

OVER HILL WIND FARM

FIGURE 10.7

Comparative ZTV to Blade Tip with Screening Effect of Woodland and Settlement

KEY

Proposed Over Hill Wind Turbines

Distance Radii from Outermost Turbine (5, 20, 35km)

Viewpoints

Woodland (modelled at 15m)

Zone of Theoretical Visibility to Blade Tip

Proposed layout (180m to blade tip)

Consented (149.9m to blade tip) and proposed layouts

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

Layout file: obvs-consented-BT-T50-45km.shp, obvs-proposed-BT-T50-45km.shp
Terrain data: OVR2-T5-screening.asc
Viewer's eye height: 2m above ground level
Calculation grid size: 50m

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.

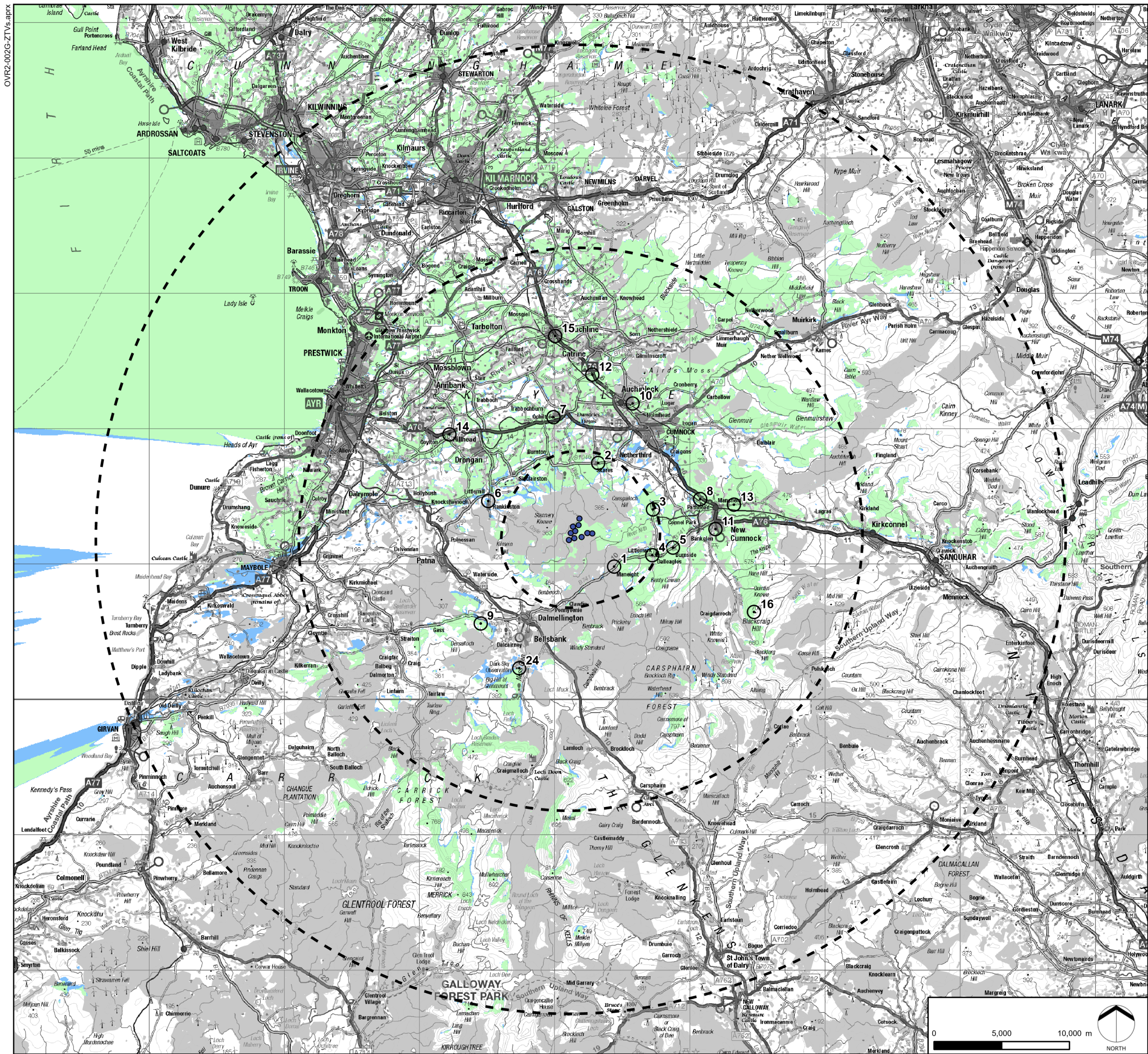
A digital surface model (DSM) has been derived from OS Terrain 50 height data with the locations of woodland and buildings taken from the OS Open Map Local dataset. Buildings have been modelled with an assumed height of 7m and woodland an assumed height of 15m, representing a conservative estimate of 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 50m² resolution.

Projected Coordinate System: British National Grid

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The map displays the Over Hill Wind Farm project area, showing proposed turbine locations (blue dots) and the Zone of Theoretical Visibility (ZTV) to the blade tip. The ZTV is divided into two main zones: a blue-shaded area representing the proposed layout (180m to blade tip) and a green-shaded area representing the consented layout (149.9m to blade tip) and proposed layouts. The map includes various geographical features such as woodlands (modelled at 15m), settlements, and topography. Key locations marked include West Kilbride, Stevenston, Irvine, Troon, Monkton, Prestwick, Maybole, Girvan, and various other towns and villages in the region. The map also shows major roads like the A7, A71, A72, A73, A74, A75, A76, A77, A78, A79, A80, A81, A82, A83, A84, A85, A86, A87, A88, A89, A90, A91, A92, A93, A94, A95, A96, A97, A98, A99, A100, and the M74. A scale bar at the bottom right indicates distances of 0, 5,000, and 10,000 meters. A north arrow is also present.

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