



Technical Appendix 6.4

Residential Visual Amenity Assessment (RVAA)

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Appendix 6.4

Residential Visual Amenity Assessment

6.1 Introduction

1. In accordance with the third edition of 'Guidelines for Landscape and Visual Impact Assessment' (GLVIA3)¹, the LVIA, contained in **Chapter 6**, assesses the visual impact of the proposed 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 proposed 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 proposed Development leads to the 'Residential Visual Amenity Threshold' being reached or, in other words, where the effect is of such a nature and / or magnitude that it potentially affects living conditions. In relation to a wind farm development, this may arise through the wind turbines giving rise to an 'overbearing' or 'overwhelming' magnitude of effect.
2. This RVAA assesses the likely effects of the proposed 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 addresses only the visual amenity aspect of residential amenity, as this is its area of expertise. Effects from noise and shadow flicker are assessed in the EIA Report in **Chapters 10** and **14** respectively.
3. 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."
4. In respect of the proposed Development the additional consideration of forestry has been incorporated into this RVAA. The area surrounding the proposed Development is largely characterised by a blanket covering of large scale commercial forestry. This has a direct bearing on the RVAA, in that, not only does its current spread and size affect the extent to which the proposed Development will be visible by residents in this area, but also plans for felling and restocking will alter the extent of visibility over specific periods during the operational life of the proposed Development. These changes to the local forestry are taken into account in this RVAA.

6.2 Approach

5. 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 proposed Development, defining the Study Area extent and scope of the assessment with respect to the properties to be included.

¹ Landscape Institute (2013). Guidelines for Landscape and Visual Impact Assessment.

- Step 2: Evaluation of baseline visual amenity at properties to be included, having regard to the landscape and visual context, the potential influence of the proposed Development and how this might change in respect of felling and restocking plans.
- Step 3: Assessment of likely change to visual amenity of included properties in accordance with GLVIA 3 principles and processes, taking into account current forest cover and future forest cover.
- Step 4: Further assessment of predicted change to the visual amenity of properties where a judgement in relation to the Residential Visual Amenity Threshold is required*, taking into account current forest cover and future forest cover.

6.2.1 Step 1

6. 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 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."* In line with this guidance, the study area for the proposed Development has been drawn out to the larger 2 km radius recommended.
7. Within the 2 km study area, all private residential properties have been identified using Address Point data and then verified in the field. The RVAA has been undertaken from residential properties that appear occupied and in use as dwelling houses. These are individually numbered on **Figure 6.4.1** and listed in **Table TA6.4-1** below. All of the properties lie within the Zone of Theoretical Visibility (ZTV) of the Development (**Figure 6.4.1**), and therefore all have been evaluated and assessed in Step 2 and Step 3.

Table TA6.4-1: Properties within 2 km study area

Ref	Address	Location	Distance/ Direction	Step 3 Assessment Required	Step 4 Assessment Required
1	Ferter Driveway	230773 / 587389	1.19 km	Yes	Yes
2	Shalloch Well	227048 / 586086	1.47 km	Yes	No
3	White Clauchrie	229489 / 586233	1.49 km	Yes	No

8. The assessment for Ferter is made from a viewpoint on the driveway. This is representative of the worst case scenario as it shows the fullest visibility of the proposed Development and also takes into account the future forest fellings proposed around the house, as these will also have a bearing on the variable effects over time. While baseline photography, wirelines and photomontages are included for Ferter West Garden, the extent of visibility is not as extensive as from Ferter Driveway, owing to the closer proximity to the forest edge. These figures have, therefore, been included for reference.

6.2.2 Step 2

9. 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*

² Landscape Institute (2019). Guidelines for Residential Visual Amenity Assessment

- Views as experienced when arriving or leaving the property, for example from private driveways / access tracks.”
10. In the course of carrying out the baseline evaluation, OPEN has surveyed the visual amenity of the residential properties Ferter and Shalloch Well from their garden grounds and access tracks as a result of the property owners agreeing to such a visit being undertaken. The property owners at White Clachrie declined the offer of an on-site survey being undertaken and therefore the survey has been undertaken from the adjacent forest track. The locations of the residential properties assessed are shown on **Figure 6.4.1**. RVAA Sheets have been prepared for the three 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 and horizontal field of view which would be affected by the proposed Development. The RVAA sheets record details of the baseline residential amenity and the likely visual effects resulting from the proposed Development.
 11. For all three properties a 90 degree wireline is presented to illustrate the theoretical visibility of the proposed Development. For Ferter and Shalloch Well, 90 degree wirelines are accompanied by 90 degree photomontages as well as 53.5 degree wirelines and photomontages. Operational windfarms are included in the baseline evaluation, with these existing windfarms considered in the assessment of effects on residential visual amenity. The only operational wind farm readily visible from this area is Mark Hill Windfarm.
 12. In addition to an assessment made against the current baseline, additional assessments have been made to represent the proposed changes to the surrounding forest cover. **Figure 14.4.6** shows the ‘with wind farm’ forestry felling plan for the area and **Figure 14.4.7** the ‘with wind farm’ forestry restocking plan. The felling plan shows a patchwork of blocks, broadly an average of 500m by 500m, albeit with some larger and some smaller. Each of these blocks is attributed a felling phase between 1 and 6, with each phase covering five years, starting with Phase 1 covering the years 2019 to 2023 and Phase 6 covering the years 2044 to 2048. There are also areas designated for long term retention and natural reserves and those which just sit outwith the plan period. The restocking plan indicates the type of forest cover that will be implemented following felling, with the vast majority being restocked with Sitka Spruce, and smaller areas referred to as mixed conifer, mixed broadleaves, mixed woodland and Sitka Spruce / Mixed Conifer, as well as areas of open ground.
- ### 6.2.3 Step 3
13. 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 proposed 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 generally only occur where a high magnitude of change is assessed for a close-range property, as the threshold reflects those effects that are at the extreme where they may become overwhelming or over-bearing.
 14. 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 proposed 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 roads, that are 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 and aspect of property affected, having regard to both the main, primary and peripheral and secondary views from the property;
 - Extent to which the development and landscape changes would be visible from the property, or parts of it, 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 proposed 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.”
- ### 6.2.4 Step 4
15. **Technical Appendix 6.1 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.
 16. 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 proposed Development. These judgements on sensitivity and magnitude are combined to arrive at an overall assessment as to whether the proposed Development would have an effect that is significant or not significant on residential visual amenity.
 17. Presented below are the RVAA Sheets containing the Step 2 Baseline Evaluation and Step 3 Assessment of Effects for the three properties in the 2 km study area. Of these, Ferter is assessed as being subject to a high magnitude of change in respect of the Phase 5 fellings and, therefore, requires a Step 4 assessment to determine whether or not Residential Visual Amenity Threshold has been reached, and this follows on from the RVAA Sheets.
 18. For each property, a separate assessment is made for each of the critical phases in the felling plan to reflect how this will change the extent to which the proposed Development will potentially be visible.
 19. The difference between significant visual effects and those at the ‘threshold’ which might be considered to be unacceptable if found to have an 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.
 20. 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 could be considered to harm the provision of good housing stock.
 21. Where this RVAA identifies any properties at the threshold, in Step 4, this does not denote an unacceptable effect, as any finding of acceptability requires to be undertaken as part of the wider planning balance. The ‘threshold’ acts to identify those properties where a predicted change to visual amenity is of such magnitude that it should be weighed in the planning balance, along with other EIA effects.

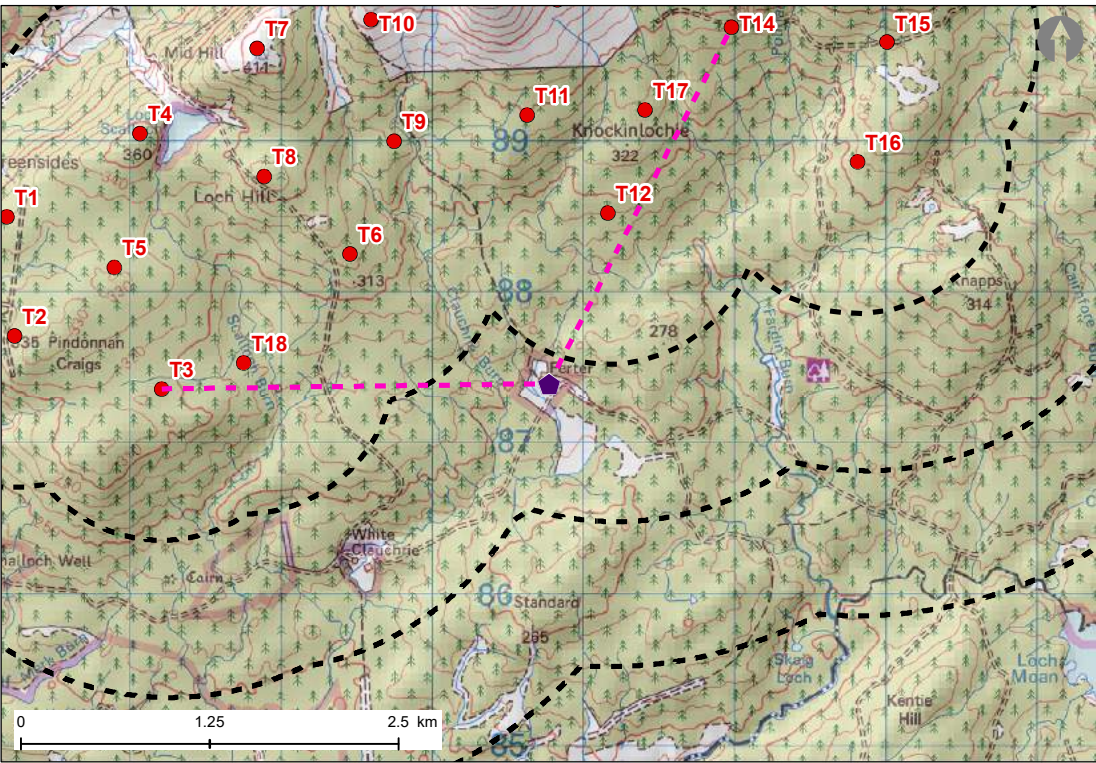
6.3 RVAA Summary

22. The RVAA Sheets in this report detail the assessments for each property and **Table 6.4.2** provides a summary of the results of this assessment. The RVAA identifies no residential properties within 1.1 km of the proposed Development. Ferter is at approximately 1.15 to 1.19 km, Shalloch Well at 1.47 km and White Clauchrie at 1.49 km. **Table TA6.4-2** below summarises the findings of the assessment.

Table TA6.4-2: RVAA Summary

Ref	Address	Sensitivity	Magnitude of change (Phase 0: No felling)	Significance of effect (Phase 0: No felling)	Magnitude of change (Phases of felling)	Significance of effect (Phases of felling)
1	Ferter	High	Medium	Significant	Phase 1: 2019-2023 Medium-high Phase 3: 2029-2033 High Phase 5: 2039-2043 Medium-high	Significant Significant (Threshold not reached) Significant
2	Shalloch Well	High	Medium	Significant	Phase 2: 2024-2028 Medium-high	Significant
3	White Clauchrie	High	Medium	Significant	Phase 5: 2039-2043 Medium-high	Significant

23. On the basis of the RVAA assessment for the proposed Development, it is considered that the visual effect on any of the assessed nearby residential properties would not lead to the Residential Visual Amenity Threshold being reached, either in respect of the current baseline or in respect of the predicted baseline resulting from the proposed forestry fellings. Although Ferter was assessed as having a high magnitude of change during Phase 3 of the forestry felling, the Step 4 assessment found that the effects would not lead to Residential Visual Amenity Threshold being reached.



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OS Grid Reference: X 230773
Y 587389
No. of blade tips theoretically visible: 17
No. of hubs theoretically visible: 15
Field of view theoretically affected: 118 degrees
Distance to nearest visible turbine: 1.19km

Property description:

<input type="checkbox"/> Farmhouse	<input type="checkbox"/> Semi Detached	<input checked="" type="checkbox"/> Stone Built	<input checked="" type="checkbox"/> Rendered	<input type="checkbox"/> 1 Storey	<input checked="" type="checkbox"/> 2 Storey	<input checked="" type="checkbox"/> Outbuildings	<input checked="" type="checkbox"/> Front Garden	<input checked="" type="checkbox"/> Rear Garden
<input checked="" type="checkbox"/> Detached	<input type="checkbox"/> Terraced	<input type="checkbox"/> Brick Built	<input type="checkbox"/> Timber-clad	<input type="checkbox"/> 1.5 Storey	<input type="checkbox"/> Conservatory	<input type="checkbox"/> Farmyard	<input checked="" type="checkbox"/> Garage(s)	<input checked="" type="checkbox"/> Side Gardens

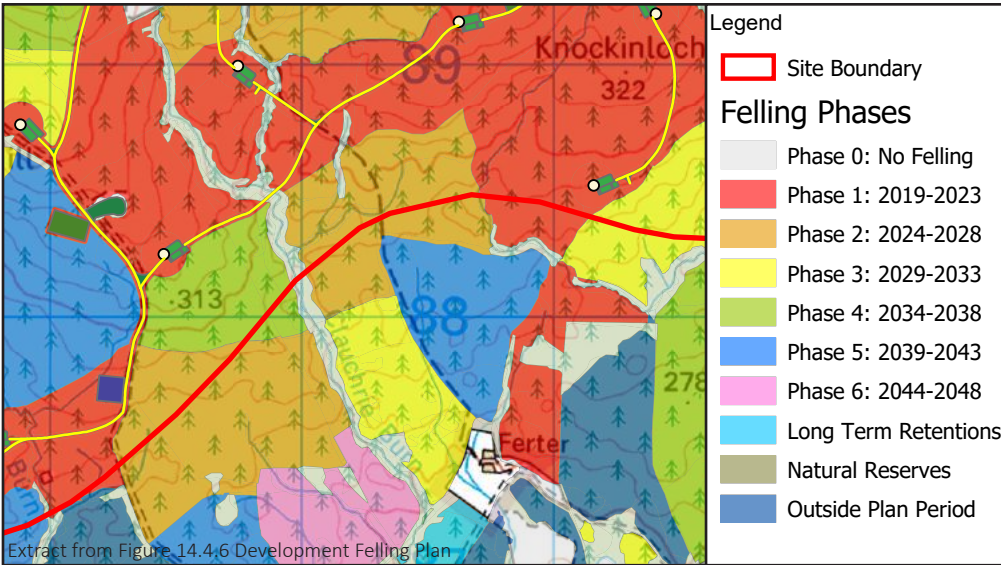
Location

Ferter is located in the northern part of the extensive coniferous forestry which covers much of the land between the Carrick Hills in the north and the Galloway Hills in the south. The landform is classified as Plateau Moorland and is characterised by broad undulations defined by intermittent burns. The surrounding landcover is predominantly commercial forestry Sitka Spruce, creating a vast mono-culture, albeit with blocks of variable age. Ferter sits at an elevation of approximately 245m AOD with landform rising gently to the north and falling briefly to the south before rising up again. Ferter is situated adjacent to the confluence of an number of burns. The house is accessed via the forest track that extends from the minor road to the east (Glentroll Road / NCR7). It's location 6 km from the road adds to the sense of remoteness experienced in this area, albeit with large scale forestry operations occurring immediately around the dwelling and defining its visual amenity. Ferter is a large, modern, two-storey, detached property with large ornamental gardens and ponds surrounding the property on all aspects. Coniferous woodland plantation forms a tight enclosure to the western, northern and eastern side of the property. The southern aspect is more open owing to the larger extent of the garden grounds on this southern side, as well as the gentle fall in landform and the comparatively young age of the forest plantation on adjacent land. The main house forms the southern side of a square layout which encloses a central courtyard. Guest accommodation occupies the west side, workshops the north side and garages the east side. The principal orientation of the main house is SSW with this aspect taking advantage of the more open aspect to the south.

Forestry Felling Scenarios

The proposed Development lies to the west, north and north-east of Ferter. This means that forestry on these sides currently provides a substantial screen in views towards the proposed Development and that its removal could give rise to more open views and potentially significant effects. In addition to Phase 0: No Felling, the forest felling plans in Figure 14.4.6 of the EIAR show the following three forest felling phases are relevant to this assessment to the west, north and east of Ferter:

- Phase 1: 2019-2023 - area occupies the land to the immediate north-east of the property, adjacent to the driveway and close to the garages on the eastern side of the house and workshops on the northern side;
- Phase 3: 2029-2033 - area occupies the land to the west of the property and is adjacent to the garden grounds and close to the guest accommodation on the western side of the house; and
- Phase 5: 2039-2043 - area occupies the land to the north of the property, adjacent to the garden grounds and close to the workshops.



Existing Residential (Visual) Amenity

Views from interior of property

The principal orientation of Ferter is SSW, with views across the valley of the Ferter Burn and young woodland planting in the foreground, albeit contained by older woodland planting towards the middleground. Ferter has been constructed within an active commercial forest, which influences its current visual amenity and changes that will be experienced in the future as a result of Forestry and Land Scotland's forest felling plan. The principal rooms are located on the southern side of the property, with the main living room on the ground floor and the dining room on the first floor. Both have large windows allowing full views out towards the south. While this view is largely characterised by the surrounding commercial forestry, through a break in the blanket cover, turbines of operational Mark Hill can be seen from approximately 5 km to the south-west. There are also large windows on the western side of the main building ,although views on this aspect are contained by dense, mature forest cover (Figure 6.4.3b).

Views from private access

The property is accessed from the forest track via a closed gate and short private driveway. The driveway starts at the sunken crossing point over the burn where views are partly contained by landform and vegetation. The driveway curves south-west, then north-west, to present a more open aspect towards the house, with coniferous forestry forming the backdrop to the house (Figure 6.4.3a).

Views from garden grounds

The gardens are ornamental, with a series of ponds constructed using the small burns which flow through the grounds and have been planted with a mix of aquatic and marginal plants. An extensive lawn surrounds these water features with beds of ornamental planting and trees set individually or in clusters intermittently across the grounds. Mature coniferous forestry encloses the western, northern and eastern aspects of the garden such that views are contained. To the south, the view is more open across the fore to middle ground owing to less mature coniferous woodland occupying the lower lying valley landform. The wider forest cover encloses the middleground, with Mark Hill Wind Farm visible in glimpsed and distant views.

Residential (Visual) Amenity Effects – Phase 0: No Felling

In Phase 0 there will be no forestry felling.

Magnitude of change: Medium

Significance of effect: Significant visual effect

The photomontage in Figure 6.4.2e and 6.4.2f shows that the extent to which the proposed Development will be visible will be notably limited by the screening effect of the intervening forestry, such that only a small number of blades and tips will be seen above the forest tree tops. These will occur to the west, north and north-east of the property. They will be visible from the driveway and most of the garden grounds, with the exception of the northern and western side of the garden where the closer range of the trees will screen visibility, as shown in the photomontage in Figure 6.4.3f.

Views from the interior of the property will be largely unaffected owing to the screening effect of the intervening forestry which lies between the proposed Development and the property. The principal views from the interior of the property towards the south will remain unaffected as the turbines will not occur in this direction and in views from the ground floor guest accommodation on the western side of the property, again, visibility will be largely screened by the forest cover. In terms of the upper floor of the main house, there are windows on the western aspect and the while the raised elevation means that a small number of tips and blades may potentially be visible over the forest tree tops, these will not form the prevailing or dominant feature due to the extent of intervening forestry screening.

In respect of the views from the driveway and most of the garden grounds, the magnitude of change will be medium and the effect will be significant. This assessment reflects the limited extent to which the proposed Development will be visible and the moderating effect of the turbines being located behind the forestry and outwith the principal southerly aspect as experienced from within the garden.

Residential (Visual) Amenity Effects – Phase 1: 2019-2023

In Phase 1 the block to the east of Ferter will be removed and restocked with a block of ‘Mixed Conifer’. The growth rates of a mix will be variable and difficult to predict accurately, but some assumptions based on growth models can be made, with an estimate of a growth rate of 0.4m per year until about age 20 years, with an increase to 0.5m per year thereafter until about 35-40 years, and then a slow down of growth rate to 0.25m a year after 40 years.

Magnitude of change: Medium-high

Significance of effect: Significant visual effect

The area that will be most affected by the Phase 1 removals will be the driveway to the parking court and the eastern garden grounds. The removal of this block will open up this easterly aspect and potentially introduce visibility of the four turbines to the north-east, although there will still be some screening from closer range garden vegetation. It must also be remembered that there are other forest blocks to the east and north of this which will remain intact during this period and also rising landform, both of which may continue to form some level of screening, albeit substantially lower than what currently exists. Where visibility does arise, the turbines in this north-easterly direction will make a notable addition owing to the greater extents of each structure being potentially visible. This effect will, however, be moderated by their location to the rear of the property and the garden where the principal outlook to the south will remain unaffected.

Views from the interior of the property will be largely unaffected by the additional visibility resulting from the Phase 1 removals as they will occur to the east and north east, where the garages and workshops are situated. While the guest accommodation on the western side will be unaffected, views from the rear upper floor of the main house may gain additional visibility. Taking all these factors into account the magnitude of change will be medium to high and the effect will be significant.

The restocking of this block to the east of Ferter will comprise mixed conifers. Ten years after planting it is estimated that this block will reach a height of 5m. This will provide a relatively effective screen such that only blades and tips will be visible above the forest tree tops. While the magnitude of change will be reduced back down to medium, the effect will remain significant. By Phase 3, the replanting of the block to the east of Ferter will be approximately 15 years old and therefore will also have reached an approximate 7m in height. This will reduce the extent of visibility of the four turbines to the north-east and therefore reduce their contribution to the overall magnitude of change.

Residential (Visual) Amenity Effects – Phase 3: 2029-2033

In Phase 3 the block to the west of Ferter will be removed and restocked with a block of Sitka Spruce.

Magnitude of change: High

Significance of effect: Significant visual effect

The magnitude of change during Phase 3 will be high and the effects will be significant. The removal of the forestry along the western edge of Ferter’s house and garden grounds will potentially introduce visibility of the 11 turbines set in this westerly and north-westerly direction. The closest turbine will be approximately 1.15 to 1.19 km from Ferter. These 11 turbines will be readily visible from the driveway and garden grounds and will form a defining feature in th view west/north-west. The overall effect will be moderated by the location of the turbines to the north-west and north which will ensure that the principal outlook to the south will remain unaffected. The potential for overbearing effects is also moderated by the occurrence of these effects well into the future, from 2029. Views from the guest accommodation on the western side of the property will be notably affected, owing to the loss of enclosure along this boundary as well as the introduction of visibility of relatively close range turbines.

The restocking of this block to the west of Ferter will comprise mostly Sitka Spruce which is an especially fast-growing coniferous tree. Ten years after planting (2029) it is estimated that this block will reach a height of approximately 5m and 15 years after planting (2023) it is estimated to be approximately 7m in height. This will provide a relatively effective screen such that only blades and tips will be visible above the forest tree tops. While the magnitude of change will be reduced back down to medium, the effect will remain significant.

Residential (Visual) Amenity Effects – Phase 5: 2039-2043

In Phase 5 the block to the north of Ferter will be removed and restocked with a block of Sitka Spruce.

Magnitude of change: Medium-high

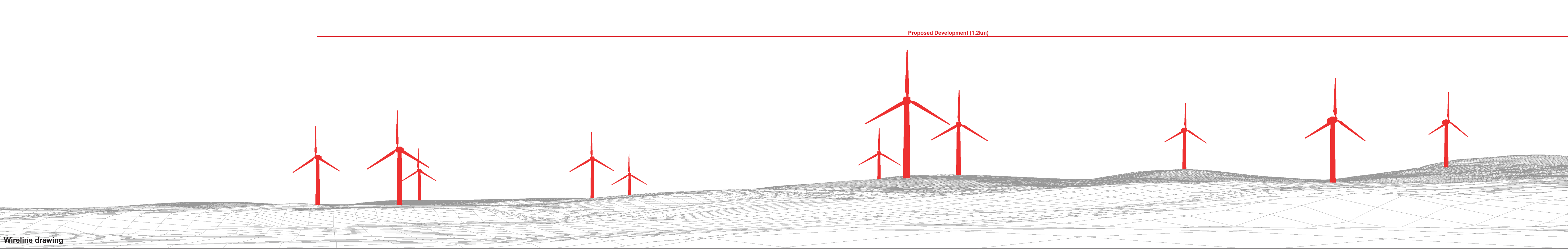
Significance of effect: Significant visual effect

By Phase 5, the replanting of the block to the east during Phase 1 and the block to the west during Phase 3 will have reached respective approximate heights of 9m and 5m. This will mean that visibility of the four turbines to the north-east will be largely screening by forest screening and that visibility of the 11 turbines to the north-west and north will be reduced by partial screening, albeit with the upper turbine towers and rotors likely to be visible above the intervening forestry. Owing to the shape of the Phase 5 block, only the apex sits to the immediate north of Ferter with the Phase 3 restocked block to the west and the Phase 3 restocked block to the east. This means that the removal of the Phase 5 block will only affect a very small proportion of the forest cover surrounding the property. Furthermore, the loss will occur to the rear of the property, onto which the workshops look, and also to the rear of the garden. Taking into account the influence of the blades and tips that will still be visible above the forest cover to the west and the very marginal increase in visibility to the north, which may potentially expose a further two or three turbines, the overall magnitude of change will be medium-high and the effect will be significant.



Existing view

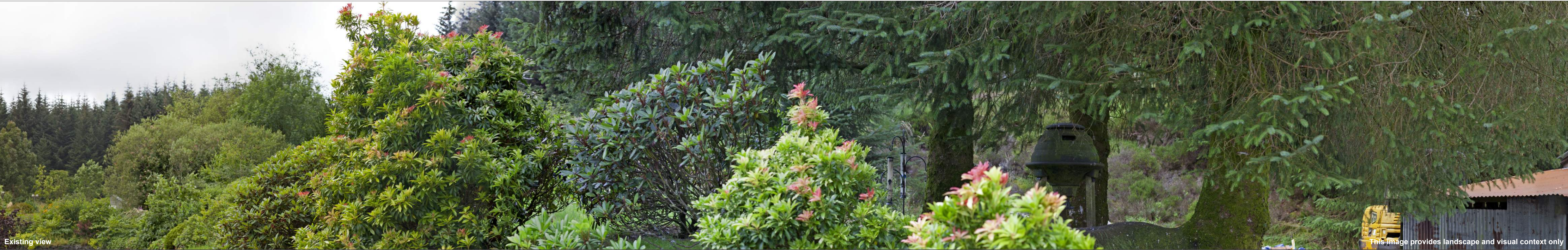
This image provides landscape and visual context only



Wireline drawing

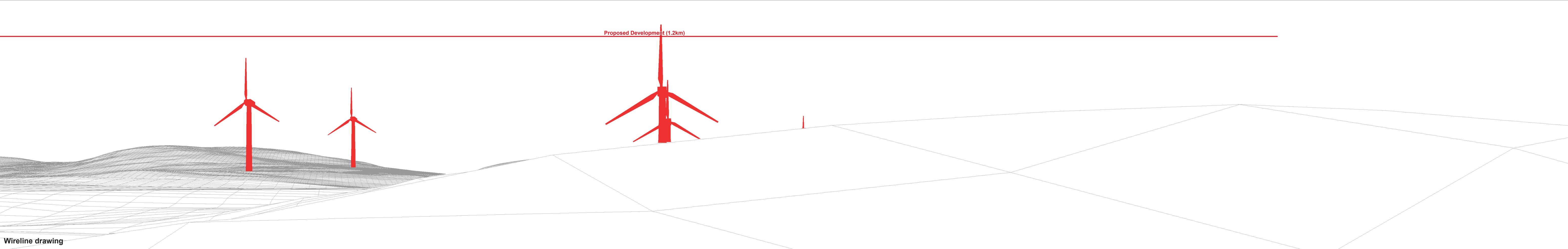
OS reference:	230773 E 587389 N	Horizontal field of view:	90° (cylindrical projection)	Camera:	Canon EOS 5D Mark II
Eye level:	253.74 m AOD	Principal distance	522 mm	Lens:	50mm (Canon EF 50mm f/1.4)
Direction of view:	296° - 26°			Camera height:	1.5 m AGL
Nearest turbine:	1.194 km			Date and time:	24/07/19, 14:27

Figure: 6.4.2a
RVAA Viewpoint 1a: Ferter Driveway



Existing view

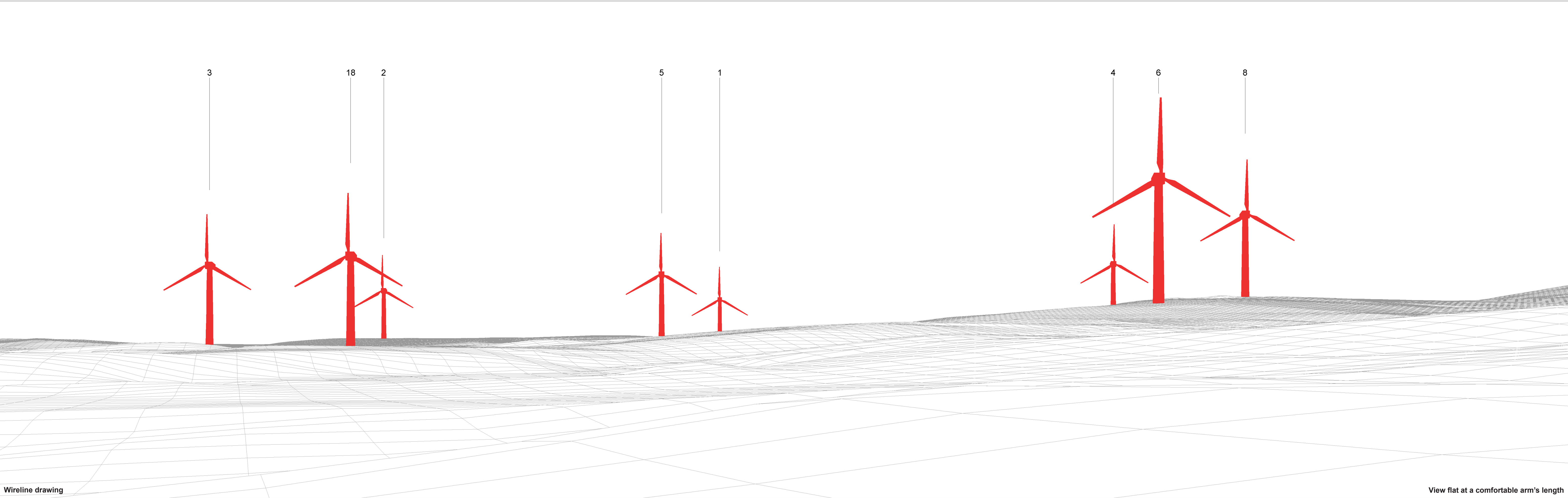
This image provides landscape and visual context only



Wireline drawing

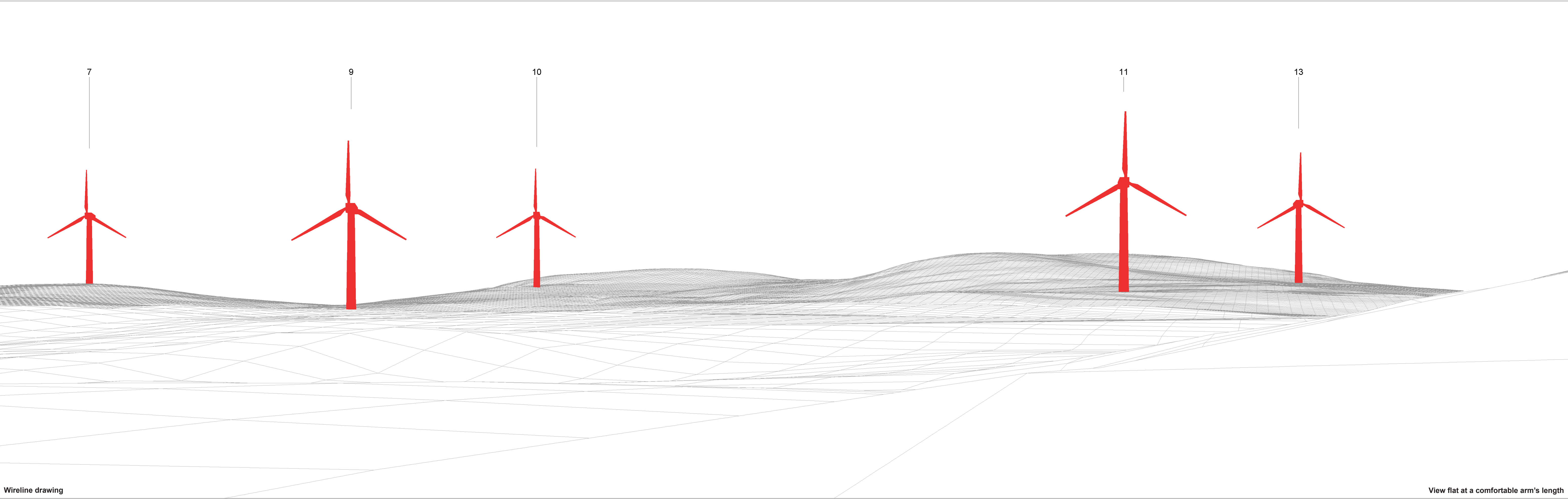
OS reference:	230773 E 587389 N	Horizontal field of view:	90° (cylindrical projection)	Camera:	Canon EOS 5D Mark II
Eye level:	253.74 m AOD	Principal distance	522 mm	Lens:	50mm (Canon EF 50mm f/1.4)
Direction of view:	296° - 26°			Camera height:	1.5 m AGL
Nearest turbine:	1.194 km			Date and time:	15/07/2019, 12:31

Figure: 6.4.2b
RVAA Viewpoint 1a: Ferter Driveway



Wireline drawing

View flat at a comfortable arm's length



Wireline drawing

View flat at a comfortable arm's length





Photomontage

View flat at a comfortable arm's length

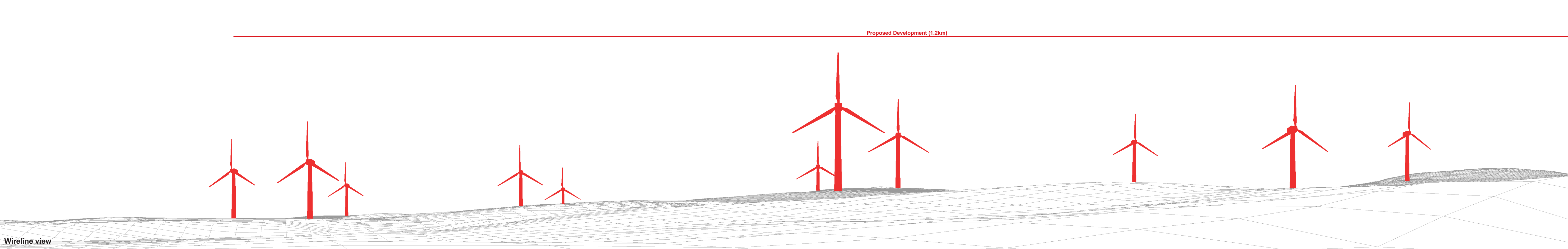
OS reference:	230773 E 587389 N	Horizontal field of view:	53.5° (planar projection)	Camera:	Canon EOS 5D Mark II
Eye level:	253.74 m AOD	Principal distance	812.5 mm	Lens:	50mm (Canon EF 50mm f/1.4)
Direction of view:	289.5 - 343°	Paper size:	841 x 297 mm	Camera height:	1.5 m AGL
Nearest turbine:	1.194 km	Correct printed image size:	820 x 260 mm	Date and time:	15/07/2019, 12:31

Figure: 6.4.2f
RVAA Viewpoint 1a: Ferter Driveway



Existing view

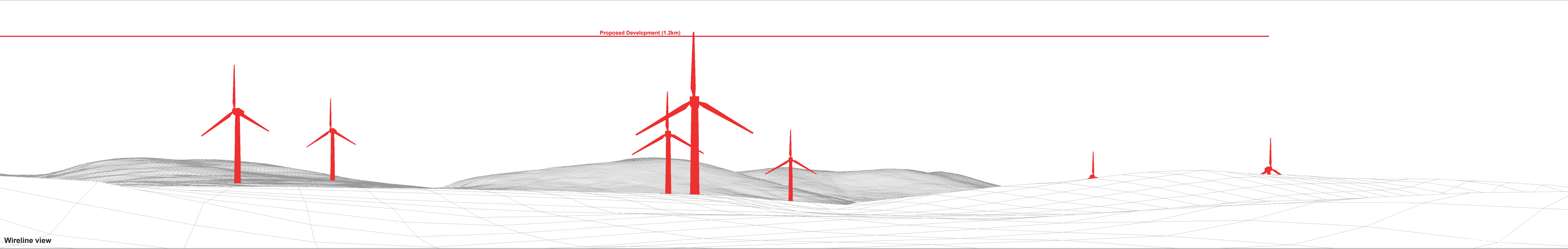
This image provides landscape and visual context only

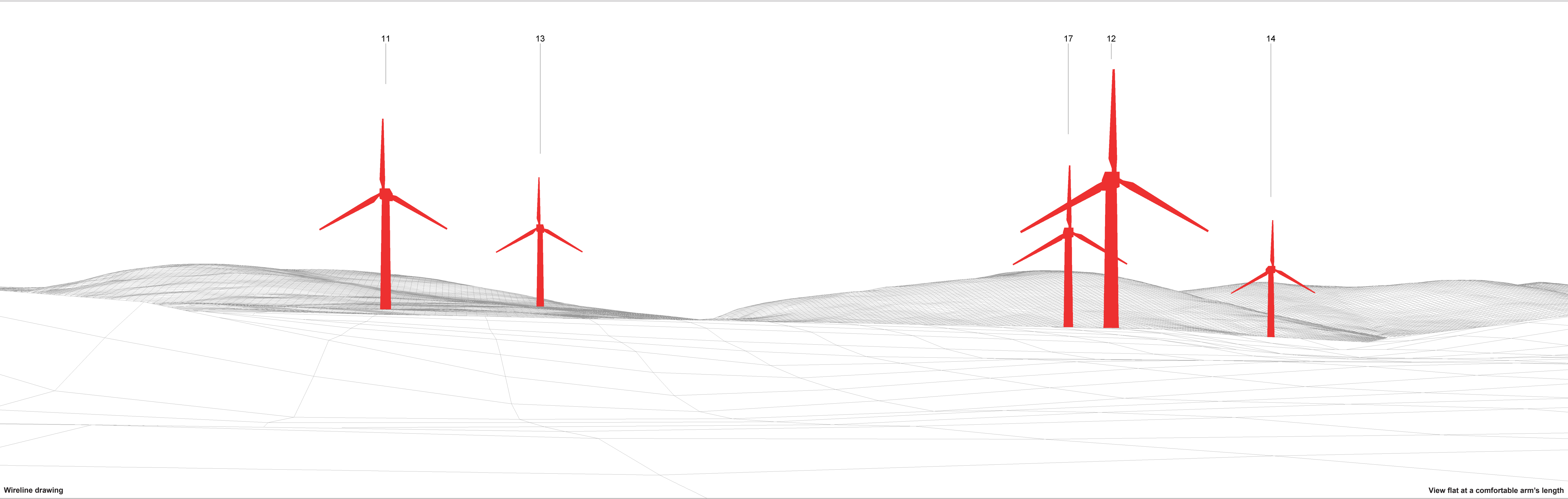


Wireline view

OS reference:	230697 E 587467 N	Horizontal field of view:	90° (cylindrical projection)	Camera:	Canon EOS 5D Mark II
Eye level:	253.77 m AOD	Principal distance	522 mm	Lens:	50mm (Canon EF 50mm f/1.4)
Direction of view:	299° - 29°			Camera height:	1.5 m AGL
Nearest turbine:	1.149 km			Date and time:	24/07/19, 14:20

Figure: 6.4.3a
RVAA Viewpoint 1b: Ferter West Garden





Wireline drawing

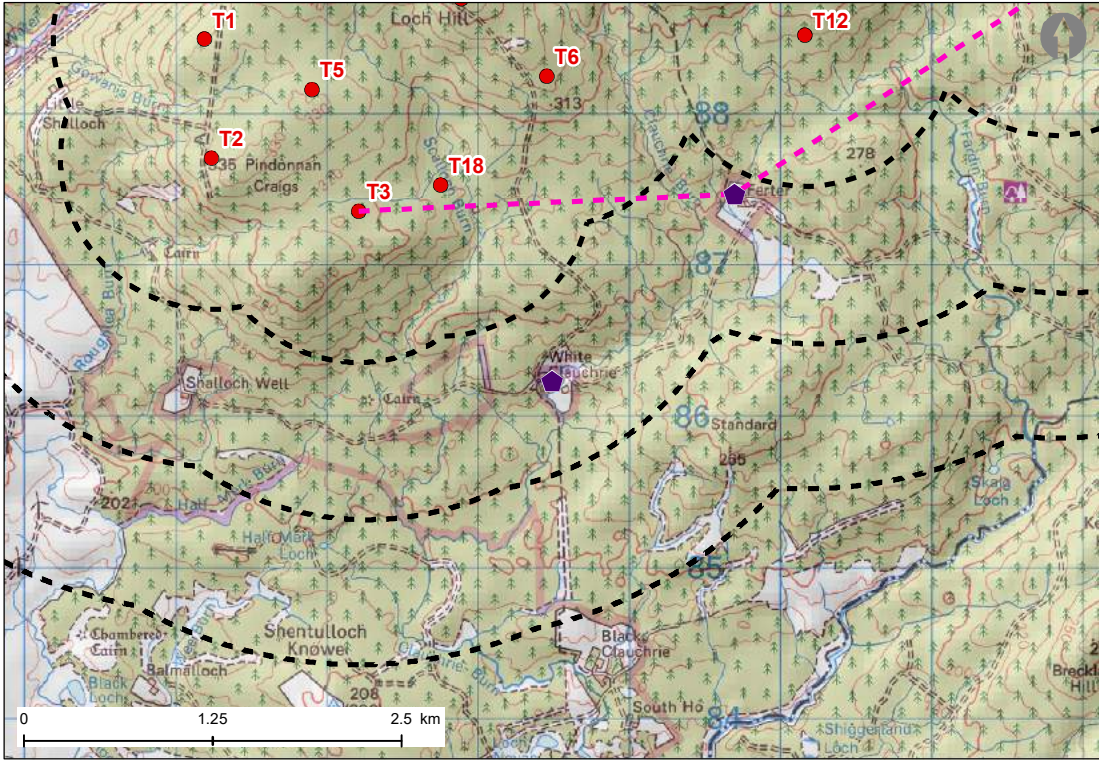
View flat at a comfortable arm's length



Photomontage

View flat at a comfortable arm's length

OS reference:	230697 E 587467 N	Horizontal field of view:	53.5° (planar projection)	Camera:	Canon EOS 5D Mark II	Figure: 6.4.3d
Eye level:	253.77 m AOD	Principal distance	812.5 mm	Lens:	50mm (Canon EF 50mm f/1.4)	RVAA Viewpoint 1b: Ferter West Garden
Direction of view:	12°	Paper size:	841 x 297 mm	Camera height:	1.5 m AGL	
Nearest turbine:	1.149 km	Correct printed image size:	820 x 260 mm	Date and time:	24/07/19, 14:20	



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
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OS Grid Reference: X 229489
Y 586233
No. of blade tips theoretically visible: 18
No. of hubs theoretically visible: 10
Field of view theoretically affected: 109 degrees
Distance to nearest visible turbine: 1.49km

Property description:

<input type="checkbox"/> Farmhouse	<input type="checkbox"/> Semi Detached	<input checked="" type="checkbox"/> Stone Built	<input checked="" type="checkbox"/> Rendered	<input type="checkbox"/> 1 Storey	<input type="checkbox"/> 2 Storey	<input checked="" type="checkbox"/> Outbuildings	<input checked="" type="checkbox"/> Front Garden	<input checked="" type="checkbox"/> Rear Garden
<input checked="" type="checkbox"/> Detached	<input type="checkbox"/> Terraced	<input type="checkbox"/> Brick Built	<input type="checkbox"/> Timber-clad	<input checked="" type="checkbox"/> 1.5 Storey	<input type="checkbox"/> Conservatory	<input type="checkbox"/> Farmyard	<input checked="" type="checkbox"/> Garage(s)	<input checked="" type="checkbox"/> Side Gardens

Location

White Clauchrie is located in a clearing in the core of the Clauchrie Plantation. It is set in a localised dell where Clauchrie Burn, from the north-east meets with a smaller burn from the north. The house is at an elevation of approximately 215m AOD with the landform rising to the north and falling gently to the south. The forest track passes on the northern side of the house at a raised elevation relative to the house. While the forest area around the house and garden is cleared out to approximately 200m, the garden grounds are largely enclosed by deciduous tree cover. Beyond the cleared area, blanket forestry of Sitka Spruce extends in all directions.

White Clauchrie comprises three main buildings; the house and two outbuildings. These are arranged with the house set to the south, one of the outbuildings adjacent to the immediate west and the other one set less than 10m to the north. Collectively, they form a cluster into which access tracks from the north-west and north-east feed into a central yard. The house is a traditional stone built and white rendered property. Its principal orientation is south-south-east across the forest clearing through which Clauchrie Burn flows. The garden is large and comprises open grass and deciduous trees which surround the house on all aspects.

Forestry Felling Scenarios

The proposed Development lies to the north-west, north and north-east of White Clauchrie. This means that forestry on these aspects currently provides a screen and that their removal could potentially give rise to significant effects. In addition to Phase 0: No Felling, the forest felling plans in Figure 14.4.6 shows that Phase 5: 2039-2043 is relevant to this assessment. The Phase 5 area wraps all around White Clauchrie, enclosing every aspect, and its removal will notable change the landscape character of this local area.

Existing Residential (Visual) Amenity

Views from interior of property

The house appears to be one and a half storey with a ground floor and upper floor set into the roof space with skylights providing light. This means that views from the property will essentially be from the ground floor, as no direct views of the surrounding landscape will be experienced from the upper floor interior spaces. Views from the ground floor southern aspect appear to be relatively open, potentially extending as far as the forest cover to the south, albeit with some mature deciduous trees in the garden grounds. Views from the ground floor northern aspect appear to be largely enclosed by the close range outbuilding to the immediate north. Whilst this building is a similar length to the house, it is offset slightly to the west such that it does not enclose the far eastern end of the house. While this could potentially open up a view north from the interior of the property, the presence of mature tree cover along the northern boundary ensures the view does not extend beyond the close range.

Views from private access

The property is accessed directly from the forest track with short driveways leading from the north-west entrance and north-east entrance to the northern aspect of the house. While there is some deciduous tree cover around these driveways there is also potentially open views of the surrounding landscape including the rising landform to the north.

Views from garden grounds

The main parts of the garden lie to the south and the east of the house, where there are large lawns and cluster of mature deciduous tree cover. Views from these garden spaces are relatively open owing to the relative openness of the close range landscape to the east and south, enhanced by the young age of the forestry cover in these directions. The garden grounds in the north, provide access and parking and are more functional in appearance albeit with mature deciduous tree cover, both within the northern curtilage of the property and to the north of the forest track, providing some screening of the landscape to the north.

Residential (Visual) Amenity Effects – Phase 0: No Felling

In Phase 0 there will be no forestry felling.

Magnitude of change: Medium

Significance of effect: Significant visual effect

The wirelines in Figure 6.4.4a shows that theoretical visibility comprises ten turbines to the north-west and eight turbines to the north-east. All of these turbines will be screened to some extent by the intervening landform, such that of the ten to the north-west, three will be seen as tips, two as blades, three to just below the nacelle and two with towers partly showing, and of the eight to the north-east, two will be seen as tips, three as blades, and two to just below the nacelle. While there is a small extent of open land preserved by the field of improved pasture to the north of White Clauchrie, which could potentially open up the view towards the proposed Development, there is mature deciduous tree cover along the northern boundary of White Clauchrie and also on the opposite side of the road that will notably reduce the extent of visibility.

In terms of views from the house, these ground floor views will be screened by the intervening outbuilding and mature tree cover. While views from the garden grounds are less restricted, they will also be largely screened by mature tree cover although its deciduous nature means that in winter months filtered views may be experienced from the garden grounds and the driveways accessing the property. Taking these factors into account, the magnitude of change will be medium and the effect will be significant.

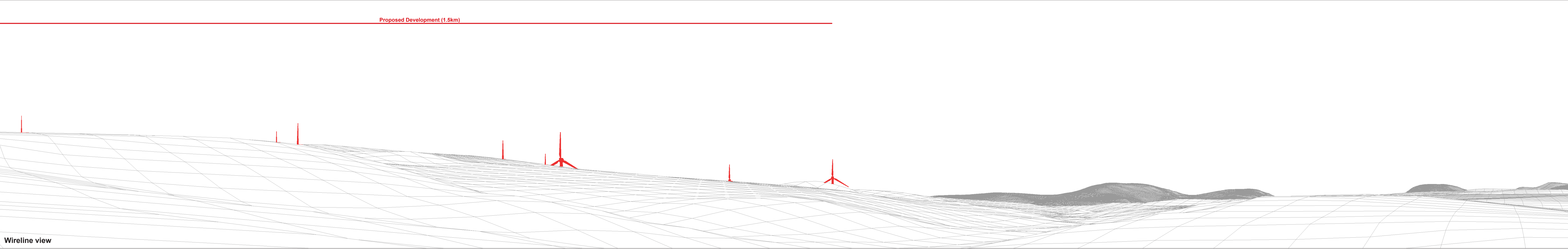
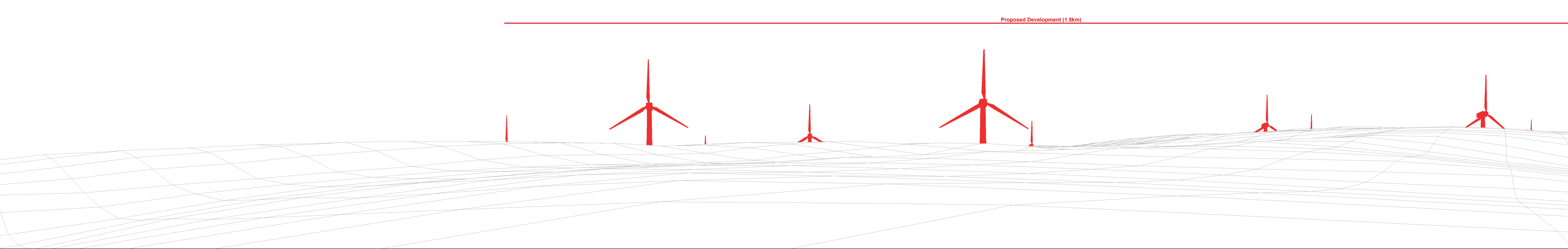
Residential (Visual) Amenity Effects – Phase 5: 2039-2043

In Phase 5 the block to the north of Ferter will be removed and restocked with a block of Sitka Spruce. The growth rates will be variable and difficult to predict accurately, but some assumptions based on growth models can be made, with an estimate of a growth rate of 0.4m per year until about age 20 years, with an increase to 0.5m per year thereafter until about 35-40 years, and then a slow down of growth rate to 0.25m a year after 40 years. With stock being planted at approximately 1m height, after 10 years it is estimated the tree cover will be 5m tall and after 15 years 7m tall.

Magnitude of change: Medium-high

Significance of effect: Significant visual effect

While the removal of all the coniferous forestry around White Clauchrie will change the landscape character from one of enclosure to one of exposure, the deciduous tree cover to the north of the property will continue to form a reasonable screen and reduce the extents to which the proposed Development will be visible. There will however be an increase in the likelihood of the turbines being visible, albeit only from the garden grounds and driveway, as the views from the interior will continue to be blocked by the adjacent outbuildings. The closest turbine will be situated a distance of 1.49 km from the property. The magnitude of change may therefore rise to medium-high and the effects will remain as significant.

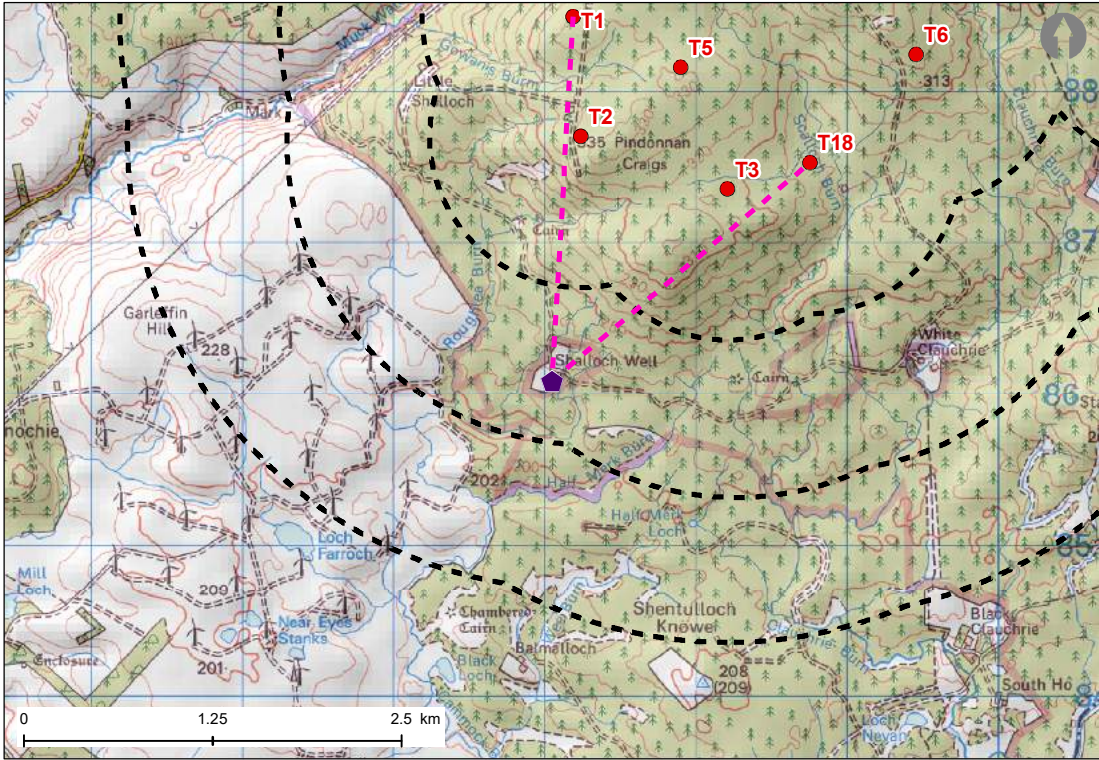


Wireline view

OS reference: 229489 E 586233 N
Eye level: 217.62 m AOD
Direction of view: 319° - 49°
Nearest turbine: 1.489 km

Horizontal field of view: 90° (cylindrical projection)
Principal distance: 522 mm

Figure: 6.4.4a
RVAA Viewpoint 2: White Clauchrie



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
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OS Grid Reference: X 227048
Y 586086
No. of blade tips theoretically visible: 9
No. of hubs theoretically visible: 6
Field of view theoretically affected: 47 degrees
Distance to nearest visible turbine: 1.63km

Property description:

<input checked="" type="checkbox"/> Farmhouse	<input type="checkbox"/> Semi Detached	<input checked="" type="checkbox"/> Stone Built	<input checked="" type="checkbox"/> Rendered	<input type="checkbox"/> 1 Storey	<input type="checkbox"/> 2 Storey	<input checked="" type="checkbox"/> Outbuildings	<input checked="" type="checkbox"/> Front Garden	<input checked="" type="checkbox"/> Rear Garden
<input checked="" type="checkbox"/> Detached	<input type="checkbox"/> Terraced	<input type="checkbox"/> Brick Built	<input type="checkbox"/> Timber-clad	<input checked="" type="checkbox"/> 1.5 Storey	<input type="checkbox"/> Conservatory	<input type="checkbox"/> Farmyard	<input checked="" type="checkbox"/> Garage(s)	<input checked="" type="checkbox"/> Side Gardens

Location

Shalloch Well is situated close to the western edge of the coniferous forest, with Garleffin Hill (228m AOD) to the west and Pindonnann Craigs (335m AOD) to the north. The house sits at an elevation of approximately 220m AOD with the landform rising to the north and falling gently to the south. Fields of improved pasture occur to the north and south of the house to create a small, but permanent, clearing in the forest cover. Recent felling around these fields has led to the clearing being expanded to the north and west. The forest track, which provides access to the house, passes to the immediate north, with the house set down in a small dip in the landform. Operational Mark Hill Wind Farm occupies land to the west and south-west, and at a minimum distance of approximately 1.2 km, appears as a notable feature.

Shalloch Well is a small traditional farmhouse built of stone, which is rendered and painted green. Although it appears as a single storey property, it is a one and a half storey, with the upper floor set in the roof space and lit via skylights. The principal orientation is south-south-west and the principal rooms have windows out onto this southerly aspect. There are no windows on the western and eastern gable ends and the windows on the northern aspect are largely enclosed by the outbuildings; one set to the immediate north and one to the north-east. Collectively, the buildings enclose a small yard by the main entrance to the house, while on the south side a large and open garden occurs.

Forestry Felling Scenarios

The proposed Development lies to the north and north-east of Shalloch Well. This means that forestry on these sides currently provides a screen and that their removal could potentially give rise to significant effects. In addition to Phase 0: No Felling, the forest felling plans in Figure 14.4.6 show that Phase 2: 2024-2028 is relevant to this assessment. The Phase 2 area occupies the land to the north of the farm field which lies to the north of Shalloch Well.

Existing Residential (Visual) Amenity

Views from interior of property

Despite the property having an upper floor in the roof space, the use of skylights means that there are no direct views of the surrounding landscape from these upper floor interior spaces. Furthermore, there are no windows on the western and eastern gable ends of the property, such that there are only views from the northern and southern aspect on the ground level. On the northern side of the property there is a lean-to porch with two small windows and a further window on the house. Less than 10m to the north there is an outbuilding with a pitched roof which extends almost the same length as the house, with another outbuilding set to the east. This enclosure contains the extent of views from the interior spaces to within the close range on this northern aspect. On the southern side of the house, there are three windows and a third especially small window. The garden comprises grass cover such that views from the interior are largely uninterrupted and extend out to the forestry to the south, with some visibility of operational Mark Hill Wind Farm to the south-west.

Views from private access

The property is accessed directly from the forest track.

Views from garden grounds

The large garden on the south side of Shalloch Well comprises a rectangle of grass cover over gently undulating land rising to a high point in the south-west corner. The boundary is marked by a low traditional drystone dyke and mature trees line the eastern garden boundary, although their sunken location on this side of the garden reduces the scale of enclosure. Operational Mark Hill Wind Farm forms a clearly visible and close range feature to the west and south-west of the garden, with the closest turbine approximately 1.2 km away. Gardens to the west and east of the house comprise a narrow band of land, while to the north there is a small yard and while enclosed by outbuildings, glimpses of the surrounding landscape can be seen.

Residential (Visual) Amenity Effects – Phase 0: No Felling

In Phase 0 there will be no forestry felling.

Magnitude of change: Medium

Significance of effect: Significant visual effect

Although there will be no material visibility of the proposed Development from the interior spaces of Shalloch Well, there will be visibility from the garden grounds, especially to the south, where a large and relatively open garden space occurs. The photomontages in Figure 6.4.5d-e show that from the large front garden on the southern side of the house, three blades and two tips will be visible behind the property and seen above the tree tops along the ridge. The closest turbine will be approximately 1.63 km from the viewpoint. Taking into account the limited extent of the proposed Development that will be visible, as well as the relatively close proximity of the closest turbines, this will give rise to a medium magnitude of change. While wind farm development is already readily visible in the baseline view, the additional visibility will extend its influence into a new sector of the view from the garden.

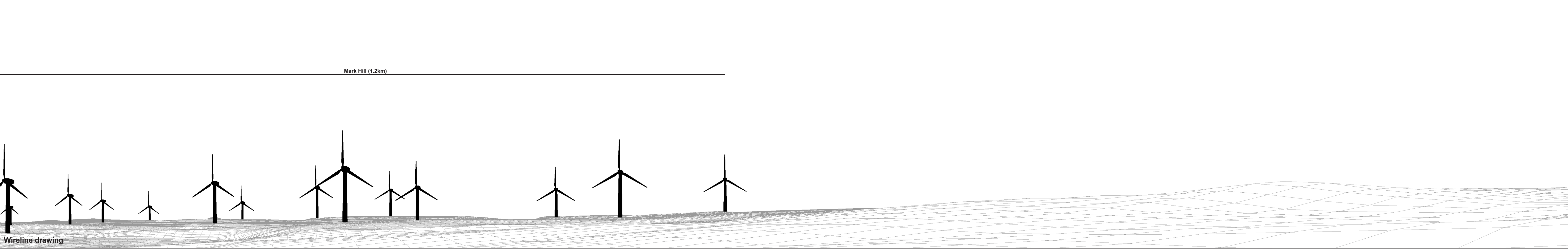
Residential (Visual) Amenity Effects – Phase 2: 2024-2028

In Phase 2, the block to the north of Shalloch Well will be removed and restocked with a block of Sitka Spruce and a broad band of ‘Mixed Broadleaves’ along the southern side. The growth rates of both Sitka Spruce and mixed broadleaves will be variable and difficult to predict accurately, with broadleaves expected to be slower growing, but some assumptions based on growth models can be made, with an estimate of a growth rate of 0.4m per year until about age 20 years, with an increase to 0.5m per year thereafter until about 35-40 years, and then a slow down of growth rate to 0.25m a year after 40 years. With stock being planted at approximately 1m height, after 10 years it is estimated the tree cover will be 5m tall and after 15 years 7m tall.

Magnitude of change: Medium-high

Significance of effect: Significant visual effect

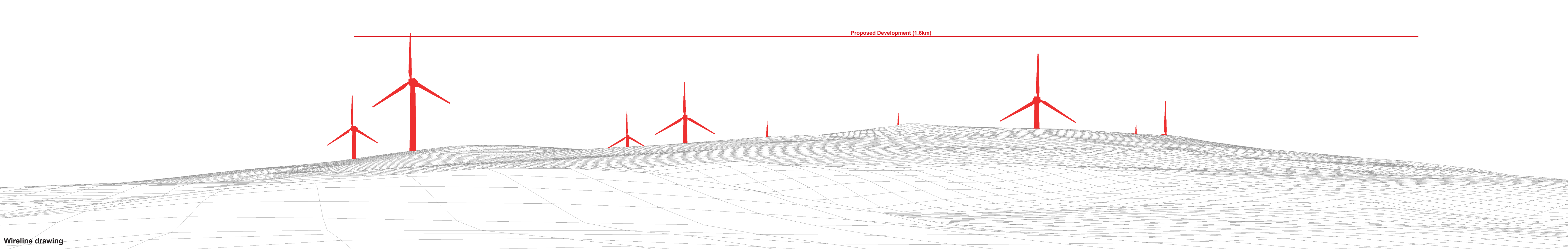
The Forestry Felling Plans in Figure 14.4.6 show that the forestry to the north of Shalloch Well is scheduled to be removed in Phase 2 between 2024 and 2028, which is relatively soon. This will mean that the forestry seen along the ridgeline in Figure 6.4.5d-e will be removed, thus potentially exposing more of the proposed Development, although the block further north on rising landform is not due for removal until Phase 4 (2034 to 2038), so there may still be some degree of screening. In considering the removal of the forestry, the magnitude of change will rise to medium to high, but will be prevented from rising to high owing to the fact that there will be no views from the interior of the property, there will be a minimum separation distance of 1.63km and the turbines will mostly still be seen set behind the intervening ridgeline. While over time, the magnitude of change will be reduced as the restocked mixed broadleaves grow, it will take longer to screen visibility of the turbines than if Sitka Spruce were used, owing to the slower growth rates, and there will be limited screening in winter when broadleaf trees are not in leaf. A height of 7m after 15 years will potentially provide a relatively substantial screen that will reduce visibility to tips and blades and the magnitude of change to medium. The effect will remain significant. Shalloch Well does not require a Step 4 Assessment as it will not undergo a high magnitude of change as a result of the proposed Development at any of the phases of felling or restocking.





Existing view

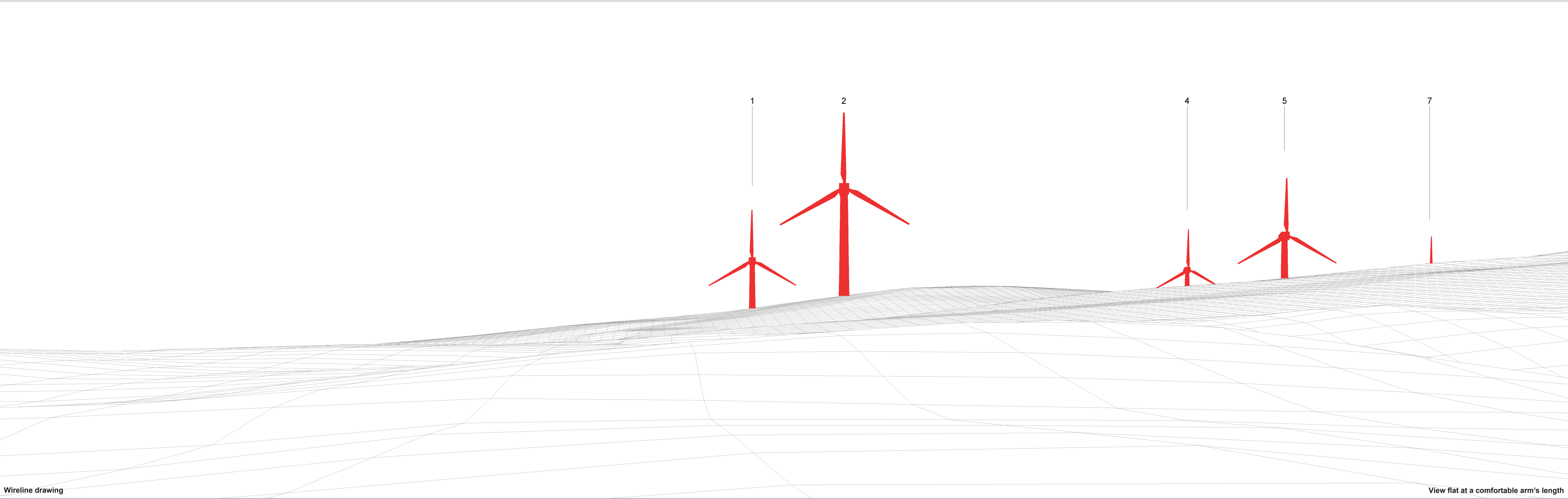
This image provides landscape and visual context only



Wireline drawing

OS reference:	227048 E 586086 N	Horizontal field of view:	90° (cylindrical projection)	Camera:	Canon EOS 5D Mark II
Eye level:	221.1m AOD	Principal distance	522 mm	Lens:	50mm (Canon EF 50mm f/1.4)
Direction of view:	298° - 28°			Camera height:	1.5 m AGL
Nearest turbine:	1.628 km			Date and time:	24/07/19, 13:15

Figure: 6.4.5b
RVAA Viewpoint 3: Shalloch Well



OS reference: 227048 E 586086 N
Eye level: 221.1m AOD
Direction of view: 4.5° - 58°
Nearest turbine: 1.628 km

Horizontal field of view: 53.5° (planar projection)
Principal distance 812.5 mm
Paper size: 841 x 297 mm
Correct printed image size: 820 x 260 mm

Camera: Canon EOS 5D Mark II
Lens: 50mm (Canon EF 50mm f/1.4)
Camera height: 1.5 m AGL
Date and time: 24/07/19, 13:15

Figure: 6.4.5c
RVAA Viewpoint 3: Shalloch Well

View flat at a comfortable arm's length

Camera: Canon EOS 5D Mark II
Lens: 50mm (Canon EF 50mm f/1.4)
Camera height: 1.5 m AGL
Date and time: 24/07/19, 13:15

Figure: 6.4.5d
RVAA Viewpoint 3: Shalloch Well



Photomontage

View flat at a comfortable arm's length

OS reference:	227048 E 586086 N	Horizontal field of view:	53.5° (planar projection)	Camera:	Canon EOS 5D Mark II
Eye level:	221.1m AOD	Principal distance	812.5 mm	Lens:	50mm (Canon EF 50mm f/1.4)
Direction of view:	4.5° - 58°	Paper size:	841 x 297 mm	Camera height:	1.5 m AGL
Nearest turbine:	1.628 km	Correct printed image size:	820 x 260 mm	Date and time:	24/07/19, 13:15

Figure: 6.4.5e
RVAA Viewpoint 3: Shalloch Well



Photomontage

View flat at a comfortable arm's length

OS reference:	227048 E 586086 N	Horizontal field of view:	53.5° (planar projection)	Camera:	Canon EOS 5D Mark II
Eye level:	221.1m AOD	Principal distance	812.5 mm	Lens:	50mm (Canon EF 50mm f/1.4)
Direction of view:	4.5° - 58°	Paper size:	841 x 297 mm	Camera height:	1.5 m AGL
Nearest turbine:	1.628 km	Correct printed image size:	820 x 260 mm	Date and time:	24/07/19, 13:15

Figure: 6.4.5d
RVAA Viewpoint 3: Shalloch Well

STEP 4 ASSESSMENT

The Step 4 Assessment for Ferter has been triggered by the Step 3 Assessment for the Phase 3 scenario, which found that the proposed Development will give rise to a high magnitude of change. The Step 4 Assessment differs from the Step 3 Assessment in that it considers in more detail whether the effects of the proposed Development will lead to Residential Visual Amenity Threshold being reached, that is to say, that the effects have the potential to be overbearing in respect of the visual amenity of residents at the property.

The Phase 3 forestry felling will take place during the period 2029 to 2033 and will involve the removal of the forestry block to the immediate west of Ferter. This will potentially expose visibility of the 200m high turbines to the west and north-west, the closest of which will be approximately 1.47 km to the north-west. While the magnitude of change has been assessed as high and the effect as significant, the effect will not be overbearing and will not lead to Residential Visual Amenity Threshold being reached. The considerations that have led to this conclusion include the fact that the principal outlook to the south from the interior spaces in the house will remain unaffected as there will be no proposed turbines visible in this sector of the view. Furthermore, this is the more open aspect of the wider views experienced from the house and gardens and this sense of openness will also remain unaffected. While the proposed turbines will be large, the minimum separation distance of approximately 1.47 km will also ensure that the presence of the turbines will not become overbearing.

In the RVAA, while there is no specific definition of Residential Visual Amenity Threshold to base an assessment upon, there are a number of suggested criteria that may be applicable, including “‘blocking the only available view from a property’, or ‘overwhelming views in all directions’; and ‘unpleasantly encroaching’ or being ‘inescapably dominant from the property’”. Using these criteria as a benchmark, it can be concluded that the effects on Ferter will not be of a magnitude that will give rise to any of these criteria.

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