Technical Appendix 6.3

Assessment of Impacts on Merrick Wild Land Area (WLA)

SCOTTISHPOWER RENEWABLES

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Appendix 6.3

Assessment of Impacts on Merrick Wild Land Area (WLA)

6.1 Introduction

6.1.1 Overview of Approach

1. Wild Land effects are considered in this Technical Appendix 6.3 (**TA:6.3**) of the LVIA in respect of the Merrick Wild Land Area (WLA).

2. The assessment follows guidance set out in SNH's draft version of 'Assessing Impacts on Wild Land Technical Guidance' (2017) ('the 2017 Draft Guidance'). SNH, on its website, states that the 2017 Draft Guidance is the appropriate guidance to be applied in the assessment of effects on WLAs in place of the original 2007 Guidance and while responses on the 2017 Draft Guidance are considered.

3. Consultations have been undertaken with SNH to determine the appropriate guidance and methodology for the wild land assessment. SNH confirmed that they do not expect a revision to the 2017 Draft Guidance to be released in the near future and have advised that the 2017 Draft Guidance should be used as the starting point for any wild land assessment. SNH has pointed to the use of the methodology adopted for the recent wild land assessment for the Limekiln Windfarm (OPEN/Infinergy, 2018) as a good practice model and it is this methodology that OPEN has adopted for the assessment of the Merrick WLA (01) in this **TA:6.3**, based on the approach taken for Limekiln Windfarm and the 2017 Draft Guidance.

4. A particular difference in the 2017 Draft Guidance, when compared with the previous 2007 approach, is that SNH indicates that the assessment should be undertaken in accordance with the Guidelines for Landscape and Visual Impact Assessment (GLVIA 3). That is helpful insofar as it sets out guidance for an approach to wild land assessment that is widely recognised and supported. However, it is also an approach that advocates the application of reasoned judgement by a suitably qualified landscape professional (GLVIA paragraph 2.24), which is likely to involve a greater degree of subjective interpretation than is the case with the 2007 Guidance, which is more prescriptive in approach.

5. GLVIA 3 enables an assessor to use a well-tested approach to establish the likelihood of significant effects arising through, firstly, establishing the sensitivity of a landscape resource or visual receptor, before then identifying the magnitude of change upon it, having regard to a range of criteria. This approach is acknowledged in paragraph 25 of the 2017 Draft Guidance: '*The overall judgement of significance should reflect the sensitivity of the wild land qualities within WLAs and the magnitude/extent of effect*'.

6. In establishing the significance of effects on WLAs, judgements have to be made on the 'sensitivity' of the wildness qualities of the landscape, in respect of the 'value' of the resource or view and its 'susceptibility' to the type of change that is proposed; and by assessing the magnitude of change arising from the proposed Development. The assessment of impacts on the Merrick WLA (01) is informed by more detailed consideration of the specific nature of the proposed Development. Fundamentally, these judgements on sensitivity and magnitude of change are considered as per the criteria set out in **Section 6.3** of OPEN's LVIA Methodology in **TA:6.1,** concerning the assessment of landscape effects.

6.1.1.1 WLAs – Attributes, Responses and Qualities

7. The Wild Land Assessment requires further judgements to be made to consider the change arising to particular 'wild land qualities'. WLAs take into account that wildness is a product of people's perceptual response to certain physical attributes in the landscape. *'Physical attributes'* and *'perceptual responses'* are therefore used as the measure by which changes in experience are assessed.

8. As acknowledged in SNH's Advice to Government in 2014, capturing the quality of wildness is a subjective matter that requires informed judgements. This is because people respond differently according to their individual experience and expectations, however there is sufficient commonality in appreciation to identify a set of attributes and responses that can be assessed if presented in a systematic, transparent and consistent way. The 2017 Draft Guidance names WLAs as having the following physical attributes:

- A high degree of perceived naturalness;
- The lack of modern human artefacts or structures;
- Little evidence of contemporary land uses;
- Landform which is rugged, or otherwise physically challenging; and
- Remoteness and / or inaccessibility.

9. The perceptual responses evoked by these physical attributes include:

- A sense of sanctuary or solitude;
- Risk or, for some visitors, a sense of awe or anxiety;
- Perceptions that the landscape has arresting or inspiring qualities; and
- Fulfilment from the physical challenge required to penetrate into these places.

10. These physical attributes are strongly expressed, and are of sufficient extent, to evoke the full range of perceptual responses in WLAs. The term 'wild land qualities' encompasses both physical attributes and perceptual responses – reflecting that it is a combination of factors that contributes to the value and appreciation of wildness. Development located outwith WLAs may only impact on perceptual responses to a WLA (since it cannot directly change the physical attributes of a WLA).

11. SNH has produced published descriptions of each WLA which set out their particular wild land qualities. The published description of the Merrick WLA (01) forms the starting point for an assessment of impacts on the Merrick WLA (01) in this **TA:6.3**.

6.1.2 Assessing Impacts on Wild Land Technical Guidance (2017): Summary

12. The assessment follows the approach set out in the 2017 Draft Guidance, with reference to SNH's 'Description of Wild Land Areas' (2017) for Merrick WLA (01).

13. A summary of the 2017 Draft Guidance is presented below in order to establish the status of WLAs, set out the expected scope of the WLA assessment and understand the extent to which windfarms can influence WLAs.

14. The status of WLAs is clearly set out in Para 8. *'WLAs have not been identified on scenic grounds and are not a statutory designation'.*

15. There is also an acceptance that WLAs are not 'wilderness' and that human influences do form part of their baseline character. This is expressed in the response to question 4 in Annex 1:

'…they contain some evidence of past occupation, contemporary use and/or land management. This can include among other things, buildings (derelict and still used), tracks, hydro-electricity, infrastructure, and evidence of sporting and grazing management. Similarly, some development outwith WLAs can be seen from parts of the WLAs. Despite the evidence of these developments (either within or outwith a WLA), it is sufficiently light and of limited extent that the range of strength of wild land qualities remains well expressed within the WLAs.'

16. The key phrase is *'sufficiently light and of limited extent'* as this presents a measure with which to assess the existing influence of the operational windfarms on the WLA. In considering the Merrick WLA (01), there are several main operational wind farm groupings in the upland landscapes around the Merrick WLA (01), which form recent human elements/modern artefacts that influence views from the tops and outermost slopes of the Merrick WLA (01).

17. Whether a WLA assessment is needed at all is discussed in paragraph 5, with the need considered to be highly likely where the proposed Development falls wholly or partly within a WLA. In contrast, where the proposed Development falls outwith the WLA *'…the need for an assessment will be more the exception and may only be necessary where significant effects on WLA qualities are likely.'* In respect of the proposed Development, the Merrick WLA (01) has been scoped in, despite the location of the proposed Development outwith this WLA and more than 5.6 km outwith its boundary. The inclusion of the Merrick WLA (01) has been in response to concerns raised by SNH and South Ayrshire Council and demonstrates a precautionary approach to the assessment.

18. Another point made in terms of the potential scope of the assessment relates to the fact that effects on WLAs can only be experienced from WLAs and not on the area surrounding them. Paragraph 21: *"The impact of development outwith a WLA will require careful justification and consideration. A wild land assessment should only consider effects on the qualities of the WLA as they are experienced from it, not from outwith it. This is in contrast to a scenic or landscape designation, whose appreciation from outwith is part of the standard LVIA approach".*

19. The technical guidance also notes the following in Paragraph 1; *'As perceptual responses cannot be mapped, physical attributes were used to inform the preparation of the 2014 map of wild land areas.'* And in Paragraph 2: '*Development outwith WLAs may only impact on perceptual responses.*'

20. In considering the two comments above, the logical conclusion is that if a development is located outwith a WLA it cannot impact on the physical attributes, although there may be impacts on the perceptual responses.

21. The proposed Development can, therefore, only indirectly affect the perceptual responses of the Merrick WLA (01) and not directly affect the physical attributes or characteristics of the landscape within the boundary. The assessment of perceptual responses has been conducted through site work within the Merrick WLA (01).

22. The technical guidance discusses the subjectivity involved in the assessment of perceptual responses. Paragraph 23 states *'The subjective nature of wildness underlines the need for judgements on effects to be transparent and understandable, so that the underlying assumptions and reasoning can be understood by others. When evaluating the significance of effects, the subjective nature of perceptual responses should be taken into account.'* The acceptance of the subjectivity involved in the assessment of perceptual responses suggests that different assessors may conclude different findings.

23. In terms of the susceptibility of a WLA to the effects from a proposed development outwith its boundary, the following comment in paragraph 25 would suggest that this is limited. '*The protection of wild land qualities as set out in SPP, means that only in exceptional circumstances relating to scale, siting or design will development outwith WLAs have a significant effect.'*

6.2 Methodology

6.2.1 Value of Wild Land

24. Wild Land is recognised in SPP and planning policy as a nationally important mapped resource (not a designation), which should be afforded protection for its wildness qualities, but it is not statutorily protected in the way that National Parks and National Scenic Areas (NSAs) are for their scenic qualities. In applying GLVIA 3 it is necessary to attribute 'value' to the receptor ('high', 'medium' or 'low' etc), where the value attributed to nationally important designations, including NPs and NSAs is normally found to be at the upper end of the scale, or 'high'.

25. In an attempt to bring some objectivity to the attribution of value in wild land areas, it is helpful to have regard to the weighting that SPP gives to it. Whereas in SPP Table 1: Spatial Frameworks Scottish Ministers place National Parks and National Scenic Areas in the Group 1 category, Wild Land Areas are identified as a Group 2 consideration, recognising the difference in their respective values. As a matter of national policy Wild Land is less highly valued than National Scenic Areas and National Parks.

26. It is relevant to note that Scottish Ministers and SNH both envisage a situation where some development of windfarms within WLAs may be acceptable, in some circumstances. Annex 1 to SNH's publication 'Spatial Planning for Onshore Wind Turbines – Natural Heritage Considerations, Guidance (June 2015) confirms, in relation to the landscape objectives for accommodation of windfarms in the Scottish landscape, that WLAs (unlike NSAs) may be considered in a category of landscapes which can accommodate windfarms: *"Within local landscape designations and Wild land Areas, the degree of landscape protection will be less than for National Scenic Areas. In these areas, an appropriate objective may be to accommodate windfarms, rather than seek landscape protection."* It is also clear from recent decisions that Scottish Ministers do not consider windfarms and WLA to be incompatible, even when significant effects are found.

27. It is also clear from SPP that wild land areas do not benefit from a degree of protection that would necessarily rule out windfarm development close to their boundaries. Wild land policy provided by SPP principally relates to development proposals within wild land areas, or otherwise, to the consideration of wild land in development plan preparation.

28. Wild Land Areas are therefore considered to have a lower inherent baseline value, in landscape terms, than nationally designated landscapes. In the terms of GLVIA 3 and OPEN's Methodology, it is reasonable to attribute a Medium-High value to the Merrick WLA (01). An NSA would be attributed a 'High' value, by comparison. This category of value is described with reference to the factors that are considered in the determination of 'value' in OPEN's Methodology in **TA:6.1 LVIA Methodology** in the EIAR. In OPEN's approach this value is applied uniformly across the WLA resource, on the basis that all parts have the same value. This combines with individual assessments of susceptibility to inform the assessment of sensitivity at key locations tested through viewpoint assessments.

6.2.2 'Susceptibility' of Receptors within Wild Land

29. Susceptibility relates to the nature of the viewer (receptor and how susceptible they are to the potential effects of the proposed Development. Susceptibility varies across the WLA depending on the particular perceptions that are experienced and in the context of different external influences. OPEN's Methodology assesses susceptibility in relation to landscape and visual receptors through the application of the following criteria, as set out in **TA:6.1 LVIA Methodology**:

- **Nature of the viewer**: This is determined by the occupation or activity in which the viewer is engaged at the viewpoint. The most common groups of viewers considered in the visual assessment include residents, road-users, workers and walkers. Viewers whose attention is focused on the landscape - walkers, for example - are likely to have a higher susceptibility, as will residents of properties that gain views of the proposed Development. Viewers travelling in cars or on trains will tend to have a lower sensitivity as their view is transient and moving. The least sensitive viewers are usually people at their place of work as they are often less sensitive to changes in the view, although this depends on the nature of their work and the work-place they occupy.
- **Principal characteristics of the view**: The principal visual characteristics are those features which define the view. The presence and relationship of certain elements, features or patterns in the baseline view establish the degree to which the landscape in the view may accommodate the influence of the proposed Development. For example, a developed, industrial landscape where built elements and structures are already part of the view may have a lower susceptibility to change, whereas a view of an undeveloped landscape which has little or no built development may have a higher susceptibility to change.
- **Experience of the viewer**: The experience of the visual receptor relates to the extent to which their focus is directed on the view, the duration and clarity of the view and whether it is a static or transitory view. For example, if the principal outlook from a residential property is aligned directly towards the proposed Development, the experience of the visual receptor will be altered more notably than if the experience related to a glimpsed view seen at an oblique angle from a car travelling at high speed.

30. Whilst not specifically devised for assessments within wild land areas, these definitions provide some reference, but they do not seek to gauge how someone would respond to a range of attributes / perceptual responses from the point of view of experiencing wild land as a resource. SNH's 2017 Draft guidance does not provide any advice as to how this aspect of the GLVIA 3 should be accommodated. In the absence of this and because SNH's approach relies on GLVIA 3, the approach to susceptibility relies to a large extent on the perceptions recorded in the published WLA descriptions, as well as in individual assessments and susceptibility is explicitly particular to the area, whereas for LVIA it is often more generic and set out in GLVIA 3 for use everywhere. It is accepted that no people live within the Merrick WLA (01), for example, so residential properties are not a valid consideration.

6.2.3 Magnitude of Change

31. OPEN's Methodology for assessing the magnitude of change that may arise from the Development is set out in **TA:6.1 LVIA Methodology**. It is repeated here for ease of reference:

"The magnitude of change that the proposed Development will have on visual receptors is assessed in terms of the size or scale of the change as follows. A separate assessment is also made of the geographical extent of the area over which this will occur and the duration and reversibility of such changes. The basis for this assessment is made clear using evidence and professional judgement, based on the following criteria:

6.2.3.1 Size or Scale

32. This criterion relates to the size or scale of change to the visual resource that will arise as a result of the proposed Development, based on the following factors:

- The scale of the change in the view, with respect to the loss or addition of features in the view and changes in its composition.
- The distance between the visual receptor and the proposed Development. Generally, the greater the distance, the lower the magnitude of change as the proposed Development will constitute a smaller-scale component of the view.
- The proportion of the proposed Development that will be seen. Visibility may range from one blade tip to all of the turbines. Generally, the more of the proposed Development that can be seen, the higher the magnitude of change.
- The field of view available and the proportion of the view that is affected by the proposed Development. Generally, the more of a view that is affected, the higher the magnitude of change will be. If the proposed Development extends across the whole of the open part of the outlook, the magnitude of change will generally be higher as the full view will be affected. Conversely, if the proposed Development covers just a part of an open, expansive and wide view, the magnitude of change is likely to be reduced as the proposed Development will not affect the whole open part of the outlook.
- The scale and character of the context within which the proposed Development will be seen and the degree of contrast or integration of any new features with existing landscape elements, in terms of scale, form, mass, line, height, colour and texture. The scale of the landform and the patterns of the landscape, the existing land use and vegetation cover, and the degree and type of development and settlement seen in the view will be relevant. For example, a large-scale simple landform can provide a more appropriate receiving environment than a more intimate, small-scale setting where the proposed Development may result in uncomfortable scale comparisons and increase the magnitude of change.
- The position of the proposed Development in relation to the principal orientation of the view and activity of the receptor. If the proposed Development is seen in a specific directional vista, the magnitude of change will generally be greater than if it were seen in a glimpsed view at an oblique angle of view.
- The consistency of the appearance of the proposed Development. If the proposed Development appears in a similar setting and form, and from a similar angle each time it is apparent, it will appear as a single, familiar site, and this can reduce the magnitude of change. If, on the other hand, it appears from a different angle and is seen in a different form and setting, the magnitude of change is likely to be higher."

33. Magnitude of change also has regard to the geographical extent, duration and reversibility of the effect, as described in **TA:6.1 LVIA Methodology** of the EIAR.

6.2.3.2 Significance of Effects

34. As the proposed Development is located outside the boundary of Merrick WLA (01), approximately 5.8km from the Merrick WLA (01) at its closest point, it follows that it cannot have any direct effects on the physical attributes of the Merrick WLA (01). As it can be seen from locations within Merrick WLA (01), it has the potential to give rise to indirect, perceptual effects which affect how parts of the wild land area and its wildness qualities are perceived. In this way the proposed Development could affect a person's perceptual responses in different ways from different parts of Merrick WLA (01). Wildness qualities are derived from both the physical attributes and perceptual responses, as confirmed in paragraph 11 of the 2017 Draft Guidance:

"The term wild land qualities encompasses both physical attributes and perceptual responses – reflecting that it is a combination of factors that contributes to the value and appreciation of wildness."

35. Again, on the basis that the use of GLVIA 3 is required, the methodology for the assessment of visual effects is set out in **TA:6.1 LVIA Methodology** of the EIAR. The significance of the effect on each view or visual receptor is dependent on factors that are considered in the sensitivity of the receptor and the magnitude of change. These factors are combined using professional judgement to arrive at an assessment as to whether the proposed Development will have a significant, or not significant, effect on the view or visual receptor. The matrix shown in **Table 6.1** of the LVIA chapter is also used to inform the threshold of significance when combining sensitivity and magnitude of change.

36. A significant effect will occur where the combination of the variables results in the proposed Development having a defining effect on the perception of wildness attributes in a view. A not significant effect will occur where the effect of the proposed Development is not definitive, and the view continues to be characterised principally by its baseline characteristics. In this instance the proposed Development may have an influence on the view, but this influence will not be a defining or significant one, in terms of the EIA.

37. The assessment of visual effects assumes clear weather and optimum viewing conditions. This means that effects that are assessed to be significant may be not significant under different, less clear conditions. Viewing conditions and visibility tend to vary considerably and therefore the likelihood of effects resulting from the proposed Development will vary greatly dependent on the prevailing viewing conditions.

6.2.3.3 Approach to Cumulative Effects

38. Operational wind energy developments are a long-established feature of the immediate and wider upland landscape context in the area around the Merrick WLA (01), as shown in **Figure 6.2** (15km context) and **Figure 6.4** (60km). As assessed in the LVIA, operational and under-construction windfarms (**Figure 6.4**) are assumed to be part of the baseline conditions in the assessment of impacts on the Merrick WLA (01).

39. All operational and under construction sites are considered as part of the baseline conditions and where relevant, considered in the assessments, as they form a part of the baseline situation. Due to the location of the proposed Development relatively close to Mark Hill Windfarm (and other operational windfarms in the forested plateau moorlands to the west of the Merrick WLA (01) in particular) there will be potential for cumulative impacts to arise with the existing baseline of operational and under-construction windfarms.

40. The assessment of impacts on the Merrick WLA (01) considers its impact cumulatively with the existing baseline of operational and under-construction windfarms where cumulative effects occur, or where the presence of operational windfarms influences particularly wildness qualities of the WLA, such as the influence of human artefacts/modern elements on perceived wildness quality.

41. The cumulative effect of the proposed Development on the wildness qualities of the Merrick WLA with consented and application stage windfarms, in the 'consented scenario' and 'application stage scenario' has been scoped out of the assessment. Fundamentally, there are no consented or application stage windfarms within 12km of the Merrick WLA (01). This distance is greater when considering windfarms visible to the west/south-west of the Merrick WLA (01), in the direction relevant to the proposed Development. The closest consented windfarm in this west/south-west direction is Chirmorrie Windfarm, at 19.9km; and the closest application stage windfarm is Arecleoch Extension at 19.4km. The introduction of further consented and application stage windfarms will lead to further intensification of wind energy influence in the wider landscape, at long distances from the Merrick WLA (01), but will not combine with the proposed Development to have any further additional significant effects on wildness qualities, over and above those assessed for the proposed Development in addition to operational windfarms.

6.2.4 The WLA Assessment Process

42. **Table TA6.3-1** summarises the approach taken when assessing the impacts on the Merrick WLA (01) in the subsequent assessment of effects on the Merrick WLA (01) in **Section 6.3**.

Table TA6.2-1 Summary of WLA Assessment Process

Step	Approach
Step 1 - Define the WLA study area and scope of the assessment	Identify a WLA study area appropriate to the scale of development and extent of likely significant effects on the WLA.
Step 2 – Establish the baseline	Confirm the wild land qualities of the WLA study area and the nature of their contribution to the WLA. The assessment should identify which qualities are likely to be significantly affected by the proposal.
Step 3 – Assess the sensitivity of the WLA study area	Identify which wild land qualities of the WLA, including the physical attributes and perceptual responses that contribute to those qualities, are most sensitive to the type and scale of change proposed.
Step 4 – Assess the effects	Given the size or scale of change, extent and duration, describe effects on individual qualities and / or combinations of qualities, drawing out which physical attributes and perceptual responses will be affected and how, and potential for mitigation.
Step 5 – Judgement of the significance of effect	Describe the significance of residual effects on the wild land qualities of the Wild Land Area. This should take into account mitigation.

6.3 Assessment of Effects Merrick WLA

43. Wild Land effects are assessed in this section in respect of the Merrick WLA (01), applying the steps to the wild land assessment set out in SNH's 2017 Draft Guidance (summarised in **Table TA6.3-1**).

6.3.1 Step 1: Define the Study Area and Scope of the Assessment

44. SNH's 2017 Draft Guidance requires the establishment of a study area at the outset of the assessment that is appropriate to the scale of development and "extent of likely significant effects on the WLA". If SNH's 2017 Draft Guidance is followed, the study area would form one part of Merrick WLA (01) related to the known extent of likely significant effects of the proposed Development. This corresponds with the areas of highest visibility (including cumulative visibility) as represented in the ZTVs of the proposed Development in **Figure TA 6.3-3a-b**. The study area would form a relatively small part of the whole WLA and generally coincide with areas where wildness qualities are less strongly expressed largely owing to the existing visibility of operational windfarms.

45. OPEN does not think that such an approach would address the information that is required to satisfactorily assess the likely effect on Merrick WLA (01) as a whole, so it has instead applied the whole of the Merrick WLA (01) as the study area but has subdivided it into three relevant sub-areas, which are marked on **Figure TA 6.3-3a-b**, and listed below.

- Sub-area (i) 'Awful Hand' (Benyellary, Merrick, Kirrieroch Hill, Tarfessock to Shalloch ridgeline and western slopes);
- Sub-area (ii) Rugged Uplands (Ayrshire); and
- Sub-area (iii) Rugged Uplands and Interior (Dumfries and Galloway).

46. Sub-area (i) 'Awful Hand' (Benyellary, Merrick, Kirrieroch Hill, Tarfessock to Shalloch ridgeline and western slopes) is well-defined by the ridgeline that extends from Benyellary (719m), through the high point of Merrick (843m) to Shalloch on Minnoch (768m) and the western slopes that rise steeply from the plateau moorland with forest to the west. Collectively these hills have become known as 'The Range of the Awful Hand' or simply the 'Awful Hand', named due to their resemblance to the fingers of a hand. This ridgeline forms a strong physical and visual divide from the other sub-areas (ii) and (iii).

47. Sub-area (ii) Rugged Uplands (Ayrshire) is defined where the Merrick range of mountains within the WLA crosses into Ayrshire and forms slightly lower and smoother uplands, including Shiel Hill (505m) and Cornish Hill (467m) at the north boundary of the Merrick WLA (01), and incorporating the eastern slopes of Shalloch on Minnoch and Tarfessock, Macaterick (499m), Hoodens Hill (568m) and Mullwarchar (692m).

48. Sub-area (iii) Rugged Uplands and Interior (Dumfries and Galloway) is formed by the slightly higher, craggier and rugged uplands between Craiglee (531m), Craignaw (645m), Dungeon Hills and the eastern slopes of Merrick (843m) and Benyellary (719m), which surround an upland 'interior' containing several natural lochs. These lower-lying areas of the upland 'interior' containing several natural lochs are often referred to in the wild land qualities of the Merrick WLA (01) and are defined in **Figure TA 6.3-1f** as the areas with highest relative wildness to the east/south-east of the Merrick around Loch Enoch, Loch Arron, Loch Neldricken, Loch Valley, Long Loch of Glenhead and Round Loch of Glenhead.

Sub-area (i) 'Awful Hand' (Benyellary, Merrick, Kirrieroch Hill, Tarfessock to Shalloch ridgeline and western slopes

Sub-area (ii) Rugged Uplands (Ayrshire)

Sub-area (iii) Rugged Uplands and Interior (Dumfries and Galloway)

6.3.2 Step 2: Establish the Baseline

6.3.2.1 Overview – Merrick WLA (01)

49. The published description of the Merrick WLA (01) (SNH, 2017) provides the following overview of the Merrick WLA (01):

'This is the most southerly of only three WLAs to the south of the Highland Boundary Fault, all of which are relatively isolated and small in extent (Merrick is 82 km^2). It includes the central part of Forestry Commission Scotland's (FCS) Galloway Forest Park, and consists of a range of steep hills, including Merrick (a Corbett) which at 843 metres is the highest mainland hill in the south of Scotland. Together with several other hills over 600 metres in height, it forms a ridge with spurs between the tops of Shalloch on Minnoch (another Corbett) and Benyellary, collectively known as 'The Awful Hand'. To the east of this, the rocky Dungeon Hills form a slightly lower ridge to the south of the more rounded hill of Mullwharchar. The hills are predominantly open, rolling moorland, but contain some exposed and craggy peaks.

These ridges enclose a central swathe of lower-lying, undulating ground containing several natural lochs, forming a corridor that rises over 400 m from Loch Trool to Loch Enoch and providing some rugged and sometimes boggy walking. The entire WLA lies within FCS ownership and is surrounded on all sides by extensive forest plantations, predominantly of Sitka spruce.

The WLA is within 2 hours of the Central Belt. It is located 14 km to the north of Newton Stewart and the nearest major road is the A714, which lies 7.5 km to the south-west of the area at its closest point. A network of minor roads as well as un-surfaced roads, promoted as 'forest drives', provide vehicle access to the Forest Park from the south, west and north and there are several designated car parks located around the periphery, the closest of which is less than 2 km from the WLA. The Forest Park contains three visitor centres, attracting 150,000 visitors annually who generally experience the WLA as a rugged moorland backdrop, glimpsed mainly amongst trees and forestry as they move around the Forest Park. FCS has published a leaflet showing walkers trails, but the paths shown do not penetrate the WLA, whilst the Southern Upland Way skirts its southern edge. ii

The WLA lies within the Galloway Dark Sky Park, the first area in the UK to be so recognised by the International Dark Sky Association and also forms part of the Galloway Hills Regional Scenic Area (RSA), designated by Dumfries and Galloway Council.

The WLA also lies within the Merrick Kells Special Area of Conservation (SAC) and Silver Flowe-Merrick Kells Biosphere Reserve. Silver Flowe, an extensive blanket bog lying below the Dungeon Hills, is one of the least interrupted undisturbed mire systems in Europe and is also designated as a Ramsar site. Merrick Kells is the largest remaining un-afforested area of upland in Galloway and contains three habitats of European interest: blanket bog, montane acid grasslands and wet heath. Aspirations for the Biosphere Reserve include enhancing the priority habitats of native woodland and peatlands, whilst FCS is committed to creating a more gradual transition between forestry and open moorland by the introduction of moorland fringe habitat.

From the tops, the extent of the WLA is generally evident by the transition from moorland to the surrounding forest plantations. Hills to the north and east beyond the WLA have a rugged character and, despite the intervening forestry, the extent is less well defined in this direction. From the central swathe of lower-lying moorland and lochs, outward views are restricted by the adjacent hills and the limits of the WLA are much less obvious'.

6.3.2.2 Wildness Mapping – Merrick WLA (01)

50. A map of Wild Land Areas in Scotland was published by SNH in 2014 and is based on analysis of data representing the physical attributes of wild land, undertaken in February 2014. Mapping of the Merrick WLA (01) and its immediate surrounds are presented in **Figures 6.3-1a-f** of this **TA:6.3**. The maps are a snap-shot at that point in time and do not reflect changes in development or land use since the data was captured. In broad terms the approach adopted by SNH, takes each of the physical attributes in turn, identifies existing datasets that can best represent these, and separately maps each of them (**Figures 6.3-1a-d)** before combining all four of them in a single map of relative wildness (**Figure 6.3-1e)**. Areas with highest relative wildness within the Merrick WLA (01) have also been identified in a further map, **Figure 6.3-1f**, to assist with this assessment of effects on its wildness qualities.

- Perceived naturalness (**Figure 6.3-1a)** – areas of highest perceived naturalness within the Merrick WLA (01) occur along the tops of the range of the Awful Hand i.e. the Benyellary, Merrick, Kirrieroech Hill, Tarfessock to Shalloch ridgeline; as well as the upland 'interior' containing several natural lochs. Areas of lower perceived naturalness occur towards the outer edges of the Merrick WLA (01), including the western flanks, which are more influenced by surrounding less-natural land-uses such as commercial coniferous forestry.
- Rugged or challenging terrain (**Figure 6.3-1b)** – large areas of the Merrick WLA (01) do not have particularly rugged or challenging terrain, including the more rounded slopes of the western flank of the 'Awful Hand', with high levels of rugged or challenging terrain focused along the ridgelines and the more rugged hills of Sub-area (iii) such as Craignaw and the Dungeon Hills.
- Remoteness from public mechanised transport (**Figure 6.3-1c)** – large parts of the Merrick WLA (01) have high levels of remoteness, particularly the tops of the range of the Awful Hand and the upland 'interior' of the WLA (01). Areas of lower remoteness occur towards the outer edges of the Merrick WLA (01), including the western flanks, which are more accessible from, or closer to roads, or subject to influences that reduce remoteness.
- Lack of built modern artefacts **(Figure 6.3-1b)** – much of the Merrick WLA (01) has moderate levels of lack of built modern artefacts, suggesting that many of outer areas and tops of the hills are influenced to some degree by built modern artefacts in the surrounding landscape, with mainly the upland 'interior' of the WLA (01) having less influence of built modern artefacts. The influence of operational windfarm developments built since February 2014 are also not reflected in the mapping, which have increased the presence of built modern artefacts in the surrounding landscape experienced from the tops and outer flanks of the Merrick WLA.
- Relative wildness **(Figures 6.3-1e)** - combining the above attributes in a single map of relative wildness, **Figures 6.3-1e** shows areas of highest perceived wildness within the Merrick WLA (01), occurring within the upland 'interior; containing several natural lochs and along the tops of the mountain formed by the Merrick (843m). These areas of highest perceived wildness are further defined in **Figure TA6.3-1f** based on the highest categories of wildness (wildness score of 132-256). The highest levels of perceived wildness (146.7-256 wildness score) are concentrated to the east/south-east of the Merrick around Loch Enoch, Loch Arron, Loch Neldricken, Loch Valley and Lochs of Glenhead as indicated by the 'lower-lying interior area' in **Figure TA6.3-1f**. Lower perceived wildness occur towards the outer edges of the Merrick WLA (01), including the western flanks, which are more influenced by surrounding less-natural land-uses, such as commercial coniferous forestry, have less rugged/challenging terrain, are more accessible and more influenced by modern artefacts/development in the surrounding landscape outwith the WLA (01) boundary.

6.3.2.3 LVIA Baseline Information

51. SNH's published description for the Merrick WLA (01) (SNH, 2017) and the 2014 Wildness Mapping provides a valuable resource in establishing the baseline of the Merrick WLA (01). The baseline described in this assessment is also informed by site specific desk study and fieldwork undertaken within the Merrick WLA (01) as part of the specific LVIA and Wild Land Assessment for the proposed Development. The LVIA provides useful material to inform understanding of the baseline conditions and published description of the Merrick WLA (01), particularly with regards to both representative viewpoints within the WLA and the influence of operational wind energy development in the baseline landscape around the Merrick WLA (01).

6.3.2.3.1 Zone of Theoretical Visibility (ZTV)

52. ZTV mapping is used to identify receptors and the geographical extent of the Merrick WLA (01) that will gain theoretical visibility of the proposed Development, as shown in **Figure 6.3-3a** (A3 size) and **Figure 6.3-3b** (A1 size).

53. The Blade Tip ZTV shows that areas of higher visibility of the proposed Development (16-18 turbines) occur from the 'Awful Hand' of Sub-area (i) from the tops of the ridgeline formed by Benyellary, Merrick, Kirrieroech Hill, Tarfessock and Shalloch, and their western slopes. The main ridgeline between these hill summits is consistently elevated, between 600-850m AoD, affording panoramic views from the path than follows the ridge, over the mountains and interior of the Merrick WLA (01), and the extensive forested plateau landscapes to the west, in which the proposed Development is located. The western flanks of these five main hills in the range, resemble the fingers of hand oriented west-east, affording consistent views from their higher slopes, but limit visibility from the lower lying ground between each 'finger'. The proposed Development will be visible at distances of between 5.8km and 10.5km to the west from this Sub-area (i).

54. The Blade Tip ZTV (**Figure 6.3-3a-b**) also shows that there is no visibility, or negligible visibility of the proposed Development, from the whole of Sub-area (ii) and Sub-area (iii), forming the remainder of the Merrick WLA (01).

55. The proposed Development will not be visible from almost the entirety of Sub-area (ii), with just the summit of Mullwarchar, having theoretical visibility of 1-3 turbines at 12.8km (**Figure 6.37b**); and Shiel Hill on the northern edge of the WLA having theoretical visibility of 4-6 turbines. Illustrative wirelines from Mulwarchar and Shiel Hill are provided in Viewpoint 11 (**Figure 6.37a-c**) and Viewpoint A (**Figure TA6.3-5**) and illustrate limited visibility of the extremity of blade tips from these locations in Sub-area (ii). These represent isolated points with the maximum visibility of the proposed Development from Sub-area (ii) of the Merrick WLA (01), with the remainder of Sub-area (ii) having no visibility of the proposed Development (**Figure 6.3-2a-b)**.

56. The proposed Development will also not be visible from almost the entirety of Sub-area (iii), with just the summit of Craiglee and small area on the Southern Upland Way at Glenhead (between Loch Dee and Loch Trool) shown as having theoretical visibility of 1-3 turbines in the ZTV (**Figure 6.3-2a-b**). Illustrative wirelines from these locations at Craiglee and the Southern Upland Way at Glenhead are provided in Viewpoint C (**Figure TA6.3-6**) and Viewpoint D (**Figure TA6.3-7**), which illustrate limited visibility of the extremity of one blade tip. These represents isolated points with the maximum visibility of the proposed Development from Sub-area (iii) of the Merrick WLA (01), with the remainder of Sub-area (iii) having no visibility of the proposed Development (**Figure 6.3-3a-b)**.

57. A summary of the theoretical visibility of the proposed Development from the Merrick WLA (01) is provided in **Table TA6.3-2**. This shows that the theoretical visibility of the proposed Development from Sub-area (ii) is only 0.4% and from Sub-area (iii) only 0.2% of the total Merrick WLA (01), with the main area of theoretical visibility concentrated to Sub-area (i) with theoretical visibility of 23.6% of the total Merrick WLA (01).

Table TA6.3-2 Visibility of the proposed Development from Merrick WLA (01)

Sub-Area	Area (in ha)	% of total Merrick WLA (01)	Theoretically visible area in (ha)	Theoretical Visibility % of total Merrick WLA (01)
Sub-area (i) 'Awful Hand'	2210.511	27.04%	1929.129	23.60%
Sub-area (ii) Rugged Uplands (Ayrshire)	2465.567	30.16%	35.443	0.43%
Sub-area (iii) Rugged Uplands and Interior (Dumfries and Galloway)	3499.665	42.81%	19.052	0.23%
Total	**8175.743**	**100.00%**	**1983.624**	**24.26%**

6.3.2.3.2 Representative Viewpoints

58. Representative viewpoints are included in the LVIA to cover points of specific importance within the WLA and to inform the definition of the likely extent of significant effects arising from the proposed Development. Three representative viewpoints are included in the LVIA within the Merrick WLA (01), which illustrate the baseline panoramas and wildness qualities across the three sub-areas of Merrick WLA (01), as follows:

- Viewpoint 8: Merrick (**Figure 6.34**). Representative of the view experienced from sub-area (i) of the Merrick WLA (01). At 843m, the summit of Merrick is the highest hill in the Southern Uplands and is a popular destination for hillwalkers, reached via well-established paths extending from the car park at Bruce's Stones, Glentrool. A description of the baseline view is contained in the LVIA (**Section 6.10.5.7**) and is repeated below.
- Viewpoint 11: Mullwharchar (**Figure 6.37**). Representative of the view experienced from sub-area (ii) of the Merrick WLA (01). Located at the summit of Mullwarchar, on the eastern side of the WLA looking back across the WLA to the main ridgeline.
- Viewpoint 13: Shalloch on Minnoch (**Figure 6.39**). Representative of the view experienced from sub-area (i) of the Merrick WLA (01). Located near the summit of Shalloch on Minnoch, it is representative of the views experienced by hill walkers from the closest parts of the 'The Range of the Awful Hand' ridgeline, which is part of the ridgeline walk from the Merrick.

59. A combination of baseline panorama, wireline and full photomontage visualisations has been produced from these viewpoints, to meet the requirements of SNH Visual Representation of Wind Farms (Version 2.2, December 2017) as shown in EAIR Volume 2 (**Figure 6.34**, **Figure 6.37** and **Figure 6.39**). Full written analysis of visual effects has been undertaken in the LVIA for those representative viewpoints that may experience significant visual effects (Viewpoints 8 and 13), while others were scoped out during preliminary assessment if no potential for significant effects were identified (Viewpoint 11).

60. The baseline view from the Merrick is described as follows from the LVIA with reference to Viewpoint 8 (**Figure 6.34**):

'At 843m, the summit of Merrick is the highest hill in the Southern Uplands and is a popular destination for hillwalkers which lies central to the Galloway Forest Park and is a key focal point in the area. The Merrick is reached via well-established paths extended from the car park at Bruce's Stones, Glentrool. The existing view is panoramic, long distance and takes in a 360° panorama over the diverse landscapes of southern and central Galloway, including the immediate mountainous core of the Merrick range and extensive forested plateau moorlands and Ayrshire coastline. The skyline to the west, in the direction of the proposed Development has a broadly plateau appearance with the undulations combining in this distant view to result in few identifiable topographical features in the view. The view to the east is limited by the mountainous core of the Merrick range. Overall, the view is notable for the variety and diversity of landscapes visible within the panorama, comprising a complex mosaic of moorlands, forest, pastoral valleys, lochs and the sea. To the north west Beneraird, Ailsa Craig and Knockdolian form notable features in this otherwise gently undulated and expansive forested moorland plateau.

The summit is remote and exposed and sits at the heart of the Merrick WLA (01) area. The uniformity and simplicity of the land-use pattern of the moorlands to the west, comprising predominantly commercial forestry, moorland and wind turbines is evidently man-modified. Whilst these distant elements are recognisable components in the view, their influence on the sense of remoteness experienced at this location is limited by distance and the clearly apparent separation created by the intervening western slopes and foothills of the Merrick range which share the remoteness quality experienced at the summit.

Windfarm development is a notable feature of the landscape character in the surrounding landscape that is viewed in the panorama from the Merrick. Airies, Artfield Fell, Balmurrie Fell, Glenchamber, Kilgallioch, Knocknain Farm, Glen App, Arecleoch and Mark Hill are visible across the forested plateau moorland landscapes to the west and form a contiguous wind turbine influenced landscape extending across this part of the view. Mark Hill Windfarm is the closest windfarm in this direction, at 16.7km, with Kilgallioch at 19.8km and Arecloech at 25.1km. Assel Valley and Hadyard Hill are visible in the view towards Arran and Ailsa Craig to the north west. Dersalloch is visible approximately 17.8km to the north. The Windy Standard/Windy Standard Extension/Afton and Hare Hill/Hare Hill Extension/Sanquhar/Whteside Hill groupings are visible in the Southern Uplands to the east of the view, at long distances of over 22.4km to Windy Standard and 32.5km to Hare Hill'.

61. Four further illustrative viewpoints are included within the TA:6.3 to illustrate, with a wireline, the views experienced from other parts of Sub-area (ii) and Sub-area (iii) of the Merrick WLA (01). Illustrative viewpoints are chosen specifically to demonstrate a particular effect or specific issue (including restricted visibility).

- Illustrative Viewpoint 24: Benyellary (**Figure 6.50**)
- Illustrative Viewpoint A: Sheil Hill (**Figure TA6.3-4**).
- Illustrative Viewpoint B: Craiglee (**Figure TA6.3-5**).
- Illustrative Viewpoint C: Southern Upland Way, Glenhead (between Loch Dee and Loch Trool) (**Figure TA6.3-6**).

6.3.2.3.3 Wind Energy Development Baseline

62. Although there are no operational windfarms within the Merrick WLA (01), operational wind energy developments are an established feature of the upland landscape context in the area around the Merrick WLA (01), as shown in **Figure 6.2** (15km context) and **Figure 6.4** (60km). As per the assessment approach in the LVIA, operational and under-construction windfarms (**Figure 6.4**) are assumed to be part of the baseline conditions in the assessment of impacts on the Merrick WLA (01).

63. There are several main operational wind farm groupings in the upland landscapes around the Merrick WLA (01), which form recent human elements/modern artefacts that influence views from the tops and outermost slopes of the Merrick WLA (01). These windfarms have had a characterising effect on the upland landscapes of parts of the landscape that is visible from the Merrick WLA (01), whereby wind turbines have become the key characteristic that has already changed the character to a windfarm landscape in certain areas. In particular, these are the Foothills

with Forest and Windfarm LCT (17c) and the Plateau Moorlands with Forestry and Windfarms LCT (18c) both within South Ayrshire. LCT17c is located 1.9km to the north of the Merrick WLA (01) at its closest point, and LCT 18c is located 3.4km to the north of the Merrick WLA (01) (**Figure 6.5a**). Other landscapes in the area around the Merrick WLA (01), although not defined as 'with windfarm' LCTs, have windfarms as a key characteristic, including the Plateau Moorland with Forest (17a) of Dumfries and Galloway; and the Southern Uplands of Dumfries and Galloway/East Ayrshire (**Figure 6.5a**).

64. Windfarms located within a 20km main influencing distance from the Merrick WLA (01) are listed below in **Table TA6.3-3**. The baseline visual influence of these windfarms from within the Merrick WLA (01) is illustrated in the Cumulative ZTVs in **Figure 6.25d-l** of the LVIA and the wirelines for Viewpoint 8 Merrick (**Figure 6.34**); Viewpoint 11 Mullwarchar (**Figure 6.37**); Viewpoint 13 Shalloch on Minnoch (**Figure 6.39**) and Illustrative Viewpoints A-D (**Figure TA6.3-4** to **Figure TA6.3-7**).

Table TA6.3-3 Operational/Under Constructions within 20km of Merrick WLA (01)

Wind energy development	No. of Turbines	Tip Height (m)	Group	Distance from Merrick WLA (01) (km)	Landscape Character Type (LCT)
Torrs Hill	2	100	None	6.0	Foothills with Forest (18a)
Dersalloch	23	125	5	8.9	Foothills with Forest west of Doon Valley (17b)
Hadyard Hill	52	101	2	10.3	Foothills with Forest & Wind Farm (17c)
Mark Hill	28	110	1	13.0	Plateau Moorlands with Forestry & Wind Farms (18a_
Penwhapple	1	67	2	13.7	Foothills with Forest & Wind Farm (17c)
Kilgallioch	96	146.5	4	16.0	Plateau Moorland (17); Plateau Moorland with Forest (17a), Plateau Moorlands with Forestry & Wind Farms (18a)
Tralorg	8	100	2	16.8	Foothills with Forest & Wind Farm (17c)
Assel Valley	10	110	2	16.8	Foothills with Forest & Wind Farm (17c)
Windy Standard II	30	120	8	17.0	Southern Uplands (19); Southern Uplands with Forest (19a)
Maclachrieston Farm	1	54	None	17.7	Intimate Pastoral Valley (13)
Windy Standard	36	53.5	8	18.4	Southern Uplands (19); Southern Uplands with Forest (19a)
North Threave	1	53.71	None	18.6	Maybole Foothills (17d)
Airies Farm	14	136.5	6	19.6	Plateau Moorland with Forest (17a)

65. Torrs Hill are the closest wind turbines to the Merrick WLA (01), consisting two 100m blade tip height turbines, under construction 6.0km to the east of the Merrick WLA (01). Dersalloch Windfarm is the closest operational windfarm to the Merrick WLA (01), located 8.9km to the north and consisting 23 turbines at 125m tip height. The Hadyard Hill windfarm grouping, consisting Hadyard Hill, Assel Valley, Penwhapple turbine and the under construction Tralorg Windfarm is located 10.3km to the north-west of the WLA and consists of 71 turbines of heights generally between 100-110m to blade tip. Mark Hill Windfarm is located 13.0km to west of the Merrick WLA (01), consisting of 28 turbines at 110m blade tip height.

66. Kilgallioch Windfarm (96 turbines of up to 146.5m blade tip height) and Arecleoch Windfarm (60 turbines of 118m blade tip height) and are separate but closely situated operational windfarms, located approximately 16.0km and 21.4km respectively, to the west of the WLA, which effectively combine to form a large-scale windfarm landscape extending across the plateau moorlands of South Ayrshire and northern Galloway. A pattern of small-medium sized, dispersed windfarms extends this windfarm landscape to the south, consisting of Barlmurrie Fell, Artfield Fell, Airies Farm, Glenchamber and Carscreugh), which are effectively perceived to join with the pattern of larger scale windfarms in the north (Kilgallioch, Arecleoch) to create a contiguous ribbon of development and windfarm influenced landscape stretching from Carscreugh in the south to Arecleoch in the north.

67. The Southern Uplands landscapes visible to the east of the WLA are also influenced by operational windfarms, particularly formed around the Windy Standard/Windy Standard Extension/Afton grouping (17.0 km to the north-east) and the Hare Hill/Hare Hill Extension/Sanquhar and Whiteside Hill groupings (26.8 km to the north-east).

6.3.2.4 Key Attributes and Qualities of the Merrick WLA (01)

68. An assessment of effects on wild land areas requires consideration of 'the qualities' of a WLA. The published wild land description for the Merrick WLA (01) (SNH, 2017) brings the qualities unique to the Merrick WLA (01) into sharper focus, which are identified as follows in **Table TA6.3-4**.

Table TA6.3-4 Merrick WLA (01): Wild Land Qualities

WQ	Wild Land Qualities of the Merrick WLA (01)
1	A relatively small wild land area but with a strong perception of naturalness, few human artefacts and little contemporary land use.
2	A wild land area that contrasts with the adjacent Forest Park, especially in terms of human activity
3	Human elements are widely visible from the tops and outermost slopes but lower-lying areas have a much stronger sense of remoteness
4	A rugged landscape that provides a surprisingly high degree of physical challenge

69. The physical attributes and perceptual responses that contribute to these wild land qualities (WQs) are described further in the preliminary assessment in **Table TA6.3-4**.

6.3.3 Step 3: Assess the Sensitivity of the Study Area

70. The 2017 Draft Guidance requires the assessor to establish which wild land qualities, including the physical attributes and perceptual responses that contribute to those qualities, are most sensitive to the type and scale of change proposed. GLVIA methodology defines sensitivity as a combination of the value of the receptor and its susceptibility to the proposed Development. The value of the WLA as a whole was established in **Section 6.2.1** and rated as **Medium-high**.

71. As the wildness qualities vary, in terms of the strength and intensity to which they can be perceived across the WLA, so too must the susceptibility to change that is assessed for them as a result of the proposed Development.

6.3.3.1 Sub-area (i) 'Awful Hand' (Benyellary, Merrick, Kirrieroech Hill, Tarfessock to Shalloch ridgeline and western slopes)

72. Within Sub-area (i) the susceptibility is influenced by the perception of human influences which are seen from, but which lie outside the Merrick WLA (01) boundary, including extensive commercial coniferous forestry over the plateau to the immediate west and operational windfarm development to the west, north and east of the WLA. The cumulative ZTVs in **Figure 6.25d-l** of the LVIA, show that visibility of several windfarm groupings already occurs fairly extensively across Sub-area (i), as described in the wind energy baseline, particularly Dersalloch Windfarm 8.9km to the north; Hadyard Hill grouping 10.3km to the north-west; Mark Hill Windfarm 13.0km to west; Kilgallioch Windfarm 16.km to the south-west; Arecleoch Windfarm 21.4km to the south-west and Windy Standard/Windy Standard Extension/Afton grouping 17.0 km to the north-east.

73. The presence of these modern human artefacts and contemporary land-use influences in the baseline reduces the susceptibility of the perceived wildness qualities of Sub-area (i) of the WLA to Medium, which reduces the overall sensitivity of Sub-area (i). The sensitivity to change is assessed as **Medium-high** for Sub-area (ii) of the Merrick WLA (01), when combining the medium susceptibility to change of this area with the medium-high value of the Merrick WLA (01).

6.3.3.2 Sub-area (ii) Rugged Uplands (Ayrshire)

74. In relation to Sub-area (ii), all of the wildness qualities are expressed to varying degrees albeit with a notably reduced influence from external human artefacts and contemporary land uses. Within Sub-area (ii) the susceptibility

of the wildness qualities to the effects of the proposed Development is diminished by the greater distance from the proposed Development and the very limited potential for visibility of the proposed Development to occur, due to the physical and visual separation of Sub-area (ii) by the intervening upland landform of the 'Range of the Awful Hand' between Benyeallary, Merrick and Shalloch on Minnoch. The Sub-area (ii) is however, relatively less influenced by human artefacts and as a higher perceived sense of remoteness, solitude and naturalness, which increase its susceptibility to the nature of change that could occur as a result of the proposed Development. The susceptibility of Sub-area (ii) is therefore assessed as Medium-high.

75. The sensitivity to change is assessed as **Medium-high** for Sub-area (ii) of the Merrick WLA (01), when combining the Medium-high susceptibility to change of this area with the Medium-high value of the Merrick WLA (01).

6.3.3.3 Sub-area (iii) Rugged Uplands and Interior (Dumfries and Galloway)

76. In relation to Sub-area (iii) it is the case that the wildness qualities are most strongly expressed due to the lack of influence from external human artefacts and contemporary land uses, although towards the southern edge of Sub-area (iii) the influence from the forestry plantations along the boundary becomes more influential. The relative absence of these influences in the baseline increases the susceptibility of this Sub-area (iii) of the WLA, however, it is also the case that the susceptibility of the wildness qualities to the effects of the proposed Development is diminished by the very limited potential for visibility of the proposed Development to occur, due to the physical and visual separation of Sub-area (iii) by the intervening upland landform of the 'Range of the Awful Hand' between Benyeallary, Merrick and Shalloch on Minnoch. The susceptibility of Sub-area (iii) is assessed as High mainly due to the strong experience of wildness qualities experienced in this Sub-area (iii) of the WLA.

77. The sensitivity to change is assessed as **High** for Sub-area (ii) of the Merrick WLA (01), when combining the High susceptibility to change of this area with the Medium-high value of the Merrick WLA (01).

6.3.4 Step 4: Assess the Effects on Wildness Qualities

6.3.4.1 Preliminary assessment of Effects on Wildness Qualities

78. The preliminary assessment in **Table TA6.3.5** identifies which of the perceptual responses, and therefore which wild land qualities, could potentially be affected by the proposed Development. Those which are assessed as having the potential to be affected by the proposed Development are then assessed further, in full, in the subsequent assessment in **Table TA6.3-6 – TA6.3.8**. The physical attributes and perceptual responses that contribute to the four wild land qualities (WQs) identified previously are summarised in **Table TA6.3.5**. The wild land qualities experienced from the Merrick WLA (01) are derived from a combination of these physical attributes and perceptual responses, which are displayed to differing degrees within Sub-areas (i), (ii) and (iii).

Table TA6.3-5 Merrick WLA (01) Preliminary Assessment of Wildness Qualities

WQ1: A relatively small wild land area but with a strong perception of naturalness, few human artefacts and little contemporary land use		
Physical attributes and perceptual responses	**Potential to be affected by the proposed Development**	**Scoped in/out of detailed assessment (Table TA6.3-5)**
"There is a strong sense of naturalness across much of this WLA, especially within the interior, where the influence of the surrounding forest plantations is smaller."	The proposed Development will have no direct effect on the sense of naturalness and no influence on the sense of naturalness experienced from the interior (where this response is most intense), from where the proposed Development will not be visible. The proposed Development may have an indirect effect on this perceptual response experienced from Sub-area (i), where the influence of surrounding forestry plantations close to the boundary of the WLA is greater and there is visibility of the proposed Development in this plantation forest.	Scoped in for Sub-area (i), (ii) and (iii)
"The contrast between the rocky uplands and the horizontal expanse of the lower-lying areas highlights the naturalness and awe-inspiring qualities of these hills."	The proposed Development will have no direct effect on the contrast between the rocky uplands and the lower lying areas within the WLA, owing to the location of the proposed Development at some distance outwith the WLA, however it has the potential to interrupt views of the rocky upland qualities of the hills in views from the WLA.	Scoped in for Sub-area (i), (ii) and (iii)
"Most watercourses and lochs appear to be very natural in character, forming an intricate pattern of vegetation and open water that emphasises the sense of sanctuary and solitude provided by these lower-lying areas."	The low-lying lochs occur within Sub-area (iii) and form part of the low-lying interior of the Merrick WLA (01). The proposed Development will have no change to the natural character of these lochs or pattern of vegetation, since it is located at distance outside the WLA. The sense of sanctuary and solitude experienced from this interior of low-lying lochs of Sub-area (iii) have potential to be affected by the proposed Development, although there is very limited visibility of the proposed Development within this area.	Scoped out for Sub-area (i) and (ii). Scoped in for sub-area (iii).
"There are few signs of human artefacts or contemporary land use within the WLA, which is uninhabited, with no roads and very few tracks."	The proposed Development will not affect this physical attribute as it will not be located in the WLA and will therefore not affect the influence of contemporary land-use within the WLA.	Scoped out for Sub-area (i), (ii) and (iii)
"Several isolated conifer blocks, typically located close to access tracks provide the most obvious human elements, contrasting with the sense of naturalness and diminishing the arresting qualities of the backdrop of rugged hills."	The proposed Development will not affect this physical attribute as it will not be located in the WLA and has no potential to affect the perceptual response of naturalness as experienced in relation to conifer blocks within the WLA.	Scoped out for Sub-area (i), (ii) and (iii)
WQ2: A wild land area that contrasts with the adjacent Forest Park, especially in terms of human activity		
"There is a noticeable difference in terms of human activity between the WLA and the surrounding parts of the Forest Park. Whereas the Forest Park is popular as a recreational destination and contains numerous visitor facilities, the WLA is much more lightly used, with little obvious recreational provision, providing a relatively strong sense of remoteness and solitude."	The proposed Development will not affect the recreational provision or human activity levels within the WLA directly, and therefore has no potential to influence the sense of remoteness and solitude from increased human activity within the WLA.	Scoped out for Sub-area (i), (ii) and (iii)

"Looking towards the WLA, the open moorland contrasts noticeably with the forest plantations that surround the WLA, so highlighting the inspiring qualities of the rugged mountain backdrop when experienced from the surrounding Forest Park."	The proposed Development has the potential to affect the upland backdrop provided by the uplands of the WLA to surrounding plateau landscapes, however these effects are assessed on relevant viewpoints and designations in the LVIA, not within the WLA assessment. The 2017 Draft Guidance is clear that *'A wild land assessment should only consider effects on the qualities of the WLA as they are experienced from it, not from outwith it. This is in contrast to a scenic or landscape designation, whose appreciation from outwith is part of the standard LVIA approach'*. The proposed Development will not affect this perceptual response as experienced from within the WLA.	Scoped out for Sub-area (i), (ii) and (iii)
"The high level of recreational use within the Forest Park is generally screened from within the WLA and consequently has less effect on the sense of remoteness, sanctuary and solitude. There are very few obvious paths within the WLA, but the main path to the Merrick from the south is well-used and the scar that has resulted has a localised impact on the sense of naturalness and sanctuary".	The proposed Development will have no influence on the level of recreational use within the Galloway Forest Park or therefore on the recreational influences on remoteness, sanctuary and solitude experienced from the Merrick WLA (01). In areas where the recreational use within the Galloway Forest Park is screened, i.e. from within Sub-areas (ii) and (iii), the interior areas of the WLA, the proposed Development will not be visible as it is also likely to be screened by intervening landforms. The proposed Development will have no direct influence on the physical attributes of the Merrick path which have reduced the sense of naturalness and sanctuary.	Scoped out for Sub-area (i), (ii) and (iii)
WQ3: Human elements are widely visible from the tops and outermost slopes but lower-lying areas have a much stronger sense of remoteness		
"The surrounding large-scale forest plantations of mostly Sitka spruce are widely visible from the tops and from the outward-facing slopes, providing evidence of contemporary land use. Recent felling coupes are visible, revealing extraction tracks that add to the perception of activity in this landscape, further reducing the sense of remoteness and sanctuary, whilst the non-native tree species also diminish the sense of naturalness."	The proposed Development may influence the perceptual responses of this quality in views from the tops and outward-facing slopes of Sub-area (i), adding to the contemporary land-use and through further forest felling planned within the Site to accommodate the proposed turbines, indirectly adding to the existing effects of forestry activities by introducing further activity, especially during the construction phase, albeit outwith the WLA. The surrounding large-scale forest plantations within which the proposed Development is located, will not be visible from Sub-area (ii) or (iii) and therefore perceptual responses from these areas have no potential to be affected.	Scoped in for Sub-area (i). Scoped out for Sub-area (ii) and (iii).
"Operational windfarms can also be seen from the Merrick and other tops. Although most of these are too distant to impose noticeably upon the wild land qualities, they appear as obvious human artefacts and some to the west are sufficiently close or extensive to be clearly visible, so reducing the sense of sanctuary. Other than the radio mast on Bennan, which lies just beyond the WLA to the south, there are very few other human artefacts evident."	The proposed Development will be seen in the same westerly sector of the view as many of the extensive operational windfarms visible from Sub-area (i). The proposed Development will therefore not add an uncharacteristic feature in views from the Merrick and other top of Sub-area (i), however it will add further obvious human artefacts at closer proximity and larger scale than the operational windfarms, with potential to further reduce the sense of sanctuary experienced from these localised areas of Sub-area (i). There is limited visibility of the proposed development from Sub-areas (ii) and (iii) and limited potential to increase the influence of human artefacts.	Scoped in for Sub-area (i), (ii) and (iii)
"There is little visibility of human artefacts or contemporary land use from the central swathe of lower-lying moorland and lochs, which consequently has a strong sense of remoteness and sanctuary. The surrounding hills enclose these areas, so obscuring the limited extent of the WLA, which is more evident from the adjacent higher areas."	The proposed Development has limited potential to influence the strong sense of remoteness and sanctuary experienced from the lower-lying interior of moorland lochs within Sub-areas (ii) and (iii) due to the screening and enclosure provided by the elevated landform of the 'range of the awful hand' extending from Merrick to Shalloch. This landform visually and physically separates the proposed Development from the lower-lying interior of the WLA. Wild land quality of 'central swathe of lower-lying moorland and lochs' does not apply to Sub area (i).	Scoped in for Sub-area (ii) and (iii). Scoped out for Sub-area (i).
WQ4: A rugged landscape that provides a surprisingly high degree of physical challenge		
"These hills are very rugged and awe inspiring with steep slopes, areas of exposed rock and some crags, more akin to a Highland landscape, but within a lowland context. The limited number of access tracks or formal footpaths and the physical challenge required to reach parts of the interior results in a strong sense of remoteness and sanctuary."	The proposed Development will have no effect on the physical challenges that occur in the WLA.	Scoped out for Sub-area (i), (ii) and (iii)

79. In summary, the proposed Development will have potential to affect some aspects of the perceptual responses of WQ1 and WQ3, but will have no potential to effect WQ2 and WQ4, which are scoped out of further assessment. The proposed Development will have no effect on the contrasts of the Merrick Wild Area with the adjacent Forest Park, in terms of human activity (WQ2); and will have no effect on the physical challenges that occur in the Merrick WLA (01) (WQ4).

80. Wildness qualities (WQ1 and WQ3) are experienced to varying degrees across the WLA, but it clear that many of the perceptual responses of sanctuary, solitude, perceived naturalness and remoteness are most strongly expressed within the parts of Merrick WLA (01) that lie within Sub-area (iii), consisting the lower-lying and contained upland 'interior' with several natural lochs, which is often referred to in the wild land qualities of the Merrick WLA (01), and is defined in **Figure TA6.3-1f** to the east/south-east of the Merrick.

81. Wildness qualities relating to visible human elements from the tops and outermost slopes of the Merrick WLA (01) (WQ3) are most readily experienced from Sub-area (i), in areas of less relative wildness, particularly the large-scale commercial forestry plantations and windfarm landscapes to the west, and to some degree from sub-area (ii), however the lower-lying areas of Sub-area (iii) have a much stronger sense of remoteness, solitude and naturalness, as recognised throughout the published description of wildness qualities of the Merrick WLA (01) (SNH, 2017).

82. In respect of WQ1, the proposed Development has the potential to indirectly affect the perceived naturalness of Sub-area (i) of the Merrick WLA (01), however this influence occurs indirectly as a result of the proposed Development outwith the WLA, and is experienced from the tops and outward-facing western slopes, where the influence of the surrounding less-natural elements such as commercial coniferous forest plantations is greater. It will also be seen as an additional human artefact and although located well outwith the WLA boundary, there is the potential that visibility of the proposed Development will increase the influence of human artefacts on the perceptual responses experienced from Sub-area (i) WLA.

83. In respect of WQ3, the proposed Development has potential to add a further windfarm development influence as a further contemporary land use and human artefact, experienced at distances of 5.8km - 10.5km outside the Merrick WLA (01) Sub-area (i). WQ3 is more specific to the effects of human artefacts outwith the WLA boundary that are visible from the tops and outermost slopes. The proposed Development will be seen in the same westerly sector of the view as many of the extensive operational windfarms visible from Sub-area and will therefore not add an uncharacteristic feature in views from the tops of Sub-area (i), however it will add further obvious human artefacts at closer proximity and larger scale than the operational windfarms, with potential to further reduce the sense of sanctuary experienced from these localised areas of Sub-area (i).

84. The effect of the proposed Development on the perceptual responses of WQ1 and WQ3 experienced from the Merrick WLA (01) are assessed further in **Section 6.3.4.2**.

6.3.4.2 Detailed assessment of Effects on Wildness Qualities

85. A detailed assessment of the effects of the proposed Development on the perceptual responses of wildness qualities WQ1 and WQ3, which were scoped into the detailed assessment (**Table TA6.3-4**) is set out in **Table TA6.3-5** to **Table TA6.3-7** for each of Sub-areas (i), (ii) and (iii) of the Merrick WLA (01). As there is no potential for the proposed Development to affect WQ4, there is no further assessment of this wildness quality included in the assessment.

86. A key factor in assessing the significance of effects of the proposed Development on the wildness qualities of the Merrick WLA (01), is to assess the likely magnitude of change that may arise on each of the Sub-areas (i) to (iii), which is assessed in **Table TA6.3-5**, along with the resulting significance of effect on each Sub-area.

87. The three representative viewpoints presented in the LVIA and further four illustrative viewpoints presented in this **TA:6.3** are particularly relevant to informing the likely magnitude of change arising from the proposed Development on the perception of wildness qualities (WQ1 and WQ3) in each Sub-area of the Merrick WLA (01). Each sub-area contains the following viewpoints, as shown in the ZTV in **Figure TA6.3-3a-b**:

- Sub-area (i): Viewpoint 8: Merrick (**Figure 6.34**); Viewpoint 12: Shalloch on Minnoch (**Figure 6.37**) and Illustrative Viewpoint 24: Benyellary (Figure **TA6.3-4**);
- Sub-area (ii): Viewpoint 11: Mullwharchar (**Figure 6.39)**; Illustrative Viewpoint A: Sheil Hill (**Figure TA6.3-4**).
- Sub-area (iii): Illustrative Viewpoint B: Craiglee (**Figure TA6.3-5**) and Illustrative Viewpoint C: Southern Upland Way, Glenhead (**Figure TA6.3-6**).

88. The photomontage and wireline visualisations for these viewpoints, in addition to field survey assessment, has informed the following assessment of effects on the wildness qualities of the Merrick WLA (01) in **Tables TA6.3-6** to **TA6.3-7**. The perceptual response assessed for each wildness quality is highlighted in bold for each wildness quality.

Table TA6.3-6 Merrick WLA (01) Assessment of Wildness Qualities Sub-area (i) 'Awful Hand'

Sub-area (i) 'Awful Hand' 'Awful Hand' (Benyellary, Merrick, Kirrieroech Hill, Tarfessock to Shalloch ridgeline and western slopes)		
Sensitivity to change:	Medium-high	
WQ1: A relatively small wild land area but with a strong perception of naturalness, few human artefacts and little contemporary land use		
Physical attributes and perceptual responses	**Magnitude of change to baseline wildness quality**	**Significance of effect on wildness quality**
*"There is a strong **sense of naturalness** across much of this WLA, especially within the interior, where the influence of the surrounding forest plantations is smaller".*	The location of the proposed Development outwith the WLA means it will have no direct effect on the perceptual responses associated with WQ1. It will, however, have an indirect effect owing to its visibility from most of Sub-area (i), as shown in the ZTV in **Figure 6.3.3a-b**, including the main ridgeline of the 'Awful Hand' and its western flanks. Sub-area (i) does not form part of the lower-lying 'interior' of the Merrick WLA (01), where the sense of naturalness is experienced at its strongest, but instead forms the elevated ridgeline and western flank of the Merrick WLA (01), where the influence of surrounding forest plantations in the plateau to the west of the WLA is greatest. The proposed Development will therefore have an effect on Sub-area (i) where there is already an influence from surrounding, less natural, commercial forestry plantations and contemporary land uses. The technological appearance of the wind turbines is likely to contrast with the perceived naturalness of the rugged upland summits of this hill range; however the proposed turbines are located in a landscape outside the WLA, in a different part of the view than the rugged upland ridge, where the naturalness of the landscape is reduced by extensive commercial forestry plantations and other windfarms. Wind turbines also represent a visual aesthetic of green/sustainable energy, which may be perceived as having positive visual associations with the natural environment. While the proposed Development will form a closer range and larger scale windfarm influence, it is assessed as having a **Low** magnitude of change on the sense of naturalness experienced as part of WQ1 from Sub-area (i) of the Merrick WLA (01).	Sub-area (i) is assessed as **Not Significant**.
*The contrast between the rocky uplands and the horizontal expanse of the lower-lying areas highlights the **naturalness** and **awe-inspiring** qualities of these hills".*	Potential contrasts between the rocky uplands and the lower-lying 'interior' areas of the Merrick WLA (01) from the tops of Sub-area (i) are minimised by the location of the proposed Development outwith the WLA, located between 5.8km -10.5km to the west of Sub-area (i), in a different part of the view than the rocky uplands and lower-lying 'interior' areas of the WLA. These areas are visible in the baseline panoramas shown in **Figure 6.34b-c** in the view south and south-east from the Merrick summit. The proposed Development is located in a different part of the view, to the west (**Figure 6.34c**), therefore avoiding interruption of the view of the rocky uplands or lower-lying interior areas of the WLA. The magnitude of change resulting from the proposed Development on the awe-inspiring qualities of the uplands experienced as part of WQ1 of Sub-area (i) of the Merrick WLA (01) is assessed as **Low**. Fundamentally, the proposed Development will not interrupt the most valued sections of the view over the Merrick WLA (01) (**Figure 6.34b/d/e)** and awe-inspiring qualities of the hills will continue to define the perceptual responses of this quality regardless of the proposed Development located outside the WLA in the plateau to the west.	The effect of the proposed Development on the naturalness and awe-inspiring qualities of the uplands experienced from Sub-area (i) is assessed as **Not Significant**.
WQ3: Human elements are widely visible from the tops and outermost slopes but lower-lying areas have a much stronger sense of remoteness		
*"The surrounding large-scale forest plantations of mostly Sitka spruce are widely visible from the tops and from the outward-facing slopes, providing evidence of **contemporary land use**. Recent felling coupes are visible, revealing extraction tracks that add to the perception of activity in this landscape, further reducing the **sense of remoteness and***	The proposed Development may influence the perceptual responses of this quality in views from the tops and outward-facing western slopes of Sub-area (i), through the addition of the proposed turbines as further and more prominent, larger scale elements of contemporary land-use. The proposed Development is not located in the immediate periphery of the Merrick WLA (01), being located in a separate and man-modified commercial forest landscape type, that forms part of the wider landscape. The land use pattern experienced in the views west from Sub-area (i) towards the proposed Development, comprising commercial forestry, moorland and extensive windfarm landscapes, is evidently man-modified and the proposed Development does not represent a fundamental change in contemporary land-use influence to that which is already experienced in views west from Sub-area (i). Further forest felling is proposed within the Site as part of the 'with windfarm' forest design plan, to accommodate the proposed turbines,	The effect of the proposed Development on the perception of contemporary land use and sense of remoteness experienced from Sub-area (i) is assessed as **Not Significant**.

sanctuary, *whilst the non-native tree species also diminish the sense of naturalness".*	adding to the existing indirect effects of forestry activities in this commercial forest, by introducing further felling coupes, forestry activity and access tracks, especially during the construction phase, albeit at distances of 5.8km -10.5km outwith this Sub-area (i) of the WLA, which may contribute to reducing the sense of remoteness experienced from the tops of outward-facing western slopes of Sub-area (i). Fundamentally, the upland ridgelines and western slopes of Sub-area (i) will remain remote areas, even with the additional influence of the proposed Development as a further contemporary land-use and with additional visible forest felling within the Site. This sense of remoteness will be retained due to their high elevation, exposure, challenging terrain and remoteness from public mechanised access, on which the proposed Development has no influence. The magnitude of change resulting from the proposed Development on the perception of contemporary land use and sense of remoteness experienced as part of WQ3 of Sub-area (i) of the Merrick WLA (01) is assessed as **Medium-low**.	
"Operational windfarms can also be seen from the Merrick and other tops. Although most of these are too distant to impose noticeably upon the wild land qualities, they appear as obvious ***human artefacts*** *and some to the west are sufficiently close or extensive to be clearly visible, so reducing the* ***sense of sanctuary***. *Other than the radio mast on Bennan, which lies just beyond the WLA to the south, there are very few other* ***human artefacts*** *evident".*	The proposed Development will be viewed in-combination with a number of operational windfarms from the tops of the range of the Awful Hand and its western slopes of Sub-area (i). The proposed Development will therefore not add an uncharacteristic feature in views from Sub-area (i), however it will add further obvious human artefacts at closer proximity and larger scale than the visible operational windfarms, with potential to further reduce the sense of sanctuary experienced. The potential changes to the perception of this wildness quality of Sub-area (i) is affected by the existing influence of operational wind farms. There are several main operational wind farm groupings in the upland landscapes around the Merrick WLA (01), which form recent human elements/modern artefacts that influence views from the tops and outermost slopes. These windfarms have had a characterising effect on the upland landscapes of parts of the landscape that is visible from the Merrick WLA (01), particularly in views to the west and south-west (towards the proposed Development) where wind turbines have become the key characteristic that has already changed the character to a windfarm landscape in certain areas. The proposed Development will be viewed in combination with Mark Hill Windfarm and the Hadyard Hill Windfarm grouping, as well as the wider windfarm influenced landscape beyond it formed by Arecleoch, Kilgallioch, Airies, Artfield Fell, Balmurrie Fell, Glenchamber and Carscreugh, extending with increasing distance across the plateau to the south-west. This results in clustering of development near to the existing windfarm influenced landscape, within parts of the landscape that are already affected by windfarm development, relating consistently to the plateau and windfarm characteristics of the landscape. The proposed Development will form a closer range and larger scale windfarm development, increasing the influence of human artefacts perceived and potentially reducing the sense of sanctuary, however it will not redefine the character of the landscape in this direction which already features a number of operational windfarms. There is some integration with the existing Mark Hill Windfarm in terms of the fundamental similarity of the turbine form, colour and visual movement of the rotors, however there will be some contrast due to the larger scale of the proposed turbines, in comparison to other visible windfarms, amplified by their closer proximity, the wider turbine spacing and the increased lateral spread of turbines in this direction of view, which appears to further visible connections between the existing Mark Hill and Hadyard Hill Windfarms, occupying the portion of the view towards Ailsa Craig and Arran. The magnitude of change resulting from the proposed Development as an increased perception of influence of human artefacts experienced as part of WQ3 of Sub-area (i) of the Merrick WLA (01) is assessed as **Medium**. The wildness context - in which the change from the proposed Development would be experienced - is already subject to a considerable degree of diminution from other human influences. Whether the increased influence in visible human artefacts translates to a reduction in the sense of sanctuary is much more subjective, but it is assessed that the elevated ridgeline and tops of Sub-area (i) have a low sense of sanctuary due to the exposure, ruggedness and risk/challenge of accessing these locations, which certainly afford a sense of remoteness, but are not readily experienced as place of safety or sanctuary.	The effect of the proposed Development on perceived influence of human artefacts experienced from Sub-area (i) is assessed as **Significant**.

Table TA6.3-7 Merrick WLA (01) Assessment of Wildness Qualities Sub-area (ii) Rugged Hills (South Ayrshire)

Sub-area (ii) Rugged Hills (South Ayrshire)		
Sensitivity to change:	Medium-high	
WQ1: A relatively small wild land area but with a strong perception of naturalness, few human artefacts and little contemporary land use		
Physical attributes and perceptual responses	**Magnitude of change to baseline wildness quality**	**Significance of effect on wildness quality**
"There is a strong ***sense of naturalness*** *across much of this WLA, especially within the interior, where the influence of the surrounding forest plantations is smaller".*	The ZTV in **Figure 6.3.3a-b** demonstrates that the proposed Development will not be visible from almost all of Sub-area (ii), with only two very localised patches of the lowest level of theoretical visibility. One patch of theoretical visibility occurs on the peak of Mullwarchar (692m AOD) and the other on the summit of Shiel Hill. The wirelines presented in Illustrative Viewpoint A: Shiel Hill (**Figure TA6.3-4**) and Viewpoint 11 Mullwarchar (**Figure 6.37a-c** of the LVIA) show that in both cases, only the extremity of turbine blade tips will be theoretically visible from these locations at long distance (VPB: 9.9km and VP11: 12.8km). The magnitude of change resulting from the proposed Development on the perceived sense of naturalness experienced as part of WQ1 of Sub-area (ii) of the Merrick WLA (01) is assessed as **Negligible** from these isolated locations, and **None** from the majority of Sub-area (ii).	The effect of the proposed Development on the sense of naturalness experienced from Sub-area (ii) is assessed as **Not Significant**.
The contrast between the rocky uplands and the horizontal expanse of the lower-lying areas highlights the ***naturalness*** *and* ***awe-inspiring*** *qualities of these hills".*	The magnitude of change resulting from the proposed Development on the naturalness and awe-inspiring qualities of the uplands experienced as part of WQ1 of Sub-area (ii) of the Merrick WLA (01) is assessed as **Negligible** from the isolated locations at Sheil Hill (Viewpoint A) and Mullwarchar (Viewpoint 13), and **None** from the majority of Sub-area (iii).	The effect of the proposed Development on the naturalness and awe-inspiring qualities of the uplands experienced from Sub-area (ii) is assessed as **Not Significant**.
WQ3: Human elements are widely visible from the tops and outermost slopes but lower-lying areas have a much stronger sense of remoteness		

*"Operational windfarms can also be seen from the Merrick and other tops. Although most of these are too distant to impose noticeably upon the wild land qualities, they appear as obvious **human artefacts** and some to the west are sufficiently close or extensive to be clearly visible, so reducing the **sense of sanctuary**. Other than the radio mast on Bennan, which lies just beyond the WLA to the south, there are very few other **human artefacts** evident".*	The ZTV in **Figure 6.3.3a-b** demonstrates that the proposed Development will not be visible from almost all of Sub-area (ii), with only two very localised patches of the low level of theoretical visibility. One patch of theoretical visibility occurs on the peak of Mullwarchar (692m AOD) and the other on summit of Shiel Hill. The wirelines presented in Illustrative Viewpoint A: Shiel Hill (**Figure TA6.3-4**) and Viewpoint 11 Mullwarchar (**Figure 6.37a-c** of the LVIA) show that in both cases, only the extremity of turbine blade tips will be theoretically visible from these locations at long distance (VPB: 9.9km and VP11: 12.8km). The magnitude of change resulting from the proposed Development on the apparency of human artefacts and sense of sanctuary experienced as part of WQ3 of Sub-area (ii) of the Merrick WLA (01) is assessed as **Negligible** from these isolated locations, and **None** from the majority of Sub-area (ii).	The effect of the proposed Development on the apparency of human artefacts and sense of sanctuary experienced from Sub-area (ii) is assessed as **Not Significant**.

Table TA6.3-8 Merrick WLA (01) Assessment of Wildness Qualities Sub-area (iii) Rugged Uplands and Interior (Dumfries and Galloway)

Sub-area (iii) Rugged Uplands and Interior (Dumfries and Galloway)		
Sensitivity to change:	High	
WQ1: A relatively small wild land area but with a strong perception of naturalness, few human artefacts and little contemporary land use		
Physical attributes and perceptual responses	**Magnitude of change to baseline wildness quality**	**Significance of effect on wildness quality**
*"There is a strong **sense of naturalness** across much of this WLA, especially within the interior, where the influence of the surrounding forest plantations is smaller".*	The ZTV in **Figure 6.3.3a-b** demonstrates that the proposed Development will not be visible from almost all of Sub-area (iii), with only two very localised patches of the lowest level of theoretical visibility – 1 to 3 turbines. One patch of theoretical visibility occurs on the peak of Craiglee (531m AOD) and the other on the hill slopes between Loch Dee and Loch Trool, at Glenhead. The wirelines presented in Illustrative Viewpoint B (**Figure TA6.3-5**) and Viewpoint C (**Figure TA6.3-6**) show that in both cases, only the extremity of one turbine blade tip is theoretically visible from these locations at long distance (VPB: 15.9km and VPC: 15.3km). The magnitude of change resulting from the proposed Development on the perceived sense of naturalness experienced as part of WQ1 of Sub-area (iii) of the Merrick WLA (01) is assessed as **Negligible** from these isolated locations, and **None** from the majority of Sub-area (iii).	The effect of the proposed Development on the sense of naturalness, especially experienced from the interior, of Sub-area (iii) is assessed as **Not Significant**.
*The contrast between the rocky uplands and the horizontal expanse of the lower-lying areas highlights the **naturalness** and **awe-inspiring** qualities of these hills".*	The magnitude of change resulting from the proposed Development on the naturalness and awe-inspiring qualities of the uplands experienced as part of WQ1 of Sub-area (iii) of the Merrick WLA (01) is assessed as **Negligible** from the isolated locations at Craiglee (Viewpoint B) and Glenhead (Viewpoint C), and **None** from the majority of Sub-area (iii).	The effect of the proposed Development on the naturalness and awe-inspiring qualities of the uplands experienced from Sub-area (iii) is assessed as **Not Significant**.
*"Most watercourses and lochs appear to be very natural in character, forming an intricate pattern of vegetation and open water that emphasises the **sense of sanctuary and solitude** provided by these lower-lying areas".*	The ZTV in **Figure 6.3.3a-b** illustrates that there will be no visibility of the proposed Development from the lower-lying areas of watercourses and lochs within Sub-area (iii). The magnitude of change resulting from the proposed Development on the sense of sanctuary and solitude experienced from these lower-lying areas, lochs and 'interior' of Sub-area (iii) of the Merrick WLA (01) is assessed as **None**.	The effect of the proposed Development on the sense of sanctuary and solitude experienced from the lower-lying areas, lochs and 'interior' of Sub-area (iii) is assessed as **Not Significant**.
WQ3: Human elements are widely visible from the tops and outermost slopes but lower-lying areas have a much stronger sense of remoteness		
*"Operational windfarms can also be seen from the Merrick and other tops. Although most of these are too distant to impose noticeably upon the wild land qualities, they appear as obvious **human artefacts** and some to the west are sufficiently close or extensive to be clearly visible, so reducing the **sense of sanctuary**. Other than the radio mast on Bennan, which lies just beyond the WLA to the south, there are very few other **human artefacts** evident".*	The ZTV in **Figure 6.3.3a-b** demonstrates that the proposed Development will not be visible from almost all of Sub-area (iii), with only two very localised patches of the lowest level of theoretical visibility – 1 to 3 turbines. One patch of theoretical visibility occurs on the peak of Craiglee (531m AOD) and the other on the hill slopes between Loch Dee and Loch Trool, at Glenhead. The wirelines presented in Illustrative Viewpoint B (**Figure TA6.3-5**) and Viewpoint C (**Figure TA6.3-6**) show that in both cases, only the extremity of one turbine blade tip is theoretically visible from these locations at long distance (VPB: 15.9km and VPC: 15.3km). The magnitude of change resulting from the proposed Development on the apparency of human artefacts and sense of sanctuary experienced as part of WQ3 of Sub-area (iii) of the Merrick WLA (01) is assessed as **Negligible** from these isolated locations, and **None** from the majority of Sub-area (iii).	The effect of the proposed Development on the apparency of human artefacts and sense of sanctuary experienced from Sub-area (iii) is assessed as **Not Significant**.
*"There is little visibility of **human artefacts** or contemporary land use from the central swathe of lower-lying moorland and lochs, which consequently has a strong **sense of remoteness and sanctuary**. The surrounding hills enclose these areas, so obscuring the limited extent of the WLA, which is more evident from the adjacent higher areas".*	The ZTV in **Figure 6.3.3a-b** illustrates that there will be no visibility of the proposed Development from the central swathe of lower-lying moorland and lochs of Sub-area (iii), due to the screening and enclosure provided by the elevated landform of the 'range of the awful hand' extending from Merrick to Shalloch. This landform visually and physically separates the proposed Development from the lower-lying interior of the WLA. The magnitude of change resulting from the proposed Development on the apparency of human artefacts, sense of remoteness and sanctuary experienced from the central swathe of lower-lying moorland and lochs of Sub-area (iii) of the Merrick WLA (01) is assessed as **None**.	The effect of the proposed Development on the apparency of human artefacts, sense of remoteness and sanctuary experienced from the central swathe of lower-lying moorland and lochs of Sub-area (iii) is assessed as **Not Significant**.

6.3.5 Step 5: Judgement of the Significance of the Effect

89. No physical attributes that contribute to the special qualities of the Merrick WLA (01) will be changed as a result of the construction and operation of the proposed Development. The proposed Development, due to its location at some distance outside the Merrick WLA (5.8km at its closest point) can only result in indirect effects on the perception of certain wildness qualities but will not physically or directly affect the physical attributes of the Merrick WLA (01). The effect resulting from the proposed Development is assessed as significant (but of medium, rather than high magnitude) on the perception of a particular wildness quality (WQ3) that derives from changes to views west from the Merrick WLA (01) from geographically focused areas along the tops of the 'Awful Hand' and its western flanks.

90. The particular wildness quality that is effected by the proposed Development, WQ3, refers to human elements as widely visible from the tops and outermost slopes, but it is the stronger sense of remoteness of the lower-lying

interior areas of the WLA that are the particular focus of WQ3. Although the proposed Development will increase the intensity of visible human influences to the human influence landscape viewed from the 'tops and outermost slopes', it has no impact on the remoteness experienced from the lower-lying interior areas - which is the wild land quality referred to in WQ3.

91. The significant effects arising from the proposed Development are contained, in the main, to the western flank of the Merrick WLA (01) that form the range of the Awful Hand, consisting Benyellary, Merrick, Kirrieroech Hill, Tarfessock to Shalloch ridgeline; and are limited to significant effects on a particular wildness quality, WQ3, relating to increased influence of human elements in the human influence landscape visible from the tops and outermost slopes. The proposed Development will form a closer range and larger scale windfarm development, increasing the influence and scale of human artefacts perceived, however it will not redefine the character of the landscape in this direction which already features a number of operational windfarms. While there is some integration with the existing operational windfarms, in terms of the fundamental similarity of the form and visual movement, the proposed Development will introduce further contrast due to the larger scale of the proposed turbines, in comparison to other visible windfarms, amplified by their closer proximity, wider turbine spacing and lateral spread, which appears to further visible connections between existing windfarms.

92. The extent of this effect on the perception of this particular wildness quality, WQ3, would be entirely contained within Sub-area (i), from the areas of theoretical visibility shown in **Figure 6.3-3a-b** which represent approximately 23.6% of the total Merrick WLA (01). Although this is a notable portion of the WLA (01), the fact that the remaining majority of the Merrick WLA (01) will not be affected by the proposed Development is a determining factor in judging the overall significance of effect.

93. These areas which will be influenced by the proposed Development, are not devoid of other visible human influences in the landscape to the west of the WLA (01), including extensive commercial coniferous plantations and numerous operational windfarms. The wildness context - in which the change from the proposed Development would be experienced - is already subject to a considerable degree of diminution from other human influences. While the effects of the proposed Development will, in places where high visibility occurs, be significant on this particular wildness quality experienced from Sub-area (i), they coincide with a part of the Merrick WLA (01) that is relatively less sensitive - particularly on the western flank and lowers slopes where they merge with the plateau to the west – where other external factors are conspicuous and influential.

94. The effects on Sub-areas (ii) and (iii) of the Merrick WLA (01) would not be significant and the wildness qualities, that become progressively stronger in the lower-lying 'interior' of the WLA (01) to the south-east (**Figure TA6.3-1f**), would remain intact. The 'interior' locations of the Merrick WLA (01) are highly susceptible to a development of this size and form, due to the high strength of wildness that results in the range of qualities described being well expressed. Existing windfarms, forestry and other features outside the WLA (01) do not have a substantial effect on these 'interior' areas of the WLA (01) and as a result, the wildness qualities or remoteness, sense of solitude and sanctuary are expressed strongly, and with minimal influence from human artefacts and contemporary land uses.

95. The proposed Development is sensitively sited with respect to the Merrick WLA (01) and whilst it would give rise to some significant effects on wildness qualities, these would be indirect effects that would be limited in extent and would coincide with parts of the Merrick WLA (01) where the perceptual qualities of wildness are diminished to a degree by other influences. In this sense, particularly on the far western flanks of the WLA (01), it would affect some parts of the WLA that are transitional, in the sense that the wildness qualities are not as strongly expressed as they are in other locations of the WLA, particularly the 'interior'. This is notable in all of the SNH Wildness Maps (2014) shown in **Figures TA6.3-1a-f.** The proposed Development would not unacceptably harm the integrity of the Merrick WLA (01) as a whole as measured by the degree to which the overall wildness qualities would be affected.

96. Whilst the assessment undertaken considers the effects of the proposed Development on the Merrick WLA (01) by 'sub-area', the effect upon the Merrick WLA (01) as a whole, and the wildness qualities it possesses, are also taken into account. The assessment finds that although significant effects occur on a particular wildness quality (WQ3) due to increased influence of human elements visible from the range of the 'Awful Hand' and the western flanks of the Merrick WLA (01), these do not undermine the overall integrity of the Merrick WLA (01). A transition into, or out of, wild land would be experienced across this western flank of the Merrick WLA (01) regardless of the presence of the proposed Development.

97. The parts of the Merrick WLA (01) which demonstrate the strongest overall wildness qualities are limited to a smaller area within the lower-lying 'interior', principally due the influence upon wildness of the outer edges and tops of the Merrick WLA (01) from existing windfarm developments and other adjacent land uses outwith its boundary. The assessment has unequivocally found that the proposed Development will have no effects on the wildness qualities experienced from within this 'interior' area of the Merrick WLA as it is entirely not visible, due to the visual and physical separation and containment provided by the mountains of the intervening 'Awful Hand'.

98. The construction and operation of the proposed Development will result in a relatively low change to the strong overall character of the Merrick WLA, with its varied and distinctive landscapes continuing to define its overall character. It is not the overall experience of wildness of the Merrick WLA (01) that will be changed, but a specific perceptual aspect of wildness where there are interactions between external human artefacts and the Merrick WLA (01). These effects arise as a result of change on a particular wildness quality, not a change to all of the wildness qualities, since the majority of perceptual responses to wildness will continue to contribute to the wildness quality of the Merrick WLA (01) and will not be changed or affected in the same way. The perception of most of the other wildness qualities will not be significantly affected by the construction and operation of the proposed Development. The assessment does not find that the proposed Development would have an effect so severe or widespread as to undermine the integrity of the Merrick WLA (01) as a whole.

Legend

- Application Boundary
- Clauchrie Wind Turbines
- 5 km Radii
- Merrick Wild Land Area

Perceived naturalness (2014)

- 37.34 - 69.21
- 69.22 - 97.18
- 97.19 - 121.71
- 121.72 - 143.24
- 143.25 - 162.13
- 162.14 - 178.7
- 178.71 - 193.24
- 193.25 - 206
- 206.01 - 220.54
- 220.55 - 237.11
- 237.12 - 256

230000 240000 590000 580000

Sub-area (i)

Sub-area (ii)

Sub-area (iii)

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1:75,000 Scale @ A3

0 2 4 Km

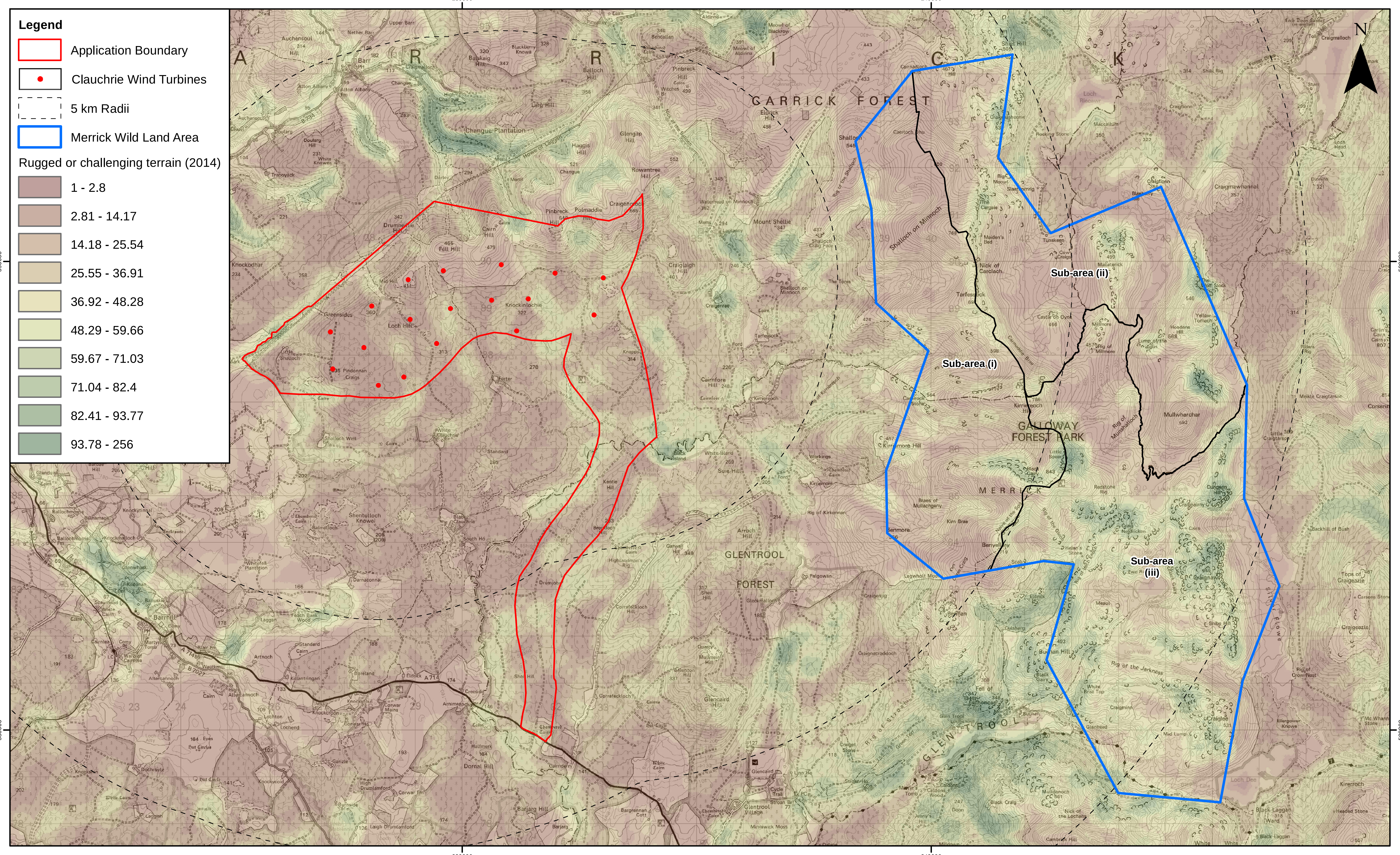
Clauchrie Windfarm

Technical Appendix

Perceived naturalness

Drg No	EDI_1263_EIAR
Rev	A
Date	14/11/19
Figure	TA6.3-1a

Datum: OSGB36 Projection: TM



Rev	Date	By	Comment
A	14/11/19	JM	First Issue.

SCOTTISHPOWER RENEWABLES

1:75,000 Scale @ A3

0 2 4 Km

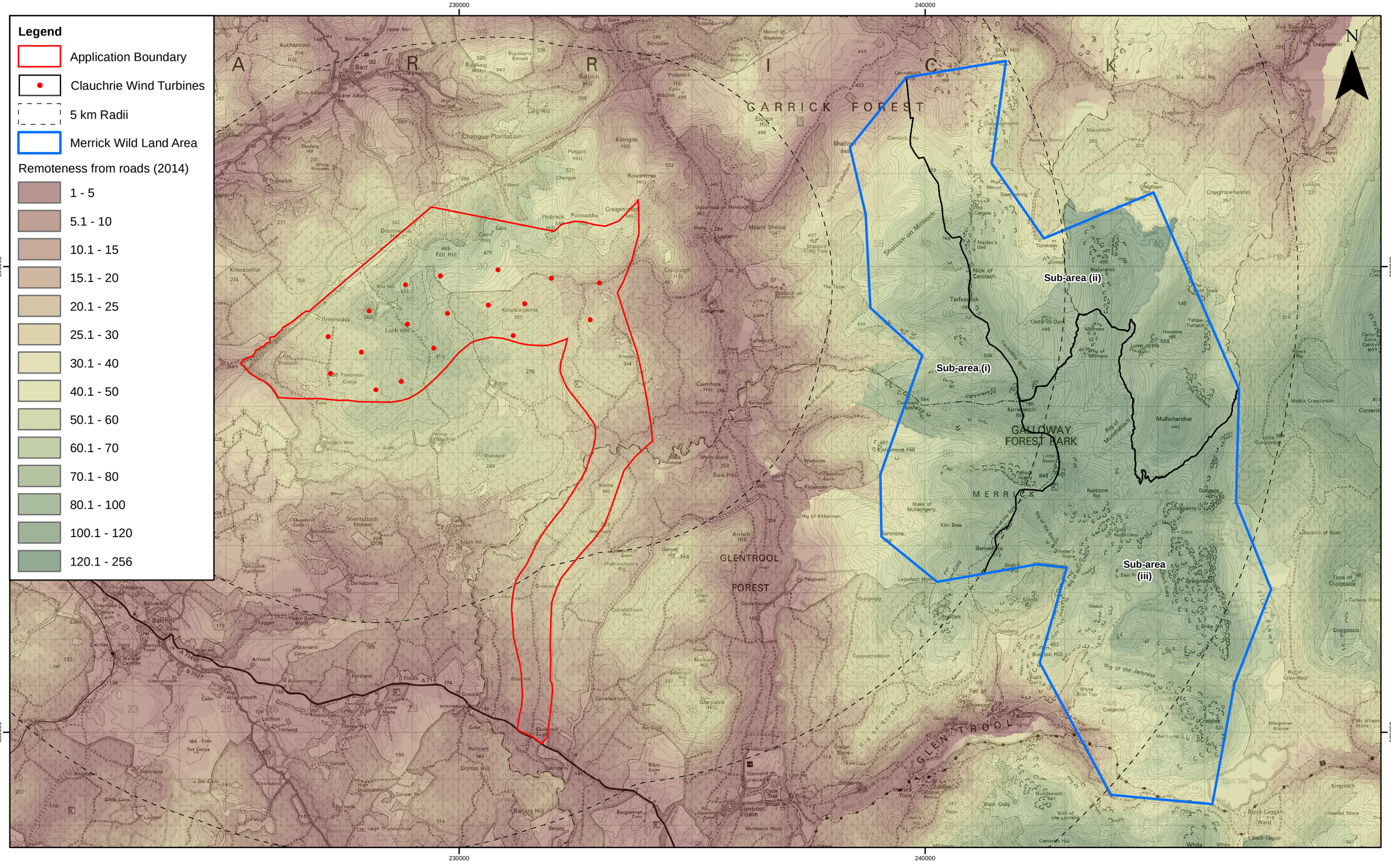
Clauchrie Windfarm

Technical Appendix

Rugged or Challenging Terrain

Drg No	EDI_1263_EIAR
Rev	A
Date	14/11/19
Figure	TA6.3-1b

Datum: OSGB36
Projection: TM



SCOTTISHPOWER RENEWABLES

Rev	Date	By	Comment
A	14/11/19	JM	First Issue.

1:75,000
Scale @ A3

0 2 4 Km

Clauchrie Windfarm

Technical Appendix

Remoteness from public mechanised access

Drg No	EDI_1263_EIAR
Rev	A
Date	14/11/19
Figure	TA6.3-1c

Datum: OSGB36
Projection: TM

220000 230000 240000

590000 580000

Legend

- Application Boundary
- Clauchrie Wind Turbines
- 5 km Radii
- Merrick Wild Land Area

Cumulative Windfarm Status

- Operational

Lack of built artefacts (2014)

- 1 - 22.63
- 22.64 - 39.5
- 39.51 - 52.64
- 52.65 - 62.89
- 62.9 - 70.88
- 70.89 - 77.1
- 77.11 - 85.09
- 85.1 - 95.34
- 95.35 - 108.48
- 108.49 - 125.35
- 125.36 - 146.98
- 146.99 - 174.73
- 174.74 - 210.33
- 210.34 - 256

Hadyard Hill

Mark Hill

Sub-area (i)

Sub-area (ii)

Sub-area (iii)

ARRICK

GARRICK FOREST

GLENTROOL FOREST

GALLOWAY FOREST PARK

MERRICK

GLENTROOL

N

220000 230000 240000

590000 580000

SCOTTISHPOWER RENEWABLES

Rev	Date	By	Comment
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1:75,000 Scale @ A3

0 2 4 Km

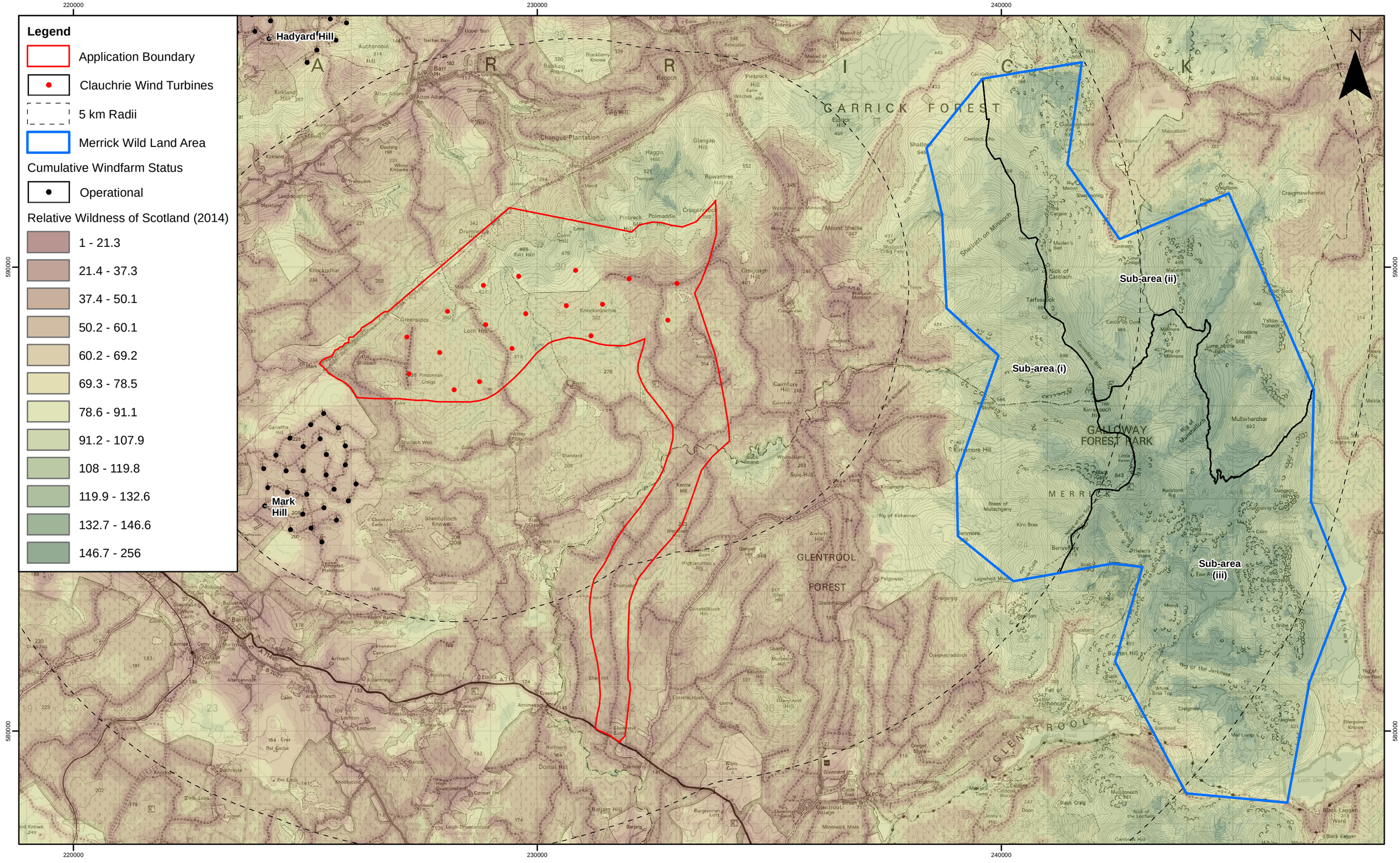
Clauchrie Windfarm

Technical Appendix

Lack of built modern artefacts

Drg No	EDI_1263_EIAR
Rev	A
Date	14/11/19
Figure	TA6.3-1d

Datum: OSGB36
Projection: TM



Legend

🟥	Application Boundary
●	Clauchrie Wind Turbines
⬚	5 km Radii
🟦	Merrick Wild Land Area

Cumulative Windfarm Status

●	Operational

Relative Wildness of Scotland (2014)

■	1 - 21.3
■	21.4 - 37.3
■	37.4 - 50.1
■	50.2 - 60.1
■	60.2 - 69.2
■	69.3 - 78.5
■	78.6 - 91.1
■	91.2 - 107.9
■	108 - 119.8
■	119.9 - 132.6
■	132.7 - 146.6
■	146.7 - 256

SCOTTISHPOWER RENEWABLES

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1:75,000
Scale @ A3

0 2 4 Km

Clauchrie Windfarm

Technical Appendix
Relative wildness

Drg No	EDI_1263_EIAR	
Rev	A	Datum: OSGB36 Projection: TM
Date	14/11/19	
Figure	TA6.3-1e	

220000 230000 240000

590000 580000

Legend

- Application Boundary
- Clauchrie Wind Turbines
- 5 km Radii
- Merrick Wild Land Area
- Lower Lying 'Interior' Area

Cumulative Windfarm Status

- Operational

Relative Wildness of Scotland (2014)

- 132 - 146.6
- 146.7 - 256

Hadyard Hill

Mark Hill

Arecleoch

Changue Plantation

GARRICK FOREST

GLENTROOL FOREST

GALLOWAY FOREST PARK

MERRICK

Sub-area (i)

Sub-area (ii)

Sub-area (iii)

N

SCOTTISHPOWER RENEWABLES				1:75,000 Scale @ A3	**Clauchrie Windfarm** Technical Appendix Highest Relative wildness - Merrick WLA
				0 2 4 Km	
A	15/11/19	JM	First Issue.	© Crown Copyright 2019. All rights reserved. Ordnance Survey Licence 0100031673. Contains public sector information licensed under the terms of the Open Government Licence v.3.0.	**Drg No** EDI_1263_EIAR
Rev	**Date**	**By**	**Comment**		**Rev** A **Date** 15/11/19 **Figure** TA6.3-1f Datum: OSGB36 Projection: TM

220000 230000 240000

590000 580000

Legend

- Application Boundary
- Clauchrie Wind Turbines
- 5 km Radii
- Merrick Wild Land Area
- Lower Lying 'Interior' Area

Cumulative Windfarm Status

- Operational

Elevation (m AOD)

- 1 - 50
- 51 - 100
- 101 - 150
- 151 - 200
- 201 - 250
- 251 - 300
- 301 - 350
- 351 - 400
- 401 - 450
- 451 - 500
- 501 - 550
- 551 - 600
- 601 - 650
- 651 - 700
- 701 - 750
- Above 750

Hadyard Hill
Barr
Nick of the Balloch
Stinchar Valley
Mark Hill
Barrhill
Sub-area (i)
Sub-area (ii)
Sub-area (iii)
GARRICK FOREST
GLENTROOL FOREST
GALLOWAY FOREST PARK
MERRICK
GLEN TROOL
N

Rev	Date	By	Comment
A	14/11/19	JM	First Issue.

1:75,000 Scale @ A3

0 2 4 Km

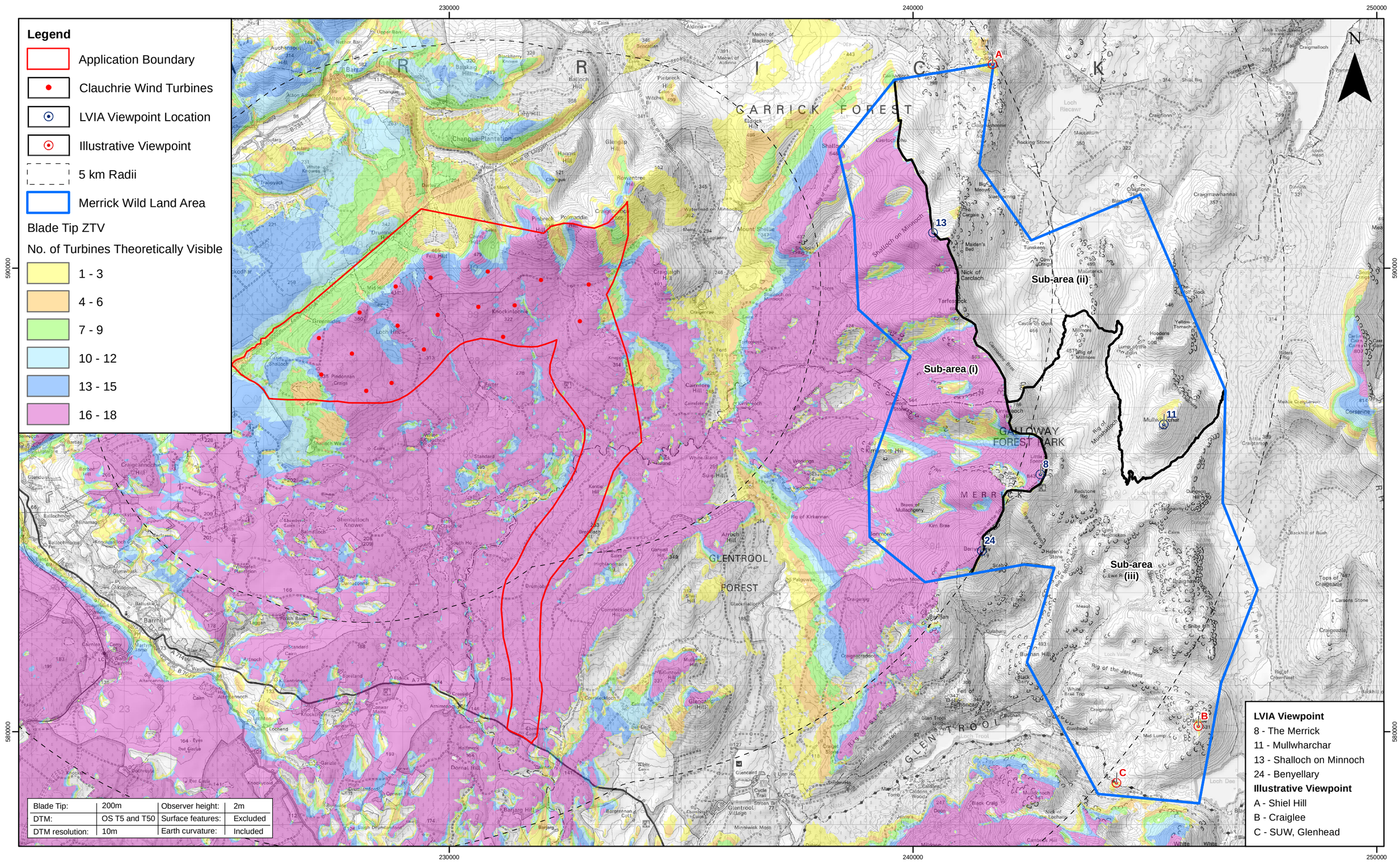
Clauchrie Windfarm

Technical Appendix

Landform

Drg No	EDI_1263_EIAR
Rev	A
Date	14/11/19
Figure	TA6.3-2

Datum: OSGB36
Projection: TM



SCOTTISHPOWER RENEWABLES

Rev	Date	By	Comment
B	10/12/19	JM	Second Issue.
A	04/11/19	JM	First Issue.

1:75,000 Scale @ A3

0 2 4 Km

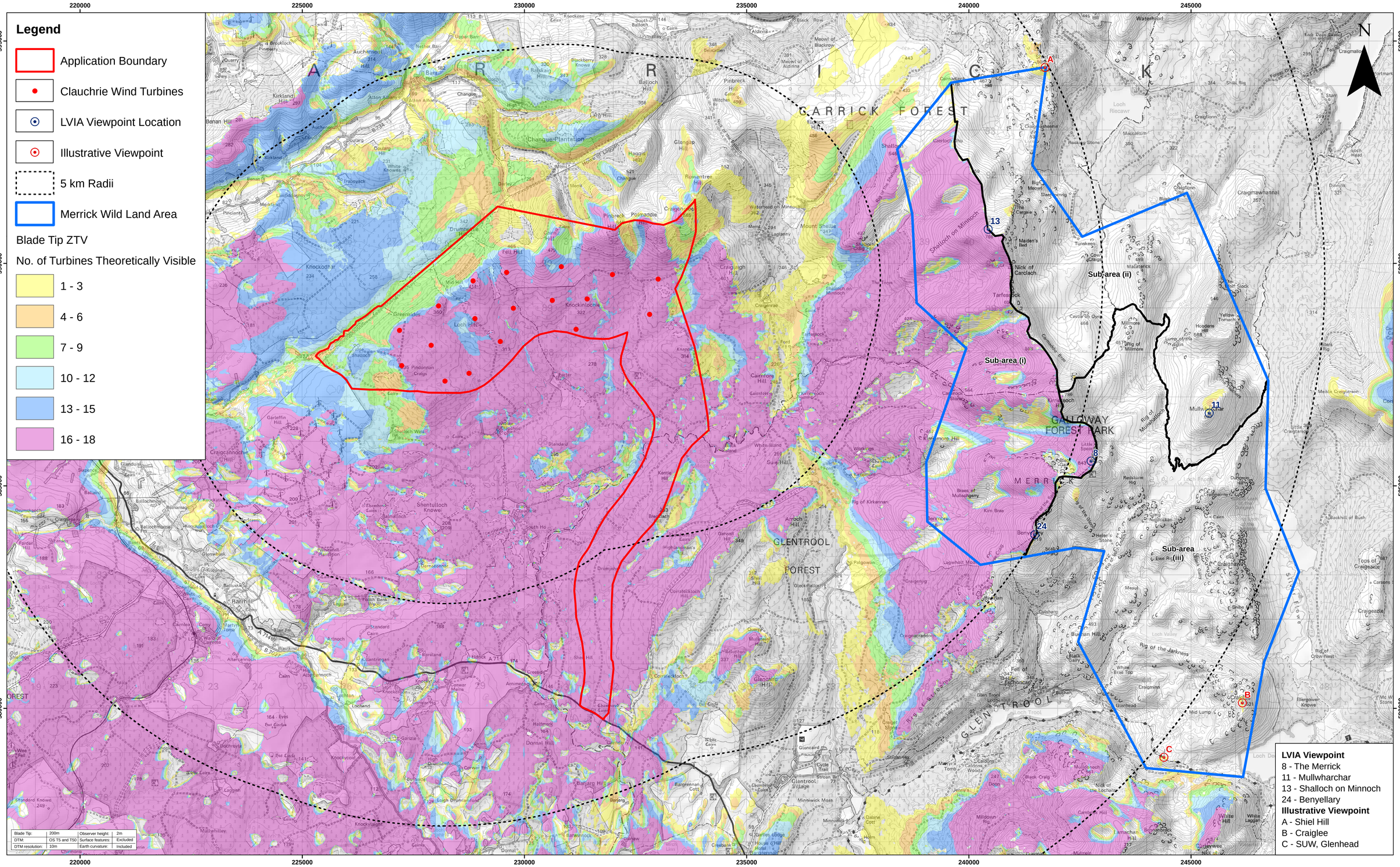
Clauchrie Windfarm

Technical Appendix

Blade Tip ZTV with Merrick Wild Land Area

Drg No	EDI_1263_EIAR
Rev	B
Date	10/12/19
Figure	TA6.3-3a

Datum: OSGB36
Projection: TM



Rev	Date	By	Comment
B	10/12/19	JM	Second Issue.
A	22/11/19	JM	First Issue.

1:40,000
Scale @ A1

0 1 2 4 Km

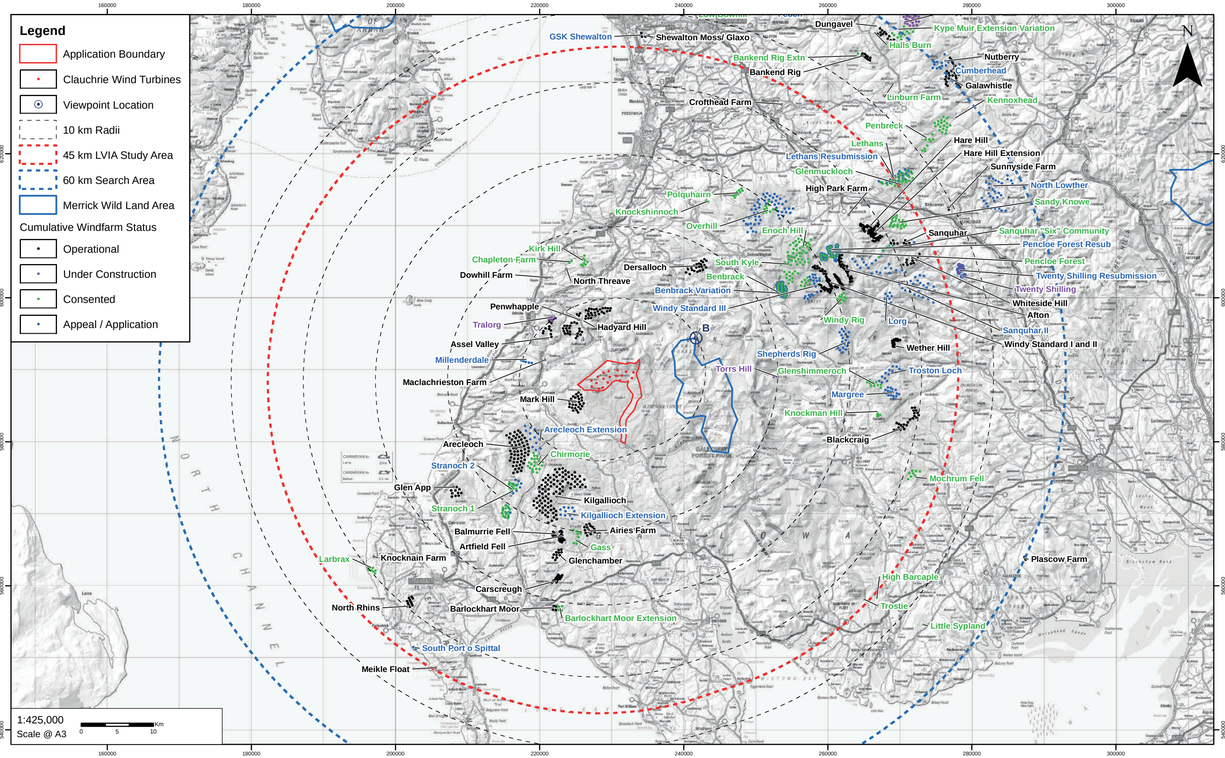
Clauchrie Windfarm

Technical Appendix

Blade Tip ZTV with Merrick Wild Land Area

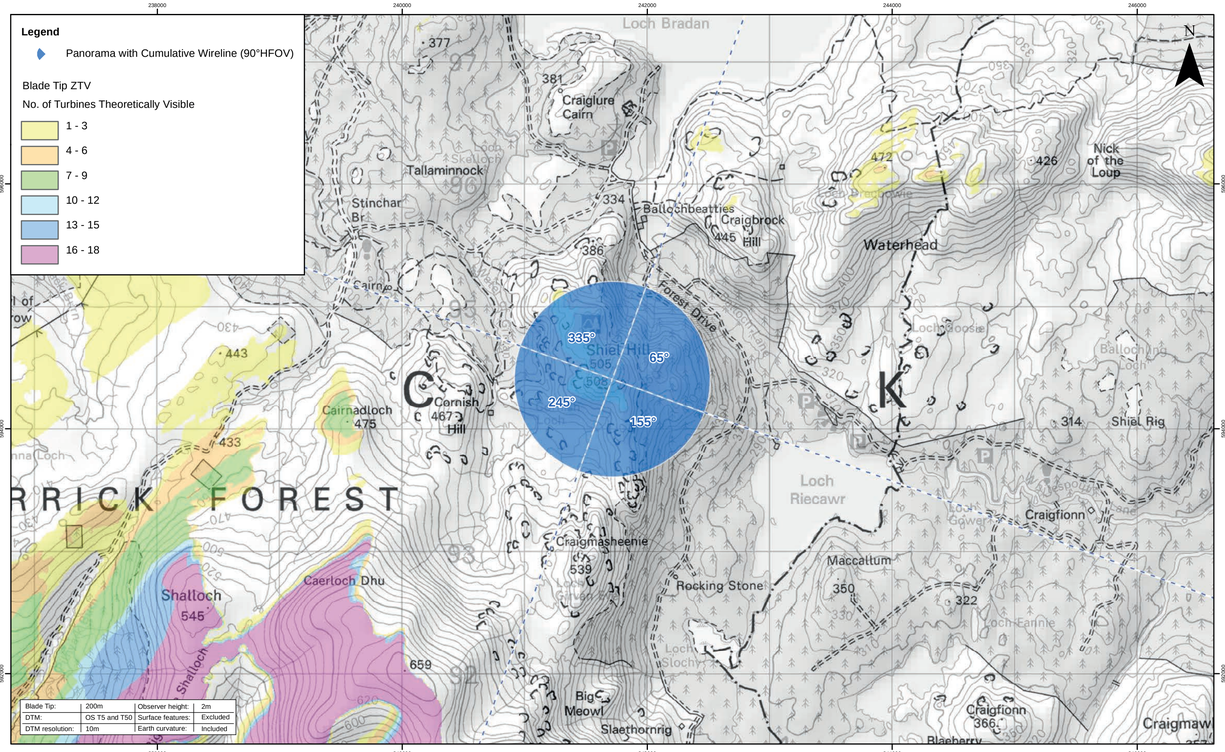
Drg No	EDI_1263_EIAR
Rev	B
Date	10/12/19
Figure	TA6.3-3b

Datum: OSGB36
Projection: TM



Note:

1. **Cumulative Windfarms:** Full 60 km Search Area is not being shown on this figure. For full extent of 60 km Search Area and including Scoping sites see Figure 6.23.



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					© Crown Copyright 2019. All rights reserved. Ordnance Survey Licence 010003167. Contains OS data © Crown copyright and database right (2019)
A	14/11/19	JM	First Issue.		
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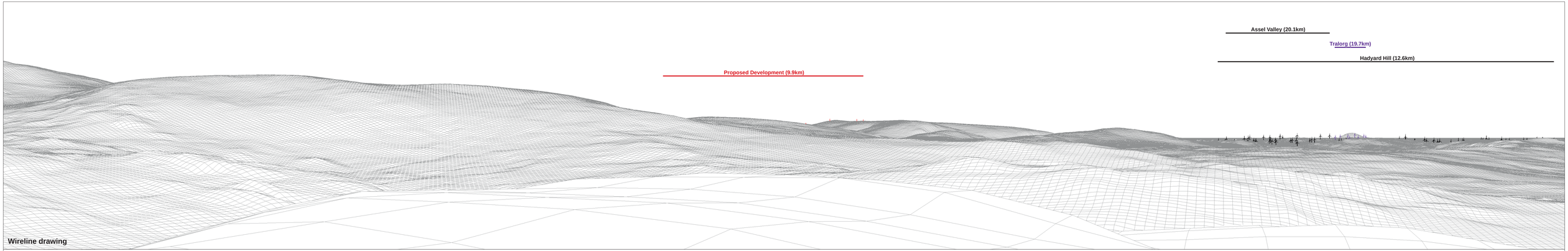
SCOTTISHPOWER RENEWABLES

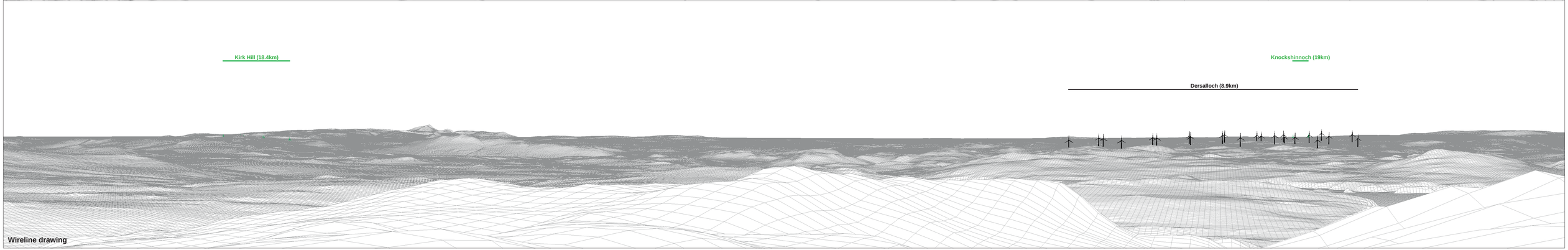
Clauchrie Windfarm

Technical Appendix

Illustrative Viewpoint A: Shiel Hill

Drg No	EDI_1263_EIAR		
Rev	A	Datum:	OSGB36
Date	14/11/19	Projection:	TM
Figure	TA6.3.4a		

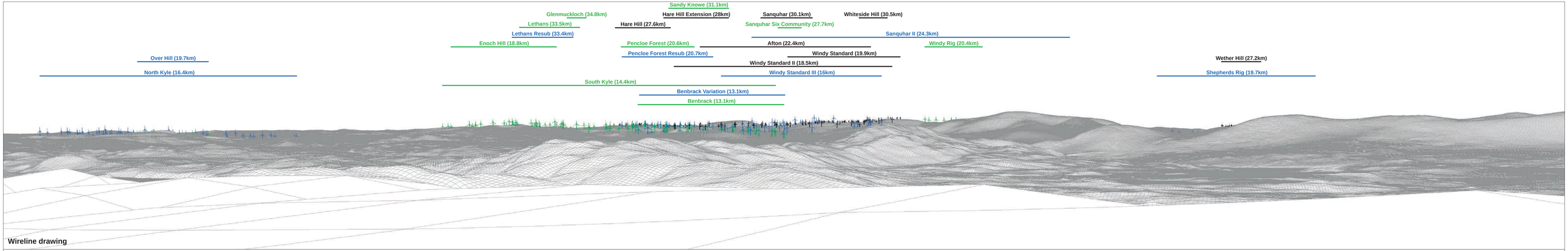


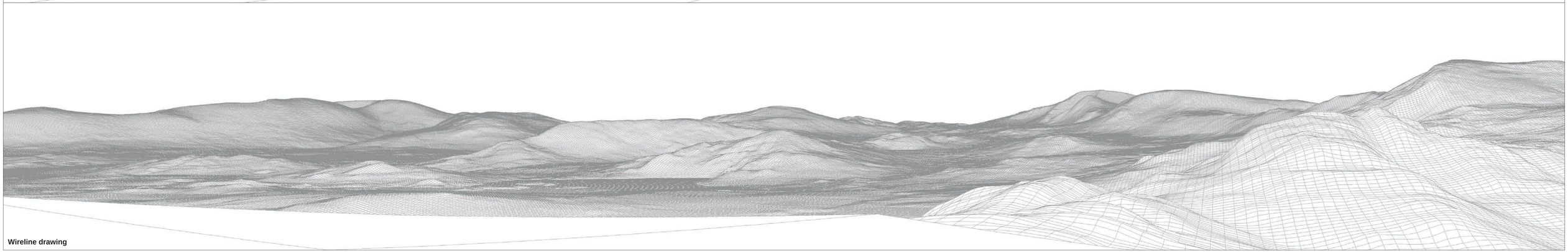


OS reference: 241715 E 594404 N
Eye level: 509.04 m AOD
Direction of view: 245° - 335°
Nearest turbine: 9.921 km

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

Figure: TA6.3-4
Illustrative Viewpoint A: Shiel Hill (Wireline)

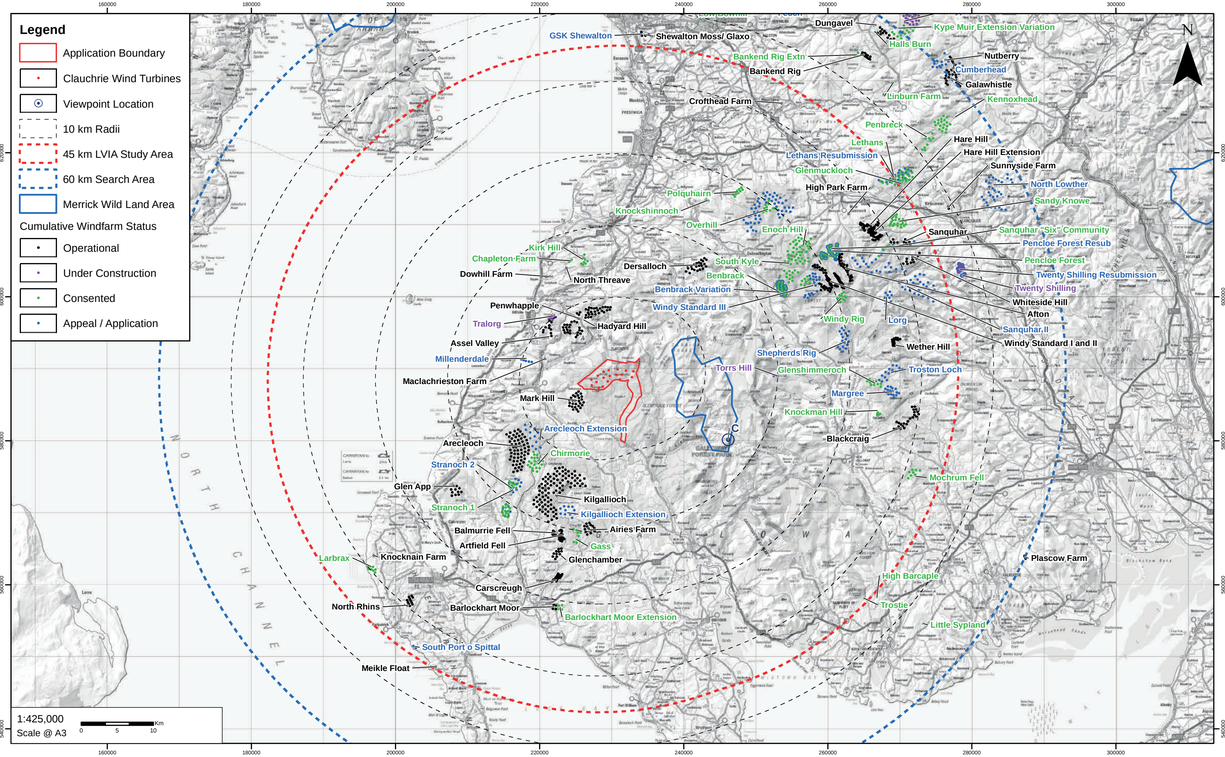




OS reference: 241715 E 594404 N
Eye level: 509.04 m AOD
Direction of view: 65° - 155°
Nearest turbine: 9.921 km

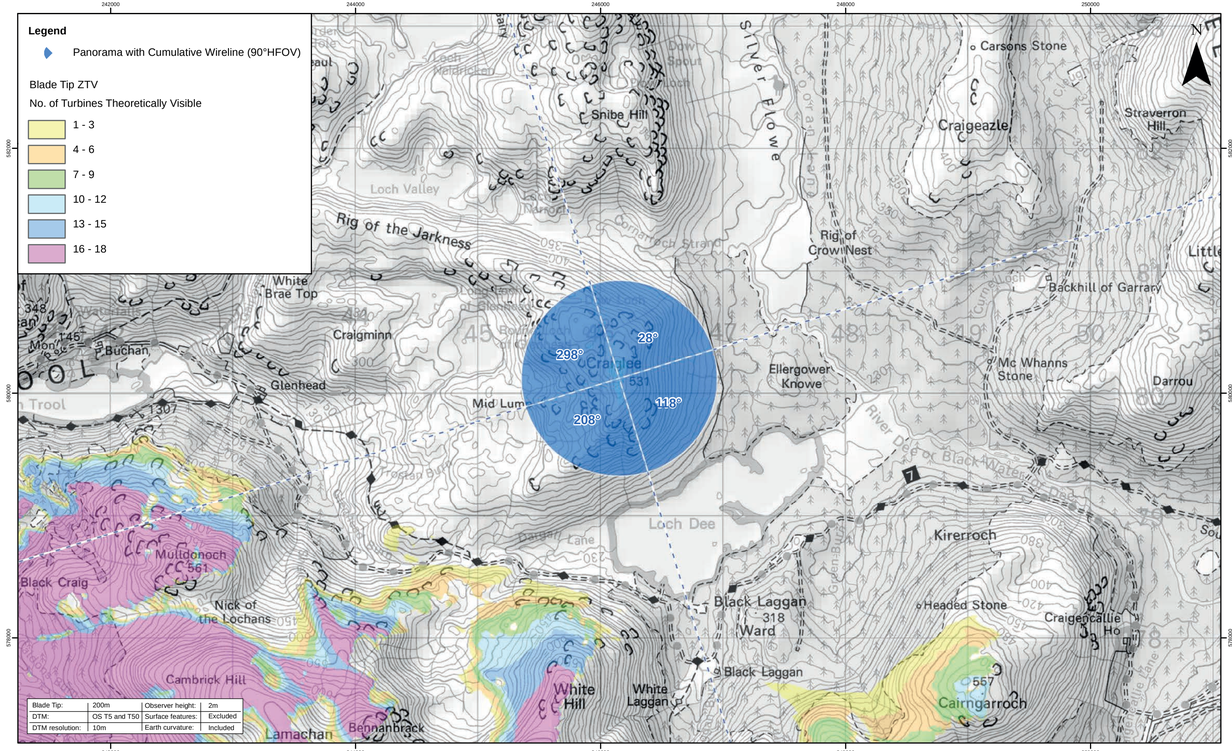
Horizontal field of view: 90° (cylindrical projection)
Principal distance 522 mm

Figure: TA6.3-4
Illustrative Viewpoint A: Shiel Hill (Wireline)



Note:

1. **Cumulative Windfarms:** Full 60 km Search Area is not being shown on this figure. For full extent of 60 km Search Area and including Scoping sites see Figure 6.23.



				1:25,000 Scale @ A3	0 0.5 1 Km
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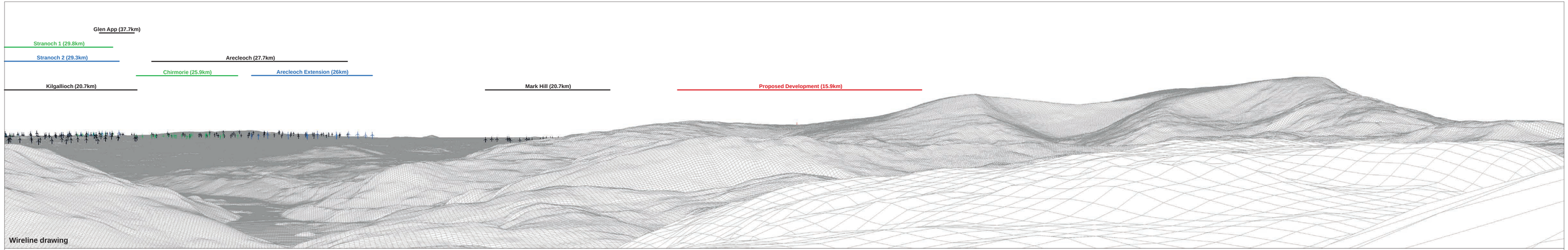
SCOTTISHPOWER RENEWABLES

Clauchrie Windfarm

Technical Appendix

Illustrative Viewpoint B: Craiglee

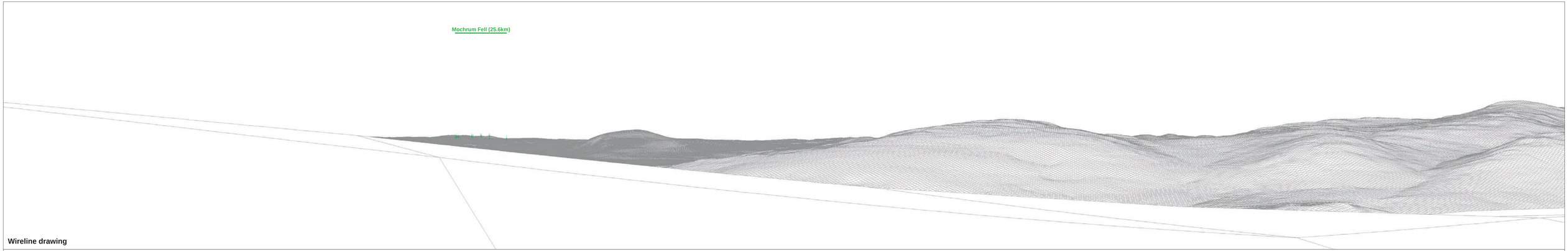
Drg No	EDI_1263_EIAR		
Rev	A	Datum:	OSGB36
Date	14/11/19	Projection:	TM
Figure	TA6.3.5a		

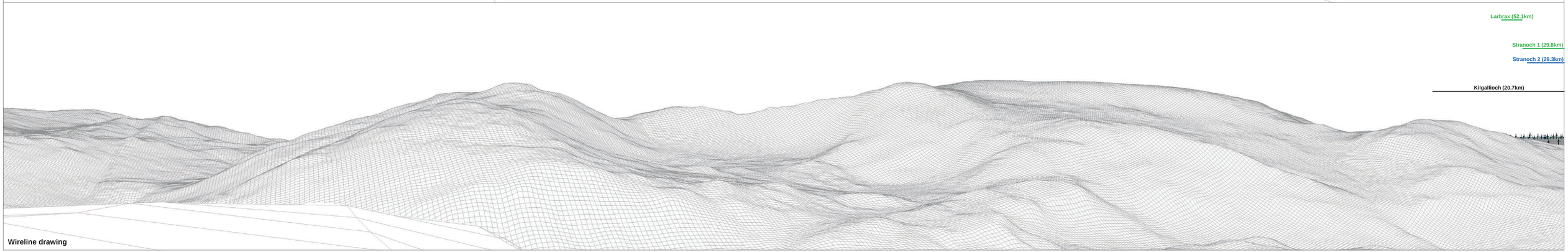


OS reference: 246153 E 580121 N
Eye level: 528.2 m AOD
Direction of view: 298° - 28°
Nearest turbine: 15.941 km

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

Figure: TA6.3-5
Illustrative Viewpoint B: Craiglee (Wireline)

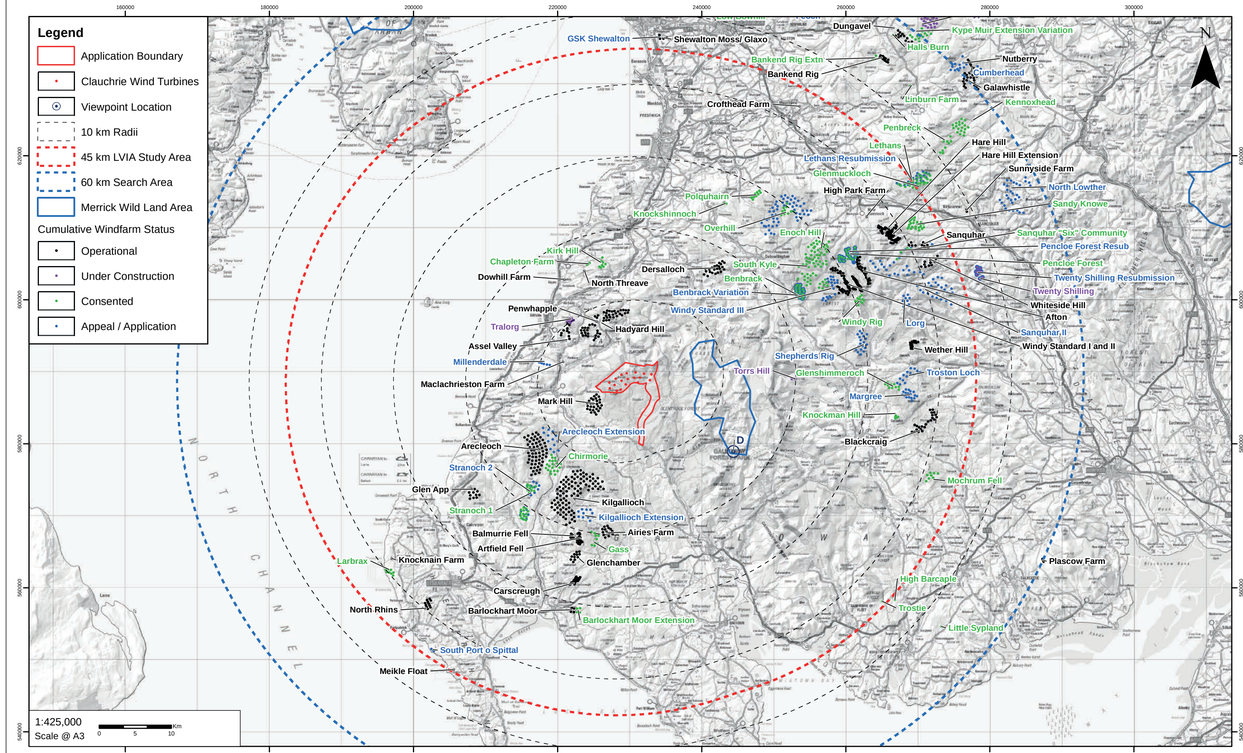




OS reference: 246153 E 580121 N
Eye level: 528.2 m AOD
Direction of view: 118° - 208°
Nearest turbine: 15.941 km

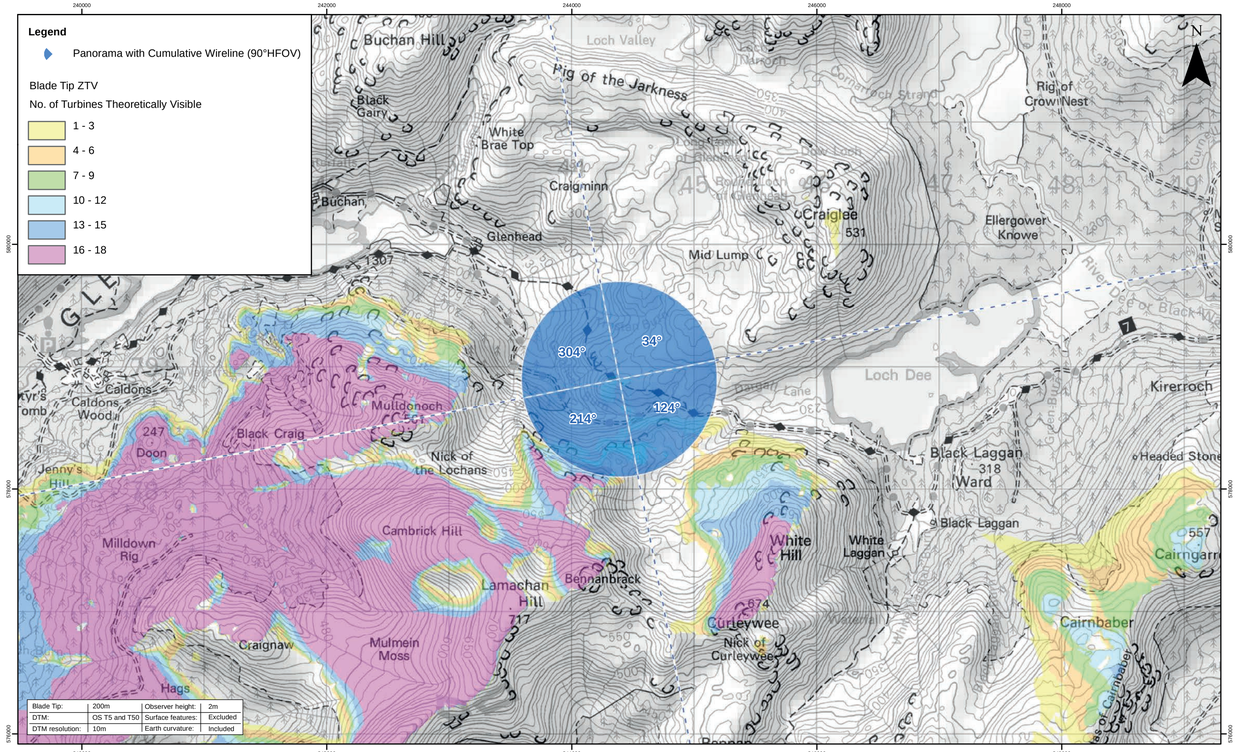
Horizontal field of view: 90° (cylindrical projection)
Principal distance 522 mm

Figure: TA6.3-5
Illustrative Viewpoint B: Craiglee (Wireline)



Note:

1. **Cumulative Windfarms:** Full 60 km Search Area is not being shown on this figure. For full extent of 60 km Search Area and including Scoping sites see Figure 6.23.



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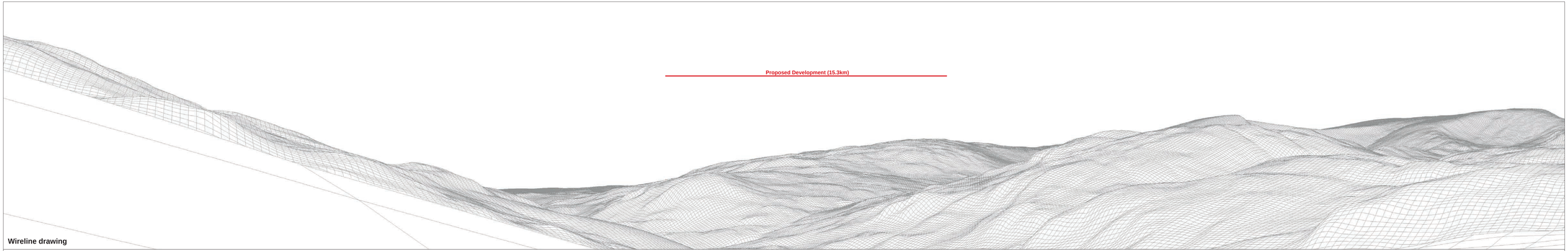
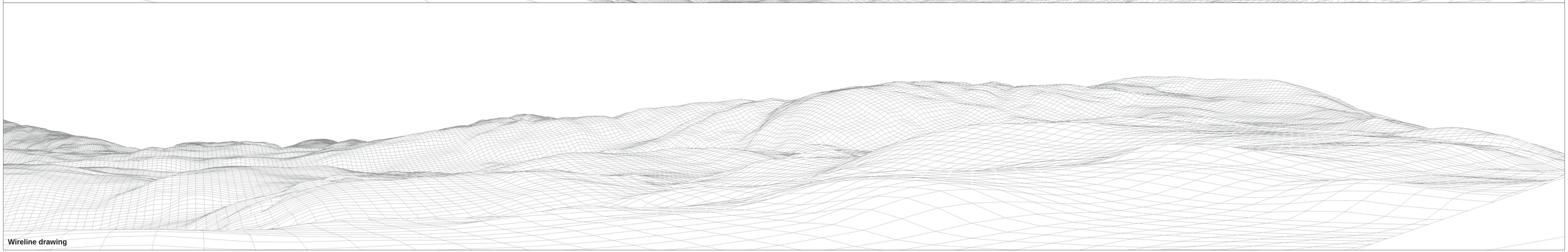
Clauchrie Windfarm

Technical Appendix

Illustrative Viewpoint C: SUW, Glenhead (between Loch Dee and Loch Trool)

Drg No	EDI_1263_EIAR
Rev	A
Date	14/11/19
Figure	TA6.3.6a
Datum:	OSGB36
Projection:	TM

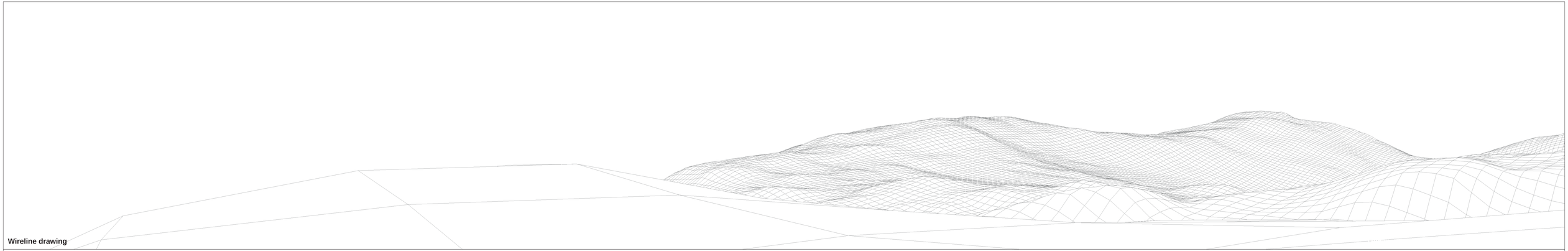


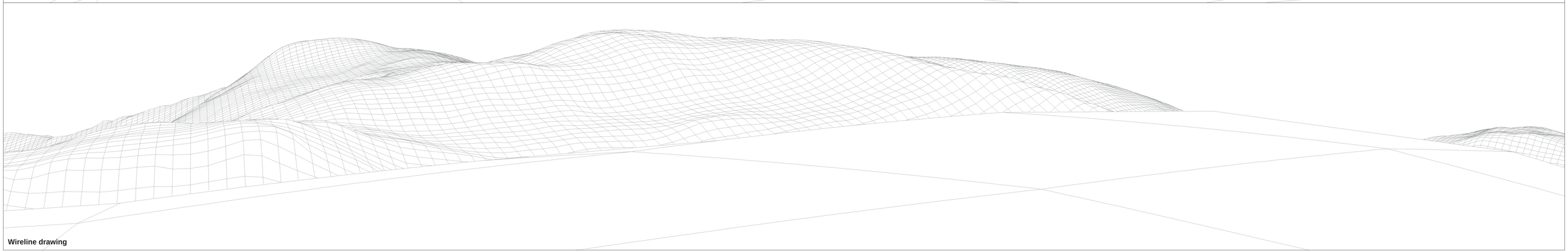


OS reference: 244388 E 578897 N
Eye level: 279.86 m AOD
Direction of view: 304° - 34°
Nearest turbine: 15.266 km

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

Figure: TA6.3-6
Illustrative Viewpoint C: Southern Upland Way, Glenhead (between Loch Dee and Loch Trool)





OS reference: 244388 E 578897 N
Eye level: 279.86 m AOD
Direction of view: 124° - 214°
Nearest turbine: 15.266 km

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

Figure: TA6.3-6
Illustrative Viewpoint C: Southern Upland Way, Glenhead (between Loch Dee and Loch Trool)

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