

Pentland floating offshore wind farm

Volume 3: Appendix A.16.4

Assessment of Effects on Wild Land Area 39



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APPENDIX 16.4: ASSESSMENT OF EFFECTS ON

WILD LAND AREA 39

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APPENDIX 16.4: ASSESSMENT OF EFFECTS ON WILD LAND AREA 39

1.1 Introduction

The assessment contained in this Appendix 16.4 focuses on the potential effects of the Offshore Development on the East Halladale Flows Wild Land Areas (WLA) 39.

WLA 39 covers an area of 159 km² that extends from Strath Halladale in the west, to Ben Dorrery in the east, and from Limekiln Forest in the north, to Altnabreac Forest in the south. It is made distinct by the broad and open expanse of sweeping moorland and flat peatland, which characterise this area.

The following assessment follows guidance set out in 'Assessing Impacts on Wild Land Technical Guidance' (NatureScot, 2020) with reference to the 'Description of Wild Land Areas' (SNH, 2017). The WLA description lists four key attributes and qualities for WLA 39, which have been numbered 1 to 4 for the purpose of this assessment:

- > WLQ 1. "An awe-inspiring simplicity of landscape at the broad scale, with a strong horizontal emphasis, 'wide skies' and few foci."
- > WLQ 2. "A remote, discrete interior, with limited access and a strong sense of solitude."
- > WLQ 3. "A rugged and complex pattern of hidden burns, lochans and pools at the local level, despite the landscape's simple composition at the broad scale."
- > WLQ 4. "A remarkably open landscape with extensive visibility, meaning tall or high features in the distance are clearly visible."

These key attributes and qualities (hereafter, referred to as Wild Land Qualities, or WLQs) form the basis of the wild land assessment as they express the distinctive and specific wildness qualities that are found in this WLA. NatureScot's WLA description provides further information on each of these WLQs as an explanation of how the various aspects of the landscape contribute to the WLQ.

This appendix is accompanied by a series of figures which are referenced throughout the text. All SLVIA figures are presented in Offshore EIA (Volume 3): Appendix 16.9: SLVIA Figures.

- > Figure 16.4: Landscape Designations and Wild Land Areas;
- > Figure 16.11: Landscape Designations and Wild Land Areas with Zone of Theoretical Visibility (ZTV);
- > Figure 16.13: Composite Plan;
- > Figure 16.14a: Level of Wildness: Composite Relative Wildness;
- > Figure 16.14b: Level of Wildness: Perceived Naturalness;
- > Figure 16.14c: Level of Wildness: Rugged or Challenging Terrain;
- > Figure 16.14d: Level of Wildness: Remoteness from Public Mechanical Access;
- > Figure 16.14e: Level of Wildness: Lack of Built Modern Artefacts; and
- > Figures 16.31 and 16.47: Viewpoint 1: Beinn Ratha.

Level of Wildness information has been derived from NatureScot's Mapping of Wildness and Wild Land (SNH, 2014). Of the overall area of WLA 39, 71% will have no visibility of any part of the Offshore Development, and only 14% will have visibility of all seven WTGs (see Table 1.3-1).

The extensive fieldwork carried out by OPEN has been an essential component of the assessment process and has enabled the assessors to develop the depth of appreciation and understanding of WLA 39 necessary to underpin a valid and credible assessment.

1.2 Assessing Impacts on Wild Land Technical Guidance

The NatureScot technical guidance (2020) sets out the suggested approach to the assessment of effects on wild land. As noted in paragraph 4 of the guidance, the assessment methodology broadly follows that of 'Guidelines for Landscape and Visual Impact Assessment' Third Edition (GLVIA3), and is based around the following five stages, as described in Table 1.3-1 taken from the NatureScot guidance.

Paragraph 13 of the guidance notes that “the assessment approach should be...

- > “concise and proportionate, focused on likely significant effects on the qualities;
- > clear and transparent, so that underlying assumptions and reasoning can be understood by others in conveying the complexity and significance of effects; and
- > focused on qualities, informed by fieldwork and the WLA descriptions.

While this Wild Land assessment methodology broadly follows GLVIA3, there are several points that are beneficially explained prior to the assessment itself, as discussed below.

1.2.1 The Status of WLAs

The status of WLAs is clearly set out in Paragraph 8;

“WLAs have not been identified on scenic grounds and are not a statutory designation.”

There is also an acceptance in Paragraph 9 that WLAs are not “wilderness” and that human influences can and do form part of the baseline character of WLAs:

“...Whilst the WLA map identifies areas where wildness is most strongly expressed, these are not ‘wilderness’, empty of any human activities or influence. They reflect Scotland’s long history of past occupation and current use and management, albeit that evidence of such is often light and limited in extent.”

An important phrase in this paragraph is “light and of limited extent” as this presents a measure with which to assess the existing external influence of development, and operational wind farms in particular, on the WLA, and indicates to what degree this influence can be accommodated within an area that is considered to be ‘wild land’.

1.2.2 The Need for a WLA Assessment

The need for a WLA assessment is discussed in Paragraphs 5 and 6 of the NatureScot guidance, which note that:

“This 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 a WLA. Given this, assessments are more likely for proposals within a WLA, and are less-likely for proposals outwith the WLA.

An assessment will only be required where it has been deemed necessary by the competent authority. You are encouraged to discuss the need for an assessment with the competent authority at an early stage.”

While the Offshore Development lies 11 km outwith this WLA, and despite the limited likelihood for significant effects to arise for proposals outwith the WLA, both NatureScot and The Highland Council (THC) have requested that a wild land assessment be carried out.

It is also important to note that, according to NatureScot guidance, effects on WLAs can only be experienced within WLAs and not on the area surrounding them. Paragraph 3 of the guidance notes that:

“This guidance sets out a methodology and general principles for assessing the impact of development and other proposals on WLAs, as they are experienced from within the WLA, not from outwith it.”

1.2.3 Cumulative Effects

At Paragraph 16, NatureScot guidance notes the following in relation to cumulative effects on WLAs:

“The potential for cumulative effects. Other proposals (either of the same or different type) which are likely to contribute to significant cumulative effects should be identified in discussion with the decision maker. The principles within our guidance document Assessing the cumulative impact of onshore wind energy developments specific to onshore wind energy development can be applied to other development and should aid this assessment.”

And at Paragraph 33: *“In judging significance, the following factors should be considered - the nature and extent of any likely cumulative effects.”*

There is a cluster of operational wind farms located a minimum of approximately 7 km to the south-east of the south-eastern boundary of the WLA, Strathy North a minimum of approximately 8 km to the west of the western boundary of the WLA, and Baillie Hill a minimum of approximately 7 km to the north of the northern boundary, as shown in Figure 16.16. These wind farms are relevant to the assessment as they exert a notable baseline influence on the character of WLA 39.

The consented Limekiln Wind Farm, Section 36C Application for Limekiln Wind Farm, and application stage Limekiln Wind Farm Extension are of particular relevance to the assessment owing to their location to the immediate north and east of WLA 39. Other application stage wind farms of relevance include the resubmissions of Drum Hollistan 2 at a minimum of approximately 5 km to the west, and Ackron at a minimum of approximately 3 km to the west, as well as the application for Forss III at a minimum of approximately 8 km to the north-east from the Offshore Development.

It is relevant to note that Causeymire, Baillie Hill and Forss Wind Farms were operational at the time of the NatureScot site assessment of this WLA, which was carried out in September 2014, but that Strathy North was not included as it only became operational in June 2015.

1.2.4 Night-time Effects

The potential for night-time effects on the East Halladale Flows WLA is limited by the fact that aviation lighting will only affect visual receptors and not landscape receptors, as it will be the visual amenity of people in the WLA that will be affected and not the landscape character, as this would not be perceptible at night. It is unlikely that there are many walkers in WLA 39 during the hours of darkness, apart from possibly stalkers, people fishing and the occasional workers or walkers who are late in returning at the end of the day. Aviation lighting will, therefore, affect only a very small number of people.

The Night-time Assessment is presented in Appendix 16.6 which includes the methodology applied and the scope of the assessment in terms of the lighting requirements. The maximum design scenario considers aviation lighting set on the hubs of the seven WTGs at a height of 170 m, and with a blade tip height of 300 m. The lights will emit a flashing red light of medium intensity, measured as 2,000 candelas (cd). The lights will carry a detection system responding to atmospheric conditions, such that when visibility is greater than 5 km the intensity of the lights will be reduced to 10% of their maximum intensity, which equates to 200 cd. Met office data recorded at Wick (see Appendix 16.8) suggests that visibility of >5km occurs 94% of the time around the north coast of Scotland although this may be slightly less frequent out over the sea due to higher moisture content. However, when visibility is less than 5 km the weather conditions will also act to reduce the intensity of the lights when viewed from the more distant areas. Therefore, for the purposes of the assessment, the light reaching the WLA is assumed to be 200 cd or less.

Those parts of WLA 39 that are shown on the ZTV of Turbine Hub Lighting in Figure 16.30 with potential to be affected, include the northern ridgeline between Beinn Ratha, Sean Airigh, Clachgeal Hill, Beinn nam Bad Mor and Beinn nam Bad. The ZTV shows that visibility of the aviation lighting will be concentrated along this northern edge of WLA 39 with only small patches of visibility occurring further south, around Cnoc an Fhuarain Bain.

These lights will cause an affect as they will be introducing lighting into an open seascape where currently night-time lighting is limited to occasional passing vessels. The effect will, however, be moderated by the fact that there is settlement and energy developments along the northern coastline, which lies between WLA39

and where the Offshore Development will be located. These developments are visible in Viewpoint 1: Beinn Ratha Figure 16.31b. and generate light pollution from street and domestic lighting, as well as the brighter security lighting associated with the Dounreay Nuclear Power Plant and Vulcan Nuclear Reactor Test Establishment (NRTE), which together create baseline light pollution. This is shown in Figures 6.28 and 6.29, where light pollution is shown to occur in patches along the north coast.

In summary, while the aviation lighting will give rise to effects on the WLA, these will be limited owing to the separation distance between the Offshore Development and WLA 39 of between 11 and 20 km, the lower number of hub lights and limited extent of visibility that will be experienced across the majority of WLA 39, especially to the south of the northern ridgeline, and most notably the extremely limited number of people in the WLA during the hours of darkness that would be experiencing the visual effect of these lights. The hub lighting will not affect the objectives of this mapped interest and the overall integrity of the WLA as a whole will not be compromised.

1.3 Methodology

1.3.1 NatureScot Guidance

As noted in NatureScot's 2020 Guidance, the Wild Land assessment methodology broadly follows that of GLVIA3 and is based around the five stages described in Table 1 of the Guidance, replicated as Table 1.3-1 below.

Table 1.3-1 NatureScot's steps to assess effects on WLAs

Step	Summary
Step 1 - Define the study area and the scope of the assessment	Identify a study area appropriate to the scale of the proposal and extent of likely significant effects on the WLA. Output: Brief justification and map or description of the area that will be assessed.
Step 2 – Verify the WLA baseline	Confirm the wild land qualities (set out in the WLA description) relevant to the study area, describing any major changes that have occurred since the description was prepared and the nature of their contribution to the WLA. Output: Identification of relevant qualities and explanation of how any changes since preparation of the WLA Description have affected them.
Step 3 – Assess the sensitivity of the qualities	Through detailed field assessment within the study area, assess the sensitivity of the wild land qualities scoped in (including their physical attributes and perceptual responses), to the type and scale of change proposed. Output: A clear and concise narrative explaining the susceptibility of individual qualities and / or combinations of qualities where there is some commonality between their contributing attributes and responses, and their overall sensitivity.
Step 4 – Assess the magnitude of the effects	Assess the effects on individual and / or combinations of qualities, drawing out which physical attributes and perceptual responses will be affected, how and to what degree. This should reflect the size or scale of change, its extent and duration. Output: A clear and concise narrative explaining the effects of the various elements of the proposal on individual qualities and / or combinations of qualities.
Step 5 – Judge the significance of the effects	Conclude on the overall significance (taking into account any mitigation), in terms of the study area and where relevant the wider WLA. Output: A clear narrative explaining the overall significance of residual effects identified on the individual qualities and / or combination of qualities.

Steps 1 and 2 do not require detailed explanation of methodology and are carried out subsequently in this Appendix. The methodology for Steps 3, 4 and 5 is described below. These steps are assessed in accordance with GLVIA3 and largely follow OPEN's methodology, which is described in full in Appendix 16.1.

1.3.2 Step 3: Assess the Sensitivity of WLA Qualities

NatureScot guidance summarises this step as follows: “Through detailed field assessment within the Offshore Study Area, assess the sensitivity of the wild land qualities scoped in (including their physical attributes and perceptual responses), to the type and scale of change proposed”.

1.3.3 Value of Wild Land Areas

In applying GLVIA3 to the assessment, and as noted by NatureScot, it is necessary to attribute a value to the receptor; these are classified as high, medium-high, medium, medium-low or low, as described in Appendix 16.1. The value attributed to nationally important designations, including National Parks (NP) and National Scenic Areas (NSA) is normally found to be at the upper end of the scale and classified as high.

Wild land is not an environmental designation and is not statutorily protected in the way that NPs and NSAs are for their scenic qualities. It is, however, recognised in Draft National Planning Framework 4 (NPF4) (Scottish Government, 2021) and Scottish Planning Policy (SPP) (Scottish Government, 2020) as a nationally important mapped resource, which should be afforded protection for its wildness qualities.

In order to apply 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 NSAs and NPs 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, therefore, less highly valued than NSAs and NPs.

NatureScot provides some further guidance on this matter in its publication ‘Spatial Planning for Onshore Wind Turbines – Natural Heritage Considerations, Guidance’ (SNH, June 2015). Annex 1 to this document provides advice on the potential landscape objectives that may be applicable in different landscapes within Scotland in terms of their ability to accommodate wind farms, suggesting that some landscapes should be subject to a higher level of protection than others.

Annex 1 places WLAs in the middle category, where some landscape ‘accommodation’ of windfarms may be considered appropriate, noting that:

“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.”

WLAs are, therefore, considered to have a lower inherent baseline value, in landscape terms, than nationally designated landscapes. In the terms of GLVIA3 and OPEN’s methodology, it is reasonable to attribute a theoretical **medium-high** value to WLA 39.

These levels of value are combined with individual assessments of susceptibility, which are described below, to inform the overall assessment of sensitivity within the WLA.

1.3.4 Susceptibility within Wild Land Areas

Susceptibility relates to the nature of the landscape receptor and how susceptible it is to the potential effects of the Offshore Development, as described in GLVIA3. Susceptibility varies across the WLA depending on the nature and strength of the WLQs, the particular perceptions that are experienced in different areas, and in the context of different external and internal influences.

OPEN’s methodology assesses the susceptibility of landscape character receptors through a series of criteria, as set out in Appendix 16.1. Those relevant to the assessment of susceptibility of WLQs are summarised below:

- The specific nature of the Offshore Development: the susceptibility of landscape receptors is specific to the change arising from the particular development that is proposed, including its individual components and features, and its size, scale, location, context and characteristics.

- > Landscape character: the key characteristics of the existing landscape character of the receptor are considered in the evaluation of susceptibility as they determine the degree to which the receptor may accommodate the influence of the Offshore Development (in the wild land assessment this criterion relates to the documented WLQs, physical attributes and perceptual responses of the WLA).
- > Landscape association: the extent to which the Offshore Development will influence the character of coastal or landscape receptors across the Offshore Study Area relates to the associations that exist between the coastal or landscape receptor within which the Offshore Development is located and the coastal or landscape receptor from which the Offshore Development is being experienced. In some situations, this association will be strong, where the seascapes, coasts or landscapes are directly related, and in other situations weak where the association is weak. The context and visual connection to areas of adjacent seascape, coast or landscape character or designations has a bearing on the susceptibility to development.

A useful tool in the assessment of the levels of susceptibility across the WLA is NatureScot's 2014 analysis of the data that was gathered in order to inform the identification of WLAs. NatureScot gathered data for each of the 'physical attributes' of wild land and used these to create a 'relative wildness map'. This process is documented in NatureScot's 'Mapping of Scotland's Wildness and Wild Land: Non-technical Description of the Methodology' (SNH, 2014). The 'Jenks Natural Breaks Optimisation method' was then used to identify the natural breaks in the distribution of the relative wildness data in order that levels of wildness could be identified and mapped. As a result, eight classes of wildness were identified, with 8 being the highest and 1 being the lowest. Maps showing relative wildness are presented in Figures 16.14a to 16.14e.

1.3.5 Step 4: Assess the Magnitude of Change

NatureScot guidance notes this step as follows in Table 1: "*Assess the effects on individual and / or combinations of qualities, drawing out which physical attributes and perceptual responses will be affected, how and to what degree. This should reflect the size or scale of change, its extent and duration.*"

In order to conform with the nomenclature presented in GLVIA 3 and Technical Appendix 16.1, the 'magnitude of effect' is referred to in this assessment as the 'magnitude of change'. The 'magnitude of effect' and the 'magnitude of change', effectively cover the same considerations. OPEN's methodology for assessing magnitude of change on landscape character receptors is carried out through the application of a set of criteria as set out in Appendix 16.1.

Broadly, the magnitude of change that the Offshore Development will have on landscape receptors is assessed in terms of the size or scale of the change, the geographical extent of the area influenced and its duration and reversibility. The key elements of the Offshore Development that will influence the level of change on landscape character are the movement, form, material, colour and scale of the turbines and their floating substructures.

1.3.6 Step 5: Judgement of the Significance of Effects

NatureScot guidance summarises this step as follows in Table 1: "*Conclude on the overall significance (taking into account any mitigation), in terms of the Offshore Study Area and where relevant the wider WLA.*"

On the basis that the NatureScot guidance follows the principles of GLVIA3, OPEN's methodology for the assessment of the significance of effects has also been used for the assessment of the significance of effects on wild land, as described in Appendix 16.1. OPEN's methodology describes the significance of effects as quoted below.

"A significant effect will occur where the combination of the variables results in the Offshore Development having a defining effect on the view or receptor. A not significant effect will occur where the effect of the Offshore Development is not definitive, and the view or receptor continues to be characterised principally by its baseline characteristics. In this instance, a not significant effect would indicate that the Offshore Development may have an influence, but this influence will not be a defining one."

1.4 Assessment of Impacts on WLA 39

The following sections of this report assess the effects of the Offshore Development on WLA 39 following the five steps as described in NatureScot's 2020 Guidance.

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

NatureScot guidance summarises this step as follows:

"Identify a study area appropriate to the scale of the proposal and extent of likely significant effects on the WLA."

Paragraph 16 of the guidance notes that:

"The rationale for the selection of the study area and scope of the assessment should be clearly stated and consider the following.

- > *The extent of visibility and recognised routes / movement through the WLA. The scale of the proposal may not equate to the extent of effects (for example, a large proposal where visibility is limited to part of the WLA, a more focused study area may be appropriate).*
- > *The wild land qualities likely to be significantly affected. The focus of the assessment should be on the qualities likely to be affected rather than where the proposal is located.*
- > *The potential for cumulative effects."*

The study area for the wild land assessment is discussed below in relation to these three considerations.

1.4.1.1 Extent of Visibility

Prior to carrying out the assessment of effects on the WLA, it is important to establish the theoretical extent of the influence that the Offshore Development will have on the WLA. This is dependent on the extent of visibility; where the Offshore Development is not visible, it will have no influence on wild land characteristics. The level of visibility of the Offshore Development from the WLA can be seen in Figure 16.11, which shows the ZTV in relation to the WLA. Table 1.4-1 below, presents the percentage of the overall area of WLA 39 in relation to the different levels of visibility. This shows that 71% will gain no visibility and a further 12% will gain visibility of only one or two of the seven WTGs.

Table 1.4-1 Percentage of WLA with visibility of the Offshore Development

No. of Turbines Visible	% of WLA 39 with visibility of the Offshore Development
0	71
1	3.0
2	2.5
3	2.5
4	2.5
5	2.0
6	2.0
7	14.5
1 to 7	29

The ZTV in Figure 16.11 shows that the majority of the WLA will gain no visibility. This relates to the division created by the northern ridgeline of hills, which effectively screens visibility of the Offshore Development from the majority of the WLA. The ridgeline also has the effect of reducing the extent of visibility in those parts of the WLA where visibility does occur. The testing of visibility from locations to the south of the ridgeline show how the northern ridgeline reduces visibility by not only screening many of the turbines completely, but also partially screening those that will be visible, so that they would not be seen to their full extent.

The pattern of visibility across the WLA comprises patches across the north-western and northern parts, with practically no visibility across the central, southern or eastern parts. A band of theoretical visibility occurs across the north facing slopes marked by the northern ridgeline from Beinn Ratha (242 m AOD) through Clachgeal Hill (219m AOD) to Beinn nam Bad Mor, albeit with patchy visibility in the valley between Clachgeal Hill and Beinn nam Bad Mor. Patches of theoretical visibility also extend across the north facing slopes of the series of low and broad hills out to Cnoc Bad Mhairtein (230 m AOD) and Cnoc an Fhuarain Bhain (243 m AOD) in the western part of WLA 39.

Visibility from the northern ridgeline is of the Offshore Development at its full extent, while from the slopes below, visibility gradually reduces down to a limited number of blade tips. From the closest edge of this patch of visibility, the turbines will be seen at the range of approximately 12 km while from the top of Cnoc an Fhuarain Bhain the range will be approximately 21 km. The only other area that will gain high levels of visibility occurs across the north facing slopes of Beinn nam Bad Beag, albeit an area of very limited extent. This occurs along the northern ridgeline at a range of approximately 21 km, with lower levels of visibility occurring across the middle and lower slopes.

The central, southern and eastern parts of the WLA will gain no visibility with the exception of small patches of low-levels of visibility occurring on localised high points along the on the south-western and eastern fringes.

Visibility of existing wind farm developments already occurs across the WLA; Baillie Hill and Forss Wind Farms both located in the sector to the north-east and Causeymire, Halsary, Bad a Cheo and Achlachan Wind Farms located to the east (shown on cumulative ZTVs in Figures 16.17, 16.18 and 16.20). Strathy North Wind Farm is also a noticeable feature in views from the western parts of the WLA (shown on cumulative ZTV in Figure 16.19). Visibility of these developments largely coincides with visibility of the Offshore Development such that it is seldom seen on its own. Across most of the ridges and upper slopes around Cnoc an Fhuarain Bhain, visibility of the Offshore Development coincides with that of Baillie Hill Wind Farm such that they will be seen in the same north to north-east sector of the view.

The cumulative ZTV for operational Strathy North in Figure 16.19 shows how the ridgeline in the WLA forms a viewshed, such that visibility of Strathy North occurs to the west and visibility of the Offshore Development occurs to the east with inter-visibility occurring only as less extensive patches in the western part of the WLA.

While the addition of the Offshore Development will not appear as a new or unfamiliar feature, it will be seen to introduce wind farm development into the currently undeveloped Pentland Firth. It can be concluded that the effects of the Offshore Development will vary notably across the extent of WLA 39 and that the areas in the north are more relevant to the assessment as they are closer and have greater potential to be significantly affected. In respect of this variable visibility, it will be unlikely for a significant effect to arise in the central, southern or eastern parts owing to the very limited extent of visibility. For this reason, the WLA 39 Study Area will include the northern and north-western parts where visibility of the Offshore development occurs and where there is the potential for significant effects to arise, extending out to a radius of 20 km from the Offshore Development.

1.4.1.2 Recognised Routes and Movement

In respect of recognised routes and movement, the NatureScot WLA 39 description states “*There are a limited number of tracks or paths entering the WLA and it tends to be visited by few people, except for the peak of Beinn Ràtha in the far north, or for fishing, deer stalking, land management or habitat survey.*”

Access tracks are evident in the northern and eastern parts of WLA 39 but not the more remote western part. An access track runs along the eastern side of Beinn Ratha from where visibility of the Offshore Development will be experienced. While a network of access tracks occurs within the coniferous plantations, these lie outwith the WLA and only one extends a short distance over the WLA boundary.

Access tracks from Shurrery, in the north-east, and Dorrery in the east, extend into this eastern part of WLA 39; the Shurrery route passing by Loch Scye and onto Loch Tuim Ghlais; the Dorrery route extending to Loch Caluim. The ZTV in Figure 16.11 shows that there is no visibility of the Offshore Development for the majority of both these routes, with occasional small patches of low-levels of visibility occurring and a small patch of higher-level visibility occurring where the track passes around the western flank of Beinn nam Bad Beig.

It can be concluded that the effects of the Offshore Development on recognised routes and movement will be limited owing to the limited extent of theoretical visibility shown along those few routes that occur. Furthermore, the use of these routes is also limited to a small number of people as set out in NatureScot’s WLA 39 description. The consideration of recognised routes and movement will, therefore, have a limited bearing on the definition of the WLA 39 Study Area with the routes to Beinn Ratha already partly included in the WLA.

1.4.1.3 Wild Land Qualities

In respect of WLQs, NatureScot guidance states “*rationale for the selection of the study area and scope of the assessment*” includes consideration of the “*wild land qualities likely to be significantly affected*”.

WLA 39 has four WLQs. These are set out in Table 1.4-2 below, along with a judgement as to whether or not there is potential for them to be significantly affected by the Offshore Development – denoted by grey shading.

Table 1.4-2 WLQs with potential to be affected by the Offshore Development

Wild Land Quality (defined in NatureScot’s WLA 39 Description)	Potential to be affected by the Proposed Consented Development
WLQ1 “An awe-inspiring simplicity of landscape at the broad scale, with a strong horizontal emphasis, ‘wide skies’ and few foci.”	Indirect effects comprising visibility of the Offshore Development seen a minimum of 11 km to the north would potentially have an effect on this WLQ as it would create a new focus, albeit beyond the extents of the WLA.
WLQ2 “A remote, discrete interior, with limited access and a strong sense of solitude.”	Indirect effects comprising visibility of the Offshore Development seen a minimum of 11 km to the north would potentially have an effect on this WLQ, as the ZTV in Figure 6.11 shows that there would be some limited visibility from the interior of the WLA and despite there already being an influence from closer range large-scale energy developments.
WLQ3 “A rugged and complex pattern of hidden burns, lochans and pools at the local level, despite the landscape’s simple composition at the broad scale.”	Indirect effects comprising visibility of the Offshore Development seen a minimum of 11 km to the north will not affect this WLQ as no reference is made in the description to the seascape setting and, therefore, this WLQ is not susceptible to changes made within this more distant context.
WLQ4 “A remarkably open landscape with extensive visibility, meaning tall or high features in the distance are clearly visible.”	Indirect effects comprising visibility of the Offshore Development will potentially have an effect on this WLQ as it will provide a new background feature of tall structures seen in views out towards the sea.

It can be concluded that three of the four WLQs has some degree of susceptibility to the effects of the Offshore Development and, therefore, that these WLQs should be considered in the detailed assessment.

The consideration of WLQs does not assist in determining the WLA 39 Study Area, as all three WLQs are expressed almost continuously across the WLA.

1.4.1.4 Potential for Cumulative Effects

The third point noted in NatureScot guidance as being relevant in the “*rationale for the selection of the study area and scope of the assessment*” is consideration of the “*The potential for cumulative effects*”.

The relevant projects that the Offshore Development may interact with cumulatively, and that have the potential to give rise to significant cumulative effects on wildness qualities, include the following developments:

- > Operational Baillie Hill Wind Farm / Forss Wind Farm / Strathy North Wind Farm;
- > Consented Limekiln Wind Farm / Consented SSE Substation / Consented Dounreay Nuclear Power Facility and Vulcan NRTE decommissioning / Strathy Wood Wind Farm / Strathy South Wind Farm;

- > Application stage Limekiln Wind Farm Resubmission / Limekiln Wind Farm Extension / Drum Hollistan 2 Wind Farm / Application Ackron Wind Farm;
- > Future proposed West Orkney Offshore Wind Farm.

While the cluster of projects including Causeymire, Halsary, Bad a Cheo and Achlachan, are evident as a substantial group to the south-east, their influence is strongest across the south-east and south of WLA 39, where the ZTV in Figure 6.11 shows the visual influence of the Offshore Development to be very limited. Although a cumulative effect could occur sequentially if people were to move around the WLA, this would not be significant owing to the limited visibility of the Offshore Development and the baseline influence from these other wind farm developments. A list of the cumulative sites within the 50 km Offshore Study Area that are relevant to the SLVIA is provided in Offshore EIA (Volume 2): Chapter 16 SLVIA at Table 16.4.

Baillie Hill Wind Farm already has an influence on the perceived wildness qualities of WLA 39, on its eastern side, along with many other human influences described in this Appendix. Strathy North has an influence on the perceived wildness qualities across the western parts of WLA 39 and is perhaps more notable - despite its greater distance from WLA 39 - when compared with Baillie Hill Wind Farm, as it is the primary element of human influence that is seen from the western side, whereas on the eastern side Baillie Hill Wind Farm is one of a number of land uses that contributes to a significant diminution in the strength of the baseline wildness qualities in the northern part, and particularly the north eastern part, of WLA 39.

The cumulative assessment on WLA 39 also considers the potential effect of the addition of the Offshore Development to a scenario where consented Limekiln Wind Farm and application stage Limekiln Wind Farm Extension, Drum Hollistan and Ackron are included in the baseline. These wind farms all come within close proximity to WLA 39, especially Limekiln Wind Farm, which is located close to the northern boundary.

It can be concluded that the broad extent of operational and proposed cumulative developments around WLA 39 and the extent to which they would be visible across WLA 39, suggests that the WLA Study Area should cover the northern and north-western parts of WLA 39, where intervisibility occurs and, therefore, a significant cumulative effect is most likely to arise.

1.4.1.5 Identification of the WLA Study Area

In considering the extent of theoretical visibility, the potential effect on routes and movement through WLA 39, the potential for the WLQs to be affected, and the potential for cumulative effects to arise, it is evident that some parts of the WLA would be affected, potentially significantly, while other parts would not be significantly affected or not be affected at all.

NatureScot's Guidance requires the establishment of a WLA 39 Study Area at the outset of the assessment, that is "*appropriate to the scale of the proposal and extent of likely significant effects on the WLA*". If this guidance is followed, the WLA 39 Study Area would form one part of WLA 39 related to the known extent of likely significant effects of the Offshore Development. This corresponds with the areas of highest visibility and cumulative visibility, as represented in the ZTV in Figure 16.13 and cumulative ZTVs in Figures 16.17 to 16.27.

The WLA 39 Study Area, therefore, includes the northern and north-western parts where visibility of the Offshore Development occurs, which is the main indicator as to whether significant effects are likely to arise. The northern and north-western parts coincide with areas where cumulative wind farms are also visible and where WLQs are less strongly expressed and extends out to a radius of 20 km from the Offshore Development.

1.4.2 Step 2: Establish the Baseline

NatureScot guidance summarises this step as follows in Table 1: "*Confirm the wild land qualities (set out in the WLA description) relevant to the study area, describing any major changes that have occurred since the description was prepared and the nature of their contribution to the WLA.*"

The baseline study is informed by NatureScot's description of the WLA, the mapping of the eight classes of wildness (SNH, 2014), OPEN's site visits, and Viewpoint 1: Beinn Ratha (Figures 16.31 and 16.47) and Viewpoint 14: Ben Dorrery (Figures 16.44 and 16.60), which illustrate the outlook across the WLA. It is important to note that while viewpoints provide a useful illustration of the views that can be gained from within the WLA 39 Study Area, the assessment of effects on viewpoints and on WLAs is carried out separately and according to specific methodologies that vary in some respects. Viewpoints 1 and 14 have, therefore, been referenced simply to provide an illustration of views within and across the WLA 39 Study Area.

1.4.2.1 Baseline Description

In order to understand the key characteristics and special qualities that have led to the WLA classification, this section presents a brief description of the landscape of the East Halladale Flows WLA. The description focuses on the experiential qualities of the landscapes included in WLA 39, as well as their relationship with those landscapes which form the wider setting.

WLA 39 forms the northern part of the wider area known as 'The Flow Country' which includes WLA 36 Causeymire – Knockfin Flows to the south. The Flow Country is characterised by a distinct and well-defined landform. It comprises broad extents of low and gently undulating, sweeping moorlands and flat peatlands, which are enclosed to the south by large, lone mountains and to the west and north by smaller scale hills. The relative lowness of the landform means that the sweeping moorlands and flat peatlands are experienced collectively as one large space, the scale of which can appear vast when seen from more elevated vantage points. This is an important factor in the appreciation of WLA 39, as the boundaries of the area are not always perceived as clear edges on the ground, but frequently seen as part of a much larger expanse of landscape.

The simplicity of the landform, combined with the simplicity of the landcover adds to appearance of the East Halladale Flows as one vast space. The absence of trees means the rough grasses mix with moorland heather to form a blanket covering, and this contributes to the uninterrupted sense of openness. There is a distinct absence of development within WLA 39 and few field enclosures, which together preserves the seamless flow of land. Tracks are one of the few human interventions which occur across this landscape, although very limited in number and extent, leaving the vast majority of the marshy land difficult to access.

Despite the pronounced definition of the landform of the wider landscape of the The Flow Country by the underlying landform, the boundaries of the WLA 39 which cover it, are largely defined by human interventions. The northern and southern boundaries are defined by the geometric edge of forestry plantations, the western and north-western edges by an electricity transmission line and the south-eastern boundary by the Inverness to Wick railway line. The broad band of coniferous forestry which lies to the south of WLA 39 has been omitted from the WLA areas and as such forms the divide between the East Halladale Flows and Causeymire – Knockfin Flows to the south. This division is contrary to the experience of this landscape, in which The Flow Country is experienced as one large expanse whereby the Flows appears to extend much further south than WLA 39 to include the intervening forestry and the extent of WLA 36 as well.

Along the northern edge of WLA 39, the ridgeline that is formed along the high ground between Beinn Ratha, Sean Airigh, Clachgeal Hill, Beinn nam Bad Mor and Beinn nam Bad Beag forms a physical and visual divide between the landscape to the north and the Flows to the south. While the landscape to the north comprises an area of sweeping moorland, it is more notably characterised by the extent of coniferous forestry in this area. Furthermore, the settled and cultivated landscapes of the northern coastal edge are evident, along with the presence of Baillie Hill and Forss wind farms, the A836, Dounreay Nuclear Power Plant and Vulcan NRTE. This finding is supported by the Levels of Wildness mapping shown in Figures 16.14a to 16.14b, where Levels of Wildness are shown to be notably lower to the north of this ridgeline.

1.4.2.2 Physical Attributes and Perceptual Responses

Establishing the baseline involves a review of the strength of attributes and responses and their contribution to the identified WLQs of WLA 39. These are verified against NatureScot's WLA Description, noting that the strength to which the WLQs are expressed will vary in different parts of the WLA.

OPEN's baseline is also informed by its extensive fieldwork within WLA 39, without which it could not have undertaken this assessment. OPEN considers that wild land qualities in WLA 39 are derived from a combination of the following physical attributes and perceptual responses, shown in Table 1.4-3 below, all of which are displayed to differing degrees.

Table 1.4-3 Physical attributes and perceptual responses of WLA 39

Physical Attribute	Perceptual Response
A high degree of perceived naturalness derived from its extensive, low lying, gently undulating peatland and simple vegetation cover. Simplicity of landscape at an expansive scale, with a strong horizontal emphasis and 'wide skies'. A remarkably open landscape with extensive visibility beyond the boundaries of the WLA.	A strong sense of solitude and sanctuary that strengthens towards the core of the WLA. A sense of risk is derived from the openness and vast scale of the landscape and the relative inaccessibility.
A lack of modern human artefacts and foci within the WLA but evidence of human occupation/ foci to the north-east of the WLA including the village of Reay, the A836, electricity transmission lines, wind farms, telecom masts, fences and the Dounreay Nuclear establishment, located to the north-east. The railway line along the southern boundary is only experienced at close range.	An awe-inspiring simplicity of landscape that extends to the south and west well beyond the boundaries of the WLA to include other more distant WLA. The modern human artefacts, including Strathy North and Baillie wind farms diminish some of the area's sense of remoteness.
Little evidence of contemporary land uses within the WLA, but extensive evidence around parts of the perimeter, including forestry plantations	A strong sense of solitude and sanctuary that strengthens towards the core of the WLA, but which is diminished in some areas of WLA 39 by proximity and visibility of some contemporary land uses. The forestry plantations diminish some of the area's awe-inspiring qualities of openness, as well as its perceived naturalness.
A rugged and complex pattern of peat hags, hidden burns, lochans and pools at the local level, despite the landscape's simple composition at the broad scale.	Perceptions that the landscape has inspiring qualities at a local scale, that strengthen towards the core of the WLA, and which appear to extend well beyond its (often imperceptible) boundaries, especially to the south and west.
A remote, discrete interior, with limited formalised access other than occasional tracks near Beinn Ratha, Shurrery and Dorrery to the north-east and east.	Physically challenging terrain to access, due to the peat coverage and incised water courses, especially in the core.

1.4.2.3 Review of NatureScot's WLA Description

This step of the assessment carries out a review of the baseline physical attributes and perceptual responses of WLA 39 and their contribution to the identified WLQs of the area, as identified in NatureScot's WLA description. OPEN agree that the four WLQs set out in the WLA Description are representative of WLA 39, to varying degrees, and does not dispute the factual accuracy of the information that is contained within the WLA Description.

On the basis of OPEN's extensive fieldwork, the WLA Description has been found to not accurately, or fully, capture the influence from human activity that exists around parts of the perimeter and how this diminishes the perceptual qualities of wildness in some areas, particularly to the north, north-east of WLA 39.

The only reference to external human influences within the WLA Description is contained in the following two paragraphs.

"Within the open views, distant mountains often form key foci and landmarks, as discussed previously. In some places, these views also include human artefacts and contemporary land uses that are tall or elevated, and thus appear prominent in contrast to the horizontal emphasis of the peatlands. These elements are mainly located at or beyond the edge of the WLA and include high voltage power lines, wind farms, telecom masts, fences and conifer trees. Where visible across the open expanse of the WLA, these elements can seem to shrink the perceived extent of the area."

"Conifer plantations currently have cumulative effects around the margins of this WLA, seeming to collectively edge the area in an arc from the north east, to the east and south west. The plantations diminish some of the area's awe-inspiring qualities of openness, as well as its perceived naturalness, and are particularly prominent due to their contrast of colour, texture and form (highlighted further during snow cover upon the peatland)."

No mention is made of the influence from Dounreay Nuclear Power Plant and Vulcan NRTE, the settled landscape around Reay, nor of Baillie Hill, Strathy North and Causeymire wind farms, all of which have a discernible influence on the strength of the wildness qualities that are expressed in different parts of WLA 39, and all of which were present at the time of the WLA Description site work. Since then, external influences have increased with the construction of Strathy North, Halsary, Bad a Cheo, Achlachan and other more distant wind farms.

A matter that is not explained in the WLA Description - nor which can be fully appreciated without visiting the area - is the degree to which the perception of the attributes and resultant wildness qualities in WLA 39 draws on the influence of landscapes which lie well outside the boundaries of the WLA, particularly when viewed from the north, looking south and west.

Although much of the southern edge of WLA 39 is defined by commercial plantations, these tend to be insignificant visual edges in the expansive views seen to the south, which extend well beyond the boundary of WLA 39, up to the edge of the Flow Country, and the lone mountains of Morven and Scaraben in the south (c30 km), to the Ben Griams in the south-west (c25 km) and to Ben Loyal (c40 km) and Ben Hope (c50 km) in the west.

These extremely long-distance views give WLA 39 an added dimension of vastness, albeit they lie outside WLA 39 (and include WLA 36), and completely alter the perception of the wildness qualities of the area, which are not constrained by the WLA 39 boundaries. Human influences in the views south include the distant wind farms to the south-east including Causeymire, Halsary, Bad a Cheo, Achlachan and Buolfruch, and the forestry plantations, which appear almost inconsequential, except at close range.

To the west of WLA 39, the operational Strathy North Wind Farm, outwith the WLA, is conspicuous from the Beinn Ratha ridgeline as it cuts across the simple, open, peatlands which otherwise seems to extend all the way to Ben Loyal and Ben Hope and the north coast, appearing to seamlessly connect WLAs 39, 35 and 38 (although in reality there is a substantial gap in between). If Strathy South Wind Farm is built out and Strathy Wood Wind Farm, consented and built out, these wind farms will serve to extend this influence much deeper into the expanse of apparent wild land, and will appear across the full horizon defined by these distant mountains.

In contrast, from the undulating and more elevated parts of the northern edge of WLA 39, a completely different perception is achieved to the east of Beinn Ratha and the ring of hills that connect from the south east up to it (including Ben nam Bad Beag), where the human influences of close range forestry, the Dounreay Nuclear Power Plant, Vulcan NRTE, Baillie Hill and Forss Wind Farms all physically curtail the WLA boundary and strongly affect the perception of wildness qualities within the edge of WLA 39.

To the north and west of Beinn Ratha, where the WLA appears to extend north to the coast (but in fact stops short of it), these human patterns are less influential, albeit a transmission line demarcates the boundary of the wild land area in the middle distance, beyond which the Drum Hollistan Wind Farm site is located. Long-range views to Ben Loyal and Ben Hope in the west bear more similarity to the type of views of Morven and Scaraben that are seen in the south, in terms of their depth and extensiveness, save for the influence of Strathy North Wind Farm which appears to extend appreciably into the core.

While on paper, the extent of WLA 39 may be relatively small, this does not reflect the impression that is gained in reality, on the ground, in which it is experienced as one part of a vast and much more extensive landscape resource covering much of Caithness and northern Sutherland, which includes at long range WLA 36 too. This is an important consideration when evaluating the degree to which the Offshore Development affects the perception of the already diminished wildness qualities along the northern edge of WLA 39, and whether this is regarded to affect or undermine the whole of the WLA, as the whole of WLA 39 is actually appreciated as one part of a much larger context.

1.4.2.4 Levels of wildness mapping

NatureScot's 2014 analysis of 'Levels of Wildness' is presented in Figures 6.14a to 6.14e and gives an understanding of the extent to which the physical attributes of the WLQs can be experienced in the different parts of WLA 02. Figure 6.14a presents the 'Relative Wildness' which is a composite map of the four physical attributes that contribute to wildness, namely 'perceived naturalness' (Figure 6.14b), 'rugged or challenging terrain' (Figure 6.14c), 'remoteness from public mechanised access' (Figure 6.14d), and 'lack of built modern artefacts' (6.14e).

Figure 6.14b shows that 'perceived naturalness' is expressed to a relatively high degree across WLA 39 with the exception of lower levels around the northern and western edges. Figure 6.14c shows that levels of wildness relative to 'rugged or challenging terrain' is consistently low across all of this WLA and explains why the 'Relative Wildness' is not high. A similar representation is shown in respect of 'remoteness from public mechanised access' (Figure 6.14d), and 'lack of built modern artefacts' (6.14e), whereby low levels occur around the northern, eastern and western edges where roads and tracks occur, and with some extension into WLA 39 relating to tracks from the north-east.

The composite plan in Figure 6.14a presents the overall levels of wildness in which there are no areas with the highest levels of wildness, but with higher levels occurring through the core and lower levels occurring around the edges, especially the northern edge. This shows that along the northern edge, where visibility of the Offshore development would be most notable, there is already an erosion of the WLQs.

1.4.3 Step 3: Assess the Sensitivity of the Wild Land Qualities

The sensitivity of the northern and north-western parts of WLA 39 which make up the WLA 39 Study Area is assessed by combining the value of the WLA and its susceptibility to the Offshore Development. NatureScot guidance summarises this step as follows in Table 1:

"Through detailed field assessment within the Offshore Study Area, assess the sensitivity of the wild land qualities scoped in (including their physical attributes and perceptual responses), to the type and scale of change proposed".

The value of the WLA as a whole has been established previously as medium-high (section 1.3.2).

NatureScot's 2020 Guidance requires the assessor to establish which WLQs, including the physical attributes and perceptual responses that contribute to those qualities, are most susceptible to the type and scale of change proposed.

The WLQs vary across WLA 39, in terms of their strength and/ or the intensity to which they can be perceived. This means that the susceptibility that is attached to them must also vary across WLA 39.

Within the northern and north-western parts, which make up the WLA 39 Study Area, the susceptibility is affected by the following factors. Firstly, there is the strength and robustness of the landscape character, which is strongly defined as a broad and open expanse of sweeping moorland. It is in this context that the seascape to the north has a relatively weak association with much of WLA 39, except from along the northern boundary from where it is seen to form the background to the wider setting, albeit separated from the WLA by the coastal edge. Secondly, the seascape presents an open, expansive and simple setting which will reduce awkward comparisons of scale or a sense of over development. Thirdly, there are existing human influences which are seen from, but which lie outside the WLA 39 boundary, including Dounreay Nuclear Power Plant, Vulcan NRTE, commercial forestry plantations; Strathy North, Baillie Hill and Forss Wind Farms, the A836 and the settlement at Reay.

These factors reduce the susceptibility of the WLA 39 Study Area to medium, and the combination of a medium-high value with a medium susceptibility, produces a **medium-high** sensitivity for the one WLQ which is susceptible to the effects of the Offshore Development.

The ZTV in Figure 16.11 demonstrates that the Offshore Development does not have the potential to significantly affect the central, southern and eastern parts of WLA 39, which are not included in the WLA 39 Study Area, owing principally to the notable absence of visibility across almost all these areas. This means that the susceptibility of these parts is very limited, and the effect of the Offshore Development will not be significant on WLQ4 in these central, southern and eastern parts.

1.4.4 Step 4: Assess the Magnitude of Change

A key component in assessing the significance of effects is to attribute the likely magnitude of change that may arise within the WLA 39 Study Area across the northern and north-western parts of WLA 39, where there is the potential for significant effects to arise in respect of WLQ4. This is set out in Table 1.4-4 below.

Table 1.4-4 Assessment of effects on wild land qualities

Wild Land Quality	Assessment of effects on wild land qualities
<p><i>“WLQ1: An awe-inspiring simplicity of landscape at the broad scale, with a strong horizontal emphasis, ‘wide skies’ and few foci.”</i></p> <p><i>“At the broad level, this WLA comprises mainly flat, gently sloping or undulating peatland with simple vegetation cover. Given the large extent over which this occurs, this creates an image of extreme simplicity and openness which results in a strong sense of awe. The openness of the landscape means it is very exposed and views of ‘wide skies’ and dynamic weather conditions emphasise the naturalness of the landscape, whilst also increasing the perceived sense of risk.</i></p> <p><i>There are few dominant foci within the peatland. In most places, this means attention alternates between the skyline and the foreground habitat, for example bogs, pools and mossy vegetation, highlighting elements that contribute to the perceived naturalness of the area. Where foci do occur, they tend to be formed by vertical elements that stand out against the horizontal landform, such as the distinct hill of Beinn Ràtha within the WLA and the lone mountains of Morven, Scaraben, Ben Loyal and the Bens Griam outside the area. These isolated features typically attract greater focus than in other landscapes because of the simplicity of the surrounding landscape from which they are seen.”</i></p>	<p>The Offshore Development will have indirect effects on this WLQ as it comprises tall features which will be visible in the middle range from localised areas within the north and north-west of the WLA 39. The ZTV in Figure 16.11 shows that all seven of the turbines will be visible from the northern slopes of Beinn Ratha and the northern hill ridge that extends around to Beinn nam Bad Mor at a range of 11 to 22 km, as well as from the broader northern slopes of Cnoc Bad Mhairtein and Cnoc an Fhuarain Bain at a range of 18 to 22 km.</p> <p>The first paragraph in the description, describes the landscape of the WLA and how this defines the open and exposed character, while the second paragraph describes how the lack of foci in the WLA leads to the skyline and landscape of the WLA presenting the characterising features. Beinn Ratha is the only focus identified within the WLA, while other larger hills outwith the WLA are also identified as foci, all on account of their vertical form amidst the horizontal moorland. There is no reference to Baillie Hill, Strathy North and Causeymire wind farms, all of which form foci around the edge of WLA 39, and all of which were present at the time of the WLA Description site work.</p> <p>Taking Sean Airigh as a reference point from which comparison of the operational wind farms and the Proposed Development can be established (Figure 16.66b), Strathy North is located a minimum of 12.5 km to the west, Baillie Hill is located a minimum of 9 km to the north-east and the Proposed development would be located a minimum of 15.2 km to the north. Despite not being referenced in the WLA 39 description, these wind farms are already visible from notable extents of the WLA, as shown in the cumulative ZTVs in Figures 16.17 and 16.19, with Strathy North typically visible across west facing slopes and Baillie Hill typically visible across east-facing slopes, such that the Offshore Development would not be introducing visibility of wind farm development in areas where there is already an influence from this type of development. While the proposed offshore WTGs would be taller than the operational onshore WTGs, their more distant location from this representative viewpoint would reduce the perceived disparity in scale. Taking Beinn Ratha as an alternative reference point, while Strathy North Wind farm would be located a minimum of 14 km, compared to the proposed Development at a minimum of 13 km, they would be still be relatively distant and occupying a small proportion of a wider view in which Baillie Hill Wind Farm would be closer at 7.5 km and Dounreay Nuclear Power Facility would be visible on the coast at a minimum of 5.5 km. Furthermore, there is no reference in the description to the landscapes to the north or the importance of the North Atlantic to this WLQ.</p> <p>While the Offshore Development would form an additional large-scale development in views from the northern parts of WLA 39, the extent to which it would detract from WLQ1, would be moderated, not only by its location outwith the WLA, but its</p>

Wild Land Quality	Assessment of effects on wild land qualities
	location at distances beyond 11 km. The existing influence from operational wind farms in those parts of the WLA where visibility of the Offshore Development would arise, would also moderate the effect. The magnitude of change would be medium-low, and the effect would be not significant.
<p>“WLQ2: A remote, discrete interior, with limited access and a strong sense of solitude.”</p> <p><i>“The elevated slopes surrounding the peatland interior typically screen this from lower-lying locations around the margins, despite the slopes being relatively gentle. In reverse, this also means that lower-lying human elements outside the WLA, such as settlement and roads within adjacent straths, tend to be screened from most of the interior, leading to a strong sense of remoteness and sanctuary.</i></p> <p><i>There are not many tracks or paths entering the WLA and none at all in the west or crossing the area from one side to the other. Given that it is very difficult to walk off-path due to the boggy ground, this strongly limits access to the area and there are few visitors, amplifying the sense of solitude.</i></p> <p><i>Despite few people accessing the WLA’s interior, it is viewed by relatively high numbers of people whilst travelling by train along the railway line at the south eastern edge of the area. Being slightly elevated, this offers open and distant views to both the north and south (across the adjacent Causeymire – Knockfin Flows WLA 37), although these views are fleeting and interrupted along sections by structures such as derelict wind breaks. In reverse, the railway line itself is surprisingly hidden within views from most of the WLA interior due to the subtle screening effect of the intervening peatland slopes. In addition, when trains are seen, although they attract attention due to their sound, noise and movement (and lights at night), this interruption is brief.</i></p> <p><i>There are some historic buildings, enclosures and drains within the WLA interior that indicate more active management in the past. The typical isolation, small scale, and low-key siting and character of these mean their effects are usually localised.”</i></p>	<p>The Offshore Development would have indirect effects on this WLQ as it comprises tall features which could potentially be visible from parts of the interior.</p> <p>The description highlights the effect that the slopes surrounding the peatland interior have, in respect of screening human elements that lie outwith the WLA. The ZTV in Figure 6.11 demonstrates the fact that there would be no visibility of the Offshore Development in the peatland interior owing to the screening effect of the surrounding slopes as described in the description. The ZTV shows there to be very limited theoretical visibility of the Offshore Development from central to southern parts of WLA39. While there would be visibility occurring as large patches across the northern part, the strong sense of solitude and sanctuary reported to be found in the peatland interior is not evident in these parts owing to the existing influence of operational wind farms visible across similar sized patches, most notably Baillie Hill Wind Farm to the north-east, as shown in the cumulative ZTV in Figure 16.17, and Strathy North to the west, as shown in the cumulative ZTV in Figure 16.19.</p> <p>WLQ2 is not evident in the northern parts of WLA 39, which is closest to the Offshore Development and where theoretical visibility is most extensive. While there is the potential for an effect to arise where theoretical visibility extends south to the northern edge of the peatland interior, for example occurring as patches around Cnoc Bad Mhairtein and Beinn nam Bad Mor, the Offshore Development would be a minimum of 20 km from these areas and would occupy only 5 to 10 degrees of the full 360 degree view. Furthermore, there is existing visibility of closer range Baillie Hill Wind Farm at a minimum of 10 to 13 km to the north-east and Strathy North Wind Farm at a minimum of 13 to 17 km to the west. While the Offshore Development would comprise larger WTGs, the disparity in scale with the onshore WTGs would be moderated by their close proximity to this northern part of the peatland interior.</p> <p>While the Offshore Development would form an additional large-scale development in views from the northern edge of the peatland interior, the extent to which it would detract from WLQ2, would be moderated, not only by its location outwith the WLA, but its location at distances beyond 20 km from the peatland interior. The existing influence from operational wind farms in those parts of the WLA where visibility of the Offshore Development would arise, would also moderate the effect. The magnitude of change would be low, and the effect would be not significant.</p>
<p>“WLQ4: A remarkably open landscape with extensive visibility, meaning tall or high features in the distance can be clearly visible which can influence how and to what strength the wildness qualities are perceived.”</p>	<p>The Offshore Development will have indirect effects on this WLQ as it comprises tall features which will be visible in the middle range from localised areas within the north and north-west of the WLA 39. The ZTV in Figure 16.11 shows that all seven of the WTGs will be visible from the northern slopes of Beinn Ratha and the northern hill ridge that extends around to Beinn nam Bad Mor at a range of 11 km to 22 km, as well as</p>

Wild Land Quality	Assessment of effects on wild land qualities
<p><i>“The great openness of the peatland means there are extensive and far-reaching views – across the WLA, but also towards the margins and beyond. Within these views, the simplicity of the landcover means it is typically difficult to perceive scale and distance, so the area often appears more extensive than it actually is.</i></p> <p><i>Within the open views, distant mountains often form key foci and landmarks, as discussed previously. In some places, these views also include human artefacts and contemporary land uses that are tall or elevated, and thus appear prominent in contrast to the horizontal emphasis of the peatlands. These elements are mainly located at or beyond the edge of the WLA and include high voltage power lines, wind farms, telecom masts, fences and conifer trees. Where visible across the open expanse of the WLA, these elements can seem to shrink the perceived extent of the area.</i></p> <p><i>Conifer plantations currently have cumulative effects around the margins of this WLA, seeming to collectively edge the area in an arc from the north east, to the east and south west. The plantations diminish some of the area’s awe-inspiring qualities of openness, as well as its perceived naturalness, and are particularly prominent due to their contrast of colour, texture and form (highlighted further during snow cover upon the peatland).</i></p> <p><i>The existing plantations also interrupt perception of the area extending into the adjacent Causeymire-Knockfin Flows WLA (37) to the south and to arresting features in the distance such as the isolated hills of Ben Alisky, Morven and Scaraben. Evidence of ongoing felling activity can also influence the sense of solitude and sanctuary.”</i></p>	<p>from the broader northern slopes of Cnoc Bad Mhairtein and Cnoc an Fhuarain Bain at a range of 18 to 22 km.</p> <p>The description highlights the importance of the landscapes around the margins of WLA 39, which can contribute to the impression that the area is more extensive than it actually is. The location of the Offshore Development in the Pentland Firth means that it will not affect this perception of the open landscape extending beyond the boundaries of WLA 39. Furthermore, while there is reference to the focal feature that distant mountains create around WLA 39, there is no reference to the seascape to the north nor its importance to the setting of WLA 39. There is also no specific reference to the human influences, including the Dounreay Nuclear Power Plant, Vulcan NRTE, operational Baillie Hill and Forss wind farms and extensive plantation forestry, which diminish the wildness qualities along the northern edge of WLA 39, although more general references to human influences are made.</p> <p>The magnitude of change on WLQ4 would be medium-low owing to the following factors. Firstly, the separation distance of a minimum of 11 km means that the Offshore Development would be seen as a middle range feature and would occupy only between 5 and 30 degrees of the available 360-degree views, as shown on the Horizontal Angle ZTV in Figure 16.8. Secondly, the Offshore Development would be located in the Pentland Firth, which is clearly separate and distinct from the open peatlands and surrounding landscapes which contribute to the perception of the wider extents of this area. Thirdly, there are existing large-scale developments along the northern coast, which are located closer to WLA 39 than the Offshore Development would be, and which already detract from the wildness qualities experienced from the northern parts of WLA 39. These include Baillie Hill and Forss Wind Farm, Dounreay Nuclear Power Plant and Vulcan NRTE. The offshore WTGs would, nonetheless, be seen as large-scale structures and offset from the moorland coastline as opposed to the settled coastline.</p> <p>While the Offshore Development would form an additional large-scale development in views from the northern parts of WLA 39, the extent to which it would detract from WLQ4 would be moderated owing to the factors described above and the effect would be not significant.</p>

1.4.4.1 Cumulative effects

The assessment presented in Table 1.4-4 above, considers the cumulative effect that the Offshore Development will give rise to in addition to the baseline wind farm context comprising all operational wind farms, such as Strathy North, Baillie Hill and Forss and other large-scale developments, such as Dounreay Nuclear Power Plant and Vulcan NRTE. The three other cumulative scenarios that need to be considered are Scenario 1, in which the cumulative effects of the Offshore Development are considered in conjunction with all operational and consented wind farms and other large-scale developments, Scenario 2, in which the cumulative effects of the Offshore Development are considered in conjunction with all operational, consented and application stage wind farms and other large-scale developments, and Scenario 3, in which the cumulative effects of the Offshore Development are considered in conjunction with all operational, consented and application stage wind farms and other large-scale developments, as well as future proposed West Orkney Offshore Wind Farm.

1.4.4.2 Scenario 1

In Scenario 1, the most notable addition will be the consented Limekiln Wind Farm which comprises 21 turbines at heights of 125.6 m and 139.4 m and which will be located on the northern edge of WLA 39. Limekiln Wind Farm will present a much closer range wind farm development than the Offshore Development. When considered as part of the cumulative baseline, Limekiln Wind Farm will moderate the effect of the Offshore Development by accentuating its greater separation distance, its smaller number of turbines and its lesser scale, despite the Offshore Development increasing the extent and influence of wind farm development into the Pentland Firth. Overall, the cumulative magnitude of change will be **low**.

The combination of the medium-high sensitivity and the low cumulative magnitude of change will give rise to a **not significant** cumulative effect.

1.4.4.3 Scenario 2

In Scenario 2, the most notable additions will be application stage Drum Hollistan and Ackron wind farms which sit to the immediate north of the north-western WLA 39 boundary, application stage Strathy Wood and Strathy South to the west, at a minimum of approximately 7 km and 8 km, and application stage Limekiln Wind Farm Resubmission and Extension to the immediate east. In considering the addition of the Offshore Development to this cumulative baseline, in which wind farm development will have a notable influence around the northern and north-western parts of WLA 39, it is unlikely that the cumulative magnitude of change will rise above **low**. It will be in contrast to these closer range wind farms and their wider horizontal extent that the addition of the Offshore Development will have a limited additional effect. The wildness context, in which the effects from the Offshore Development will be experienced, will already be subject to a considerable degree of diminution from these cumulative developments present in these north-westerly, westerly and easterly sectors.

Taking all these factors into account, the medium-high sensitivity combined with the low cumulative magnitude of change will give rise to a **not significant** cumulative effect.

1.4.4.4 Scenario 3

In Scenario 3, scoping stage West Orkney Offshore Wind Farm will be located a minimum of approximately 35 km to the north of the northern boundary of WLA 39. This will be seen set beyond the application stage Drum Hollistan 2 and Ackron Resubmission Wind Farms, which will be located along the northern boundary of the WLA, and Limekiln Wind Farm Resubmission and Extension, which will be located along the eastern boundary of the WLA. In relation to these close-range onshore wind farms, West Orkney Offshore Wind Farm will appear especially distant and small scale, albeit with a potentially broad horizontal extent. While the addition of the Offshore Development will be seen to draw offshore wind farms closer to the northern coastline and WLA 39, as under Scenario 1 and Scenario 2, its influence will be moderated by the especially close-range onshore wind farms around the northern and eastern boundaries. The cumulative magnitude of change will be **low**.

Taking all these factors into account, the medium-high sensitivity combined with the low cumulative magnitude of change will give rise to a **not significant** cumulative effect.

1.4.5 Step 5: Judge the Significance of Effects

In Step 1 of this assessment, following considerations set out in NatureScot Guidance, it was determined that the WLA 39 Study Area cover the northern and north-western parts of WLA 39 where visibility of the Offshore Development is shown on the ZTV to occur (Figure 16.11). In Step 1, it was also determined that of the four WLQs evident in WLA 39, WLQ1, WLQ2 and WLQ4 would be susceptible to the effects of the Offshore Development.

In Step 2 of this assessment, an analysis of the baseline conditions highlighted that all four of the WLQs were indeed present in WLA 39, albeit to variable extents and with some existing erosion of these WLQs already having taken place in the northern and north-western parts which are closer to operational wind farms, other large-scale developments, settlements, roads and contemporary land uses such as farming and forestry.

In Step 3 of this assessment, the sensitivity of the northern and north-western parts of WLA 39 to the Offshore Development has been assessed as being medium-high, through a combination of the medium-high value, relating to the WLA status, and the medium susceptibility to the Offshore Development, considering its location in the Pentland Firth and existing influence of closer range developments.

In Step 4 of this assessment, the magnitude of change on WLQ1 has been assessed as medium-low, on WLQ2 as low, and on WLQ4 as medium-low. This takes into account the separation distance between the Offshore Development and WLA 39, the relatively small proportion of the wider views that the seven offshore WTGs would occupy, their association with the seascape and not the surrounding landscape of WLA 39 and the baseline influence from a number of different large, medium and small-scale developments along the northern edge of WLA 39, as well as operational wind farms to the west, north-east and south-east.

In respect of the three different cumulative Scenarios, the addition of the Offshore Development would give rise to a low cumulative magnitude of change and not significant cumulative effects. This assessment relates principally to the fact that the majority of the cumulative developments are all closer range to WLA 39 and will occupy the onshore area between WLA 39 and the Offshore Development, thus moderating the additional effect it will give rise to.

In conclusion, OPEN is of the professional opinion that while the Offshore Development would affect the perception of wildness qualities in parts of WLA 39, these effects would arise, in the main, in locations where the wildness qualities are not expressed to their optimum and where other external influences have resulted in a diminution of their strength. Importantly, in the parts of WLA 39 which display wildness qualities to their optimum, the Offshore Development will not cause any significant effects. On this basis, OPEN considers that Offshore Development would not affect the integrity of the WLQs that are experienced in WLA 39.

1.5 References

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