TECHNICAL APPENDIX 7.5: RESIDENTIAL VISUAL AMENITY

Introduction

Background

1. This Residential Visual Amenity Assessment (RVAA) has been prepared in accordance with Landscape Institute Technical Guidance Note 2/19: Residential Visual Amenity Assessment (15 March 2019). The Technical Guidance Note (TGN) identifies that:

   "The purpose of carrying out a Residential Visual Amenity Assessment (RVAA) is to form a judgement, to assist decision makers, on whether a proposed development is likely to change the visual amenity of a residential property to such an extent that it becomes a matter of 'Residential Amenity'."

2. It further notes that:

   "Changes in views and visual amenity are considered in the planning process. In respect of private views and visual amenity, it is widely known that, no one has 'a right to a view.' …

   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."

3. This assessment considers only what the resident may see from their property. Views or 'visual amenity' are just one component of residential amenity and the two should not be confused. The latter is a planning matter and may also include aspects such as noise, air quality, traffic, etc., in addition to residential visual amenity. This RVAA considers the visual amenity aspects of residential amenity. Where necessary, other aspects are considered in the relevant chapters of this EIA Report and it is for decision makers to weigh all these aspects, and documents/assessments relating to them, in determining the acceptability of a proposal.

4. Overall residential amenity is discussed within Table 8.1 of the **Planning Statement** accompanying the application for the proposed Harestanes West Windfarm (hereafter, 'the proposed Development').

5. This assessment, and the process of RVAA, seeks to identify where effects on residential visual amenity are of such a nature or magnitude that they may need to be considered in the overall balance of 'Residential Amenity' or 'Living Conditions'. The point at which this happens is referred to as the Residential Visual Amenity Threshold.

Approach

6. TGN 2/19 advocates a four-step process to RVAA with the first three falling broadly within the scope of LVIA where the magnitude and significance of visual effects is assessed.

7. The fourth step involves a further assessment of the change to visual amenity of individual properties identified as "*having the greatest magnitude of change*" and identifying whether the RVA threshold is reached.

Methodology

Study Area and Initial Assessment

8. There are no standard criteria for defining the RVAA study area and this is determined on a case by case basis. The guidance note identifies that for large structures, such as wind turbines, a preliminary study area of 1.5-2 km radius may be appropriate to begin identifying properties for inclusion within RVAA, but for other developments the study area would be much reduced in proportion to their size. In this case, a study area of 2 km has been used.

9. Within the RVAA study area all residential properties are identified. An initial appraisal is undertaken to identify those properties likely to experience the greatest effects, therefore requiring further detailed assessment, and those where effects would be less and unlikely to approach the RVA threshold. This process may draw on the findings of the LVIA as a starting point and is supplemented by other tools including ZTV maps, wireframes and field work.

Further Detailed Assessment

10. For those properties that have been identified at the initial stage as requiring further detailed assessment the process follows the following key stages:

    - Evaluation of baseline visual amenity;
    - Assessment of likely change to the visual amenity of properties; and
    - Forming the RVAA judgement.

11. Properties are usually assessed individually but may be considered in groups where their outlook or views are essentially the same; for example, a row of houses that all share an open outlook towards the proposed Development. Where properties are grouped for assessment, this will be clearly identified and reasons for grouping described.

Baseline Visual Amenity

12. The existing baseline visual amenity is described for each property and is informed by desk study and field work. Site visits to all individual properties included within the detailed assessment are undertaken where access has been agreed with property owners. Where access is not possible this step is informed by visits to nearby publicly accessible areas. Visual amenity is described 'in the round' and considers both views from the dwelling itself, the domestic curtilage and views experienced when arriving or leaving the property. In this RVAA, all residential properties are considered to be of high sensitivity to change in the view.

13. It has been noted where the owners of a dwelling have a financial involvement in the project.

Likely Change to Visual Amenity

14. The change to baseline views and visual amenity as a result of the proposed Development is described for each property and a judgement on the magnitude of effects likely to be experienced is provided. This may involve consideration of the following factors:

    - Distance between the property and proposed Development and their relative locations (e.g. up/down hill);
    - Nature of available views (e.g. panoramic, enclosed) and the effect of daily or seasonal variations;
    - Direction of view or aspect of property affected;
    - Extent to which the proposed Development may be visible from various parts of the property (e.g. dwelling, rooms, access, garden);
    - Scale of change to views, including the proportion of view occupied by the proposed Development;
    - Compositional changes (e.g. loss/addition of landscape features such as woodland);
    - Contrast or integration of new features with the existing views; and
    - Duration and nature of changes (e.g. temporary/permanent, intermittent/continuous).

Visualisation and Understanding Localised Mitigating Factors

15. This stage may be supported by a range of visual aids as required including maps, ZTV studies, photography and visualisations. The choice of visual aids is determined on a case by case basis and may be informed by consultation. In line with best practice guidance the type of visualisation should be proportionate to the nature of the proposed Development and assessment stage.

RVAA Judgement

16. This final stage is concerned with identifying "*whether the predicted effects on visual amenity and views at the property are such that it has reached the Residential Visual Amenity Threshold, therefore potentially becoming a matter of Residential Amenity*". This is the key concern of RVAA and judgements on the RVA threshold are set out clearly and unambiguously.

Cumulative

17. RVAA is undertaken against the baseline, as described in the accompanying LVIA. As stated in the TGN, future cumulative visual effects are not assessed within the RVAA, as the focus of the RVAA is on the existing visual amenity. As such the operational Dalwinston Windfarm and Harestanes Windfarm are included in the RVAA, but not Harestanes South Windfarm Extension.

18. This assessment also considers the effects of forestry removal as much of the existing forestry within the RVAA study area is likely to be felled in the short to medium term or during the lifetime of the proposed Development.

Distances/Directions

19. Where distances and directions are given within the assessment, these are distances between the nearest part of the property (including the domestic curtilage) and the nearest turbine, unless explicitly stated otherwise. Distances given are rounded to the nearest 10 m to account for the level of accuracy available in techniques used to measure (usually based on aerial photography within a GIS (Geographical Information Mapping System).

Assessment

Introduction

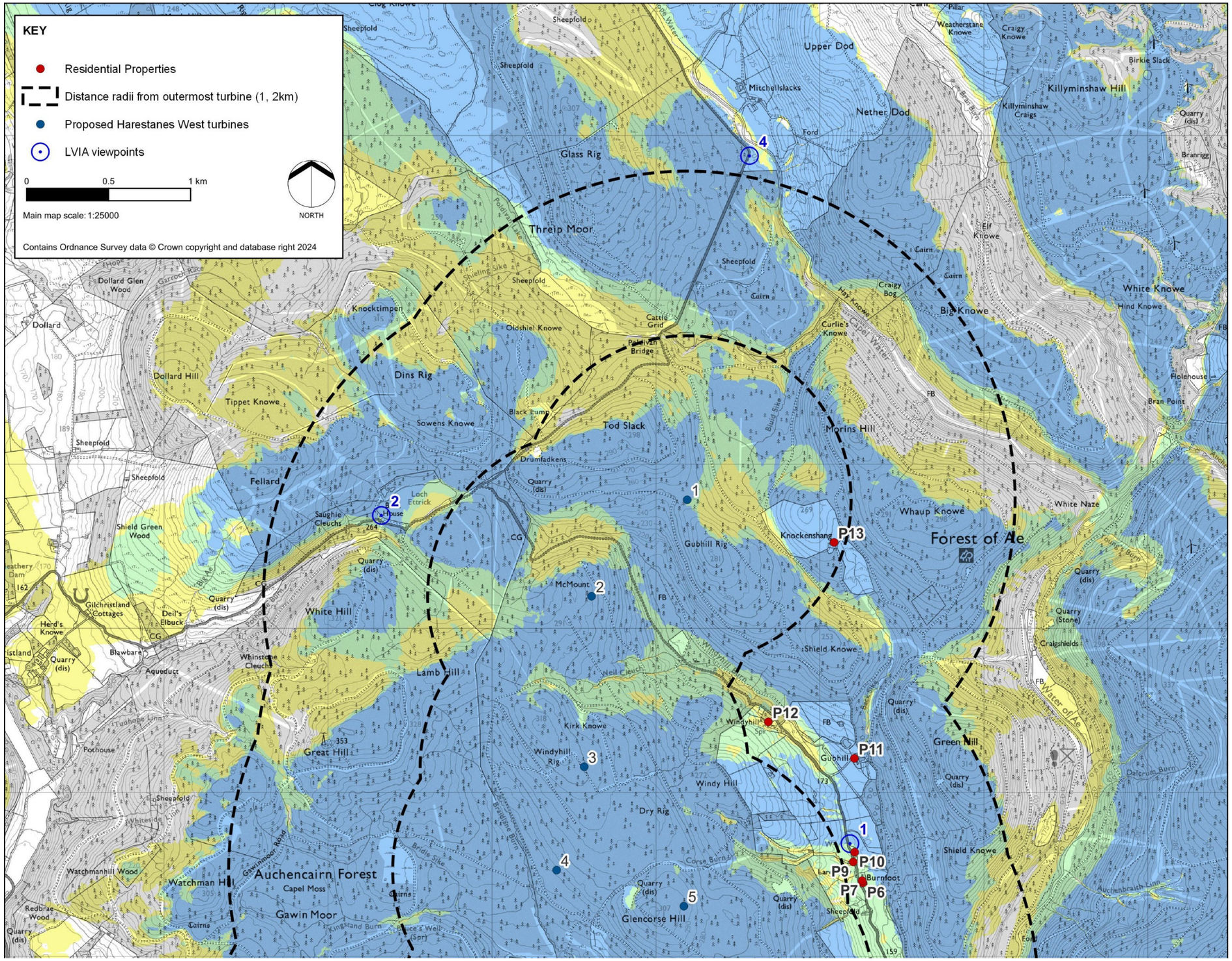
20. RVAA Figure 1 below illustrates properties within the 2 km RVAA study area. In total there are 13 properties/property groups located within the RVAA study area. The map is overlaid with the bare earth ZTV to blade tip height. Bare earth wirelines have been provided for each property.

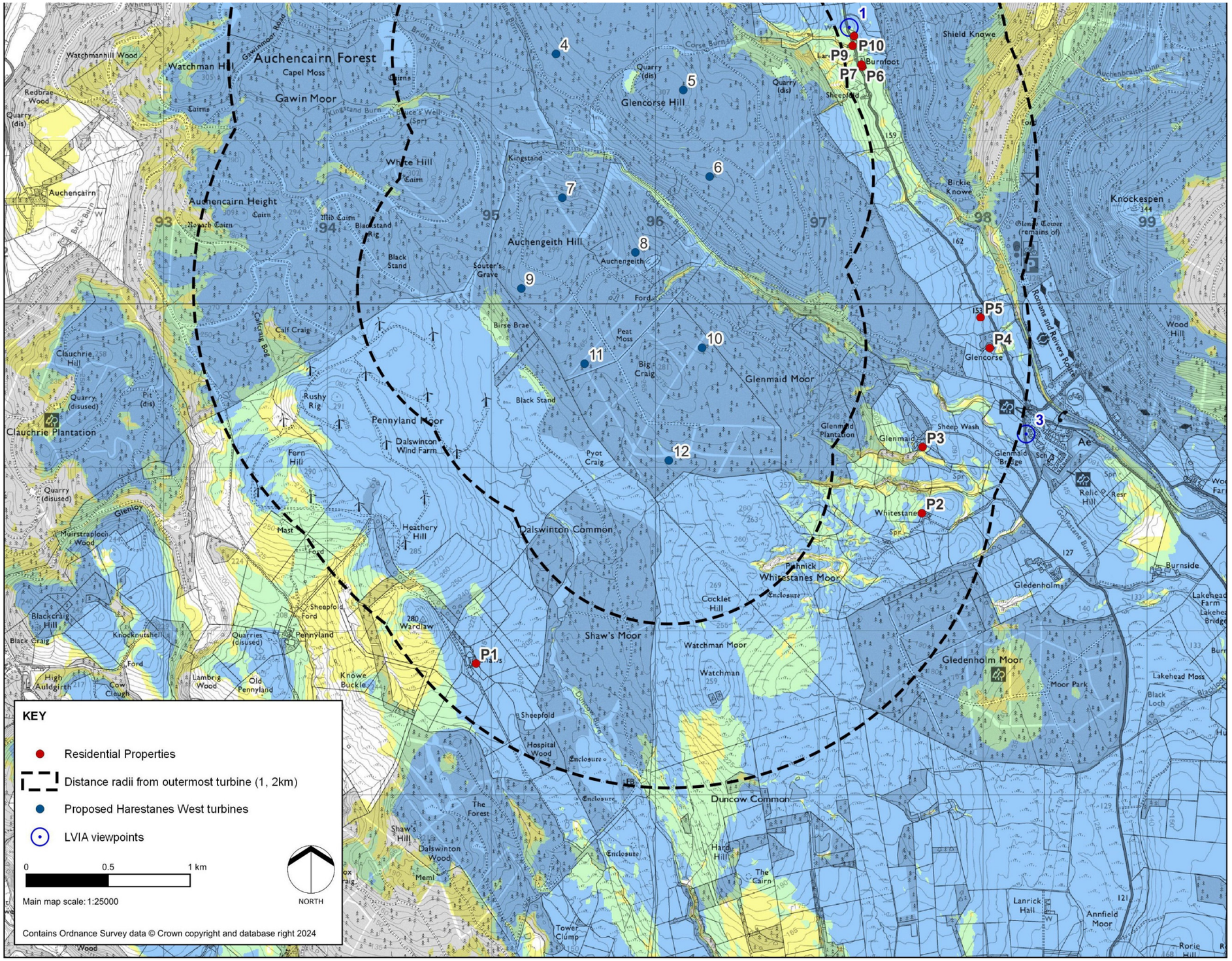
21. Further detailed assessment has been included for all properties within the RVAA including wirelines for each property in **Volume 3b: Visualisations**.

22. In terms of construction phase effects, the most notable of these would arise from visibility of cranes during the final erection of turbines. This would be a short-term activity and the scale of change arising would be no greater than that of the operational phase of the proposed Development.

23. As requested by Dumfries and Galloway Council, all properties within the 2km study area have been considered in detail. Site visits were also undertaken to all properties to understand the context and assess the change, as noted in paragraph 12 above.

RVAA Figure 1: Residential Properties





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PROPERTY NAME:	Shaws
PROPERTY REFERENCE:	P1
DISTANCE TO NEAREST TURBINE:	1.7 km northeast to T12
ORIENTATION OF FRONTAGE	South
DIRECTION TO TURBINES:	Northeast
RESIDENT DETAILS:	Uninvolved
SURVEY DETAILS:	Survey to accessible external areas.

Baseline Visual Amenity:

This property comprises of a two storey farmhouse set on a gentle southeastern slope with adjoining outbuildings at the northeastern end. The main views are open to the south, over the property approach and neighbouring farmland. The property has windows on all sides, though views are shortened to the north, west and east due to rising topography, adjacent and adjoining buildings and nearby woodland. The property is accessed from the southwest of the house via a long access track. The garden extends to the south of the house where a private lawn is located with a southern outlook. The curtilage of the farm extends to the north where it is bound by a low wall, with farm buildings set along borders to the northwest, and to the east. Farm buildings to the north and northeast truncate views from ground level windows on the northern facade, with a shelterbelt partially contains the southeast outlook.

Operational turbines at Dalswinton Windfarm are visible 0.8 km to north and currently occupy 55 degrees of the view. The operational Harestanes Windfarm is also visible, but much more distant at 7.1 km northwest.

Likely Change to Visual Amenity:

Bare earth wirelines show that up to 10 hubs and a further 2 sets of blade tips of the proposed Development could be visible to the north and northwest adjacent to the operational Dalswinton Windfarm turbines. The proposed Development would occupy up to 40 degrees of the view. The turbines would be clearly visible from windows on the eastern façade, most notably T10 and T12, with oblique views of T1-9 and T11. Views to T9, T7 and T1-4 may be available from the northern façade, while adjoining farm buildings would partially screen the remaining turbines, which would appear as blade tips above the roofline in views to the northeast.

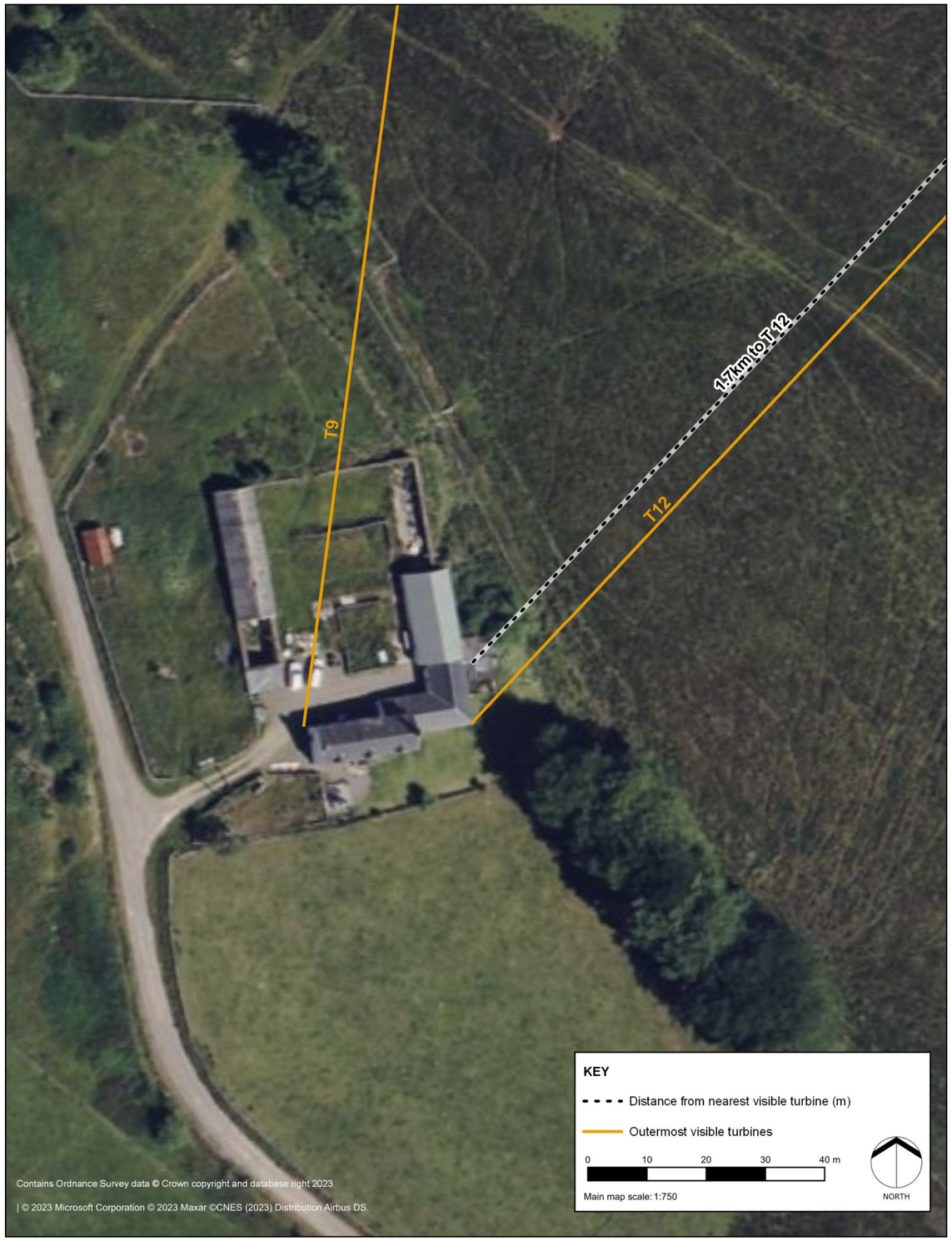
There is likely to be less screening to turbines from upstairs windows on the northern façade, where the proposed Development would appear adjacent to operational turbines at Dalswinton Windfarm, with the closest (T12) of the proposed turbines appearing at a similar scale as the operational turbines (despite being much larger). There would be views to the proposed Development on approach to the property and from the property entrance. The proposed site access tracks and substation (and its construction compound) between T11 and T12 would be visible over 1.7 km away amongst the commercial forestry, but at this distance there would be limited impacts on their residential visual amenity. The main outlook to the south would remain unchanged as a result of the proposed Development. Future forestry felling may result in increased visibility to the turbine array in views to the northwest from the property where available. This may include views to the bases of T11 and T12, the hubs of T3 and T4 and the blade tips of T1 and T2.

Night-time: As illustrated in the bare earth wirelines, the lights on T3, T6, T7, T8, T9, and T12 would be theoretically visible to the northeast, where not screened by farm buildings. This would increase the duration of the impact into the night within this dark area. The mitigation of automatically reducing the intensity of the lights during clear conditions would reduce the brightness, but they would still be clearly visible against the darkness. When the wind is from the south and west (predominant wind direction) the blades would pass in front of the turbines resulting in a blinking effect and this blinking effect would be uncoordinated, which would draw attention to them. At this distance the glow from the light onto the blades would also be visible. Secondary mitigation of 'vertical directional intensity' would reduce the impacts further at this property.

Magnitude of Change: Substantial

RVAA Judgement:

The turbines would form a prominent new feature in views north, from the rear of the property and access track adjacent to the Dalswinton Windfarm turbines in both the day and night. The effect on visual amenity at the property would be Major, although mitigating factors include the separation distance, screening by farm buildings, existing turbines in the view north and no change to the main outlook of views. These factors would prevent the proposed turbines from appearing overbearing. Whilst the changes at this property would be Major, it would not be sufficient to exceed the Residential Visual Amenity threshold.



PROPERTY NAME:	Whitestanes
PROPERTY REFERENCE:	P2
DISTANCE TO NEAREST TURBINE:	1.57 km west to T12
ORIENTATION OF FRONTAGE	West
DIRECTION TO TURBINES:	Northwest
RESIDENT DETAILS:	Uninvolved
SURVEY DETAILS:	Access granted to all external areas of the property.

Baseline Visual Amenity:

This property located off the public road and is accessible via a private track. The property is comprised of several farm buildings and one dwelling. The dwelling consists of an L shaped cottage adjoining the western end of farm building with conservatory at north end and garden room at south. The curtilage of the property is lined with garden trees to the north, a small block of woodland to the east and further garden trees to the south.

The main outlook from the property is to the west, with land dropping away from the house into adjacent fields before rising again with forestry on the horizon. This view is predominantly open from the western façade, conservatory and garden room. Views to the east and south are contained to the garden by adjoining farm buildings, outbuildings and boundary vegetation.

Operational turbines at Harestanes Windfarm are theoretically visible in views north, but boundary vegetation screens visibility from the property.

Likely Change to Visual Amenity:

Bare earth wirelines show that up to 5 hubs and a further 6 sets of blade tips of the proposed Development may be visible across 65 degrees of the view from the main western façade, conservatory and garden room. The hubs and rotating blades of T10, T12 would appear 1.5 km away on the horizon, beyond the rising hill and adjacent fields. The blades of T11, T6 and T6would appear in the background to the west above forestry.

Turbines to the northwest would be increasingly distant and T9, T7, T8, T1-T3 screened by existing forestry and tree cover.

There would be no visibility of proposed turbines from the property other than the main outlook to the west due to local screening from farm buildings and boundary vegetation. There may be some sequential view to the proposed Development above trees and buildings from the approach to the property.

There would be no views to the proposed site access tracks, substation, borrow pits or construction compounds.

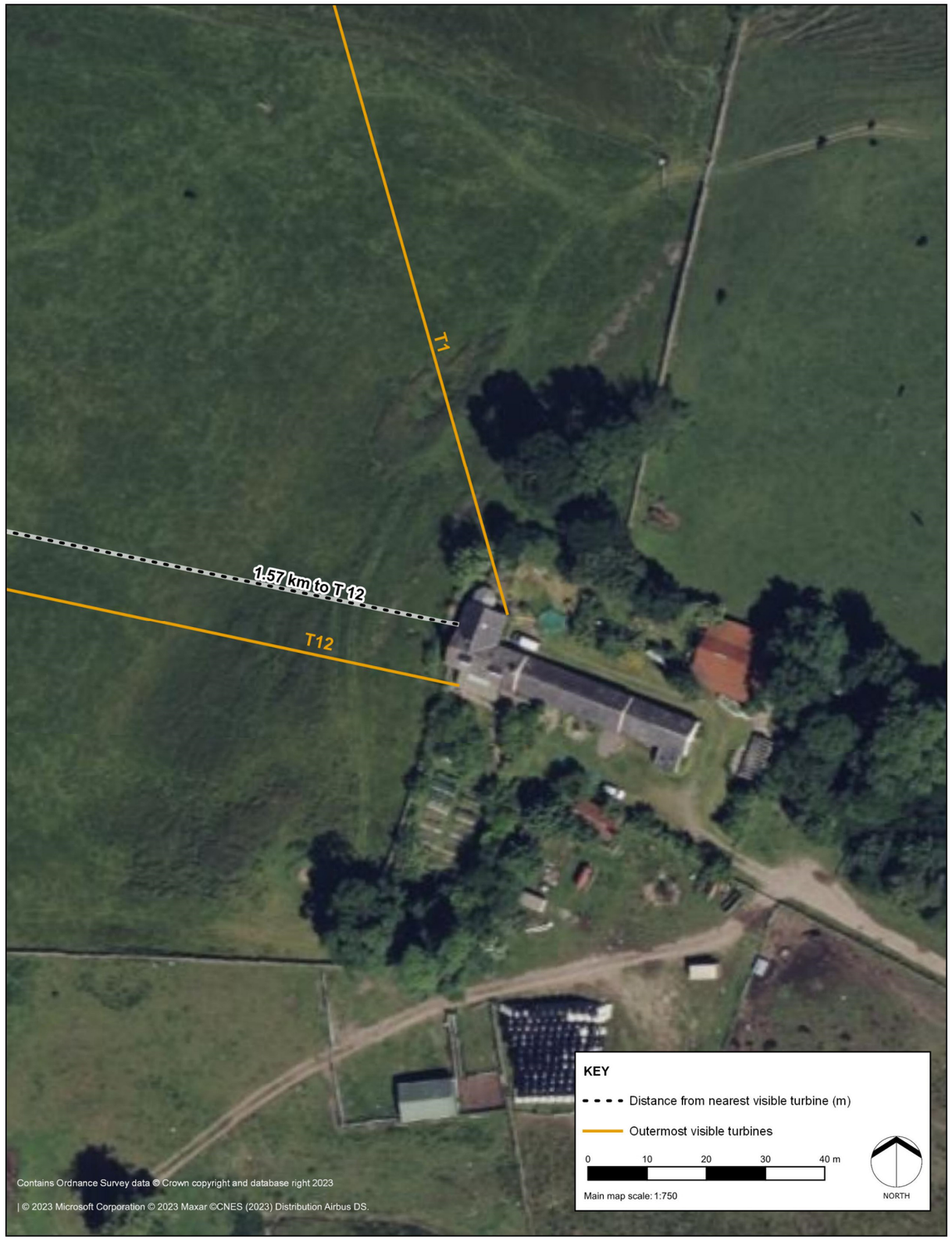
Future forestry felling may result in greater visibility to proposed turbines T11, T9, T10, T7, T8, T6, T3 and T5. However, the forestry plan indicates that some plantation areas to the northwest are to undergo minimum intervention and will likely be retained.

Night-time: As illustrated in the bare earth wirelines, the lights on T6 and T12 would be theoretically visible to the northwest and west. However, the light on T6 would be screened by existing forestry on the horizon. This would increase the duration of the impact into the night within this dark area. The mitigation of automatically reducing the intensity of the lights during clear conditions would reduce the brightness but would still be clearly visible against the darkness. When the wind is from the east the blades would pass in front of the turbines resulting in a blinking effect which would draw attention. At this distance the glow from the light onto the blades would also be visible. Secondary mitigation of 'vertical directional intensity' would reduce the impacts further at this property.

Magnitude of Change: Substantial

RVAA Judgement:

The turbines would form a prominent new feature in views west from main living rooms at the western side of the property in the day and one light visible at night. The effect on visual amenity at the property would be Major, although mitigating factors include the separation distance, partial screening by landform and further by forestry, garden tree cover and farm buildings leading to the limited number of turbines visible. Together these factors would prevent the turbines from appearing overbearing. Whilst the changes at this property would be Major, it would not be sufficient to exceed the Residential Visual Amenity threshold.



PROPERTY NAME:	Glenmaid
PROPERTY REFERENCE:	P3
DISTANCE TO NEAREST TURBINE:	1.46 km and 1.53 km northwest to T10
ORIENTATION OF FRONTAGE	Southeast and east
DIRECTION TO TURBINES:	West and northwest
RESIDENT DETAILS:	Uninvolved
SURVEY DETAILS:	Access granted to all external areas of the property.

Baseline Visual Amenity:

This property is comprised of two separate dwellings. The main farmhouse (Glenmaid), which is sited at the southern end of the property curtilage, is a two storey cottage with windows on all sites and a main outlook southeast across farmland and the Ae village. There are several large farm buildings located across a small courtyard space to the northwest of the main cottage, with further agricultural outbuildings and a small block of woodland, set uphill. Views to the north and west from the main cottage are largely contained by outbuildings and woodland.

The secondary dwelling (Glenvale) is located to the northeast of the main dwelling, set in an open curtilage to the north of the farm access track. There is an agricultural building and woodland to the west. The main outlook is east and south across open countryside. There are open views west across rising land however, farm buildings and woodland truncate these views to a degree. Views north are curtailed by the adjoined garage.

Operational turbines of Harestanes Windfarm are theoretically visible from both dwellings at 4.5 km northeast, but predominantly screened by forestry.

Likely Change to Visual Amenity:

Bare earth wirelines indicate visibility of up to 6 hubs and a further 4 sets of blade tips of the proposed Development would occupy 75 degree of the view west. T12, T10, T8 and T7 would be located to the west appearing as turning blades above the horizon as close as 1.46 km. T1-6 would appear more distant (over 2 km) to the northwest along the course of the valley. However, outbuildings and woodland would provide considerable screening to turbines from both dwellings.

From the rear (northwestern façade) of Glenmaid, turbines in the southern part of the array (T7-8, T10 and T12) would be predominantly screened by landform and further by farm outbuildings but it may be possible to see the blade tips above farm buildings. T5-T6 may appear as blade tips above farm buildings and woodland to the northwest. T1-4 would be screened by woodland to the north.

From the rear (western façade) of Glenvale, views to T1-6 may be available in oblique views north, with some screening to T1 from the garage. Turbines at the southern part of the array (T7-12) would be screened by outbuildings, woodland and forestry located uphill to the northwest and west from the dwelling.

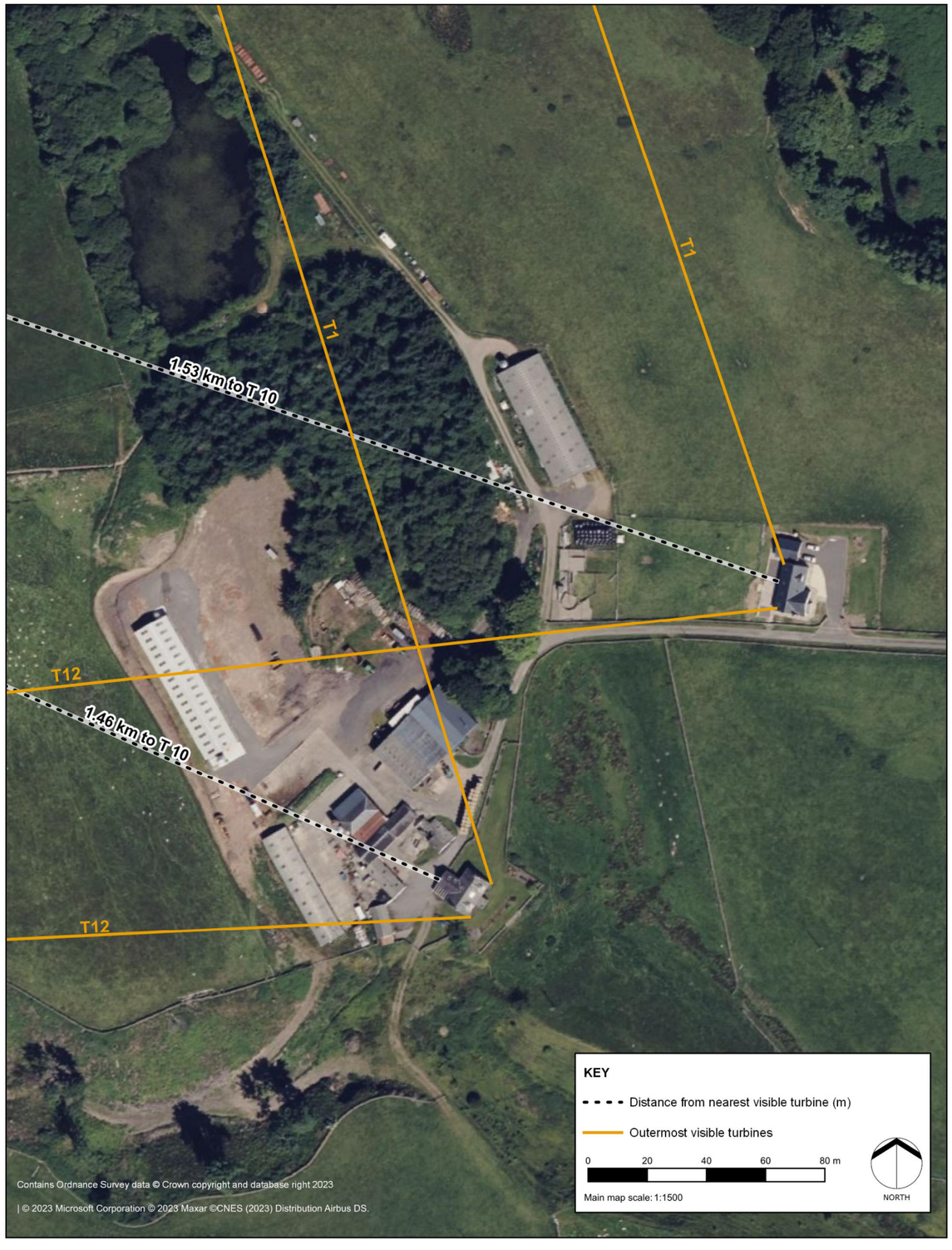
Future forestry felling may result in the opening of views toward the site, though due to local screening, this would only be evident in views to the northwest and north from Glenvale. Felling may result in a reduction of screening to T1-6 from this dwelling however, the forestry closest to the dwelling are scheduled for minimum intervention and likely to be retained. There would be no views to the proposed site access tracks, substation, borrow pits or construction compounds. The proposed Development would also be visible in views from the private track on approach to the property. Primary outlooks from both dwellings would remain unchanged as a result of the proposed Development.

Night-time: As illustrated in the bare earth wirelines, the lights on T6 and T3 would be theoretically visible to the northwest. However, the lights would be screened by outbuildings and tree cover from Glenmaid but would be visible from Glenvale. This would increase the duration of the impact into the night within this dark area. The mitigation of automatically reducing the intensity of the lights during clear conditions would reduce the brightness but would still be clearly visible against the darkness. When the wind is from the south and east the blades would pass in front of the turbines resulting in a blinking effect which would draw attention. At this distance the glow from the light onto the blades would also be visible. Secondary mitigation of 'vertical directional intensity' would reduce the impacts further at this property.

Magnitude of Change: Substantial/Moderate

RVAA Judgement:

The proposed turbines would form a new feature in views north and west from the rear of both dwellings but the extent of screening by landform, woodland and farm outbuildings would notably reduce visibility in day and night. The effect on visual amenity at the property would be Major/Moderate, with mitigating factors including the separation distance, screening by landform and further by forestry, tree cover and outbuildings leading to a limited number of turbines in view, which would prevent the turbines from appearing overbearing. Whilst the changes at this property would be Major/Moderate it would not be sufficient to exceed the Residential Visual Amenity threshold.



PROPERTY NAME:	Glencorse
PROPERTY REFERENCE:	P4
DISTANCE TO NEAREST TURBINE:	1.77 km west to T10
ORIENTATION OF FRONTAGE	Southeast
DIRECTION TO TURBINES:	West and Northwest
RESIDENT DETAILS:	Uninvolved
SURVEY DETAILS:	Access granted to all external areas of the property.

Baseline Visual Amenity:

This property consists of a main detached dwelling to the southeast, with outbuildings to the northwest including a converted barn dwelling and adjoining agricultural buildings in a U shaped arrangement with a courtyard. The curtilage includes a large front garden to the southeast of the main detached dwelling and open space which wraps around the U shaped barn and barn conversion. There is an equestrian exercise area to the west of the main house. The main dwelling is a two storey house with windows on all sides, and the primary outlook to the south and east. The outlook to the north is along the private drive and across the property entrance into the valley, with outbuildings and woodland that shorten views to the northwest and west. Views are open to the southwest, south and east with an open garden and outdoor amenity space wrapping the southeast of the dwelling.

The barn conversion contains windows on the northeast, southeast and southwest sides and forms the end of the U shaped block of outbuilding to the north of the main. Outlook is more contained from this dwelling due to the position of the main dwelling and adjoining buildings and woodland.

Operational turbines at Harestanes Windfarm are theoretically visible in the base of the valley 4.2 km to the northwest.

Likely Change to Visual Amenity:

Bare earth wirelines indicate that up to 8 hubs and a further 4 sets of blade tips of the proposed Development could be visible across the west and northwestern outlook occupying up to 85 degrees of the view. However, due to screening from outbuildings and woodland to the northwest, views from the property would be much reduced. From the main dwelling, mixed woodland to the northwest would screen views to T1-T9 in summer months, with heavily filtered views during winter, with some additional screening at ground level provided by adjacent outbuildings. T10, T11 and T12 would be visible above forestry and intervening tree cover from the western end of the main dwelling year-round. From the barn conversion, visibility to turbines from the ground floor would be predominantly screened by adjoining buildings to the northwest. In winter or through any gaps in the nearby woodland, there may be views to some of the turbines from top floor windows.

There would be no views to the proposed site access tracks, substation, borrow pits or construction compounds. The primary outlook to the southeast would remain unchanged as a result of the proposed Development. Future forestry felling would result in less screening of T10, T11 and T12 to the west however, the closest plantation forests are scheduled for minimum intervention and are likely to be retained.

Night-time: As illustrated in the bare earth wirelines, the lights on all seven turbines (T1, T3, T6, T7, T8, T9, and T12) would be theoretically visible to the northwest. However, the lights on T1-T9 would be predominantly screened by woodland at the rear of the property with the light on T12 likely. This would increase the duration of the impact into the night within this dark area. The mitigation of automatically reducing the intensity of the lights during clear conditions would reduce the brightness but would still be clearly visible against the darkness. When the wind is from the east the blades would pass in front of the turbines resulting in a blinking effect which would draw attention. At this distance the glow from the light onto the blades would also be visible. Secondary mitigation of 'vertical directional intensity' would reduce the impacts further at this property.

Magnitude of Change: Substantial

RVAA Judgement:

The proposed turbines would form a prominent new feature in views, mainly west, from main living rooms and garden area at the west side of the property, day and night. The effect on visual amenity at the property would be Major, although mitigating factors include the separation distance and screening by landform, tree cover, forestry and agricultural buildings leading to a limited number of turbines in views, which would prevent the turbines from appearing overbearing. Whilst the changes at this property would be Major, it would not be sufficient to exceed the Residential Visual Amenity threshold.

PROPERTY NAME:	Glenfine Farm
PROPERTY REFERENCE:	P5
DISTANCE TO NEAREST TURBINE:	1.7 km west to T10
ORIENTATION OF FRONTAGE	Southeast
DIRECTION TO TURBINES:	West & northwest
RESIDENT DETAILS:	Uninvolved
SURVEY DETAILS:	Survey to accessible external areas.

Baseline Visual Amenity:

This property consists of a two storey house with agricultural outbuildings to the north. The house is east-west aligned, with windows on all sides and a balcony at the eastern end overlooking the property entrance and the valley below the property, which is the main outlook. Outlook is truncated by farm buildings to the north, and by rising topography and woodland to the west. Outlook is open to the south to nearby woodland.

Operational turbines at Harestanes Windfarm are theoretically visible to the north at a distance of 3.7 km but screened by outbuildings.

Likely Change to Visual Amenity:

Bare ground wirelines indicate visibility of up to 8 hubs and a further 4 sets of blade tips of the proposed Development would be visible across 90 degrees of the views west to north. T6 would appear the most prominent in the centre of the array to the northwest, while the closer turbines (T10 and T12) would appear on the horizon to the west.

However, turbines to the west would be likely to be screened by forestry, with blade tips of T8, T10 and T12 appearing above the treeline. The hubs of T5 and T6 would appear above the treeline to the northwest, with the tip of T4 predominantly screened. T1-3 would be largely screened by adjacent farm buildings to the north of the house, though blade tips may be visible above the roofline of farm buildings.

Turbines at the southern end of the array (T8, T10 and T12) would be visible from the drive on approach to the property. The primary outlook to the east would remain unchanged as a result of the proposed Development.

There would be no views to the proposed site access tracks, substation, borrow pits or construction compounds.

Future felling may result in reduced screening of T5-12.

Night-time: As illustrated in the bare earth wirelines, the lights on five turbines (T1, T3, T6, T8, and T12) would be theoretically visible to the northwest. However, the lights on all but T6 would be predominantly screened by outbuilding and current forestry. This would increase the duration of the impact into the night within this dark area. The mitigation of automatically reducing the intensity of the lights during clear conditions would reduce the brightness but would still be clearly visible against the darkness. When the wind is from the east the blades would pass in front of the turbines resulting in a blinking effect which would draw attention. At this distance the glow from the light onto the blades would also be visible. Secondary mitigation of 'vertical directional intensity' would reduce the impacts further at this property.

Magnitude of Change: Substantial

RVAA Judgement:

The proposed turbines would form a prominent new feature in views, mainly west, from the rear of the property and access track to the property including one light. The effect on visual amenity at the property would be Major, although mitigating factors include the separation distance and screening by landform forestry and outbuildings. These factors would prevent the turbines from appearing overbearing. Whilst the changes at this property would be Major, it would not be sufficient to exceed the Residential Visual Amenity threshold.

PROPERTY NAME:	3 and 4 Gubhill
PROPERTY REFERENCE:	P6 (4 Gubhill) & P7 (3 Gubhill)
DISTANCE TO NEAREST TURBINE:	1.09 km west to T5
ORIENTATION OF FRONTAGE	West
DIRECTION TO TURBINES:	West (southwest to northwest)
RESIDENT DETAILS:	Uninvolved
SURVEY DETAILS:	Access granted to external west facing external areas

Baseline Visual Amenity:

This comprised two single storey semi-detached dwellings on the public road with main views west and east. The curtilage extends to the public road at the front and gardens at the rear (east). The dwellings have windows on all external facades, with south facing windows on P6 and north facing windows on P7. These dwellings are located approximately 220 m south of Viewpoint 1.

The main frontage of these properties is to the west across the road, with short, uphill views to an undulating and partially forested horizon with occasional foreground trees. Views are longer to the north and/or south along the course of the road and valley where available from each dwelling. Outlook to the east is over garden space and across the valley from each dwelling.

There are no operational turbines visible from either property.

Likely Change to Visual Amenity:

Bare ground wirelines indicate that there would be up to 5 hubs and a further 2 sets of blade tips of the proposed Development visible to the west and northwest across 125 degrees and widely spread on the undulating horizon.

T6, T5 and T3 would be clearly noticeable due west from the main outlook, with some localised screening by trees. T4 would be screened or barely noticeable due screening by landform and further by vegetation. T1 and T2 would be visible to the north from the front of the dwellings and gardens. The tip of T10 would be screened by landform and landcover.

Viewpoint 1 provides a proxy for the nature of visibility of the proposed Development and the effect of local screening elements.

There would be no views to the proposed site access tracks, substation, borrow pits or construction compounds.

Future felling may result in the removal of forestry between the properties and the proposed turbines in the western and northwestern outlook, which would result in a reduction of potential screening, in line with the bare earth wirelines. However, it is unlikely that all screening would be removed at once.

Night-time: As illustrated in the bare earth wirelines, the lights on three turbines (T1, T3, and T6) would be visible to the west and northwest. This would increase the duration of the impact into the night within this dark area. The mitigation of automatically reducing the intensity of the lights during clear conditions would reduce the brightness but would still be clearly visible against the darkness. When the wind is from the east or southeast the blades would pass in front of the turbines resulting in a blinking effect which would draw attention. At this distance the glow from the light onto the blades would also be visible. Secondary mitigation of 'vertical directional intensity' would reduce the impacts further at this property.

Magnitude of Change: Substantial

RVAA Judgement:

The proposed turbines would form a prominent new feature in open views west and northwest, from the front of the dwellings in both the day and night. The effect on visual amenity at the property would be Major, although mitigating factors include the extent of screening by landform, tree cover and forestry leading to a limited number of turbines visible, which would prevent the turbines from appearing overbearing. Whilst the changes at this property would be Major, it would not be sufficient to exceed the Residential Visual Amenity threshold.

PROPERTY NAME:	Burnfoot
PROPERTY REFERENCE:	P8
DISTANCE TO NEAREST TURBINE:	1.1 km west to T5
ORIENTATION OF FRONTAGE	West
DIRECTION TO TURBINES:	West (southwest to northwest)
RESIDENT DETAILS:	Uninvolved
SURVEY DETAILS:	Survey from road

Baseline Visual Amenity:

This property is comprised of a two-storey dwelling facing the public road with two outbuildings to the south of the main dwelling. The property faces west across an open frontage and driveway to the proposed Development. There is garden to the north, south and at the rear (east). The dwelling has windows on all facades. It is located approximately 170 m south of Viewpoint 1.

Outlook from the frontage of the property is uphill to the west across the road to a close, undulating horizon with intermittent forestry and trees. Views to the northwest and north are longer, along the course of the road, though garden trees at the northern boundary of the property which filter views in this direction. Outlook to the east from the rear of the property and garden space is across the valley to the Forest of Ae. The southern outlook is truncated by outbuildings and adjacent property though narrow views may be available between structures from large gable end windows. There are no operational turbines visible from either property.

Likely Change to Visual Amenity:

Bare ground wirelines indicate that there would be up to 5 hubs and a further 2 sets of blade tips of the proposed Development visible to the west spread across 125 degrees of the undulating horizon to the west.

The blade tip of T10 would be screened by landform and landcover. T6, T5 and T3 would be clearly noticeable due west from the main outlook, with some localised screening by trees. T4 would be screened or barely noticeable. T1 and T2 would be visible to the north from the front and side of the dwelling, partially screened or filtered by deciduous trees on the northern boundary.

Viewpoint 1 provides a proxy for the nature of visibility of the proposed Development and the effect of local screening elements.

There would be no views to the proposed site access tracks, substation, borrow pits or construction compounds.

Future felling may result in the removal of forestry from plantation areas between the properties and the proposed turbines, which would result in a reduction of screening in line with the bare earth wirelines. However, it is unlikely that all screening would be removed at once.

Night-time: As illustrated in the bare earth wirelines, the lights on three turbines (T1, T3, and T6) would be visible to the west and northwest. The light on T1 to the northwest is likely to be screened or filtered by deciduous trees on the northern boundary. This would increase the duration of the impact into the night within this dark area. The mitigation of automatically reducing the intensity of the lights during clear conditions would reduce the brightness but would still be clearly visible against the darkness. When the wind is from the east or southeast the blades would pass in front of the turbines resulting in a blinking effect which would draw attention. At this distance the glow from the light onto the blades would also be visible. Secondary mitigation of 'vertical directional intensity' would reduce the impacts further at this property.

Magnitude of Change: Substantial

RVAA Judgement:

The proposed turbines would form a prominent new feature in open views west and northwest, from the front of the dwelling in both day and night. The effect on visual amenity at the property would be Major, although mitigating factors include the extent of screening by landform, tree cover and forestry leading to a limited number of turbines visible. These factors would prevent the turbines from appearing overbearing. Whilst the changes at this property would be Major, it would not be sufficient to exceed the Residential Visual Amenity threshold.

PROPERTY NAME:	Larchview Cottage
PROPERTY REFERENCE:	P9
DISTANCE TO NEAREST TURBINE:	1.06 km west to T5
ORIENTATION OF FRONTAGE	East
DIRECTION TO TURBINES:	Southwest, west & northwest
RESIDENT DETAILS:	Uninvolved
SURVEY DETAILS:	Survey from road

Baseline Visual Amenity:

This property is comprised of a single storey T shaped cottage aligned on the public road with several outbuildings to the west and immediate north of the main dwelling. The property is set in a small cutting into the east facing slope. It is assumed the dwelling has windows on all facades. It is located approximately 80 m south of Viewpoint 1.

The property faces east over the road and across the valley to the Forest of Ae. Land rises steeply to the west and shortens views. A small, wooded waterway to the northwest of the property provides some local screening to views from the rear of the property. Outbuildings and fine grain local landforms truncate the northern outlook.

There are no operational turbines visible form the property.

Likely Change to Visual Amenity:

Bare ground wirelines indicate that there would be 4 hubs and 2 further set of blade tips of the proposed Development visible to the southwest, west and northwest across 130 degrees of the undulating horizon.

The tip of T10 would be screened by landform and landcover. T6, T5 and T3 would be noticeable due west from the rear, with some localised screening by trees and further by forestry on the horizon. T4 would be predominantly screened by forestry. T1 would be predominantly screened by local landform and tree cover.

Viewpoint 1 provides a proxy for the nature of visibility of the proposed Development and the effect of local screening elements.

There would be no views to the proposed site access tracks, substation, borrow pits or construction compounds.

Future felling may result in the removal of forestry from plantation areas between the properties and the proposed turbines, which would result in a reduction of screening in line with the bare earth wirelines. However, it is unlikely that all screening would be removed at once.

Night-time: As illustrated in the bare earth wirelines, the lights on two turbines (T3, and T6) would be visible to the west. This would increase the duration of the impact into the night within this dark area. The mitigation of automatically reducing the intensity of the lights during clear conditions would reduce the brightness but would still be clearly visible against the darkness. When the wind is from the east the blades would pass in front of the turbines resulting in a blinking effect which would draw attention. At this distance the glow from the light onto the blades would also be visible. Secondary mitigation of 'vertical directional intensity' would reduce the impacts further at this property.

Magnitude of Change: Substantial

RVAA Judgement:

The proposed turbines would form a prominent new feature in views, mainly west from the rear of the dwelling in both day and night. The effect on visual amenity at the property would be Major, although mitigating factors include the extent of screening by landform, tree cover and forestry leading to a limited number of turbines visible. These factors would prevent the turbines from appearing overbearing. Whilst the changes at this property would be Major, it would not be sufficient to exceed the Residential Visual Amenity threshold.

PROPERTY NAME:	Gubhill
PROPERTY REFERENCE:	P10
DISTANCE TO NEAREST TURBINE:	1.09 km west to T5
ORIENTATION OF FRONTAGE	Southeast & East
DIRECTION TO TURBINES:	Northwest
RESIDENT DETAILS:	Uninvolved
SURVEY DETAILS:	Access granted to all external areas of the property.

Baseline Visual Amenity:

This property comprises a single storey cottage to the east of the public road, located approximately 40 m to the south of Viewpoint 1. The entrance / driveway is located to the west and north, with garden areas to the north, south and east of the cottage. The property is bordered with dense hedgerow boundary to the southeast, a small group of trees to the north and open outlooks in all other directions.

The cottage has windows on all sides, with a main frontage to the west at the roadside and a conservatory and formal garden area to the south. The steepling rising land undulating landform to the west foreshortens the view with intermittent forestry and open areas which have been recently felled. Outlook to the north is along the course of the valley with some screening from garden and boundary trees. Views to the east are across the valley to the Forest of Ae which forms a rolling tree lined horizon. Outlook is truncated to the south by boundary vegetation.

There are no operational turbines visible from this property.

Likely Change to Visual Amenity:

Bare ground wirelines indicate that there would be 6 hubs and a further 2 sets of blade tips of the proposed Development visible to the west and northwest spread across 130 degrees of the undulating horizon.

Viewpoint 1 indicates the potential visibility of the proposed Development and the effects of local screening including landform and trees from areas immediately north of this property. It is noted that the landform provides marginally more screening to the proposed Development than is indicated in the terrain model due to fine grain local features.

Turbines T6 and T5 would be clearly noticeable with the blade tips of T10, T8, T4 and T3 also visible to the west. To the north, T1 and T2 would be visible in views along the valley.

There would be no views to the proposed site access tracks, substation, borrow pits or construction compounds.

Future felling may result in the removal of forestry from plantation areas between the properties and the proposed turbines, which would result in a reduction of screening bare earth wirelines. However, it is unlikely that all screening would be removed at once.

Night-time: As illustrated in the bare earth wirelines, the lights on three turbines (T1, T3, and T6) would be visible to the west. This would increase the duration of the impact into the night within this dark area. The mitigation of automatically reducing the intensity of the lights during clear conditions would reduce the brightness but would still be clearly visible against the darkness. When the wind is from the east the blades would pass in front of the turbines resulting in a blinking effect which would draw attention. At this distance the glow from the light onto the blades would also be visible. Secondary mitigation of 'vertical directional intensity' would reduce the impacts further at this property.

Magnitude of Change: Substantial

RVAA Judgement:

The turbines would form a prominent new feature in views west, from the front and side of the dwelling in both day and night. The effect on visual amenity at the property would be Major, although mitigating factors include the extent of screening by landform, tree cover and forestry leading to a limited number of turbines visible. These factors would prevent the turbines from appearing overbearing. Whilst the changes at this property would be Major, it would not be sufficient to exceed the Residential Visual Amenity threshold.

PROPERTY NAME:	Gubhill Farm
PROPERTY REFERENCE:	P11
DISTANCE TO NEAREST TURBINE:	1.36 km southwest to T5
ORIENTATION OF FRONTAGE	South and west
DIRECTION TO TURBINES:	Southwest, west and northwest
RESIDENT DETAILS:	Uninvolved
SURVEY DETAILS:	Access granted to all external areas of the property.

Baseline Visual Amenity:

This property comprises a main house, which faces south down the valley and several barn conversion holiday cottages accessed off a private access track to the east of the public road. The main house is two storey and three holiday cottages which have been converted from the former two storey farm outbuildings on the western side of the U shaped outbuildings.

The main dwelling has open elevated views focussed to the south down the valley with open garden space wrapping around the south and southeast. There are also open views from windows on the western and northern elevations. Outlook to the east and northeast from the main house is closely bound by dense woodland at the property border.

By contrast, views from the holiday cottages are more contained. 'Stockmans' has windows on the west and east elevations. Whereas 'Shepherds' and 'Hayloft' have outlook only to the north and south with no direct views west toward the site due to screening by adjacent dwellings, walls or nearby trees.

There are no operational turbines visible from this property.

Likely Change to Visual Amenity:

Bare earth wirelines indicate that there would be 9 hubs and a further 3 sets of blade tips of the proposed Development visible across 130 degrees of the view southwest, west and northwest. The wirelines indicate that T5, T6, T3 and T2 would appear prominent above the horizon. The remaining turbines would appear lower in the background including T4, T7, T8 and T10. Turbines at the southern and northern ends of the array would appear more distant.

Intermittent forestry is spread across the horizon from southwest to northwest, which would provide screening to the hubs of T4, T7, T10 and T12, the blade tips of T11 and screen all of T1. The proposed Development would not fall within the main views south from this elevated property, but there would be open oblique views from the front, as well as direct views from the side and from the access track to the house.

From 'Stockmans' there would be direct views towards the proposed Development from the western elevation, as described above. However, views from 'Shepherds' and 'Hayloft' would be screened by local tree cover to the north.

There would be no views to the proposed site access tracks, substation, borrow pits or construction compounds.

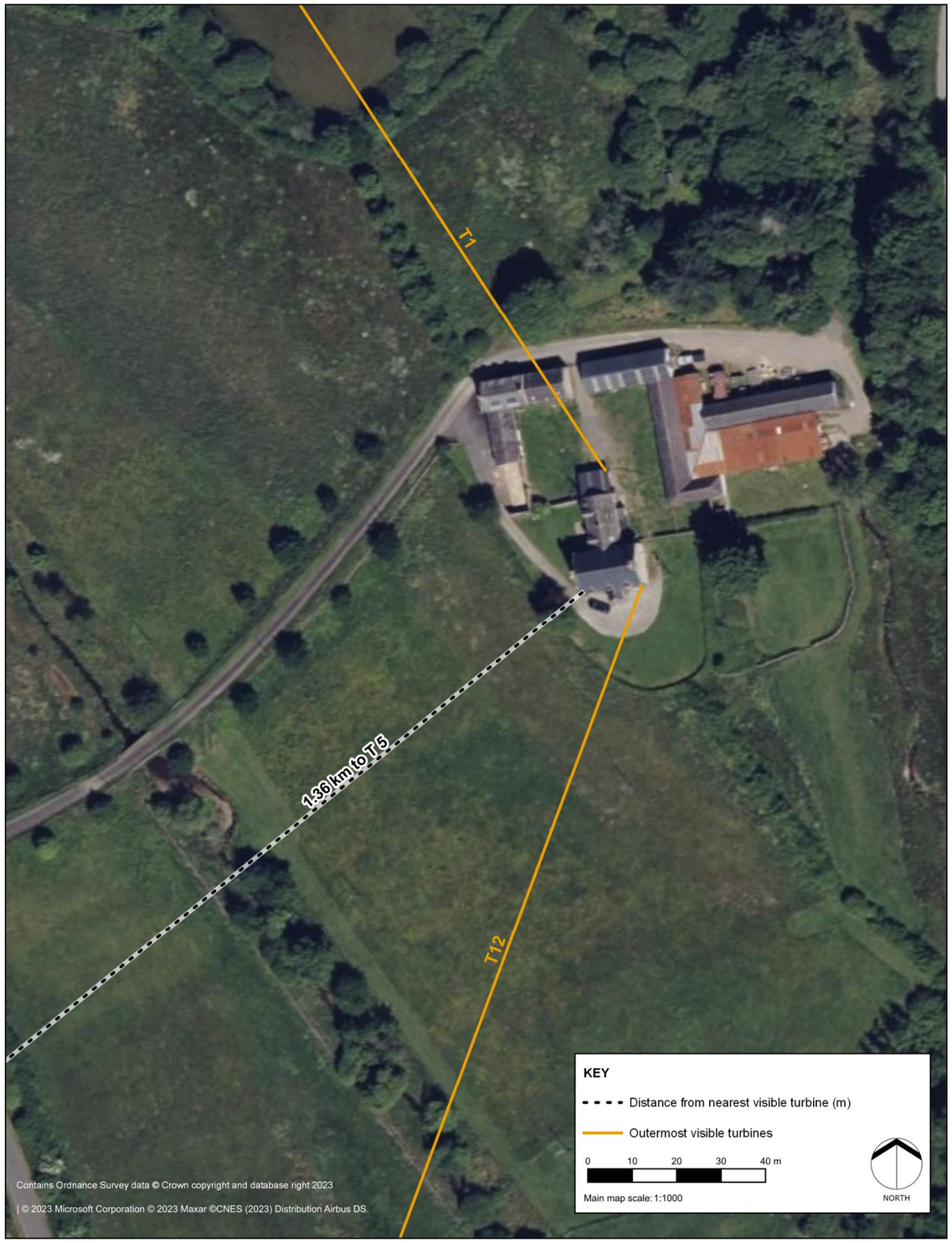
Future felling may result in the removal of forestry from the horizon in front of the proposed Development, which would marginally open views to the turbines in line with the bare earth wireline.

Night-time: As illustrated in the bare earth wirelines, the lights on six turbines T1, T3, T6, T7, T8, and T12) would be theoretically visible to the southwest to northwest. However, the lights on T1, T7 and T12 would be screened by woodland and forestry. This would increase the duration of the impact into the night within this dark area. The mitigation of automatically reducing the intensity of the lights during clear conditions would reduce the brightness but would still be clearly visible against the darkness. When the wind is from the east and northeast the blades would pass in front of the turbines resulting in a blinking effect which would draw attention. At this distance the glow from the light onto the blades would also be visible. Secondary mitigation of 'vertical directional intensity' would reduce the impacts further at this property.

Magnitude of Change: Substantial

RVAA Judgement:

The proposed turbines would form prominent new features on the horizon to the west, from the elevated location of the main house, one of the holiday cottages and the access track to the property in both day and night. The effect on visual amenity at the property would be Major, although mitigating factors include the separation distance and extent of screening by landform, tree cover and forestry, which would prevent the turbines from appearing overbearing. Whilst the changes at this property would be Major, it would not be sufficient to exceed the Residential Visual Amenity threshold.



PROPERTY NAME:	Windy Hill
PROPERTY REFERENCE:	P12
DISTANCE TO NEAREST TURBINE:	1.14 km west to T3
ORIENTATION OF FRONTAGE	South
DIRECTION TO TURBINES:	Southwest, west and Northwest
RESIDENT DETAILS:	Uninvolved
SURVEY DETAILS:	Access granted to all external areas of the property.

Baseline Visual Amenity:

This property comprises a long east/west aligned cottage, attached converted barn and conservatory with outbuildings to the west. The curtilage includes an access drive to the southeast, formal garden space to the north, south and east of the house and woodland wrapping around the property to the north, south and east. The main views from the property are to the northeast and southwest.

The dwelling has windows on the south, east and northern facades, with a conservatory at the eastern end overlooking the contained garden. Outlook is generally contained by the trees surrounding the garden space in most directions, with some views out beyond the garden to the west on either side of the outbuilding.

To the south of the driveway, localised landform rises sharply coupled with deciduous woodland which truncates views to south. Deciduous woodland to the north and east also truncate views from the house and garden.

There are no operational turbines visible from this property.

Likely Change to Visual Amenity:

Bare ground wirelines indicate visibility of up to 3 hubs and one further set of blade tips of the proposed Development in views to the southwest, west and northwest across 135 degrees of the view.

However, the blade tips of T5 would not be visible due to screening by landform and further by tree cover. T3 would be clearly visible from the front and rear garden looking west beyond the outbuildings, but less so from the house itself. T1, T2 and the meteorological mast would be screened by deciduous woodland in summer months, in views north from the dwelling and garden with possibly some views in winter or from the western edge of the garden.

There would be no views to the proposed site access tracks, substation, borrow pits or construction compounds.

Night-time: As illustrated in the bare earth wirelines, the lights on turbines T1 and T3 would be theoretically visible to the west and northwest. However, the lights on T1, would be predominantly screened or filtered by deciduous woodland. This would increase the duration of the impact into the night within this dark area. The mitigation of automatically reducing the intensity of the lights during clear conditions would reduce the brightness but would still be clearly visible against the darkness. When the wind is from the east and southeast the blades would pass in front of the turbines resulting in a blinking effect which would draw attention. At this distance the glow from the light onto the blades would also be visible. Secondary mitigation of 'vertical directional intensity' would reduce the impacts further at this property.

Magnitude of Change: Substantial

RVAA Judgement:

The proposed turbines would form a prominent new feature in views mainly west from the garden of the property in both day and night. The effect on visual amenity at the property would be Major, although mitigating factors include the extent of screening by landform, tree cover and forestry leading to a limited number of turbines visible. These factors would prevent the turbines from appearing overbearing. Whilst the changes at this property would be Major, it would not be sufficient to exceed the Residential Visual Amenity threshold.

PROPERTY NAME:	Knockenshang
PROPERTY REFERENCE:	P13
DISTANCE TO NEAREST TURBINE:	0.92 km west to T1
ORIENTATION OF FRONTAGE	Southeast
DIRECTION TO TURBINES:	Southwest
RESIDENT DETAILS:	Unoccupied, Involved
SURVEY DETAILS:	Access granted to all external areas of the property.

Baseline Visual Amenity:

This property comprises a single storey cottage with main views to the southeast and northwest. The curtilage includes garden space to the front and an overgrown garden on the western end, with a steep embankment to the north where the cottage is cut into the hillside. The property is accessed via a track from the south and east through the forest.

The cottage has windows on all façades, with the outlook primarily focused to the southeast into the valley through a break in forestry and woodland. Dense woodland truncates the southwestern outlook. Rising land and distant forestry shortens views to the west and north.

There are no operational turbines visible from this property.

Likely Change to Visual Amenity:

Bare ground wirelines indicate visibility of all 12 turbines (hubs and blade tips) of the proposed Development in views to the southwest, west and northwest across 95 degrees of the view.

Woodland and forestry would screen T3-12 entirely. The tops of T1 and T2 would appear 0.92 km above the horizon to the west from the western and northern facades of the property and garden.

T1 and T2 would also be visible from the northern access track near the property.

There would be no views to the proposed site access tracks, substation, borrow pits or construction compounds.

Future forestry felling may result in the reduction of screening to T3-12. more in line with the bare earth wirelines, but deciduous woodland near the property is likely to be retained providing some screening.

Night-time: As illustrated in the bare earth wirelines, the lights on all seven turbines T1, T3, T6, T7, T8, T9 and T12) would be theoretically visible to the west and southwest. However, the lights on T3 - T12 would be screened by woodland and forestry, leaving only one light visible. This would increase the duration of the impact into the night within this dark area. The mitigation of automatically reducing the intensity of the lights during clear conditions would reduce the brightness but would still be clearly visible against the darkness. When the wind is from the southeast the blades would pass in front of the turbines resulting in a blinking effect which would draw attention. At this distance the glow from the light onto the blades would also be visible. Secondary mitigation of 'vertical directional intensity' would reduce the impacts further at this property.

Magnitude of Change: Substantial

RVAA Judgement:

The proposed turbines would form a prominent new feature in views west, from the western and northern facades and garden of the dwelling in both day and night. The effect on visual amenity at the property would be Major, although mitigating factors include the extent of screening by landform, tree cover and forestry leading to a limited number of turbines visible. These factors would prevent the turbines from appearing overbearing. Whilst the changes at this property would be Major, it would not be sufficient to exceed the Residential Visual Amenity threshold.

Summary and Conclusions

24. The aim of the RVAA seeks to identify where effects on residential visual amenity are of such a nature or magnitude that "*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.*"

25. A total of 18 residential properties within 13 groups are located within the 2 km RVAA study area. All properties were visited on site and considered in detail.

26. In terms of construction and decommissioning phase effects, the most notable of these would arise from visibility of cranes during the final erection of turbines. This would be a short-term activity and the scale of change arising would be no greater than that of the operational phase of the proposed Development.

27. The proposed site access, substation, borrow pits and construction compounds would all be located away from residential properties considered within this assessment. There would be no notable visibility of these elements and they would have little or no impact on residential visual amenity.

28. In terms of operational phase effects, most of the properties would have some degree of visibility to at least one of the proposed turbines from their dwelling or garden area and as a result, most properties would experience a Major or Major/moderate effects. Most of these properties would be located on the western side of the valley and due to the extent of screening by landform and further by localised woodland and trees, as well as forestry, the impacts have been mitigated to some degree which for the most part consists of only a small number of turbines present in views. The notable exceptions to this would be P11 Gubhill Farm which is located on more elevated ground on the eastern side of the valley where there would be more open views to turbines on the western horizon of the valley; and P1 Shaws which is substantially screened by barns at the rear.

29. There would be night-time impacts at most of the properties, but in many cases screening would prevent widespread visibility of the seven lights proposed, with the notable exception at P1 Shaws and P11 Gubhill Farm. This would increase the duration of the impact into the night within this dark area. There would be some secondary mitigation of 'vertical directional intensity' that would reduce the impacts further.

30. All of the properties would experience some of the highest levels of visual impact as a result of the proposed Development. However, mitigating factors would prevent the proposed turbines from appearing overbearing or at such a number, size or proximity that would make these properties an unpleasant or unattractive place to live. None of the properties assessed would reach the Residential Amenity threshold.