



Technical Appendix 5.4

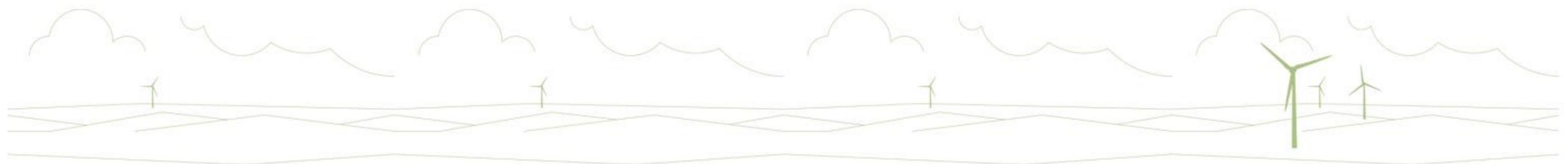
Wild Land Assessment

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1 WILD LAND ASSESSMENT

1.1 Introduction

1. The purpose of this Technical Appendix is to provide an assessment of the potential effects of the proposed Harestanes South Extension Windfarm (the Proposed Development) on the attributes of the Talla-Hart Fell Wild Land Area.
2. The Proposed Development lies 18km to the south west of the Talla-Hart Fell Wild Land Area (WLA). Through consultation, NatureScot requested that a Wild Land Assessment should be undertaken particularly with reference to impacts on turbine aviation lighting upon the special qualities of the WLA and recreational receptors. This Appendix responds to this request in accordance with NatureScot's Wild Land Assessment (2017) guidance. **Appendix 5.5: Landscape and Visual Lighting Assessment** provides the overall lighting assessment, but the findings relevant to the WLA are referenced here. In addition, reference should be made to **Appendix 4.2 Transponder Activated Lighting** which details proposed future approaches to minimising aviation lighting effects through use of transponders.

1.2 Policy and Guidance

3. Wild Land Areas describe “Scotland's more natural, remote and uninhabited landscapes whose strength and extent of wildness is considered to be of national importance” (NatureScot, Sept 2020). They are not a statutory designation but are considered a nationally important asset as set out in the National Planning Framework 3 (2014) and should be afforded protection. Scottish Planning Policy (SPP) include Wild Land Areas in ‘Group 2: Areas of significant protection’ of their spatial framework advice (SPP, page 39) which requires that any development on wild land must “demonstrate that any significant effects on the qualities of these areas can be substantially overcome by siting, design or other mitigation.”
4. Supporting the planning policy, NatureScot have undertaken detailed analysis of Scotland and identified 42 Wild Land areas and provided maps and descriptions of each. Their rationale for allocation of Wild Land areas is based on four physical attributes: perceived naturalness of the land cover; ruggedness of terrain; remoteness from public roads, ferries or railway stations; and visible lack of buildings, roads, pylons and other modern artefacts.
5. NatureScot have recently published their final version of technical guidance on ‘Assessing Impacts on Wild Land Areas’ (September 2020) which updates the 2017 consultation version. This guidance provides a methodology and general principles based on the Guidelines for Landscape and Visual Impact Assessment, 3rd Edition, 2013, Landscape Institute and IEMA (GLVIA3). NatureScot's guidance suggests that a Wild Land Assessment should be undertaken as supplementary to an LVIA, building on the LVIA approach but should not duplicate material that is already captured through the LVIA.

1.3 Consultation

6. NatureScot identify in their 2020 guidance that “the guidance should only be applied to proposals whose nature, siting, scale or design are likely to result in a significant effect on the qualities of the WLA” (para 5) and advise that “An assessment will only be required where it has been deemed necessary by the competent authority.” (para 6).
7. NatureScot's response to the Scoping Opinion (13th May 2020) stated that they felt the potential for significant effects on the Talla-Hart Fell Wild Land Area, particularly from night time lighting, should be assessed with reference to their technical guidance.

8. In response, a detailed ZTV of the Proposed Development's potential visibility within the WLA was issued to NatureScot accompanied by wirelines from Hart Fell summit and locations on popular walking routes within the WLA to recommend that a full Wild Land Assessment was not required due to distance and limited extent of visibility from within the WLA. NatureScot responded that they felt it should still be assessed and a night time viewpoint included. This appendix therefore responds to this request, noting that the 2020 guidance (para.14) acknowledges that the assessment should respond proportionally to the likely significance and complexity of effects.

1.4 Approach

9. The approach to WLA assessment in accordance with NatureScot's 2020 guidance follows a five step process, similar to standard LVIA methodology set out in GLVIA3:
 - Define the study area and scope of assessment
 - Verify the WLA baseline
 - Assess the sensitivity of the qualities
 - Assess the magnitude of the effects
 - Judgement of significance of effect
10. This process has been followed and is presented in the subsequent sections.
 - 1.4.1 Study Area
11. A ZTV (**Figure 5.4.1**) had been produced clearly showing the potential visibility within the WLA. The ZTV illustrates that visibility is mainly from the south west of the WLA, between the Annandale Way to Hart Fell and south east to Black Hope. There is very limited visibility beyond Hart Fell and the majority of the WLA. This south western edge is the least remote part of the WLA due to proximity to main road corridors and includes views of the existing extensive Clyde Wind Farm which lies within 10km to the west.
12. It is therefore appropriate to focus the Study Area on the south western end of the WLA but acknowledging the contribution that this area has to the WLA as a whole.
 - 1.4.2 Scope
13. The specific qualities relating to the Talla-Hart Fell WLA will form the starting point of the assessment. Wild land qualities are defined by NatureScot as encompassing both physical attributes and perceptual responses but noting that development outside the WLAs may only impact upon perceptual aspects. The qualities likely to be affected by Proposed Development – a windfarm 18km from the Wild Land Area, therefore relate only to the perceptual aspects rather than physical attributes. In general, this is likely to include the following attributes that apply to all WLAs as set out by NatureScot in paragraph 11 of their guidance:
 - 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
14. These attributes are considered by NatureScot more specifically in relation to each WLA and are presented in the baseline section (**Section 1.5**) below.
15. The scope of the assessment will also consider recreational routes and destinations such as the Annandale Way and the Hart Fell summit within the Study Area.
16. Cumulative effects will also be considered, with reference to the main LVIA Cumulative Assessment in **Chapter 5: LVIA**.

1.5 Baseline

17. Talla-Hart Fells WLA is 9335 hectares in size and described by NatureScot as “an elongated triangle of upland (some 17 km long and up to 9 km at its widest point), between the larger glens of the Megget Water to the north and the Moffat Water to the south.”
18. The key attributes of the Talla-Hart Fell WLA are described as the following:
 - *Rounded moorland hills, deeply incised by glens and deceptively challenging to traverse*
19. Whilst generally a physical quality, the description for this attribute also states that “parts are very exposed, with arresting views into steep-side glens and glacially sculpted corries which contribute to a sense of naturalness”
 - *A strong perception of naturalness that contrasts with the surrounding forest plantations*
20. There are a few small conifer plantations within the WLA and many just beyond, which as an indication of contemporary land use and their geometric coverage are described as detracting from the “sense of naturalness, sanctuary and remoteness.” The NatureScot assessment also considers the views of more distant forestry plantations which can be seen from the higher parts of the WLA and observes they “diminish the sense of remoteness and sanctuary of the interior.”
 - *A well-defined area of wild land that contrasts with the surrounding glens, but with strong visual links to adjacent hills*
21. This attribute alludes to the fact that there is a strong sense of remoteness and sanctuary within the WLA interior that is often surprising given the proximity to main roads, settlement, forestry and agriculture. This is due to the complex topography which conceals views of the settled glens and creates visual links between the upland areas to the north and south of the WLA. In the west, there is more potential for open views towards the higher points of Hart Fell and White Coomb, but much of the WLA is screened by the outer slopes.
 - *Few human artefacts, mostly historic settlements that are restricted to sheltered glens*
22. As well as the conifer plantations previously mentioned, the assessment for this attribute includes the visibility of wind turbines at Clyde and Glenkerie as manmade artefacts, and states that these reduce “the sense of remoteness and sanctuary of the interior”. Since the NatureScot’s Talla Hart Fell assessment was undertaken in 2013, Clyde Extension has now been built and consent has been given for an extension to Glenkerie, and a new windfarm at Whitelaw Brae. These bring turbines within 10km of the WLA to the west and north west.

1.6 Assessment

1.6.1 Sensitivity

23. The sensitivity of each of the four attributes identified in section 1.5 are considered below. Sensitivity takes into account both the value of the attribute and their susceptibility to the type of development proposed into account. A detailed methodology is set out in **Appendix 5.1: LVIA Methodology**.
24. The WLA is nationally recognised as having a wild character, and parts of it are locally designated within the Moffat Regional Scenic Area. It is valued for its wild characteristics, and sculptural and dramatic landform. The overall value is considered as High-Medium.
25. The susceptibility of each attribute to the type of development proposed is considered in more detail below and takes into consideration that the Proposed Development is a windfarm that lies outside the WLA.
 - *Rounded moorland hills, deeply incised by glens and deceptively challenging to traverse*
26. This attribute largely relates to views within the WLA, but there is potential that longer distance views of wind development could detract from the sense of naturalness created by the ‘arresting views’. It is considered that this attribute has a medium susceptibility to wind development.

- *A strong perception of naturalness that contrasts with the surrounding forest plantations*
27. This WLA attribute is concerned with the effect of contemporary landuses, primarily forestry, and their contrast with the character of the WLA, reducing the perception of naturalness. Interpreting this to apply to other contemporary land use such as windfarms, it is considered that this attribute has a high susceptibility to wind development.
 - *A well-defined area of wild land that contrasts with the surrounding glens, but with strong visual links to adjacent hills*
 28. The susceptibility of this WLA attribute to the type of development proposed is considered to be High. Wind development outside the boundary has the potential to interrupt or distract from the existing strong visual links and visually encroach into the glens, thus reducing remoteness and sanctuary.
 - *Few human artefacts, mostly historic settlements that are restricted to sheltered glens*
 29. The susceptibility of this WLA attribute to the type of development proposed is considered to be High, particularly as a cumulative effect, given windfarms are already a feature in nearby views and considered to reduce “...the sense of remoteness and sanctuary of the interior”.

1.6.2 Magnitude of Change

30. The Proposed Development lies 18km at its closest point to the Wild Land Area. The ZTV (**Figure 5.4.1**) illustrates that the main areas of potential visibility are on the outer south western slopes of the WLA, south west of the summit of Hart Fell (808m AOD), between 18 and 21km from the Proposed Development. Elsewhere within the WLA, potential visibility is limited to a few of the highest points within the central area including an area around White Coomb (821m AOD), Great Hill (774m AOD), and Mollis Cluech (785m AOD). In the north eastern half of the WLA, potential visibility is only in small areas along the edge of the boundary with the Moffat Water Upland Glen, and views here are likely to be limited further by the forestry plantations that are prevalent.
31. Potential visibility is therefore very restricted and largely limited to those areas which lie at the periphery of the WLA. These areas are already influenced by existing windfarms, settlement and transport infrastructure, as well as forestry plantations. This is illustrated in **Appendix 5.6: Cumulative Context: Figure 5.32 Cumulative ZTV** which shows the combined visibility of the Proposed Development in addition to all the operational windfarms in the Study Area. This illustrates that the Proposed Development would not be visible in any parts of the WLA that do not already have visibility of existing windfarms.
32. Viewpoint 15 (**Chapter 5: LVIA Figure 5.25**) illustrates the view from Hart Fell, the highest point within the WLA. A negligible scale of effect was assessed within **Appendix 5.3: Viewpoint Assessment**. This judgment was based on that the Proposed Development would appear as an extension to the operational array of turbines, within a very small proportion of the overall view, in an area already characterised by windfarms. It would slightly alter the view in this direction from Hart Fell through the scale of turbines being more detectable than the existing turbines, but the overall baseline would not materially change.
33. Taking into account the viewpoint assessment, and consideration of the limited extent of visibility, the following assessment in **Table 5.4.1** has been undertaken on the effects on the four relevant attributes of the WLA. It has not included consideration of lighting, which is discussed further in **Section 1.6.3**.

Attribute	Sensitivity	Magnitude of Change	Significance of Effect
<i>Rounded moorland hills, deeply incised by glens and deceptively challenging to traverse</i>	Medium	The Proposed Development would not notably increase the horizontal extent of windfarms already visible from these areas. It will not disrupt or detract from the sense of naturalness created by the arresting views. The scale of change is considered to be Negligible and the magnitude of change is Negligible.	The significance of effect on this attribute is judged to be negligible and not significant.

Attribute	Sensitivity	Magnitude of Change	Significance of Effect
<i>A strong perception of naturalness that contrasts with the surrounding forest plantations</i>	High	The Proposed Development would intensify the presence of turbines within a distant and small horizontal extent of the views from the WLA already characterised by windfarms. The very limited extent of visibility of the Proposed Development would also limit potential to reduce the perception of naturalness, particularly within the interior of the WLA. The scale of change is considered to be Negligible and the magnitude of change is Negligible.	The significance of effect on this attribute is judged to negligible and not significant.
<i>A well-defined area of wild land that contrasts with the surrounding glens, but with strong visual links to adjacent hills</i>	High	The Proposed Development would not notably increase the horizontal extent of windfarms already visible from the WLA. It would not interrupt the visual links to adjacent hills and will not be close enough to the WLA to be perceived to encroach on the area, thus not reducing remoteness and sanctuary. The scale of change is considered to be Negligible and the magnitude of change is Negligible.	The significance of effect on this attribute is judged to negligible and not significant.
<i>Few human artefacts, mostly historic settlements that are restricted to sheltered glens</i>	High	The Proposed Development would intensify the presence of turbines within a distant and small horizontal extent of the views from the WLA already characterised by windfarms. The very limited extent of visibility of the Proposed Development from the interior of the WLA would also limit any potential for it to reduce the sense of remoteness or sanctuary. The scale of change is considered to be Negligible and the magnitude of change is Negligible.	The significance of effect on this attribute is judged to be negligible and not significant.

Table 5.4.1: WLA Assessment

1.6.3 Lighting Assessment

34. **Appendix 5.5: Landscape and Visual Lighting Assessment** provides an assessment of the turbine aviation lighting on the landscape character and visual amenity of the Study Area. A lighting visualisation from Hart Fell is provided in **Chapter 5: LVIA Figures 5.25h**.
35. The lighting assessment shows that the necessary turbine aviation lighting will be potentially visible on the nacelle of each turbine. At the distance the WLA lies from the Proposed Development, potential visibility of lighting would only be in good visibility conditions (>5km visibility) and the nacelle lighting would be reduced to 200 candela (cd) from 2000cd. Turbine lighting on the tower at only 32cd is unlikely to be seen at the distance the WLA is from the Proposed Development.
36. The lighting visualisation illustrates that the baseline lighting from Hart Fell includes a prominent cluster of yellow and white lights to the south in the direction of the motorway and Lockerbie junction. There are sporadic white light sources across Annandale with a more continuous band of distant lighting visible along the Solway Firth. Lighting sources from along Nithsdale and Dumfries can be seen beyond the foothills, including a notable source of light

behind the operational Harestanes Windfarm. There are no obvious light sources further north within the Foothills with Forest LCT and edge of the Lowther Southern Uplands LCT within the field of view.

37. The lighting visualisation for the Hart Fell viewpoint (**Figure 5.25h**) illustrates that the lighting would be seen as small dots of red light in an immediate area with minimal light sources. At 18km it will be discernible but unlikely to become a focus of the view. It will also be perceived more closely with the light sources from the settled dales area, so that the influence within the darker southern upland areas is less.
38. **Table 5.4.2** considers the effects of the aviation lighting on the four relevant attributes of the WLA.

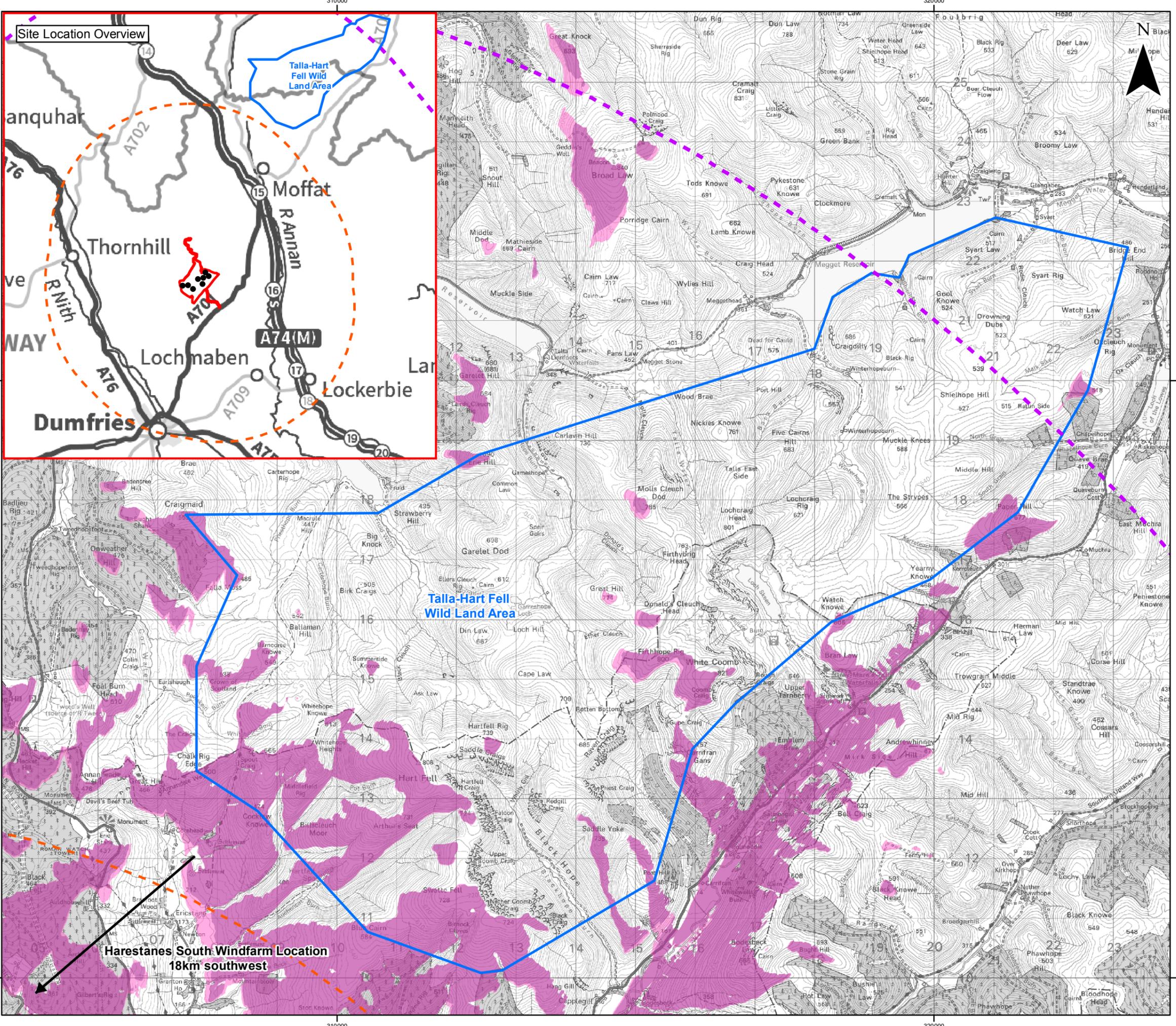
Attribute	Sensitivity	Magnitude of Change	Significance of Effect
<i>Rounded moorland hills, deeply incised by glens and deceptively challenging to traverse</i>	Medium	The lighting of the Proposed Development would not impact upon this attribute. It would be barely perceptible and seen in the context of existing light sources and therefore not readily discernible	No effect.
<i>A strong perception of naturalness that contrasts with the surrounding forest plantations</i>	High	The lighting of the Proposed Development would have a very slight visual influence on the edge of the WLA where it would potentially be seen as points of red light that will identify the location of the turbines in an otherwise dark area. The very limited extent of visibility of the Proposed Development across the WLA would limit the potential of the lighting to reduce the perception of naturalness. The scale of change is considered to be Negligible and the magnitude of change is Negligible.	The significance of effect of aviation lighting on this attribute is judged to be negligible and not significant.
<i>A well-defined area of wild land that contrasts with the surrounding glens, but with strong visual links to adjacent hills</i>	High	The lighting of the Proposed Development would not impact upon this attribute.	No effect.
<i>Few human artefacts, mostly historic settlements that are restricted to sheltered glens</i>	High	The lighting of the Proposed Development would have a very slight visual influence on the edge of the WLA where it would potentially be seen as points of red light that will identify the location of the turbines in an otherwise dark area. The very limited extent of visibility of the Proposed Development from the interior of the site would limit the potential of the lighting to reduce the overall sense of remoteness or sanctuary. The scale of change is considered to be Negligible and the magnitude of change is Negligible.	The significance of effect of aviation lighting on this attribute is judged to be negligible and not significant.

Table 5.4.2: Lighting Assessment on the WLA

39. The consented or application windfarms over 150m in height within the Study Area that will require aviation lighting are not located in close proximity to the WLA or the Proposed Development. The application Faw Side windfarm is closest, at circa 20km from the WLA, but the cumulative ZTV (**Appendix 5.6: Cumulative Context, Figure 5.6.9**) illustrates that there would be no combined visibility with the Proposed Development from the WLA. The several large application sites to the west of the Study Area including Eucharhead, Fell and Trostan Loch Windfarms would lie over 40km from the WLA such that their aviation lighting would be barely noticeable from the WLA. It is considered that the addition of the Proposed Development would not result in any significant cumulative lighting effects.

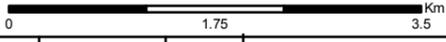
1.7 SUMMARY

40. The Proposed Development lies some 18km at closest to the Talla-Hart Fell WLA and is only potentially visible from the south western extents. Where seen it will lie largely behind the operational Harestanes and Minnygap Windfarms such that it will not be a readily noticeable change to the baseline. The addition of the Proposed Development may increase the intensity of turbines within the section of view, and the scale of turbines may draw the eye to this part of the view more than the current operational windfarms do, but at a considerable distance, and within the context of wider views which would include the much closer Clyde and Clyde Extension Windfarms.
41. Other application and consented windfarms would be seen within the wider panoramic views, largely in addition to existing clusters and groups of windfarms. The addition of the Proposed Development, particularly within the same horizontal extents as Harestanes and Minnygap would not create a significant cumulative effect.
42. Potential significant impacts of the aviation lighting at the distance the Proposed Development lies from the WLA is very unlikely. As shown in the lighting photomontage, the lighting would appear as small dots of red light and in part of the view where light sources from the nearby settled areas is also obvious. There would be no significant cumulative lighting impacts with other windfarm applications with aviation lighting in the Study Area.
43. The assessment of the WLA qualities concludes that the Proposed Development will not significantly affect the attributes and qualities of the Talla-Hart Fell WLA and that the naturalness, remoteness and sanctuary will be retained.



- Legend**
- Application Boundary
 - Proposed Turbine Location
 - 30km Study Area
 - 15km Buffer
 - Talla-Hart Fell Wild Land Area
- Zone of Theoretical Visibility**
- Not Visible
 - Hub Visible
 - Blade Visible

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Rev	Date	By	Comment
B	11/11/2020	BG	Second Issue
A	12/05/2020	MM	First Issue.



Harestanes South Windfarm Extension
Figure 5.4.1: Wild Land Area Zone of Theoretical Visibility

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