Technical Appendix 4.7: Residential Visual Amenity Assessment

1.1 Introduction

- 1.1.1 The Residential Visual Amenity Assessment (RVAA) is intended to assist the decision maker in a judgement as to the overall impact of the Proposed Development on the visual aspects of residential amenity. This assessment explicitly does not consider, or provide information on, other components of residential amenity such as noise, dust, shadow flicker, etc. and therefore needs to be read alongside other sections of the Environmental Impact Assessment Report (EIAR) which cover those subjects.
- It is normal to expect significant effects (in the context of EIA regulations) on views and visual amenity 1.1.2 from nearby residential properties as a result of introducing a wind farm in any landscape. For properties experiencing a high magnitude of visual change (identified using the methodology set out in Technical Appendix (TA) 4.1, EIAR Volume 4), this study considers the potential effects on the visual component of 'Residential Amenity' or 'Living Conditions'.

Methodology 1.2

- The Landscape Institute (LI) has published guidance on RVAA¹, upon which this assessment is based. 1.2.1 While the guidance has no status advised by planning authorities it is the only dedicated advice on RVAA and is regularly used.
- 1.2.2 The LI guidance sets out a four-staged process involving:
 - identifying the scope of the assessment and properties to be considered;
 - evaluating the baseline visual amenity of the properties;
 - assessing changes as a result of the introduction of the Proposed Development; and •
 - judging whether the nature and scale of the effect likely to be experienced is potentially so great as to reach what in the guidance is called a 'Residential Visual Amenity Threshold'.
- 1.2.3 The LI guidance supports planners and landscape architects in forming their judgements of the effects on visual amenity at residential properties. The LI guidance sets out that the role of the landscape architects should be limited to advising planners as to whether visual aspects of residential amenity should be considered in the planning balance.
- This RVAA is set out following the stages of assessment outlined above. The methodology used to 1.2.4 assess the magnitude of change to views is set out in TA 4.1. All residential properties are judged to have **High** sensitivity to visual change. In combination with a **High** magnitude of change this would result in the finding of a significant effect on visual amenity at the property. This does not however mean that the Residential Visual Amenity Threshold is engaged. The latter requires further assessment and judgement.
- 1.2.5 Field surveys were undertaken in August 2024 to identify, as far as possible, the orientation and likely views from each property (including main aspects and direction of windows); layout and orientation of the external spaces and gardens associated with the property curtilage; access and likely views from private or shared driveways or access tracks; and composition type and experience of existing views from each property. The field surveys considered local variations in topography, tree cover and potential screening by buildings within the landscape.
- 1.2.6 The assessments were undertaken from the closest publicly accessible points to the properties.

1.2.7 Visualisations are provided for each property in the form of wirelines set up to be equivalent to the panoramic view with 53.5° horizontal angle as per NatureScot visualisation guidance².

1.3 Identification of the Scope of Assessment

- 1.3.1 The LI guidance published in 2019 suggests that the scope of assessments should be identified on a case-by-case basis, but that for conspicuous structures such as wind farms an initial study area of 1.5-2 km radius may be appropriate (as a potential upper limit to the extent of the study area). Since the publication of the guidance, the size of turbines proposed has continued to increase. In this instance it is deemed appropriate to increase the extent of the study area to 2.5 km from the outer turbines.
- 1.3.2 There are several properties within approximately 2.5 km of the Proposed Development, shown on Figure TA4.7.1 (EIAR Volume 4). Table 4.7.1 sets out the properties and distance from the closest turbine.

Table 4.7.1:			
Property reference	Property name	Distance and Direction to the nearest turbine	
1	Bodinglee	2.3 km south	
2	Maidencots Cottage / Meiklemarr	1.3 km west	
3	Maidencots Farm	1.5 km west	
4	Netherton Farm / Cottage	704 northwest	
5	The Strand	Within Site	
6	Duneaton Cottage / Lodge	1.6 km northwest	
7	Craighead Farm	1.9 km northwest	
8	Springdale House / Rigdale / Drakelaw / Gilkerscleugh / Broadwood	1.8 km north	
9	Woodfield House	1.8 km north	
10	Gilkerscleuch Mains Farm Cottage	1.5 northeast	
11	Firholme	1.4 km north	
12	Manse Road Group	1.0 km north	
13	Crawfordjohn Mill Farm	1.0 km north	
14	Nether Balgray Farm	1.7 km northeast	
15	Manse View Cottage / The Stables / Lindisfarne	1.9 km north	
16	Crossknowe Farm	2.1 km northeast	
17	Crawfordjohn	2.1 km northeast	
18	Blairhill – Dail Bhreagha / Blairhill House / Townhead Cottage	1.9 km north	
19	Burnside – Burnside Cottage / Holmview Cottage	1.7 km northeast	
20	Over Balgray	1.6 km northeast	
21	Greenfield Farm	1.9 km northeast	
22	Blackburn Farm	510 m northeast	

² Scottish Natural Heritage. (2017) Visual Representation of Wind Farms, Guidance. Available from: https://www.nature.scot/sites/default/files/2019-09/Guidance%20-%20Visual%20representation%20of%20wind%20farms%20-%20Feb%202017.pdf [Accessed 5th August 2024]

¹ Landscape Institute. (2019) Residential Visual Amenity Assessment (RVAA) Technical Guidance Note 2/19. Available from: https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2019/03/tgn-02-2019-rvaa.pdf [Accessed: 5th August 2024]

Table 4.7.1	:		
Property reference	Property name	Distance and Direction to the nearest turbine	
23	Thirstane Cottage	Within Site, 294 m	
24	Redshaw	2.2 km southeast	

1.3.3 It is noted that although the Proposed Development includes solar PV arrays, Battery Energy Storage System (BESS), and other ground level infrastructure elements, it is the turbines that are most likely to affect visual aspects of residential amenity.

1.4 Assessment of Effects on Residential Visual Amenity

affected. Overall, it is judged that the RVAA threshold would not be reached.

This section outlines for each property: the existing visual amenity, the likely changes as a result of the 1.4.1introduction of the Proposed Development, and for those with a High magnitude of change: an assessment of visual effects judging whether the nature and scale of the effect likely to be experienced is potentially so great so as to reach what in the LI guidance is called a 'Residential Visual Amenity Threshold'.

Table TA4.7.2: Property 1: Bodinglee		
OS Grid Reference: 289912, 630588	Figure: TA4.7.2	
Distance to nearest turbine: 2.3 km	Primary outlook: Northeast	
Number of turbines theoretically visible: 9 hubs, 12 blade tips	Direction of view to Site: South	
Description of Property, Context and Existing Views: This property is located approximately 4.3 km to the northwest of Roberton at 293 metres (m) Above Ordnance Datum (AOD) on southeast facing slopes above the Roberton Burn. The building is orientated northeast to southwest with the main house connected to a series of outbuildings to the west. The primary outlook from the property is to the northeast across foreground farmland towards Fallside and forestry on the slopes of Ewe Hill. Views from the property in other directions are limited by foreground outbuildings. The property is accessed via a track to the east which bypasses the south of the main house to access the outbuildings to the west. Views from the approach track are open onto surrounding undulating farmland and moorland.		
To the southeast, Clyde Wind Farm is visible on either side of Roberton Hill and the blade tips of Middle Muir Wind Farm are visible to the southwest.		
Changes to Views and Visual Amenity: The Proposed Development would be approximately 2.3 km to the south and would be seen from the approach road and area to the south and west of outbuildings across surrounding moorland. Turbines in the southern part of the Site would be partially screened by Wildshaw Hill with turbine blades seen above the horizon. Turbines in the northern three quarters of the Site would be visible between Wildshaw Hill and Jack's Law with the turbine bases and infrastructure being screened by landform. The solar PV array, BESS, substation and supporting ground infrastructure would not be visible from this location.		
After dark, the tower lights on turbines T1, T3 and T4 would be visible over the dark landscape to the southwest, The hub lights, albeit with greatly reduced brightness due to the angle of view, which would be between -2 and -4° at this location. At angles of -4° and the lights should not be visible, but there may be some light seen and there may be some reflection off the backs of passing blades in certain wind directions. The magnitude of change to the views is judged to be High .		
RVAA Threshold Conclusion: This property is located on southeast facing slopes approach route and grounds around the farm house Development and in particular the turbines being n	and the turbine array would be openly visible from the e and outbuildings. There would be a sense of the Proposed earby, occupying approximately 49° of the overall view direction from the property, northeast, would not be	

Table TA4.7.3: Properties 2: Maidencots Cottage / Meilklemarr

OS Grid Reference: 292673, 626357	Figuros
03 GIU Relefence: 292073, 020337	Figure:
Distance to nearest turbine: 1.3 km	Primary
Number of turbines theoretically visible: 7 hubs, 4 blade tips	Directio

Description of Property, Context and Existing Views:

This group of properties includes two 1-storey houses located approximately 115 m west of Maidencots Farm, and 2.6 km north of Abington. Situated on the northeastern slopes of Foreside Hill at approximately 274 m AOD, the properties are adjacent to a minor road connecting the A702 and B7078 roads above the Duneaton Water. The primary outlook is southeast across the road onto the floodplain of the Duneaton Water and River Clyde towards Craighead Hill which is backdropped by the Southern Uplands. Between both properties and to the rear of Maidencots Cottage is woodland which alongside rising landform to the rear reduces visibility. Maidencots Cottage has a conservatory at the front, and Meiklemarr on the western side affording views westwards along the valley.

Clyde Wind Farm is visible to the southeast on hills above the Clyde valley.

Changes to Views and Visual Amenity:

The Proposed Development would be located approximately 1.3 km to the west of the property group. Maidencots Cottage would receive heavily filtered views in the direction of the Site in the winter, and fully screened in the summer. The solar PV array would be viewed to the south on the southern side of the Duneaton Water and to the south west on Black Hill. Meiklemarr would receive side on views from both the property and garden of the turbine array and solar PV array to the south.

Views of turbines to the west would be partially screened by Wildshaw Hill with turbine blades seen above the horizon. Turbines in the northern three guarters of the Site would be visible between Wildshaw Hill and Jack's Law with the turbine bases and infrastructure being screened by landform. The BESS and substation would not be visible from this location.

After dark, the tower lights on turbines T16, T17 and T22 would be visible over the dark landscape to the west, The hub lights, albeit with greatly reduced brightness due to the angle of view, which would be between -2 and -4° at this location. At angles of -4° and the lights should not be visible, but there may be some light seen and There may be some reflection off the backs of passing blades in certain wind directions.

The magnitude of change to the views is judged to be **High**.

RVAA Threshold Conclusion:

This property is located on south facing slopes of Foreside Hill and the turbine array would be openly visible from the approach route and to the west of the property group. There would be a sense of the Proposed Development and in particular the turbines being nearby, occupying approximately 44° of the overall view. The primary view direction from the property, southeast, would not be affected although the turbine array would be visible from a conservatory facing west on Meiklemarr. Overall, it is judged that the RVAA threshold would not be reached.

Table TA4.7.4: Property 3: Maidencots Farm

OS Grid Reference: 292806, 626252	Figure:
Distance to nearest turbine: 1.5 km	Primar
<i>Number of turbines theoretically visible</i> : 8 hubs, 6 tips	Directio
1	

Description of Property, Context and Existing Views:

This property is located approximately 2.4 km north of Abington, on the northeastern slopes of Foreside Hill at approximately 256 m AOD above the Duneaton Water. Comprising 1.5 storey farmhouse below a minor road connecting the A702 in the east, and the B7078 road to the west. Orientated north east to south west, the primary outlook is to the southwest onto foreground fields and along the floodplain of the Duneaton Water which is cut across by the M74 motorway.

Changes to Views and Visual Amenity:

The Proposed Development would be located approximately 1.5 km to the west of the farm. The farmhouse would receive slightly oblique views of the southernmost turbines of the turbine array in front and beyond Knock Leaven Hill, gradually reducing to the blades of the northern turbines due to screening by Forside Hill.

TA4.7.3

v outlook: Southeast

on of view to Site: West

e: TA4.7.4

ry outlook: Southwest

ion of view to Site: West

Table TA4.7.4: Property 3: Maidencots Farm

The solar array would be seen from the ground surrounding the farm as well as on the lower slopes of Black Hill to the southwest.

The BESS, substation and supporting ground infrastructure would not be visible from this location.

After dark, the tower lights on turbines T1, T3 and T4 would be visible over the dark landscape to the west, The hub lights, albeit with greatly reduced brightness due to the angle of view, which would be between -2 and -4° at this location. At angles of -4° and the lights should not be visible, but there may be some light seen and There may be some reflection off the backs of passing blades in certain wind directions.

The magnitude of change to the views is judged to be **High**.

RVAA Threshold Conclusion:

This property is located on south facing slopes of Foreside Hill and the turbine array would be openly visible from the approach route and to the west of the farm. There would be a sense of the Proposed Development and in particular the turbines being nearby, occupying approximately 42° of the overall view. The primary view direction from the property, southeast, would be affected. Overall, it is judged that the RVAA threshold would not be reached due to extent of the view affected and influence of landform in screening the bases of the turbines reducing their vertical prominence.

<i>OS Grid Reference</i> : 290835, 625508	Figure: TA4.7.5a-c
Distance to nearest turbine: 704 m northeast	Primary outlook: Northwest
Number of turbines theoretically visible: 17 hubs, 5 blade tips	Direction of view to Site: Northwest
Description of Property, Context and Existing View	<i>vs</i> :
2.8 km north west of Abington. Netherton Cottag 297 m AOD, the primary outlook is to the northwe and trees west of the building. Views in other dire landform to the north.	etherton Cottages 1, 2, and Netherton Farmhouse located es are orientated northwest to southeast at approximately est onto foreground fields framed by the hillside to the north ctions are limited by farm outbuildings, silage pit and rising of the complex and includes a garden to the east.
Surrounded by broadleaf trees, views outwards an west, views are restricted by farm outbuildings.	re heavily filtered onto surrounding fields. To the north and
The farm is accessed from the north west via sho and B7078 roads down a slope and experiences s	t access track leading from a minor road between the A702 emi-open views.
Changes to Views and Visual Amenity:	
west of the farm. Turbines would be visible above intervening woodland and visible from the access	art of the Proposed Development located to the north and e the ridgeline to the north with some screening by track and in front of Netherton Cottages 1 and 2. The ary view from the cottages above the foreground ridgeline.
Netherton Farmhouse is not predicted to receive a direction of the Proposed Development.	a view due to screening by farm outbuildings and trees in the
The solar PV array would also be visible on Black Development would be visible.	Hill to the south, no other components of the Proposed
north. The hub lights, albeit with greatly reduced	and T22 would be visible over the dark landscape to the brightness due to the angle of view, which would be betweer he lights should not be visible, but there may be some light cks of passing blades in certain wind directions.
	o be High for Netherton Cottages, and Negligible for
Netherton Farm.	

screening the bottom proportion of the turbines reducing their vertical prominence.

Table TA4.7.6: Property 5: The Strand	
OS Grid Reference: 290083, 625403	Figure: I
<i>Distance to nearest turbine</i> : 277 m north west and 274 m south	Primary
Number of turbines theoretically visible: 20 hubs, 1 tips	Directior

Description of Property, Context and Existing Views:

This property is located within the Site and includes a change of use away from residential. Therefore, no further assessment of the visual amenity has been undertaken.

Table TA4.7.7: Property 6: Duneaton Cottage / Lodge

OS Grid Reference: 291609, 624578	Figure
Distance to nearest turbine: 1.6 m	Primai
<i>Number of turbines theoretically visible</i> : 17 hubs, 5 blade tips	Directi

Description of Property, Context and Existing Views:

This group comprises two 1.5 semi-detached properties located 1.7 km to the north west of Abington and adjacent to Craighead Road which passes the houses to the east. Orientated north to south, at approximately 240 m AOD, the primary outlook is to the north onto fields on either side of the Duneaton Water. The M74 motorway crosses east to west in the mid-ground of the view and there is a large culvert in the centre of view where the Duneaton Water crosses underneath the motorway, with Foreside Hill beyond. Views in other directions are limited by boundary trees and outbuildings.

Changes to Views and Visual Amenity:

The turbine array would be seen to the north beyond the M74 motorway spanning Knock Leaven with the northerly turbines being the most prominent within the view. Intervening landform would screen the bases of the turbines, supporting ground infrastructure, BESS and substation. The property group would also receive close views of a solar PV array on the lower eastern side of Black Hill.

After dark, the tower lights on turbines T4, T9, T16, T17, T19 and T22 would be visible over the dark landscape to the southwest, The hub lights, albeit with greatly reduced brightness due to the angle of view, which would be between -1 and -4° at this location. At angles of -4° and the lights should not be visible, but there may be some light seen and There may be some reflection off the backs of passing blades in certain wind directions.

The magnitude of change to the views is judged to be **High**.

RVAA Threshold Conclusion:

The turbine array would be openly visible from the approach route and the primary view. Turbines would occupy approximately 58° of the view northwards. Overall, it is judged that the RVAA threshold would not be reached due to the influence of landform in screening the bottom proportion of the turbines reducing their vertical prominence.

Table TA4.7.8: Property 7: Craighead Farm

OS Grid Reference: 291370, 623608	Figure:
Distance to nearest turbine: 1.9 km	Primar
Number of turbines theoretically visible: 16 hubs, 2 blade tips	Directio

Description of Property, Context and Existing Views:

This property comprises a farm located on a meander of the Duneaton Water 1.6 km west of Abington at approximately 241 m AOD. The farmhouse is in the south western corner of the farm and is accessed via a short track west from Craighead Road. Orientated northwest to south east, views from the farmhouse are

Not applicable

outlook: Southwest

on of view to Site: Within the Site

e: TA4.7.6a-b

ary outlook: North

tion of view to Site: Northwest

e: TA4.7.7

y outlook: Southeast

ion of view to Site: Northwest

Table TA4.7.8: Property 7: Craighead Farm

limited by farm outbuildings to the north and east, riparian woodland to the south, and woodland and rising slopes of Black Hill to the west.

Changes to Views and Visual Amenity:

The Proposed Development would be located 1.9 km to the north towards the top of the valley. The south eastern side of the turbine array would be the most prominent in the view with the lower slopes of Black Hill reducing visibility to blade tip s and fully screening turbines. None of the components of the ground infrastructure, substation or BESS would be visible from this location. The solar PV array located on the lower eastern side of Black Hill would be visible and provide some screening to turbine blades.

After dark, the tower lights on turbines T9 and T16 would be visible over the dark landscape to the north, The hub lights, albeit with greatly reduced brightness due to the angle of view, which would be between -2 and -4° at this location. At angles of -4° and the lights should not be visible, but there may be some light seen and There may be some reflection off the backs of passing blades in certain wind directions.

The magnitude of change to the views is judged to be Medium.

RVAA Threshold Conclusion:

This property is close to the Duneaton Water and farm outbuildings to the north would screen the turbine array in views from the farmhouse. The turbines and part of the solar PV array would be visible to the north with intervening landform reducing the turbines vertical extent, occupying approximately 39° of the overall view. This would be limited to views from the access track and north of the farm outbuildings. Overall, it is judged that the RVAA threshold would not be reached.

Table TA4.7.9: Property 8: Sprindale House / Riddale / Drakelaw / Gilkerscleugh / Broadwood

OS Grid Reference: 290253, 623245	Figure: TA4.7.8	
Distance to nearest turbine: 1.8 km	Primary outlook: Mixed orientation	
Number of turbines theoretically visible: 12 hubs, 3 blade tips	Direction of view to Site: North	
Description of Property, Context and Existing Views:		

This group of properties are located on the northern slopes of Drake Law 2.6 km west of Abington at approximately 278 m AOD. The properties are situated to the north and south of the Craighead Road above a tributary burn flowing northwards to the Duneaton Water. Orientation is mixed with the properties being situated in mixed woodland that encloses views. Accessed via short access track leading north and south of Craighead Road, adjacent forestry encloses views.

Changes to Views and Visual Amenity:

The properties listed above are in woodland and have not been built in order to take advantage of the view. The Proposed Development would be located to the northwest at 1.8 km. Theoretically, the southern turbines would be visible beyond Black Hill. However, foreground woodland would screen views towards the turbine array. No other components of the Proposed Development would be visible from these properties.

After dark, the tower lights on turbines T1, T4, T1, T19, T22 would be visible over the dark landscape to the north. The hub lights, albeit with greatly reduced brightness due to the angle of view, which would be between 0 and -4° at this location.

The magnitude of change to the views is judged to be **Negligible**.

RVAA Threshold Conclusion:

Due to screening by surrounding trees, this property group is not predicted to receive views of the Proposed Development. Overall, it is judged that the RVAA threshold would not be reached.

Table TA4.7.10: Property 9: Woodfield House	
OS Grid Reference: 290280, 623387	Figure: TA4.7.9
Distance to nearest turbine: 1.8 km	Primary outlook: West
Number of turbines theoretically visible: 12 hubs, 3 blade tips	Direction of view to Site: North
Description of Property, Context and Existing Views:	

Table TA4.7.10: Property 9: Woodfield House

This property is situated to the north of Craighead Road on the southern slopes above the Duneaton Water, 2.7 km west of Abington at approximately 262 m AOD. This property is accessed via a short track leading from north from Craighead Road and is flanked by mixed woodland to the north. Orientated east to west, the eastern and southern side of the house look onto a foreground field with woodland in the mid-ground limiting the extent of visibility. To the north and west, views are screened by existing woodland.

Changes to Views and Visual Amenity:

Theoretically, the turbine array would be visible to the north and northwest of this property; however, woodland which extends to the boundary of the property would screen views in this direction.

After dark, the tower lights on turbines T1, T4, T1, T19, T22 would be visible over the dark landscape to the north. The hub lights, albeit with greatly reduced brightness due to the angle of view, which would be between 0 and -4° at this location.

The magnitude of change to the views is judged to be **Negligible**.

RVAA Threshold Conclusion:

Due to screening by surrounding trees, this property group is not predicted to receive views of the Proposed Development, Overall, it is judged that the RVAA threshold would not be reached.

Table TA4.7.11: Property 10: Gilkerscleuch Mains Farm Cottage

	OS Grid Reference: 289990, 623532	Figure:
	Distance to nearest turbine: 1.5 km	Primary
	Number of turbines theoretically visible: 15 hubs, 4 tips	Directio
	Description of Property, Context and Existing Views:	

This property is a farm located adjacent to Craighead Road 3.0 km west of Abington at 282 m AOD. The primary view from this property is across the road and fields covering the floodplain of the Duneaton Water onto the southwestern slopes of Black Hill. Views can also be obtained to the south east which follow the road towards woodland at Properties 8 and 9. Elsewhere, views are limited by rising landform and forestry to the rear, and farm outbuildings to the north west.

Changes to Views and Visual Amenity:

The Proposed Development would be seen at an oblique angle within the primary view and when accessing the farm from Craighead Road. The turbine array would be seen to the northwest where the western turbines would be visible in their entirety, with the slopes of Black Hill screening views of the eastern turbines. After dark, the tower lights on turbines T1, T4, T17, and T19 would be visible over the dark landscape to the

north. The hub lights, albeit with greatly reduced brightness due to the angle of view, which would be between 0 and -4° at this location.

The magnitude of change to the views is judged to be **High**.

RVAA Threshold Conclusion:

The turbine array would be openly visible from the approach route and an oblique angle in the primary view. Turbines would occupy approximately 55° of the view to the northwest. Overall, it is judged that the RVAA threshold would not be reached due to the influence of landform in screening the bottom proportion of the turbines reducing their vertical prominence.

Table TA4.7.12: Property 11: Firholme

OS Grid Reference: 289747, 623688	Figure:
Distance to nearest turbine: 1.4 km	Primar
Number of turbines theoretically visible: 18 hubs, 2 tips	Directi

Description of Property, Context and Existing Views:

This group of properties comprises two cottages situated 1.6 km to the east of Crawfordjohn at 265 m AOD. Orientated northeast to southwest, the primary view is across the road and floodplain of the Duneaton Water towards Black Hill. This view is open with some filtering from boundary garden vegetation. Views in other directions are limited on account of forestry and rising landform to the rear of the properties.

: TA4.7.10a-b

y outlook: Northeast

ion of view to Site: North

: TA4.7.11a-b

y outlook: Northeast

ion of view to Site: North

Table TA4.7.12: Property 11: Firholme

Changes to Views and Visual Amenity:

The Proposed Development would be seen at an oblique angle to the primary view and when accessing the farm from Craighead Road. The turbine array would be seen to the northwest where the western turbines would be visible in their entirety, with the slopes of Black Hill screening views of the eastern turbines.

After dark, the tower lights on turbines T1, T4, T1, T19, T22 would be visible over the dark landscape to the north. The hub lights, albeit with greatly reduced brightness due to the angle of view, which would be between 0 and -4° at this location.

The magnitude of change to the views is judged to be **High**.

RVAA Threshold Conclusion:

The turbine array would be visible from the approach and the primary view. Turbines would occupy approximately 58° of the view to the north west. Overall, it is judged that the RVAA threshold would not be reached due to the influence of landform in screening the bottom proportion of the turbines reducing their vertical prominence.

Table TA4.7.13: Property 12: Manse Road Group		
OS Grid Reference: 289625, 624063	Figure: TA4.7.12a-b	
Distance to nearest turbine: 1.0 km	Primary outlook: Southwest	
Number of turbines theoretically visible: 14 hubs, 5 tips	Direction of view to Site: North	
Description of Property, Context and Existing Views:		
This group of four properties comprises two semi-detached buildings that are 2-storey high, 1.4 km east of Crawfordjohn at 248 m AOD. Orientated northeast to southwest, the primary outlook is to the southwest		

across Craighead Road onto fields either side of the Duneaton Water and the rising slopes of Mains Hill which are covered by forestry and includes an overhead transmission line. The properties are in an open area which allows views to the north, east and west from both the end terraces, and gardens. Due to the location within the Duneaton Water valley and the undulating nature of the surrounding hills, the extent view is limited.

Changes to Views and Visual Amenity:

The Proposed Development would be seen in rear views from the properties and gardens to the north and be prominent. This would include the western side of the turbine array which would be viewed between Black Hill and the rising ground towards Greenfield Law and Middle Muir to the northwest. Foreground landform would screen the bottom of the turbines and supporting ground infrastructure. No views of the substation, BESS or solar PV array would be experienced from these properties.

After dark, the tower lights on turbines T1, T4, T19, T22 would be visible over the dark landscape to the north. The hub lights, albeit with greatly reduced brightness due to the angle of view, which would be between 0 and -4° at this location.

The magnitude of change to the views is judged to be **High**.

RVAA Threshold Conclusion:

The turbine array would be visible from the approach road and the rear view of the properties. Turbines would occupy approximately 66° of the view to the north west. Overall, it is judged that the RVAA threshold would not be reached due to the influence of landform in screening the bottom proportion of the turbines reducing their vertical prominence.

Table TA4.7.14: Property 13: Crawfordjohn Mill Farm	
OS Grid Reference: 289671, 624148	Figure: TA4.7.13a-b
Distance to nearest turbine: 1.0 km	Primary outlook: Southeast
<i>Number of turbines theoretically visible</i> : 13 hubs, 5 tips	Direction of view to Site: North
Description of Property, Context and Existing Views: This property is a one storey house and farm outbuildings, 1.5 km northeast of Crawfordjohn at 248 m AOD.	

Orientated north and south, the primary outlook is south across fields on the northern side of Duneaton Water

Table TA4.7.14: Property 13: Crawfordjohn Mill Farm

towards the forested slopes of Drake Law. Views to the north are limited by farm outbuildings and rising landform of Black Hill.

Changes to Views and Visual Amenity:

The turbine array would be seen to the north in rear views, these would be partially screened by foreground outbuildings but due to the close distance, the turbines would be viewed above Black Burn and ridgeline. Due to the rising landform, the turbine bases and supporting ground infrastructure would be screened reducing the vertical extent of the turbines within the view. From this property, there would be no views of the substation, BESS, and solar PV array.

After dark, the tower lights on turbines T1, T4, T17, T19, and T22 would be visible over the dark landscape to the north. The hub lights, albeit with greatly reduced brightness due to the angle of view, which would be between 0 and -4° at this location.

The magnitude of change to the views is judged to be **High**.

RVAA Threshold Conclusion:

The turbine array would be visible from the approach and the rear view of the farmhouse. Turbines would occupy approximately 66° of the view to the north west. Overall, it is judged that the RVAA threshold would not be reached due to the influence of landform in screening the bottom proportion of the turbines reducing their vertical prominence.

Table TA4.7.15: Property 14: Nether Balgray Farm

OS Grid Reference: 288654, 624057	Figure:
Distance to nearest turbine: 1.7 km	Primary
<i>Number of turbines theoretically visible</i> : 0 hubs, 1 tip	

Description of Property, Context and Existing Views:

This property comprises a farm situated 580 m to the east of Crawfordiohn at 267 m AOD. Orientated north east to south west, the farmhouse is located within the middle of the farm and is surrounded by outbuildings and woodland limiting visibility to the immediate farmyard. From the periphery, views are more open but hindered by rising landform to the north.

Changes to Views and Visual Amenity:

The Proposed Development would be to the north and screened by farm outbuildings. From the periphery, the blade tip of T22, would be seen above the horizon. This would be from the entrance to the farm and fields across Manse Road.

No aviation lights would be visible from this location.

The magnitude of change to the views is judged to be **Negligible**.

RVAA Threshold Conclusion:

Turbines would predominantly be screened from this location, overall, it is judged that the RVAA threshold would not be reached.

Table TA4.7.16: Property 15: Manse View Cottage / The Stables / Lindisfarne

OS Grid Reference: 288458, 624065	Figure:
Distance to nearest turbine: 1.9 km	Primary
Number of turbines theoretically visible: 0 hubs, 5 blade tips	Directio
Description of Property, Context and Existing Views This group of properties is located on the northern e 276 m AOD. Comprising three buildings, the proper west direction. The primary outlook is onto Manse filtered by trees within the gardens, along the roads which combined with rising landform reduces visibil	side of Ma ties are o Road to t side, and

Changes to Views and Visual Amenity:

TA4.7.14

y outlook: Southwest

on of view to Site: Northeast

TA4.7.15

outlook: Northeast and southeast

on of view to Site: North

anse Road, 424 m northeast of Crawfordjohn at orientated in a northeast to southwest, and east to the south. Views from the properties are heavily there is a belt of woodland to the north and west,

Table TA4.7.16: Property 15: Manse View Cottage / The Stables / Lindisfarne

The blade tips of 5 turbines are predicted to be visible to the north, these would be partially to fully screened by intervening woodland.

No aviation lights would be visible from this location.

The magnitude of change to the views is judged to be **Negligible**.

RVAA Threshold Conclusion:

Turbines would predominantly be screened from this location, overall, it is judged that the RVAA threshold would not be reached.

Table TA4.7.17: Property 16: Crossknowe Farm	
OS Grid Reference: 288200, 623910	Figure: TA4.7.16a-b
Distance to nearest turbine: 2.1 km	Primary outlook: Northwest
Number of turbines theoretically visible: 9 hubs, 12 blade tips	Direction of view to Site: Northeast

Description of Property, Context and Existing Views:

This property comprises a farm located on the southern side of Manse Road, 100 m north east of Crawfordjohn, at 262 m AOD. Orientated northwest to southeast, the primary outlook is across the road to the northwest onto fields with coniferous shelterbelts leading to Blair Hill. Views to the side are limited because of farm outbuildings with rear views across the Duneaton Water towards rising forested slopes of Mill Scar

Changes to Views and Visual Amenity:

The turbine array would be seen in the primary view to the north where turbines would be visible above the horizon. As a result of intervening landform, the bottom half of the nearest turbines would be screened from view alongside the supporting ground infrastructure, limiting views to 9 hubs and blade tips.

After dark, the tower lights on turbines T19 and T22 would be visible over the dark landscape to the north. The hub lights, albeit with greatly reduced brightness due to the angle of view, which would be between 0 and -4° at this location. The magnitude of change to the views is judged to be **Medium**.

RVAA Threshold Conclusion:

The turbine array would be visible in the primary view above the ridgeline, occupying approximately 72° of the view. Overall, it is judged that the RVAA threshold would not be reached due to the influence of landform in screening the bottom proportion of the turbines reducing their vertical prominence.

Table TA4.7.18: Property 17: Crawfordjohn	
OS Grid Reference: 287997, 623896	Figure: TA4.7.17a-b
Distance to nearest turbine: 2.1 km	Primary outlook: Northeast
Number of turbines theoretically visible: X hubs, X tips	Direction of view to Site: Northeast

Description of Property, Context and Existing Views:

This village is located on the B740 road and comprises older properties situated close together along narrow streets, to modern properties on the edge of the village positioned to take advantage of elevation and views of the surrounding landscape. Orientation of properties is dependent on road direction with views beyond the village where available over surrounding farmland, forestry and includes part of Clyde Wind Farm in the distance to the southeast.

Changes to Views and Visual Amenity:

All 22 of the proposed turbines are predicted to be visible viewed from elevated properties within the village to the east and include turbine hubs, with three of the north western turbines being only the blades visible. Older properties within the centre of the village and at lower elevations would not receive a view of the Proposed Development. None of the other components of the Proposed Development would be visible from the village on account of screening by foreground landform. Some partial and full screening would occur as result if screening by intervening forestry and woodland. The Proposed Development would result in turbines being

Table TA4.7.18: Property 17: Crawfordjohn

located closer to the village and would overlap with Clyde Wind Farm occupying a large part of the view eastwards. The size and scale of the change would be large with turbines being prominent above the horizon. After dark, the tower lights on turbines T1, T3, T4, T16, T17, T19, T22 would be visible over the dark landscape to the east. The hub lights, albeit with greatly reduced brightness due to the angle of view, which

would be between 0 and -4° at this location.

The magnitude of change to the views is judged to be **High**.

RVAA Threshold Conclusion:

Some properties would obtain elevated open to partially open views towards the Proposed Development. Foreground landform would provide screening to ground level infrastructure, substation, solar PV array and BESS. Overall, it is judged that the RVAA threshold would not be reached due to distance from the Proposed Development combined with the panoramic views obtained from this elevation.

Table TA4.7.19: Property 18: Blairhill – Dail Bhreagha / Blairhill House / Townhead Cottage

OS Grid Reference: 287656, 624303	Figure
Distance to nearest turbine: 1.9 km	Primar
Number of turbines theoretically visible: 22 hubs	Directi

Description of Property, Context and Existing Views:

This group includes two properties orientated northwest to southeast and one northeast to southwest located 360 m to the northwest of Crawfordjohn at 312 m AOD. The primary outlook is to the southeast across farmland towards the adjacent forested covered hillsides of Mills Scar and Mains Hill. Boundary trees and nearby forest plantations provide some filtering as does woodland to the north although Dail Bhreagha obtains open views to the north east.

Changes to Views and Visual Amenity:

The turbine array would be visible to the north and due to the elevation, all 22 turbines would be visible. This would mainly be experienced from Dail Bhreagha which obtains open views in the direction of the turbines. The two more southern properties would obtain views of the turbine array form their gardens although this would be filtered by trees within the gardens.

After dark, the tower lights on turbines T1, T3, T4, T9, T16, T17, T19, and T22 would be visible over the dark landscape to the northeast The hub lights, albeit with greatly reduced brightness due to the angle of view, which would be between 0 and -4° at this location.

The magnitude of change to the views is judged to be **High**.

RVAA Threshold Conclusion:

These properties would obtain elevated open to partially open views towards the Proposed Development. This would occupy approximately 76° of the view northwards. Foreground landform would provide some screening to ground level infrastructure and the top of the substation and BESS would be visible. No views of the solar PV array would occur from this location. Overall, it is judged that the RVAA threshold would not be reached due to distance from the Proposed Development combined with the panoramic views obtained from this elevation.

Table TA4.7.20: Property 19: Burnside – Burnside Cottage / Holmview Cottage

OS Grid Reference: 288216, 624361	Figure:
Distance to nearest turbine: 1.7 km	Primary
Number of turbines theoretically visible: 3 hubs, 13 blade tips	Directio
Description of Property, Context and Existing Views	

This group comprises two properties located on the B740 road 430 m northeast of Crawfordjohn, at approximately 277 m AOD. Orientated northwest to southeast, the primary outlook is towards the road onto adjacent fields. These views are filtered by boundary vegetation which extends around both properties.

Changes to Views and Visual Amenity:

e: TA4.7.18a-b

ry outlook: Northeast and southeast

tion of view to Site: North

TA4.7.19a-b

y outlook: Southeast

on of view to Site: Northeast

Table TA4.7.20: Property 19: Burnside – Burnside Cottage / Holmview Cottage

The Proposed Development is predicted to be visible to the north and above high ground to the northeast. Landform would screen turbines limiting visibility to 3 hubs but close to the horizon, and the remaining turbines as blades only. This would mainly be experienced from the eastern house of the group where filtered views to the north are available.

After dark, the tower lights on turbines T19 and T22 would be visible over the dark landscape to the north. The hub lights, albeit with greatly reduced brightness due to the angle of view, which would be between 0 and -4° at this location.

The magnitude of change to the views is judged to be **Low**.

RVAA Threshold Conclusion:

The turbine array would not be visible in the primary view, occupying approximately 72° of the view to the side of the properties. Views towards the turbine array would be heavily filtered by boundary trees. Overall, it is judged that the RVAA threshold would not be reached due to the influence of landform in screening the bottom proportion of the turbines reducing their vertical prominence.

Table TA4.7.21: Property 20: Over Balgray	
OS Grid Reference: 287953, 624707	Figure: TA4.7.20a-b
Distance to nearest turbine: 1.6 km	Primary outlook: Southeast
Number of turbines theoretically visible: 22 hubs	Direction of view to Site: Northeast

Description of Property, Context and Existing ViewsThis property is in an elevated location 660 m north of Crawfordjohn, at approximately 288 m AOD. Orientated northwest to southeast, the primary outlook is to the southeast across fields and the Blackie Burn towards the forested slopes of Mill Scar. The property is accessed by a track heading north from the B740 road and experiences open to enclosed views on account of a forestry plantation on the southern side on approaching the property. Views from the house are framed by woodland to the east and west, and the forestry plantation to the south east. To the rear, rising landform restricts views.

Changes to Views and Visual Amenity:

The Proposed Development is predicted to be visible to the north where all 22 turbines would be visible. However, these views would be heavily filtered by trees adjacent to the eastern side of the property.

After dark, the tower lights on turbines T1, T3, T4, T9, T16, T17, T19 and T22 would be visible over the dark landscape to the north. The hub lights, would be seen at angles of between 0 and -4° at this location reducing their brightness due to the angle of view.

The magnitude of change to the views is judged to be **Low**.

RVAA Threshold Conclusion:

This property would obtain elevated heavily filtered views towards the Proposed Development. This would occupy approximately 91° of the view northwards. Overall, it is judged that the RVAA threshold would not be reached due to screening by adjacent woodland.

Table TA4.7.22: Property 21: Greenfield Farm	
OS Grid Reference: 289014, 625346	Figure: TA4.7.21a-c
Distance to nearest turbine: 1.9 km	Primary outlook: Southeast
Number of turbines theoretically visible: 22 hubs	Direction of view to Site: Northeast

Description of Property, Context and Existing Views:

This group comprises two properties located 970 m to the north of Crawfordjohn at 288 m AOD. Both properties are orientated northwest to southeast. Views from the farmhouse are framed by foreground trees to the southeast onto foreground farmland and Black Hill beyond. Farm outbuildings and trees within the boundary limit views elsewhere. A property is located on the north eastern side of the farm which obtains open views to the southeast and northeast.

Changes to Views and Visual Amenity:

The Proposed Development would be seen at this elevation in its entirety to the north. This would mainly occur from the northeastern property where open views can be obtained, from the grounds of the farm, and access track when heading north on the approach. There would be some partial screening of the bottom of the northern turbines and the top of the BESS and substation would be visible.

Table TA4.7.22: Property 21: Greenfield Farm

After dark, the tower lights on turbines T1, T3, T4, T9, T16, T17, T19, and T22 would be visible over the dark landscape to the north. The brightness of the hub lights would be reduced due to the angle of view, which would be between 0 and -4° at this location.

The magnitude of change to the views is judged to be **High**.

RVAA Threshold Conclusion:

The turbine array would not be visible in the primary view, occupying approximately 104° of the view. Overall, it is judged that the RVAA threshold would not be reached due to the influence of landform in screening the bottom proportion of the turbines reducing their vertical prominence.

Table TA4.7.23: Property 22: Blackburn Farm (financially involved in the Proposed **Development**)

OS Grid Reference: 289014, 625336	Figure
Distance to nearest turbine: 510 m	Prima
Number of turbines theoretically visible: 22 hubs	Direct

Description of Property, Context and Existing Views:

This property is located adjacent to the B740 road 1.6 km northeast of Crawfordjohn at 258 m AOD. Orientated east to west. The primary view is to the west across fields and moorland and includes the turbines of Middle Muir Wind Farm 2.4 km away. There are further views in other directions but these are limited by surrounding farm outbuildings.

Changes to Views and Visual Amenity:

The Proposed Development would be located to the north and the farmhouse would receive oblique views of T17, T18 and T19 to the northeast from approximately 500 m. Due to the topography it would be difficult to view the access track and crane pads. The remaining turbines would be visible to the north from the farmyard and extend around to the east. The top of the substation and BESS would be visible above broadleaf and scrub woodland to the north.

After dark, the tower lights on turbines T1, T3, T4, T9, T17 and T19 would be visible over the dark landscape to the north. The hub lights, albeit with greatly reduced brightness due to the angle of view, which would be between 0 and -4° at this location.

The magnitude of change to the views is judged to be **High**.

RVAA Threshold Conclusion:

The effect on the view north from this property is significant with Turbine 19 dominant in the view and undoubtedly changing the character and experience of the view in this direction. Other view from the property, albeit limited are available and it should be noted that this property is financially involved with the Proposed Development. On this basis is judged that the RVAA threshold will not be engaged.

Table TA4.7.24: Property 23: Thirstone C	ottage
OS Grid Reference: 289177, 626317	Figure: Not
Distance to nearest turbine: 294 m	Primary out
Number of turbines theoretically visible: 22 hubs	Direction of
Description of Property, Context and Existing Views This property is located within the Site and includes further assessment of the visual amenity has been	a change of

Table TA4.7.25: Property 24: Redshaw	
OS Grid Reference: 286027, 628538	Figure:
Distance to nearest turbine: 2.2 km	Primary

e: TA4.7.22a-d

ary outlook: West

tion of view to Site: Northeast

Not applicable

y outlook: East

on of view to Site: Within the Site

ge of use away from residential. Therefore, no

TA4.7.23

y outlook: East

Table TA4.7.25: Property 24: Redshaw

Number of turbines theoretically visible: 10 hubs, 10 tips

Direction of view to Site: Southeast

Description of Property, Context and Existing Views:

This property is located west of the B7078 road and 2.6 km southeast of Douglas at 307 m AOD. A one storey house, orientation is northwest to southeast, the latter being the primary view. This property is situated in an open landscape surrounded by a combination of farmland and moorland and obtains close views of an electricity transmission line to the southeast, and Middle Muir Wind Farm to the southwest.

Changes to Views and Visual Amenity:

The turbine array would feature in the primary view of this property at an oblique angle. The norther turbines would be prominent features with Wildshaw Hill in the foreground providing screening to the bottom sections of the turbine towers. The ground infrastructure, solar PV array would not be visible from this location. The top of the substation and BESS would be visible above broadleaf woodland and scrub to the southeast.

After dark, the tower lights on turbines T1, T3, T4, T17 and T19 would be visible over the dark landscape to the north. The hub lights, albeit with greatly reduced brightness due to the angle of view, which would be between 0 and -4° at this location.

The magnitude of change to the views is judged to be **High**.

RVAA Threshold Conclusion:

This property would obtain close views of the turbines which would occupy 45° of the primary view at an oblique angle. Overall, it is judged that the RVAA threshold would not be reached due to screening by adjacent woodland.

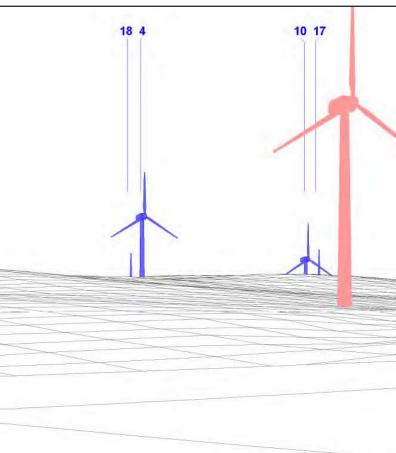
1.5 Summary of Findings

- 1.5.1 There are 24 property groups within 2.5km of the Proposed Development, which have been considered. Most properties are located to the south and southeast of the Site, and most properties look southeastwards across lower land rather than up towards the hills.
- 1.5.2 A total of two properties (Netherton and Blackburn Farms) are financially involved with the Proposed Development, and there would be a change of use from residential to a further two properties located within the Site (The Strand and Thirstone Cottage). For this reason, both properties were not assessed in the RVAA but are shown for information.
- 1.5.3 The assessment found that whilst there would be fourteen property groups judged to have a **High** magnitude of change, and two a **Medium** magnitude of change to the views. No properties were judged to receive effects on visual aspects of residential amenity such that the properties would reach what in current guidance is called a 'Residential Visual Amenity Threshold'.

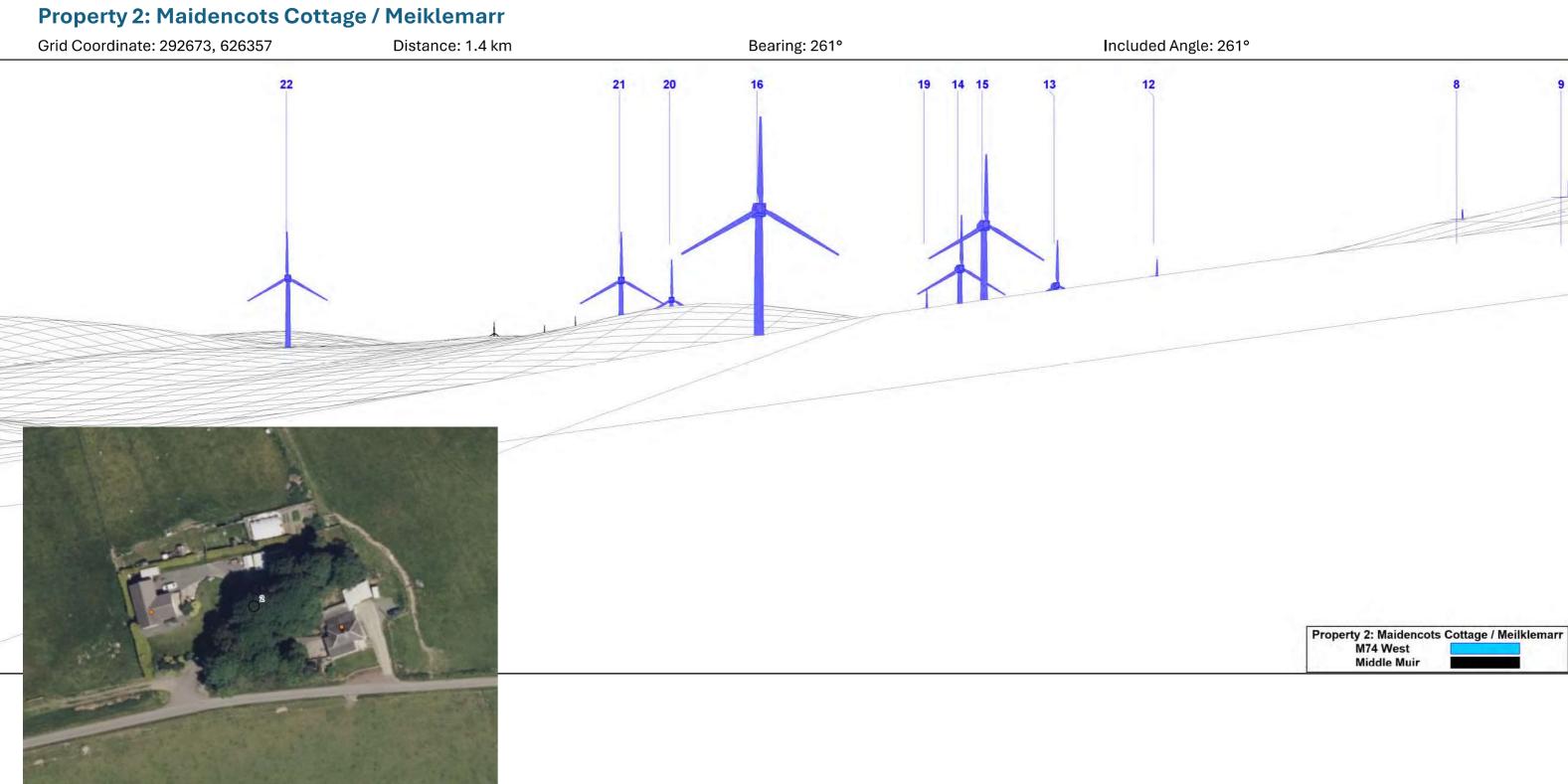
Grid Coordinate: 289912, 630588 Bearing: 187° Included Angle: 53.5° Distance: 549 m 1 11 5 19 16 9 3 21 7 12 6 15 13 20 2 14

Property 1: Bodinglee











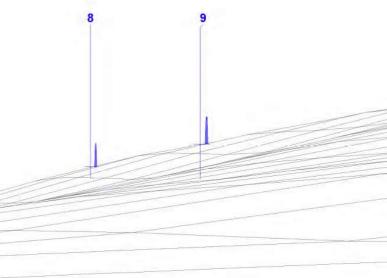
Property 2: Maidencots Cottage / Meilklema
M74 West
Middle Muir

Grid Coordinate: 292806, 626252 Distance: 1.5 km Bearing: 269° Included Angle: 53.5°

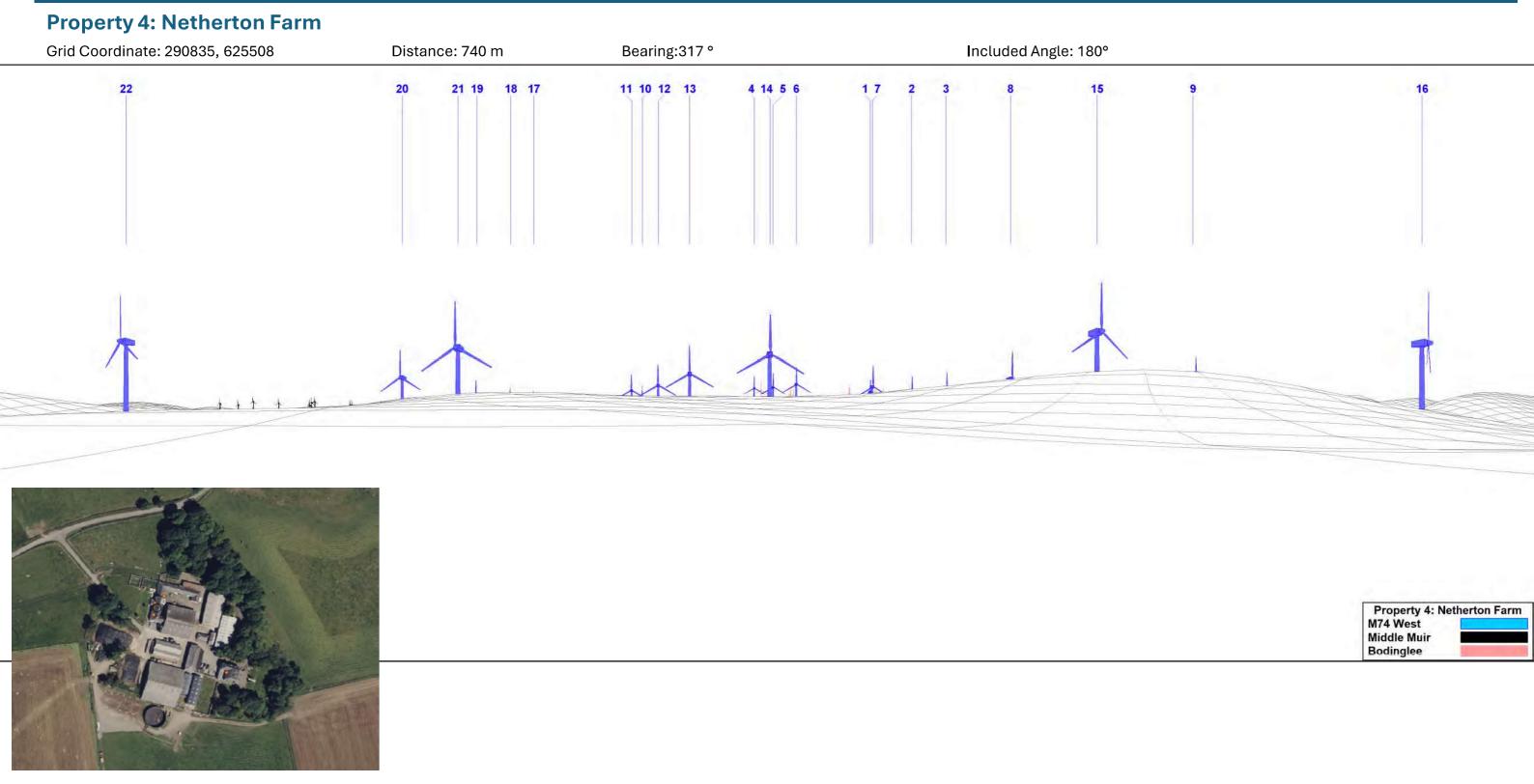




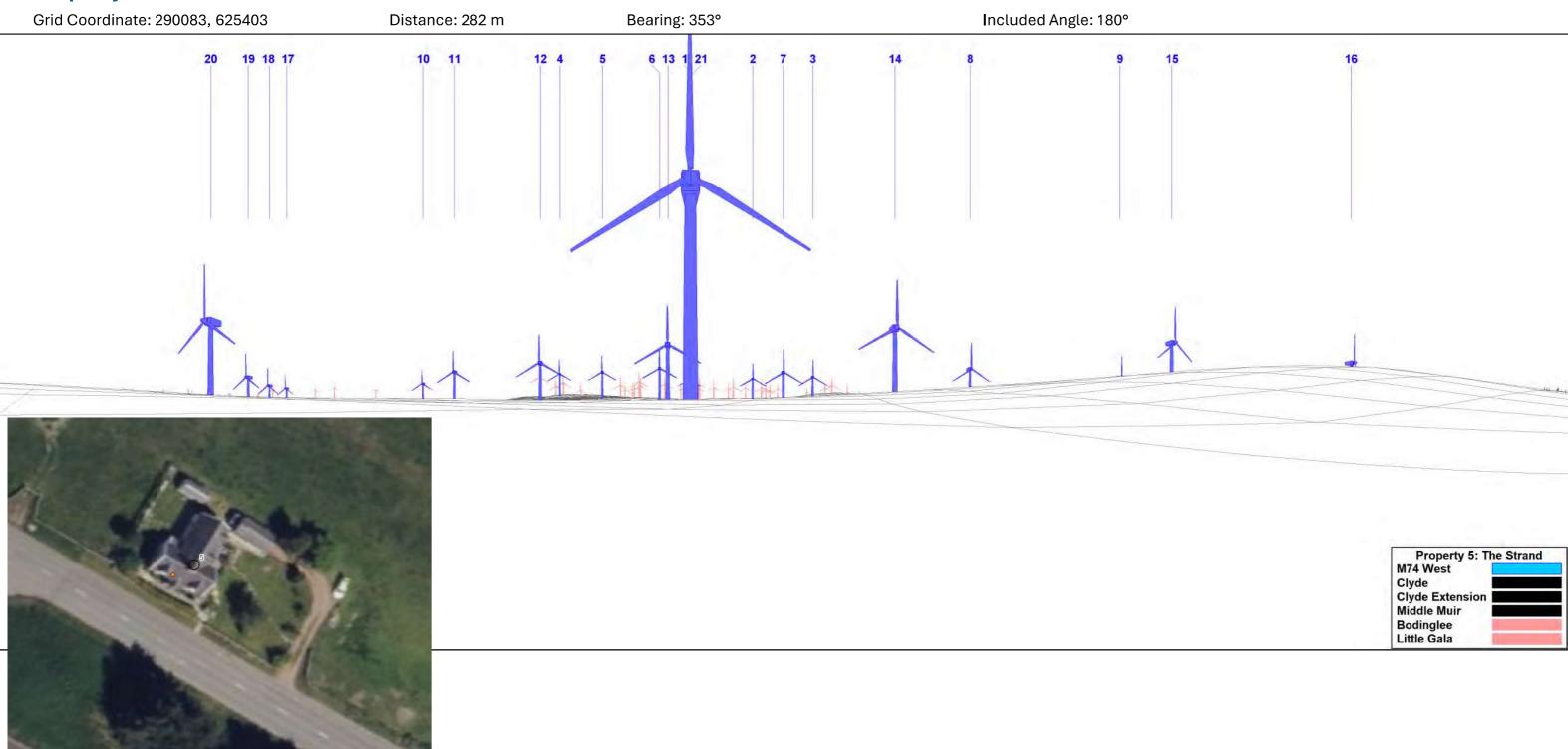




Property 3: Maidencots Farm
M74 West
Middle Muir
Bodinglee



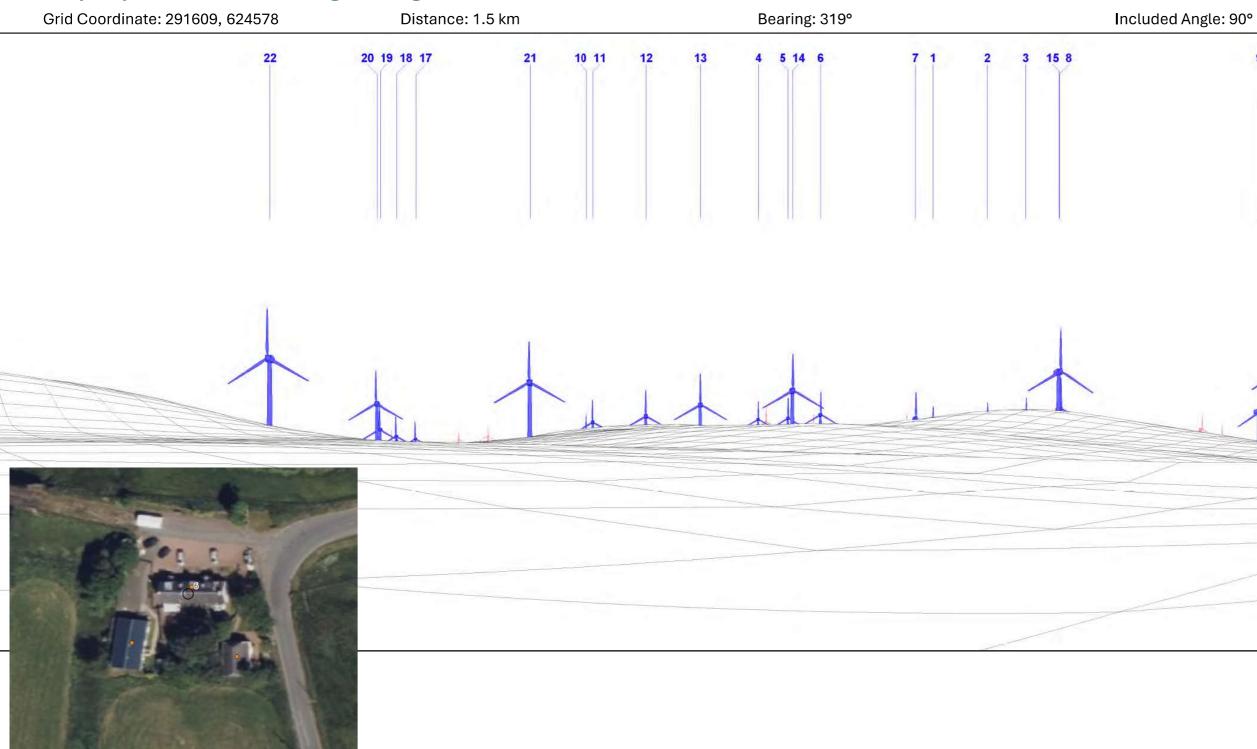




Property 5: The Strand



Property 6: Duneaton Cottage / Lodge

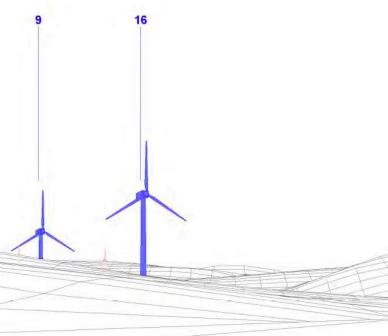




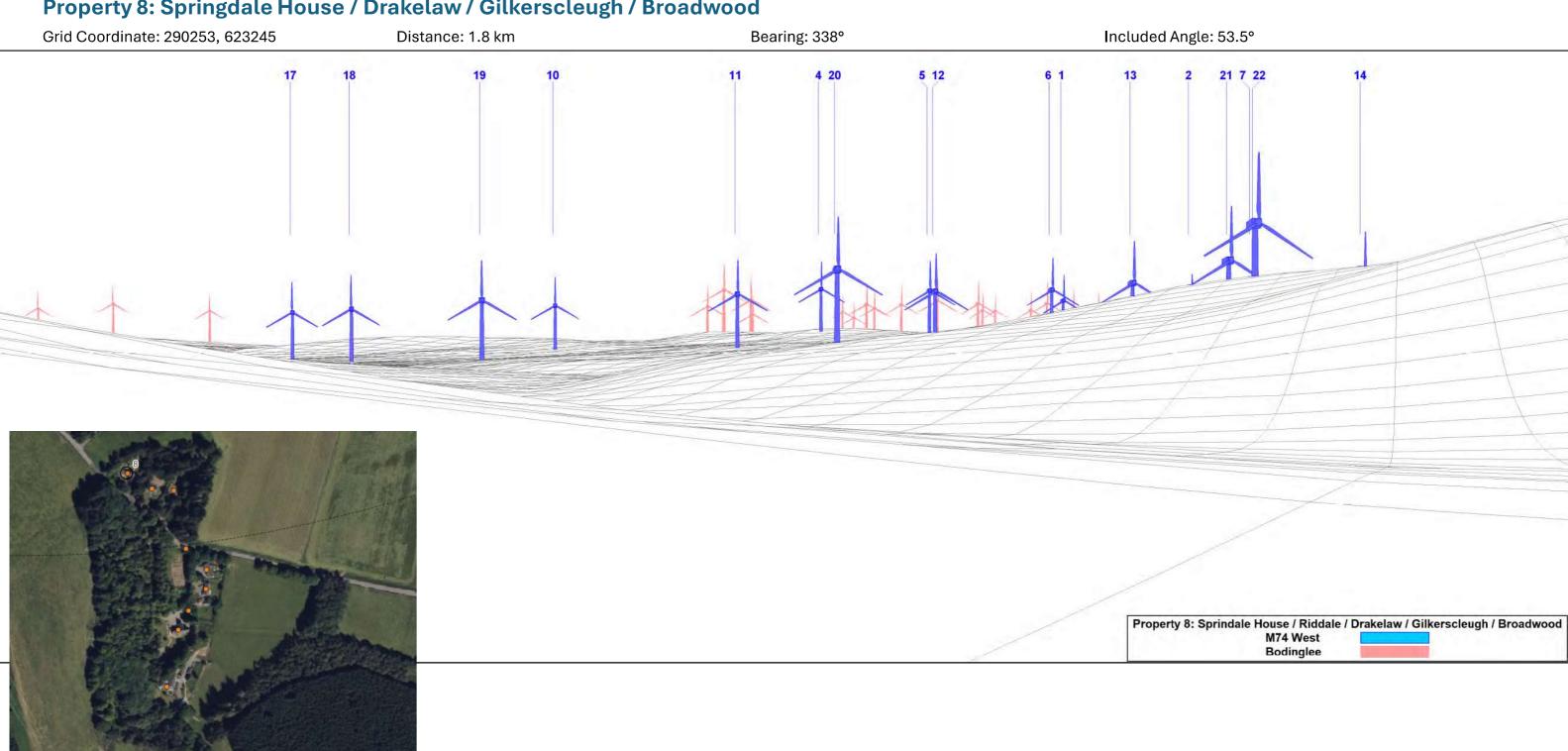
9 16 Property 6: Duneaton Cottage / Lodge M74 West Bodinglee Little Gala

Property 7: Craighead Farm Grid Coordinate: 291370, 623608 Bearing: 338° Included Angle: 53.5° Distance: 1.9 km 22 21 15 14





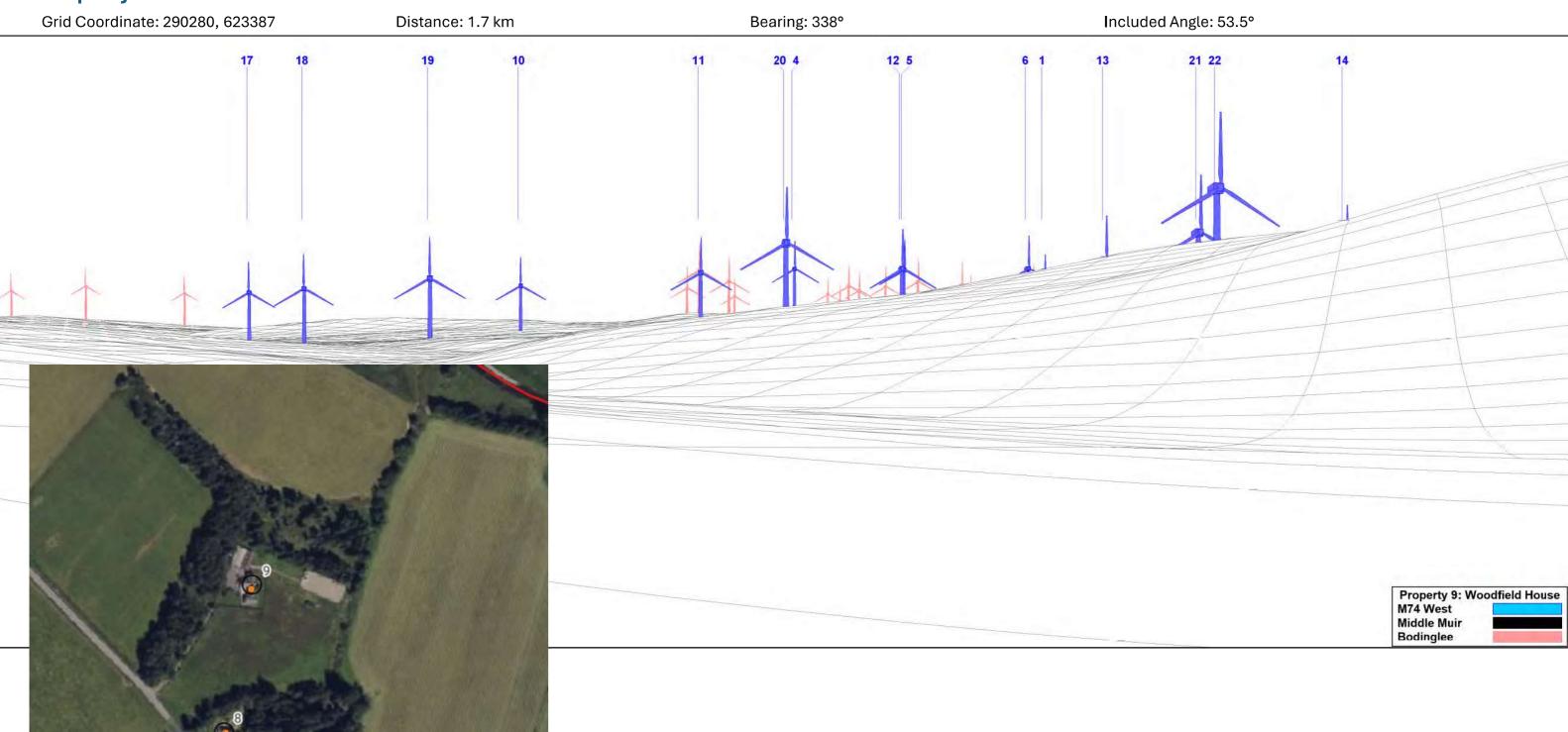
Property 7: Craighead Farm
M74 West
Bodinglee
Little Gala



Property 8: Springdale House / Drakelaw / Gilkerscleugh / Broadwood







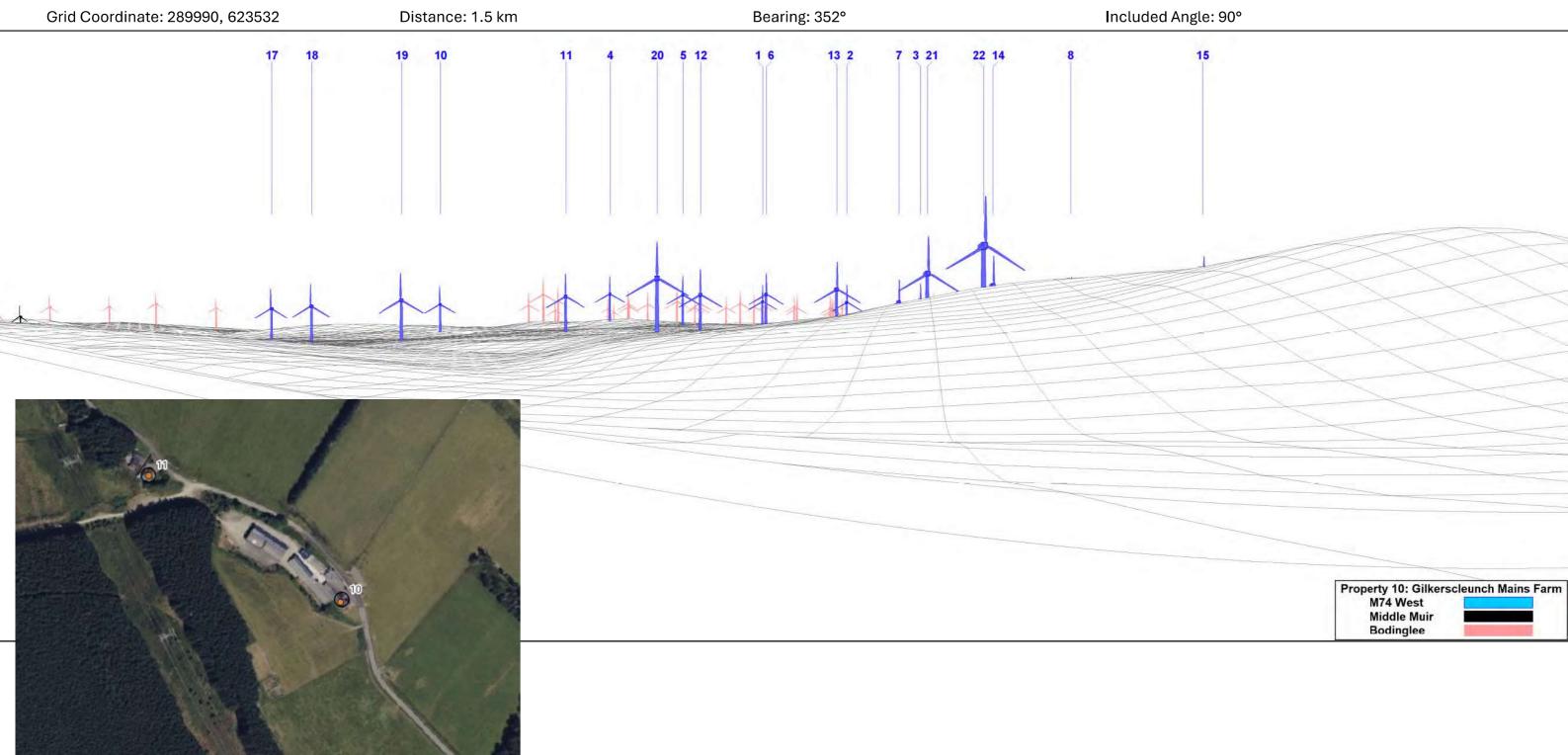
Property 9: Woodfield House





Property 9: Woodfield House
M74 West
Middle Muir
Bodinglee

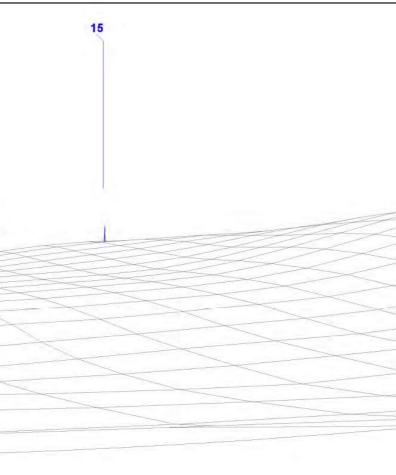
Property 10: Gilkerscleugh Mains Farm



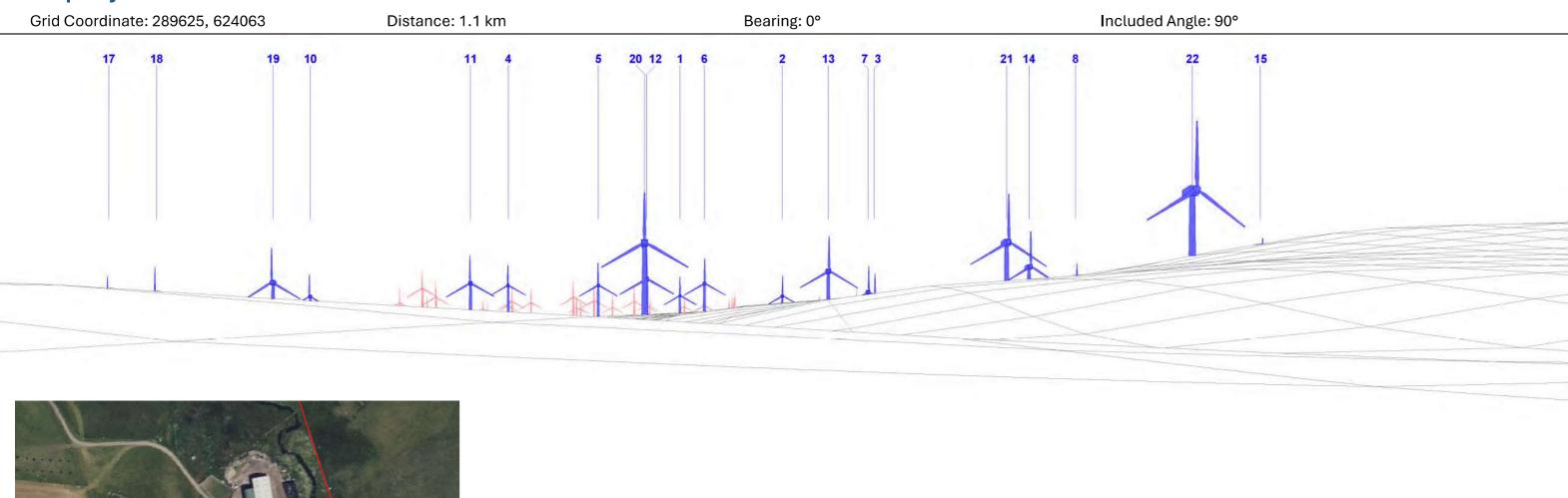


Property 11: Firholme Grid Coordinate: 289747, 623688 Bearing: 353° Included Angle: 90° Distance: 1.4 km 19 10 5 20 12 1 6 8 22 17 18 11 2 13 21 14 7 3 4





Property 11: Firholme
M74 West
 Middle Muir
Bodinglee
Little Gala

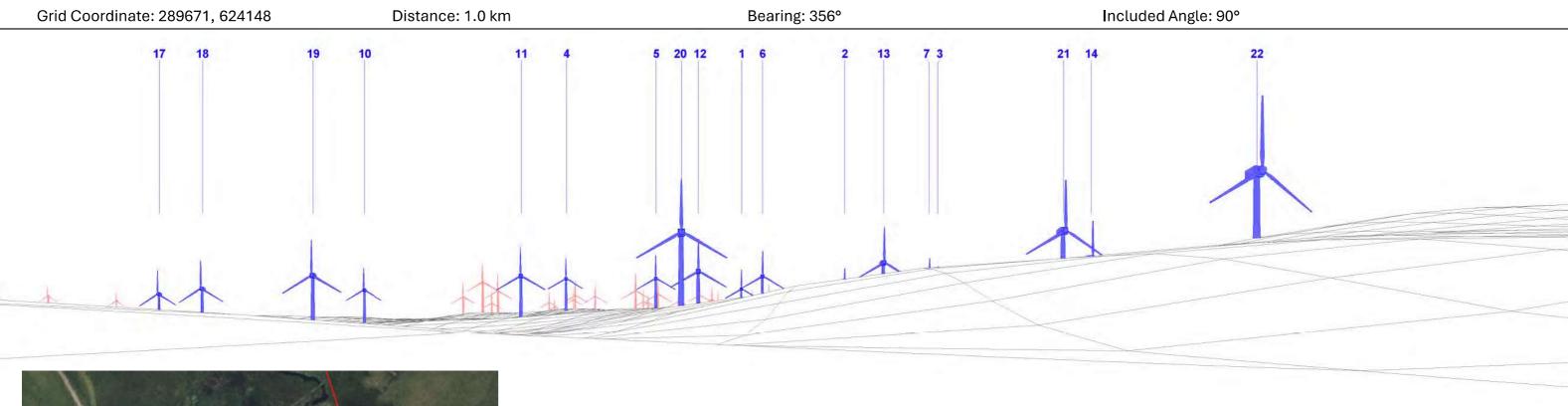


Property 12: Manse Road





	Property 12:Manse Road (group) M74 West Bodinglee
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Property 13: Crawfordjohn Mill Farm





Property 13: Crawfordjohn Mill Farm
M74 West
Bodinglee

Property 14: Nether Balgray Farm Grid Coordinate: 288654, 624057 Bearing: 52° Included Angle: 53.5° Distance: 1.7 km 22



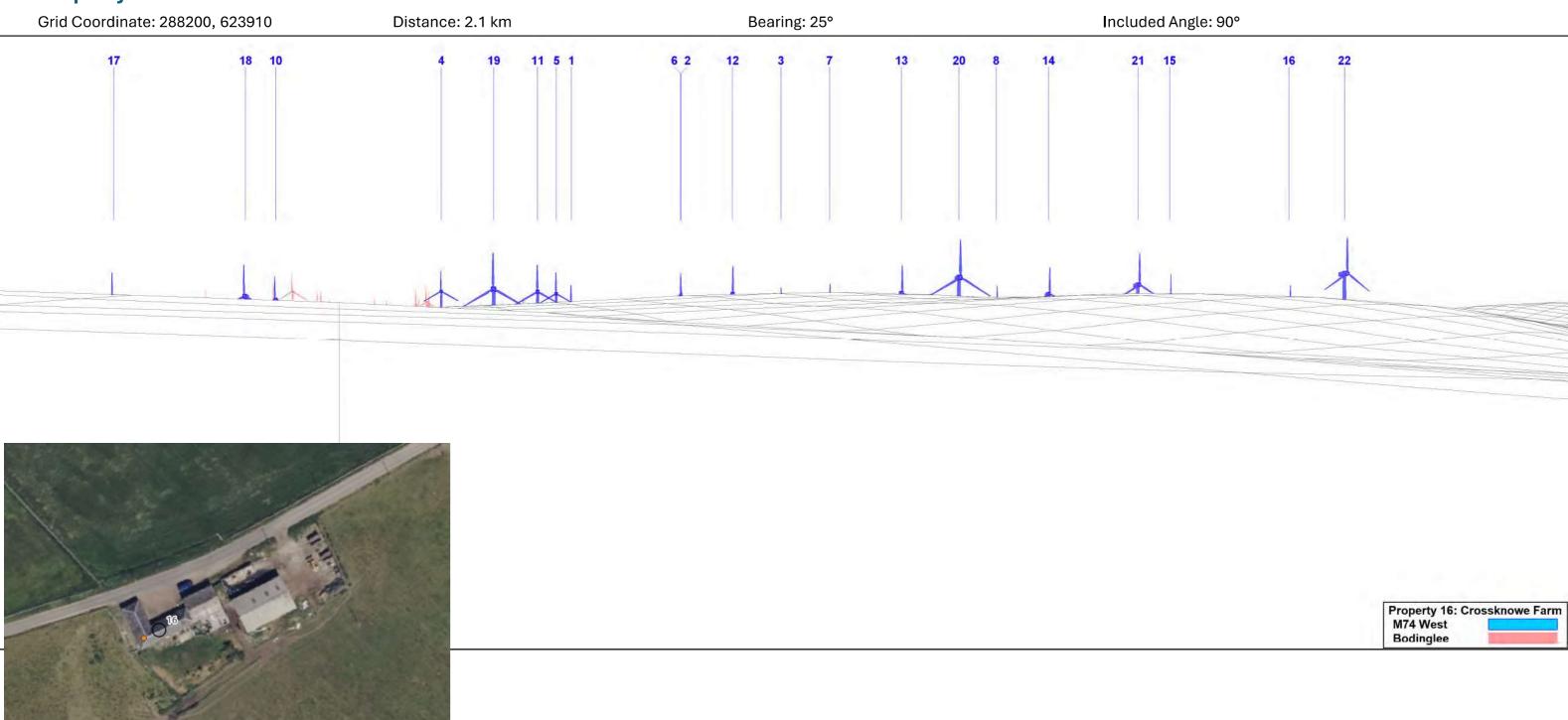
Property 14: Nether Balgray Farm M74 West

Property 15: Balgray Grid Coordinate: 288458, 624065 Distance: 1.8 km Bearing: 19° Included Angle: 90° 20 17 10 19 18



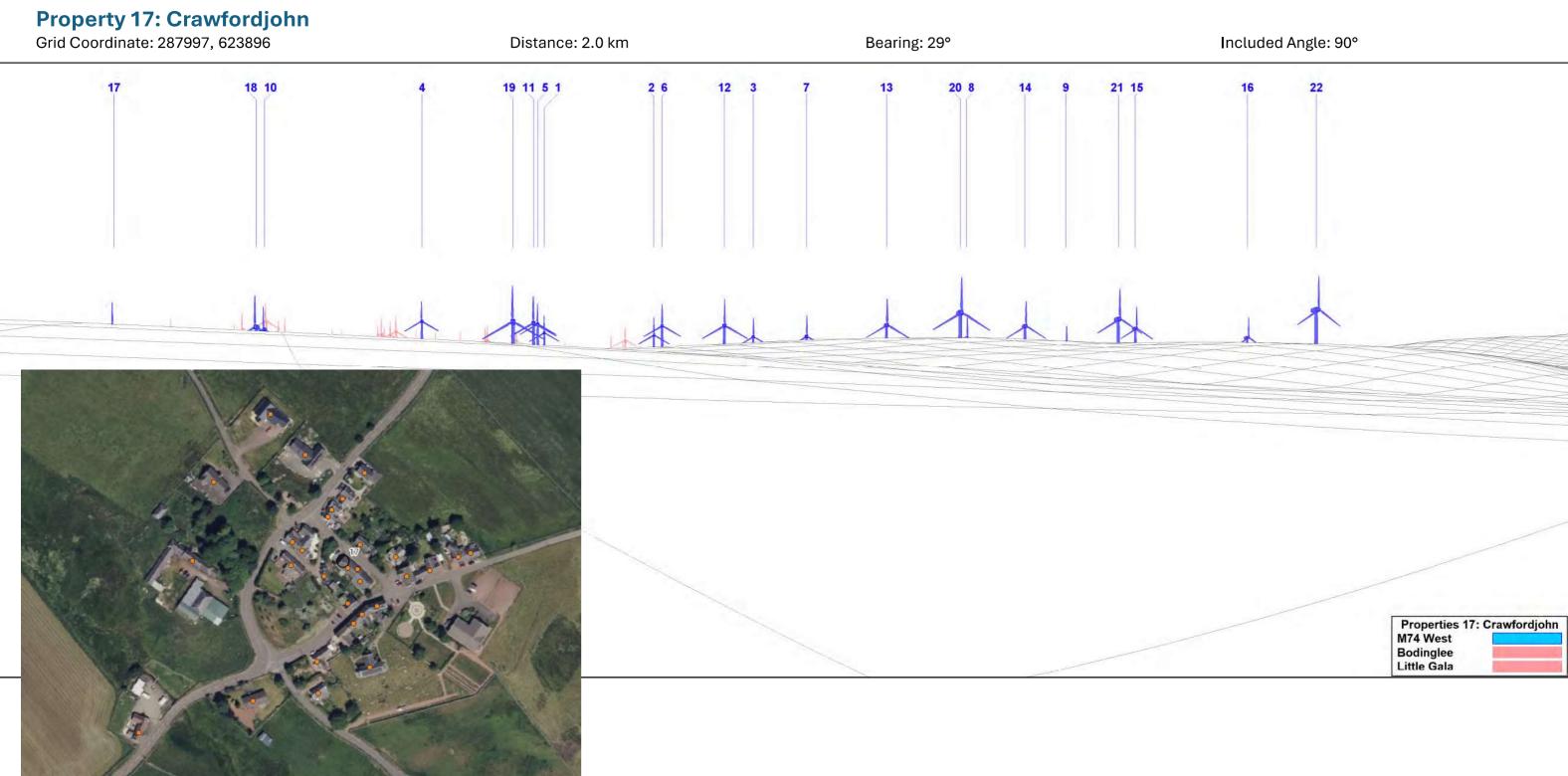
22

Property 15	: Balgray
M74 West	
Bodinglee	

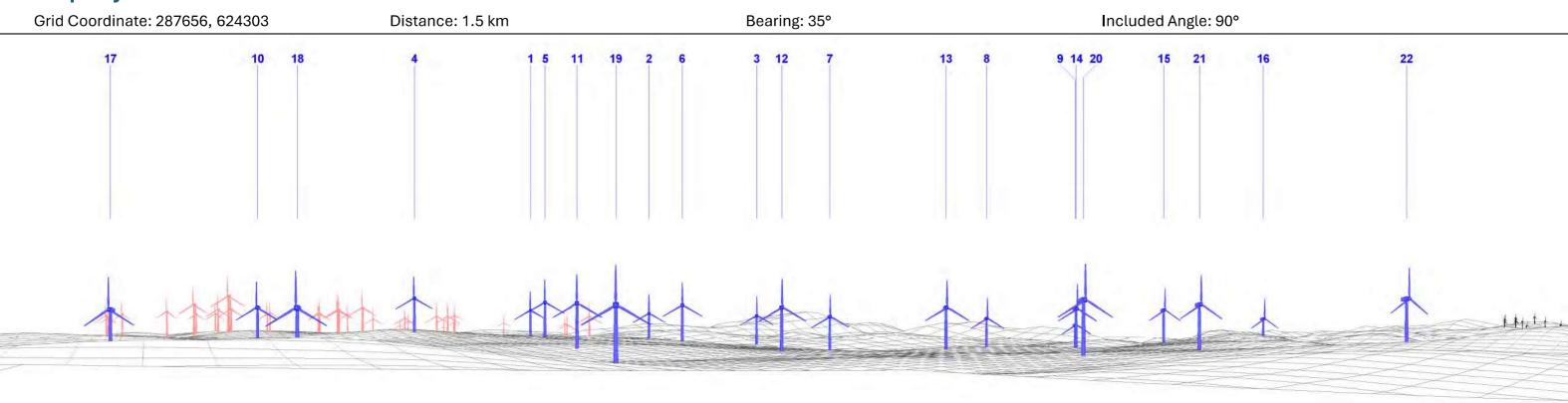


Property 16: Crossknowe









Property 18: Blairhill House





Property 18: Blairhill Hous
M74 West
Clyde
Clyde Extension
Bodinglee
Little Gala



Property 19: Burnside Cottage



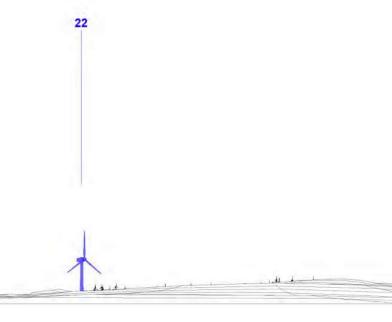


Grid Coordinate: 288033, 624664 Bearing: 40° Included Angle: 120° Distance: 1.4 km 17 18 10 1 5 11 19 9 14 20 21 16 2 6 3 12 13 15 8

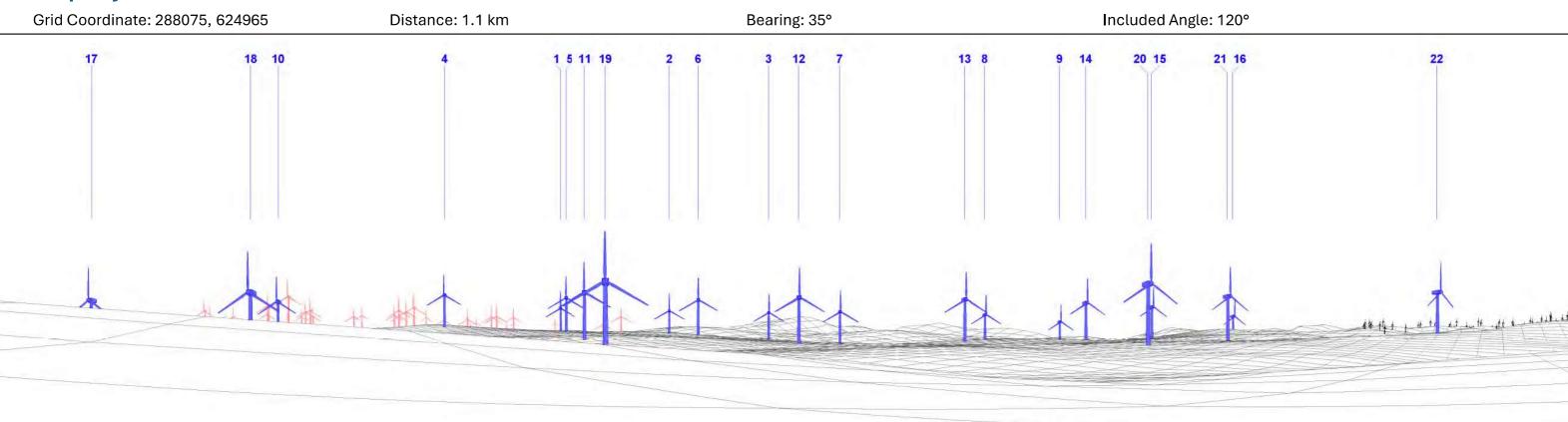
Property 20: Over Balgray











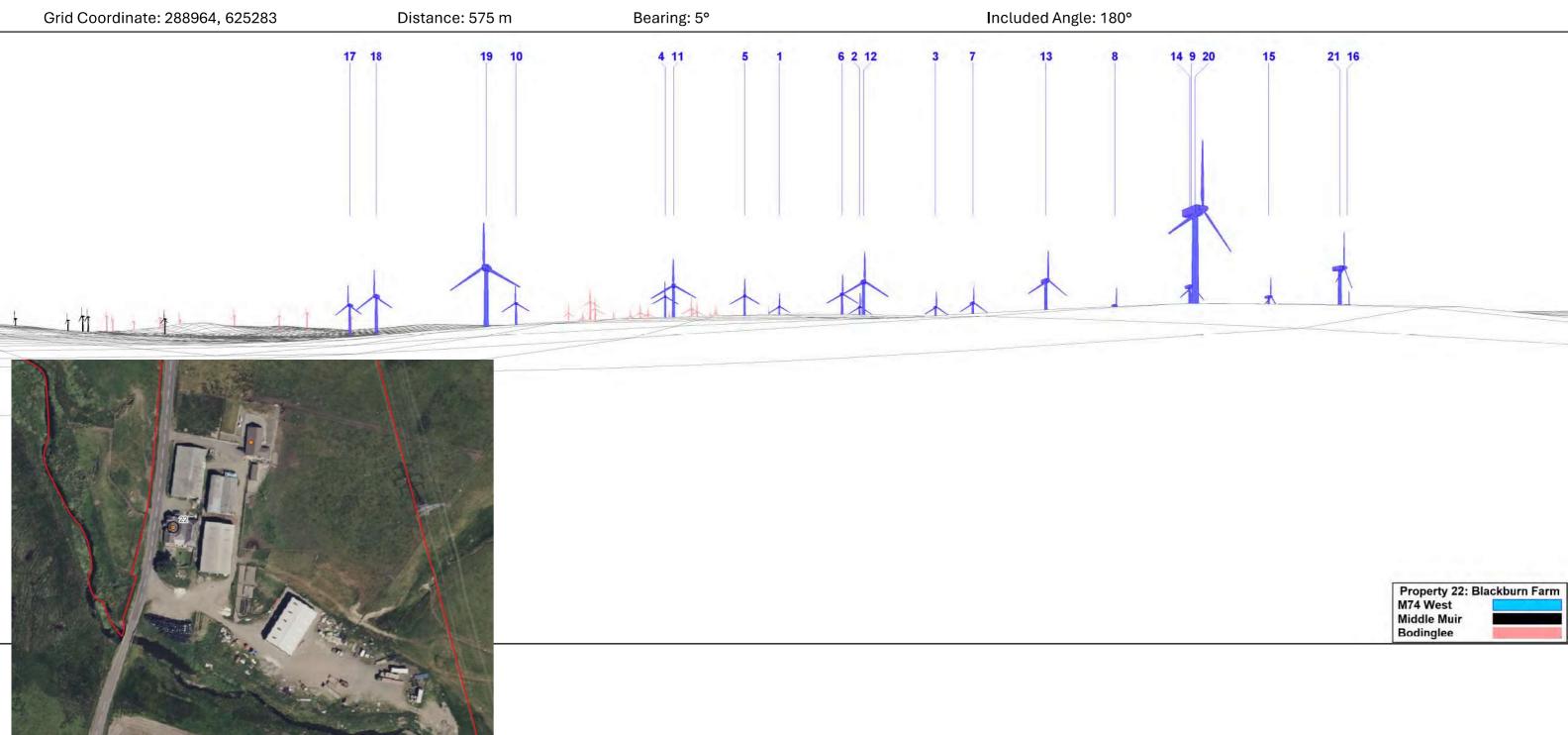
Property 21: Greenfield Farm







Property 22: Blackburn Farm





Grid Coordinate: 289177, 626317 Distance: 293 m Bearing: 331° Included Angle: 180°









Property 24: Redshaw Orid Coordinate: Distance: 1.0 km Bering: ° Include Angle: °





