

Technical Appendix 7.2

Residential Visual Amenity Assessment



Table of contents

1	Introduction	3
2	Approach	3
2.1	Step 1	3
2.2	Step 2	3
2.3	Step 3	3
2.4	Step 4	4
3	Summary of RVAA Results	4

List of Figures

Volume 3a: Plan Figures to support this Chapter Volume 3b: Visualisations – viewpoints 1 – 11 Volume 3c: Visualisations – viewpoints 12 – 22 Volume 3d: Visualisations – night time visualisations

Note – Figure names and numbers listed in contents pages of each of the Volumes 3a – 3d.

List of Technical Appendices

Technical Appendix 7.1: Landscape and Visual Assessment Methodology. Technical Appendix 7.2: Residential Visual Amenity Assessment (RVAA). Technical Appendix 7.3: Visual Assessment of Turbine Lighting.



Residential Visual Amenity Assessment
Page 2

Arecleoch Windfarm Extension

EIA Report

Residential Visual Amenity Assessment (RVAA)

1 Introduction

- In accordance with the third edition of 'Guidelines for Landscape and Visual Impact Assessment' (GLVIA3)¹, the LVIA, contained in Chapter 7, assesses the visual impact of the Development on public views and public visual amenity. This Residential Visual Amenity Assessment goes a stage beyond the LVIA by assessing the visual impact of the Development on private views and private visual amenity. It has been prepared in accordance with the Landscape Institute's recently published Technical Guidance Note 2/19 'Residential Visual Amenity Assessment' (RVAA)². This guidance sets out the 'Steps' to be followed when undertaking a RVAA and highlights how it should be informed by the principles and processes of GLVIA3. The purpose of the RVAA is to identify those properties where the effect of the Development leads to the 'Residential Visual Amenity Threshold' being reached or, in other words, where the effect could be described as overwhelming or overbearing.
- This RVAA assesses the likely effects of the Development on the visual component of residential amenity relating to individual properties within a localised study area. The term 'residential amenity' refers to the living conditions at a house, including its gardens and domestic curtilage, which are commonly interpreted to include visual amenity, noise amenity and other factors such as shadow flicker. In a RVAA, such as this, OPEN deals only with the visual amenity aspect of residential amenity, as this is its area of expertise. The effect on noise and shadow flicker are assessed in the EIA Report in Chapters 13 Noise and 15 Other Issues.
- The purpose of the RVAA is to inform the planning process. It is in this context that the Technical Guidance makes the following statement: 'It is not uncommon for significant adverse effects on views and visual amenity to be experienced by people at their place of residence as a result of introducing a new development into the landscape. In itself this does not necessarily cause particular planning concern. However, there are situations where the effect on the outlook / visual amenity of a residential property is so great that it is not generally considered to be in the public interest to permit such conditions to occur where they did not exist before.'

2 Approach

- 4. The approach set out in the Technical Guidance is based on the four following Steps:
 - Step 1: Definition of the Study Area and scope of the assessment, informed by the description of the Development, defining the Study Area extent and scope of the assessment with respect to the properties to be included.
 - Step 2: Evaluation of baseline visual amenity, at properties to be included having regard to the landscape and visual context and the Development proposed.
 - Step 3: Assessment of likely change to visual amenity of included properties in accordance with GLVIA 3 principles and processes.
 - Step 4: Further assessment of predicted change to visual amenity of properties to be included forming a judgement with respect to the Residential Visual Amenity Threshold.

2.1 Step 1

Step 1 involves defining the extent of the Study Area and establishing the scope of the assessment. In respect of defining the extent of the Study Area, Landscape Institute Technical Guidance Note presents the following advice, 'When assessing

¹ Landscape Institute and IEMA (2013). 'Guidelines for Landscape and Visual Impact Assessment: Third Edition'.

relatively conspicuous structures such as wind turbines, and depending on local landscape characteristics, a preliminary study area of approximately 1.5 to 2 km radius may initially be appropriate in order to begin identifying properties to include in a RVAA.'

- Given the theoretical visibility across this area is almost continuous it is considered that the larger radius of 2 km is an appropriate radius for the RVAA study area. The ZTV within this 2 km area shows theoretical visibility is extensive across the plateau areas with varying levels of visibility in the upland glens that intersect the 2 km area. Whilst it is recognised that there are further residential properties beyond 2 km that may also experience a significant effect the Technical Guidance Note explains that the 'exceptionally large' study areas of up to 3 km are disproportionate further stating that 'The logic for these (exceptionally) large study areas was based on certain findings of LVIAs which identified significant visual effects from 'settlements' or from clusters of residential properties within this range. This fails to recognise that RVAA is a stage beyond LVIA. Consequently, many RVAAs, including those of windfarms with large turbines (150m and taller), have included disproportionately extensive study areas incorporating too many properties. This appears to be based on the misconception that if a significant effect has been identified in the LVIA adjacent to a property at 2.5km it will also potentially lead to reaching the Residential Visual Amenity Threshold.'
- The RVAA has been undertaken from residential properties that appear occupied and in use as dwelling houses. 4 properties have been identified within the 2 km study area using Address Point data and then verified in the field. The detailed blade tip ZTV Figure 7.2-1 shows that 1 of these properties (Farden Farm) would have no visibility of the proposed Development. The remaining 3 properties (Kilrenzie Farm, Wheeb Farm and Glenour) are therefore the only properties considered in the RVAA. Whilst the property at Glenour is currently uninhabited is has been included within the RVAA in relation to its potential future residential use.

2.2 Step 2

- Step 2 involves carrying out an evaluation of the baseline visual amenity at the properties to be included, through a combination of desk study and field work. The key considerations of this evaluation are set out in the Technical Guidance as follows:
 - The nature and extent of all potentially available existing views from the property and its garden / domestic curtilage, including the proximity and relationship of the property to surrounding landform / landcover and visual foci. This may include primary / main views from the property or domestic curtilage as well as secondary / peripheral views; and
 - Views as experienced when arriving or leaving the property, for example from private driveways / access tracks.
- In the course of carrying out the baseline evaluation, OPEN has surveyed the visual amenity of the residential properties from adjacent public roads, open land or footpaths. The locations of the residential properties within the 2 km study area are shown on Residential Visual Amenity Assessment Overview plan (Figure 7.2-1).
- Assessment Productions RVAA sheets have been prepared for the properties within the Study Area. These assessments contain an OS map and aerial photograph of the property, the orientation of the principal facade of each property, the direction of the view/horizontal field of view which would be affected by the proposed Development and a wireline view illustrating the theoretical visibility of the proposed Development (showing a 90 degree horizontal field of view). The RVAA sheets record details of the baseline residential amenity and the likely visual effects resulting from the proposed Development. Operational windfarms are included in the baseline evaluation, with these existing windfarms considered in the assessment of effects on residential visual amenity.

2.3 Step 3

Step 3 involves carrying out an assessment of the likely change to the visual amenity of properties by applying the process of assessment advocated by GLVIA3, in which the sensitivity of the receptor is combined with the magnitude of change which would arise as a result of the Development, to determine whether the effect would be significant or not. The aim of Step 3 is to identify those properties with potential to reach Residential Visual Amenity Threshold and therefore require further assessment in Step 4. This will only occur where a high magnitude of change is assessed as the threshold describes those effects that are at the extreme where they become overwhelming or over-bearing.

Residential Visual Amenity Assessment Page 3

² Landscape Institute (2019). Technical Guidance Note 2/19 'Residential Visual Amenity Assessment (RVAA)'.

- OPEN's methodology assumes that all occupiers of local residential property within this RVAA typically have a higher sensitivity than other visual receptors. OPEN attaches less weight to views from upper floor rooms in houses compared with ground floor principal rooms, an approach which is reflected in GLVIA3 (paragraph 6.36). The assessment of magnitude of change which would arise from the Development is determined by the factors influencing magnitude of change on views, the potential change to the outlooks from each property, as well as other factors, such as areas of garden ground or property access drives immediately surrounding a property, that would be likely to be affected. The key considerations of this assessment are set out in the Technical Guidance as follows:
 - 'Distance of property from the proposed development having regard to its size / scale and location relative to the property (e.g. on higher or lower ground);
 - Type and nature of the available views (e.g. panoramic, open, framed, enclosed, focused etc.) and how they may be affected, having regard to seasonal and diurnal variations;
 - Direction of view / aspect of property affected, having regard to both the main / primary and peripheral / secondary views from the property;
 - Extent to which development / landscape changes would be visible from the property (or parts of) having regard to views from principal rooms, the domestic curtilage (i.e. garden) and the private access route, taking into account seasonal and diurnal variations:
 - Scale of change in views having regard to such factors as the loss or addition of features and compositional changes including the proportion of view occupied by the development, taking account of seasonal and diurnal variations;
 - Degree of contrast or integration of new features or changes in the landscape compared to the existing situation in terms
 of form, scale and mass, line, height, colour and texture, having regard to seasonal and diurnal variations;
 - Duration and nature of the changes, whether temporary or permanent, intermittent or continuous, reversible or irreversible etc.; and
 - Mitigation opportunities consider implications of both embedded and potential further mitigation.'
- Technical Appendix 7.1 LVIA Methodology provides a full description of the criteria that contribute to magnitude of change on views and a description of the magnitude ratings used in this assessment.
- The significance of the effect on residential visual amenity experienced at each property is dependent on all of the factors considered in the sensitivity and the magnitude of change resulting from the Development. These judgements on sensitivity and magnitude are combined to arrive at an overall assessment as to whether the Development would have an effect that is significant or not significant on residential visual amenity.

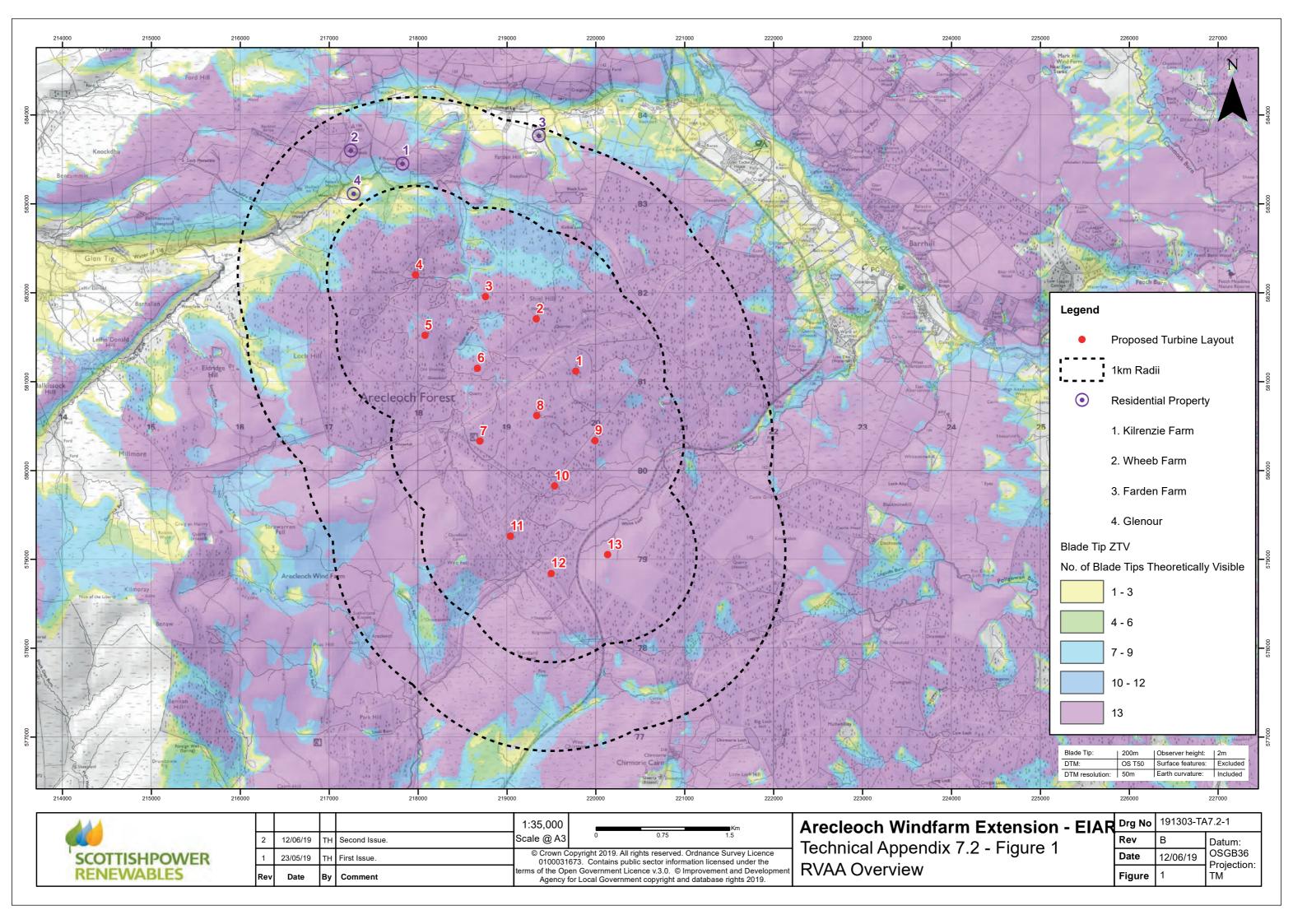
2.4 Step 4

- The difference between significant visual effects and what might be considered to be an unacceptable or overbearing effect on residential visual amenity has evolved through Public Local Inquiry (PLI) decisions over the past decade. The factors considered in such an assessment are widely recognised by professional Landscape Architects and decision makers and are often referred to as 'the Lavender test' after the Inspector who first developed the concept. The factors considered in the so called 'Lavender test' requires a level of visual effect to arise which is greater than a significant visual effect in EIA terms, for the impact to be unacceptable in planning terms. In the Technical Guidance this is referred to as the Residential Visual Amenity Threshold.
- The magnitude of effect must be to such a degree that a property would become widely regarded as an unattractive place in which to live. This public interest test therefore has a higher threshold than 'significant' in EIA terms. This approach is commonly applied to the assessment of visual effects on residential amenity. The approach has been refined through decisions for Inquiries and Appeals into wind farm applications across the United Kingdom and recognises that, given no person is entitled to a view in law, it is not sufficient for a property to simply sustain a significant visual effect for its residential amenity to be unacceptably harmed. For residential visual amenity to be harmed a higher threshold requires to be triggered, whereby the turbine(s) are at such proximity to a house, or in such number, that they lead to an overwhelming or overbearing effect on the property to the extent that it becomes an unattractive place in which to live. Where this occurs, the matter affects the public interest as such an outcome would be considered to harm the provision of good housing stock.

3 Summary of RVAA Results

The RVAA identifies no residential properties within 1 km. Of the 4 residential properties within the study area 3 (Kilrenzie Farm, Wheeb Farm and Glenour) have potential views of the proposed Development and detailed assessment sheets have therefore been prepared. A High magnitude of change has been predicted for the Kilrenzie Farm and Wheeb Farm properties in the detailed assessment sheets as part of the stage 3 RVAA and both are therefore also considered for step 4 Residential Visual Amenity Threshold. The conclusions for these assessments, although predicting a High level of change and significant visual effect for both properties, determines that the visual impact at neither property is at a sufficiently high enough level of change for an overwhelming or overbearing effect on visual amenity to occur. A Medium – Low magnitude of change has been predicted for the Glenour property resulting in a Not Significant effect.

Residential Visual Amenity Assessment
Page 4



Property No 1: Kilrenzie Farm

Property Location OS Grid Ref:

Elevation:

217825E 583452N

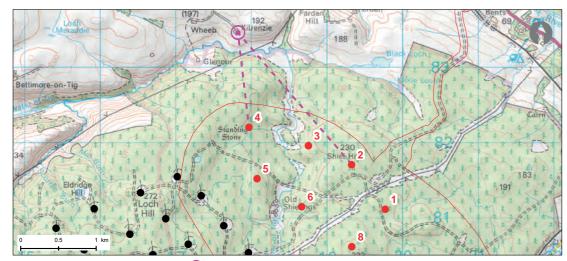
167.8m AOD

1.26km Distance to Nearest Turbine:

Arecleoch Extension Theoretical Visibility

35°

No Blade Tips Visible: 13 No Hubs Visible: 12



Proposed Turbine Layout

Residential Property

Arecleoch Windfarm

Affected Horizontal Field of View



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Property description:

Semi Detached

X	Farmhouse	Derelict
X	Detached	Uninhabited

X Stone Built

Rendered Timber Cladding

Brick Built

Conservatory Single Storey

X One & Half Storey

Three Storey Detail not Known

Two Storey

Existing residential (visual) amenity:

to the east.

from the north-west. This parking area has a looped track round which are the property, an outbuilding and a caravan. The garden and principal facade of the property are south east facing. This property overlooks the upper Glen Tig and has an immediate character context of upland with some forestry blocks. Landcover is predominantly grazing which is rough in texture with patches of moorland grasses and gorse covered knolls common in the immediate context of the property and along the side of the access track. Large areas of forestry dominate the southern slopes of upper Glen Tig, punctuated by power lines, pylons and the turbines of the existing Arecleoch windfarm. Distant views include hills to the east and west with these longer more distant views directed by the valley sides to the north and south.

Residential visual amenity effects:

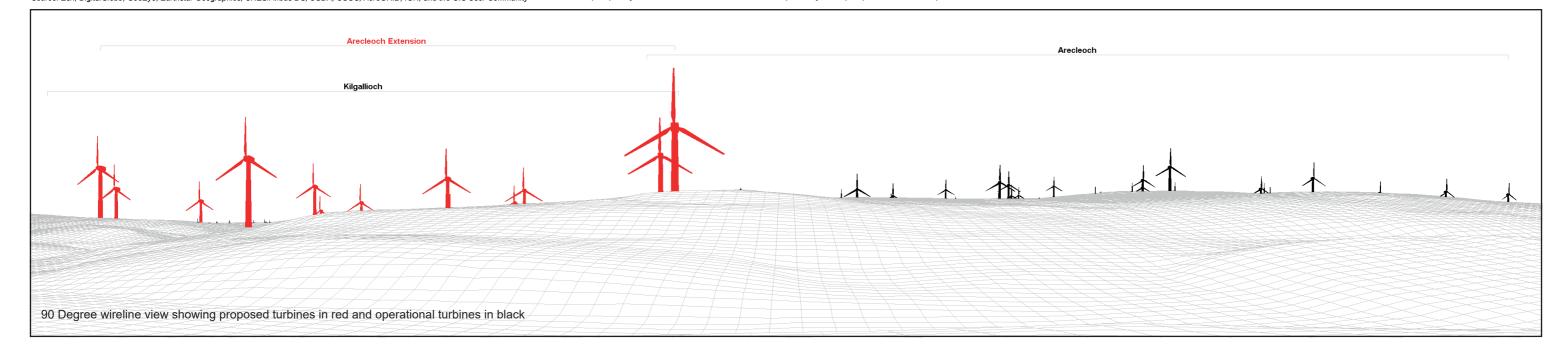
Magnitude of change:	High	Med-High	Ме	edium	Med-Low	Low	Negligible	None
Significance of effect:	Significant visual effect			Not significant visual effect			No effect	

Stage 3 Assessment: The proposed Development turbines would be visible at 1.26 km to the nearest turbine. The proposed Development turbines are located to the south-east in line with the primary view from the rear of this property. Whilst all 13 turbines are theoretically visible Arecleoch Forest intervenes reducing the level of visibility, particularly for the more southerly 4-5 turbines in the layout which would have their hubs screened by the intervening forestry with the farthest 2 blades entirely screened. The closest most northerly 3-4 turbines appear to sit higher on the horizon and the position of these turbines along with their larger size creates a strong contrast with the existing Arecleoch turbines in the view. The property, surrounding landscape in the immediate view and location of the proposed Development is clearly situated within an upland landscape character context that is large in scale and largely composed of large areas of forestry, existing windfarm development and gentle moorland slopes and plateau and the large scale of the receiving landscape would help accommodate the proposed Development turbines into the immediate landscape context of this property. The horizontal spread of development currently seen from this property in Arecleoch is 46°, the proposed Development would in itself occupy 34° of the view to the south with the total span of horizon occupied increasing to approximately 84° from the existing 46°

property and the position of proposed Development turbines on the leading ridgeline to the south of Glen Tig. Taking this into account, the magnitude of change as a result of the

Stage 4 Assessment: In applying the higher threshold in relation to changes in visual amenity, it is considered that the proposed Development would not lead to an overwhelming/

in contrast to the existing Arecleoch turbines, their position behind the leading ridgeline and intervening forest helps the perception of these turbines being located in the broader upland plateau to the south and further visually seperated by the upland glen characteristics of upper Glen Tig which is in the foreground view. Whilst the proposed Development turbines appear in the primary view from the property to the south-east, the views along the glen to the east and west, which provide landscape focus and interest from this property, would not be encroached upon by the proposed Development.



Property No 2: Wheeb Farm

Property Location

OS Grid Ref:

Elevation:

217243E 583599N

175.7m AOD

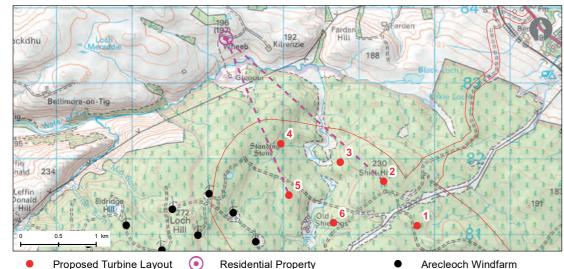
Distance to Nearest Turbine: 1.58km

Arecleoch Extension Theoretical Visibility

Affected Field of View:

13 No Blade Tips Visible: 13

No Hubs Visible:



Affected Horizontal Field of View



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Property description:

Semi Detached

X Farmhouse	Derelict	Brick Built
X Detached	Uninhabited	Rendered

X Stone Built

Existing residential (visual) amenity:

This property is accessed from Colmonell via Craigneil Road and a rough access track that leads to this property and Kilrenzie Farm. This is a particularly isolated property which overlooks the upper Glen Tig. The property is orientated on a north-east to south-west axis and is accessed through a porch which leads off the small parking area against the access road to the north. The garden and principal facade of the property are south west facing. The character context surrounding the property is upland with some forestry blocks. Landcover is predominantly grazing which is rough in texture with patches of moorland grasses and gorse covered knolls common in the immediate context of the property and along the side of the access track. Large areas of forestry dominate the southern slopes of upper Glen Tig, punctuated by power lines, pylons and the turbines of the existing Arecleoch windfarm. Distant views include hills to the east and west with these longer more distant views directed by the valley sides to the north and south.

Timber Cladding

Conservatory

Single Storey

X One & Half Storey

Two Storey

Three Storey

Detail not Known

Residential visual amenity effects:

Magnitude of change:	High	Med-High	Medium		Med-Low	Low	Negligible	None
Significance of effect:	Significant visual effect			Not significant visual effect			No effect	

Stage 3 Assessment: The proposed Development turbines would be visible at 1.58 km to the nearest turbine. The proposed Development turbines are located to the south-east and away from the direction of view of the principal facade of the property to the south-west. Whilst all 13 turbines are theoretically visible, 2 turbines would be screened and 3 almost entirely screened behind the intervening forestry. The closest most northerly 3-4 turbines, appear to sit higher on the horizon, and the position of these turbines along with their larger size creates a strong contrast with the existing Arecleoch turbines in the view. The property, surrounding landscape in the immediate view and location of the proposed Development is clearly situated within an upland landscape character context that is large in scale and largely composed of large areas of forestry, existing windfarm development and gentle moorland slopes and plateau and the large scale of the receiving landscape would help accommodate the proposed Development turbines into the immediate landscape context of this property. The horizontal spread of development currently seen from this property in Arecleoch is 49°, the proposed Development would in itself occupy 26° of the view to the south with the total span of horizon occupied increasing to approximately 82° from the existing 49°. The proposed Development turbines appear 2-3 times

Glen Tig. T

Stage 4 Assessment: In applying the higher threshold in relation to changes in visual amenity, it is considered that the proposed Development would not lead to an overwhelming/

in contrast to the existing Arecleoch turbines, their position behind the leading ridgeline and intervening forest helps the perception of these turbines being located in the broader upland plateau to the south and further visually seperated by the upland glen characteristics of upper Glen Tig which is in the foreground view. The proposed Development turbines do not appear in the primary view from the property to the south-west, and the views along the glen to the east and west provide landscape focus and interest from this property, would not be encroached upon by the proposed Development.

Arecleoch Extension Arecleoch 90 Degree wireline view showing proposed turbines in red and operational turbines in black

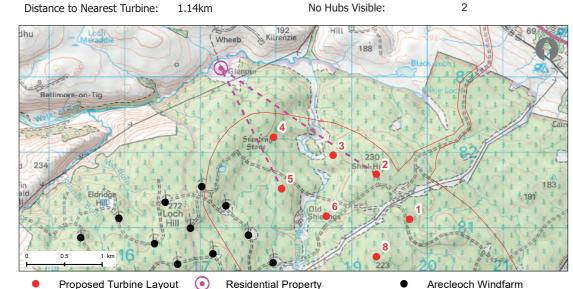
Property No 4: Glenour

Property Location
OS Grid Ref: 217274E 583112N

Elevation: 153m AOD

Arecleoch Extension Theoretical Visibility

Affected Field of View: 3No Blade Tips Visible: 4



Application Boundary --- Affected Horizontal Field of View



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Property description:

☐ Farmhouse	X Derelict	Brick Built	Conservatory	X Two Storey
X Detached	X Uninhabited	X Rendered	Single Storey	Three Storey
Semi Detached	X Stone Built	Timber Cladding	One & Half Storey	Detail not Known

Existing residential (visual) amenity:

This property is very isolated and listed on the Buildings at Risk Register for Scotland which notes it as unnocupied from at least 1990. There are no windows on the main building and no roof on the outbuilding, there are no current signs of restoration. Access is from Colmonell via Craigneil Road and the same rough access track that also leads to Wheeb and Kilrenzie Farms (from Wheeb Farm the track is very rough and is now no longer suitable for cars).

The property is within Glen Tig to the south of the Water of Tig and is orientated on an east to west axis with entrance porches at each aspect of the property. Whilst it is no longer clear which aspect constitutes the front of the property a remnant track that lies to the east appears to have provided a front access in the past and in line with this, the principal facade of the property is assumed east facing. Whilst the moorland immediately outside the property is a little less rough in texture, there is no longer a clearly defined garden area surrounding the property. The character context surrounding the property is upland with some forestry blocks. Landcover is predominantly grazing which is rough in texture with patches of moorland grasses. Large areas of forestry dominate the southern slopes of upper Glen Tig, punctuated by the nearby power lines and pylons that follow the southern slopes of Glen Tig.

Residential visual amenity effects:

Magnitude of change:	High	Med-High	Medium		Med-Low	Med-Low Low		None
Significance of effect:	Significant visual effect			Not si	gnificant visual	effect	No effe	ect

Stage 3 Assessment:

The proposed Development turbines would be visible at 1.14 km to the nearest turbine. The proposed Development turbines are located to the south-east and away from the direction of view of the principal facade of the property to the south-west. Only 4 of the 13 proposed development turbines are theoretically visible, 2 as blade tips and 2 with hubs close to the intervening horizon. In reality however the intervening forestry on the horizon would screen both of the turbines theoretically visible as blade tips and would also screen the hubs and partial blades of the other 2 turbines resulting in only the blade tips of 1-2 turbines visible above the treeline.

The property, surrounding landscape in the immediate view and location of the proposed Development is clearly situated within an upland landscape character context that is large in scale and largely composed of large areas of forestry, gentle moorland slopes and plateau. The large scale of the receiving landscape would help accommodate the proposed Development turbines into the immediate landscape context of this property. The closest proposed Development turbine appears to sit higher than the others and much of its blades are predicted to appear above the treeline from this property, however, the amount of actual visibility that would be experienced is considered to be limited overall and the change in the view to south would be minimal. On balance and should the property become habited once more, the magnitude of change as a result of the proposed development is considered to be Medium - Low resulting in a Not Signi

Stage 4 Assessment:

Based on the low level magnitude of change predicted, the Stage 4 RVAA assessment is not required for this property.

