

Appendix 6.2 Assessment of Effects on the Special Landscape Qualities of the Hoy and West Mainland NSA



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# Appendix 6.2: Assessment of Effects on the Special Landscape Qualities of the Hoy and West Mainland NSA

## Introduction

This Technical Appendix contains the Assessment of Effects on the Special Landscape Qualities (SLQs) of the Hoy and West Mainland National Scenic Area (NSA). It follows guidance set out in NatureScot's Working Draft 11 entitled 'Guidance for Assessing the Effects on Special Landscape Qualities' (Scottish Natural Heritage, 2018). The guidance is aimed specifically at landscape professionals undertaking Landscape and Visual Impact Assessments (LVIA) for developments or land use changes with potential to impact on the SLQs of NSAs or National Parks (NP).

The following figures are of particular relevance to the assessment of effects on the NSA and have been used in the assessment process.

Figure 6.8: Landscape Designations and Wild Land Area with ZTV at 20 km radius;

Figure 6.11: Composite Map with Landscape Designations at 20 km radius;

Figure 6.28: Viewpoint 10: A967 near Queena;

Figure 6.29: Viewpoint 11: Ring of Brodgar; and

Figure 6.37: Viewpoint 19: Ward Hill, Hoy.

The draft guidance presents an approach that is intended to be *"proportionate to the scale and stage of the development, be clear and transparent so that the reasoning that informs judgements can be tracked and convey the complexity of effects"*. It sets out a four-step approach presented in the associated Pro Forma under the following four headings;

Step 1: The Proposal – gain as full an understanding of the proposal as possible.

Step 2: Definition of the Study Area and Scope of the Assessment - identifying the area likely to be affected.

Step 3: The Analysis of Impacts and Effects on SLQs.

Step 4: Summary of Impacts on the SLQs, implications for the NSA/NP and possible future effects on SLQs and recommendations for mitigation.

## Role of NSAs

National Scenic Area (NSA) is a conservation designation used in Scotland and administered by NatureScot (previously Scottish Natural Heritage (SNH)). The designation's purpose is to identify areas of exceptional scenery and to protect them from inappropriate development. NSAs were first established in 1980, under planning legislation, by order of the Secretary of State. Part 10 of the Planning etc. (Scotland) Act 2006 gave NSAs a statutory basis. The Town and Country Planning (National Scenic Areas) (Scotland) Designation Directions 2010 then brought this into force. In December 2010, NSAs were designated under this new legislation.

Scottish Planning Policy (SPP) is a statement of Scottish Government policy on how nationally important land use planning matters should be addressed. With regard to National Designations, Paragraph 212 of SPP states that:

"Development that affects a National Park, National Scenic Area, Site of Special Scientific Interest or a National Nature Reserve should only be permitted where:

the objectives of designation and the overall integrity of the area will not be compromised; or



any significant adverse effects on the qualities for which the area has been designated are clearly outweighed by social, environmental or economic benefits of national importance."

While there are other relevant policies that are addressed in the Planning Policy chapter (**Chapter 5**) the focus in this assessment is on the SPP advice.

The role of this Assessment is to provide an appropriate level of information to enable decision makers and consultees to reach a conclusion regarding the potential effects on the qualities of the Hoy and West Mainland NSA.

This assessment is carried out with specific reference to the effect that the Proposed Development may have on the 'special qualities' of the NSA. In 'Guidance for Identifying the Special Qualities of Scotland's National Scenic Areas' (SNH, 2008), SLQs are defined as *"the characteristics that individually, or when combined together, make an NSA special in terms of landscape and scenery."* The special qualities of the Orkney – Hoy and West Mainland NSA are documented in two reports: 'Scotland's Scenic Heritage' (Countryside Commission for Scotland, 1978), and 'Special Qualities of the Orkney – Hoy and West Mainland NSA' (SNH, 2010), which supersedes the 1978 report.

"The great ice-rounded eminences of the hills of North Hoy dominate the Orkney scene with a power that is scarcely in tune with their modest height (479 metres). Their bold shape, fine grouping, soaring cliffs and headlands, including the famous stack of the Old Man of Hoy, are almost as important to the Caithness scene as they are in that of Orkney.

North Hoy has a particularly strong visual inter-relationship with the south-west mainland of Orkney, the pastoral character of which around the shores of the Loch of Stenness makes a good foil for the bold hills of Hoy. The basin of this loch is enclosed by low rolling hills of lush grassland, some arable land, scattered farm steadings and stone dykes with a noticeable lack of trees, giving a very open landscape, the character of which is enlivened by the abundant remains of ancient occupation.

This landscape culminates in the west in cliffed headlands like a rampart against the sea, which breaks through at Hoy Sound in a tidal race of impressive swiftness. The stone-built settlement of Stromness rising steeply out of its harbour further enhances the character of the area."

## Step 1: The Proposal

The aim of Step 1 is to "gain as full an understanding of the proposal as possible" by setting out the key aspects of the proposal that have potential to affect the SLQs.

The Proposed Development will comprise four wind turbines, each with a blade tip height of up to 180 m, located on Hundland Hill (106 m AOD) in the north-east corner of West Mainland. Other on-site infrastructure will include a substation, borrow pit, construction compound, earthworks and access tracks. The permanent features most likely to have an effect on the Hoy and West Mainland NSA will be the four turbines, as well as to a lesser extent the substation and access tracks.

The Hoy and West Mainland NSA is located a minimum of 10.1 km to the north of the closest turbine of the Proposed Development. The NSA covers the south-western part of West Mainland, the small island of Graemsay and the northern part of Hoy. The ZTV in **Figure 6.8** shows theoretical visibility to occur across the south-western part of West Mainland, and the north-facing slopes and hill tops of Hoy and Graemsay.

The Proposed Development could potentially affect the SLQs of the Hoy and West Mainland NSA owing principally to visibility of the four wind turbines. These components will be located on Hundland Hill, which forms part of the low Coastal Hills and Heath LCT and occurs along the north coast of West Mainland. There are currently two operational wind farms in the Moorland Hills LCT along the east coast of West Mainland, namely Burgar Hill Wind Farm and Hammars Hill Wind Farm. Also of relevance to the cumulative assessment are the more distant consented Costa Head Wind Farm in the same Coastal Hills and Heath LCT as the Proposed Development and a two turbine consented extension to Hammars Hill.



# Step 2: Definition of the Study Area and Scope of the Assessment

The aim of Step 2 is to identify the extent of the area likely to be affected through consideration of the location of the NSA relative to the Proposed Development, the extent to which the Proposed Development will alter the NSA, in this case as a result of its visibility only, and how it will affect people's experience of the NSA from, both, within and outwith the NSA boundaries.

### Location of the NSA Relative to the Proposed Development

The Hoy and West Mainland NSA covers the south-western corner of West Mainland, and the northern half of the Island of Hoy with the designated area extending out to cover the island of Graemsay, as well as the surrounding seascapes of all these islands. Mainland Orkney is the largest of the Orkney Islands and the south-west part of West Mainland, that is covered by the NSA designation, includes the coastal settlement of Stromness and the relatively low-lying and settled surrounding landscape. This area also includes the Loch of Stenness and the archaeological features of Ring of Brodgar and Maes Howe. Hoy is the second largest of the Orkney Islands. Hoy lies to the south-west of the Mainland of Orkney and is most famous for the dramatic cliffs around its western coast, including the famous stack 'The Old Man of Hoy'. Hoy is the hilliest of the Orkney Islands, with the Rugged Hills LCT in the north rising to high points of 479 m and 433 m AOD. Moorland Hills LCT covers the central and southern inland area of the island, with the hills gradually falling in height from high points of 399 m AOD in the north to 101 m AOD in the south.

The Proposed Development lies a minimum of 10.1 km from the closest northern edge of the NSA. The Proposed Development will, therefore, have no direct effects on the NSA. The Zone of Theoretical Visibility (ZTV) in **Figure 6.8** shows theoretical visibility to occur in localised patches mostly concentrated in the western parts of the NSA, albeit with some extending into the central parts where higher land occurs.

#### Potential for Cumulative Effects

The potential for cumulative effects to arise relates principally to the interactions of the Proposed Development with the operational, consented and application stage wind farms. The locations of the cumulative wind farms are shown in **Figure 6.12**. Those closest to the NSA include the operational Hammars Hill and Burgar Hill wind farms, a minimum of approximately 4 km and 6 km to the north-east of the north-eastern boundary. There are also a number of smaller scale operational turbines on West Mainland, as well as on Rousay, Shapinsay and Hoy.

In light of these and other proposed developments, there is the potential for a significant cumulative effect to arise across various parts of the NSA, and for that reason the whole of the NSA has been considered in this assessment.

### Potential for Night-time Effects

The potential for night-time effects relating to the aviation lighting on the turbines will be limited owing to the minimum distance of 10.1 km between the Proposed Development and the closest boundary of the NSA. The Night-time Assessment is presented in Appendix 6.3 which includes the methodology applied and the scope of the assessment in terms of the lighting requirements. The assessment considers aviation lighting set on the hubs of the four turbines at a height of 102.5 m, and with a blade tip hight of 180 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 humidity in the atmosphere, 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 200cd (a reduction permitted by the Civil Aviation Authority). When visibility is less than 5 km the weather conditions will also act to reduce the intensity of the lights, to an intensity also calculated to be 200 cd.

The Hub Lighting ZTV in **Figure 16.19** shows that some visibility of the aviation lighting will occur across parts of the NSA. The ZTV shows patches of visibility of variable numbers from one to four aviation lights and patches of no visibility. Those areas from which four aviation lights would be seen, occur across the coastal hills on the west of West Mainland between 10 and 15 km, and to the south of Loch of Stenness beyond 15 km. The Baseline Light Pollution map in **Figure 16.18** shows that there are already multiple sources of light pollution in the NSA, including all the lighting associated with the town of Stromness and to a lesser extent Dounby. The settled nature of West Mainland means that there is also baseline lighting associated with rural properties and roads across this northern part of the NSA and there are no remote parts from which no

baseline lighting would be visible. It is in this context and also taking into account the extent to which the intensity of the aviation lighting would dissipate over this distance, that the addition of the aviation lighting at distances beyond 10 km would not give rise to a significant effect on the SLQs of the Hoy and West Mainland NSA.

## Summary of Step 2

The Hoy and West Mainland NSA covers a relatively small area and despite the patchy nature of visibility in some parts, the spread of theoretical visibility across most of the NSA means that the whole of the NSA has been considered in this assessment. The NSA covers a predominantly settled and farmed landscape, where human influences occur, albeit typically small in scale and rural in character within the NSA, and with larger scale existing and proposed developments occurring outwith. The scope of the assessment considers the cumulative effects with other large-scale developments.

# Step 3: Analysis of Effects on the Special Landscape Qualities

Step 3 sets out the assessment of effects on the NSA that will potentially arise as a result of the Proposed Development. Within Step 3, the following four key considerations are made;

- Identify those SLQs with potential to be affected;
- Establish the key landscape characteristic that underpin the SLQs;
- Assess the effects of the Development on the relevant SLQs; and
- Consider the potential for mitigation and determine the level of effect.

Table 6.2.1 sets out a preliminary assessment to identify those SLQs with potential to be affected by the Proposed Development. Table 6.2.2 then establishes the key characteristics that underpin the SLQs with reference to NatureScot's NSA citation and Landscape Character Assessment, with information supplemented with the experiences of the assessor gained through site work. Table 6.3.2 also sets out the effects that all relevant SLQs will undergo as a result of the Proposed Development and determines the potential level of effect.

NatureScot's draft guidance requests mention of mitigation measures. The only way to mitigate the landscape and visual effects of the Proposed Development is through the design of the layout. As the proposed Development comprises only four turbines set on a small site, there is limited scope for design alternatives. The small number of turbines does, however, mean that they form a compact group with practically no occurrence of overlapping or outliers. There is, therefore, no further reference to mitigation measures in this appendix. Standard mitigation in respect of site selection and layout design is discussed in Section 6.9 of **Chapter 6**.

## Sensitivity of the Hoy and West Mainland NSA

The value of the Hoy and West Mainland NSA is high. This is because it is a national designation, applied in this area to signify the national importance of the scenic landscape.

The susceptibility of the NSA to the effects of the Proposed Development is medium-high. The high part of the susceptibility rating relates to the fact that there is no large-scale development in the NSA and while there are human influences across the northern part of the NSA in the form of settlement, roads and farmland, the southern part is more undeveloped and remote. The medium part of the rating relates to the fact that there are large scale developments visible from the NSA in the form of wind farm developments and masts and these form an established part of the baseline character of the NSA. The wind farms which have an existing influence across parts of the NSA, as shown in the cumulative ZTVs in **Figures 6.13 to 6.17**. There is also an existing influence from the settlement of Stromness, which lies within the NSA and the frequent ferries and boats, and occasional cruise liners, that pass in and out of Hoy Sound and along the west coast of Hoy.

The combination of the high value of this NSA and its medium-high susceptibility to the effects of the Development results in an overall **high** sensitivity.



## Identify those SLQs with Potential to be Affected

In respect of the Hoy and West Mainland NSA, there are 11 SLQs listed in 'The special qualities of the National Scenic Areas' (SNH, 2010). The majority of the 11 SLQs will not be affected, largely owing to the fact that the Proposed Development will be located outwith the NSA boundary and at distances greater than 10 km. Moreover, many of the SLQs are not susceptible to indirect effects or effects arising in respect of the wider setting. The two SLQs assessed in detail, have potential to be indirectly affected either from within the NSA, or from outwith the NSA, whereby the setting of the NSA, as seen within the wider landscape and seascape context, could be affected. Table 6.2.1 below presents the 11 SLQs attributed to the Hoy and West Mainland NSA, highlighting the two which have potential to be significantly affected and which, therefore, require a detailed assessment.

Special Landscape Quality	Susceptibility to the Proposed Development	
A palimpsest of geology, topography, archaeology and land use.	Indirect effects comprising visibility of the Proposed Development would not affect this SLQ of 'a palimpsest of geology, topography, archaeology and land use'.	
An archaeological landscape of World Heritage Status.	Indirect effects comprising visibility of the Proposed Development may have an effect on this SLQ, as the ZTV <b>in Figure 16.6b</b> shows that patches of visibility cover some of the main archaeological features that are covered by the NSA and the World Heritage Site (WHS).	
The spectacular coastal scenery.	Indirect effects comprising visibility of the Proposed Development would not have an effect on this SLQ, as the ZTV in <b>Figure 16.6b</b> shows the very limited occurrence of theoretical visibility along the western coast of West Mainland and Hoy.	
Sandstone and flagstone as an essence of Orkney.	Indirect effects comprising visibility of the Proposed Development would not affect this SLQ of 'sandstone and flagstone as an essence of Orkney'.	
A long-settled and productive land and sea.	Indirect effects comprising visibility of the Proposed Development would not affect this SLQ of 'a long-settled and productive land and sea'.	
The contrast between the fertile farmland and the unimproved moorland.	Indirect effects comprising visibility of the Proposed Development would not have an effect this SLQ of 'the contrast between the fertile farmland and the unimproved moorland'.	
A landscape of contrasting curves and lines.	Indirect effects comprising visibility of the Proposed Development would not affect this SLQ of "a landscape of contrasting curves and lines'.	
Land and water in constantly changing combinations under the open sky.	Indirect effects comprising visibility of the Proposed Development would not affect this SLQ of 'land and water in constantly changing combinations under the open sky'.	

#### Table 6.2.1 – Hoy and West Mainland SLQs with potential to be affected

Special Landscape Quality	Susceptibility to the Proposed Development	
The high hills of Hoy.	There is the potential that visibility of the Proposed Development may affect the appreciation of the high hills of Orkney as the proposed turbines would be visible from the hill tops and north-facing slopes as shown in the ZTV in <b>Figure 6.6a</b> .	
The townscape of Stromness, its setting and its link with the sea.	Indirect effects comprising visibility of the Proposed Development would not affect this SLQ of 'the townscape of Stromness, its setting and its link with the sea'.	
The traditional buildings and crofting patterns of Rackwick.	Indirect effects comprising visibility of the Proposed Development would not affect this SLQ of 'the traditional buildings and crofting patterns of Rackwick'.	

## Assess the Effects of the Proposed Development on the Relevant SLQs

The two SLQs with potential to be significantly affected by the Proposed Development are assessed in detail in Table 6.2.2 below. In the left-hand column, the descriptions of the SLQs are presented in bold text, while 'further information' is in normal text.

Special Landscape Quality	Effects of the Proposed Development on the SLQs	
An archaeological landscape of World Heritage Status.		
"By their location, shape and vertical presence, the Neolithic monuments of the Ring of Brodgar, the Stones of Stenness and the grass covered tomb of Mags Howe are	The Proposed Development would be located a minimum of 10.1 km from the closest NSA boundary, such that it would have only indirect effects on the setting of the archaeological sites within the NSA. In respect of the	
the grass-covered tomb of Maes Howe, are distinctive landmarks of international renown. They lie within a landscape of low-lying farmland, which has been farmed for millennia. Wilder moors and hills rise to the east, and the Hills of Hoy form the backdrop to the south. Unusually for Orkney, there are few clear views of the open sea. The area feels enclosed, in the middle of a vast lowland amphitheatre of glistening loch and fertile pasture. The NSA is also rich in remains from other eras, from Norse and medieval to the Second World War. However, visible monuments represent only the clearest element of much more extensive and complex evidence of	archaeological sites within the NSA. In respect of the specific archaeological sites referenced it would be located a minimum of 13.4 km from the Ring of Brodgar	
	(Viewpoint 11: <b>Figure 6.29</b> ), 14.1 km from Maes Howe, 14.3 km from the Stones of Stenness, 15.2 km from Unsten and 27.0 km from Dwarfie Stane. The description highlights how these sites are all located in a low-lying landscape which has been modified by agricultural land- uses for millennia. In respect of the wider setting, reference is made to the Hills of Hoy to the south and the	
	moorland hills to the east, but not to the more distant coastal hills to the north, where the Proposed Development would be located.	
	The ZTV in <b>Figure 16.6b</b> shows that there would be visibility of the Proposed Development from all of these sites with the exception of Maes Howe, which would be	
settlement and use of the landscape as revealed by archaeological excavations.	screened by the slight rise in landform to the north. In respect of the archaeological sites in the Loch of Stenness and Loch of Harray basin, the Proposed Development	

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Special Landscape Quality	Effects of the Proposed Development on the SLQs
'The Orkney imagination is haunted by time.'	would be seen as four turbines set behind the intervening
George Mackay Brown.	moorland hills to the north, such that three would be
The Neolithic monuments of central Orkney	seen to below the hub and one would be seen as a tip.
comprise the Heart of Neolithic Orkney World	The magnitude of change on this SLQ would be <b>low</b> owing
Heritage Site and have become recognisable	to a combination of the following factors. Firstly, the
landmarks of West Mainland. Within the NSA	Proposed Development would have only indirect effects
they include:	on this SLQ owing to its location in the coastal hills to the
<ul> <li>The Stones of Stenness, the Ring of</li> </ul>	north, which is over 14 km away and separate from the
Brodgar and other standing stones	loch basin where most of the archaeological sites are
composed of large flags of Devonian	located. Secondly, these hills to the north are not
sandstone.	specifically referenced in the description as forming a key feature in the enclosing hills around the loch basin.
<ul> <li>Maes Howe and Unstan (Onston) cairns,</li> </ul>	Thirdly, the influence of the Proposed Development is
and other cairns and tumuli, which form	limited by the fact that it comprises a compact group of
distinctive, often grass covered low	only four turbines, which occupy only a small proportion
mounds in the landscape.	of a much wider setting and, furthermore, that these four
<ul> <li>The solid carved boulder block of the</li> </ul>	turbines are partly screened by the intervening landform.
Dwarfie Stane on Hoy lies within the NSA	Fourthly, there is already a baseline influence from
(although not in the World Heritage Site)."	operational Burgar Hill Wind Farm, visible in this northern
	sector, and
	Taking all these factors into account, the effect of the
	Proposed Development on this SLQ will be not significant.
The high hills of Hoy	
"The high, rounded hills of Hoy form a	There are two key considerations in the assessment of
spectacular backdrop to much of West	effects on this SLQ; firstly, the effects of the Proposed
Mainland. With their corries, deep U-shaped	Development on views of the high hills of Hoy from West
valleys and patterned ground, these rugged,	Mainland; and secondly, the effects of the Proposed
moorland hills reflect their glacial history.	Development on views from the high hills of Hoy towards
Within a sheltered gully in these hills lies the	West Mainland.
small Berriedale birchwood, the most	The high hills of Hoy form a backdrop to West Mainland in
northerly native wood in Britain.	views from the northern parts of the NSA, from north-
Glaciated landforms on Hoy include distinctive	east, across the Bay of Ireland, Loch of Stenness and Loch
U-shaped valleys, moraines, including a	of Harray, and views from the east, across Clestrain and
terminal moraine at Rackwick, and corries, the	Houton. The Proposed Development would have a very
most northerly in Britain.	limited effect on these views as it would be located to the north of the northern part of the NSA. It would be
Post-glacial features include patterned ground	situated in the opposite direction to the High Hills of Hoy,
on the summit of Ward Hill (Hoy) and raised	as seen from the part of West Mainland covered by the
beaches. In contrast to Hoy, Mainland is a	NSA designation. The Proposed Development would,
drowned coast without raised beaches."	however, be seen within the full 360 degree views from
	parts of the NSA on West Mainland and while this would
	have some influence on the SLQ, this would be limited by
	have some influence on the SLQ, this would be limited by the separation distance of the Proposed Development at

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Special Landscape Quality	Effects of the Proposed Development on the SLQs
	influence from operational Burgar Hill and Hammars Hill
	wind farms to the north-east and east.
	The ZTV in Figure 6.6b shows that visibility of the
	Proposed Development would occur as patches across the
	north-facing slopes from a range of 23 to 30 km. In these
	views, the four proposed turbines would be seen in the
	northerly sector as relatively distant features occupying a
	small proportion of the wider view. Furthermore, they
	would be seen in the context of existing wind farm
	developments in the same northerly sector and although
	the proposed turbines would be seen to be slightly larger,
	from a range of over 23 km they will form small scale
	features in views from these hills.
	In respect of the Berriedale Birchwood, the ZTV in Figure
	6.6b shows that there will be no visibility of the Proposed
	Development in this area and, therefore, there will be no
	effect.
	Overall, the magnitude of change arising as a result of the
	Proposed Development will be low and the effect will be
	not significant.

## **Cumulative Effects**

The Cumulative Assessment considers the following a future scenario in which the Proposed Development is added to a cumulative situation comprising all operational, under construction and consented wind farms. While application stage wind farms are also included in the Cumulative Assessment, in respect of the Proposed Development there is only one application stage wind farm in the 45 km radius, namely Faray, and as this is located a minimum of 31 km from the closest boundary of the Hoy and West Mainland, this has been discounted from the assessment.

The plan in **Figure 16.9** shows that there are no cumulative developments located within the Hoy and West Mainland NSA and few cumulative developments within close proximity. In terms of operational wind farms, Burgar Hill Wind Farm is situated a minimum of approximately 8 km to the north-east and Hammars Hill Wind Farm a minimum of approximately 9 km to the east of the northern NSA boundary. In terms of consented wind farms, the three relevant developments are Costa Head, situated 12.5 km to the north of the northern NSA boundary, and Hammars Hill Extension situated 8.5 km to the east of the northern boundary and Quanterness situated 6 km to the east of the eastern boundary.

The cumulative ZTVs in **Figures 16.13 to 16.17** illustrate the variable extents to which the operational and consented developments would be visible from the Hoy and West Mainland NSA. In the lower-lying parts of the NSA in West Mainland around Loch Harray and Loch Stenness, while visibility of the cumulative developments is typically less extensive owing to the enclosure of the surrounding moorland hills, there is fairly extensive visibility of Burgar Hill and, to a lesser extent, Hammars Hill, owing to their location on these moorland hills. These wind farms, along with consented Costa Head and Quanterness wind farms present visibility across the north facing slopes of Hoy, while consented Hoy Wind Farm presents visibility across the south-facing slopes.

The cumulative wirelines for Viewpoint 11: Ring of Brodgar and Viewpoint 15: Ward Hill, presented in Figures **16.30c and 16.34c** illustrate the limited influence of the operational and consented wind farms, largely owing to their distance from the NSA but also the screening effect of the enclosing landform in the northern part.



#### **Cumulative Assessment**

The operational wind farms with an influence on this NSA are Burgar Hill and Hammars Hill wind farms, which have more of an influence on the northern part of the NSA owing to their closer proximity on the moorland hills to the north-east and east, at a range of approximately 8 km and 9 km respectively, albeit with their influence moderated by their relatively small number of turbines and scale. Consented Hammars Hill Extension comprises two turbines at 150 m which would be located close to the northern side of the existing group, ie further from the NSA. Consented Costa Head Wind Farm comprises four turbines at 125 m to blade tip which would be located on the coastal hills in the north-east corner of the West Mainland and at a greater distance from the NSA than the Proposed Development.

The cumulative magnitude of change on the SLQs of the Hoy and West Mainland NSA in respect of the cumulative developments would be **low**. While the Proposed Development would contribute to the cumulative context, and would introduce turbines with an additional influence owing to their larger size, the separation distance of over 10 km from the northern boundary of the NSA, combined with the limited influence that a compact group of four turbines would have on wider views, the existing influence from the operational wind farms in this same northerly sector and the extensive human influences that occur across this settled and cultivated landscape, would moderate the overall effect and prevent the Proposed Development from becoming a defining feature in respect of either 'an archaeological landscape of World Heritage Status' or the 'high hills of Hoy'.

The combination of the high sensitivity and the low cumulative magnitude of change would give rise to a **moderate / minor** and **not significant** in-conjunction cumulative effect on the NSA in respect of Scenario 1.

An Assessment of the in-combination cumulative effect considers the effect of the Proposed Development in combination with all other cumulative developments rather than only its addition to the different cumulative scenarios. The magnitude of change arising as a result of the Proposed Development in-combination with all other cumulative developments would be low and the effect would be **moderate / minor** and **not significant**. This finding relates to the limited influence of both the Proposed Development and the other cumulative wind farms as shown in the Cumulative Wind Farm Plan in **Figure 6.9** owing to a combination of distance from the NSA and the relatively small scale of these developments.

## Step 4: Summary of Effects on the Special Landscape Qualities

The Assessment has considered the effect of the Proposed Development on the two relevant SLQs of the Hoy and West Mainland NSA. The finding is that the effects on these SLQs will not be significant. All other SLQs relating to other parts of the NSA and their setting, will not be significantly affected. The Proposed Development lies outwith the NSA, at a distance of over 10 km to the north, such that there will be no direct effects on the NSA, only indirect effects associated with its visibility. The ZTV in **Figure 16.6b** illustrates the extent of visibility across the NSA.

Nine of the 11 SLQs will not be affected by the Proposed Development, in most cases owing to the location of the Proposed Development outwith the NSA and more than 10 km to the north of the northern boundary of the NSA, especially in the case of those SLQs which are not susceptible to indirect effects. The two remaining SLQs with potential to be affected include 'an archaeological landscape of World Heritage Status' and 'the high hills of Hoy' both of which will be indirectly affected through visibility of the Proposed Development in views from the NSA.

Table 6.2.2 presents the findings of the assessment on these two SLQs, which are that the effects will not be significant on 'an archaeological landscape of World Heritage Status' or 'the high hills pf Hoy'. These findings relate chiefly to a combination of the limited extents of visibility in those parts of the NSA where the SLQs are experienced, the substantial separation distances between the Proposed Development and those areas where visibility will occur, and the existing influences from surrounding modern artefacts and contemporary land uses.

While there is potential for cumulative effects to arise through the addition of the Proposed Development, these will not be significant owing to a combination of the separation distance between the Proposed Development and the NSA, the small number of proposed turbines, the influence of other operational wind farms and the limited presence and influence of other proposed wind farms. This means that the Proposed Development and other developments will have a relatively weak influence on the cumulative situation.



While the Proposed Development will have effects on two of the 11 SLQs of the NSA, the effects will be not significant. The overall effect on the Hoy and West Mainland NSA will be not significant as the objectives of the designation and the overall integrity of the NSA as a whole will not be compromised.



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