

CRAIGINMODDIE WIND FARM

FIGURE 6.9

Cumulative ZTV: Clauchrie

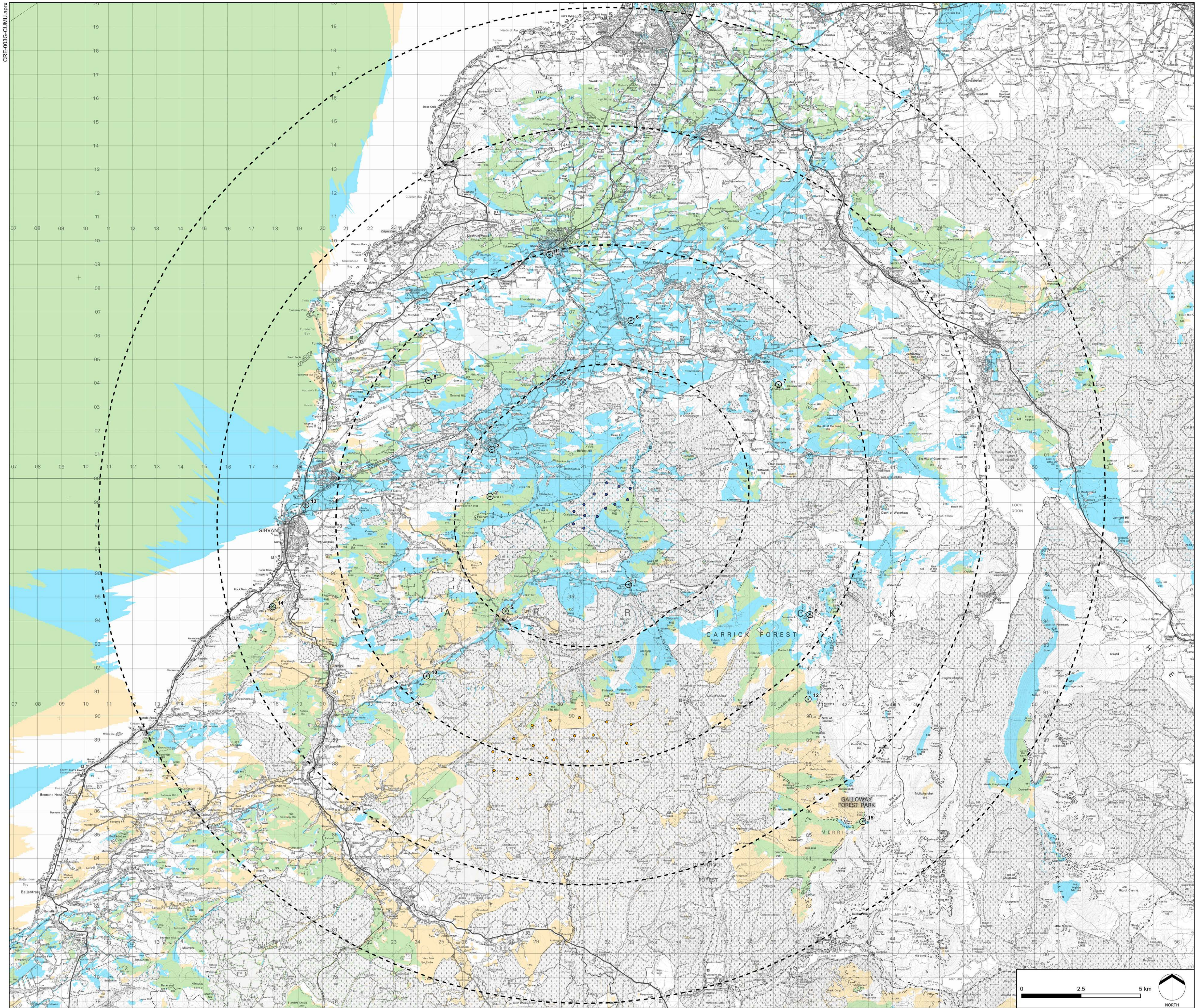


FIGURE DATA:
This figure has been based on the following data:

Layout file: obvs-BT-T5-20km.shp; obvs-BT-T50-45km.shp; obvs-cumu-clauchrie-BT-T5-20km.shp; obvs-cumu-clauchrie-BT-T50-45km.shp
Terrain data: T5-DSM-cumu-screening-10m.asc; T50-DSM-cumu-screening.asc
Viewer's eye height: 2m above ground level
Calculation grid size: 10m to 20km from site; 50m beyond

NOTES:
This drawing is based upon computer generated Zone of Theoretical Visibility (ZTV) studies produced using the Viewshed routine in the Visibility Analysis plugin for QGIS.

The areas shown are the maximum theoretical visibility, taking into account topography, principal woodlands and buildings.

A digital surface model (DSM) has been derived from OS Terrain 5/50 height data with the locations of woodland and buildings taken from the OS Open Map Local dataset. Buildings have been modelled with an assumed height of 7.5m and woodland an assumed height of 15m, representing a conservative estimate of average heights within the study area.

The model does not take into account some localised features such as small copses, hedgerows or individual trees and therefore still gives an exaggerated impression of the extent of visibility. The actual extent of visibility on the ground will be less than that suggested by this plan.

The ZTV includes an adjustment that allows for Earth's curvature and light refraction. It is based on a derived DSM and has a 10m² (to 20km from site)/50m² (beyond) resolution.

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CRAIGINMODDIE WIND FARM

FIGURE 6.10

Cumulative ZTV: Carrick

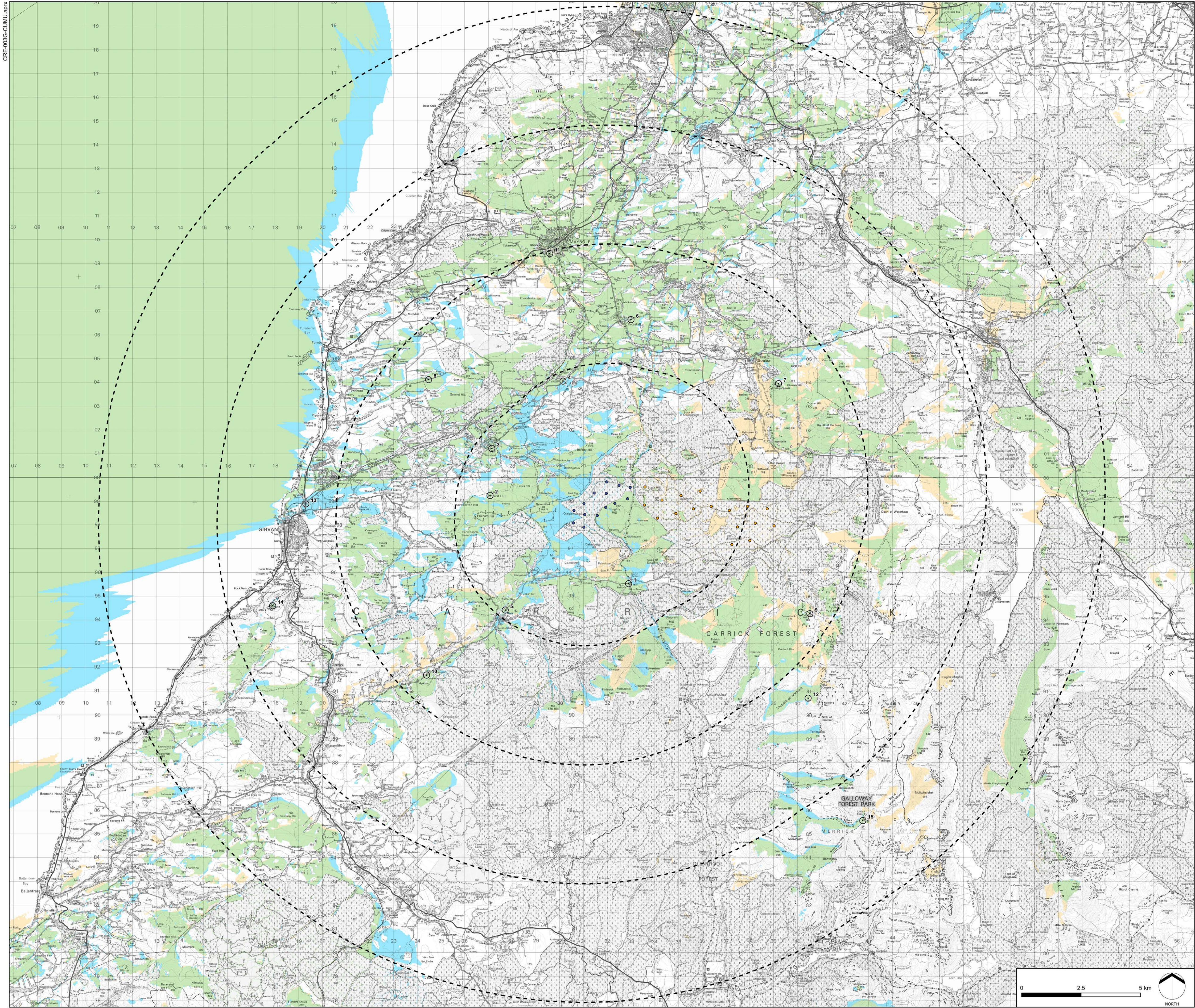


FIGURE DATA:
This figure has been based on the following data:

Layout file: obvs-BT-T5-20km.shp; obvs-BT-T50-45km.shp; obvs-cumu-carrick-BT-T5-20km.shp; obvs-cumu-carrick-BT-T50-45km.shp
Terrain data: T5-DSM-cumu-screening-10m.asc;
T50-DSM-cumu-screening.asc
Viewer's eye height: 2m above ground level
Calculation grid size: 10m to 20km from site; 50m beyond

NOTES:
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A digital surface model (DSM) has been derived from OS Terrain 5/50 height data with the locations of woodland and buildings taken from the OS Open Map Local dataset. Buildings have been modelled with an assumed height of 7.5m and woodland an assumed height of 15m, representing a conservative estimate of average heights within the study area.

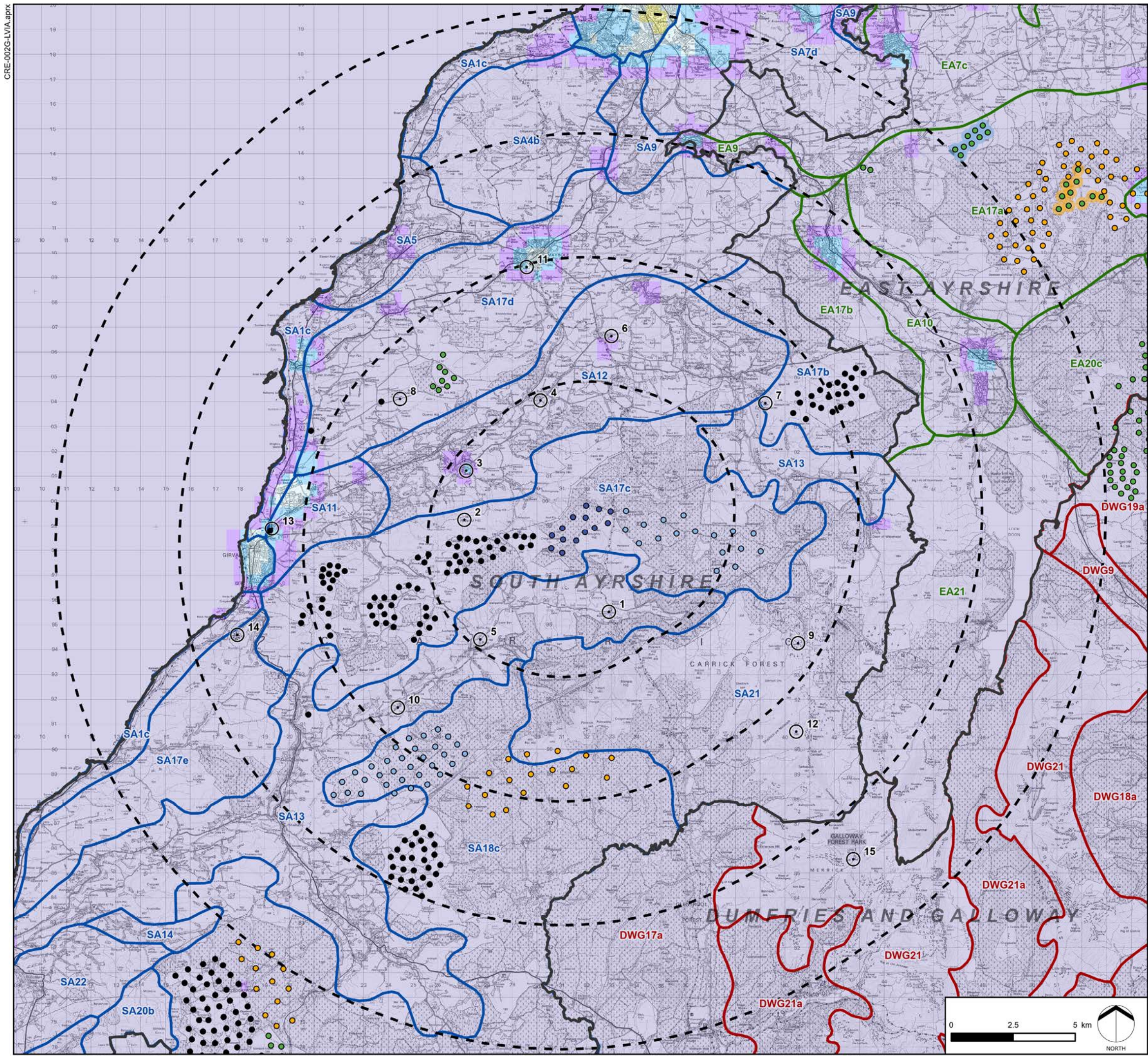
The model does not take into account some localised features such as small copses, hedgerows or individual trees and therefore still gives an exaggerated impression of the extent of visibility. The actual extent of visibility on the ground will be less than that suggested by this plan.

The ZTV includes an adjustment that allows for Earth's curvature and light refraction. It is based on a derived DSM and has a 10m² (to 20km from site)/50m² (beyond) resolution.

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CRAIGINMODDIE WIND FARM

FIGURE 6.11
Landscape Character and Existing Light Environment



KEY

- Proposed Craiginmoddie Wind Turbines
- Distance Radii from Outermost Turbine (5, 10, 15, 20km)
- Viewpoints
- Local Authority Boundaries

Existing Light Environment
Visible Infrared Imaging Suite (VIIRS) 2019 ($W / cm^2 \cdot sr$)

- 15 - 25.5
- 7.5 - 15
- 3 - 7.5
- 1 - 3
- Below 1

Landscape Character

South Ayrshire	East Ayrshire
SA1c	SA1c
SA4b	SA4b
SA5	SA5
SA7d	SA7d
SA9	SA9
SA11	SA11
SA12	SA12
SA13	SA13
SA14	SA14
SA17b	SA17b
SA17c	SA17c
SA17d	SA17d
SA17e	SA17e
SA18c	SA18c
SA20b	SA20b
SA21	SA21
SA22	SA22
EA7c	EA7c
EA9	EA9
EA10	EA10
EA17a	EA17a
EA17b	EA17b
EA20c	EA20c
EA21	EA21
DWG9	DWG9
DWG17a	DWG17a
DWG18a	DWG18a
DWG19a	DWG19a
DWG21	DWG21
DWG21a	DWG21a

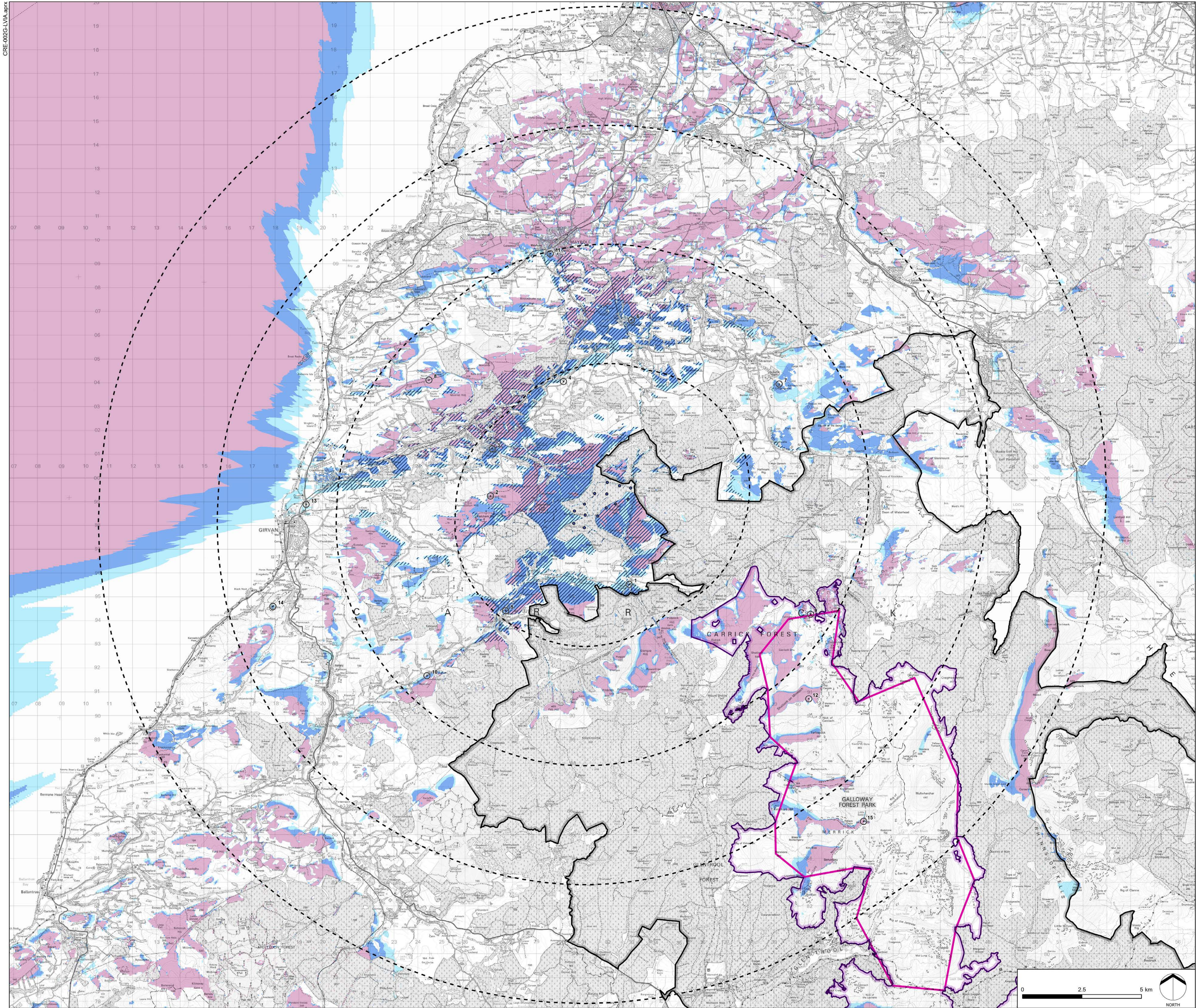
Cumulative Wind Farms

- Operational
- Consented
- In planning
- Scoping
- Consented, subject to a proposed variation
- Consented, subject to a scoping request for variation

CRAIGINMODDIE WIND FARM

FIGURE 6.12

Zone of Theoretical Visibility - Visible Aviation Lighting



KEY

- Proposed Craiginmoddie Wind Turbines
- Viewpoints
- Distance Radii from Outermost Turbine (5, 10, 15, 20km)
- Woodland (modelled at 15m)
- Galloway Forest Dark Sky Park - Core Area
- Galloway Forest Dark Sky Park - Park Boundary
- Merrick Wild Land Area

Zone of Theoretical Visibility to Hub Height (122.5m)

- 1 - 4 turbines may be visible
- 5 - 10 turbines may be visible
- 11 - 14 turbines may be visible
- Light intensity notably reduced (nominally up to 95%) - angles below 2°

FIGURE DATA:
This figure has been based on the following data:

Layout file: obvs-HH-T5-20km.shp; obvs-HH-T50-45km.shp
Terrain data: T5-DSM-screening.asc; T50-DSM.asc
Viewer's eye height: 2m above ground level
Calculation grid size: 5m to 20km from site; 50m beyond

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A digital surface model (DSM) has been derived from OS Terrain 5/50 height data with the locations of woodland and buildings taken from the OS Open Map Local dataset. Buildings have been modelled with an assumed height of 7.5m and woodland an assumed height of 15m, representing a conservative estimate of average heights within the study area.

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Projected Coordinate System: British National Grid

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