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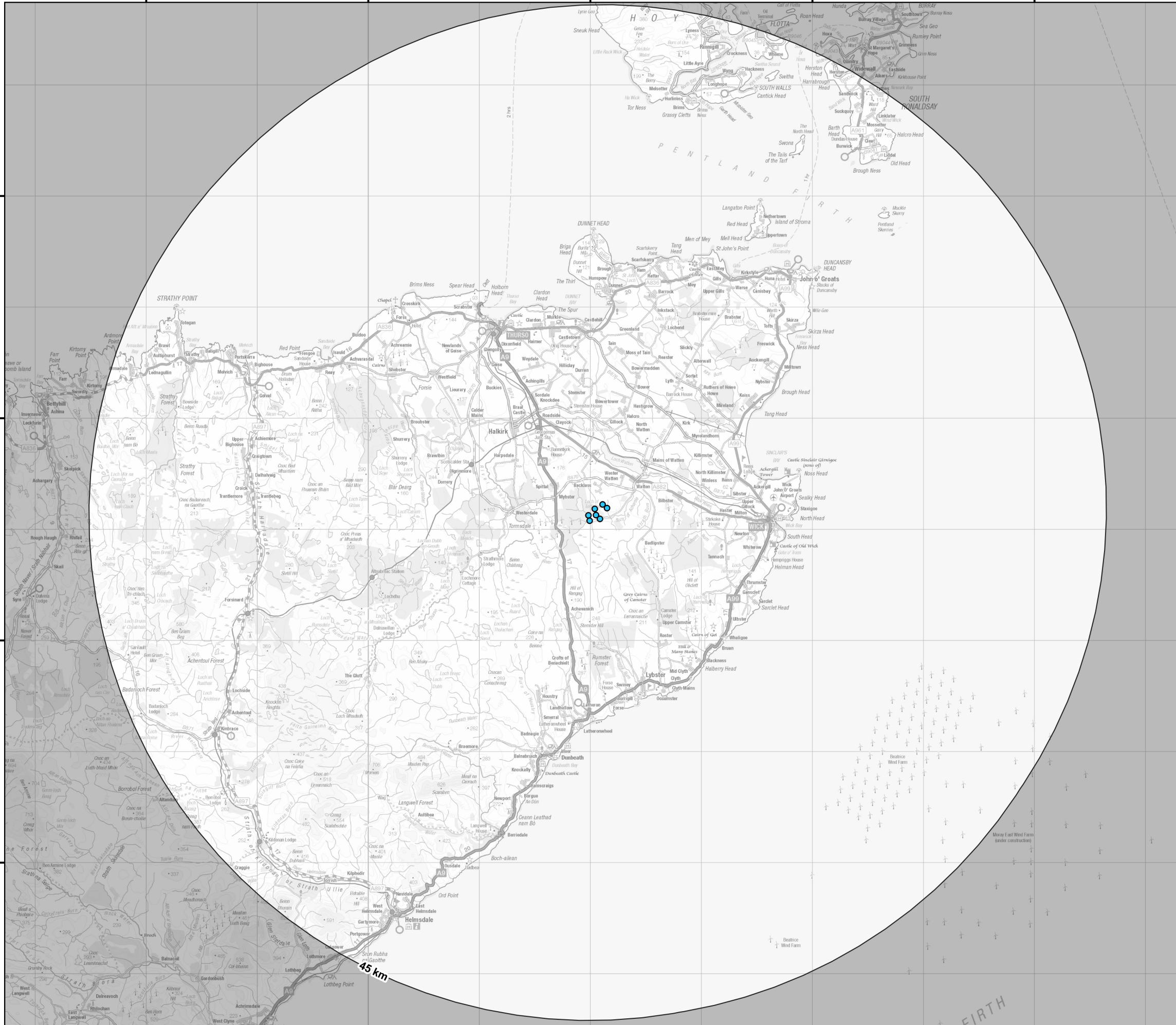
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**Watten Wind Farm, Scottish Highlands**

Title:  
**Figure 6.1: LVIA Study Area**

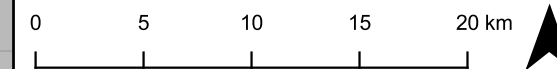
- Key**
- Proposed turbine
  - Distance from outermost turbines



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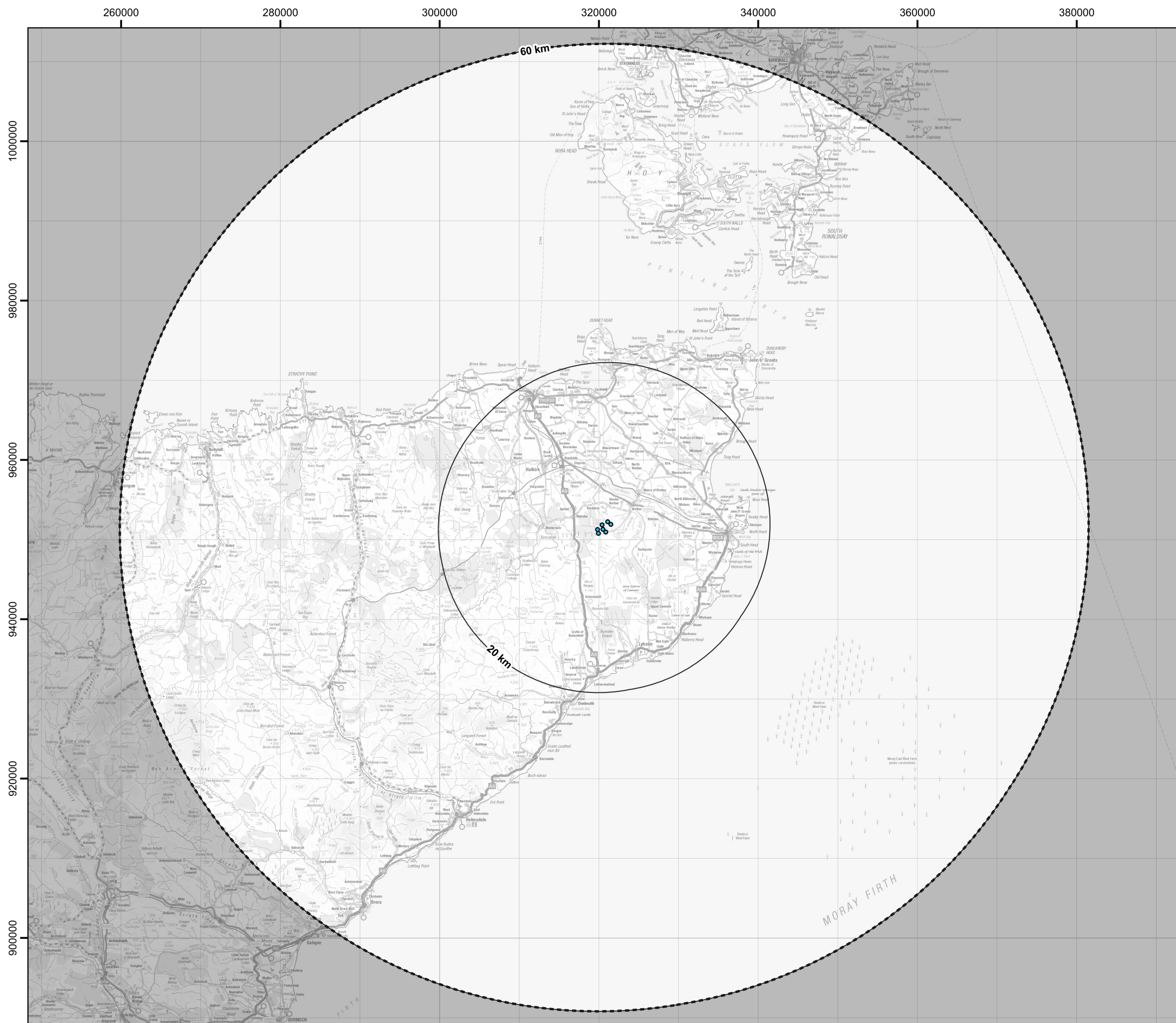
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 Castle Douglas, DG7 3XS, UK  
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**Figure 6.2: Cumulative Study Areas**

**Key**

- Proposed turbine
- Inner Cumulative Study Area
- ⊘ Wider Cumulative Study Area

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Project:  
**Watten Wind Farm, Scottish Highlands**

Title:  
**Figure 6.3a Zone of Theoretical Visibility to Tip Height**

**Key**

- Proposed turbine
- Distance from outermost turbines
- Viewpoint

**Number of turbines theoretically visible to tip height:**

- 1 - 2
- 3 - 4
- 5 - 6
- 7

**ZTV notes:**

- \* Visibility takes earth curvature and atmospheric refraction into account, but not buildings, trees or other surface obstacles.
- \* ZTV produced for 7 turbines of 220 m tip height.
- \* Visibility removed beyond the 45 km study area.
- \* Viewpoint height set to 2 m AGL.

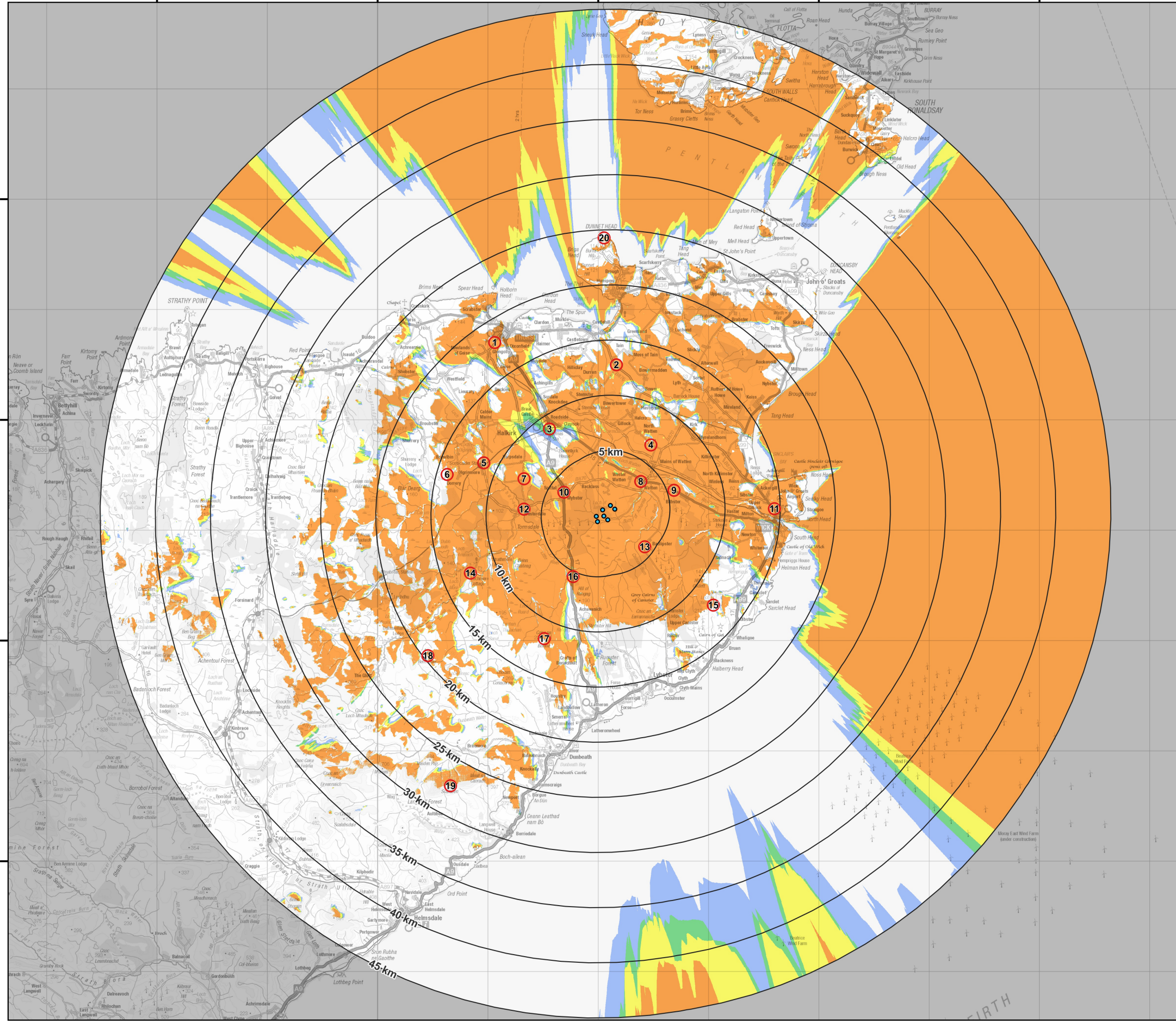
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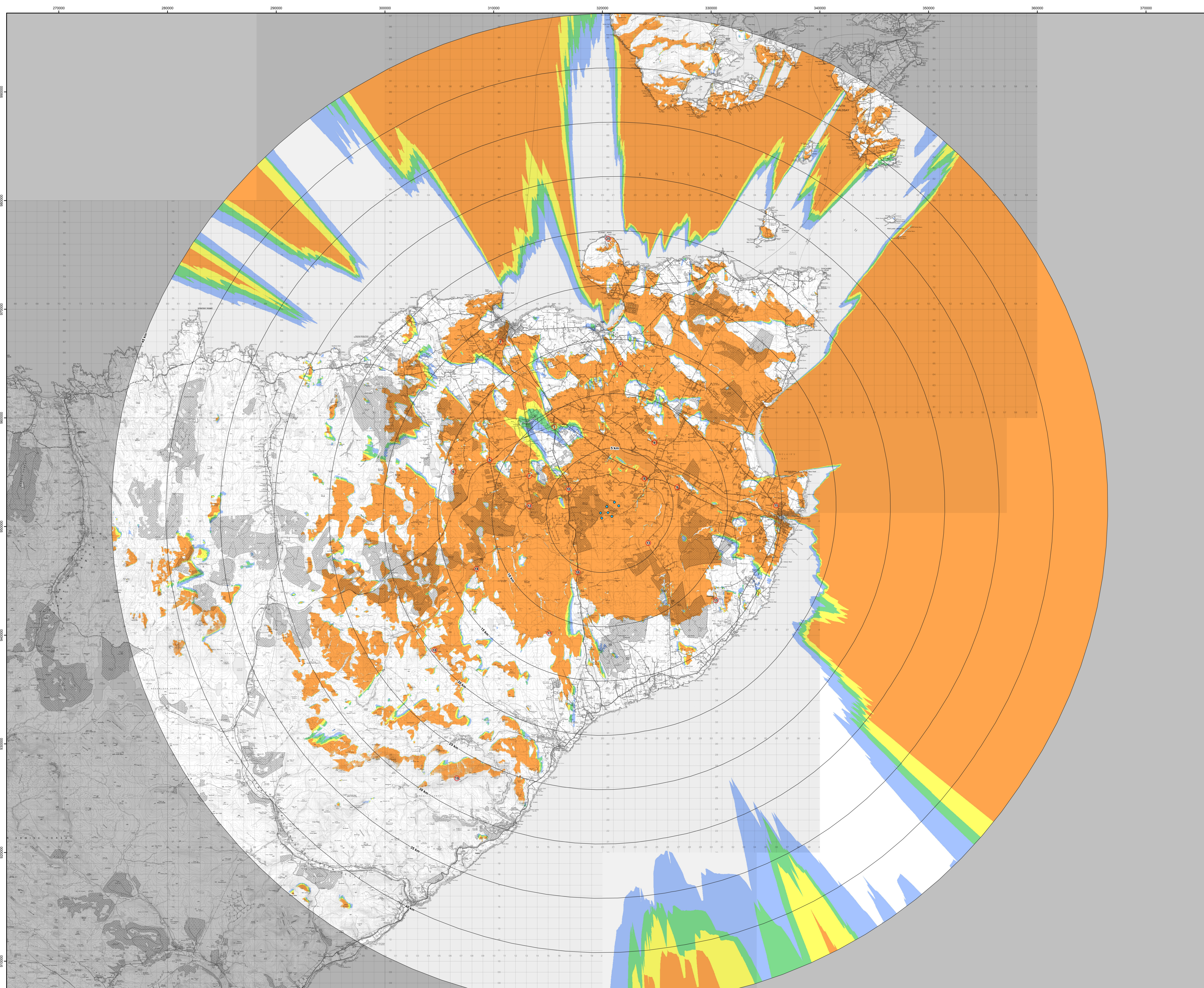
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Project:  
**Watten Wind Farm, Scottish Highlands**

Title:  
**Figure 6.3b: Zone of Theoretical Visibility to Tip Height**

**Key**

- Turbine
- Distance from outermost turbines
- Viewpoint

Number of turbines theoretically visible to tip height:

- 1-2
- 3-4
- 5-6
- 7

ZTV notes:

- \* Visibility takes earth curvature and atmospheric refraction into account, but not buildings, trees or other surface obstacles.
- \* ZTV produced for 7 turbines at 220 m tip height.
- \* Visibility removed beyond the 45 km study area.
- \* Viewpoint height set to 2 m AGL.

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Project:  
**Watten Wind Farm, Scottish Highlands**

Title:  
**Figure 6.4: Zone of Theoretical Visibility to Hub Height**

**Key**

- Turbine
- Distance from outermost turbines
- Viewpoint

**Number of turbines theoretically visible to hub height:**

- 1 - 2
- 3 - 4
- 5 - 6
- 7

**ZTV notes:**

- \* Visibility takes earth curvature and atmospheric refraction into account, but not buildings, trees or other surface obstacles.
- \* ZTV produced for 7 turbines of 139 m hub height.
- \* Visibility removed beyond the 45 km study area.
- \* Viewpoint height set to 2 m AGL.

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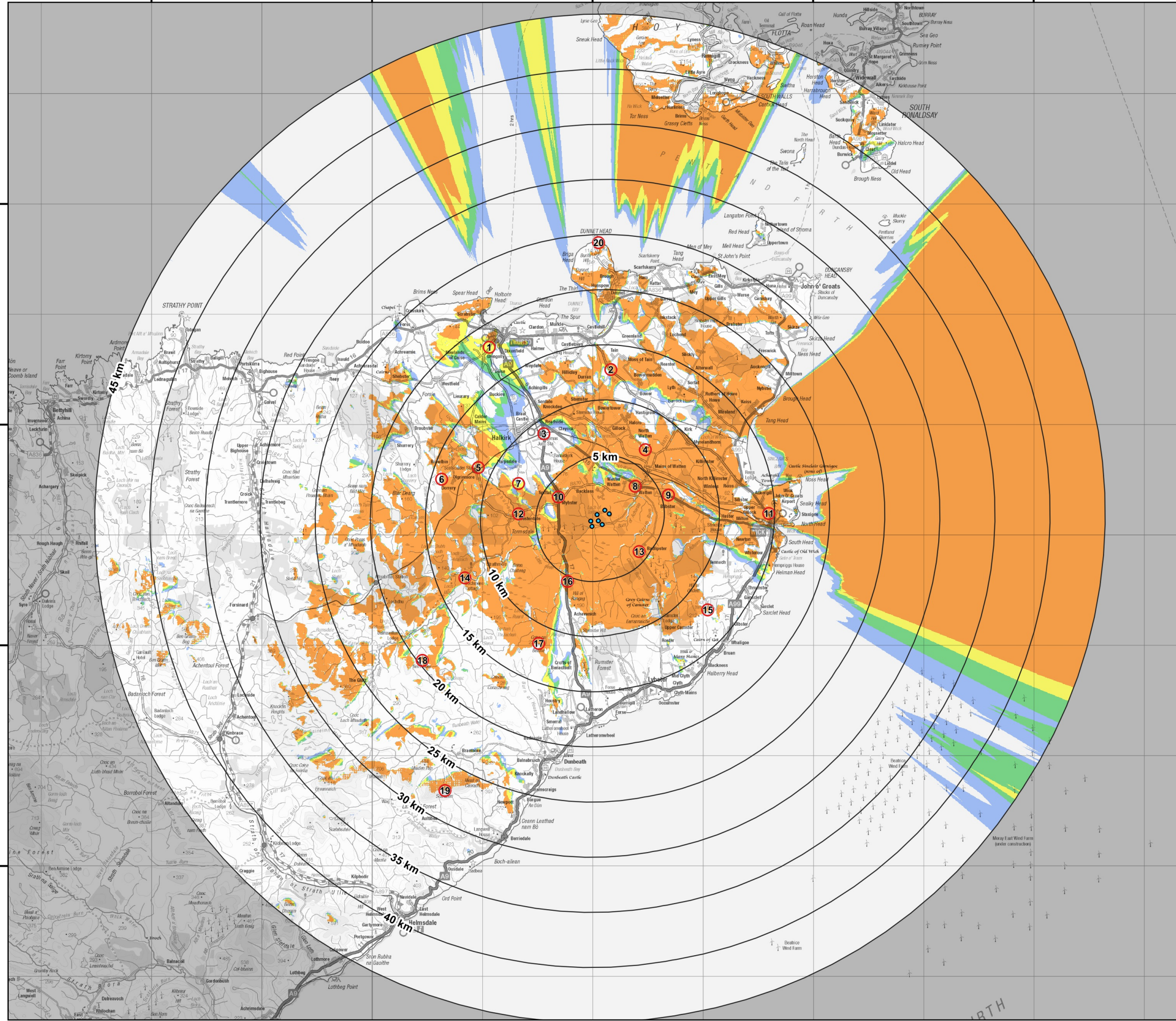
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Project:  
**Watten Wind Farm, Scottish Highlands**

Title:  
**Figure 6.5: Horizontal Angle Tip Height Zone of Theoretical Visibility**

**Key**

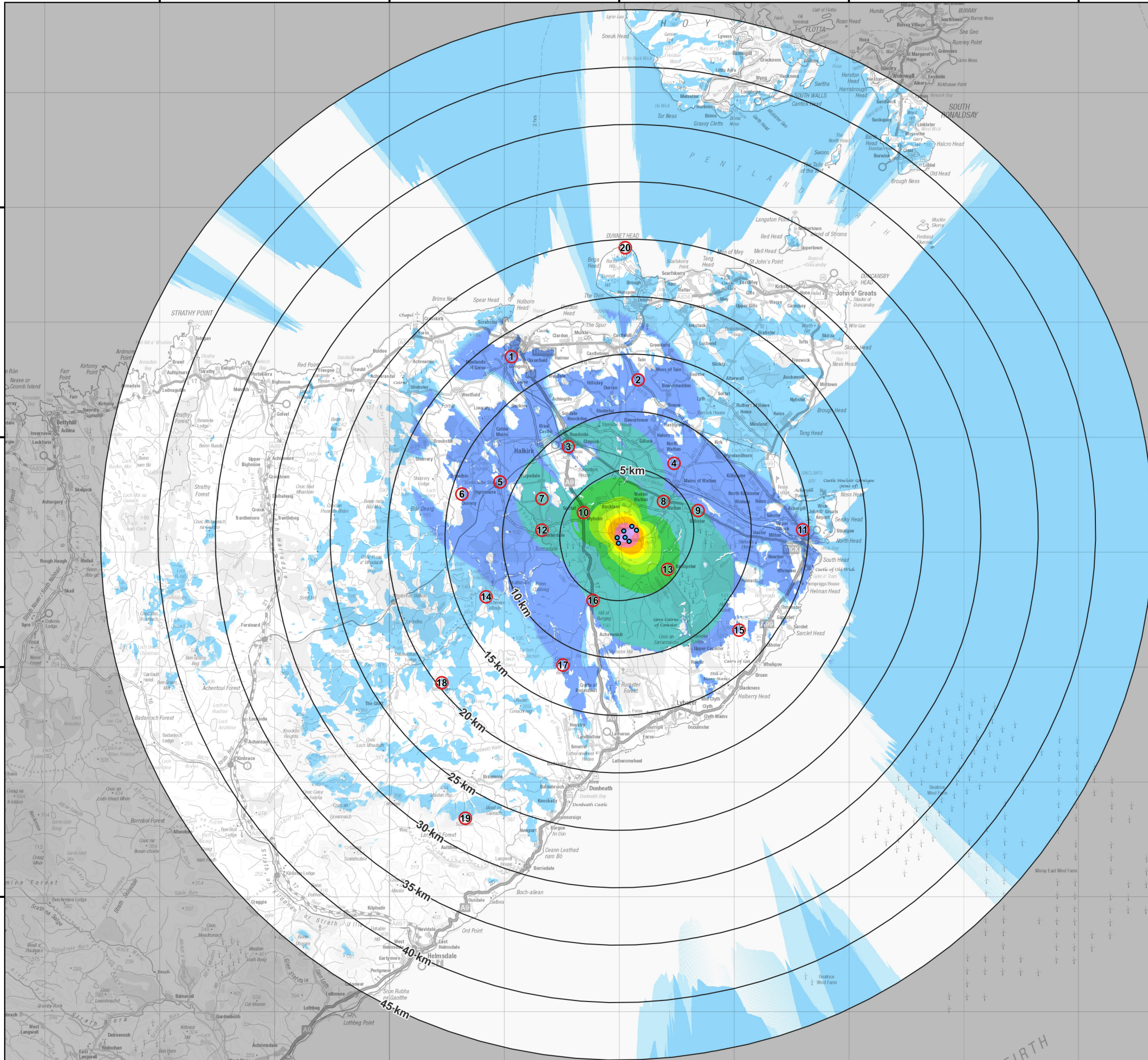
- Proposed turbine
- Distance from outermost turbines
- Viewpoint

**Horizontal Angle Tip Height ZTV (degrees)**

0 - 1
1 - 5
5 - 10
10 - 20
20 - 30
30 - 40
40 - 50
50 - 60
60 - 90
90 - 180
180 - 360

**ZTV notes:**

- \* Visibility takes earth curvature and atmospheric refraction into account, but not buildings, trees or other surface obstacles.
- \* ZTV measures the proportion in degrees of the horizontal field of view occupied by the wind farm.
- \* ZTV produced for 7 turbines of 220 m tip height.
- \* Visibility removed beyond the 45 km study area.
- \* Viewpoint height set to 2 m AGL.



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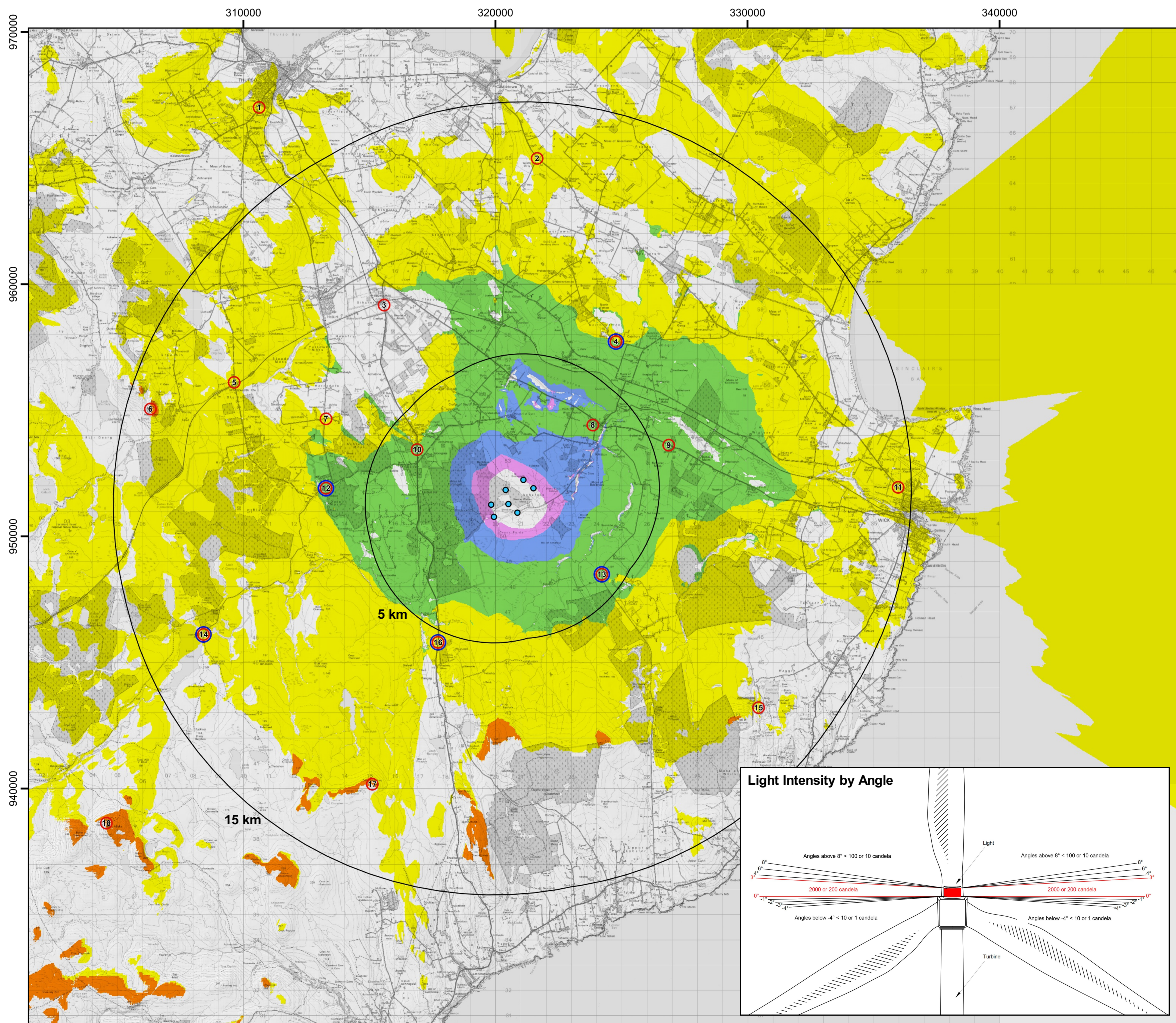
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Project:  
**Watten Wind Farm,  
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Title:  
**Figure 6.6 Theoretical Visibility  
 of Aviation Lighting by Intensity  
 (Worst Case)**

- Key**
- Proposed turbine with visible aviation lighting
  - Viewpoint
  - Night-time viewpoint
  - Distance from outermost turbines
- Theoretical visibility of predicted lighting intensity**
- 0° to 3° (2000 candela)
  - 3° to 4° (2000 candela reducing to 1400 candela)
  - 0° to -1° (2000 candela reducing to 750 candela)
  - 1° to -2° (750 candela reducing to 80 candela)
  - 2° to -3° (80 candela reducing to 40 candela)
  - 3° to -4° (40 candela reducing to < 10 candela)

**ZTV notes:**

- \* ZTV demonstrates potential visibility of the aviation warning lighting only. Whole or parts of turbines themselves may be visible where no lighting is illustrated.
- \* ZTV represents worst case scenario as current CAA requirements allow reduction of lighting intensity to 200 candela beyond 5 km.
- \* Predicted visible lighting intensity does not take account of distance.
- \* Visibility takes earth curvature and atmospheric refraction into account, but not daylight/weather conditions, buildings, trees or other surface obstacles.
- \* ZTV produced for 7 turbines at 139 m nacelle height at a range of vertical angles.
- \* Viewpoint set at 2 m AGL.

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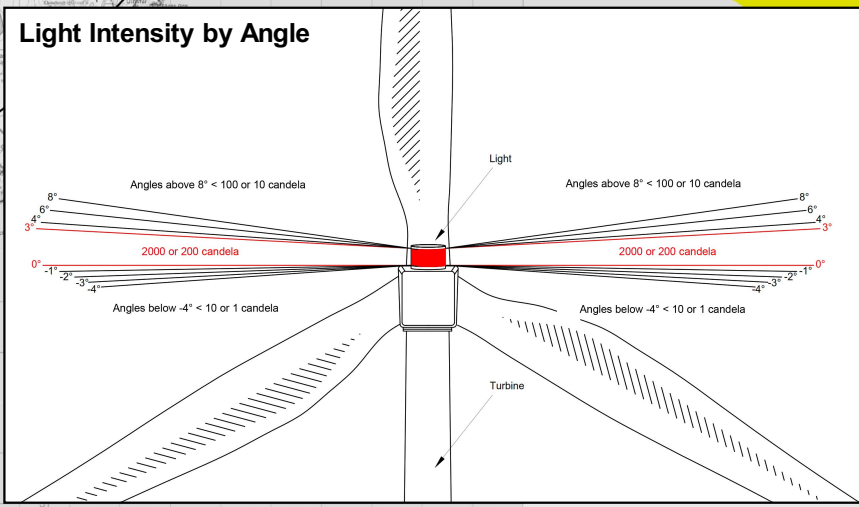
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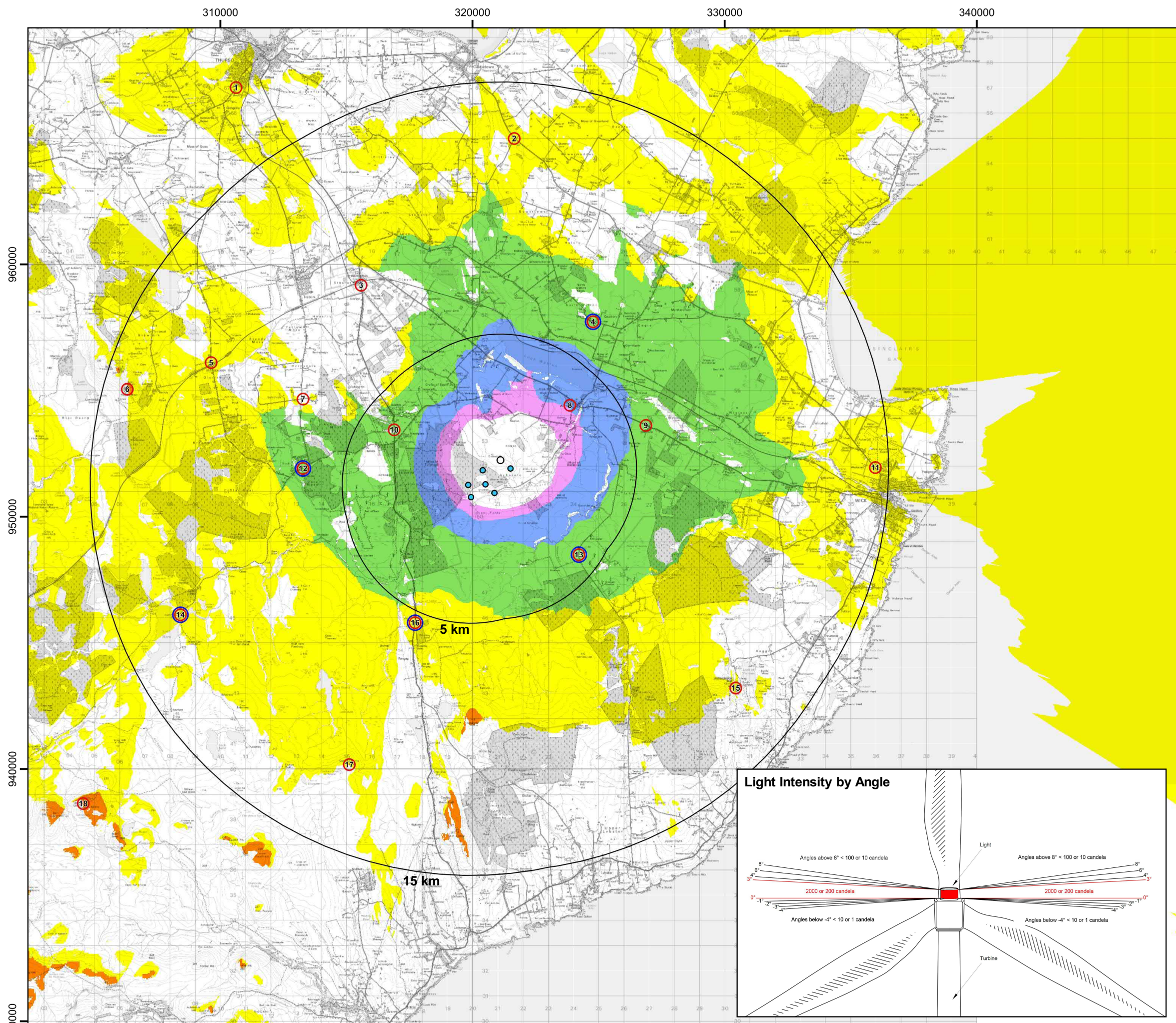
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Project:  
**Watten Wind Farm,  
 Scottish Highlands**

Title:  
**Figure 6.6a Theoretical  
 Visibility of Aviation Lighting by  
 Intensity - Turbine 1**

- Key**
- Turbine
  - Proposed turbine with visible aviation lighting
  - Viewpoint
  - Night-time viewpoint
  - Distance from outermost turbines
- Theoretical visibility of predicted lighting intensity**
- 0° to 3° (2000 candela)
  - 3° to 4° (2000 candela reducing to 1400 candela)
  - 0° to -1° (2000 candela reducing to 750 candela)
  - 1° to -2° (750 candela reducing to 80 candela)
  - 2° to -3° (80 candela reducing to 40 candela)
  - 3° to -4° (40 candela reducing to < 10 candela)

**ZTV notes:**

- \* ZTV demonstrates potential visibility of the aviation warning lighting only. Whole or parts of turbines themselves may be visible where no lighting is illustrated.
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- \* ZTV produced for individual turbines at 139 m nacelle height at a range of vertical angles.
- \* Viewpoint set at 2 m AGL.

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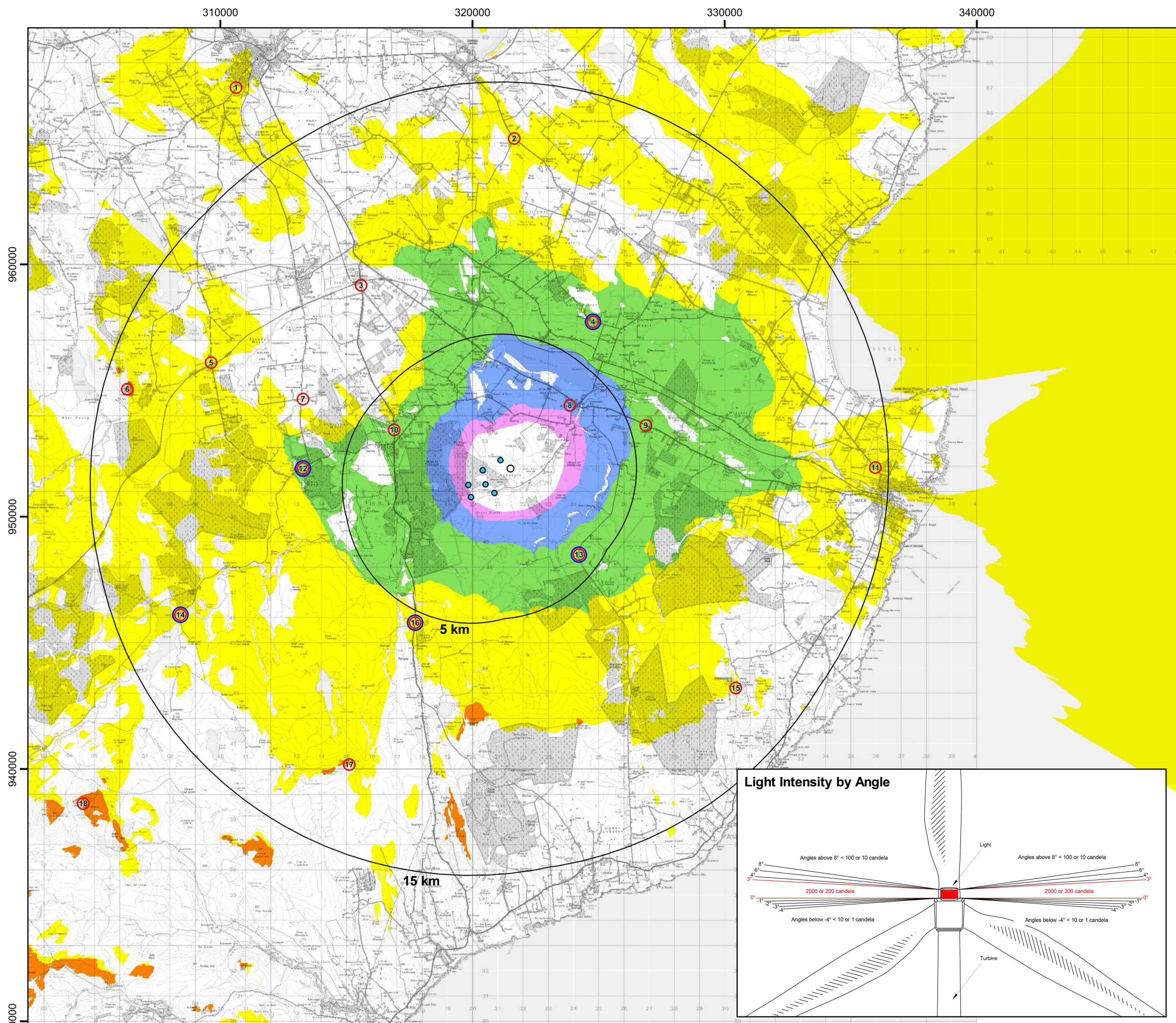
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 Coordinate System: British National Grid

Date: 15-06-23 Prepared by: DH Checked by: GG

Ref: GB204032\_M\_024\_A Layout: 060922\_7t\_A

Drawing by:  
 The Natural Power Consultants Limited  
 The Green House  
 Forrest Estate, Dalry  
 Castle Douglas, DG7 3XS, UK  
 Tel: +44 (0)1644 430008  
 Fax: +44 (0)845 299 1236  
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Project:  
**Watten Wind Farm,  
 Scottish Highlands**

Title:  
**Figure 6.6b Theoretical  
 Visibility of Aviation Lighting by  
 Intensity - Turbine 2**

- Key**
- Turbine 2
  - Proposed turbine with visible aviation lighting
  - Viewpoint
  - Night-time viewpoint
  - Distance from outermost turbines
- Theoretical visibility of predicted lighting intensity**
- 0° to 3° (2000 candela)
  - 3° to 4° (2000 candela reducing to 1400 candela)
  - 0° to -1° (2000 candela reducing to 750 candela)
  - 1° to -2° (750 candela reducing to 80 candela)
  - 2° to -3° (80 candela reducing to 40 candela)
  - 3° to -4° (40 candela reducing to < 10 candela)

**ZTV notes:**

- \* ZTV demonstrates potential visibility of the aviation warning lighting only. Whole or parts of turbines themselves may be visible where no lighting is illustrated.
- \* ZTV represents worst case scenario as current CAA requirements allow reduction of lighting intensity to 200 candela beyond 5 km.
- \* Predicted visible lighting intensity does not take account of distance.
- \* Visibility takes earth curvature and atmospheric refraction into account, but not daylight/weather conditions, buildings, trees or other surface obstacles.
- \* ZTV produced for individual turbines at 139 m nacelle height at a range of vertical angles.
- \* Viewpoint set at 2 m AGL.

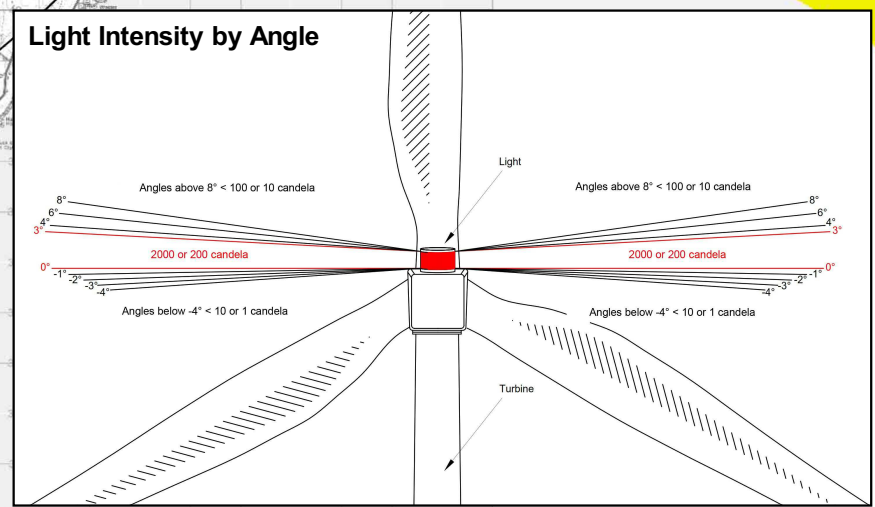
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 Coordinate System: British National Grid

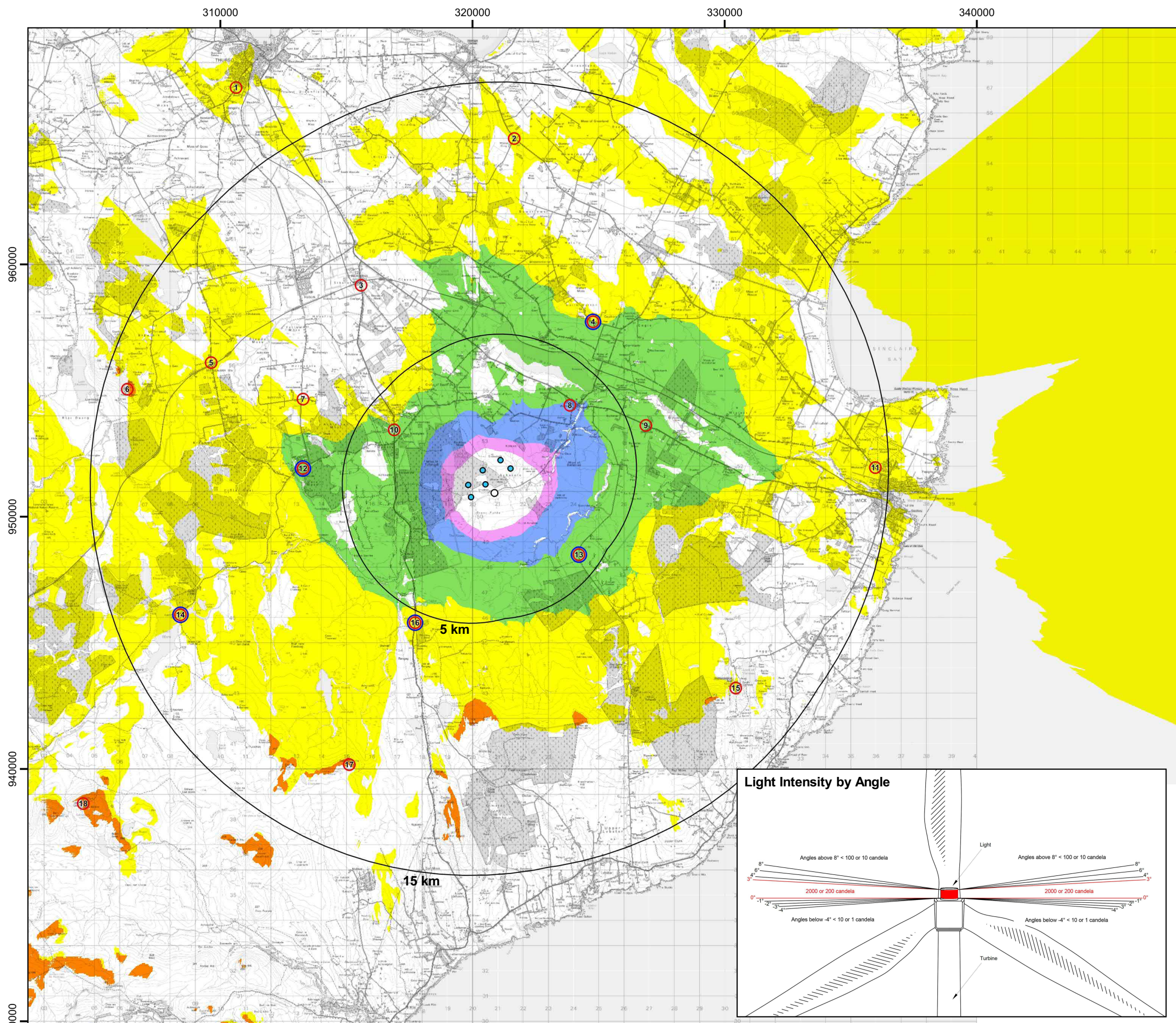
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 The Natural Power Consultants Limited  
 The Green House  
 Forrest Estate, Dalry  
 Castle Douglas, DG7 3XS, UK  
 Tel: +44 (0)1644 430008  
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Project:  
**Watten Wind Farm,  
 Scottish Highlands**

Title:  
**Figure 6.6c Theoretical  
 Visibility of Aviation Lighting by  
 Intensity - Turbine 3**

- Key**
- Turbine 3
  - Proposed turbine with visible aviation lighting
  - Viewpoint
  - Night-time viewpoint
  - Distance from outermost turbines
- Theoretical visibility of predicted lighting intensity**
- 0° to 3° (2000 candela)
  - 3° to 4° (2000 candela reducing to 1400 candela)
  - 0° to -1° (2000 candela reducing to 750 candela)
  - 1° to -2° (750 candela reducing to 80 candela)
  - 2° to -3° (80 candela reducing to 40 candela)
  - 3° to -4° (40 candela reducing to < 10 candela)

**ZTV notes:**

- \* ZTV demonstrates potential visibility of the aviation warning lighting only. Whole or parts of turbines themselves may be visible where no lighting is illustrated.
- \* ZTV represents worst case scenario as current CAA requirements allow reduction of lighting intensity to 200 candela beyond 5 km.
- \* Predicted visible lighting intensity does not take account of distance.
- \* Visibility takes earth curvature and atmospheric refraction into account, but not daylight/weather conditions, buildings, trees or other surface obstacles.
- \* ZTV produced for individual turbines at 139 m nacelle height at a range of vertical angles.
- \* Viewpoint set at 2 m AGL.

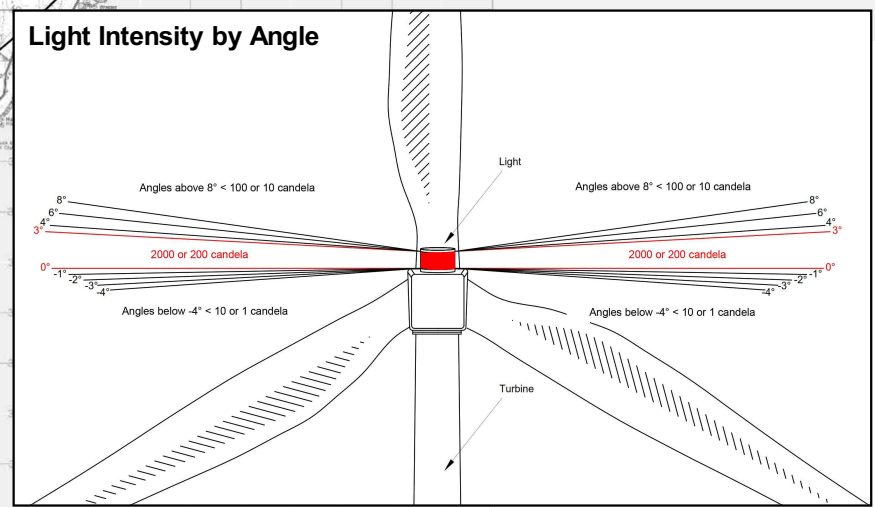
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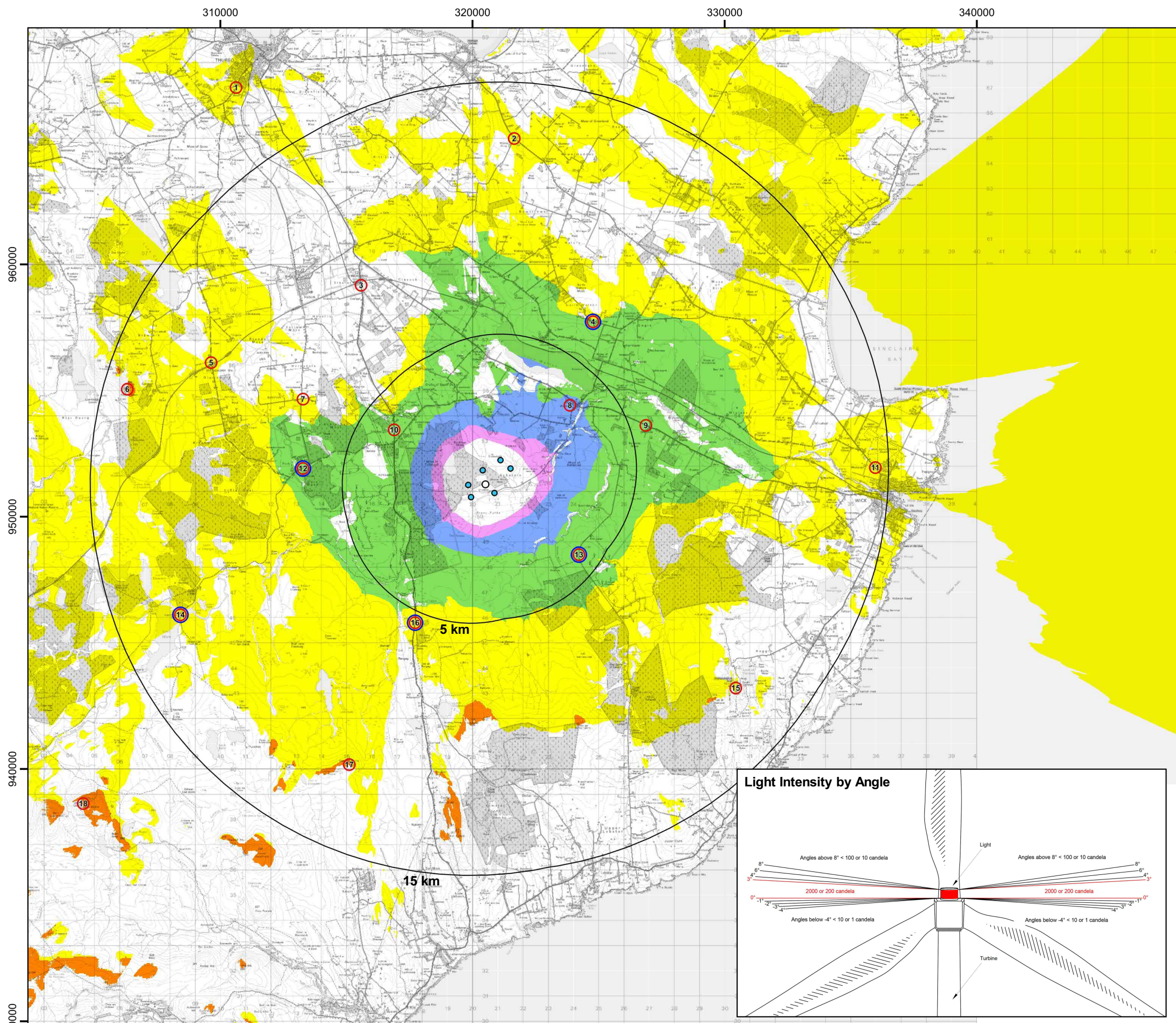
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 The Green House  
 Forrest Estate, Dalry  
 Castle Douglas, DG7 3XS, UK  
 Tel: +44 (0)1644 430008  
 Fax: +44 (0)845 299 1236  
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Project:  
**Watten Wind Farm,  
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Title:  
**Figure 6.6d Theoretical  
 Visibility of Aviation Lighting by  
 Intensity - Turbine 4**

- Key**
- Turbine 4
  - Proposed turbine with visible aviation lighting
  - Viewpoint
  - Night-time viewpoint
  - Distance from outermost turbines
- Theoretical visibility of predicted lighting intensity**
- 0° to 3° (2000 candela)
  - 3° to 4° (2000 candela reducing to 1400 candela)
  - 0° to -1° (2000 candela reducing to 750 candela)
  - 1° to -2° (750 candela reducing to 80 candela)
  - 2° to -3° (80 candela reducing to 40 candela)
  - 3° to -4° (40 candela reducing to < 10 candela)

**ZTV notes:**

- \* ZTV demonstrates potential visibility of the aviation warning lighting only. Whole or parts of turbines themselves may be visible where no lighting is illustrated.
- \* ZTV represents worst case scenario as current CAA requirements allow reduction of lighting intensity to 200 candela beyond 5 km.
- \* Predicted visible lighting intensity does not take account of distance.
- \* Visibility takes earth curvature and atmospheric refraction into account, but not daylight/weather conditions, buildings, trees or other surface obstacles.
- \* ZTV produced for individual turbines at 139 m nacelle height at a range of vertical angles.
- \* Viewpoint set at 2 m AGL.

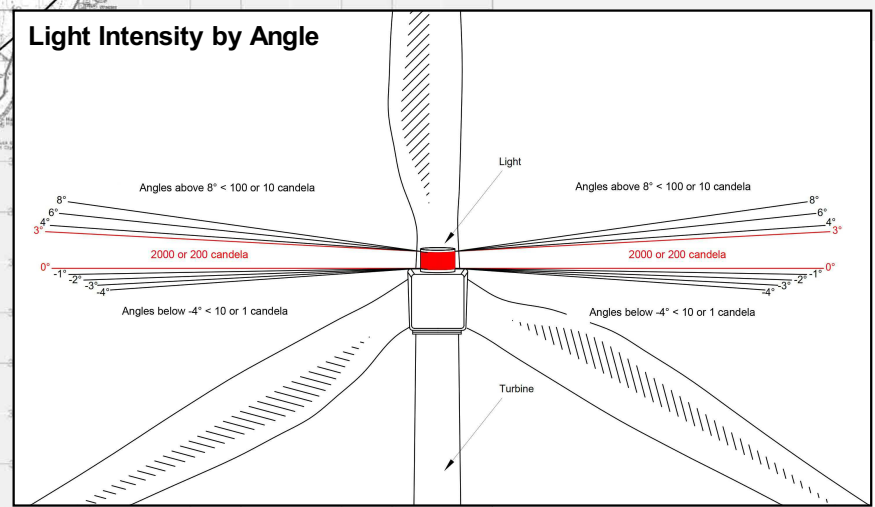
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 Coordinate System: British National Grid

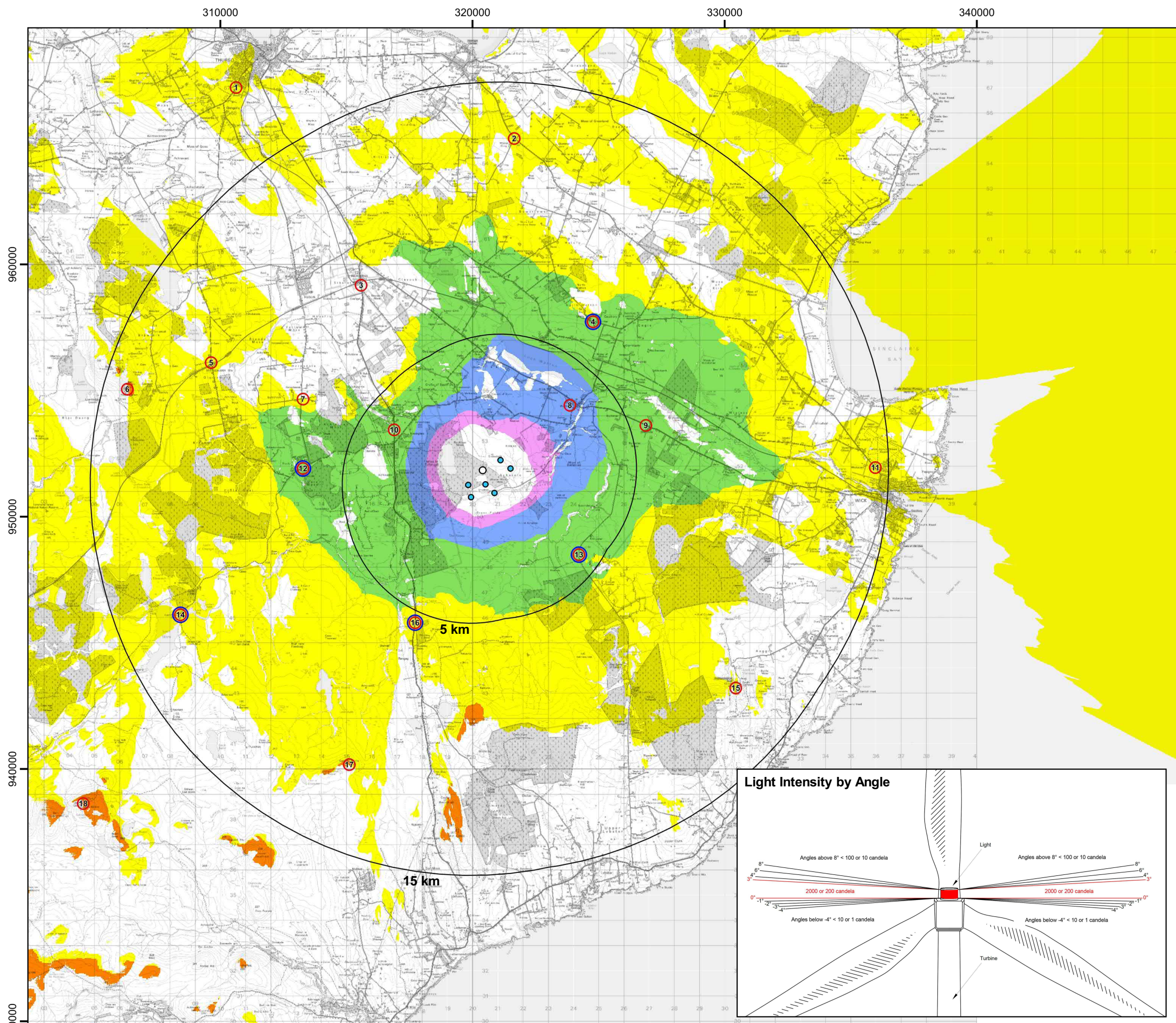
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 The Natural Power Consultants Limited  
 The Green House  
 Forrest Estate, Dalry  
 Castle Douglas, DG7 3XS, UK  
 Tel: +44 (0)1644 430008  
 Fax: +44 (0)845 299 1236  
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Project:  
**Watten Wind Farm,  
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Title:  
**Figure 6.6e Theoretical  
 Visibility of Aviation Lighting by  
 Intensity - Turbine 5**

- Key**
- Turbine 5
  - Proposed turbine with visible aviation lighting
  - Viewpoint
  - Night-time viewpoint
  - Distance from outermost turbines
- Theoretical visibility of predicted lighting intensity**
- 0° to 3° (2000 candela)
  - 3° to 4° (2000 candela reducing to 1400 candela)
  - 0° to -1° (2000 candela reducing to 750 candela)
  - 1° to -2° (750 candela reducing to 80 candela)
  - 2° to -3° (80 candela reducing to 40 candela)
  - 3° to -4° (40 candela reducing to < 10 candela)

**ZTV notes:**

- \* ZTV demonstrates potential visibility of the aviation warning lighting only. Whole or parts of turbines themselves may be visible where no lighting is illustrated.
- \* ZTV represents worst case scenario as current CAA requirements allow reduction of lighting intensity to 200 candela beyond 5 km.
- \* Predicted visible lighting intensity does not take account of distance.
- \* Visibility takes earth curvature and atmospheric refraction into account, but not daylight/weather conditions, buildings, trees or other surface obstacles.
- \* ZTV produced for individual turbines at 139 m nacelle height at a range of vertical angles.
- \* Viewpoint set at 2 m AGL.

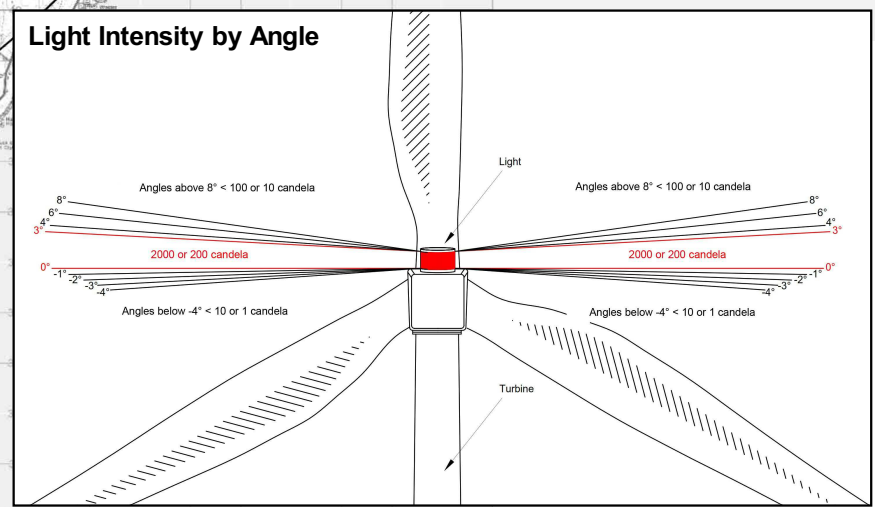
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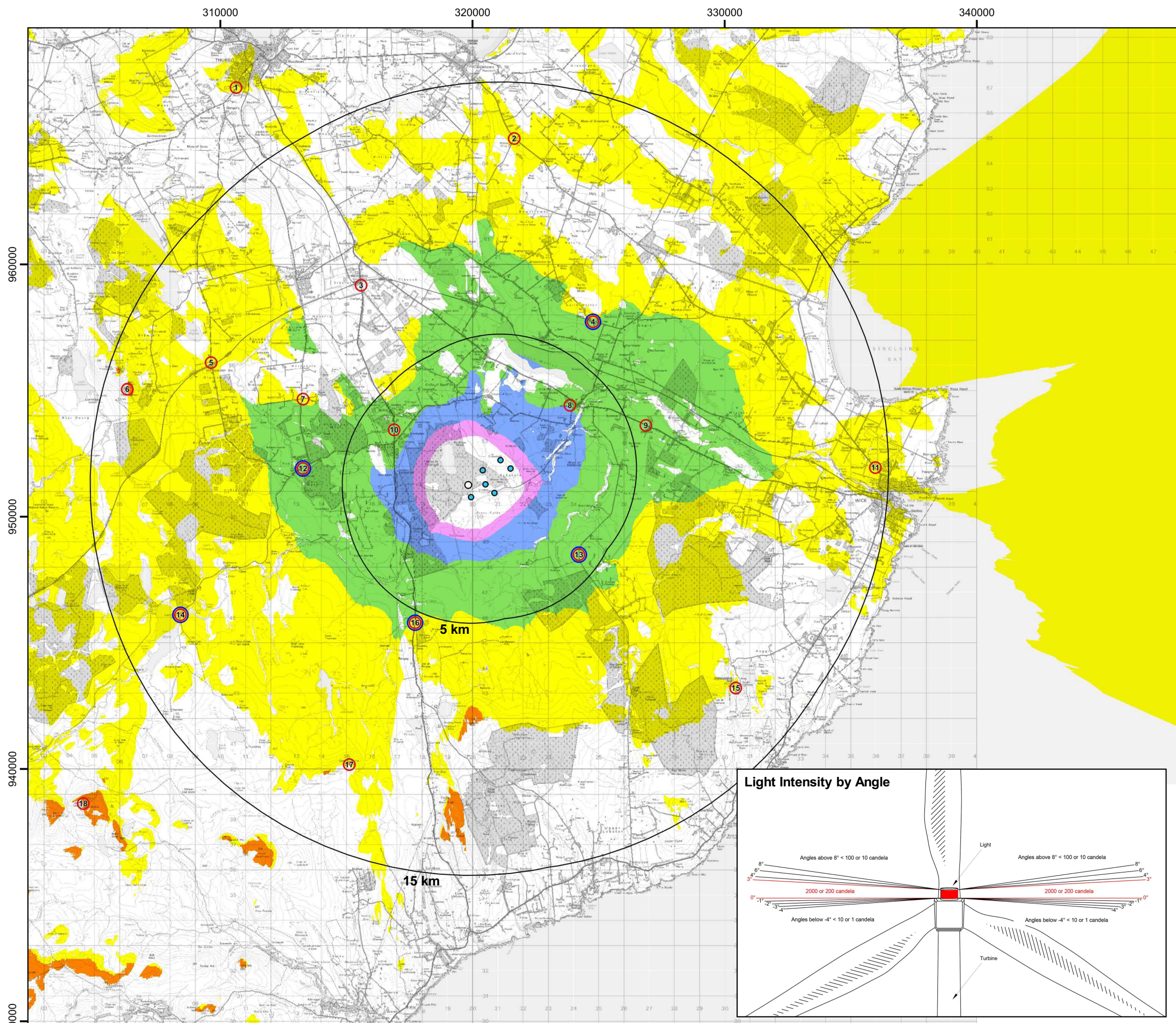
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 The Green House  
 Forrest Estate, Dalry  
 Castle Douglas, DG7 3XS, UK  
 Tel: +44 (0)1644 430008  
 Fax: +44 (0)845 299 1236  
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Project:  
**Watten Wind Farm,  
 Scottish Highlands**

Title:  
**Figure 6.6f Theoretical Visibility  
 of Aviation Lighting by Intensity  
 - Turbine 6**

- Key**
- Turbine 6
  - Proposed turbine with visible aviation lighting
  - Viewpoint
  - Night-time viewpoint
  - Distance from outermost turbines
- Theoretical visibility of predicted lighting intensity**
- 0° to 3° (2000 candela)
  - 3° to 4° (2000 candela reducing to 1400 candela)
  - 0° to -1° (2000 candela reducing to 750 candela)
  - 1° to -2° (750 candela reducing to 80 candela)
  - 2° to -3° (80 candela reducing to 40 candela)
  - 3° to -4° (40 candela reducing to < 10 candela)

**ZTV notes:**

- \* ZTV demonstrates potential visibility of the aviation warning lighting only. Whole or parts of turbines themselves may be visible where no lighting is illustrated.
- \* ZTV represents worst case scenario as current CAA requirements allow reduction of lighting intensity to 200 candela beyond 5 km.
- \* Predicted visible lighting intensity does not take account of distance.
- \* Visibility takes earth curvature and atmospheric refraction into account, but not daylight/weather conditions, buildings, trees or other surface obstacles.
- \* ZTV produced for individual turbines at 139 m nacelle height at a range of vertical angles.
- \* Viewpoint set at 2 m AGL.

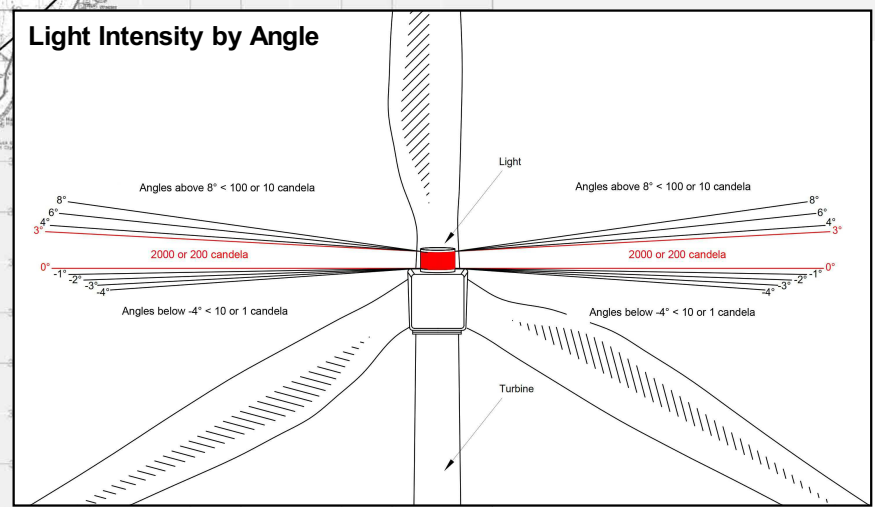
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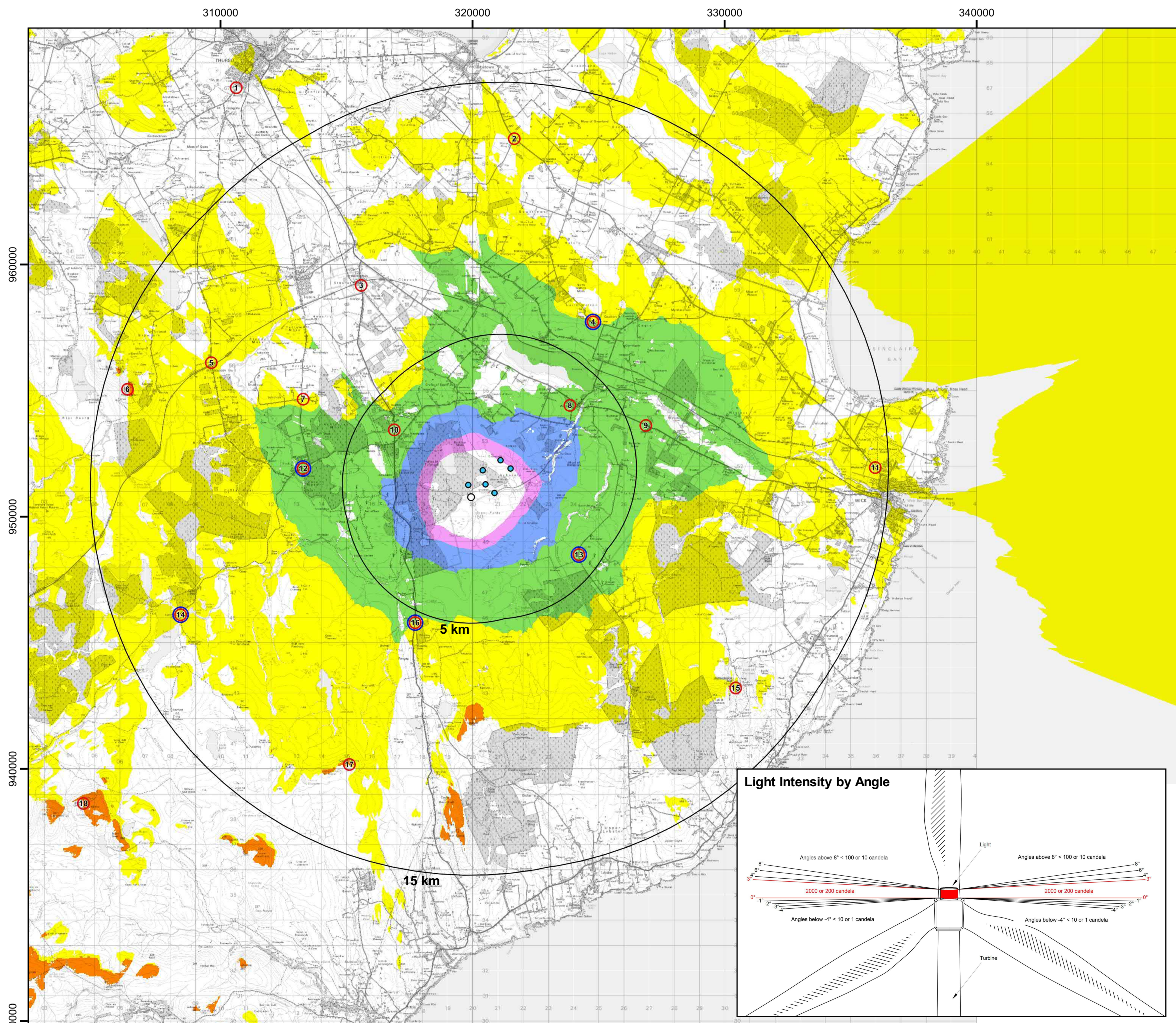
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 The Green House  
 Forrest Estate, Dalry  
 Castle Douglas, DG7 3XS, UK  
 Tel: +44 (0)1644 430008  
 Fax: +44 (0)845 299 1236  
 Email: sayhello@naturalpower.com  
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Project:  
**Watten Wind Farm,  
 Scottish Highlands**

Title:  
**Figure 6.6g Theoretical  
 Visibility of Aviation Lighting by  
 Intensity - Turbine 7**

- Key**
- Turbine 7
  - Proposed turbine with visible aviation lighting
  - Viewpoint
  - Night-time viewpoint
  - Distance from outermost turbines
- Theoretical visibility of predicted lighting intensity**
- 0° to 3° (2000 candela)
  - 3° to 4° (2000 candela reducing to 1400 candela)
  - 0° to -1° (2000 candela reducing to 750 candela)
  - 1° to -2° (750 candela reducing to 80 candela)
  - 2° to -3° (80 candela reducing to 40 candela)
  - 3° to -4° (40 candela reducing to < 10 candela)

**ZTV notes:**

- \* ZTV demonstrates potential visibility of the aviation warning lighting only. Whole or parts of turbines themselves may be visible where no lighting is illustrated.
- \* ZTV represents worst case scenario as current CAA requirements allow reduction of lighting intensity to 200 candela beyond 5 km.
- \* Predicted visible lighting intensity does not take account of distance.
- \* Visibility takes earth curvature and atmospheric refraction into account, but not daylight/weather conditions, buildings, trees or other surface obstacles.
- \* ZTV produced for individual turbines at 139 m nacelle height at a range of vertical angles.
- \* Viewpoint set at 2 m AGL.

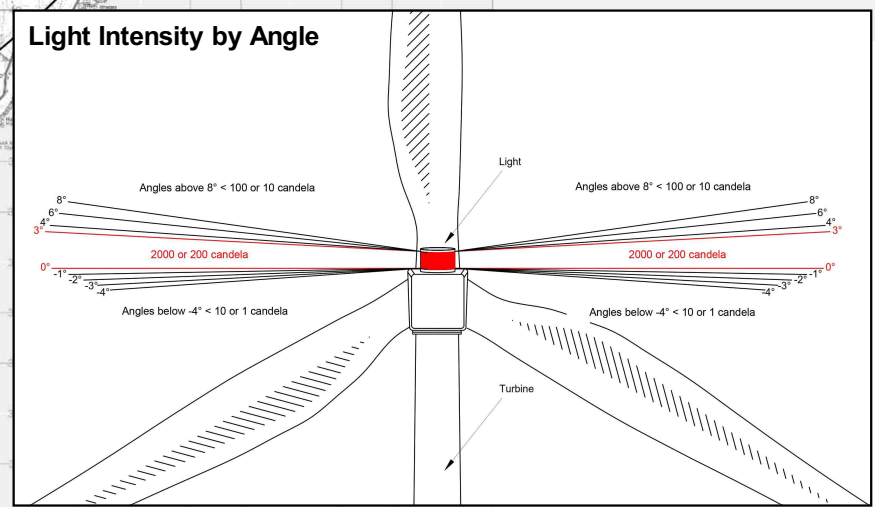
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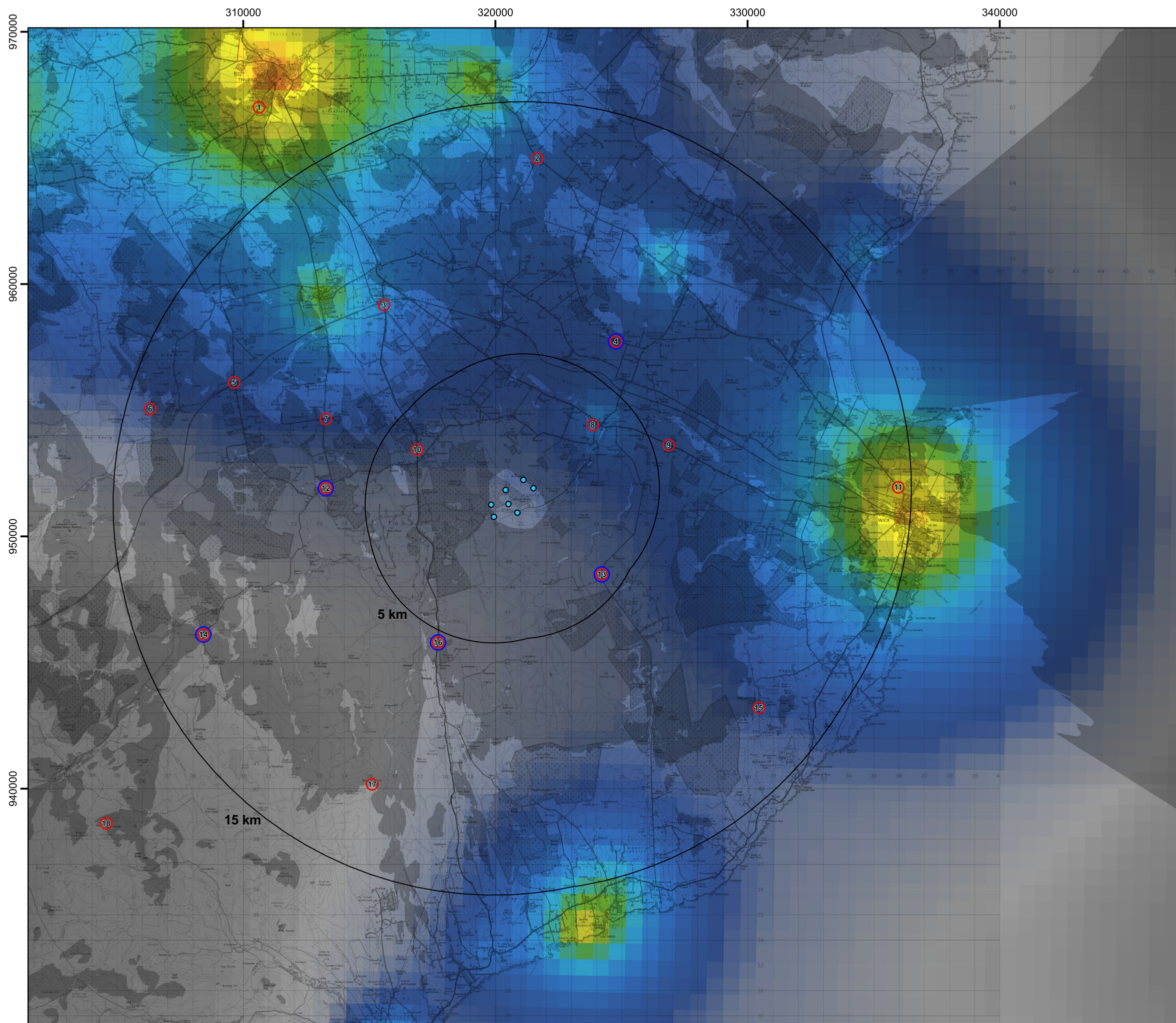
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 The Natural Power Consultants Limited  
 The Green House  
 Forrest Estate, Dalry  
 Castle Douglas, DG7 3XS, UK  
 Tel: +44 (0)1644 430008  
 Fax: +44 (0)845 299 1236  
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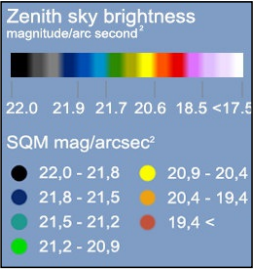
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Project:  
**Watten Wind Farm,  
 Scottish Highlands**

Title:  
**Figure 6.7: Predicted Light  
 Pollution in Areas of Theoretical  
 Visibility of Aviation Lighting**

- Key**
- Proposed turbine with visible aviation lighting
  - Viewpoint
  - Night-time viewpoint
  - Distance from outermost turbines
  - Theoretical visibility of aviation lighting



**ZTV notes:**

- \* ZTV demonstrates potential visibility of the aviation warning lighting only. Whole or parts of turbines themselves may be visible where no lighting is illustrated.
- \* ZTV represents worst case scenario as current CAA requirements allow reduction of lighting intensity to 200 candela beyond 5 km.
- \* Predicted visible lighting intensity does not take account of distance.
- \* Visibility takes earth curvature and atmospheric refraction into account, but not daylight/weather conditions, buildings, trees or other surface obstacles.
- \* ZTV produced for 7 turbines at 139 m nacelle height at a range of vertical angles.
- \* Viewpoint set at 2 m AGL.
- \* Credits for the World Atlas of Artificial Night Sky Brightness: Jurij Stare, www.lightpollutionmap.info; Falchi, Fabio; Cinzano, Pierantonio; Duriscoe, Dan Kyba, Christopher C. M.; Elvidge, Christopher D.; Baugh, Kimberly; Portnov, Boris; Rybnikova, Nataliya A.; Furgoni, Riccardo (2016).

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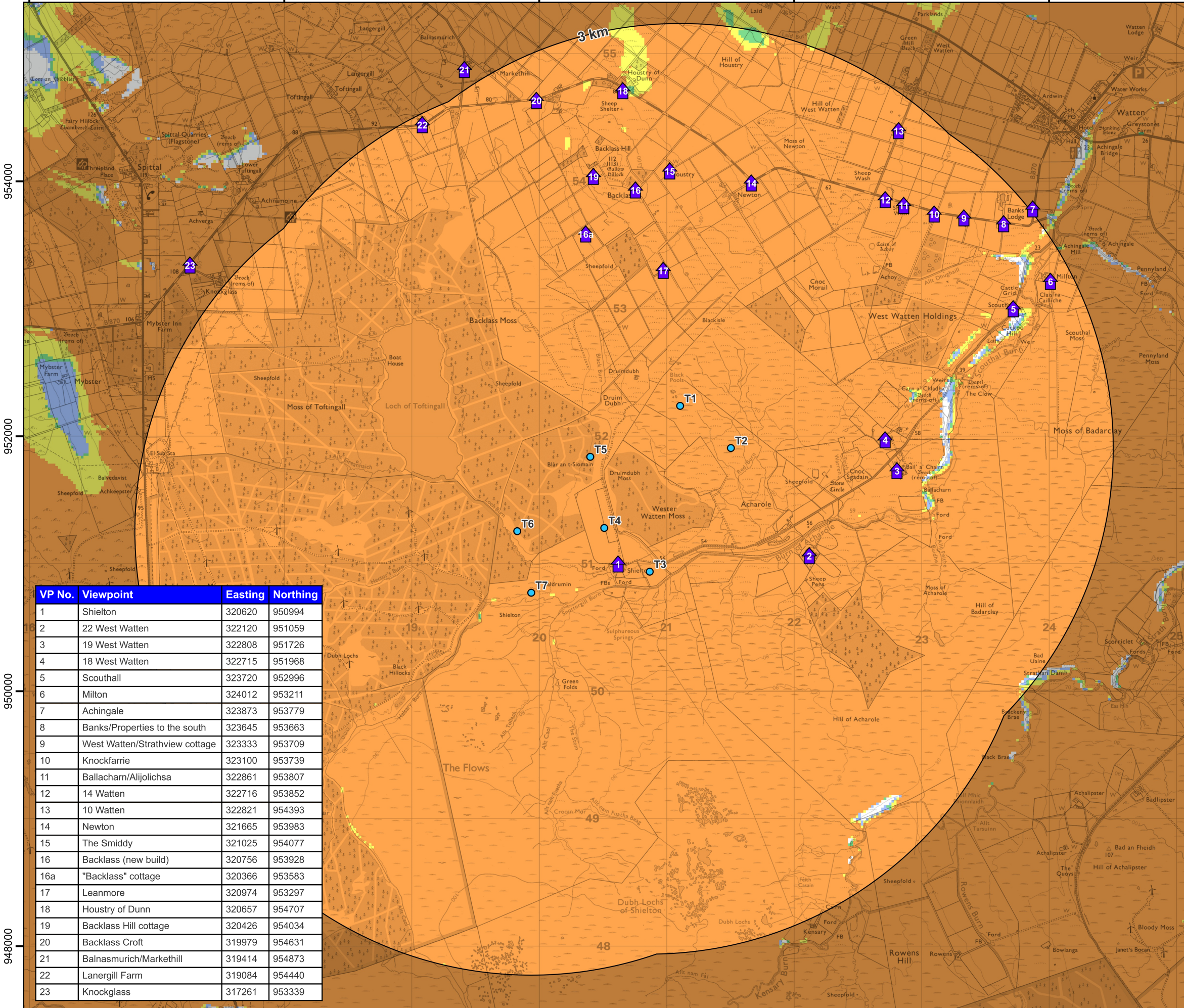
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 Forrest Estate, Dalry  
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316000 318000 320000 322000 324000



Project:  
**Watten Wind Farm, Scottish Highlands**

Title:  
**Figure 6.7.1: Residential Receptors**

**Key**

- Proposed turbine
- Distance from outermost turbines (3 km)
- ↑ Residential receptor

**Number of turbines theoretically visible to tip height:**

- 1 - 2
- 3 - 4
- 5 - 6
- 7

**ZTV notes:**

- \* Visibility takes earth curvature and atmospheric refraction into account, but not buildings, trees or other surface obstacles.
- \* ZTV produced for 7 turbines of 220 m tip height.
- \* Viewpoint height set to 2 m AGL.

VP No.	Viewpoint	Easting	Northing
1	Shielton	320620	950994
2	22 West Watten	322120	951059
3	19 West Watten	322808	951726
4	18 West Watten	322715	951968
5	Scouthall	323720	952996
6	Milton	324012	953211
7	Achingale	323873	953779
8	Banks/Properties to the south	323645	953663
9	West Watten/Strathview cottage	323333	953709
10	Knockfarrie	323100	953739
11	Ballacharn/Aljochisa	322861	953807
12	14 Watten	322716	953852
13	10 Watten	322821	954393
14	Newton	321665	953983
15	The Smiddy	321025	954077
16	Backlass (new build)	320756	953928
16a	"Backlass" cottage	320366	953583
17	Leanmore	320974	953297
18	Houstry of Dunn	320657	954707
19	Backlass Hill cottage	320426	954034
20	Backlass Croft	319979	954631
21	Balnasmurich/Markethill	319414	954873
22	Lanergill Farm	319084	954440
23	Knockglass	317261	953339

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**Scale @ A3: 1:30,000**

Coordinate System: British National Grid

0 0.25 0.5 0.75 1 km

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The Green House  
Forrest Estate, Dalry  
Castle Douglas, DG7 3XS, UK  
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Fax: +44 (0)845 299 1236  
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280000

300000

320000

340000

360000

980000

960000

940000

920000

Project:  
**Watten Wind Farm, Scottish Highlands**

Title:  
**Figure 6.8: Landscape Character**

**Key**

- Proposed turbine
- Viewpoint
- Distance from outermost turbines

**Landscape Character Type**

- Highlands & Islands

**Number of turbines theoretically visible to tip height:**

- 1 - 2
- 3 - 4
- 5 - 6
- 7

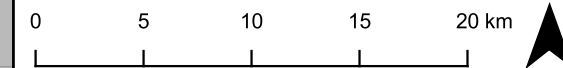
**ZTV notes:**

- \* Visibility takes earth curvature and atmospheric refraction into account, but not buildings, trees or other surface obstacles.
- \* ZTV produced for 7 turbines of 220 m tip height.
- \* Visibility removed beyond the 45 km study area.
- \* Viewpoint height set to 2 m AGL.

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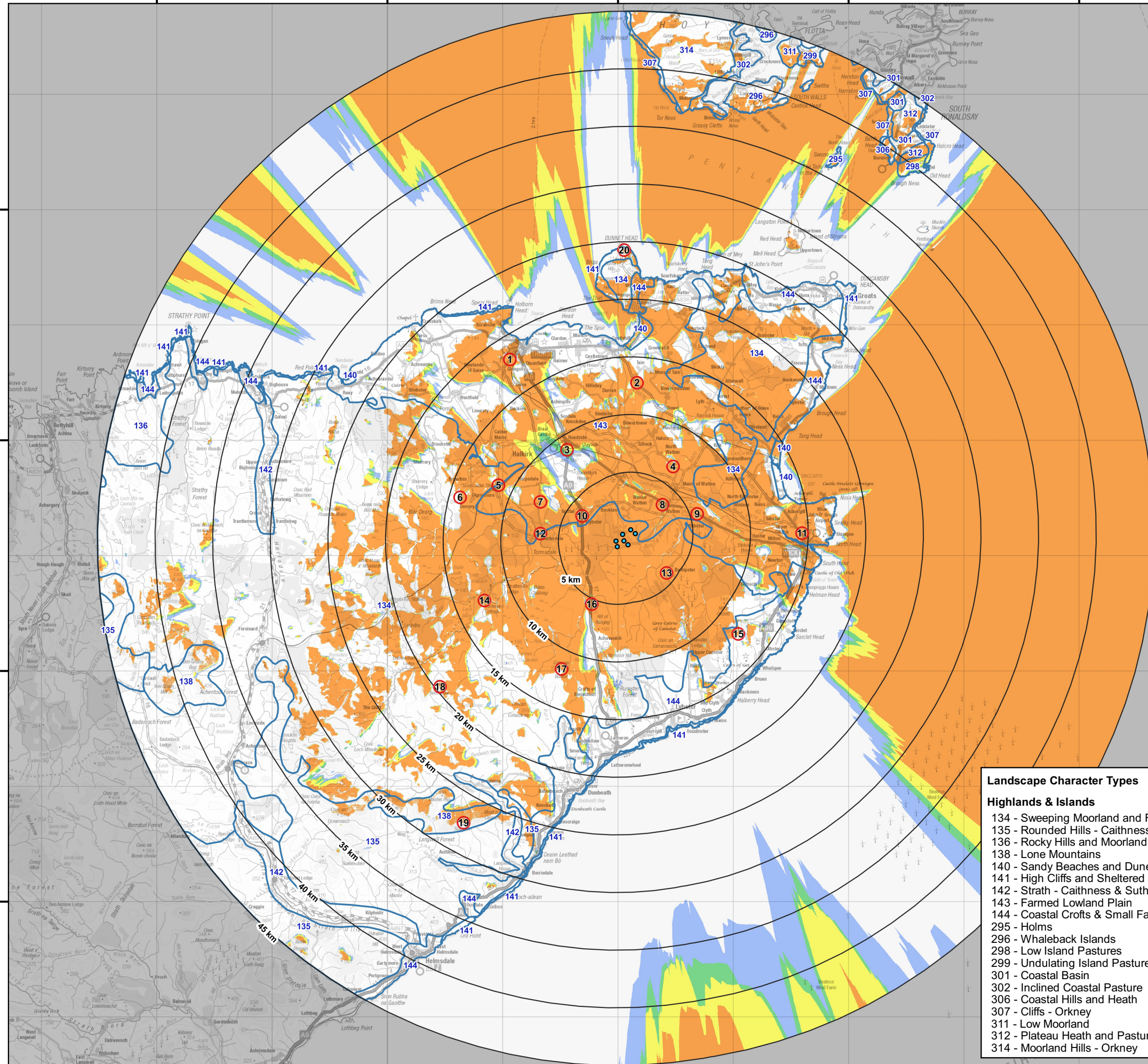
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Fax: +44 (0)845 299 1236  
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- Landscape Character Types**
- Highlands & Islands**
- 134 - Sweeping Moorland and Flows
  - 135 - Rounded Hills - Caithness & Sutherland
  - 136 - Rocky Hills and Moorland
  - 138 - Lone Mountains
  - 140 - Sandy Beaches and Dunes
  - 141 - High Cliffs and Sheltered Bays
  - 142 - Strath - Caithness & Sutherland
  - 143 - Farmed Lowland Plain
  - 144 - Coastal Crofts & Small Farms
  - 295 - Holms
  - 296 - Whaleback Islands
  - 298 - Low Island Pastures
  - 299 - Undulating Island Pasture
  - 301 - Coastal Basin
  - 302 - Inclined Coastal Pasture
  - 306 - Coastal Hills and Heath
  - 307 - Cliffs - Orkney
  - 311 - Low Moorland
  - 312 - Plateau Heath and Pasture
  - 314 - Moorland Hills - Orkney



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Project:  
**Watten Wind Farm, Scottish Highlands**

Title:  
**Figure 6.9: Protected & Designated Landscapes**

- Key**
- Turbine
  - Distance from outermost turbines
  - Viewpoint
  - ▨ National Scenic Area
  - ▤ Wild Land Area
  - ▩ Special Landscape Area - Highlands & Islands
  - ▧ Historic Gardens & Designed Landscapes \*\*

- Number of turbines theoretically visible to tip height:**
- 1 - 2
  - 3 - 4
  - 5 - 6
  - 7

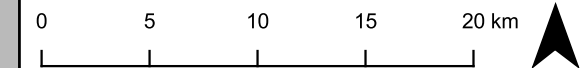
**Notes:**

- \* Visibility takes earth curvature and atmospheric refraction into account, but not buildings, trees or other surface obstacles.
- \* ZTV produced for 7 turbines of 220 m tip height.
- \* Visibility removed beyond the 45 km study area.
- \* Viewpoint height set to 2 m AGL.
- \*\* List of Historic Gardens & Designed Landscapes restricted to those with theoretical visibility of the wind farm.

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Coordinate System: British National Grid



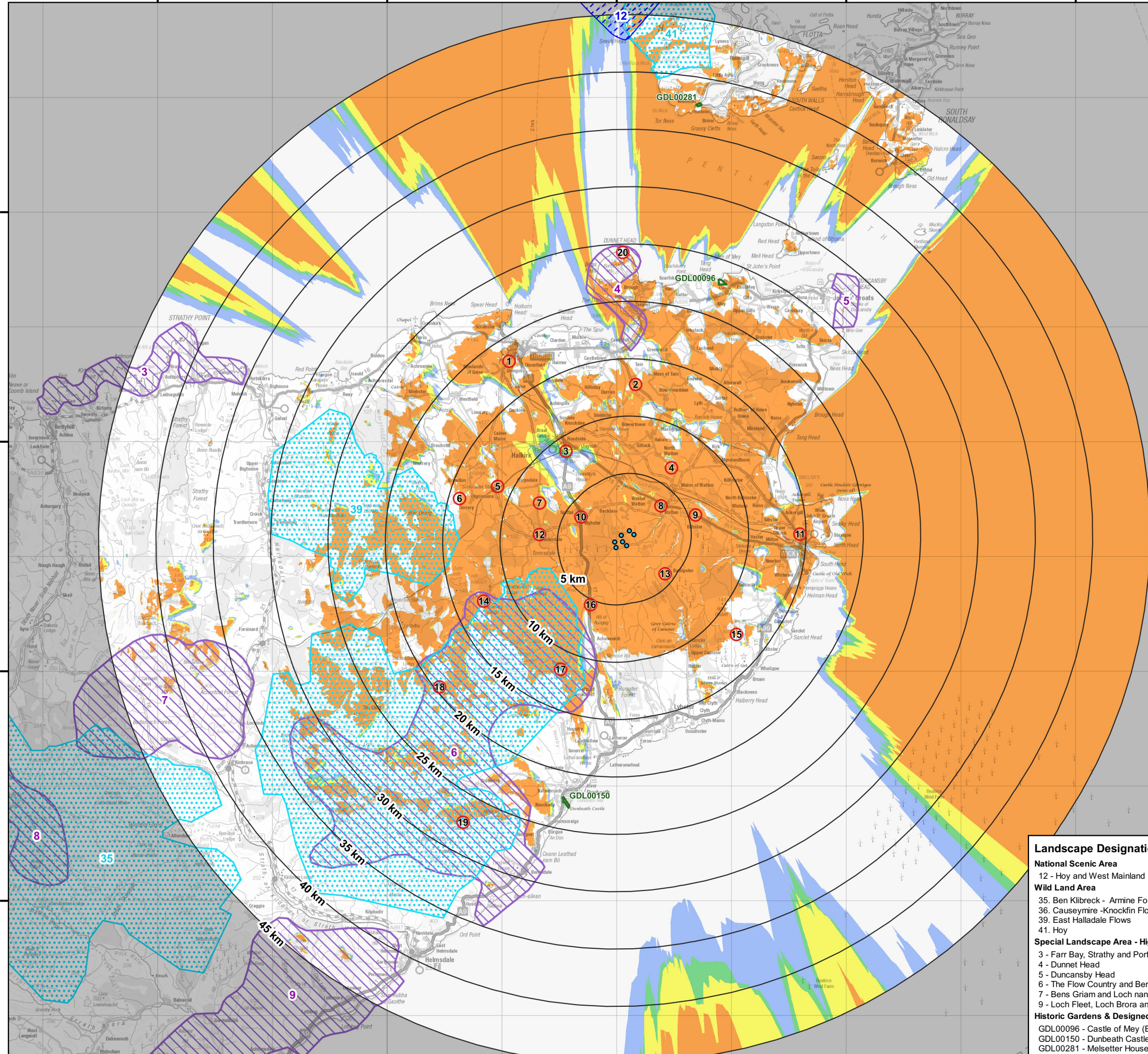
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- Landscape Designations**
- National Scenic Area**
  - 12 - Hoy and West Mainland
  - Wild Land Area**
  - 35 - Ben Klibreck - Armine Forest
  - 36 - Causeymire - Knockfin Flows
  - 39 - East Halladale Flows
  - 41 - Hoy
  - Special Landscape Area - Highlands & Islands**
  - 3 - Farr Bay, Strathy and Portserra
  - 4 - Dunnet Head
  - 5 - Duncansby Head
  - 6 - The Flow Country and Berriedale Coast
  - 7 - Bens Griam and Loch nan Clar
  - 9 - Loch Fleet, Loch Brora and Glen Loth
  - Historic Gardens & Designed Landscapes \*\***
  - GDL00096 - Castle of Mey (Barrogill Castle)
  - GDL00150 - Dunbeath Castle
  - GDL00281 - Melssetter House



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Project:  
**Watten Wind Farm, Scottish Highlands**

Title:  
**Figure 6.10: Visual Receptors**

**Key**

- Proposed turbine
- Viewpoint
- Distance from outermost turbines

**Sequential Routes**

- A9
- A99
- A882
- B876
- B874
- B870

**Number of turbines theoretically visible to tip height:**

- 1 - 2
- 3 - 4
- 5 - 6
- 7

**Notes:**

- \* Visibility takes earth curvature and atmospheric refraction into account, but not buildings, trees or other surface obstacles.
- \* ZTV produced for 7 turbines of 220 m tip height.
- \* Visibility removed beyond the 45 km study area.
- \* Viewpoint height set to 2 m AGL.

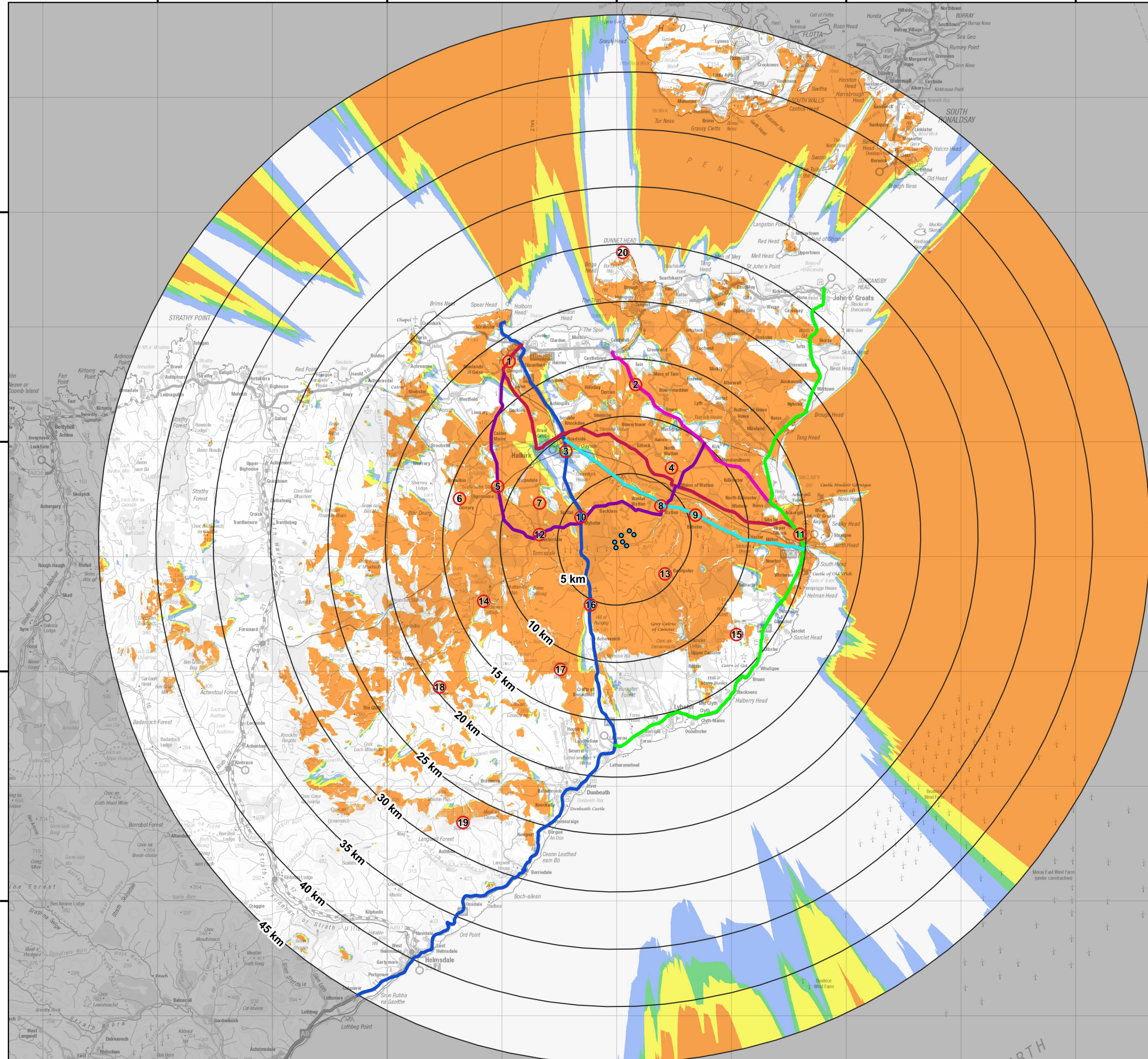
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Project:  
**Watten Wind Farm, Scottish Highlands**

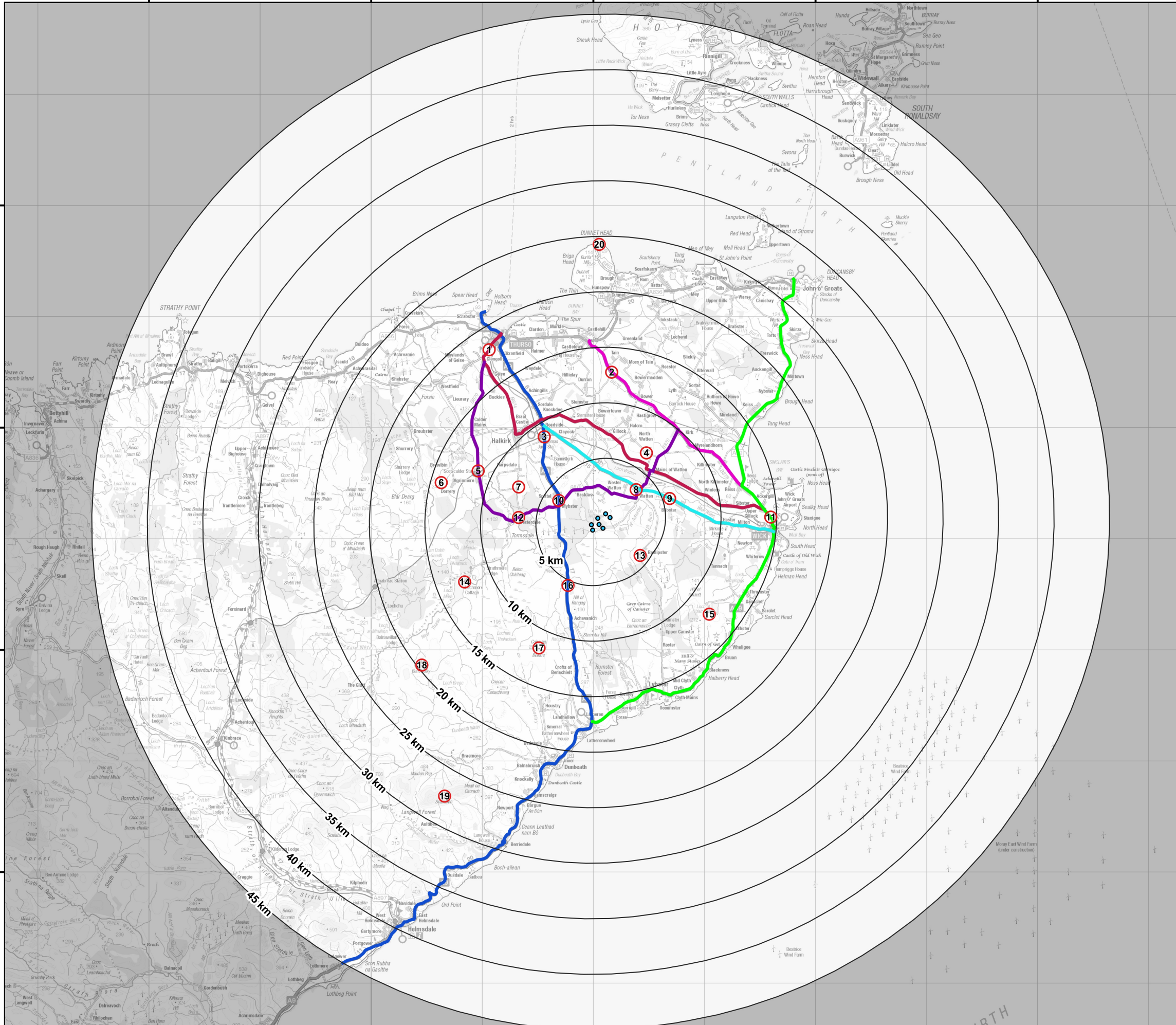
Title:  
**Figure 6.11: Sequential Receptors - Key Routes**

**Key**

- Proposed turbine
- Viewpoint
- Distance from outermost turbines

**Sequential Route**

- A9
- A99
- A882
- B876
- B874
- B870



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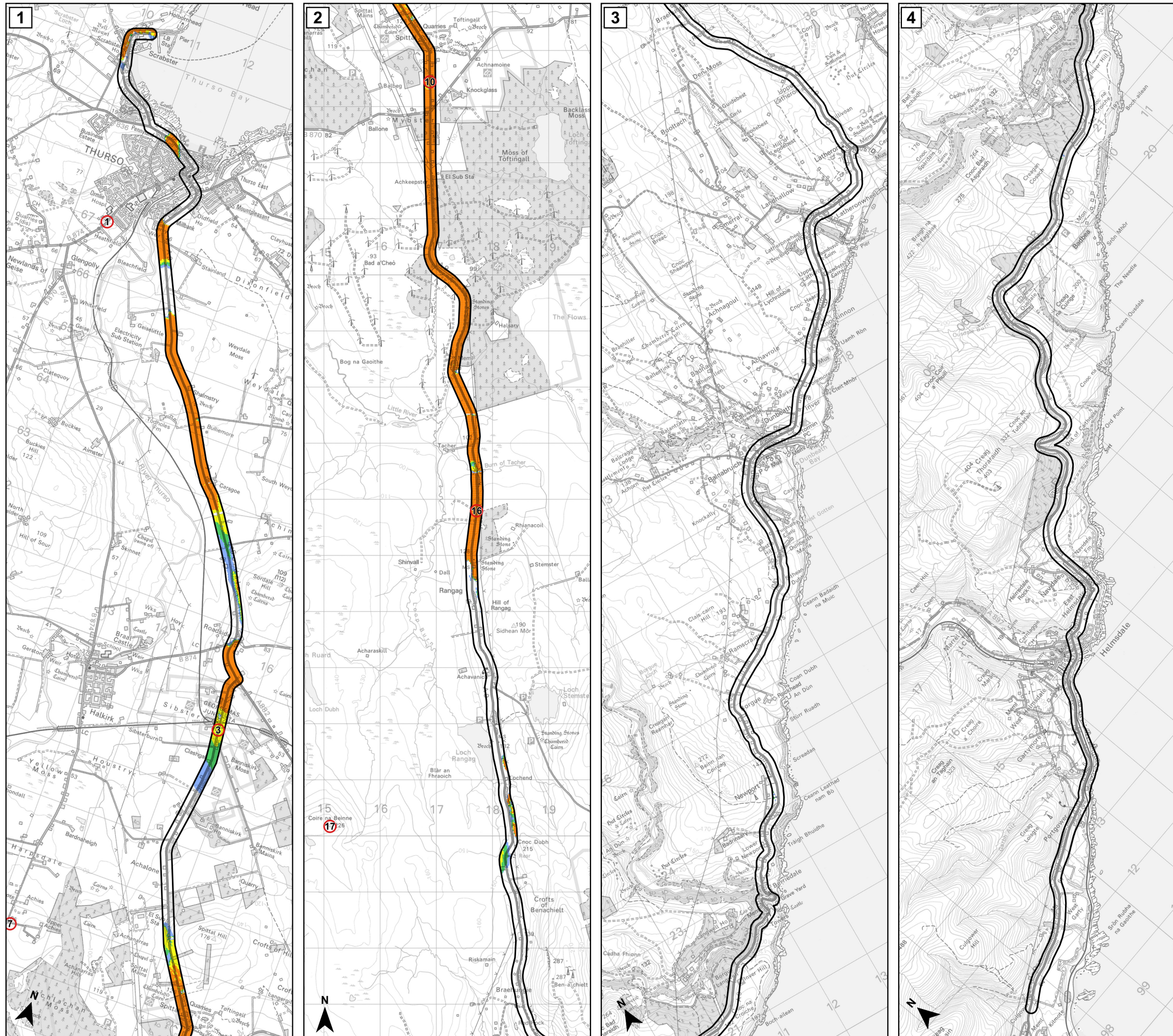
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Project:  
**Watten Wind Farm, Scottish Highlands**

Title:  
**Figure 6.11a: Sequential Route Visibility - A9**

**Key**

- Viewpoint
- Extent of route within the LVIA Study Area

**Number of turbines theoretically visible to tip height:**

- 1 - 2
- 3 - 4
- 5 - 6
- 7

**ZTV notes:**

- \* Visibility takes earth curvature and atmospheric refraction into account, but not buildings, trees or other surface obstacles.
- \* ZTV produced for 7 turbines of 220 m tip height.
- \* Viewpoint height set to 2 m AGL.
- \* See Figure 6.11 for full extent of assessed route.

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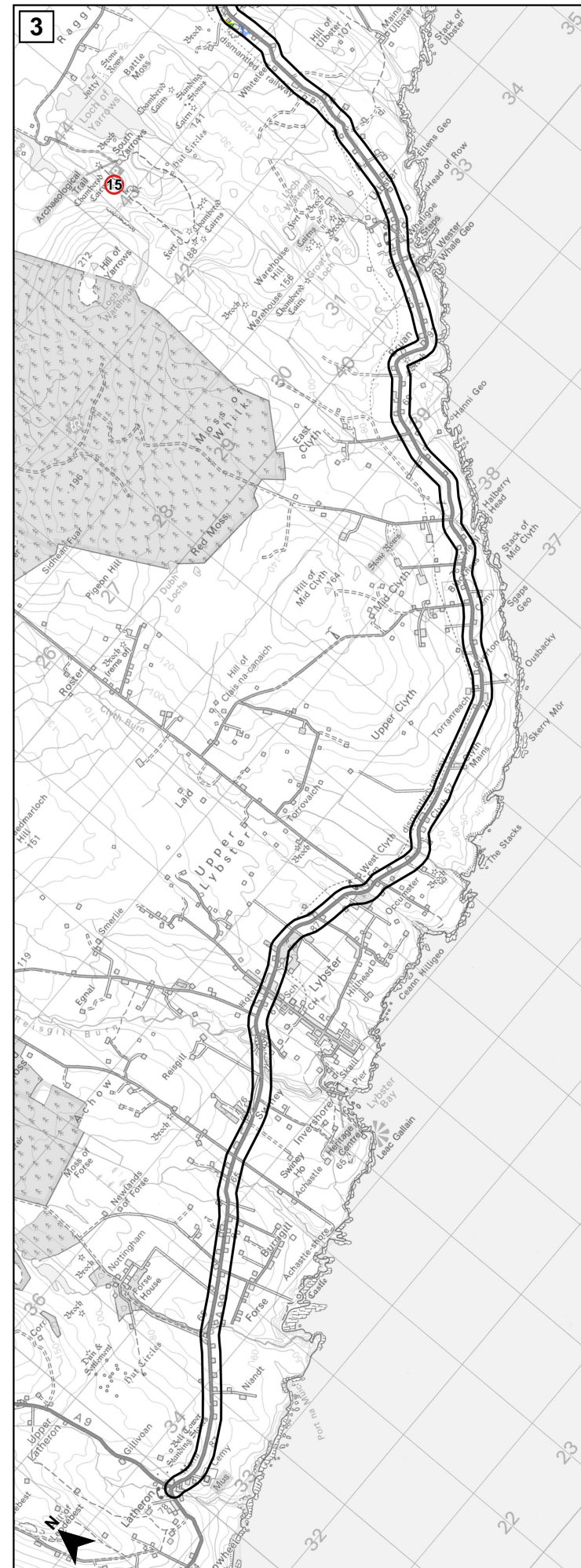
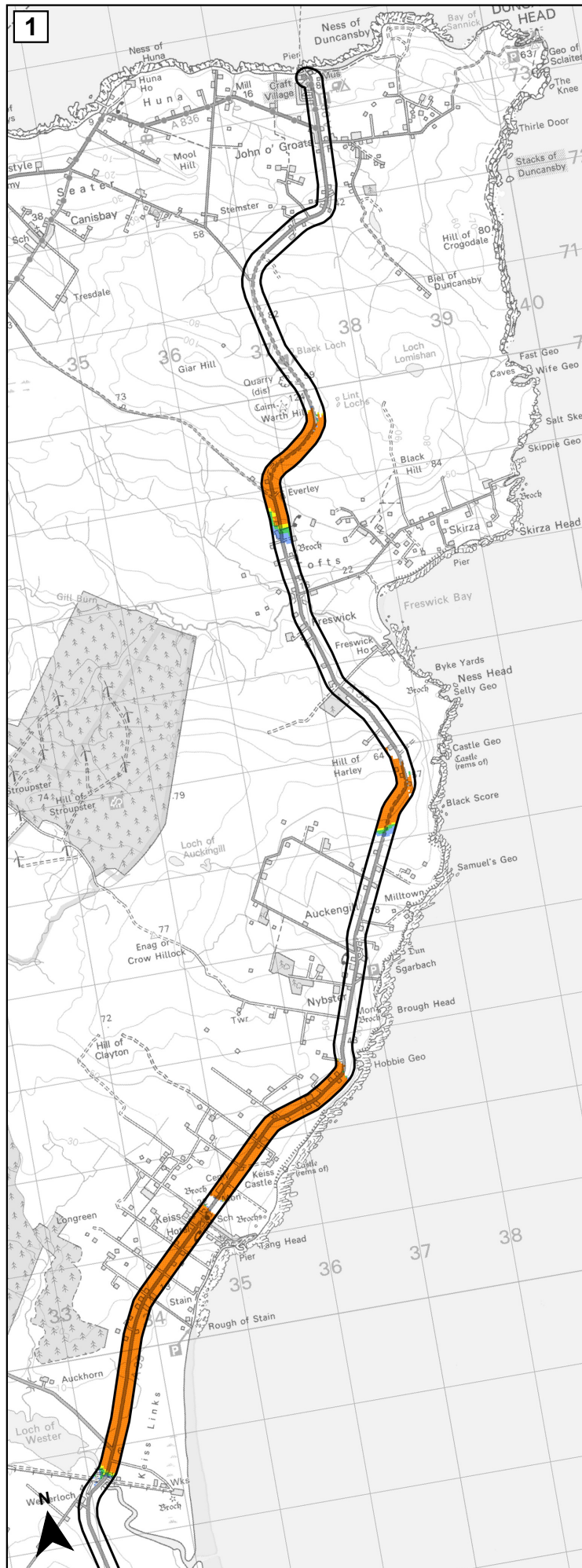
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Project:  
**Watten Wind Farm, Scottish Highlands**

Title:  
**Figure 6.11b: Sequential Route Visibility - A99**

- Key**
- Viewpoint
  - Extent of route within the LVIA Study Area
- Number of turbines theoretically visible to tip height:**
- 1 - 2
  - 3 - 4
  - 5 - 6
  - 7

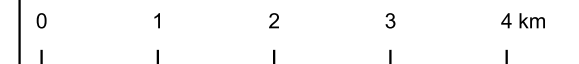
**ZTV notes:**

- \* Visibility takes earth curvature and atmospheric refraction into account, but not buildings, trees or other surface obstacles.
- \* ZTV produced for 7 turbines of 220 m tip height.
- \* Viewpoint height set to 2 m AGL.
- \* See Figure 6.11 for full extent of assessed route.

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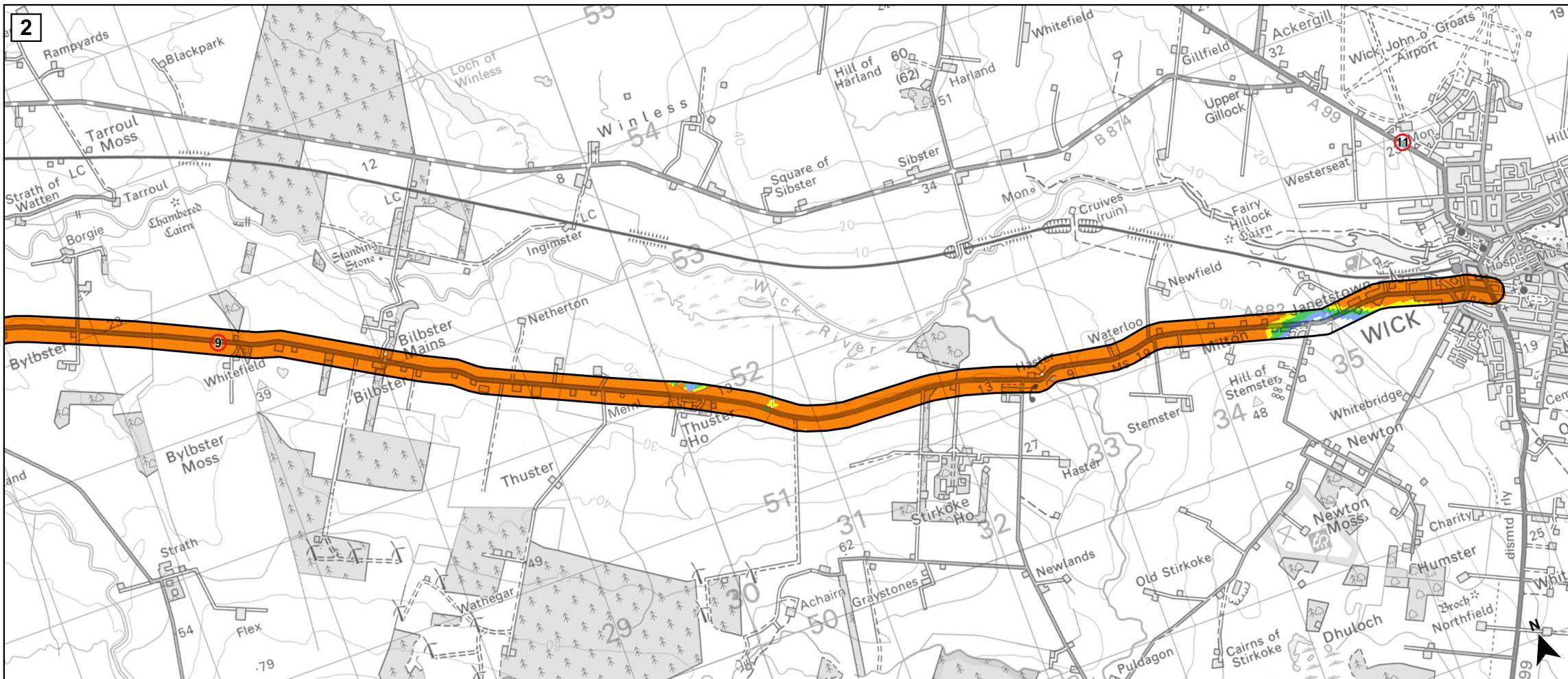
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Project:  
**Watten Wind Farm, Scottish Highlands**

Title:  
**Figure 6.11c: Sequential Route Visibility - A882**

**Key**

- Viewpoint
- Extent of route within the LVIA Study Area

**Number of turbines theoretically visible to tip height:**

- 1 - 2
- 3 - 4
- 5 - 6
- 7

**ZTV notes:**

- \* Visibility takes earth curvature and atmospheric refraction into account, but not buildings, trees or other surface obstacles.
- \* ZTV produced for 7 turbines of 220 m tip height.
- \* Viewpoint height set to 2 m AGL.
- \* See Figure 6.11 for full extent of assessed route.

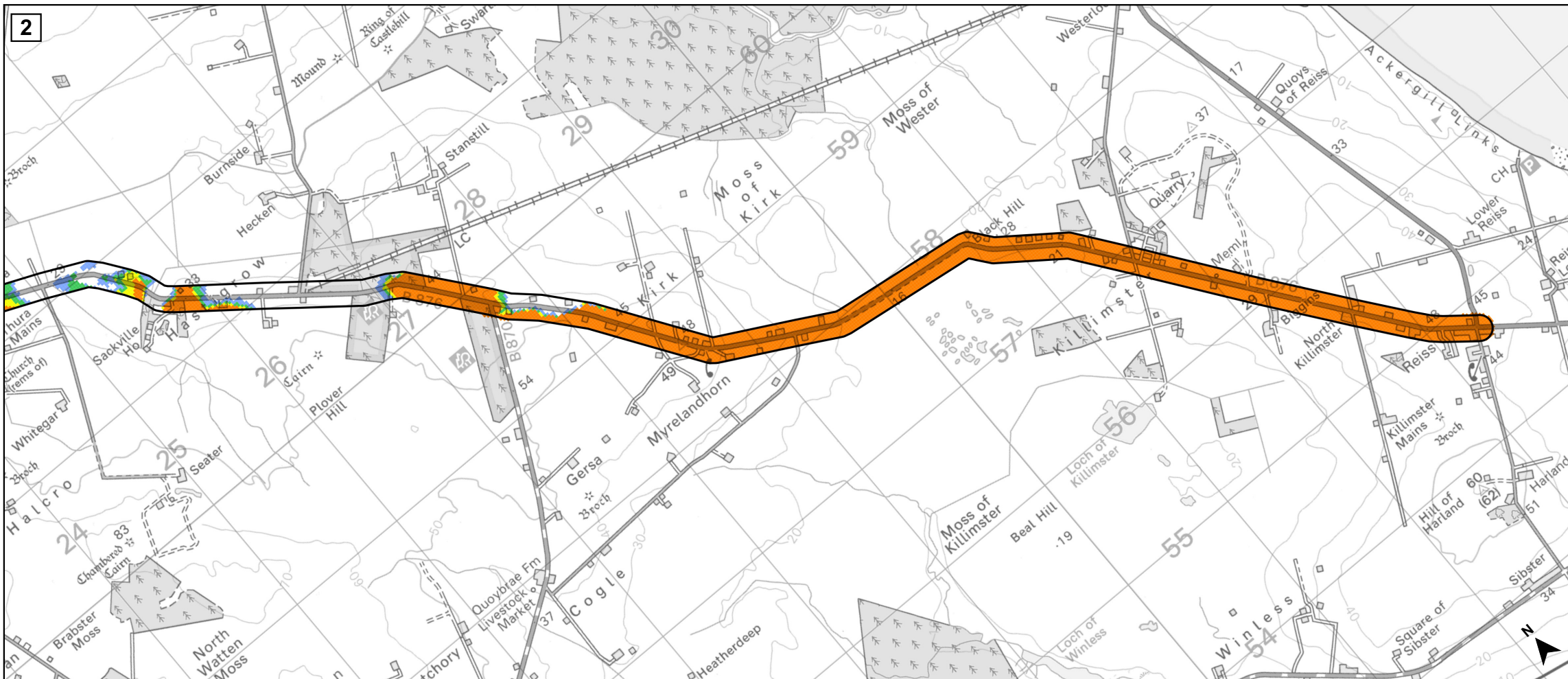
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Project:  
**Watten Wind Farm, Scottish Highlands**

Title:  
**Figure 6.11d: Sequential Route Visibility - B876**

**Key**

- Viewpoint
- Extent of route within the LVIA Study Area

**Number of turbines theoretically visible to tip height:**

- 1 - 2
- 3 - 4
- 5 - 6
- 7

**ZTV notes:**

- \* Visibility takes earth curvature and atmospheric refraction into account, but not buildings, trees or other surface obstacles.
- \* ZTV produced for 7 turbines of 220 m tip height.
- \* Viewpoint height set to 2 m AGL.
- \* See Figure 6.11 for the full extent of the assessed route.

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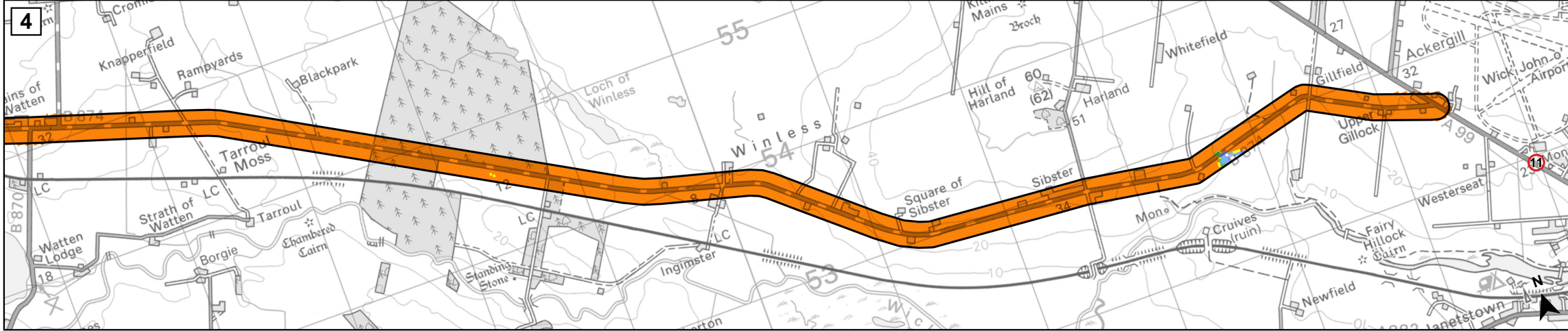
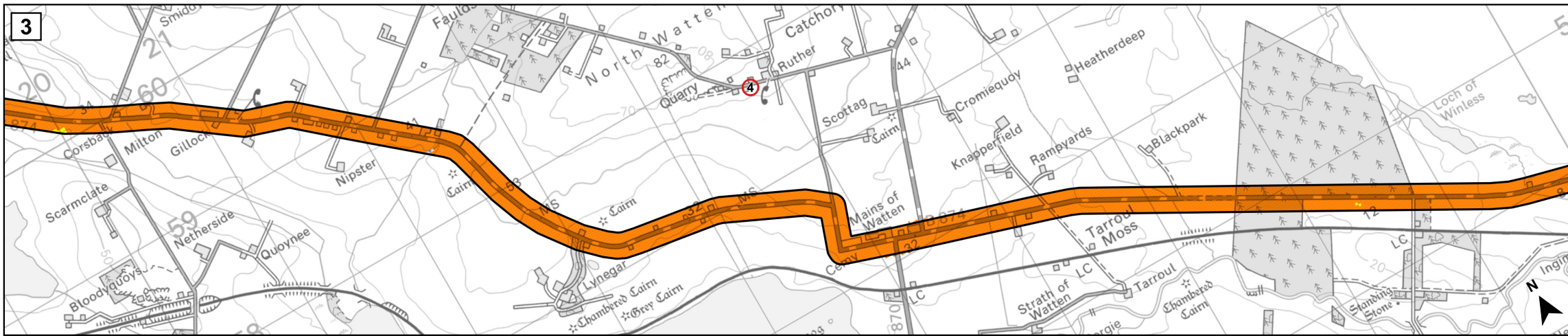
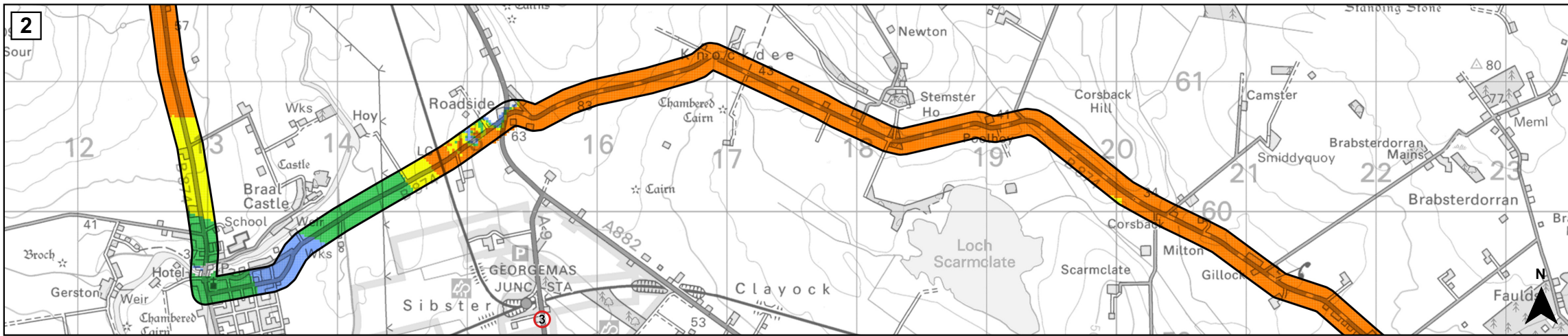
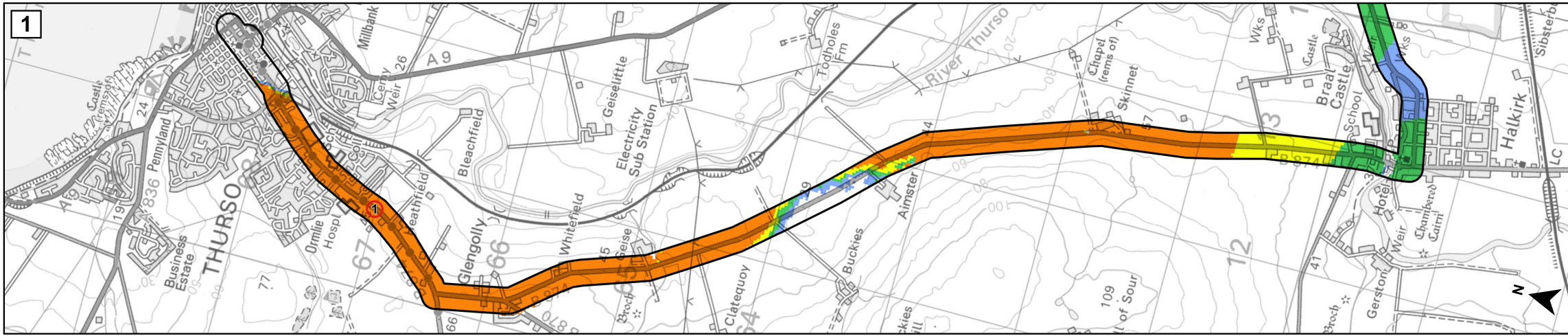
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Project:  
**Watten Wind Farm, Scottish Highlands**

Title:  
**Figure 6.11d: Sequential Route Visibility - B74**

**Key**

- Viewpoint
- Extent of route within the LVIA Study Area

**Number of turbines theoretically visible to tip height:**

- 1 - 2
- 3 - 4
- 5 - 6
- 7

**ZTV notes:**

- \* Visibility takes earth curvature and atmospheric refraction into account, but not buildings, trees or other surface obstacles.
- \* ZTV produced for 7 turbines of 220 m tip height.
- \* Viewpoint height set to 2 m AGL.
- \* See Figure 6.11 for the full extent of the assessed route.

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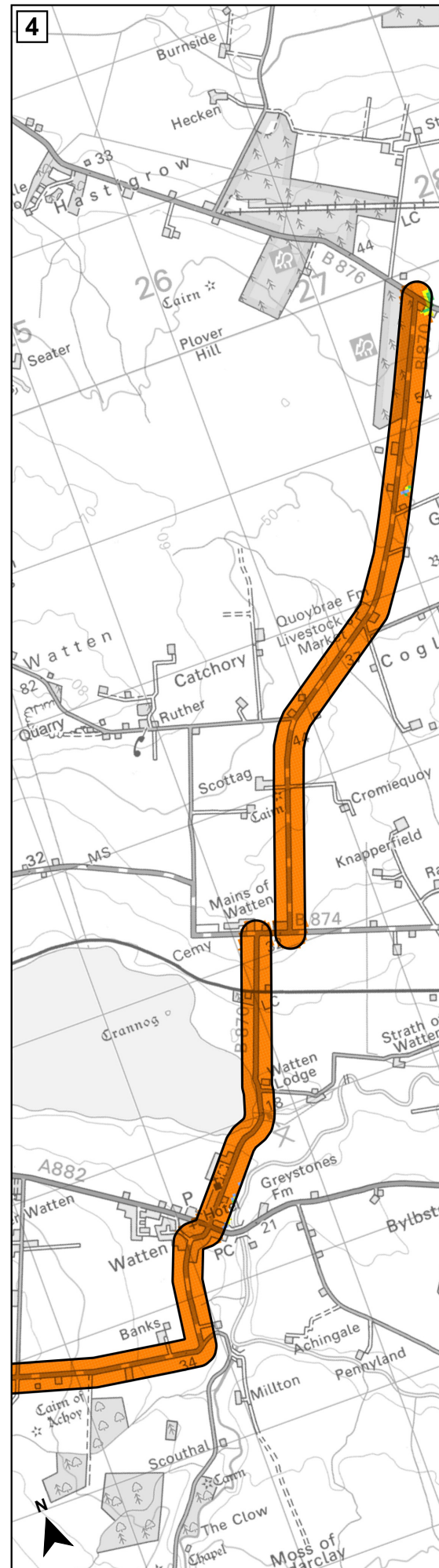
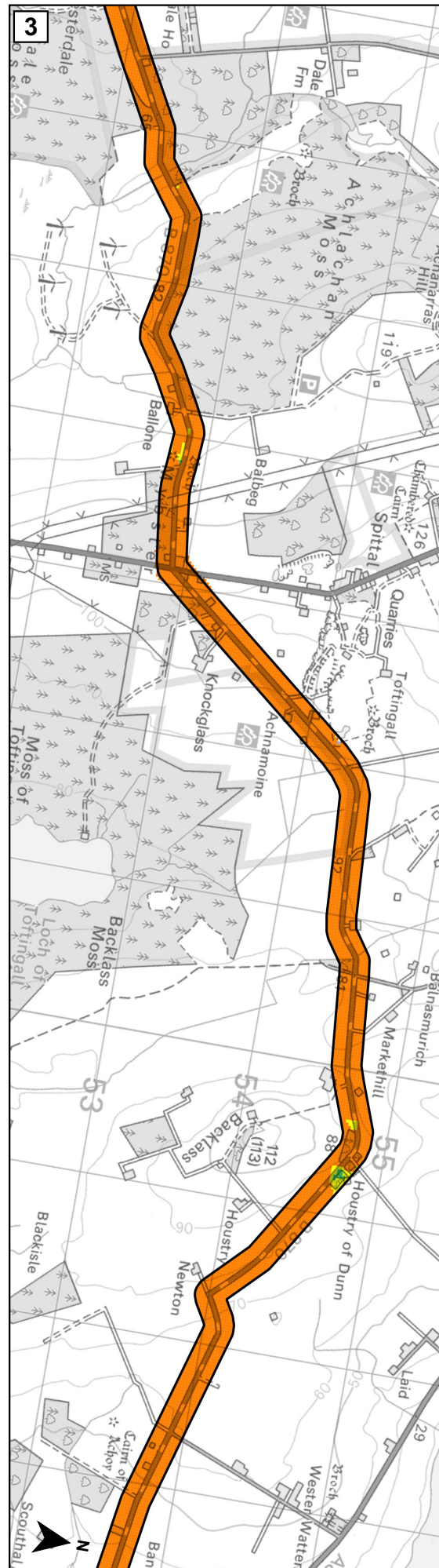
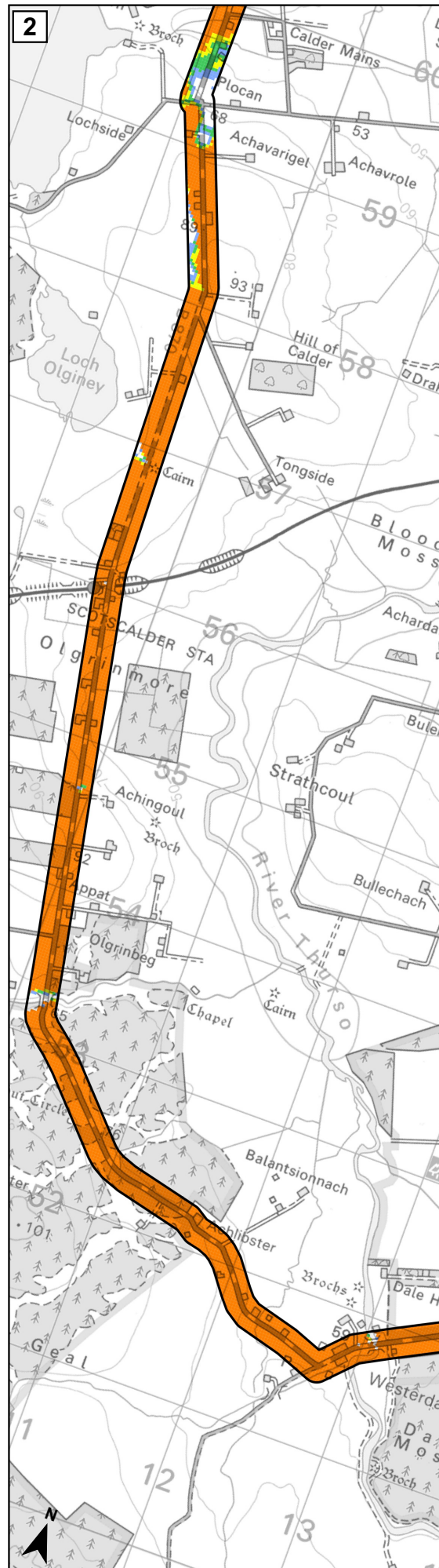
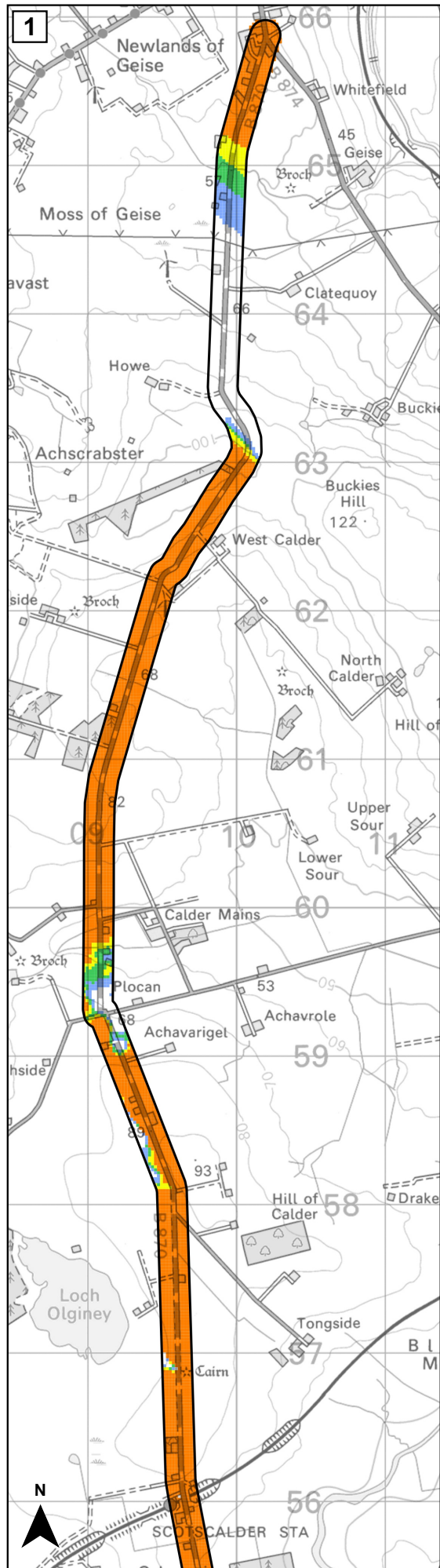
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Project:  
**Watten Wind Farm, Scottish Highlands**

Title:  
**Figure 6.11f: Sequential Route Visibility - B870**

**Key**

- Viewpoint
- Extent of route within the LVIA Study Area

**Number of turbines theoretically visible to tip height:**

- 1 - 2
- 3 - 4
- 5 - 6
- 7

**ZTV notes:**

- \* Visibility takes earth curvature and atmospheric refraction into account, but not buildings, trees or other surface obstacles.
- \* ZTV produced for 7 turbines of 220 m tip height.
- \* Viewpoint height set to 2 m AGL.
- \* See Figure 6.11 for the full extent of the assessed route.

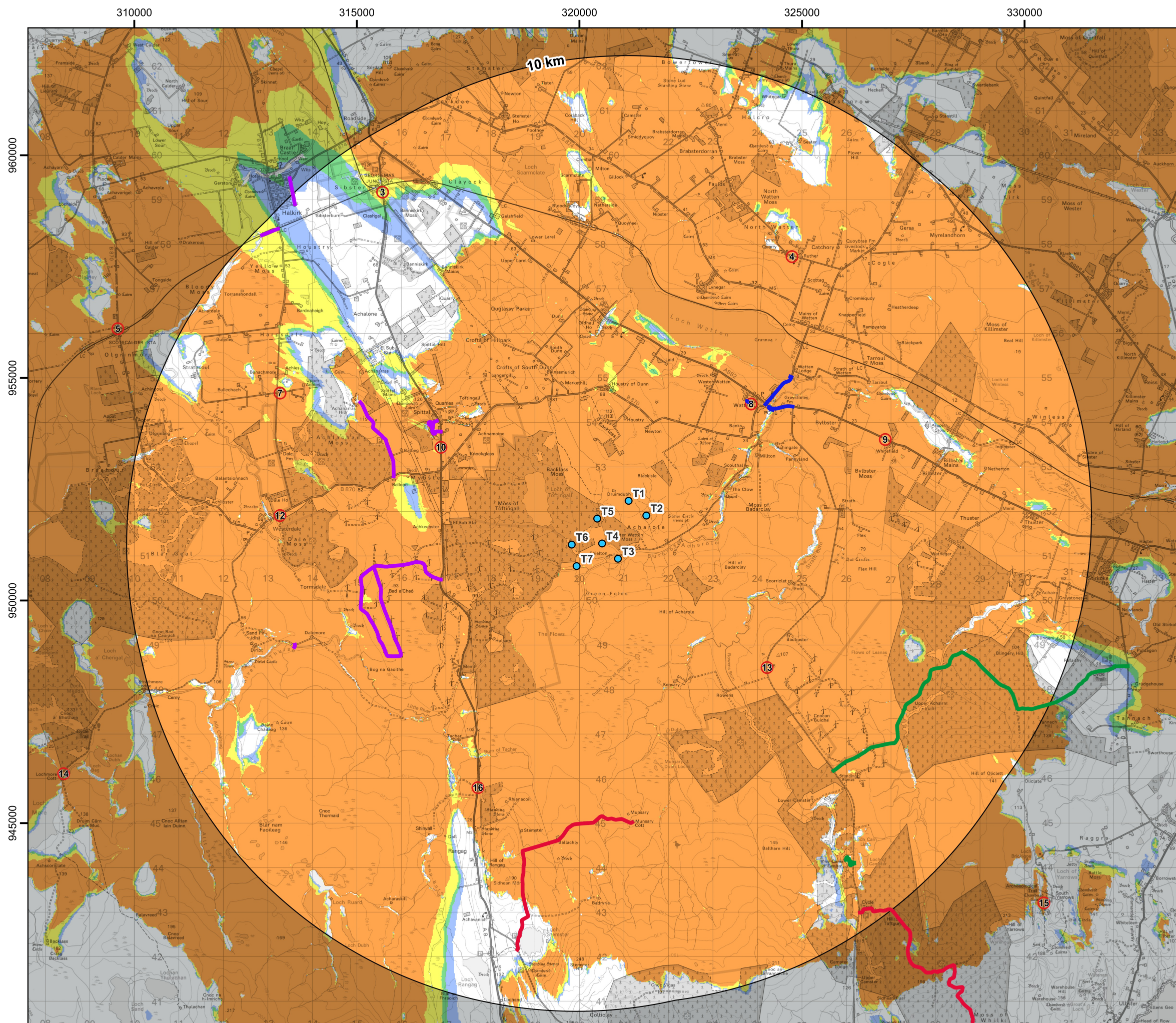
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Project:  
**Watten Wind Farm, Scottish Highlands**

Title:  
**Figure 6.12: Core Paths Within 10 km**

**Key**

- Proposed turbine
- Viewpoint
- Distance from outermost turbines

**Core Path**

- 6
- 10
- 12
- 14

**Number of turbines theoretically visible to tip height:**

- 1 - 2
- 3 - 4
- 5 - 6
- 7

**ZTV notes:**

- \* Visibility takes earth curvature and atmospheric refraction into account, but not buildings, trees or other surface obstacles.
- \* ZTV produced for 7 turbines of 220 m tip height.
- \* Viewpoint height set to 2 m AGL.

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Project:  
**Watten Wind Farm, Scottish Highlands**

Title:  
**Figure 6.13 Cumulative Wind Farms within 60km**

- Key**
- Proposed turbine
  - Distance from outermost turbines
- Cumulative wind farm status**
- Operational/under construction
  - Approved
  - Submitted

Note: The status of wind farms is continually evolving and this map illustrates the stages of development to the best of our knowledge at the time of creation.

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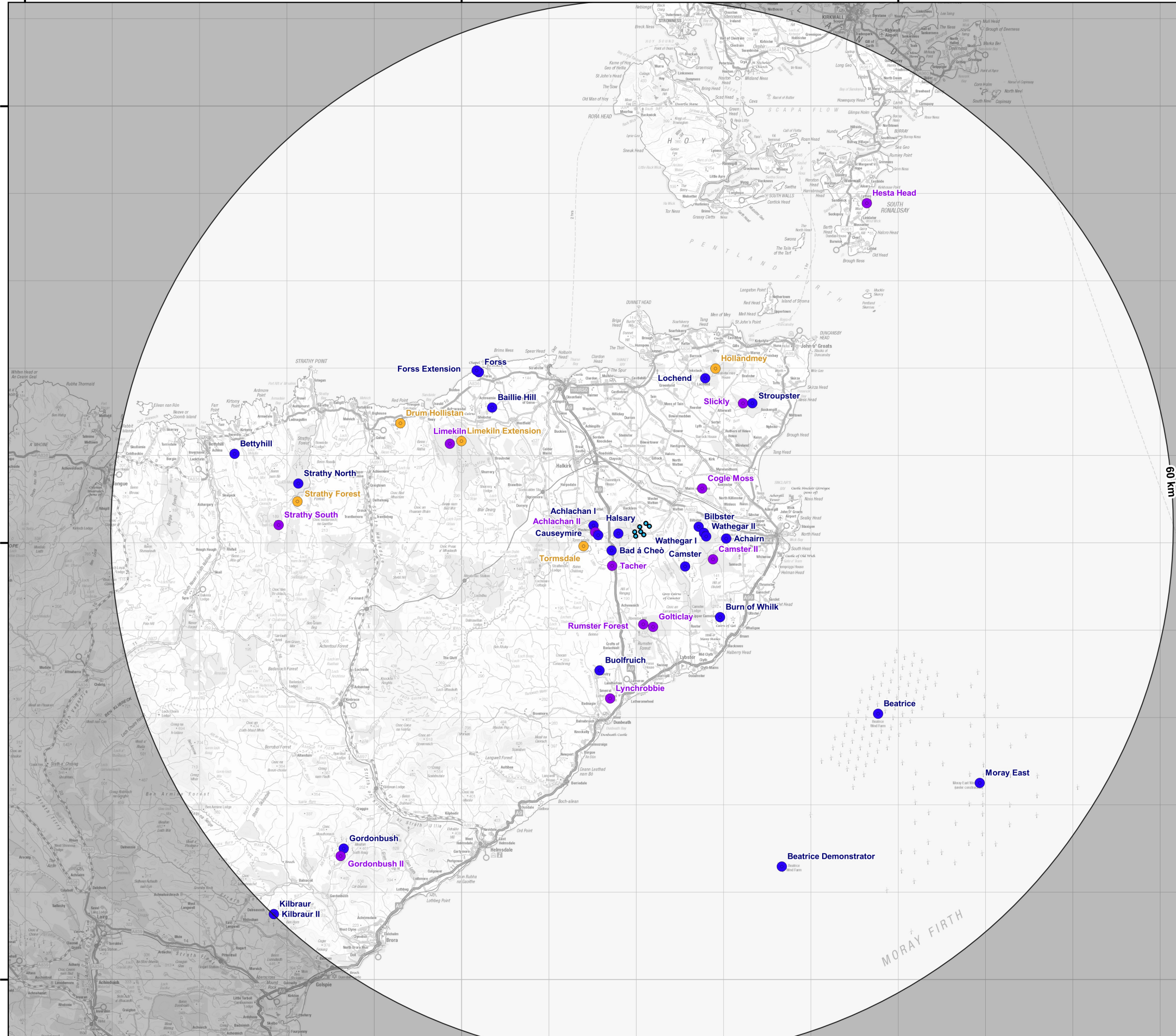
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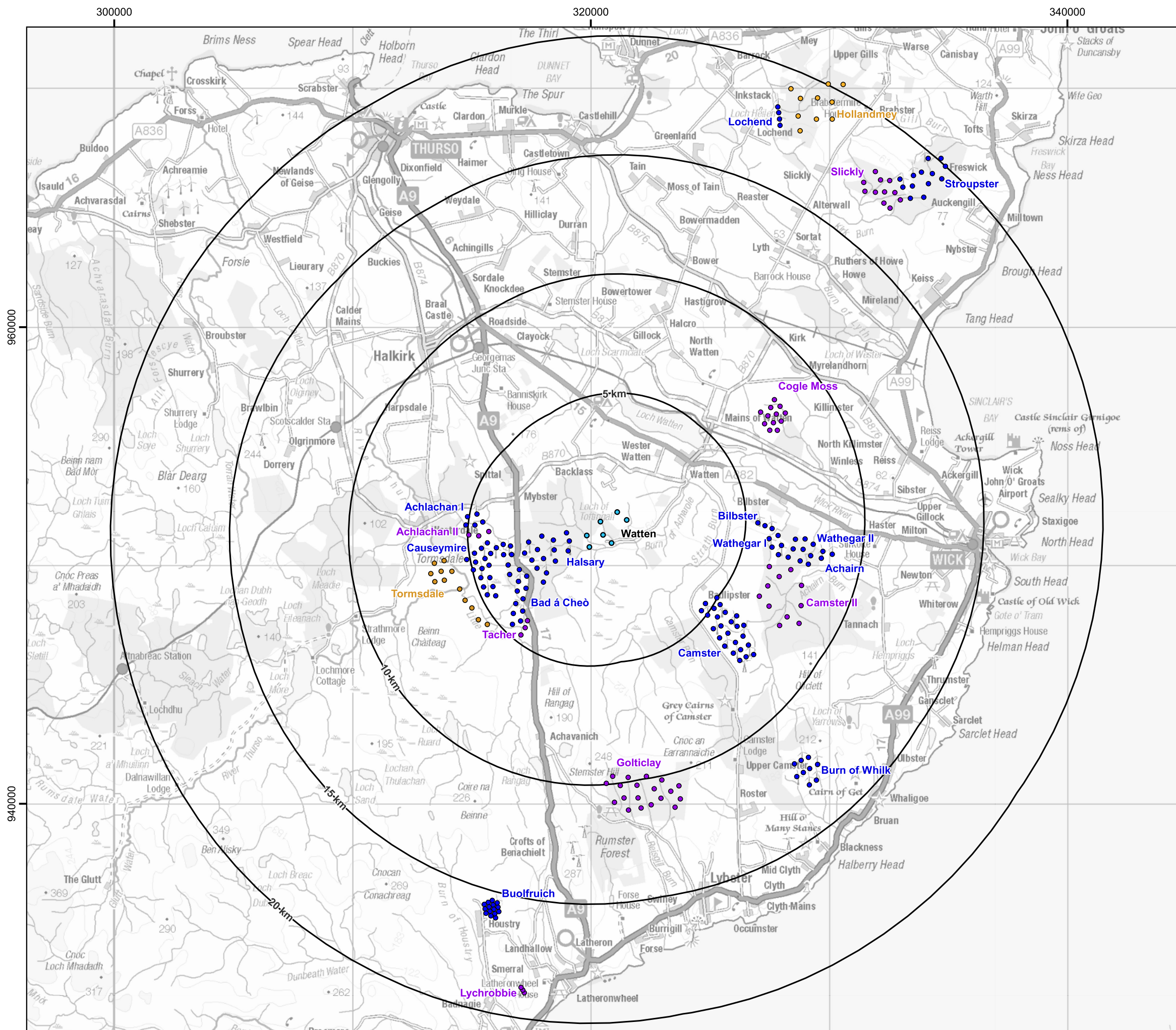
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Project:  
**Watten Wind Farm, Scottish Highlands**

Title:  
**Figure 6.14 Wind Farms considered in the Cumulative Assessment**

- Key**
- Watten turbine
  - Distance from outermost Watten turbines
  - Operational turbine
  - Consented turbine
  - Proposed (in planning) turbine

Note: The status of wind farms is continually evolving and this map illustrates the stages of development to the best of our knowledge at the time of creation.

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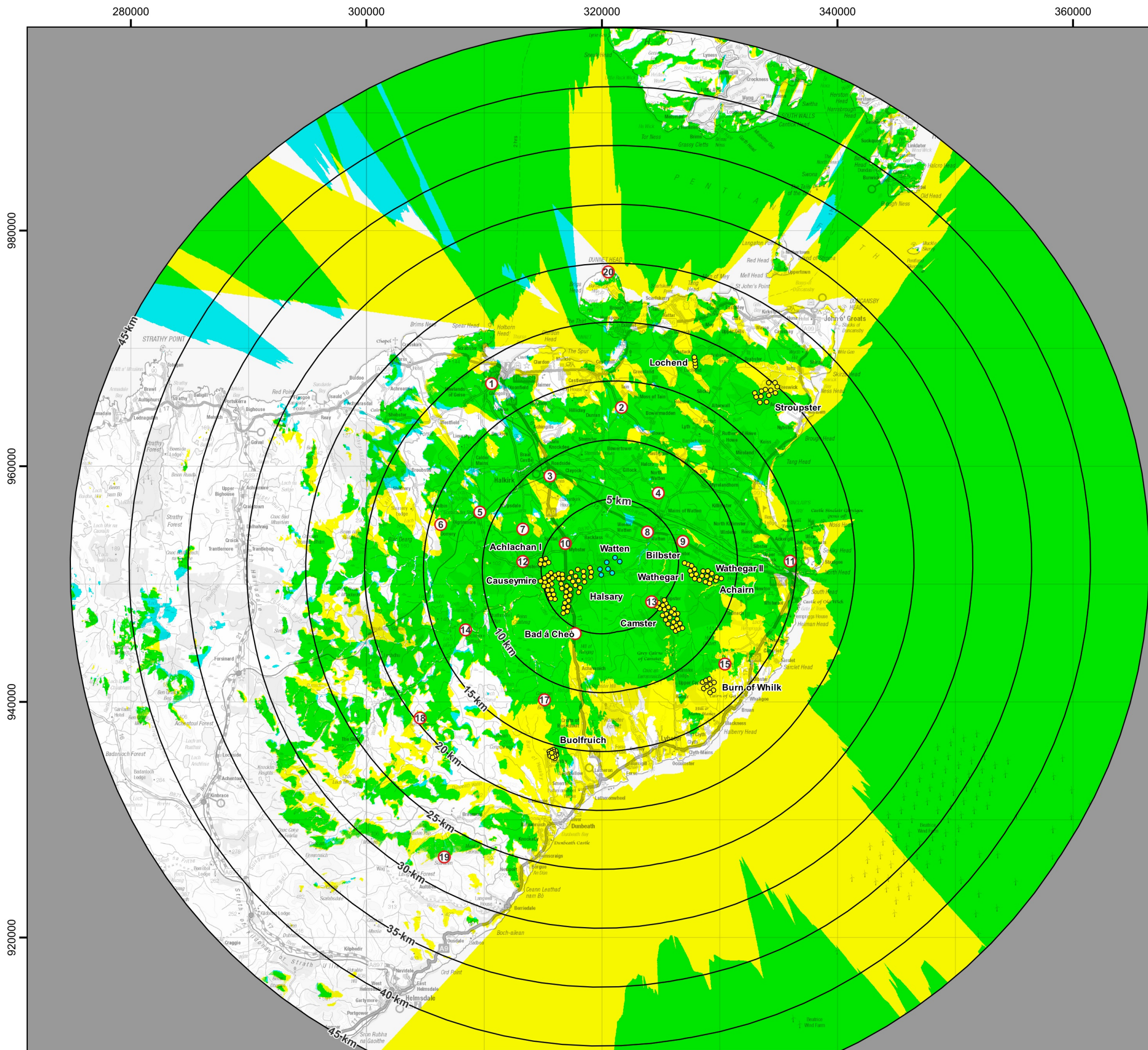
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Drawing by:  
 The Natural Power Consultants Limited  
 The Green House  
 Forrest Estate, Dalry  
 Castle Douglas, DG7 3XS, UK  
 Tel: +44 (0)1644 430008  
 Fax: +44 (0)845 299 1236  
 Email: sayhello@naturalpower.com  
 www.naturalpower.com



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Project:  
**Watten Wind Farm, Scottish Highlands**

Title:  
**Figure 6.15: Cumulative Zone of Theoretical Visibility to Tip Height: Scenario 1 (Baseline) - Watten & Wind Farms in Operation/Under Construction (Study Area)**

**Key**

- Proposed Watten turbine
- Distance from outermost Watten turbines
- Operational turbine
- Viewpoint

**Theoretical visibility to tip height of:**

Operational/  
under construction  
wind farms

∩

Watten

**ZTV Notes:**

- \* Visibility takes earth curvature and atmospheric refraction into account, but not buildings, trees or other surface obstacles.
- \* ZTV produced for 7 Watten turbines at 220 m to tip.
- \* Operational/under construction turbines: Achlachan I (5 turbines at 115 m to tip); Bad à Cheo (13 turbines at 111 m to tip); Bilbster (3 turbines at 93 m to tip); Buolfruch (15 turbines at 75 m to tip); Burn of Whilk (9 turbines at 116 m to tip); Camster (25 turbines at 120 m to tip); Causeymire (21 turbines at 101 m to tip); Halsary (15 turbines at 120 m to tip); Lochend (4 turbines at 99.5 m to tip); Stroupster (13 turbines at 113 m to tip); Wathegar I (9 turbines at 100 m to tip); Wathegar II (9 turbines at 110 m to tip).
- \* Viewpoint height set to 2 m AGL.

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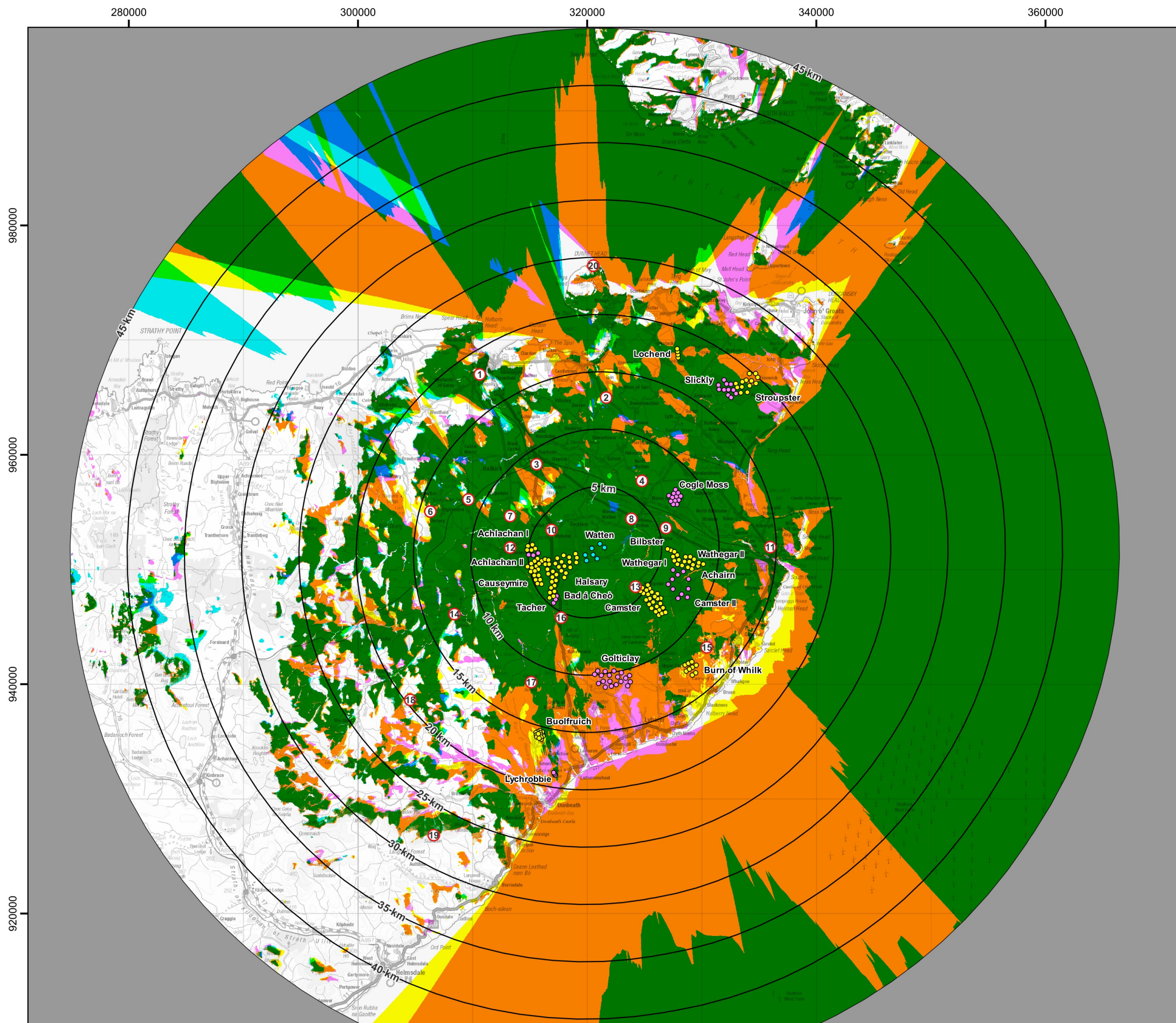
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0 2.5 5 7.5 10 km

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 The Natural Power Consultants Limited  
 The Green House  
 Forrest Estate, Dalry  
 Castle Douglas, DG7 3XS, UK  
 Tel: +44 (0)1644 430008  
 Fax: +44 (0)845 299 1236  
 Email: sayhello@naturalpower.com  
 www.naturalpower.com

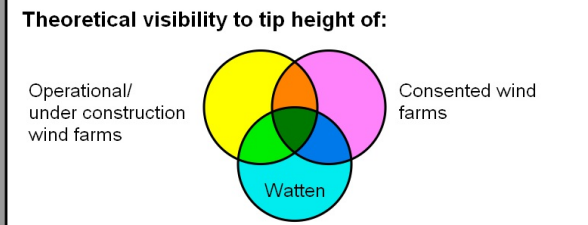
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Project:  
**Watten Wind Farm, Scottish Highlands**

Title:  
**Figure 6.16a: Cumulative Zone of Theoretical Visibility to Tip Height: Scenario 2 - Scenario 1 with Consented Wind Farms (Study Area)**

- Key**
- Proposed Watten turbine
  - Distance from outermost Watten turbines
  - Operational turbine
  - Consented turbine
  - Viewpoint



**ZTV Notes:**

- \* Visibility takes earth curvature and atmospheric refraction into account, but not buildings, trees or other surface obstacles.
- \* ZTV produced for 7 Watten turbines at 220 m to tip.
- \* Operational/under construction turbines: See 6.15 for details.
- \* Consented turbines: Achlachan II (3 turbines at 111 m to tip); Camster II (11 turbines at 126.5 m to tip); Cogle Moss (12 turbines at 99.5 m to tip); Golticlay (19 turbines at 130 m to tip); Slickly (11 turbines at 149.9 m to tip); Tacher (3 turbines at 135 m to tip); Lychrobbie (3 turbines at 74 m to tip).
- \* Viewpoint height set to 2 m AGL.

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Scale @ A3: 1:330,000  
 Coordinate System: British National Grid

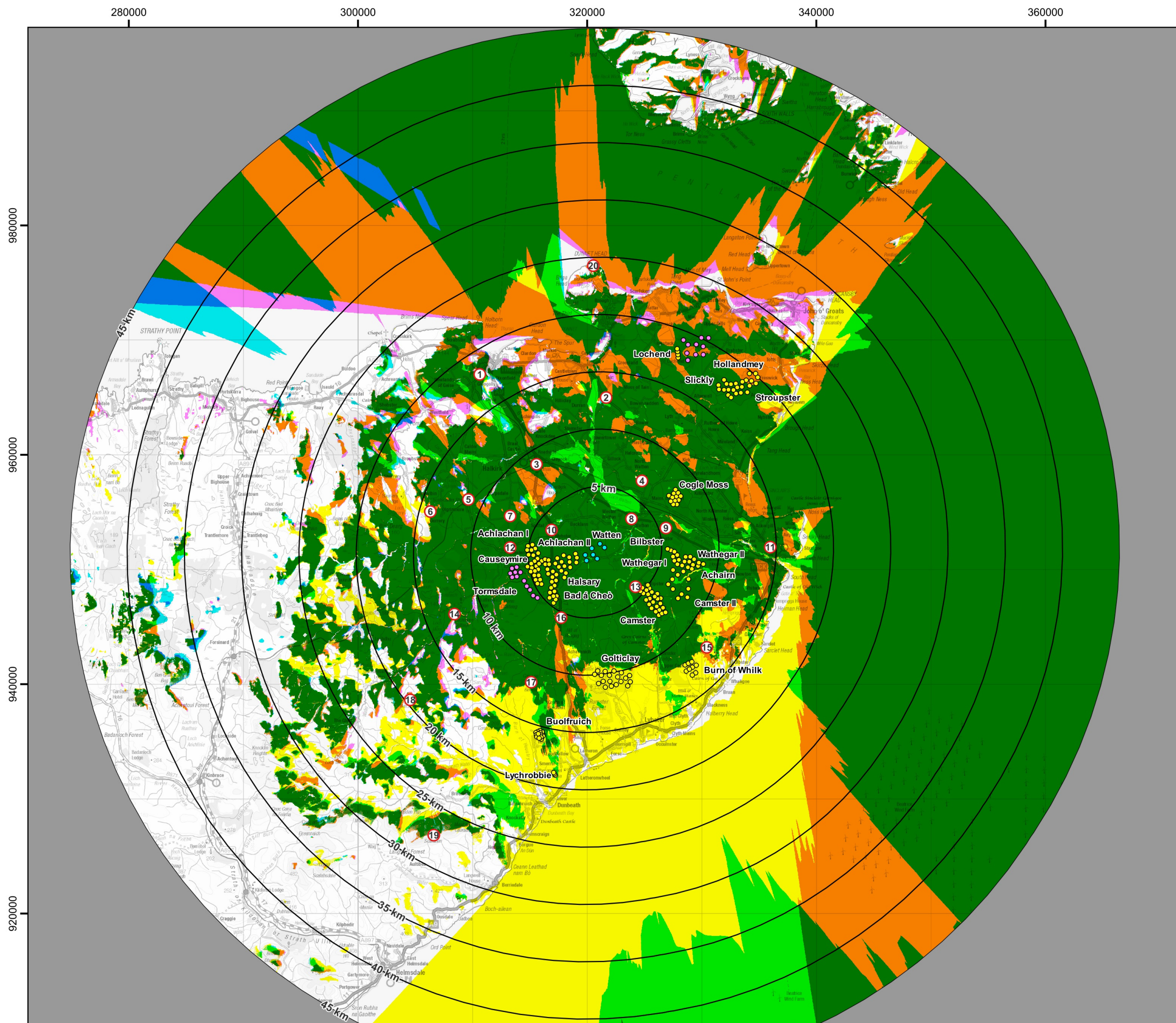
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 The Natural Power Consultants Limited  
 The Green House  
 Forrest Estate, Dalry  
 Castle Douglas, DG7 3XS, UK  
 Tel: +44 (0)1644 430008  
 Fax: +44 (0)845 299 1236  
 Email: sayhello@naturalpower.com  
 www.naturalpower.com



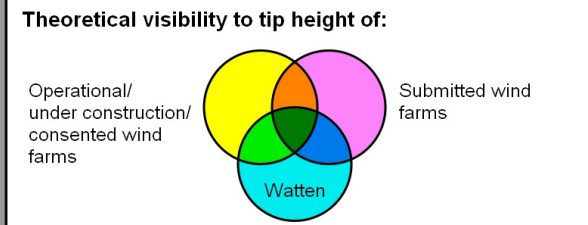
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Project:  
**Watten Wind Farm, Scottish Highlands**

Title:  
**Figure 6.16b: Cumulative Zone of Theoretical Visibility to Tip Height: Scenario 3 - Scenario 2 with Submitted Wind Farms (Study Area)**

- Key**
- Proposed Watten turbine
  - Distance from outermost Watten turbines
  - Operational or consented turbine
  - Submitted turbine
  - Viewpoint



**ZTV Notes:**

- \* Visibility takes earth curvature and atmospheric refraction into account, but not buildings, trees or other surface obstacles.
- \* ZTV produced for 7 Watten turbines at 220 m to tip.
- \* Operational/under construction turbines: See Figure 6.15 for details.
- \* Consented turbines: See Figure 6.16a for details.
- \* Submitted turbines: Hollandmey (10 turbines at 149.9 m to tip); Tormsdale (12 turbines at 149.9 m to tip).
- \* Viewpoint height set to 2 m AGL.

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Drawing by:  
 The Natural Power Consultants Limited  
 The Green House  
 Forrest Estate, Dalry  
 Castle Douglas, DG7 3XS, UK  
 Tel: +44 (0)1644 430008  
 Fax: +44 (0)845 299 1236  
 Email: sayhello@naturalpower.com  
 www.naturalpower.com



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