# 6 Landscape and Visual

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# 6 *Landscape and Visual*

## 6.1 Executive Summary

6.1.1 The assessment of landscape and visual effects has been carried out to identify the significant effects that are likely to arise as a result of the Proposed Development. It has considered the effects on landscape and visual receptors, as well as the cumulative effect of the Proposed Development in addition to other wind farm developments. The process involved identifying those receptors with potential to be significantly affected and assessing the potential impacts that the construction and operation of the Proposed Development will give rise to. The significance of the effects has been assessed through combining the sensitivity of each receptor with a prediction of the magnitude of change that will occur as a result of the Proposed Development.

6.1.2 The Proposed Development comprises the construction of six proposed turbines, each 149.9 m to blade tip, and associated infrastructure, including access tracks, a water crossing, crane hardstandings, underground cabling, possible external transformers, on-site substation and maintenance building, a temporary construction compound, borrow pit search area and a permanent meteorological mast. The proposed turbines will not be lit with visible lighting. The site layout is shown in Figure 1.2.

6.1.3 The site is situated on the island of Hoy, close to the eastern coastal edge, and to the immediate west of the village of Lyness. The site lies within a landscape classified as Moorland Hills LCT and characteristically comprises low, rounded, smooth hills covered in heather and moorland grasses. The main road on the island is the B9047 which passes along the eastern coast. The central and western parts of the island are largely undeveloped.

6.1.4 The study area for the Proposed Development covers a radius of 40 km and within this area, those receptors with the potential to be significantly affected have been assessed in detail. This has included one landscape element, 17 Landscape Character Units (LCUs), seven Regional Coastal Character Areas (RCCAs), one designated landscape, 16 representative viewpoints and six principal visual receptors. Photomontages have been prepared for 15 of the 16 representative viewpoints. The figures also include a wireline of the Proposed Development on its own and wirelines with all other cumulative developments. These visualisations have helped assist in the assessment process. Figures 6.1 to 6.14 show plans of the study area, landscape receptors, visual receptors and Zone of Theoretical Visibility models (ZTVs) of the Proposed Development on its own and in combination with other cumulative wind farms, while Figures 6.15 to 6.30 show the photographs, wirelines and photomontages from the representative viewpoints and Figures 6.31 to 6.34 show additional wirelines included to further inform the assessment.

6.1.5 The effects of the Proposed Development are assessed as being relatively localised. The ZTVs in Figure 6.5a, 6.5b and 6.10 show a concentration of visibility across the south-east corner of Hoy and the surrounding small islands, with visibility becoming increasingly patchy towards the north of Hoy as higher hills screen visibility to an increasing extent. The openness of Scapa Flow and the Pentland Firth means visibility extends out from the Proposed Development to the north, east and south to meet the coastal edges of the Mainland of Orkney, Burray, South Ronaldsay and Mainland Scotland. Visibility is typically concentrated along the facing coastal edges, albeit with patches extending inland over lower ground and higher facing slopes.

6.1.6 In respect of the physical effects on landscape elements, the assessment found that the direct effect on the rough moorland, as a result of the construction of the Proposed Development, will be not significant. The losses will comprise only a small proportion of a much wider landscape resource and will occur in an area where the landscape has already been modified by tracks and former naval land uses. Rough moorland will be relatively easy to re-establish post-construction, in those areas temporarily affected.

6.1.7 In respect of effects on landscape character, the assessment found there will be significant effects within a 6.5 km radius of the Proposed Development, with five of the 17 LCUs assessed, with either

the whole or only part of the LCU significantly affected. These LCUs are either close to the site on Hoy or cover nearby islands off the east and south coast from where a strong visual association with the site arises. All LCUs beyond this radius will undergo not significant effects. In terms of coastal character, the Proposed Development will give rise to significant effects on three of the RCCAs, also within a 6.5 km radius of the Proposed Development and largely owing to the strong association between the site and the surrounding coastal landscapes. All other RCCAs will not be significantly affected.

6.1.8 Appendix 6.2 presents a detailed assessment of the effects of the Proposed Development on the Special Landscape Qualities (SLQs) of the Hoy and West Mainland National Scenic Area (NSA). The finding of this assessment is that only one of the 11 SLQs will be significantly affected, namely the High Hills of Hoy, across a localised area in the Moorland Hills LCT on the southern boundary of the designated area, between 5 km and 6.5 km from the Proposed Development. Three other SLQs will be affected by the Proposed Development but not significantly, while the remaining seven SLQs will not be affected.

6.1.9 Appendix 6.3 presents a detailed assessment of the effects of the Proposed Development on the Wild Land Qualities (WLQs) of the Hoy Wild Land Area (WLA). In order to assist the assessment the Hoy WLA has been divided into a Sub-area East and Sub-area West. The finding of this assessment is that four of the six WLQs will be significantly affected where they are experienced in Sub-area East. In Sub-area West, while there will also be significant effects, these will occur in three small localised areas, while the majority of Sub-area West will remain unaffected by the Proposed Development.

6.1.10 In respect of effects on visual amenity, of the 16 viewpoints assessed, the assessment found that nine will be significantly affected during the construction and operational phases of the Proposed Development. These viewpoints are all located within an approximate 10 km radius of the Proposed Development. The viewpoints will mostly be affected owing to either their close proximity to the construction works and operation of the Proposed Development, or their greater sensitivity. All viewpoints beyond this 10 km range will not be significantly affected as a result of the Proposed Development, owing to the greater distance and wider seascape and landscape influences.

6.1.11 In terms of the principal visual receptors assessed, it was found that residents of the two closest range settlements, namely Lyness and Longhope, will be significantly affected during the construction and operational phases. Road-users on the B9047, which connects these two settlements, will also be significantly affected along much of its length, with the exception of the northern section, where there will be no visibility. A significant effect will occur in respect of ferry passengers on the Lyness to Houton ferry between Cava and Lyness. In terms of core paths, walkers on H7 Wee Fea will be significantly affected owing to their especially close range and on the western section of F1 West Hill Circular, owing to the strong association between these opposing coastlines. These significant effects will all be relatively local, occurring within 9 km, with principal visual receptors beyond this extent not being significantly affected.

6.1.12 This assessment considered the cumulative effect of the Proposed Development with all operational, under construction, consented and application wind farms and single turbines above 50 m in height. There are very few operational, under construction, consented and application wind farms and single turbines in the study area. There are no operational or under construction wind farms within a 20 km radius of the Proposed Development, and only three single operational turbines and two single under-construction turbines in this area. There is one consented wind farm at 18 km and the closest application wind farm is at 23 km. There will be no significant cumulative effects largely owing to the very small number, small size and relatively distant location of the cumulative wind farms. This prevents wind farms becoming the prevailing characteristic of landscape character or visual amenity.

6.1.13 The Residential Visual Amenity Assessment (RVAA) in Appendix 6.4 has considered the impact of the Proposed Development on the visual amenity of residents within a 2 km radius, which includes the village of Lyness. The assessment found that, although many of the properties will be subject to significant effects, none of the predicted effects on visual amenity experienced at properties have potential to reach the Residential Visual Amenity Threshold.

6.1.14 In summary, the Proposed Development will give rise to significant effects on landscape character during the construction and operation of the Proposed Development, albeit contained within the localised extent of approximately 6.5 km. It will give rise to significant effects on visual amenity out to approximately 10 km during the construction and operation of the Proposed Development. While landscape and visual receptors beyond these ranges may be affected by the influence of the Proposed Development, these effects will not be significant. There will be no significant cumulative effects. In respect of the wider 40 km study area, all effects will be relatively close-range and this reflects the wider human influences which occur across the surrounding seascapes and landscapes. While the sensitivity of the island of Hoy is recognised through the NSA designation and WLA mapped interest, the Proposed Development would be located in the south-eastern corner of the island, which is already influenced by built development and a modified landscape. There will, nonetheless, be significant effects as a result of the Proposed Development in this localised area.

6.1.15 All effects during the construction of the Proposed Development will be short-term and reversible and all effects during the operation of the Proposed Development will be long-term and reversible. All effects will be adverse in nature.

## 6.2 Introduction

6.2.1 This chapter of the Environmental Impact Assessment Report (EIA Report) evaluates the effects of the Proposed Development on the landscape and visual resource. This assessment was undertaken by Optimised Environments Ltd (OPEN), with the LVIA authored by Jo Phillips and reviewed by Lynda Thomson, both of whom have BA Honours in Landscape Architecture and are Chartered Members of the Landscape Institute.

6.2.2 This chapter of the EIA Report is supported by the following Technical Appendix documents provided in Volume 4: Appendices:

- 6.1: Landscape and Visual Impact Assessment Methodology;
- 6.2: Assessment of Effects on Special Landscape Qualities of Hoy and West Mainland National Scenic Area;
- 6.3: Assessment of Effects on Wild Land Qualities of Hoy Wild Land Area; and
- 6.4: Residential Visual Amenity Assessment (RVAA).

6.2.3 This chapter includes the following elements:

- Legislation, policy and guidelines;
- Consultation;
- Assessment methodology and significance criteria;
- Baseline conditions;
- Receptors brought forward for assessment;
- Standard mitigation;
- Likely effects;
- Additional mitigation;
- Residual effects;
- Cumulative Assessment; and
- Summary of effects.

## 6.3 Legislation, Policy and Guidelines

6.3.1 Presented below are details of relevant legislation, policy and guidelines that have been taken into consideration during the Landscape and Visual Impact Assessment (LVIA).

### *Legislation*

6.3.2 Relevant legislation documents have been reviewed and taken into account, as part of this LVIA. Of particular relevance, to the LVIA, is The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 (the EIA Regulations).

### *Planning Policy*

**European Landscape Convention (ELC)**

6.3.3 The ELC is devoted exclusively to the protection, management and planning of all landscapes in Europe. Landscape is described as "*an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*" (ELC, 2000). The definition applies to all urban and peri-urban landscapes, towns, villages, rural areas, the coast and inland areas. In addition,

it applies to ordinary or even degraded landscape as well as those areas that are of outstanding value or protected.

6.3.4 The ELC became binding in the UK from 1 March 2007. As a signatory, the UK government has, therefore, undertaken to adopt general policies and measures to protect, manage and plan landscapes as follows:

- to recognise landscapes in law as an essential component of people's surroundings, an expression of the diversity of their shared cultural and natural heritage, and a foundation of their identity;
- to establish and implement landscape policies aimed at landscape protection, management and planning through the adoption of the specific measures. These include awareness-raising, training and education, identification and assessment of landscapes, definition of landscape quality objectives and the implementation of landscape policies;
- to establish procedures for the participation of the general public, local and regional authorities, and other parties with an interest in the definition and implementation of the landscape policies mentioned in the bullet above; and
- to integrate landscape into regional and town planning policies and in cultural, environmental, agricultural, social and economic policies, as well as in any other policies with possible direct or indirect impact on landscape.

6.3.5 The ELC provides a framework for Scottish Natural Heritage's (SNH's) work for Scotland's landscapes based on the following five guiding principles:

- Our landscape - people, from all cultures and communities, lie at the heart of efforts for landscape, as we all share an interest in, and responsibility for, its well-being;
- All landscapes - the landscape is important everywhere, not just in special places and whether beautiful or degraded;
- Changing landscapes - landscapes will continue to evolve in response to our needs, but this change needs to be managed;
- Understanding landscapes - better awareness and understanding of our landscapes and the benefits they provide is required; and
- Tomorrow's landscapes - an inclusive, integrated and forward-looking approach to managing the landscapes we have inherited, and in shaping new ones, is required.

6.3.6 Given the UK's adoption of the ELC and its aims, the ELC gives an appropriate basis for the importance placed on the Scottish landscape.

**Scottish Planning Policy (SPP)**

6.3.7 The key national policy document in relation to land use planning is Scottish Planning Policy (SPP) (Scottish Government, 2014). As part of Scotland's commitment to sustainable economic growth it is recognised in Paragraph 2 that the planning system should *"…take a positive approach to enabling high-quality development and making efficient use of land to deliver long-term benefits for the public while protecting and enhancing natural and cultural resources".*

6.3.8 In Table 1: Spatial Framework, SPP sets out the basis for a spatial framework in relation to wind farm development in which a hierarchy of suitability is defined, in order to guide Local Authorities in the identification of suitable areas of search for wind farm development. Group 1 areas are defined as 'Areas where wind farms will not be acceptable' and are based on National Parks and National Scenic Areas. Group 2 areas are defined as 'Areas of Significant Protection' and are based on the following criteria: a range of national designations, other nationally important environmental interests, such as Wild Land Areas or carbon rich soils, deep peat and priority peatland habitat, and community

separation of 2 km from cities, towns and villages identified on the Local Development Plan. Group 3 areas are defined as areas with potential for wind farm development, with the guidance in SPP stating; "*…wind farms are likely to be acceptable subject to detailed consideration against identified policy criteria."*

6.3.9 The Spatial Framework for the Orkney Islands shows that the main central part of the site lies within a Group 3 area, where there is potential for wind farm development, while the eastern and western edges lie within a Group 2 area, which is an area of significant protection.

National Scenic Areas

6.3.10 Paragraph 212 of SPP sets out the following policy in respect of National Scenic Areas:

6.3.11 "*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'."*

Gardens and Designed Landscapes

6.3.12 In Paragraph 148 of SPP, protection is given to Gardens and Designed Landscapes as follows: *"Planning authorities should protect and, where appropriate, seek to enhance gardens and designed landscapes included in the Inventory of Gardens and Designed Landscapes and designed landscapes of regional and local importance."*

Wild Land Areas

6.3.13 Paragraph 200 of SPP states the importance of Wild Land Areas as follows: "*Wild land character is displayed in some of Scotland's remoter upland, mountain and coastal areas, which are very sensitive to any form of intrusive human activity and have little or no capacity to accept new development. Plans should identify and safeguard the character of areas of wild land as identified on the 2014 SNH map of wild land areas."* Paragraph 215 further explores the ability of Wild Land Areas to accommodate development: *"In areas of wild land (see paragraph 200), development may be appropriate in some circumstances. Further consideration will be required to demonstrate that any significant effects on the qualities of these areas can be substantially overcome by siting, design or other mitigation."*

**Orkney Local Development Plan Policy**

6.3.14 The Orkney Local Development Plan (OLDP) was adopted in April 2017. The OLDP is considered to be a relevant and currently up to date Local Development Plan.

Policy 7D – Onshore Wind Energy Development

6.3.15 The Wind Energy Policy is considered to be the most relevant OLDP Policy to the Proposed Development. The OLDP Wind Energy Policy 7D sets out the following requirements for wind farm development.

6.3.16 *"iii. Applications for any windfarms should take account of the Spatial Strategy Framework for windfarm development:*

*a. Areas with potential capacity to accommodate wind farms have been identified as 'Areas with Potential for Wind Farm Development'; representing the areas of least constraint to wind energy development. Wind energy development is likely to be supported in principle within these areas, subject to proposals complying with the Development Criteria from Supplementary Guidance: Energy and any other material planning consideration.*

*b. Within the 'Areas of Significant Protection' wind farm development may be supported when a proposal complies with the Development Criteria from Supplementary Guidance: Energy and where it can be demonstrated by the applicant that any significant effects on the qualities of these areas can be overcome by siting, design or other mitigation.*

*c. Wind farm developments will not be supported within the National Scenic Area.*

*iv. Throughout the lifetime of the Plan, OIC will investigate potential 'Strategic Wind Energy Development Areas' within which the principle of wind farm developments will be supported. Any such areas will be subject to appropriate assessment and full public consultation before being adopted within Supplementary Guidance: Energy."*

6.3.17 The central part of the Proposed Development lies partially within an area detailed as 'Areas with Potential for Wind Farm Development' and partially within an area detailed as 'Areas of Significant Protection' as identified by the Figure 1 Spatial Strategy Map on Page 17 of the SG Energy. Spatial Policy 2 (SP2): Areas of Significant Protection identifies known constraints to development which are acknowledged as Group 2 areas in SPP. With respect to these SP2 areas, much of the Proposed Development lies within an area of Class 1 Peat, the western part of the site lies within a wild land area and the eastern part of the site is within 2 km of the settlement of Lyness. No parts of the site are classified as 'Areas where Wind Farms are not Acceptable.'

Policy 8B Part V – Gardens and Designed Landscapes

6.3.18 The OLDP presents Policy 8B Part V which aims to protect Gardens and Designed Landscapes (GDLs) from harmful development. The assessment of effects on landscape designations, including GDLs, is presented in Section 6.12:

6.3.19 *"Development which preserves or enhances the character and features of inventory gardens and designed landscapes and their setting, will be supported. Development that would have a significant negative impact upon the character of their areas will not be permitted. The conservation, maintenance and restoration, including the restoration of layout and features, will be supported where this is appropriate and based on historical research."*

Policy 9G - Landscape

6.3.20 The OLDP presents Policy 9G to protect all landscapes including National Scenic Areas (NSA). The site does not lie within an NSA and there are no regionally designated landscapes on Orkney. The assessment of effects on landscape character is presented in Section 6.12 with reference to the Orkney Landscape Character Assessment, along with the assessment of effects on the Orkney – Hoy and West Mainland NSA.

6.3.21 *"i All development proposals must be sited and designed to minimise negative impacts on the landscape, townscape and seascape characteristics and landscape sensitivities that are identified in the Orkney Landscape Character Assessment and should be sympathetic to locally important natural and/or historic features within the landscape.*

*ii. Consideration should be given to the siting, scale and design of the proposal, as well as the potential for cumulative effects with other developments.*

*iii. Development that affects the National Scenic Area (NSA) will only be permitted where it is demonstrated that:*

*a) the proposal will not have a significant effect on the overall integrity of the area or the qualities for which it has been designated; or*

*b) any such adverse effects are clearly outweighed by social, environmental or economic benefits of national importance.*

*iv. Development proposals affecting the area of wild land on Hoy will be only be permitted where it has been demonstrated that any significant effects on the character and qualities of this area can be substantially overcome by siting, design or other mitigation."*

### *Guidance*

6.3.22 The LVIA follows OPEN's methodology devised specifically for the assessment of wind farm developments as presented in Technical Appendix 6.1. This generally accords with 'Guidelines for Landscape and Visual Impact Assessment: Third Edition' ('GLVIA3'), the key source of guidance for LVIA.

6.3.23 Other sources of guidance used and referenced in the LVIA include the following:

- Visual Representation of Wind Farms Version 2.2 (Scottish Natural Heritage, February 2017);
- Technical Guidance Note 06/19: Visual Representation of Development Proposals (Landscape Institute, 2019);
- Assessing the Cumulative Impact of Onshore Wind Energy Proposed Developments (SNH, 2012);
- Landscape Character Assessment Guidance for England and Scotland (SNH and TCA, 2002);
- SNH (2017). Guidance on Coastal Character Assessment Prepared by Carol Anderson Landscape Associates;
- Scottish Natural Heritage draft guidance: Assessing the impacts on Special Landscape Qualities (SNH 2018);
- Scottish Natural Heritage consultation on draft guidance: Assessing impacts on Wild Land Areas - technical guidance (2017);
- Technical Guidance Note 2/19: Residential Visual Amenity Assessment (RVAA) (Landscape Institute 2019); and
- Siting and Designing of Windfarms in the Landscape: Version 3a (SNH, August 2017).

**Orkney Islands Council Supplementary Guidance: Energy (2017)**

6.3.24 The Supplementary Guidance: Energy (2017) document outlines the Spatial Framework for wind energy development across the Orkney Islands. This Spatial Framework identifies areas which have potential for wind farm development and those which do not, or those which require significant protection. In addition to this, the Supplementary Guidance refers to the Orkney Islands Council Landscape Capacity Assessment for Wind Energy (2014) which provides advice on landscape sensitivities, capacity thresholds, the selection of viewpoints and cumulative issues amongst other things. The supplementary guidance highlights the Orkney - Hoy and West Mainland NSA and Hoy WLA as being especially sensitive to wind farm developments. It also emphasises the sensitivity of residential properties and settlements in terms of visual amenity.

**Orkney Landscape Wind Energy Capacity Study (2014)**

6.3.25 The Orkney Landscape Wind Energy Capacity Study (OLWECS) was published in 2014 and adopted by OIC as Supplementary Guidance in 2015. It attempts to determine the capacity of the Orkney landscape in terms of its ability to accommodate onshore wind energy development and is based on an assessment of landscape sensitivity and the value of the different Landscape Character Types (LCTs) on Orkney, whilst also taking into account the influence of cumulative wind farm developments. While the limitations of the OLWECS are recognised in respect of its strategic rather than site specific guidance, it is considered by OIC to be a useful tool in understanding the likely acceptability of proposed developments.

6.3.26 The overall conclusion of this study states, "*There are no areas of Orkney with underlying capacity for the scale of multi-turbine windfarms found in parts of mainland Scotland; there are no locations where single wind energy developments greater than 20 MW could be accommodated without exceeding the underlying landscape capacity*."

6.3.27 In respect of Hoy, the OLWECS identifies 'East Hoy and Flotta' as an "*area with highest underlying capacity".* In Figure A of the OLWECS, this area is shown to be centred around Lyness, Cava and Flotta. The reason behind the identification of capacity in this area relates to past and present industrial influences as captured in the following descriptions; "*Derelict wartime infrastructure such as anti-aircraft defences, encampments and storage facilities are still present in the landscape, especially around Lyness, which was an important naval base during both World Wars. Much of this infrastructure is of historical value, but in some instances its derelict state has an adverse effect on the perceived condition of the landscape."* And "*These landscapes are of modest condition, and*

*industrial land uses are present in the landscape including modern marine renewables development, the Flotta oil terminal 4 km to the east, and old naval and wartime infrastructure still widespread."*

6.3.28 Despite Figure A showing the East Hoy part of the "*area with highest underlying capacity*" to coincide with the Inclined Coastal Pastures LCT, the assessment of landscape capacity in the OLWECS refers not only to the capacity of the transition to the Moorland Hills LCT but also capacity within this south-eastern part of this upland landscape, as described in the following statements;

6.3.29 *"Where the Inclined Coastal Pastures to the south east of Hoy transition to the Moorland Hills, opportunities arise for the siting of larger turbines which can be located away from smaller scale lowland developments and take advantage of back clothing from higher Moorland Hills. Single or small groups of turbines from 50 to 80m height could be located in these areas, however the siting of turbines towards the north of the Inclined Coastal Pastures (between Mill Bay and Pegal Head) should be sensitive to the importance of this landscape as the transition to the NSA."*

6.3.30 *"Highest residual capacity for wind energy development is centred around Lyness to the south east of the island, extending north to Pegal Bay, and south to North Ness, encompassing the Inclined Coastal Pastures and the eastern fringes of the Moorland Hills landscape types."*

6.3.31 The OLWECS, therefore, recognises the capacity of the eastern fringes of the Moorland Hills LCT, where the site is located, to accommodate turbines, largely in light of the existing industrial influences in this area. It does not, however, consider there is capacity for turbines higher than 80 m as being appropriate. The OLWECS dates back to 2014 and was adopted by OIC in 2015, since when the height of turbines proposed in wind farm applications have notably increased and the understanding of how landscape can accommodate taller turbines has evolved.

6.3.32 In respect of the relevance of capacity studies to this assessment, GLVIA 3 makes the following statement at Paragraph 5.41, "*The assessment may take place in situations where there are existing landscape sensitivity and capacity studies, which have become increasingly common. They may deal with the general type of development that is proposed, in which case they may provide useful preliminary background information for the assessment. But they cannot provide a substitute for the individual assessment of the susceptibility of the receptors in relation to change arising from the specific development proposal.*"

6.3.33 In the Appeal Decision Notice for the consented Costa Head Wind Farm, dated 18th April 2019 and produced by The Scottish Government's Planning and Environment Appeals Division, this position is supported in the following statement "…*whilst strategic studies provide useful guidance, especially for developers' areas of search, all schemes require to be assessed by detailed landscape and visual impact assessments as the Environmental Statement Addendum has done."* The Reporter also states; "…*I have some reservation about the council's two landscape assessment studies*…" listing the concerns cited by the Appellants in that appeal and agreeing with the reservations expressed.

6.3.34 In the OLWECS, the following caveats regarding the weight that should be applied to the study are presented as follows; "*It is emphasised that this is a strategic level landscape and visual study, providing a context for consideration of capacity for, and the cumulative effects of, existing and potential future wind turbine developments in Orkney. No site specific conclusions should be drawn from it in relation to current, proposed or future wind turbines and windfarms. As a strategic landscape and visual study this does not address specific localised impacts such as effects on individual residential receptors or other sensitive receptors. All wind energy proposals should be considered on their own unique locational and design characteristics as well as their strategic context. All proposals should be subject to landscape, visual and cumulative impact assessment including (if required) a full environmental assessment."*

**Orkney Islands Council: Development Management Guidance: Energy**

6.3.35 This Report was produced by the Executive Director of Development and Infrastructure at Orkney Islands Council in April 2019 in response to the Climate Change Emergency and in order to provide additional clarity regarding the material factors, outlined within Supplementary Guidance: Energy, to be considered in the assessment of planning applications.

6.3.36 In respect of LVIA the following comment is made; "*Scottish Planning Policy is clear that the only areas where wind farms are fundamentally unacceptable in terms of landscape impact are Scotland's National Scenic Areas and National Parks. Therefore, outwith the Hoy and West Mainland National Scenic Area, notwithstanding other constraints, it may be possible for a developer to make a strong argument regarding how the positive effects of the proposal outweigh the identified negative impacts on the landscape."*

6.3.37 In respect of future wind farm developments, the report encourages the acceptance of turbines larger than 125 m to blade tip as well as wind farms with a generating capacity of 15 MW, in order to secure meaningful contributions to the targets required for the interconnector with Mainland Scotland.

## 6.4 Consultation

6.4.1 A request for a Scoping Opinion was submitted to the Statutory Consultees in April 2018. Key information provided by consultees relevant to this LVIA assessment is provided in Table 6.1.

**Table 6.1 – Consultation on LVIA matters**

| Consultee name and date | Consultee Comment | Consultant Comments / Actions |
|---|---|---|
| Scottish Natural Heritage<br>Scoping Opinion<br>06/06/2018 | *"The development site lies about 4.3 km from the NSA boundary. An assessment will be required of the effects of the proposal on the Special Landscape Qualities (SLQs) of the NSA. Visibility of the proposal from within the NSA appears to be limited, and the main issue is likely to be the impact of the proposal on the appreciation of 'The high hills of Hoy' location specific quality in views from outwith the NSA. The high hills form a spectacular backdrop in views across Scapa Flow where the proposal is also likely to be widely visible.*<br><br>*We are currently preparing guidance on the assessment of effects on the SLQs of NSAs, and will be able to share a draft shortly to inform the NSA assessment. We would be happy to discuss the guidance and the finer detail of the methodology with OIC, and the contractor employed to carry out the landscape and visual impact assessment. This would include identification of any additional viewpoints required, and OIC have agreed to provide a ZTV at 1:50,000 scale to assist with this."* | Appendix 6.2 presents a detailed assessment of the effects of the Proposed Development on the Hoy and West Mainland NSA with a special focus on the Special Landscape Quality of 'The High Hills of Hoy' as experienced from the Mainland of Orkney. This assessment has been carried out in line with SNH's 2018 draft guidance. Pre-application consultation regarding viewpoint selection has been ongoing with SNH (see below) and ZTVs have been provided. |
| Scottish Natural Heritage<br>Scoping Opinion<br>06/06/2018 | *"Thirteen of the 30 turbines lie within the Hoy WLA and the remaining turbines are all within 2 km of the WLA boundary. An assessment will therefore be required of the effects of the proposal on the Special Qualities of the WLA. The proposal is likely to be visible from a large part of the WLA, from upper slopes and broad summits, and river glens within the more remote, hidden interior of the WLA. The main issue is likely to be the impact of the* | Appendix 6.3 presents a detailed assessment of the effects of the Proposed Development on the Hoy WLA with a special focus on the sense of remoteness, isolation and sanctuary. This assessment has been carried out in line with |

| Consultee name and date | Consultee Comment | Consultant Comments / Actions |
|---|---|---|
| | *proposal on the sense of remoteness, isolation and sanctuary experienced within the WLA.*<br><br>*Our 2017 consultative guidance should be used to assess the impacts on the Special Qualities of the WLA, rather than the 2007 interim guidance referred to in the scoping report. Again, we would be happy to discuss viewpoints and other details of the methodology with OIC and landscape contractors in due course."* | SNH's 2017 draft guidance. Pre-application consultation regarding viewpoint selection and methodology has been ongoing with SNH (see below). |
| Scottish Natural Heritage<br>Scoping Opinion<br>06/06/2018 | *"The majority of the development site lies within the Moorland Hills Landscape Character Type (LCT) with the remainder extending eastwards into the lower lying Inclined Coastal Pastures LCT, as defined in the Landscape Capacity Assessment for Wind Energy in Orkney (April 2014). The capacity study only identified capacity for small groups of turbines between 30m and 80m in height within the Moorland Hills LCT, and capacity for just small groups of domestic scale turbines up to 30m within the Inclined Coastal Pasture LCT."* | The Landscape Capacity Assessment for Wind Energy in Orkney (2014) is referenced at Section 6.3. |
| Orkney Island Council<br>Scoping Opinion<br>08/08/2018 | *"Considerations for wind energy proposals include impacts on landscape and on views, including cumulative effects. These issues require careful consideration through the Environmental Impact Assessment, which should clearly show how the design and location of the proposal has been developed to reflect the scale and character of the landscape and to seek to minimise landscape and visual impact, including cumulative impact. Consideration should also be made of visual implications arising from possible lighting at height which may be required in the interest of aviation safety."* | Section 6.8 sets out the landscape and visual considerations of site selection and the iterative design of the layout. Aviation lighting is not required. |
| Orkney Island Council<br>Scoping Opinion<br>08/08/2018 | *"Through Policy 9, G, landscape, wild land on Hoy, is identified and there is a requirement to consider impact on it, and where necessary for developers to undertake wild land assessment. Proposals that may have an adverse impact on the wild land resource should undergo a wild land assessment, guided by Scottish Natural Heritage's (SNH) Assessing the Impacts on Wild Land technical guidance, available online."* | Appendix 6.3 presents a detailed assessment of the effects of the Proposed Development on the Hoy WLA in line with SNH's 2017 draft guidance. |
| Orkney Island Council | *"The list of viewpoints identified is representative of a wide range of possible areas of impact, however it may be appropriate to review these and consider cumulative* | OIC were consulted on viewpoint selection on 09/03/2020 and 06/05/2020. No response |

| Consultee name and date | Consultee Comment | Consultant Comments / Actions |
|---|---|---|
| Scoping Opinion 08/08/2018 | *effects, particularly given the large ZTV and the number of sensitive receptors."* | from OIC has been received. The viewpoint list has been updated to include recommendations from SNH and three other viewpoints considered important by the assessors. |
| Orkney Island Council Scoping Opinion 08/08/2018 | *"The Council requirements for LVIA and photomontages to be used within any assessment of visual impact should be made with reference to the OIC Supplementary Guidance: Energy (April 2017) and SNH guidance on 'Visual Representation of Wind Farms', currently version 2.2 – February 2017. The level of information required should, at a minimum, given the proposed scale of the development, be in accordance with the large/very large scale and windfarm element of Table 2 of the OIC Supplementary Guidance: Energy."* | The visualisations have been prepared in accordance with SNH's 'Visual Representation of Wind Farms: Version 2.2 and OIC Supplementary Guidance: Energy 2017. |
| Historic Environment Scotland Scoping Opinion 31/05/2018 | HES request that an appropriate assessment is carried out in respect of Melsetter House.<br>*"GDLs are included in the LVIA section of the scoping report and we would note that there could be the potential for confusion if this asset type is included in both assessments. Inventory GDLs are designated historic environment assets rather than specific landscape designations and should be assessed using an appropriate historic environment methodology rather than an LVIA methodology. Should GDLs be assessed in both sections of an EIA Report there should be appropriate cross-referencing and care taken."* | Melsetter House GDL is included as a receptor in Chapter 10 Cultural Heritage. |
| John Muir Trust Scoping Opinion 17/05/2018 | *"We have real concerns regarding the proposed location of the turbines within and/or close to Wild Land Area 41 Hoy."*<br>*"SPP2 in 215 goes on to state'' In areas of wild land, development may be appropriate in some circumstances. Further consideration will be required to demonstrate that any significant effects on the qualities of these areas can be substantially overcome by siting, design or other mitigation.'' This will need to be fully demonstrated in the final Application and is a significant challenge as is evidenced by the decisions taken on wind farm applications impacting on WLAs since their establishment in 2014."* | Appendix 6.3 presents a detailed assessment of the effects of the Proposed Development on the Hoy WLA in line with SNH's 2017 draft guidance. Section 6.8 presents the mitigation measures implemented through site selection and layout design. |

| Consultee name and date | Consultee Comment | Consultant Comments / Actions |
|---|---|---|
| John Muir Trust<br>Online Pre-application Consultation<br>25/05/2020 | *"…we have a particular concern about the impacts on Hoy's Wild Land Area arising from the suggested location of Turbine 4, which is within Hoy's Wild Land Area. We don't object to this turbine, or the total number of turbines, but rather to its siting. The proposed site boundary for the development cuts into the Wild Land Area which has made siting one turbine within this area possible. We note that several turbines that were previously proposed in the Wild Land Area do not now appear in these plans. The rationale for why one remains in a Wild Land Area is not set out at this stage, whilst that may not have been deemed necessary, it means we are left to speculate. Given that the PAN consultation document states, 'The site is being designed with due consideration of landscape designations and wild land' and that 'Care is being taken to minimise impacts', it would be useful to understand why this turbine needs to be located in a Wild Land Area."* | A pre-application meeting was held with representatives of JMT on 4th June 2020, during which the reasons behind the siting of T4 were explained, highlighting the requirement for a minimum of six turbines to make the project viable and describing the multiple technical and environmental constraints that prevent an alternative location being found outwith the WLA. |
| Mountain-eering Council for Scotland<br>Scoping Opinion | *"We are concerned that Ward Hill has been omitted from the list of included viewpoints. Inclusion of the Knap of Trowieglen is appropriate but no substitute for Ward Hill."* | Ward Hill has been included as a representative viewpoint with visualisations presented in Figure 6.24 and a detailed assessment in Section 6.13. |
| Scottish Natural Heritage<br>Pre-application consultation<br>19/02/2020 | *"Many of the key attributes of the whole Hoy WLA relate to the high degree of exposure across the area; the contrast between the east and west (the exposed coast and the remote secluded hinterland); the gently sloped smooth hills with prevailing openness and simple ground cover with an overriding lack of human artefacts; contributing to a strong sense of naturalness; physically challenging with strong sense of remoteness, solitude and sanctuary.*<br>*To further explore impacts of the development on these attributes we request the following viewpoint locations are included in the assessment:*<br>*Photomontage – Bakingstone Hill (GR 254 934) within the WLA; and*<br>*Wirelines – from North Dale and West Dale within the WLA"* | Bakingstone Hill, West Dale and North Dale have been included as representative viewpoints with visualisations presented in Figure 6.27, Figure 6.31 and Figure 6.32 and a detailed assessment in Section 6.13. The visualisations are used to inform the assessment of the effects on Hoy WLA in Section 6.12 and Appendix 6.3. |
| Scottish Natural Heritage | *"In addition, an attribute of the WLA is how the high simple remote hill backdrop contributes to, and is appreciated from the wider Orkney Archipelago. This* | Clestrain has been included as a representative viewpoint |

| Consultee name and date | Consultee Comment | Consultant Comments / Actions |
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| Pre-application consultation 19/02/2020 | *latter attribute is also reflected in the Location-specific quality of the NSA 'The High Hills of Hoy' where the high, rounded hills are cited as forming a spectacular backdrop to much of the West Mainland.*<br>*To further explore impacts of the development on these attributes we request the following viewpoint locations are included in the assessment*<br>*Photomontage - Clestrain area (views along Clestrain Sound) within the NSA GS 29 07; and*<br>*Photomontage – Hunda (high point) GS 43 96 – views across Scapa Flow."* | with visualisations presented in Figure 6.21 with a detailed assessment in Section 6.13. Public access onto Hunda is not permitted and therefore an alternative viewpoint on Burray has been included and is shown in Figure 6.29 with a detailed assessment in Section 6.13. The visualisations are used to inform the assessment of the effects on Hoy WLA in Section 6.12 and Appendix 6.3. |
| Scottish Natural Heritage<br>Pre-application consultation<br>05/05/2020 | *Withi Gill is useful to capture and good to include in the WLA assessment. However the reasoning behind including West or North Dale was to capture the extent to which the windfarm may intrude upon the WLA qualities remoteness and sanctuary within the central range of rounded hills and the simplicity of the large rolling interior hills and their sense of naturalness and interlocking forms receding into the distance. Given current lockdown could you include a couple of wirelines to inform this assessment from 'within' the Dales (as opposed to from hill summits) where visibility is displayed? These will be helpful, as and when I am able to conduct my own site work within the WLA. Whether either one of these wirelines is included subsequently in the EIAR (as a photomontage), can be discussed at a later date to ascertain what added benefit they would bring to your assessment (and my appraisal of that assessment).*<br>*Houton to Lyness Ferry (as opposed to Hunda) 331661 996744 – the reason for choosing Hunda was to represent the large areas of potential visibility along west coasts of the chain of islands that contain the east of Scapa Flow. This was to fully inform the effect of the proposal on the qualities of both the WLA (a distinctive high, simple and remote hill back drop) and the NSA (The high hills of Hoy – the high rounded hills of Hoy form a spectacular backdrop). An alternative location would be* | Wirelines from Withi Gill, North Dale and West Dale have been included as Figures 6.30, 6.31 and 6.32, with a written assessment of the effects on Withi Gill presented in Section 6.13.<br>As Hunda is not accessible to the public, a viewpoint just south of Churchill Barrier No.3 has been included in the assessment and presented as Figure 6.29. |

| Consultee name and date | Consultee Comment | Consultant Comments / Actions |
|---|---|---|
| | *at Glimps Holm or along the Churchill Barrier to the immediate north.* | |

## 6.5 Assessment Methodology and Significance Criteria

### *Study Area*

6.5.1 The initial step in the LVIA is the establishment of the study area for the assessment. Guidance developed by Scottish Natural Heritage (SNH) (Visual Representation of Wind Farms Version 2.2, February 2017) indicates that an area with a radius of 40 km from the nearest turbine is appropriate for turbines of the size proposed (149.9 m). This study area is shown in Figure 6.1. Zone of Theoretical Visibility (ZTV) analysis has been carried out for this area, as has mapping of landscape character, coastal character, landscape related designations, Wild Land Areas and principal visual receptors.

6.5.2 The study area is not intended to provide a boundary beyond which the Proposed Development will not be seen, but rather to define the area within which it may have a significant landscape or visual effect. In reality, a significant effect is very unlikely to occur towards the edges of the study area.

6.5.3 The cumulative landscape and visual assessment covers a study area of 40 km from the nearest turbine in the Proposed Development, as shown in Figure 6.12. While SNH's 'Assessing the Cumulative Impact of Onshore Wind Energy Proposed Developments, 2012', suggests a 60 km radius study area, a preliminary assessment found that cumulative wind farms beyond 40 km would not contribute to a significant cumulative effect as a result of the addition of the Proposed Development.

### *Desk Study*

6.5.4 The assessment is initiated through a desk study of the site and the 40 km radius study area. This study identifies aspects of the landscape and visual resource that may need to be considered in the landscape and visual assessment, including landscape-related planning designations, landscape and coastal character typologies, Wild Land Areas, operational and potential cumulative wind farms, and views from settlements and routes, including roads, ferry routes, and walking routes.

6.5.5 The desk study also utilises Geographic Information System (GIS) and Resoft Windfarm software to explore the potential visibility of the Proposed Development. The resultant Zone of Theoretical Visibility (ZTV) diagrams and wirelines provide an indication of which landscape and visual receptors are likely to be relevant to the assessment.

### *Site Visit*

6.5.6 Field surveys have been carried out across the 40 km radius study area, although the focus of the assessment has been on the closer range areas, shown on the ZTV to gain theoretical visibility of the Proposed Development. The baseline field survey has four broad stages:

- A preliminary familiarisation around the study area to visit landscape and visual receptors that have been identified through the desk study, and to verify their existence and importance. Important features and characteristics that have not become apparent through the desk study are also identified, and particularly sensitive receptors are noted in order to inform the design process.
- A visit onto the site taking particular note of the baseline characteristics and wider influences, in order to establish the potential of the site for wind farm development and identify the most

suitable areas for the Proposed Development in landscape and visual terms, along with any constraints that may restrict the developable area.

- Further field survey around the study area, concurrent with the design process for the Proposed Development, to identify those receptors that are likely to be particularly important in the assessment and inform the layout design, possible turbine height, and the extent of the Proposed Development.
- The identification of representative viewpoints to include in the landscape and visual assessment, and to ensure representation of a wide range of visual receptors, as well as landscape receptors, and from a variety of directions and distances relative to the Proposed Development.

## *Methodology for the Assessment of Effects*

6.5.7 Significance has been assessed through professional consideration of the sensitivity of each landscape and visual receptor to the Proposed Development and the magnitude of the potential effects arising a result of the introduction of the Proposed Development. This section summarises the methodology and guidance used to carry out the LVIA, which is described in full in Appendix 6.1.

**Categories of Effects**

6.5.8 The LVIA is intended to determine the effects that the Proposed Development will have on the landscape and visual resource. For the purpose of assessment, the potential effects on the landscape and visual resource are grouped into four categories:

- **Effects on landscape elements** are restricted to the area within the site boundary and are the direct effects on the existing fabric of the site, such as alteration to ground cover. This category of effects considers landscape elements, which are the components of the landscape such as rough grassland and moorland that may be directly and physically affected by the Proposed Development.
- **Effects on landscape character**, in which landscape character is the distinct and recognisable pattern of elements that occur consistently in a particular type of landscape, and the way that this pattern is perceived. Effects on landscape character arise either through the introduction of new elements that physically alter this pattern of elements, or through visibility of the Proposed Development, which may alter the way in which the pattern of elements is perceived. This category of effects is made up of landscape character receptors, which fall into two groups; landscape character types and landscape-related designated areas or Wild Land Areas (WLAs).
- **Effects on views,** in which the assessment of effects on views considers how the introduction of the Proposed Development and appearance and movement of the wind turbines will affect views throughout the study area. The assessment of effects on views is carried out in two parts:
  - An assessment of the effects that the Proposed Development will have on a series of representative viewpoints around the study area; and
  - An assessment of the effects that the Proposed Development will have on views from principal visual receptors, which are the people in the relevant settlements and travelling on routes found throughout the study area. The effects on these receptors is included alongside the most relevant representative viewpoints.
- **Cumulative effects** arise where two or more wind farms (or in some cases other relevant development) overlap so that both of the wind farms or developments are experienced at a proximity where they may have a greater incremental effect, or where wind farms or other developments may combine to have a sequential effect. In accordance with guidance (SNH,

2012), the LVIA assesses the effect arising from the addition of the Proposed Development to the cumulative situation.

### *Assessment of Effects*

6.5.9 The broad principles used in the assessment of significance of the various categories of effects are the same and are described below. The detailed methodology for the assessment of significance does, however, vary, and the specific criteria used are described in Appendix 6.1.

6.5.10 The objective of the assessment of the Proposed Development is to predict the likely significant effects on the landscape and visual resource. In accordance with the EIA Regulations the LVIA effects are assessed to be either significant or not significant. The LVIA does not define intermediate levels of significance as the EIA Regulations do not provide for these.

6.5.11 The significance of effects is assessed through a combination of two considerations; the sensitivity of the landscape receptor or view and the magnitude of change that will result as a consequence of the addition of the Proposed Development.

**Sensitivity**

6.5.12 Sensitivity is an expression of the ability of a landscape or visual receptor to accommodate the likely effects arising as a result of the Proposed Development. Sensitivity is determined through a combination of the value of the receptor and its susceptibility to the Proposed Development. The factors that determine these criteria are described in Appendix 6.1.

6.5.13 Levels of sensitivity; high, medium to high, medium, medium to low and low; are applied in order that the judgement used in the process of assessment is apparent.

**Magnitude of Change**

6.5.14 Magnitude of change is an expression of the extent of the impact on landscape and visual receptors that will result from the introduction of the Proposed Development. The magnitude of change is assessed in terms of a number of variables, including the size and scale of the impact and the extent of the affected area. The factors that determine these criteria are described in Appendix 6.1.

6.5.15 Levels of magnitude of change; high, medium to high, medium, medium to low, low and negligible or no change; are applied in order that the judgement used in the process of assessment is apparent.

**Assessment of Significance**

6.5.16 The significance of effects is assessed through a combination of the sensitivity of the landscape or visual receptor and the magnitude of change that will result from the addition of the Proposed Development. While this methodology is not reliant on the use of a matrix to determine a significant or not significant effect, a matrix is included in Table 6.2 below to illustrate how combinations of sensitivity and magnitude of change ratings can give rise to significant effects. The matrix also gives an understanding of the threshold at which significant effects may arise.

**Table 6.2 – Assessment of significance matrix**

| **Magnitude:**<br>**Sensitivity:** | **High** | **Medium to high** | **Medium** | **Medium to low** | **Low** | **Negligible or no change** |
|---|---|---|---|---|---|---|
| **High** | Significant | Significant | Significant | Significant or not significant | Not significant | Not significant |
| **Medium to high** | Significant | Significant | Significant or not significant | Significant or not significant | Not significant | Not significant |

| Magnitude: Sensitivity: | High | Medium to high | Medium | Medium to low | Low | Negligible or no change |
|---|---|---|---|---|---|---|
| **Medium** | Significant | Significant or not significant | Significant or not significant | Not significant | Not significant | Not significant |
| **Medium to low** | Significant or not significant | Significant or not significant | Not significant | Not significant | Not significant | Not significant |
| **Low** | Significant or not significant | Not significant | Not significant | Not significant | Not significant | Not significant |

6.5.17 Effects within the dark grey boxes in the matrix are considered to be significant. Effects within the light grey boxes may be significant or not significant depending on the specific relevant factors that arise at a particular landscape or visual receptor. Effects within the white boxes are considered to be not significant. In accordance with GLVIA3, experienced professional judgement is applied to the assessment of all effects and reasoned justification is presented in respect of the findings of each case.

6.5.18 A significant effect occurs where the Proposed Development will provide a defining influence on a landscape element, landscape character receptor or view, albeit that it may be one of a number of defining characteristics. A not significant effect occurs where the effect of the Proposed Development is not material, and the baseline characteristics of the landscape element, landscape character receptor, view or visual receptor continue to provide the definitive influence. In this instance, the Proposed Development may have an influence, but this influence will not be definitive.

6.5.19 OPEN has chosen to keep these the consideration of the size or scale of the effect, its geographical extent and its duration and reversibility separate, by basing the magnitude of change on size or scale to determine where significant and not significant effects occur, and then describing the geographical extents of these effects and their duration and reversibility separately. Duration and reversibility are therefore stated separately in relation to the assessed effects (i.e. as short/medium/long-term and temporary/permanent) and are considered as part of drawing conclusions about significance, combining with other judgements on sensitivity and magnitude, to allow a final judgement to be made on whether each effect is significant or not significant. A fuller description of duration and reversibility is presented at 6.5.34 to 6.5.39 of this section.

### *Cumulative Assessment*

6.5.20 Significant cumulative landscape and visual effects arise where the addition of the Proposed Development to other wind farm developments leads to wind farms becoming a prevailing landscape and visual characteristic, albeit that it may become one of a number of prevailing characteristics.

6.5.21 Baseline operational and under construction cumulative wind farms are taken into consideration in the solus assessment and cumulative assessment of the Proposed Development, as presented in Sections 6.12 and 6.13. There are only two developments within a 10 km radius of the Proposed Development, both of which are single turbines. The Ore Brae turbine is 67 m to blade tip and lies approximately 1.3 km to the south-east of the Proposed Development. The West Hill turbine is 100 m to blade tip and lies approximately 6 km to the east of the Proposed Development.

6.5.22 Consented and application-stage wind farms are considered in the cumulative assessment, presented in Section 6.14, along with operational and under construction wind farms. Cumulative

ZTVs have been prepared to illustrate theoretical visibility of the Proposed Development in conjunction with consented Hesta Head Wind Farm (Figures 6.13) and application Quanterness Wind Farm (Figure 6.14). The cumulative wirelines in Figures 6.15 to 6.34 also demonstrate the limited influence of other wind farm developments on the cumulative situation.

**Cumulative Guidance**

6.5.23 SNH's guidance, 'Assessing the Cumulative Impact of Onshore Wind Energy Proposed Developments' (SNH 2012) is widely used across Scotland to inform the specific assessment of the cumulative effects of wind farms. This guidance provides the basis for the methodology for the cumulative assessment.

6.5.24 *"The purpose of the Cumulative Landscape and Visual Impact Assessment (CLVIA) is to describe, visually represent and assess the ways in which a proposed windfarm would have additional impacts when considered in addition to other existing, under construction, consented or proposed windfarms. It should identify the significant cumulative effects arising from the proposed windfarm." (SNH, 2012).*

6.5.25 The guidance defines the following types of cumulative effects:

- Cumulative landscape effects are those effects that '*can impact on either the physical fabric or character of the landscape, or any special values attached to it*' (SNH, 2012, p10);
- Cumulative visual effects are those effects that can be caused by combined visibility, which '*occurs where the observer is able to see two or more Proposed Developments from one 'viewpoint' and/or sequential effects which 'occur when the observer has to move to another viewpoint to see different Proposed Developments'* (SNH, 2012, p11); and
- Perceived cumulative effects are those which may arise '*where two or more Proposed Developments are present but one or more is never seen by the observer*' (SNH, 2012, p11).

6.5.26 The degree to which cumulative effects occur, or may occur, as a result of more than one wind farm being constructed or becoming operational are a result of:

- the distance between individual wind farms and/or relevant other developments;
- the interrelationship between their Zones of Theoretical Visibility (ZTV) and how they may appear together in views;
- the overall character of the landscape and its sensitivity to wind farms and/or other relevant developments;
- the siting, scale and design of the wind farms and/or other relevant developments themselves; and
- the way in which the landscape is experienced.

6.5.27 The aim of the Cumulative Landscape and Visual Impact Assessment (CLVIA) is to focus on, and determine, the likely significant cumulative landscape and visual effects. Significant cumulative landscape and visual effects are likely to arise where wind farm developments become a prevailing landscape and visual characteristic as a result of the additional effects of the Proposed Development, albeit that they may become one of a number of prevailing characteristics.

6.5.28 To assist the decision maker, the assessment also presents below an overview of the likely combined cumulative effects of the Proposed Development in-combination with relevant operational and consented wind farms. The purpose of this is to consider whether the resulting pattern of development, including the Proposed Development, will result in the redefinition of landscape character or visual receptors. For example, if the existing landscape character displays a 'landscape with wind farms' characteristic, where wind farms are one of a number of defining characteristics, the assessment will consider whether this may be redefined as a 'wind farm landscape' when the Proposed Development is added in to the overall pattern, where wind turbines become the most

prevalent defining characteristic of the landscape. Combined cumulative effects are linked closely to landscape and visual capacity and the assessment has regard to factors such as the relationship of the combination of wind farms to landscape character types and the overall influence of the ZTV, in reaching an informed opinion as to the extent and nature of any combined cumulative effects.

### *Nature of Effects*

6.5.29 The 'nature of effects' relates to whether the effects of the Proposed Development are positive/beneficial or negative/adverse. Guidance provided in GLVIA3 states that "*thought must be given to whether the likely significant landscape and visual effects are judged to be positive (beneficial) or negative (adverse) in their consequences for landscape or for views and visual amenity*" but does not provide an indication as to how that may be established in practice. The nature of effects is therefore one that requires interpretation and reasoned professional opinion.

6.5.30 In relation to many forms of development, the EIA will identify beneficial and adverse effects under the term nature of effect. The landscape and visual effects of wind farms are difficult to categorise in either of these brackets as, unlike other disciplines, there are no definitive criteria by which these effects can be measured as being categorically beneficial or adverse. For example, in disciplines such as noise or ecology it is possible to identify the nature of the effect of a wind farm by objectively quantifying its effect and assessing the nature of that effect in prescriptive terms. However, this is not the case with landscape and visual effects, where the approach combines quantitative and qualitative assessment.

6.5.31 In this assessment, beneficial, neutral and adverse effects are defined as follows:

- **Beneficial effects** contribute to the landscape and visual resource through the enhancement of desirable characteristics or the introduction of new, beneficial attributes. The removal of undesirable existing elements or characteristics can also be beneficial, as can their replacement with more appropriate components;
- **Neutral effects** occur where the Proposed Development neither contributes to nor detracts from the landscape and visual resource and is accommodated with neither beneficial nor adverse effects, or where the effects are so limited that the change is hardly noticeable. A change to the landscape and visual resource is not considered to be adverse simply because it constitutes an alteration to the existing situation; and
- **Adverse effects** are those that detract from or weaken the landscape and visual resource through the introduction of elements that contrast, in a detrimental way, with the existing characteristics of the landscape and visual resource, or through the removal of elements that are key in its characterisation.

6.5.32 In this assessment, landscape and visual effects are considered to be adverse unless otherwise stated.

### *Duration and Reversibility of Effects*

6.5.33 The effects of the Proposed Development are of variable duration, and are assessed as short-term or long-term, and permanent or reversible. The construction effects include consideration of the construction compound, machinery, ground modifications, materials and cranes.

6.5.34 The Applicant is seeking in-perpetuity consent for the Proposed Development. In the event of decommissioning, or replacement of turbines, it is anticipated that the levels of effect would be similar but of a lesser level than those during construction. Decommissioning would be undertaken in line with best practice processes and methods at that time and will be managed through an agreed Decommissioning Environmental Management Plan. The turbines, site access tracks, substation compound and permanent met mast will be apparent in perpetuity, and these effects are therefore considered to be long-term and potentially in perpetuity although they will also be largely reversible if required.

6.5.35 Other infrastructure and operations such as the construction processes and plant, including tall cranes for turbine erection, and construction and storage compounds will be apparent only during the, approximate, 18 month construction period of the Proposed Development and are considered to be short-term effects. The tall cranes will be apparent intermittently and over a shorter duration.

6.5.36 The reversibility of effects is variable. The most apparent effects on the landscape and visual resource, which arise from the presence and movement of the turbines, will ultimately be reversible if the turbines were to be removed in the event of decommissioning. The effects of the tall cranes and heavy machinery used during the construction and decommissioning periods are also reversible.

6.5.37 Should the site ever be decommissioned it should be noted that elements of the Proposed Development, such as access tracks may be retained, while turbine foundations and underground cabling are likely to be left in-situ below ground with no residual landscape and visual effects.

6.5.38 In order to avoid repetition, the duration and reversibility of effects are not reiterated throughout the assessment.

### *Graphic Production*

6.5.39 The written LVIA is accompanied by a set of graphics contained in Volume 3. Reference is made throughout the written text to these graphics, as they are an integral part of the overall assessment and of importance in illustrating specific matters. They should be viewed in accompaniment to the written text.

6.5.40 The graphics can be divided into two categories; maps and visualisations. The maps are largely based on the 40 km study area around the Proposed Development and present data of relevance to the assessment, such as the location and extent of landscape designations and Wild Land Areas. Zone of Theoretical Visibility ('ZTV') maps are also included. These digitally calculate the extent and level of theoretical visibility across a given area, using Ordnance Survey Terrain 5 mapping as the basis for the calculations. As this terrain model is based only on the 'bare earth', it does not take account of potential screening by vegetation or buildings, and this is why it is referred to as theoretical and not actual visibility.

6.5.41 The visualisations are based on the sixteen representative viewpoint locations, which are representative of the visual amenity of visual receptors in the area surrounding the Proposed Development and which have been assessed in detail in Section 6.13. For each viewpoint there is baseline photography, and wirelines of the Proposed Development and the 'bare earth' landform for the same extent as shown in the photography. In accordance with SNH's visualisation guidance, fourteen of the viewpoints also have accompanying photomontages. These use the baseline photography and add onto this a computer-generated model of the Proposed Development. There is no photograph or photomontage for Viewpoint 16: Withi Gill since through the consultation process, SNH requested only a wireline to represent this viewpoint.

6.5.42 A further four illustrative viewpoint locations have been included, to illustrate the extent of visibility from Hoy WLA (41). More detailed information on graphic production is included in the Assessment Methodology in Appendix 6.1.

### *Limitations to Assessment*

6.5.43 Photographs and other graphic material such as wirelines and photomontages used in the assessment are for illustrative purposes only and, whilst useful tools in the assessment, are not considered to be completely representative of what will be apparent to the human eye. The assessment itself is carried out from observations in the field and therefore may include elements that are not visible in the photographs.

**Zone of Theoretical Visibility (ZTV)**

6.5.44 There are limitations in the theoretical production of ZTVs, and these should be borne in mind in their consideration and use:

- Ordnance Survey Terrain 5 DTM has been used to generate the ZTV's within the study area. The analysis is based on visibility at points on a 5 m grid and does not take into account local, small-scale landform changes in analysing theoretical visibility.
- The ZTVs illustrate the 'bare ground' situation, and do not take into account the screening effects of vegetation, buildings, or other local features that may prevent or reduce visibility.
- The ZTVs do not indicate the reduction in visibility that occurs with increased distance from the Proposed Development. The nature of what is visible from 3 km away will differ markedly from what is visible from 10 km away, although both are indicated on the ZTVs as having the same level of visibility.
- It is important to remember that there is a wide range of variation within the visibility shown on the ZTV. For example, an area shown on the blade tip ZTV as having visibility of all of the turbines may gain views of the smallest extremity of blade tips, or of full turbines. This can make a considerable difference in the effects of the Proposed Development on that area.

6.5.45 These limitations mean that while the ZTVs are used as a starting point in the assessment, providing an indication of where the Proposed Development will theoretically be visible, the information drawn from the ZTVs is not completely relied upon to accurately represent visibility of the Proposed Development and is verified by wirelines and fieldwork.

**Visualisations**

6.5.46 The visualisations are based on theoretical visibility from 1.5 metres above ground level. There are limitations in these theoretical productions, and these should be borne in mind in the consideration and use of the wireline images. Firstly, the wireline illustrates the 'bare ground' situation, not taking into account the screening effects of vegetation, buildings, or other local features that may prevent or reduce visibility. Secondly, the wireline is based on OS Terrain 5 DTM, so there may be local, small-scale landform variations that are not reflected in the wireline but may alter the actual visibility of the Proposed Development, either by screening theoretical visibility or revealing parts of the Proposed Development that are not theoretically visible. Thirdly planning conditions are likely to allow the locations of the turbines to be horizontally micro-sited to a small degree and the levels of the turbine bases have not yet been established in detail as this will be determined through site investigations and engineering design. Both of these factors may alter the base and therefore the height above ordinance datum from those that are assumed in the assessment and shown in figures. Such variation may also affect ZTVs.

6.5.47 Where descriptions within the assessment identify the numbers of turbines visible this refers to the theoretical illustrations generated and therefore the reality may differ to a degree from these impressions. These factors are unlikely to make a material difference to the outcome of the assessment.

6.5.48 Not all areas of the study area are publicly accessible, and this has limited the specific assessment of views from residential and other properties, and not all parts of the study area have been visited due to time and accessibility constraints, especially in light of the UK Governments restrictions on travel imposed as part of the Covid-19 measures in March 2020. Notwithstanding these limitations, the assessors consider that there is sufficient information available, from publicly accessible viewpoints, to form a competent assessment of the likely landscape and visual amenity effects.

## 6.6 Baseline Conditions

6.6.1 The baseline section of the LVIA records the existing conditions of the study area. Establishing a baseline helps to gain an understanding of what makes the landscape distinctive and what its important components or characteristics are. The baseline is instrumental in the identification of the landscape character receptors, visual receptors and viewpoints that are included in the assessment. This section is presented under the following headings:

- The Site;

- Landscape character;
- Coastal character;
- Landscape planning designations;
- Viewpoints;
- Principal visual receptors;
- Trends and projected future baseline; and
- Cumulative wind farm developments.

### *The Site*

6.6.2 The site is located on the island of Hoy, the second largest island in the Orkney archipelago, and situated to the south-west of the Mainland of Orkney. Hoy is famous for its dramatic coastal scenery, comprising cliffs over 300 m AOD in height and the Old Man of Hoy, which at 137 m AOD, is the highest stack in the British Isles. Although the hills on Hoy are relatively small, they are the highest in Orkney and present a dramatic feature, especially the rugged hills located across the north of the island.

6.6.3 At 479 m AOD, Ward Hill is the highest hill on the Orkney Islands. It is set in the north of Hoy and along with the Cuilags (433 m AOD) to the north and the coastal hills, including St John's Head (378 m AOD) forms a prominent group of hills, separated by the central and southern parts of the island by a deep glacial valley which is aligned from Quoyness on the east coast to Rackwick on the west coast. To the south of this valley, the moorland hills merge to form a broad, undulating upland plateau, which is incised by a series of burns which either flow off the hills into the deep valley to the north, or to the coastal edges to the west or east. Knap of Trowieglen at 399 m AOD, is the highest hill in this group in which most of the hills are characterised by their relatively low and rounded profiles.

6.6.4 There is a distinct contrast between the high cliffs of the western and northern coastal edge and the lower cliffs and bays of the eastern coastal edge, with settlement mostly concentrated on the lower headlands and sheltered bays of the east coast, with the majority of the approximate 400 population in Lyness and Longhope. While development is typically small scale and rural, the history of Lyness as a naval base has left visible remnants in the landscape of larger scale developments.

6.6.5 The site occupies an area in the south-east of the island, set in the transition between the uplands and the coastal edge. It occupies the southern slopes of Wee Fea (173 m AOD) which lie to the north of the valley of the Burn of Ore and Binga Fea (154 m AOD). Although only a small hill, Wee Fea forms a prominent feature in the local landscape. The site lies to the west of the settlement of Lyness and the B9047 which follows the eastern coastline to the north and south.

6.6.6 While there are no operational wind farms within a 20 km radius of the Proposed Development, there are three operational single turbines and two under construction single turbines in this area. Ore Brae is the closest of the single turbines, set at the south-eastern base of Wee Fea, while the West Hill turbine is located 6 km to the east on Flotta. The single turbine at Northfield lies out on Burray at a range of 20 km, while the under-construction turbines, Akla and Berriedale, are located 14 km to the north-east and 17 km to the east, respectively. There is also a large scale oil terminal on nearby Flotta, ferries and other vessels on the water and often large rigs stationed in Scapa Flow.

### *Landscape Character*

6.6.7 Landscape character information produced by or prepared on behalf of SNH, forms the basis of much of the characterisation of the study area. The original LCA, which covers the study area, is SNH Review 100: Orkney Landscape Character Assessment.

6.6.8 SNH has recently reviewed and updated the 30 original Landscape Character Assessments (LCAs), produced to cover the whole of Scotland during the 1990s, by creating a single data set in a digital version. This has been based on the original LCAs and updated to ensure greater consistency in the

approach and structure, to reduce cross boundary discrepancies and to make the mapping more accessible and readily legible. This information is contained in the SNH Landscape Character Assessment GIS dataset. In respect of the study area, the Landscape Character Types (LCTs) have not been noticeably changed between the original Orkney Landscape Character Assessment and the updated data set.

6.6.9 The guidance on the SNH web page, advises that, where available, capacity studies should take precedence over SNH's LCAs, and where relevant to specific types of development, such as wind farms. The study that has been considered in this assessment is the Landscape Capacity Study for Wind Energy in Orkney (OLWECS) written by Land Use Consultants in 2014 and adopted by OIC in 2015. The OLWECS also uses the LCTs presented in SNH's original LCA and the updated data set, and therefore the SNH information is used as the basis of this assessment.

6.6.10 SNH's LCAs and datasets, and local authority capacity studies, divide the landscape into areas of distinctive character which are generally referred to as LCTs. Many of these LCTs are extensive, sometimes covering several areas that are geographically separate. In order to distinguish between different areas of the same LCT and identify these areas in respect of their specific location, a sub classification of Landscape Character Units (LCUs) has been applied.

6.6.11 The distribution of the LCTs and relevant LCUs within the 40 km study area is shown in Figure 6.2a, and in conjunction with the ZTV across a 15 km radius in Figures 6.7a and 6.10. The LCTs / LCUs that show theoretical visibility, and which require to be assessed in detail are presented in Section 6.7 and assessed in detail in Section 6.12.

6.6.12 The Blade Tip ZTV, in Figure 6.7a, shows that theoretical visibility across the other LCTs / LCUs in the study area will be both limited and distant, thus reducing the potential for the Proposed Development to redefine the landscape character of these LCTs / LCUs. These LCTs / LCUs have, therefore, been discounted from the detailed assessment owing to the very low likelihood of significant effects arising.

### *Coastal Character*

6.6.13 In addition to the assessment of effects on landscape character, this LVIA also considers the effects on coastal character. The basis of this assessment is SNH's 2016 publication entitled 'Coastal Character Assessment: Orkney and North Caithness, which presents classification descriptions for regional and local coastal character areas around all the Orkney and North Caithness coastlines.

6.6.14 The distribution of the RCCAs within the 40 km study area is shown in Figure 6.2b, and in conjunction with the ZTV across a 15km radius in Figures 6.7b, 6.10a and 6.10b. The RCCAs that show theoretical visibility, and which require to be assessed in detail are presented in Section 6.7 and assessed in detail in Section 6.12.

### *Landscape Planning Designations*

6.6.15 There are three ways in which landscape planning designations are relevant to the LVIA:

- The presence of a designation can give an indication of a recognised value that may increase the sensitivity of a landscape character receptor, viewpoint or visual receptor, and may therefore affect the significance of the effect on that receptor;
- The presence of a relevant designation can lead to the selection of a representative viewpoint within the designated area, as the viewpoint will provide a representative outlook from that area; and
- Designated areas may be included as landscape character receptors so that the effects of the Proposed Development on these features of the landscape that have been accorded particular value can be specifically assessed.

6.6.16 A number of areas have been attributed a landscape planning designation within the 40 km study area, as shown in Figure 6.3 and in conjunction with the ZTV in Figure 6.8a and 6.8b. These include

a nationally important National Scenic Area (NSA) and a number of Gardens and Designed Landscapes (GDLs). There are no regionally designated landscapes on Orkney. The site itself is not subject to any national landscape designations intended to protect landscape quality or scenery considered to be of national importance.

**National Scenic Areas**

6.6.17 NSAs are areas of land considered to be important on a national level and are designated by SNH. The site is not covered by any national landscape designations intended to protect landscape quality as shown in Figure 6.3. Figure 6.8a and Figure 6.8b show theoretical visibility of the Proposed Development to occur as a small patch in the Rugged Hills LCT and a larger patch in the Moorland Hills LCT on Hoy and then as a band through the centre of West Mainland on the Mainland of Orkney. Appendix 6.2 presents a detailed assessment of the effects of the Proposed Development on the Hoy and West Mainland NSA in line with SNH's draft guidance.

**Gardens and Designed Landscapes**

6.6.18 Historic Environment Scotland is responsible for designating Gardens and Designed Landscapes (GDLs). These are contained in an Inventory which can be accessed at http://www.historic-scotland.gov.uk/gardens. The descriptions contained in the Inventory identify the special qualities which merit the designation of each GDL.

6.6.19 There are four nationally important Inventory Gardens and Designed Landscapes (GDL) within the study area as shown in Figure 6.3. These are Balfour Castle at approximately 28 km to the north-east, Skaill House at approximately 25 km to the north, Castle of Mey at approximately 20 km to the south-east and Melsetter House at approximately 4 km to the south-west. The ZTVs in Figure 6.8a and 6.8b shows that there will be no or limited visibility of the Proposed Development from the GDLs of Skaill House and Balfour Castle, such that there will be no or a very limited effect. The ZTV shows that theoretical visibility will be almost continuous across Melsetter House GDL and Castle of Mey. The 20 km separation distance between Castle of Mey and the Proposed Development makes it unlikely for a significant effect to arise and, therefore, this receptor has been discounted. A full assessment of the effects of the Proposed Development on Melsetter House GDL is presented in Chapter 10 Cultural Heritage.

**Wild Land Areas**

6.6.20 In 2017, SNH published a consultation draft version of 'Assessing Impacts on Wild Land technical guidance'. The document sets out guidance for those assessing the impact of development on WLAs. Wild Land Area descriptions or citations have also been published by SNH, which describe the key attributes and qualities of each of the 42 WLAs in Scotland.

6.6.21 The only WLA on Orkney is the Hoy WLA (41), which occupies the central moorland hills of the island. The site is located on the southern margin of the WLA with five of the six turbines located outside the boundary and one turbine located within the boundary. The Blade Tip ZTVs in Figures 6.8b, 6.10a and 6.10b show the extent of visibility that will occur across the WLA and suggests there is a likelihood that significant effects will arise. Appendix 6.3 presents a detailed assessment of the effects of the Proposed Development on the Hoy WLA in line with SNH's draft guidance.

## *Viewpoints*

**Viewpoints**

6.6.22 The LVIA is informed by a series of 16 representative viewpoints, which are selected to represent visibility from landscape character types, landscape planning designations, mapped interests and principal visual receptors around the study area. These include points of specific importance such as recognised viewpoints, designated landscapes, settled areas, important routes and attractions. The viewpoints also attempt to represent visibility from a range of different directions and distances, whilst also highlighting those areas with greatest potential for significant effects to arise. It should be noted that while the majority of the viewpoints are chosen to represent receptors that have potential to undergo a significant effect, this is not always the case, and some viewpoints are

included to demonstrate where the thresholds between significant and not significant effects arise or to inform the assessment of the effects on landscape designations or Wild Land Areas.

**General Visibility**

6.6.23 The ZTVs in Figure 6.5a and 6.5b illustrate the extent of theoretical visibility across the 40 km and 15 km radius areas. Figures 6.10a and 6.10b provide a further composite A1 and A0 version of the ZTV on a 1:50,000 Ordnance Survey map base. The majority of both the 40 km and 15 km radius areas comprise seascape rather than landscape and, as such, the majority of visibility occurs across the seascape areas. The location of the Proposed Development on the south-eastern fringe of the Moorland Hills LCT means that the closest and fullest visibility occurs over the first 5 km to 10 km to the south, south-east and east, with almost continuous visibility across the south-east corner of Hoy, South Walls and Flotta. While visibility through the valley of the Ore Burn to the west is also almost continuous out to 5 km, the intermittent screening of the moorland hills makes the extents patchy beyond. To the north, bands of visibility occur across the moorland hills as a result of the undulating landform, with limited patches of visibility permeating to the north-west and to the north. While visibility is extensive around the south-eastern coast of Hoy, the remainder of the coastline is largely unaffected, in particular the more sensitive western coast.

6.6.24 The openness of Scapa Flow and the Pentland Firth means visibility extends out from the Proposed Development to the east, south-east and south, to meet the coastal edges of Burray, South Ronaldsay and Mainland Scotland. Visibility is typically concentrated along the facing coastal edges, albeit with patches extending inland over facing slopes and lower ground. Visibility across Burray and South Ronaldsay is experienced from ranges between 5 km and 10 km, while from Mainland Scotland this range increases to 20 km to 40 km. A similar pattern of visibility occurs north-east and north across Scapa Flow towards East and West Mainland Orkney, with a concentration of visibility occurring along the coastal edge from 10 km to 25 km, albeit with more oblique and less directional views of the site compared to those experienced from Burray and South Ronaldsay.

6.6.25 The openings which allow bands of visibility to spread beyond the viewshed surrounding Scapa Flow include, the Bay of Ireland and the low lying inland lochs that lie to the north of this and Scapa Bay which allows visibility to extend over Kirkwall and spill out across the islands to the north-east. While this north-eastern band of visibility lies beyond 20 km and will be limited in terms of the extent to which the proposed turbines are visible, the band to the north occurs within the slightly closer ranges of 16 km to 30 km.

6.6.26 In summary, the ZTV shows a concentration of almost continuous visibility around the coastal edges of Scapa Flow, and is especially close range around the south-eastern coast of Hoy, South Walls and Flotta and extending more patchily into the moorland hills to the west and north. It is in this area that it will be most likely for significant effects to arise and therefore, the most appropriate location for representative viewpoints. Wirelines have been run to review the potential for significant effects from other sensitive, but more distant locations in order to substantiate discounting them from the detailed assessment.

**Viewpoint selection**

6.6.27 The viewpoint assessment is used to inform and illustrate the assessment of effects on landscape character as well as the assessment of effects on views and principal visual receptors. The viewpoints used in the assessment are set out in Table 6.3, and detailed assessment for each of these is presented in Section 6.13. The viewpoint locations are shown in conjunction with the blade tip ZTV in Figures 6.5a (40 km), 6.5b (15 km) and 6.10 (A1 composite) and the hub height ZTV on 6.6a (40 km) and 6.6b (15 km).

6.6.28 The process of identifying viewpoints involves extensive investigation to ensure that the final viewpoints are representative of the highest levels of visibility and most sensitive receptors around the study area, and that they clearly illustrate the predicted visibility of the Proposed Development.

**Table 6.3: Representative Viewpoints**

| ID | Viewpoint name | Grid ref. | | Dist. nearest turbine (km) | Receptors represented |
|---|---|---|---|---|---|
| 1 | Knap of Trowieglen | 323984 | 998465 | 6.05 km north-west | Walkers on the hill<br>Moorland Hills LCT |
| 2 | West Hill, Flotta | 335267 | 993886 | 6.19 km east | OS Viewpoint, residents of Flotta, core path<br>Low Moorland LCT |
| 3 | Longhope, South Walls | 330359 | 990869 | 3.43 km south-south-east | Residents of South Walls / Road-users on B9047<br>Whaleback Island LCT |
| 4 | A961 OS Viewpoint, South Ronaldsay | 344523 | 987886 | 16.75 km south-east | Road-users on A961 and at layby<br>Plateau Heath and Pasture LCT |
| 5 | St Margaret's Hope Ferry | 334516 | 987793 | 8.40 km south-east | Ferry passengers<br>Scapa Flow / Pentland Firth |
| 6 | Orphir, A964 | 334009 | 1005850 | 12.46 km north-east | Residents of Orphir / Road-users on the A964<br>Inclined Coastal Pasture LCT |
| 7 | Clestrain, A964 | 330239 | 1007084 | 12.74 km north | Residents in rural area / Road-users on A964<br>Inclined Coastal Pasture LCT |
| 8 | Dunnet Head, Mainland | 320327 | 976669 | 18.56 km north-south-south-east | Visitors to Dunnet Head<br>High Cliffs and Sheltered Bays LCT |
| 9 | Duncansby Head, Mainland | 340511 | 973356 | 23.66 km south | Visitors to Duncansby Head<br>High Cliffs and Sheltered Bays LCT |
| 10 | Ward Hill | 322893 | 1002188 | 9.66 km north-west | Walkers on the hill<br>Rugged Hills LCT |

| ID | Viewpoint name | Grid ref. | | Dist. nearest turbine (km) | Receptors represented |
|---|---|---|---|---|---|
| 11 | Lyness Naval Cemetery | 330246 | 994657 | 1.18 km east | Visitors to the cemetery / Road-users on B9047 / Residents of Lyness<br>Plateau Heath and Pasture LCT |
| 12 | North Walls School | 330644 | 992695 | 2.25 km south-east | School-users /Residents in rural area / Road-users on B9047<br>Inclined Coastal Pasture LCT |
| 13 | Bakingstone Hill | 325339 | 992843 | 2.65 km east-south-east | Walkers on the hills<br>Moorland Hills LCT |
| 14 | Houton to Lyness Ferry | 331661 | 996744 | 3.48 km north-east | Ferry passengers<br>Bring Deeps / Gutter Sound |
| 15 | A961, Burray | 347745 | 997701 | 18.94 km east-north-east | Road-users<br>Inclined Coastal Pasture LCT |
| 16 | Withi Gill | 325266 | 997180 | 4.23 km north-west | Walkers on the hills<br>Moorland Hills LCT |

### *Principal Visual Receptors*

6.6.29 A number of visual receptors are considered in the assessment as views from people there may be affected by the Proposed Development. It is not possible to consider every potential visual receptor where people may be located in the study area due to the extent of ground that it covers and the assessment therefore concentrates on the key visual receptors that may gain visibility of the Proposed Development such as people in settlements and on routes. Principal visual receptors are shown in Figure 6.4 and in conjunction with the blade tip ZTV in Figures 6.9, 6.10a and 6.10b.

**Settlements and Residents**

6.6.30 Settlement on Orkney is typically sparse and small-scale. In the study area, there are only a few nucleated towns and villages, with much of the rural population living in dispersed dwellings throughout the rural agricultural landscape. While settlement is typically concentrated along the coastal edges, it also extends across lower-lying parts of the hinterland but is largely absent from the upland landscapes.

6.6.31 This settlement pattern is evident on Hoy and South Walls, where there are only a few nucleated villages, all of which have evolved around strategic ferry ports along the east coast. The remainder of the settlement is dispersed along the coastal edges of Hoy and South Walls, albeit with very limited development on the west coast of Hoy and the south coast of South Walls. The upland interior has no settlement.

6.6.32 The main settlement is Lyness which sits in the south-east of Hoy and is where the ferry terminal linking Hoy with the Mainland of Orkney and Flotta, is situated. While there are a few small clusters

of development, this settlement is fairly dispersed, with dwellings around the coast and along the B9047. It is also characterised by remnant structures from the WWI and WWII naval base. In the north of the island, Moaness is the small settlement where the passenger ferry from Stromness arrives, while over on the west coast, the small settlement of Rackwick sits in a sheltered position between high hills to the north and south. On South Walls, Longhope is the small settlement associated with the ferry terminal and comprises a clustered group of dwellings sitting on the hill slope and then more linear dispersed settlement along the B89047.

6.6.33 The Orkney Local Development Plan identifies areas which it regards as 'Settlement' and these identified locations are shown in Figure 6.4 and in conjunction with the ZTV in Figure 6.9. None of the Settlements lie within 2 km of the Proposed Development, with the exception of Lyness which lies directly to the east of the site at a range of approximately 1 km.

6.6.34 Settlements which are relevant to the assessment include Lyness and Longhope on Hoy, and Orphir on the Mainland of Orkney, which are represented by the following viewpoints; Viewpoint 3: Longhope, Viewpoint 6: Orphir and Viewpoint 11: Lyness Naval Cemetery. These settlements are assessed in detail in Section 6.13 of this chapter.

**Road Routes**

6.6.35 Hoy and South Walls have a sparse road network with the B9047 forming the main route between Moaness in the north, to Hackness in the south, via Lyness in the south-east of Hoy. This runs along the eastern coastline to Lyness, from where it cuts inland north of Longhope and encircles North Bay, before hugging the low-lying coastline to Hackness. Generally, views of the sea, the southern isles and the Mainland of Orkney are seen from along the length of the road and these are strongly influenced by the coastline. Where the road is elevated above the coast, views become more open and expansive. Where the coast becomes more irregular or islands lie nearby, views become more enclosed and short-range. Views inland are largely obscured or shortened by landform, particularly to the north and west where higher landform is more prominent. The lower lying ground of the south-east allows longer ranging and more expansive views inland.

6.6.36 The A964 connects Kirkwall to Houton and its ferry terminal. From the east the road follows the coastline becoming straighter and lying further inland near Kirbister before turning south at Scorradale to approach Houton. The largely elevated road affords long-range views south out to sea over gently sloping farmland, occasionally interrupted by sparse settlement. Views are open and wide from upper slopes and as the road drops to the coast, low headlands around the Bay of Houton enclose the view. From the ferry terminal wide views south over the bay encompass the Holm of Houton and beyond Bring Deeps, the moorland hills of east Hoy appear low on the skyline. Turning north from Houton, the A964 climbs quickly to run along the more exposed west facing coastline within a broad level shelf. The road is well inset from the coast and in combination with the landform and more sporadic settlement, views are more open and panoramic than those available east of Houton. Within these views Hoy is more prominent on the skyline, becoming hillier to the island's north and contrasting with the flatness of the sea and the low-lying peninsula at Stromness.

6.6.37 Kirkwall is connected to South Ronaldsay by the A961, which follows the coast southwards to cross Glimps Holm, Lamb Holm and Burray, via a series of four causeways known as the Churchill Barriers, to hug the South Ronaldsay coast to St Margaret's Hope where it turns south to run along the centre of the island to Burwick. A network of straight minor roads extends from Margaret's Hope throughout a geometric pattern of fields to the coastline. West of Margaret's Hope, these continue along the centre of the Hoxa peninsula and along the east coast of Herston Head. Views over the gently undulating farmland are generally wide and open, and with land falling away to the coast, views expand to a panoramic vista of sea and low islands in the west.

6.6.38 The roads of relevance to the LVIA, where significant effects may arise are the B9047 on Hoy and the A964 on the Mainland of Orkney and are represented by the following viewpoints; Viewpoint 3: Longhope, Viewpoint 11: Lyness Naval Cemetery, Viewpoint 12: North Walls School (B9047), Viewpoint 6: Orphir and Viewpoint 7: Clestrain (A964). These routes are assessed in detail in Section 6.13 of this chapter.

**Walking Routes**

6.6.39 There are a number of short walking routes within the 15 km study area, which are formally recognised through their status as core paths as defined in Orkney Islands Council 'Orkney Core Paths Plan' (2018). The ZTV in Figures 6.9, 6.10a and 6.10b shows that theoretical visibility will be screened from a number of these core paths, including those paths across the north and north-west of Hoy. The path of most relevance on Hoy is H7 Wee Fea, which is especially close range, connecting Lyness with the site. While the core path along the southern side of South Walls is shown on the ZTV to gain visibility, the extent of intervening landform will limit the levels of visibility. F1 West Hill Circular is set around the western edge of Flotta, which will be much more exposed to the effects of the Proposed Development. There is no visibility of the Proposed Development on the core paths on Graemsay and limited visibility from those around Stromness. While there is some visibility shown on the core paths on the southern coastal edge of the Mainland of Orkney, their location beyond a distance of 12 km, combined with the exiting influence of the settled and cultivated coastal edge and the presence of rigs in Scapa Flow, ensures that a significant effect would not arise.

6.6.40 The core paths of relevance to the LVIA include H7 Wee Fea on Hoy and F1 West Hill Circular on Flotta and are represented by the following viewpoints; Viewpoint 11: Lyness Cemetery and Viewpoint 2: West Hill Flotta. These routes are assessed in detail in Section 6.13 of this chapter.

**Ferry Routes**

6.6.41 Ferry routes from Stromness and Houton on the Mainland of Orkney run to the island of Hoy, with an integrated service to Gramesay running from Stromness to Moaness on Hoy, and an integrated service to Flotta running from Houton to Lyness on Hoy.

6.6.42 The Scrabster to Stromness ferry route passes along the scenic western coast of Hoy, where views west extend across the Atlantic Ocean and views east are arrested by the high cliffs and high hills of the hinterland. This means that little visibility penetrates further east and that the central and eastern parts of Hoy are largely screened from view. Crossings from Stromness to Scrabster take two hours with two crossings a day.

6.6.43 A passenger ferry also runs from Stromness to Moaness in the north of Hoy, via Graemsay, although from this route, the southern part of Hoy, where the site is located, is not so readily visible as from the Houton to Lyness ferry. Crossings from Stromness to Moaness on Hoy take 25 minutes with up to five sailings a day during the week and two a day at the weekend.

6.6.44 Ferries from Houton on the Mainland of Orkney, cross Bring Deeps and the inshore areas between Hoy and Flotta. Views to the surrounding islands are continuous and uninterrupted for passengers on these ferries. Inshore crossings from Longhope and Lyness on Hoy to the island of Flotta are short, while the crossings from Lyness and Flotta to Houton passes through more open water at Bring Deeps. Crossings between Longhope and Lyness take 25 minutes with two a day. Crossings between Lyness, Flotta and Houton take around 40 minutes with up to six crossings a day. Overall, the islands of Hoy and Flotta are well connected with the Mainland of Orkney.

6.6.45 A ferry route to Gill's Bay on the Mainland of Scotland runs from Margaret's Hope passing Flotta through the Sound of Hoxa and past the islands of Swona and Stroma. These islands interrupt views looking west while the remaining views of the surrounding southern islands are clear and uninterrupted for passengers on these ferries. Crossings from Margaret's Hope to Gill's Bay take approximately 1.5 hours, with six crossings every day of the week. South Ronaldsay is fairly well connected to the Mainland of Scotland.

6.6.46 The ZTV shown in Figures 6.9, 6.10a and 6.10b, show theoretical visibility of the Proposed Development across a number of ferry routes and areas of sea which are popular with watercraft. Theoretical visibility is shown to be almost continuous across Scapa Flow and the Pentland Firth east of Hoy with almost no theoretical visibility of the Proposed Development from Clestrain Sound, Hoy Sound and the Pentland Firth north west of Hoy.

6.6.47 The extent of this visibility relates to the openness of the water combined with the relatively flat landform of many of the islands and the higher landform of Hoy. It means that the Stromness-Scrabster ferry route will only have visibility of the Proposed Development along part of its route;

the Stromness-Moaness ferry route will have almost no visibility of the Proposed Development; and the ferry route from Margaret's Hope to Gill's Bay, and ferry routes between Longhope, Lyness, Flotta and Houton will have largely continuous visibility of the Proposed Development.

6.6.48 The key ferry routes with potential to be significantly affected by the Proposed Development run from Lyness to Houton, and Margaret's Hope to Gill's Bay. These visual receptors are represented by Viewpoint 5: St. Margaret's Hope Ferry and Viewpoint 14: Houton to Lyness Ferry and are assessed in detail in Section 6.13 of this chapter. The effects on all other ferry routes would be not significant.

### *Trends and Projected Future Baseline*

6.6.49 In relation to Climate Change, the Stern Report states '*The scientific evidence is now overwhelming: climate change is a serious global threat, and it demands an urgent global response.*' While many of the large scale and immediate impacts of climate change will be experienced in other parts of the world, the impacts that are being experienced on the Orkney Islands will be experienced on an increasingly frequent basis and at increasing magnitudes.

6.6.50 United Kingdom Climate Projections 2018 (UKCP18) produced by the Met Office predict that the Scottish climate will get wetter, especially in the winter months and with more frequent storm events. Coastlines will be especially vulnerable due to a combination of rising sea levels and the predictions for more frequent stormy weather, and this could lead to coastal settlements being affected by flooding during high tides. A wetter climate on the Orkney Islands will mean greater risk of flooding in low-lying parts of the landscape, which in the study area, largely coincides with low-lying areas of farmland, where improved pasture is the predominant land use.

6.6.51 In terms of future development on the islands, Figure 6.12 shows the extent of operational, under construction and consented wind farm developments, as well as those in scoping, for turbines greater than 50 m to blade tip and across the 40 km radius around the Proposed Development. There are currently only two application stage wind farms for turbines over 50m, Quanterness on the Mainland of Orkney and Slickley on the Mainland of Scotland. This shows the limited number and extent of wind farms being proposed within the study area, especially within the local area around the Proposed Development. The approach of the assessment to cumulative effects is outlined below and a more detailed assessment is contained in the main assessment in Sections 6.12 and 6.13 and in the cumulative assessment in Section 6.14. It must be noted that wind farm consents have been typically time limited and that in the absence of applications for repowering of wind farms, decommissioning would be the default.

### *Cumulative Wind Farm Developments*

6.6.52 Both SNH and GLVIA3 advise in their guidance that the assessment of the cumulative impacts associated with the Proposed Development should encompass the effects of the proposal in conjunction with existing, under construction, consented and application stage wind farms awaiting determination. Schemes that are at the pre-planning or scoping stage are generally not considered in the assessment of cumulative effects because firm information on which to base the assessment is not available. The list of proposals presented in SNH guidance (SNH, 2012, p7) is as follows:

- *"existing development, either built or under construction;*
- *approved development, awaiting implementation; and*
- *proposals awaiting determination within the planning process with design information in the public domain. Proposals and design information may be deemed to be in the public domain once an application has been lodged, and the decision-making authority has formally registered the application."*

6.6.53 The developments to be considered within the CLVIA are set out in Table 6.4 below. As stated in guidance (SNH, 2012, p15) '*At every stage in the process the focus should be on the key cumulative effects which are likely to influence decision making, rather than an assessment of every potential cumulative effect'.*

6.6.54 While the baseline presented in the LVIA would be altered by the introduction of further wind farms, the cumulative map in Figure 6.12, combined with the cumulative ZTVs in Figures 6.13 and 6.14, and the cumulative wirelines in Figures 6.15 to 6.34, together illustrate the limited influence of the consented and application wind farms. The cumulative effect of the Proposed Development in conjunction with the operational and under construction wind farms is presented along with the main assessment in Sections 6.12 and 6.13, while a brief assessment of the cumulative effect of the Proposed Development with the consented and application wind farms is presented in Section 6.14.

6.6.55 The cumulative situation changes frequently as applications are made or withdrawn, and the layouts of submitted application wind farms are changed. It is therefore necessary to set a cut-off date when the sites and layouts to be included are fixed. This has been set at the 4th May 2020. Any changes in the cumulative situation after this date have not been considered in the CLVIA.

6.6.56 The scale and proximity of cumulative wind farms and other development is also of relevance to the CLVIA, with the greatest influence arising where large-scale wind farms or other developments are situated in close proximity to the Proposed Development. The larger the development, generally the higher the likelihood of a significant cumulative effect. Turbines of less than 50 m are not included within the assessment.

6.6.57 A total of 39 wind farm sites lie within a 40 km radius of the Proposed Development and these are listed in Table 6.4 below. Sites that lie outwith a 40 km radius of the Proposed Development have been discounted due to their distance from the Proposed Development which ensures that either one or both will be seen from a considerable distance away and therefore will have a very limited effect.

6.6.1 Table 6.4 also indicates whether or not cumulative wind farms are referenced in the LVIA. Their separation distance from the Proposed Development, turbine height and number are the key reasons for excluding sites within the cumulative context as they are considered to not have the potential to contribute to the Proposed Development having a significant cumulative effect.

**Table 6.4 - Cumulative Wind Energy Development within a 40 km Radius**

| Name | Status | Number of turbines | Blade tip height in m | Distance in km / Direction | Referenced in LVIA |
|---|---|---|---|---|---|
| West Hill, Flotta | Operational | 1 | 100 | 6.18 / E | Yes |
| Ore Brae, Hoy | Operational | 1 | 67 | 1.33 / SE | Yes |
| Northfield | Operational | 1 | 70 | 19.68 / ENE | Yes |
| Rennibister | Operational | 1 | 67 | 21.33 / NE | No |
| Crowness Business Park | Operational | 1 | 67 | 23.40 / NE | No |
| Hammars Hill | Operational | 5 | 67 | 29.27 / NNE | Yes |
| Howe, Shapinsay | Operational | 1 | 67 | 31.58 / NE | No |
| Holodykes | Operational | 1 | 80 | 27.34 / N | No |
| Burgar Hill | Operational | 6 | 116 | 31.41 / N | Yes |

| Name | Status | Number of turbines | Blade tip height in m | Distance in km / Direction | Referenced in LVIA |
|---|---|---|---|---|---|
| Kingarly Hill | Operational | 1 | 67 | 37.99 / NNE | No |
| Upper Stove | Operational | 1 | 67 | 31.83 / ENE | No |
| Barnes of Ayre | Operational | 3 | 67 | 31.17 / ENE | No |
| Baillie Hill | Operational | 21 | 115 | 36.89 / SW | No |
| Weydale | Operational | 1 | 66 | 31.57 / SW | No |
| Cogle Moss | Operational | 12 | 100 | 36.68 / S | No |
| Stroupster | Operational | 13 | 113 | 27.20 / S | No |
| Lochend Farm | Operational | 4 | 99.5 | 24.39 / S | No |
| Taigh na Muir | Operational | 1 | 79.6 | 20.95 / S | No |
| Forss | Operational | 6 | 78 | 34.93 / SW | No |
| Work Farm | Under construction | 2 | 67 | 26.10 / | No |
| Akla | Under construction | 1 | 100 | 14.16 / NE | Yes |
| Berriedale | Under construction | 1 | 67 | 17.59 / E | Yes |
| Dounreay Tri | Under construction | NA | NA | 39.52 / WSW | No |
| Costa Head | Consented | 4 | 125 | 35.34 / N | Yes |
| Hesta Head | Consented | 5 | 125 | 17.57 / SE | Yes |
| Hill of Lybster | Consented | 1 | 99.5 | 35.08 / SW | No |
| Quanterness | Application | 6 | 149.9 | 22.40 / NE | Yes |
| Slickley | Application | 11 | 149.9 | 27.36 / S | No |

| Name | Status | Number of turbines | Blade tip height in m | Distance in km / Direction | Referenced in LVIA |
|---|---|---|---|---|---|
| Rennibister Extension | Scoping | 5 | 125 | 21.33 / NE | No |
| Halcro Head | Scoping | 6 | 125 | 18.38 / SE | No |
| Banniskirk Mains | Scoping | N/A | N/A | 37.21 / SSW | No |
| Pottinger Farm | Scoping | N/A | N/A | 26.55 / S | No |
| Caithness Livestock Centre | Scoping | 2 | N/A | 35.42 / S | No |
| Borgie House | Scoping | N/A | N/A | 26.67 / SSW | No |
| Hill of Clindrag | Scoping | N/A | N/A | 27.04 / SSW | No |
| Borrowstone | Scoping | 4 | 91 | 34.77 / SW | No |
| Grottistoft Moss | Scoping | 1 | 135 | 23.80 S | No |
| Skaill | Scoping | 1 | 135 | 36.46 / SW | No |

6.6.2 The Cumulative Wind Farm plan in Figure 6.12 highlights the limited number and size of wind farm developments within the study area. The only two developments in the first 15 km radius of the Proposed Development are the operational turbines at Ore Brae on Hoy and West Hill on Flotta. The fact that these are both single turbines, Ore Brae at 67 m to blade tip and West Hill at 100 m, means that the influence they have on the cumulative situation is limited. The single structure of a turbine on its own has less prominent effects on the baseline character of the landscape. Between 15 km and 20 km, there is only one other operational development - a single turbine at Northfield on Burray. There are also two under-construction single turbines, Akla at 15 km to the north-east and Berriedale at 18 km to the east. Again, the medium and small scale of these developments means that they will have a limited influence on the cumulative situation. Consented Hesta Head is a larger development, set at 18 km to the south-east and comprising 5 turbines at 125 m. The cumulative ZTV for this development is presented in Figure 6.13. The viewshed of the landform around Scapa Flow lies at approximately 15 km to 25 km, such that inter-visibility with developments that lie in or beyond this radius is typically limited. This is true of the application wind farm at Quanterness which comprises 6 turbines at 149.9m, but as shown on the cumulative ZTV in Figure 6.14, presents very little inter-visibility with the Proposed Development.

6.6.3 There are more operational and proposed wind farms on the Mainland of Scotland, which are visible in good conditions from open shorelines and facing hill slopes of the closer Orkney Islands. Their separation distance of between 20 km and 40 km combined with their location on a separate and larger island moderates their influence on the cumulative situation.

6.6.4 Baseline operational and under construction cumulative wind farms are taken into consideration in the solus assessment and cumulative assessment of the Proposed Development, as presented in

Sections 6.12 and 6.13. Consented and application-stage wind farms are considered in the cumulative assessment, presented in Section 6.14, along with operational and under construction wind farms.

## 6.7 Receptors Brought Forward for Assessment

6.7.1 Through a combination of the scoping process, baseline assessment and site work, the following landscape and visual receptors have been identified as having potential to undergo significant effects as a result of the Proposed Development. These, therefore, form the basis of the assessment and are assessed in detail in Section 6.12 and 6.13.

**Landscape Elements**

- Rough moorland

**Landscape Character Types and Units**

- Coastal Basin LCT (301): Widewall Bay LCU;
- Enclosed Bays LCT (305); Swanbister Bay LCU;
- Holms LCT (295): Cava and Rysa Little LCU;
- Holms LCT (295): Calf of Flotta and Switha LCU;
- Holms LCT (295): Hunda LCU;
- Holms LCT (295): Swona LCU;
- Inclined Coastal Pasture LCT (302): Lyness LCU;
- Inclined Coastal Pasture LCT (302): Orphir LCU;
- Inclined Coastal Pasture LCT (302): Hoxa LCU;
- Low Moorland LCT (311): West Flotta LCU;
- Moorland Hills – Orkney LCT (314): Hoy Central Hills LCU;
- Moorland Hills – Orkney LCT (314): Ward Hill LCU;
- Rolling Hill Fringe LCT (313): Scorra Dale LCU;
- Rugged Hills LCT (316): Ward Hill LCU;
- Undulating Island Pasture LCT (299): East Flotta LCU;
- Whaleback Islands LCT (296): Fara LCU; and
- Whaleback Islands LCT (296): South Walls LCU.

**Coastal Character Areas**

- 23: Orphir;
- 24: Stromness and Clestrain Sound;
- 31: Cava, Rysa Little and Fara;
- 32: South East Hoy;
- 33: Flotta;
- 34: North Bay, Longhope and Switha; and
- 38: West Burray and South Ronaldsay.

**Landscape Designations**

- Orkney – Hoy and West Mainland NSA Appendix (6.2).

**Wild Land Areas**

- Hoy WLA (Appendix 6.3).

**Viewpoints (also representing Principal Visual Receptors)**

- Viewpoint 1: Knap of Trowieglen;
- Viewpoint 2: West Hill, Flotta (PVR F1 West Circular Core Path);
- Viewpoint 3: Longhope, South Walls (PVRs Longhope / B9047);
- Viewpoint 4: A961 OS Viewpoint, South Ronaldsay;
- Viewpoint 5: St Margaret's Hope Ferry (PVR St Margaret's to Gills Bay Ferry Route);
- Viewpoint 6: Orphir, A964 (PVR Orphir and Houton);
- Viewpoint 7: Clestrain, A964;
- Viewpoint 8: Dunnet Head, Mainland;
- Viewpoint 9: Duncansby Head, Mainland;
- Viewpoint 10: Ward Hill;
- Viewpoint 11: Lyness Naval Cemetery (PVRs Lyness / B9047 / H7 Wee Fea core path);
- Viewpoint 12: North Walls School (PVR B9047);
- Viewpoint 13: Bakingstone Hill;
- Viewpoint 14: Houton to Lyness Ferry (PVR Houton to Lyness Integrated Ferry Route);
- Viewpoint 15: A961, Burray; and
- Viewpoint 16: Withi Gill

## 6.8 Standard Mitigation

6.8.1 This section describes the landscape and visual mitigation measures which have been incorporated through the iterative design of the Proposed Development in order to prevent, reduce or offset potentially negative landscape and visual effects caused by the construction and operation of the Proposed Development. It should be read in conjunction with the full project description and the rationale for site selection and scheme design in Chapter 2: Design Iteration.

**Site Selection**

6.8.2 The site is located in the south-east of Hoy, to the west of the settlement of Lyness. It is located on the eastern fringe of the Moorland Hills LCT, where it transitions towards the Inclined Pastoral Valley LCT of the eastern coast. As highlighted in the OLWECS (2014) this area to the east of the site is considered the most suitable part of Hoy for wind farm development, owing to the existing influence of past and present developments in this area, including the remnants of the naval base, the ferry terminal, the tidal energy research centre, the mast on Binga Fea and the single turbine at Ore Brae. Furthermore, there is also the influence from the oil terminal and single turbine on Flotta, 4 km to the east. The influence of these human artefacts reduces the susceptibility of this area to further wind farm development, detracting from the sense of wildness and remoteness found in other parts of the island.

6.8.3 The site selection reflects the relative sensitivity of the different landscapes across the island of Hoy. The most sensitive landscapes are the Rugged Hills LCT in the north of the island and the Cliffs LCT

along the western coast. The value of the landscapes across the north of the island is recognised through the NSA designation. The location of the site in the south-east of the island ensures some degree of separation from these most sensitive landscapes and, as shown in the ZTV in Figure 6.7a, there will be practically no visibility from the western coast and only limited small patches of visibility in the Rugged Hills LCT.

6.8.4 The location of the Proposed Development in the south-east also ensures that it will be situated on the lower moorland hills. This means that the base elevation of the wind farm will be lower and, therefore, it will be less prominent in views from within Hoy, but also in views of Hoy from West Mainland and the other islands. The higher moorland hills to the north will help screen and reduce the extent of visibility of the Proposed Development from other parts of the island. They will also help to back-cloth the turbines in views towards the island, thus, to some extent, reducing the effect on the Hoy skyline. The location of the turbines at the lower southern end of the island, will also reduce the association with the more dramatic higher hills to the north, when viewed across Scapa Flow.

**Layout Design**

6.8.5 The design of the wind farm layout is a vital part of the EIA process as it is the stage where the most notable contribution can be made to mitigate likely landscape and visual effects. Thoughtful design helps to create a wind farm which relates both to the underlying and surrounding landscape and which appears as a compact and well-contained feature in surrounding views. The iterative design process allows the effects of different wind farm layouts to be assessed then modified to prevent, reduce or offset effects. The residual effects reported in the following section, therefore, include considerable embedded mitigation in the form of design refinement and consideration against landscape and visual objectives, for example, arranging turbines with respect to landform features, particular consideration of a view of the wind farm from a highly valued landscape, or ensuring the arrangement of turbines is aesthetically balanced from sensitive viewpoints and visual receptors.

6.8.6 In order to minimise negative effects on the landscape and views, a number of design principles were considered. Insofar as possible, given other technical and environmental constraints on the site, these principles sought to reduce significant effects through alterations to layout, design and siting, management practices and mitigation. The design objectives are based upon the characteristics of the existing landscape and visual environment described in Section 6.6: Baseline Conditions above, and are set out as follows:

- To create a compact and well-defined group of turbines that appears well contained within its landscape setting; visually legible design, insofar as was possible on a site, which is constrained by other environmental and technical issues, and create a simple, positive layout, viewed consistently from different positions;
- To ensure that the proposed turbines, access tracks and other infrastructure relates well to the underlying landform and appears clearly associated with Wee Fea – the central hill on the site;
- To arrange the turbines to create a simple and well-balanced layout, with turbines evenly spaced and without too much disparity between relative base height elevations and avoiding the occurrence of overlapping turbines or outliers;
- To ensure that the infrastructure follows the existing patterns and shapes of the landform, by tying in with existing access tracks, and following baseline contours; and
- To locate the sub-station compound and temporary construction compound within the eastern end of the site, in order to utilise some screening from the woodland plantation and keep them behind the formal viewpoint.

6.8.7 The iterative design process has refined the original layout to help mitigate the likely effects of the Proposed Development on the landscape and visual receptors. The sequence of iterative design layouts is illustrated in Chapter 2: Design Iteration. Key viewpoints located at Lyness Naval

Cemetery, North Walls School, Longhope, Ward Hill and Knap of Trowieglen have been used in the iterative process to ensure that the turbines comply with the design objectives set out above.

## 6.9 Likely Effects

6.9.1 Likely effects are those which could result from the construction, operation and decommissioning of a wind farm, according to the characteristics of the site, the Proposed Development and the landscape and visual receptors and the interactions between these factors. Table 6.5 describes typical landscape and visual effects that can occur from a wind farm. Their inclusion in the table does not imply that they will occur, or occur as significant effects, as a result of the Proposed Development.

6.9.2 A variety of landscape and visual mitigation measures have been incorporated through the iterative design of the Proposed Development in order to prevent, reduce or offset likely landscape and visual effects. These are described in Section 6.8: Standard Mitigation presented above. The residual effects of the Proposed Development are those effects remaining after mitigation, which will become apparent under construction or operation. These are assessed in Section 6.12: Residual effects on landscape character, Section 6.13: Residual effects on views.

**Table 6.5: Likely Landscape and Visual Effects - Construction, Operation and Decommissioning**

| Activity | Specific Element | Likely Effects | Likely Sensitive Receptors |
|---|---|---|---|
| Construction (or decommissioning) | Construction plant, temporary construction compound, access tracks, meteorological mast, hard-standings, landform changes, borrow pits, construction cranes, turbines. | Temporary / permanent physical effects on landscape fabric<br>Temporary / permanent effects on landscape character<br>Temporary / permanent effects on visual amenity | Physical landscape features e.g. rough moorland<br>Landscape character receptors – landscape and coastal character types and designated landscapes<br>Views – experienced by different receptors e.g. residents, road users, walkers |
| Operation | Turbines, access tracks, meteorological mast, substation, external transformers, hard standings, borrow pits and landform changes. | Long term effects on landscape fabric<br>Long term effects on landscape character<br>Long term effects on visual amenity | |

6.9.3 The effects of the Proposed Development on landscape and visual receptors will arise principally from the construction, operation and possible future decommissioning of the turbines and met mast, substation compound, borrow pits, earthworks and access tracks. The temporary construction facilities, such as cranes, construction vehicles, construction compounds, laydown areas and delivery vehicles required during construction will also have effects on the landscape and visual resource. It is anticipated that construction of the Proposed Development will take up to approximately 18 months; the construction effects identified are, therefore, predicted to occur during this period and end at the start of the operational stage. While the most widespread effects during the construction phase will relate to the tall cranes, it is anticipated that two months will be the maximum period during which the cranes will be active on the site, making this an especially short term effect. A Construction Management Statement will be prepared that will further detail the mitigation measures to be implemented during the construction phase.

6.9.4 The Applicant is seeking in-perpetuity consent for the Proposed Development. In the event of decommissioning, or replacement of turbines, it is anticipated that the levels of effect would be similar but of a lesser level than those during construction. Decommissioning would be undertaken in line with best practice processes and methods at that time and will be managed through an agreed Decommissioning Environmental Management Plan.

## 6.10 Additional Mitigation

6.10.1 There is very limited opportunity to mitigate landscape and visual effects outwith standard mitigation measures undertaken in the iterative design process. Where short term effects on the landscape elements of the peat and landcover would occur during the construction phase, these would be mitigated through the implementation of the Habitat Management Plan, which includes peatland and vegetation restoration. There is no further additional mitigation to be considered in the LVIA.

6.10.2 The residual effects of the Proposed Development on landscape and visual receptors, that is those that will remain after mitigation, are assessed in the sections presented below. These are categorised into effects on landscape elements, effects on landscape character, and effects on views, as described previously. Cumulative effects are also assessed in these sections as these effects relate to the operational and under construction wind farms that make up the baseline cumulative context, rather than any proposed wind farms.

## 6.11 Residual Effects on Landscape Elements

### *Introduction*

6.11.1 The first category of effects covered in the assessment is the physical effects on landscape elements. These are the direct effects on the fabric of the site, such as the removal of ground cover vegetation. Effects on landscape elements are found only on the site, where existing landscape elements may be removed or altered by the Proposed Development. This category of effects is made up of landscape elements and, in this case, the only one element involved is heather moorland. The methodology for the assessment of physical effects is described in full in Appendix 6.1.

### *Rough Moorland*

**Baseline**

6.11.2 Rough moorland is associated with the Moorland Hills LCT, which covers the majority of Hoy. As such, rough moorland is the predominant landcover across the island. The site is located in the Moorland Hills LCT and its land cover comprises the mix of heathers and grasses that make up the rough moorland landcover. These grow from soils that tend to be peat based and often waterlogged, albeit with drier upper slopes and summits. This type of landcover is typical throughout much of Hoy and other upland areas in Orkney. It contributes to the open and exposed character of the upland landscapes, and while ecological diversity occurs at a detailed scale, the general appearance is of a homogenous blanket landcover.

**Sensitivity**

6.11.3 The value of the rough moorland landcover is medium. The rough moorland contributes to the more open and less modified character of the upland landscape. While it is a relatively abundant landscape element that is not rare or recognised for its value, within the diversity at the detailed scale there are landscape elements within it which are of greater value owing to the importance of the flora and fauna.

6.11.4 The susceptibility of the rough grass moorland to the effects of the Proposed Development is low as it occurs in abundance across the Moorland Hills of Hoy. Furthermore, the heather and rough grass species are sufficiently invasive to enable them to re-colonise disturbed areas.

6.11.5 The combination of these factors results in a **medium to low** sensitivity being attributed to the rough moorland landcover on the site.

**Magnitude of Change**

6.11.6 Changes to the rough moorland landcover would result as a consequence of the removal of soil and vegetation from the routes of the new access tracks, and along the edge of the upgraded access tracks where widening is required, in the areas of the temporary construction compound and the longer term substation, hard-standings, crane pads and foundations for turbines and meteorological mast.

6.11.7 The magnitude of change on the rough moorland landcover would be **low** as the Proposed Development would result in the removal of relatively small areas, which constitute a small proportion of this extensive landscape element. This rating has also taken into account the relative ease with which this vegetation type can re-colonise. The location of the turbines, tracks and other associated infrastructure have been carefully located to avoid the more sensitive habitats within this landscape element.

**Significance of Effect**

6.11.8 The physical effect of the Proposed Development on the rough moorland landcover will be not significant. This is primarily due to the medium to low sensitivity of the landscape element, the limited proportion of the landscape element that would be affected, and the high potential for the visual mitigation of any direct effects through reinstatement of the rough grass moorland ground cover. Although the effect would be not significant, the nature of the effect would be adverse.

## 6.12 Residual Effects on Landscape Character

### *Introduction*

6.12.1 Landscape character is the distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, and the way that this pattern is perceived. Effects on landscape character are manifested both on the site, where the pattern of elements that characterises the landscape will be directly altered by the addition of the Proposed Development to the landscape; and off-site, around the study area, where visibility of the Proposed Development may alter the way in which this pattern of elements is perceived. For example, if the Proposed Development is visible from the Ward Hill LCU of the Rugged Hills LCT, the perceived experience of this area may be altered. This is because the visibility of the Proposed Development introduces new external influences and characteristics, despite its physical location in a different, geographically separate, LCT.

6.12.2 Landscape character receptors fall into two groups:

- LCTs/LCUs; and
- Designated areas.

6.12.3 The assessment of effects on these receptors is described in the following sections of this chapter. The detailed methodology for the assessment of effects on landscape character is described in Appendix 6.1.

6.12.4 It should be noted that levels of magnitude of change on landscape character receptors are generally found to be lower than the magnitude of change on viewpoints that lie within these receptors. This means, for example, that if a viewpoint is assessed to undergo a medium to high magnitude of change it does not necessarily follow that the landscape character receptor within which it lies will also undergo a medium to high magnitude of change but may undergo a medium magnitude of change instead.

6.12.5 This is because the effects on viewpoints are assessed within the context of a specific outlook towards the site and are usually specifically selected to gain a direct view over the Proposed Development. The Proposed Development is, therefore, the principal consideration in the viewpoint assessment, and influences that lie in other areas of the view are of lesser relevance to the assessment. The landscape character of a receptor is not, however, determined so specifically by the outlook over the Proposed Development, and there are many other considerations, both visual and perceptual, that combine to give an area its landscape character. This means that the degree of

influence of the Proposed Development on landscape character may be lower than its influence on a specific view. Viewpoints are referred to in this assessment as they do give a useful indication of the appearance of the Proposed Development from the landscape receptors, but the level of magnitude of change may vary between the viewpoint assessment and the landscape character assessment.

6.12.6 This is particularly true of areas that lie slightly further away from the site. In the immediate vicinity of the site, typically up to around 2 km to 3 km away – the magnitude of change on viewpoints and landscape character is likely to be similar, but beyond this, the magnitude of change on landscape character is found to often diminish more rapidly as the influence of the turbines is subsumed in the many other influences on landscape character.

### *Assessment of Effects on LCTs and LCUs*

6.12.7 The LCTs and LCUs that cover the local study area of a 15 km radius are shown in Figure 6.2 and in conjunction with the ZTV in Figures 6.7a, 6.10a and 6.10b. The following LCTs / LCUs have the potential to undergo significant effects and therefore require a detailed assessment in the LVIA.

**Table 6.6: Landscape Character Types and Landscape Character Units to be assessed in detail**

| Landscape Character Type | Landscape Character Unit(s) |
|---|---|
| Coastal Basin LCT (301) | Widewall Bay LCU |
| Enclosed Bays LCT (305) | Swanbister Bay LCU |
| Holms LCT (295) | Cava and Rysa Little LCU / Calf of Flotta and Switha LCU / Hunda LCU / Swona LCU |
| Inclined Coastal Pasture LCT 302) | Lyness LCU / Orphir LCU / Hoxa LCU |
| Low Moorland LCT (311) | West Flotta LCU |
| Moorland Hills – Orkney LCT (314) | Hoy Central Hills LCU / Ward Hill LCU |
| Rolling Hill Fringe LCT (313) | Scorra Dale LCU |
| Rugged Hills LCT (316) | Ward Hill LCU |
| Undulating Island Pasture LCT (299) | East Flotta LCU |
| Whaleback Islands LCT (296) | Fara LCU / South Walls LCU |

6.12.8 The effect on each of these LCTs / LCUs is assessed below. The LCTs / LCUs that cover the remainder of the study area were found through the review process to not have the potential to be significantly affected, largely owing to no or limited visibility, and have therefore not been assessed in any further detail. A baseline description that encompasses the broader geographical extent of the LCT is provided first with a more specific description of the LCU that is to be assessed in detail, following on from this.

**Coastal Basins LCT (301) – Widewall Bay LCU**

Baseline

6.12.9 The Coastal Basins LCT occurs intermittently around the mainland coast and on the coastline of some of the islands. This LCT comprise areas of smooth relief which extend inland from the coastal edge and which are defined as basins by the surrounding rising landform. They are, therefore, relatively open to the sea, often with good views out. The land is relatively productive and is used for improved pasture and arable crops, although the lower lying land closer to the coast is often wetland or contains small lochs. This landscape is settled, with large farmsteads dispersed across the area and some drystone dykes forming enclosure to the geometric field pattern.

6.12.10 This LCU covers the coastline of the bay north to Ronaldsvoe. It comprises areas extending inland from the coastal edge loosely defined by the surrounding hills of Hoxa, Vensilly and Kirkie which lie at 60 m, 83 m and 76 m AOD respectively. Comprising mostly improved pasture and arable farmland, this LCU is largely representative of the Coastal Basins LCT. The LCU is largely characterised by the enclosure the headlands form, and this reduces visibility of the neighbouring islands.

Sensitivity

6.12.11 The value of the Widewall Bay LCU is medium. This LCU is not covered by any national or regional landscape designations, which would otherwise denote a special value.

6.12.12 The susceptibility of the Widewall Bay LCU to the effects of the Proposed Development is medium to low. The orientation of the coastline between Oyce of Quindry and Oyce of Herston ensures that there is some association with Hoy, albeit moderated by distance and the enclosing landform of the bay's headlands. Theoretical visibility of the Proposed Development is mostly continuous in this area with no visibility from areas immediately to the east of Hoxa Hill and the southern headland at Herston. There is an existing influence from the single turbine at West Hill on Flotta.

6.12.13 The combination of the medium value of this LCU and its medium to low susceptibility to the effects of the Proposed Development gives rise to an overall sensitivity rating of **medium**.

Magnitude of change

6.12.14 During the operational phase, the Proposed Development will not physically alter the strong pattern of elements and features within this LCU. The magnitude of change to the character of this LCU will be **low**, with **no change** to the areas immediately to the east of Hoxa Hill and Kirkie Hill. While the LCU has theoretical visibility of all six turbines, this is limited to the west facing slopes of Kirkie Hill and Vensilly Hill. Towards Vensilly Hill the openness of the landscape means that actual visibility will be largely equivalent to theoretical visibility, while visibility of the six turbines will occur in the far distance beyond the interlocking headlands. From Kirkie Hill, the influence of the Proposed Development reduces as the association with the Hoy Central Hills LCU weakens and the surrounding farmland becomes a stronger influence on landscape character.

6.12.15 The nearest proposed turbine is located approximately 12.5 km from the closest edge of the LCU. The proposed turbines will appear as vertical elements at variance with the character of the low-lying moorland hills upon which they sit as part of the wide context of this LCU which contains many features. The small number of turbines and their containment within the lower hills in the south of the island moderates their influence which would otherwise have been greater if located in the higher hills in the central or northern part of the island.

6.12.16 During the construction phase, the magnitude of change will be similar to that described during operation of the Proposed Development. Changes to the character of the LCU will relate to the construction of the turbines as lower level construction will be obscured. The strength of the association with Hoy's central hills, combined with duration of construction activity will limit observable change to the LCU.

Significance of effect

6.12.17 During the operational and construction phases, the effect of the Proposed Development on the Widewall Bay LCU of the Coastal Basins LCT will be not significant**.** This takes into consideration the

distance of the LCU from the site, the influence of the enclosing headlands, the limited visibility of the Proposed Development and the influence of the surrounding farmland.

Significance of cumulative effect

6.12.18 The cumulative magnitude of change in respect of the operational and under construction turbines will be low and the cumulative effect will be not significant.

6.12.19 The LCT is characterised by shallow coastal basins at the mouth of short inland valleys or depressions, around sand and shingle bays and enclosed by low headlands. Generally, below 20 metres above sea level, the landscape rises slightly in the back-land. Small water courses draining from adjoining low-lying areas often pass through the LCT. Behind the coastline, the LCT is predominantly pasture with some wetland, watercourses, riparian scrub and infrequent small woodlands. Lower land contains small farms and estate farms with crofts located towards higher land. Views of the sea are framed by curving coastline and headlands. This LCU is generally perceived as isolated and remote, beyond the visitor season when accessible beaches become busy.

**Enclosed Bays LCT (305) - Swanbister Bay LCU**

Baseline

6.12.20 The LCT is characterised by shallow coastal basins at the mouth of short inland valleys or depressions, around sand and shingle bays and enclosed by low headlands. Generally, below 20 metres above sea level, the landscape rises slightly in the back-land. Small water courses draining from adjoining low-lying areas often pass through the LCT. Behind the coastline, the LCT is predominantly pasture with some wetland, watercourses, riparian scrub and infrequent small woodlands. Lower land contains small farms and estate farms with crofts located towards higher land. Views of the sea are framed by curving coastline and headlands. This LCU is generally perceived as isolated and remote, beyond the visitor season when accessible beaches become busy.

6.12.21 This LCU is located on the southern coast of the Mainland of Orkney, to the south-east of Orphir. It extends across the low hinterland of the bay and the east facing slopes of Veness Hill, which at 63 m (AOD) is the highest point within the LCU. Largely consistent with the character of the Enclosed Bays LCT, it is characterised by a coastal basin at the mouth of the valley of Burn of Lerquoy. Generally, below 10 m (AOD) the LCU is predominantly pasture with few estate farms and associated small woodlands, some wetland, and numerous small burns and drains, which flow into a bay enclosed by the headlands of Toy Ness, to the south, and Ve Ness, to the north. Two sandy beaches lie within the bay, which is rocky elsewhere.

Sensitivity

6.12.22 The value of the Swanbister Bay LCU is medium. National or regional landscape designations, which would otherwise denote a special landscape value, do not cover the LCU.

6.12.23 The susceptibility of the Swanbister Bay LCU to the effects of the Proposed Development is medium to low. While the coastal nature of this LCU increases its susceptibility to the influences of the surrounding seascape and neighbouring islands, its south-easterly orientation moderates its potential association with the Proposed Development which would be located to the south-west. Hoy occurs as a distant influence on the character of this LCU, although its upland skyline forms a distinctive feature within the wider context.

6.12.24 The medium value of the Swanbister Bay LCU and its medium to low susceptibility to the effects of the Proposed Development, means that the overall sensitivity is rated **medium to low**.

Magnitude of change

6.12.25 The Proposed Development will not physically alter the strong pattern of elements and features within this LCU. During the operational phase, the magnitude of change will be **low** between Toy Ness and The Lash, with **no change** to north-east facing coastlines at Piggar and Waulkmill Bay. The ZTV in Figure 6.7a shows theoretical visibility of all six turbines to be largely continuous across the LCU with no visibility north of the headlands. Actual visibility will be almost equivalent due to the coastal location and the openness of the LCU. The nearest proposed turbine lies approximately 11.8 km from the LCU.

6.12.26 The Proposed Development will introduce wind farm development into the southern part of Hoy which forms part of the wide context to this LCU. The verticality, scale and modern appearance of the proposed turbines will appear at variance with the low-lying landscape of southern Hoy. The effect of the Proposed Development will be moderated by the presence of farmland and settlement across the near shore which denotes the extent of human influence, and furthermore, the presence of rigs which are often stationed in Scapa Flow. The association with Hoy weakens further east along the coastline, where distance from the site combines with the increasing influence of Scapa Flow.

6.12.27 During the construction phase, the magnitude of change will initially be lower than that described during the operational phase, approaching similar levels nearing completion. Screening of ground level construction by landform means that the effect of the Proposed Development will largely derive from construction of the wind turbines. Visibility of the turbines and associated construction work at height as they near completion will limited the influence of the Proposed Development.

Significance of effect

6.12.28 The effect of the Proposed Development on the Swanbister Bay LCU will be not significant. This finding reflects the limited visibility of the Proposed Development, the orientation of the LCU in a different direction to that of the Proposed Development and the unaffected influence of both the rugged hills of north Hoy and the intervening expanse of Scapa Flow.

Significance of cumulative effect

6.12.29 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

**Holms LCT (295)**

Baseline

6.12.30 The Holms LCT includes small, oval-shaped islands with a smooth landform that is flat to slightly domed. Low-lying, these rise to between 5 and 20 metres above sea level, or occasionally up to almost 40 metres above sea level. The coastline fringe comprises rock platforms and occasional low cliffs, and ridges in sandy or shingle beaches. Vegetation behind the coastline contains low-lying rough grassland with some heather, grazed by sheep. Levels of habitation and associated roads are low on most islands with historic structures including ruined crofts, fishing stations, beacons and wartime defence structures. The islands have a strong sense of wildness and remoteness increased by the sight and sound of wildlife. The remote, largely unsettled and exposed islands are silhouetted against the sea, providing a focus for views from surrounding islands.

Landscape Character Units

- Cava and Rysa Little LCU includes the islands of Cava and Rysa Little. These two small uninhabited islands are located in the Scapa Flow just offshore from Hoy, with the skerry Barrel of Butter further north-east;
- Calf of Flotta and Switha LCU includes the Calf of Flotta and the island of Switha. These two small uninhabited islands are located approximately 0.5 km north and 1.2 km south of Flotta respectively;
- Hunda LCU covers the island of Hunda situated in the Scapa Flow and connected to the nearby island of Burray by a causeway; and
- Swona LCU covers the island of Swona within the Pentland Firth between the Orkney Islands and Caithness on Mainland Scotland, in the southern approach to Scapa Flow, off the west coast of South Ronaldsay.

**Holms LCT (295a) - Cava and Rysa Little LCU**

Baseline

6.12.31 This LCU includes the islands of Cava and Rysa Little. Both islands are low-lying with Cava being higher at 38 m AOD to Little Rysa's 20 m AOD. Their smooth landform is largely flat and covered by

a mosaic of moorland and rough grassland. The larger Cava is 107 ha in area and distinguished by the Calf of Cava, a small peninsula joined to the island by a narrow isthmus. The sole structure on Cava is a lighthouse located on the peninsula. Inhabited until the last century, ruined crofts are still evident on the island. The smaller Little Rysa is 32 ha in area and has been uninhabited for much longer. This lends a strong sense of naturalness and remoteness to both islands, enhanced by the absence of wartime defence structures. The islands are representative of the Holms LCT. Gutter Sound, south of Cava and between Fara and Rysa Little, is the scene of the mass-scuttling of the interned German Imperial High Seas Fleet in 1919.

Sensitivity

6.12.32 The value of the Cava and Rysa Little LCU is medium. National or regional landscape designations, which would otherwise denote a special landscape value, do not cover the islands.

6.12.33 The susceptibility of the Cava and Rysa Little LCU to the effects of the Proposed Development is medium. The open and exposed landscapes of the islands have a strong horizontal emphasis that is largely devoid of vertical features. The enclosing landscape of neighbouring Hoy to the west is closely associated with the character of the islands. The undeveloped and relatively natural islands are susceptible to the Proposed Development which would contrast with this character. Cava being inset further into Scapa Flow than Little Rysa, means it has a slightly reduced association with Hoy. West Hill on Flotta is the only readily visible turbine from this LCU.

6.12.34 The combination of the medium value of the Cava and Rysa Little LCU and its medium susceptibility to the effects of the Proposed Development results in an overall sensitivity rating of **medium**.

Magnitude of change

6.12.35 The Proposed Development will not physically alter the strong pattern of elements and features within this LCU. During the operational phase, the magnitude of change to the character of Cava and Rysa Little LCU will be **medium**. The Proposed Development will have a notable influence on the character of the islands. This derives from the visual influence of Hoy on Cava and Little Rysa and its close association with both islands. The ZTV in Figures 6.7a, 6.10a and 6.10b shows theoretical visibility to be almost continuous across Rysa Little and Cava, with landform limiting visibility from both east coasts. Actual visibility will be comparable. The nearest proposed turbine lies 5.8 km from Cava and 3.6 km from Rysa Little.

6.12.36 The Proposed Development will be partially visible from much of the LCU and will occur as a new feature above and extending over a relatively small area of the skyline largely formed by Hoy. The six proposed turbines will contrast with the relatively natural character of northern Hoy and both islands. Settlement and agriculture are located further south on Hoy's coastline, which in combination with the West Hill turbine on Flotta, will lightly moderate the effect of the Proposed Development.

6.12.37 During the construction phase, the magnitude of change to the Cava and Rysa Little LCU will be **medium to low**. Hills on Hoy will largely obscure ground level construction works and the emerging turbines and associated tall cranes used in their construction will be partially visible from the larger part of both islands. These new introductions will occupy a small proportion of the wider landscape of the LCU. As such, the defining influence of the Moorland Hills LCT on Hoy will remain largely unaltered.

Significance of effect

6.12.38 At the operational phase, the Proposed Development will have a significant effect on the Cava and Rysa Little LCU. For areas without visibility of the Proposed Development, the effect will be lower to not significant levels. During construction the effects of the Proposed Development will be not significant. This finding relates to the close association between Hoy and the landscape character of Cava and Rysa Little islands and the anticipated visibility of construction of the wind turbines.

Significance of cumulative effect

6.12.39 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

**Holms LCT (295c) - Calf of Flotta and Switha LCU**

Baseline

6.12.40 This LCU covers the Calf of Flotta and Switha islands. Both islands are low-lying with Switha being slightly higher at 29 m (AOD) compared to 18 m (AOD) at the Calf of Flotta. Switha is larger at approximately 41 ha in area. The islands are representative of the Holms LCT having a largely flat smooth landform covered by rough grassland and a strong sense of naturalness and remoteness. Switha is further distinguished by cairns and standing stones.

Sensitivity

6.12.41 The value of the Calf of Flotta and Switha LCU is medium. National or regional landscape designations, which would otherwise denote a special landscape value, do not cover the islands.

6.12.42 The susceptibility of the Calf of Flotta and Switha LCU to the effects of the Proposed Development is medium. The uninhabited and natural landscapes are largely flat, open, and devoid of vertical features. Calf of Flotta is more readily influenced by nearby Flotta, while Switha is influenced by nearby Flotta and South Walls. The location of Hoy, behind these closer islands, combined with the existing influence of the West Hill turbine on Flotta, reduces the susceptibility of this LCU to the influence of the Proposed Development. Hoy does, nonetheless, present an external influence, especially in respect of the rising landform which forms some sense of enclosure to the west of these small islands.

6.12.43 The combination of the medium value of this LCU and its medium susceptibility to the effects of the Proposed Development results in an overall **medium** sensitivity.

Magnitude of change

6.12.44 The Proposed Development will not physically alter the strong pattern of elements and features within this LCU. During the operational phase, the magnitude of change in the character of the Calf of Flotta and Switha LCU will be **medium to low**. Hoy is associated with the Calf of Flotta and Switha LCU and the Proposed Development will have a visual influence on the character of the LCU. The ZTV in Figure 6.7a shows that theoretical visibility is uninterrupted across both islands and actual visibility will be largely comparable. Wind turbines within the Proposed Development will lie between approximately 8.8 km to 10 km from the near coastline of the Calf of Flotta and 7.8 km to 8.4 km from the near coastline of Switha. Being closer to Hoy than the Calf of Flotta, the association between Switha and the Hoy Central Hills LCU is stronger.

6.12.45 The six proposed turbines will be clearly visible on or behind Wee Fea on Hoy, albeit with visibility of lower parts of the turbines, potentially screened by intervening landform. The Proposed Development will contrast with the largely undeveloped character of the moorland hills and of both islands. Both islands are, however, influenced by the presence of the West Hill turbine at Flotta. Distance to the site, and the relatively contained layout of the turbines will moderate the effects of the Proposed Development.

6.12.46 During construction, the magnitude of change will be **medium to low**. While ground level construction works will be visible from Switha, the greater influence will be the emerging turbines and associated tall cranes used in their construction. For both islands these will be visible as they near completion. Construction activity will occupy a small proportion of the wider landscape, will be of short duration and temporary, moderating the effect of the Proposed Development.

Significance of effect

6.12.47 The effect of the Proposed Development on the Calf of Flotta and Switha LCU will be not significant during operation and construction. This takes into consideration broad range of external influences on character and the separation by sea and other closer islands, parts of which are developed, and despite the anticipated visibility of the Proposed Development and the uninhabited and remote character of Calf of Flotta and Switha.

Significance of cumulative effect

6.12.48 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

**Holms LCT (295e) - Hunda LCU**

Baseline

6.12.49 This uninhabited island is 100 ha in extent and rises to 42 m (AOD). It is representative of the Holms LCT being low-lying, gently domed and largely covered by rough moorland. While the island has a sense of naturalness and remoteness this is moderated by pasture within a large area adjacent to the causeway and nearby on Burray.

Sensitivity

6.12.50 The value of the Hunda LCU is medium. National or regional landscape designations, which would otherwise denote a special landscape value, do not cover the island.

6.12.51 The susceptibility of the Hunda LCU to the effects of the Proposed Development is **medium**. There are a number of closer range islands with a more direct influence on the character of the Hunda LCU than Hoy. For example, Burray and Ronaldsay are the closest islands, situated to the east and south, while Fara and Flotta are situated to the west and south-west, separating Hunda from Hoy, although with the hills of Hoy visible above the intervening islands. Small scale development is readily evident on these surrounding islands and the presence of the West Hill turbine and oil terminal on Flotta, reduces susceptibility by making larger development an existing influence on landscape character.

6.12.52 The combination of the medium value and the medium susceptibility to the effects of the Proposed Development means the Hunda LCU has a medium rating for sensitivity.

Magnitude of change

6.12.53 The Proposed Development will not physically alter the strong pattern of elements and features within this LCU. During the operational phase, the magnitude of change on the character of Hunda LCU will be **low**. The nearest proposed turbine lies approximately 14 km from the LCU. This distance will reduce the influence of the Proposed Development on the landscape character of the LCU, as the turbines will occur as moderately scaled features, occupying a small proportion of a much wider landscape and seascape context. The ZTV in Figure 6.7a shows theoretical visibility will be uninterrupted across the west of the island, with remaining areas having no visibility of the Proposed Development. Actual visibility will be equivalent due to the openness of the islands and surrounding waters of Scapa Flow.

6.12.54 The influence of the Proposed Development will be limited to the small group of six proposed turbines present on the southern hills of Hoy and set behind the intervening landform of Flotta. They will occur offset from the higher hills to the north and within a landscape context in which large and small-scale developments already have a presence.

6.12.55 During the construction phase, the magnitude of change will be **low**. Distance from this LCU combined with the screening of ground level construction works by intervening islands will limit the magnitude of effect, although the emerging turbines and associated construction activity at height will have a distant influence.

Significance of effect

6.12.56 The effect of the Proposed Development on the Hunda LCU during operation and construction will be not significant. This finding relates to the relatively weak influence of Hoy on Hunda, the association of neighbouring islands to Hunda and the distant and limited visibility of the Proposed Development.

Significance of cumulative effect

6.12.57 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

**Holms LCT (295c) - Swona LCU**

Baseline

6.12.58 The island is 2.0 km long and rises to approximately 41 m (AOD) with an approximate area of 92 ha. The Swona LCU is largely representative of the Holms LCT being low-lying and gently domed. It is distinguished by its covering of grassland and the presence of ruined structures. Swona retains the strong sense of naturalness and remoteness typical of the Holms LCT.

Sensitivity

6.12.59 The value of the Swona LCU is medium. National or regional landscape designations, which would otherwise denote a special landscape value, do not cover the island.

6.12.60 The susceptibility of the Swona LCU to the effects of the Proposed Development is medium to low. The uninhabited landscape of Swona is relatively natural. The alignment of its length from north-east to south-west, establishes an association with Hoy to the north-west, that is weakened by the intervening distance of approximately 14 km, with nearby South Ronaldsay forming a stronger association.

6.12.61 The combination of the medium value of this LCU and its low susceptibility to the effects of the Proposed Development results in an overall **medium** sensitivity.

Magnitude of change

6.12.62 The Proposed Development will not physically alter the strong pattern of elements and features within this LCU. During the operational phase, the magnitude of change to the character of Swona LCU will be **low**. Although theoretical visibility is uninterrupted across the island, the Proposed Development will have limited visual influence on its character due to distance. The surrounding waters of the Pentland Firth mean that actual visibility will be equivalent. The nearest proposed turbine lies 13.7 km from the LCU.

6.12.63 The ZTV in Figure 6.7a shows that the proposed turbines will be visible on the lower moorland hills in the southern part of Hoy and set behind the intervening landform of South Walls, which will add to the sense of separation. While, the Proposed Development will introduce a new influence of wind farm development, this will be moderated slightly by the presence of the West Hill turbine on Flotta and the presence of ferries passing through the Pentland Firth.

6.12.64 During the construction phase, the magnitude of change will be **low**. While the separation distance, combined with the intervening landform of South Walls will mean that ground level construction works will be screened, the presence of emerging turbines and associated construction activity, will have a distant influence.

Significance of effect

6.12.65 The effect of the Proposed Development on the Swona LCU during operation and construction will be not significant. This finding relates to the limited association between Hoy and the island of Swona, the distant visibility of the Proposed Development, and the more direct influence of the surrounding Pentland Firth and neighbouring islands.

Significance of cumulative effect

6.12.66 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

**Inclined Coastal Pastures LCT (302)**

Baseline

6.12.67 This LCT is characterised by gentle slopes falling down to very low cliffs or unenclosed bays. Elevation lies between 10 to 50 metres above sea level, occasionally reaching 100 metres above sea level on larger islands. Coastlines tend to curve out to sea and include bay coastlines with occasional ouses and coastal wetlands nearby, while a mix of improved and rough pasture, occur behind the coastline. Farmland is the predominant land-use, forming a rectilinear field pattern largely oriented to the coastline and containing occasional trees and shrub cover. Crofts in small clusters and estate

farms are dispersed throughout the landscape and roads connecting the coast and higher pastures lie parallel to the coast, further inland. Open sky dominates most views with inland views restricted by elevated ground. Fields on the coastline tend to merge with the sea in sea views which include other islands.

Landscape Character Units

- Lyness LCU extends from Pegal Bay on the east coast to encompass the settled south-eastern and southern coastline of Hoy. It adjoins Moorland Hills inland with the entirety of its coastline being Type 12. Deposition Coasts of Islands;
- Orphir LCU extends eastwards from Coldomo to Piggar and Smoogro where the coastal area comprises Coastal Bays. Inland it adjoins Rolling Hill Fringe and Moorland Hills to the west. The entire coastline is Type 12. Deposition Coasts of Islands; and
- Hoxa LCU is discontinuous and covers the Hoxa peninsular west of Hoxa and the west facing slopes of Hoxa Hill being separated by an area of LCT 307 Coast with Sand – Orkney.

**Inclined Coastal Pastures LCT (302a) - Lyness LCU**

Baseline

6.12.68 The LCU is characterised by low slopes gently falling down from Moorland Hills to very low cliffs and unenclosed bays. Patches of semi-natural habitat lie within a hinterland of improved and rough pasture in a rectilinear pattern largely oriented to the coastline. Trees and shrubs are largely absent. Settlement lies in small clusters dispersed throughout the landscape, connected by roads inset from the coastline. Inland hills provide a low undulating skyline that contrasts with the low landscape and surrounding sea. Surrounding islands are low-lying and in conjunction with the sea and gentle slopes of the LCU, there is a strong sense of horizontality. The LCU is largely consistent with the Inclined Coastal Pastures LCT.

Sensitivity

6.12.69 The value of the Lyness LCU is medium. This LCU is not covered by any national or regional landscape designations and the landscape is typical of much of Orkney's coastline.

6.12.70 The susceptibility of the Lyness LCU to the effects of the Proposed Development is medium to high. The Moorland Hills – Hoy Central Hills LCU adjoins the LCU to the west and is strongly associated with the Lyness LCU. The coastal landscapes of the neighbouring islands and Scapa Flow beyond also influence the character of the LCU. While wind farm development does not inform the character of the LCU, a single turbine is located nearby at Ore Brae. In combination with the modified nature of the agricultural landscape of the LCU, settlement and associated infrastructure, this reduces the susceptibility of the LCU.

6.12.71 The combination of the medium value of the Lyness LCU and its medium to high susceptibility to the effects of the Proposed Development means that overall sensitivity is rated **medium to high**.

Magnitude of change

6.12.72 The Proposed Development will not physically alter the strong pattern of elements and features within this LCU. During the operational phase, the magnitude of change to the character of this LCU will be **medium to high**. The ZTV in Figure 6.7a shows theoretical visibility to be almost continuous across this LCU and the openness of this coastal landscape and the adjacent upland landscape, where the Proposed Development would be located, would mean actual visibility would be largely similar. Despite the influence on the character of this LCU from the seascape to the east, the proximity of the Proposed Development, the extent to which it will be visible, and the variance of its character relative to the baseline landscape character, means it will have a strong influence on the character of this LCU.

6.12.73 Turbines within the Proposed Development lie between approximately 0.8 km and 6.2 km from the boundary of the LCU. While the Proposed Development would introduce wind farm development to the landscape of Hoy, the existing turbines at Ore Brae on Hoy, and West Hill on Flotta, slightly

moderate this effect. Furthermore, the presence of settlement and derelict former naval buildings at Lyness, the coastal road and agriculture along the coastline, also denote the existing human influences in this area moderates the effect of the Proposed Development to an extent. The scale and extent of the Proposed Development are such that it will appear incongruous with the landscape.

6.12.74 During the construction phase, the magnitude of change on this LCU will be **medium to high**. While ground level construction works may be screened from parts of this LCU owing to intervening landform, all six of the emerging turbines and associated cranes will be readily visible from most parts and ground level construction works of tracks, foundations and hard-standings will also be readily visible from notable parts of the LCU.

Significance of effect

6.12.75 During the operation and construction phases, the effect of the Proposed Development on the Lyness LCU will be significant. This finding relates to the strength of the association between Hoy's Moorland Hills and Inclined Coastal Pastures, the widespread influence of the wind farm across the LCU, and the contrast the Proposed Development will make in respect of the baseline landscape character, during both construction and operational phases. This takes into account the medium to high sensitivity of the LCU to the Proposed Development and the medium to high magnitude of change resulting from its operation and construction.

Significance of cumulative effect

6.12.76 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

**Inclined Coastal Pastures LCT (302b) - Orphir LCU**

Baseline

6.12.77 Broader and flatter than the Lyness LCU, the Orphir LCU is characterised by gentle slopes extending from the Rolling Hill Fringe LCT in the north to the unenclosed shoreline and bays of Scapa Flow in the south. The landcover comprises a strongly rectilinear pattern of fields, given to improved and rough pasture, with an absence of trees and shrubs and very little natural habitat. Scattered farmsteads and dwellings are dispersed across the landscape, generally lying near roads, inset from the coastline. Inland hills back the LCU providing a gently undulating skyline that encloses the coastal landscape. The principal orientation of this LCU is south-east across the seascape of Scapa Flow, towards Flotta and South Ronaldsay. Hoy, present to the south-west, is made distinct by the skyline of its upland landscape. The LCU is largely consistent with the Inclined Coastal Pastures LCT.

Sensitivity

6.12.78 The value of the Orphir LCU is medium to high. The western part of this LCU is covered by the Hoy and West Mainland National Scenic Area, which denotes a special landscape value, while the eastern part is not designated.

6.12.79 The susceptibility of the Orphir LCU to the effects of the Proposed Development is medium. The openness of this landscape and the openness of the surrounding seascape means that there is a broad range of external influences acting on the character of this LCU. It is in this context, that susceptibility to the Proposed Development is limited, as it will form just one of many influences, many of which relates to other human influences, such as the rigs, ferries and other vessels, present offshore and single turbines, dispersed development and agriculture, present onshore. The Proposed Development will, however, be seen as part of a previously undeveloped moorland area and this does establish a particular susceptibility.

6.12.80 The combination of the medium to high value of the Orphir LCU and its medium susceptibility to the effects of the Proposed Development leads to an overall sensitivity rating of **medium to high**.

Magnitude of change

6.12.81 The Proposed Development will not physically alter the strong pattern of elements and features within this LCU. During the operational phase, the magnitude of change on the character of the

Orphir LCU will be **medium to low** across the area around the Bay of Houton, which is within approximately 10 km of the site, and reducing to **low** across remaining areas. Theoretical visibility of the Proposed Development is consistently high across the LCU apart from patches near Coldomo, west of Houton, and at Quoyclarks, the Breck and Smoogro.

6.12.82 The nearest proposed turbine lies approximately 9 km from the LCU. The ZTV on Figure 6.7a shows that theoretical visibility of the Proposed Development will be largely continuous across the LCU with actual visibility equivalent due to the openness of the intervening seascapes and landscapes. The convex shape of the southern coastline means that this LCU is open to influences from all across the broad extents of Scapa Flow and it is in this context that the Proposed Development will form a new modern artefact. While its association with the largely undeveloped upland landscape of Hoy will add to the magnitude of change, the presence of other developments and modern land-uses, on the near shore, within and on the waters, and on the far shore, will moderate this effect as part of this wide context.

6.12.83 During the construction phase, the magnitude of change on the Orphir LCU will be similar to that described during operation of the Proposed Development, albeit lower during earlier stages. The combination of distance from the LCU and the extent of intervening landform means that ground level construction works are unlikely to be apparent. The main influence on the character of the LCU will, therefore, be derived from the presence and activity of tall cranes and the emerging turbines, albeit also seen from distance.

Significance of effect

6.12.84 The effect of the Proposed Development on the Orphir LCU during operation and construction will be not significant. This finding relates to the broad range of seascape and landscape influences that this LCU is subject to, including existing human influences associated with these areas. This takes into account the medium to high sensitivity of the Orphir LCU to the Proposed Development and the medium to low or low magnitude of change due its operation and construction.

Significance of cumulative effect

6.12.85 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

**Inclined Coastal Pastures LCT (302c) - Hoxa LCU**

Baseline

The LCU is typical of the landscape character type with landform being under 50 m AOD and gently sloping down to very low cliffs. Landcover is predominantly pastoral farmland in a rectilinear field pattern largely oriented to the coastline with little tree cover. Settlement of dispersed farms and crofts are connected by roads parallel to the coast, and along the spine of the peninsular to Hoxa Head. Inland views are limited by landform with extensive views outwards to the surrounding seascape and islands.

Sensitivity

6.12.86 The value of the Hoxa LCU is medium. National or regional landscape designations, which would otherwise denote a special landscape value, do not cover the peninsula.

6.12.87 The susceptibility of the Hoxa LCU to the effects of the Proposed Development is medium around the peninsula of Hoxa Head, reducing to low across the eastern part of the LCU. The rounded coastline of the peninsula means it is exposed to influences from the surrounding seascapes and islands. The most immediate of these influences is the island of Flotta, at 3km on the opposite side of the Sound of Hoxa. Although the landform on Flotta rises only to a high point of 50 m, it separates the Hoxa LCU from establishing a closer connection with the landscapes of Hoy, further west. This, along with the separation distance of approximately 11 km, moderates the susceptibility of the Hoxa LCU to the effects of the Proposed Development.

6.12.88 The combination of the medium value of the Hoxa LCU and its low susceptibility to the effects of the Proposed Development means the sensitivity of the LCU is rated **medium** around Hoxa Head and **low** across remaining areas.

Magnitude of change

6.12.89 The Proposed Development will not physically alter the strong pattern of elements and features within this LCU. During the operational phase, the magnitude of change to the character of the Hoxa LCU will be **medium to low** in the area around Hoxa Head, out to approximately 13 km from the site; **low** for remaining parts of the LCU and with **no change** for sections of coastline without visibility of the Proposed Development. The ZTV in Figure 6.7a shows that theoretical visibility will be almost continuous across the LCU, with the exception of areas on the eastern side of the peninsular, screened by the intervening ridgeline. The Proposed Development will be seen set on the low moorland hills in the south of Hoy behind the intervening landform of Flotta, with the closest proposed turbine approximately 11.5 km from the LCU.

6.12.90 The Proposed Development will introduce a new external influence on the character of the Hoxa LCU, owing to its modern appearance amidst a largely undeveloped upland landscape. Its influence will, however, be moderated by its distance from the LCU which means that it will appear relatively distant and the turbines, moderate in scale, as well as forming only one contained influence in a much wider context of different landscape, seascape and human influences. The more notable human influences include the rigs, ferries and other vessels in Scapa Flow, as well as the single turbine on Flotta and extensive modification of the landscape through agriculture and dispersed settlement.

6.12.91 During the construction phase, the magnitude of change will be slightly lower than described for operation. The emerging turbines and associated construction activity at height will have an influence on the LCU, seen rising above the intervening landform of Flotta, albeit with all the ground and lower level works screened.

Significance of effect

6.12.92 The effect of the Proposed Development on the Hoxa LCU will be not significant. This finding reflects the separation distance between Hoxa LCU and the Proposed Development which means that it will present a distant and well-contained influence within the context of a much wider landscape and seascape context. This takes into consideration the medium to low sensitivity of the Hoxa LCU and medium to low magnitude of change due to operation and construction of the Proposed Development.

Significance of cumulative effect

6.12.93 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

**Low Moorland LCT (311a) - West Flotta LCU**

Baseline

6.12.94 This LCT consists of low undulating hills or slightly domed moorland, usually adjoining lower pastures. A sense of relative remoteness and wildness is often present due to its open and unenclosed heather moorland, and coastal maritime heath. Moorland vegetation contrasts with adjoining green pastures. This mix provides floral diversity and is populated with sea birds. Generally devoid of roads and tracks, sporadic historical structures are prominent against the unsettled landscape.

6.12.95 The West Flotta LCU comprises the less settled west and north of the island. It contains West Hill, the highest on the island at 58m AOD and is predominantly covered by open moorland and coastal maritime heath. A coastal road and disused airfield to the west detracts from the relative remoteness and wildness of these areas. An oil terminal located between the western and northern parts of the island presents a strong industrial influence on the island's character. There are also a few historical defence structures, which contrast with the unsettled landscape in the north. The LCU is largely representative of the Low Moorland LCT with the oil terminal providing a strong contrasting feature characteristic of the LCU.

Sensitivity

6.12.96 The value of the West Flotta LCU is medium. There are no national or regional landscape designations covering the island, which would otherwise denote a special landscape value.

6.12.97 The susceptibility of the West Flotta LCU to the effects of the Proposed Development is medium. The two key factors which influence the susceptibility of the LCU relate to its association with Hoy, and the presence of close-range developments on Flotta. West Flotta LCU faces out towards the south-eastern part of Hoy, and the low moorland hills where the site is located. This close relationship between these landscapes adds to the susceptibility of the LCU. The presence of the disused air-field, single turbine on West Hill and the oil terminal and associated activities to the north, moderates the susceptibility of the LCU by establishing modern land-uses and structures as a feature of the baseline character.

6.12.98 The combination of the medium value of the West Flotta LCU and its medium susceptibility to the effects of the Proposed Development means that overall sensitivity is rated **medium.**

Magnitude of change

6.12.99 The Proposed Development will not physically alter the strong character derived from the elements and features within this LCU. During the operational phase, the magnitude of change will be **medium**. The ZTV in Figure 6.7a shows theoretical visibility to be almost continuous across the LCU, with the exception of the eastern edge where a small patch of no visibility occurs owing to intervening landform. The nearest proposed turbine lies approximately 4.7 km from the LCU, with mostly all six turbines seen set on the low moorland hills beyond the eastern coastal edge of Hoy. The orientation of the landform of the West Flotta LCU towards the south-east of Hoy means that the Proposed Development will be prominent and readily visible.

6.12.100 The height, verticality and dynamic nature of the turbines means they will appear in contrast to the largely undeveloped character of the upland landscape context. While the LCU is not influenced by other existing wind farm developments, the effect will be moderated by the close range influence of the oil terminal to the north, with its flare stacks, containers and jetties onto which tankers are frequently moored, as well as the single turbine on West Hill and the disused air-field along the western Flotta coast, all of which will make the Proposed Development appear less incongruous than it otherwise would.

6.12.101 During the construction phase, the magnitude of change will be **medium to low**. While ground level construction works may be partly or wholly screened by intervening landform, construction of tracks and other infrastructure may be visible on the more exposed hill slopes of Wee Fea. While, the presence of the emerging turbines and the tall cranes used in their construction will form readily apparent features, they will be seen in a context in which the Flotta oil terminal and West Hill turbine already have a notable influence on the character of West Flotta LCU.

Significance of effect

6.12.102 The effect of the Proposed Development on the West Flotta LCU will be not significant during operation and construction. This finding relates to the baseline character of this LCU which is already influenced by the presence of the oil terminal to the immediate north and West Hill turbine to the immediate east, despite the association between Hoy and this western half of the island and their relatively close proximity.

Significance of cumulative effect

6.12.103 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

**Moorland Hills LCT (314)**

Baseline

6.12.104 The Moorland Hills LCT comprises the highest uplands of Orkney and occurs across Hoy, Rousay and Eday as well as the Mainland of Orkney, with heights ranging from 50 m to 480 m. These upland landscapes are made distinct on account, not only of their more elevated and steep sloping

landform, but also the presence of open moorland landcover, the darker hues of which contrast notably with the brighter hues of the enclosed, improved and semi-improved pasture across the lower levels. Furthermore, they are seen in the context of relatively flat, coastal landscapes and other islands, which further accentuates their presence.

Landscape Character Units

- Hoy Central Hills LCU includes the upland area south of the valley formed by South Burn and Whaness Burn, excluding the rugged west coast and the settled east coastline south of Pegal Bay; and
- Ward Hill LCU comprises the uplands around the 269 m AOD Ward Hill on the Mainland of Orkney.

**Moorland Hills LCT (314a) - Hoy Central Hills LCU**

Baseline

6.12.105 This LCU covers a large part of Hoy, extending from the U-shaped Valley LCT in the north, right down to the south of the island, and extending from the narrow margin of the Coastal Cliffs LCT in the west to the coastal edge of the Inclined Coastal Pastures LCT in the east. The LCU covers the central and southern hills of Hoy, the tallest of which is Knap of Trowieglen at 399m AOD. The hills present little evidence of human land-use or artefacts, especially across the higher hills in the north and central sections, while these influences increase towards the south-east corner where the site is located.

6.12.106 The Hoy Central Hills LCU comprises the central rounded hills of Hoy's interior and the eastern hill slopes that gradually merge with the Inclined Coastal Pastures of the east coast. The interior hills are large and gently rolling with a smooth landform and simple ground cover, generally of bog, heather and grassland vegetation. Numerous lochans are scattered near the ridgeline of the hills with burns running down to the east and west coastlines. Larger water bodies lie to the south at Heldale Water and Hoglinns Water. Narrow glens within the hills contain waterfalls, landslips and other features that engender a sense of naturalness. The interlocking ridges and glens of the interior hills lack landmarks and human influence. The resulting sense of remoteness is strong as there are few paths and this is heightened by low inter-visibility between the interior hills and wider landscape due to the screening effect of steep outer facing slopes and cliffs.

6.12.107 The distinctive profile of the gently interlocking, convex slopes of the hills provide a scenic backdrop to the seascapes and landscapes of the surrounding sounds and islands. The sweeping skyline, relative height and steep sides, contrast with the surrounding low and flat, sea and islands. The darkness of the moorland ground cover on the hills, contrasts with the brighter green grasses along the coasts, emphasising this contrast.

Sensitivity

6.12.108 The value of the Hoy Central Hills LCU of the Morland Hills LCT is medium to high. The northern part of the LCU coincides with the Hoy and West Mainland National Scenic Area, and this denotes a landscape of national importance. The majority of the LCU is not designated, however the central part is a Wild Land Area mapped interest and valued for its wildness qualities.

6.12.109 The susceptibility of the Hoy Central Hills LCU to the effects of the Proposed Development is medium to high. This reflects the fact that the Proposed Development is located in this LCU and will give rise to direct, as well as indirect effects. The general absence of human artefacts and land-uses in the northern and central parts of this LCU adds to its susceptibility, although, in the southern part, both large, and small-scale developments are evident both within and outwith the LCU boundary.

6.12.110 The combination of the medium to high value of the LCU and its medium to high susceptibility to the effects of the Proposed Development means that the overall sensitivity is **medium to high.**

Magnitude of change

6.12.111 During the operational phase, the magnitude of change to the Hoy Central Hills LCU will range from **high** through **medium to high** to **medium** and then **low** or **no change** in areas of low or no visibility. The ZTV, in Figure 6.7a, shows theoretical visibility of the Proposed Development is clear and continuous to the area south of Bakingstone Hill, Sky Fea and Wee Fea and nearby elevated areas up to 300 m AOD, with intervening landform restricting visibility to hill tops and ridges further north. Much of the western half of the LCU has no theoretical visibility of the Proposed Development.

6.12.112 In the close range area within approximately 2 km to 3 km of the Proposed Development, the ZTV shows visibility of all six turbines will be almost continuous apart from south-west of Binga Fea where there is a small patch of no visibility and north of Wee Fea where levels of visibility are lower. In this area, the proposed turbines will have a **high** magnitude of change, relating to the large scale and dynamic nature of the proposed turbines and the extent to which these will alter the baseline character of the open and largely undeveloped moorland hills, despite some influence from development across this south-east corner of the island.

6.12.113 In the area within approximately 3 km to 4.5 km of the Proposed Development, the ZTV shows patches of visibility along the ridgelines and across the south facing slopes of the moorland hills to the north. The proposed turbines would be seen set in the lower moorland hills on the southern edge and will have a **medium to high** magnitude of change where visibility occurs and **low** or **no change** where visibility is limited or does not occur. While their scale will be reduced owing to the additional separation distance, and their small number would mean they will form a compact group, they will still appear at variance with the remote and largely unmodified moorland hills.

6.12.114 In the area within approximately 4.5 km to 6.5 km of the Proposed Development the magnitude of change will be **medium** in the smaller patches where theoretical visibility is shown and **low** or with **no change** where visibility is limited or does not occur. Not only will the proposed turbines occupy a smaller proportion of the wider landscape and seascape influences, but a greater influence from other elements, including large scale developments, will be evident in this wider context, including the rigs, ferries and other vessels on Scapa Flow and these factors will moderate the magnitude of change.

6.12.115 In the areas to the north-west and west, where there is no or limited visibility the magnitude of change will be **low** or there will be **no change**. Despite the apparent absence of human artefacts or land-uses, the very limited geographical extents of visibility and low levels of visibility, will limit the influence of the proposed turbines on the character of these remote areas.

6.12.116 During the construction phase, the magnitude of change to the Hoy Central Hills LCU will largely reflect the ratings assessed in respect of the operational phase, with a general pattern of levels of change that reduce gradually with distance from the Proposed Development. In the close-range area, the magnitude of change will be **high**, especially as the turbines and all associated infrastructure will be located in this area and will have direct as well as close-range indirect effects on the character of the moorland hills. From the areas beyond this, the intervening hills will likely screen the ground level construction works such that the change will relate to the emergence of the turbines and the presence and activity of the tall cranes used in their construction. As such, the magnitude of change will be generally be lower than during operation, approaching similar levels nearing completion.

Significance of effect

6.12.117 The effect of the Proposed Development on the Hoy Central Hills LCU during operation and construction will be significant out to approximately 6.5 km to the north, 5 km to the north-west, 4 km to the west and south-west and then out to the close range boundary of the LCU to the south and east. This finding reflects the fact that the Proposed Development would be located in the Hoy Central Hills LCU, directly altering the pattern of the elements and features that provide its baseline character and would occur in a context in which other human influences are limited. The effect on the remaining areas to the south-west, west and far north, would be not significant, owing largely to limited or no visibility.

Significance of cumulative effect

6.12.118 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

**Moorland Hills LCT (314b) - Ward Hill LCU**

Baseline

6.12.119 This LCU is located on the Mainland of Orkney, set to the north of the transitional Rolling Hill Fringe LCT and the Inclined Coastal Pasture LCT, which skirt the Scapa Flow coast. It is largely typical of the Moorland Hills LCT comprising relatively steep sloping upland with open moorland landcover. The LCU is relatively remote and largely undeveloped. The dark hues of the rough moorland landcover contrast with the brighter hues of the adjoining enclosed pasture across the lower slopes. The Ward Hill LCU, like the Moorland LCT, is prominent within the surrounding context of relatively flat, coastal landscapes and other islands, and this accentuates their presence.

Sensitivity

6.12.120 The value of this LCU is medium to high. To the west of Ward Hill and Gruf Hill the LCU is covered by the Hoy and West Mainland National Scenic Area, which denotes a special landscape value. To the east, there is no landscape designation, and this moderates the overall value of the LCU.

6.12.121 The susceptibility of this LCU to the effects of the Proposed Development is medium to low. The medium part of the susceptibility relates to the elevated nature of this LCU and, therefore, the associations which arise between this LCU and surrounding landscapes and seascapes, including the moorland hills where the Proposed Development will be located. The low part of the susceptibility relates to the separation distance of over 11 km which exists, which not only means that the six proposed turbines will form a small proportion of the wider context, but that within the wider context other human influences will act on the character of this LCU, most notably the rigs, ferries and other vessels in Scapa Flow, as well as the under-construction turbine at Akla, within this LCU to the immediate east.

6.12.122 The medium to high value of the LCU in combination with its medium to low susceptibility to the effects of the Proposed Development means that the overall sensitivity is rated **medium to high.**

Magnitude of change

6.12.123 The Proposed Development will not physically alter the strong pattern of elements and features within this LCU. During the operational phase, the magnitude of change will be **low** where the Proposed Development is most clearly and continuously visible within the LCU, with **no change** where no visibility occurs. The ZTV in Figures 6.7a, 6.10a and 6.10b shows theoretical visibility extending across the ridgelines and south facing slopes along the southern boundary of the LCU, but not across the steeper north facing slopes, which lie to the north of the ridgeline and which occupy a substantial part of the LCU.

6.12.124 With the nearest proposed turbine a distance of 11.6 km from the LCU, the Proposed Development will appear as a medium scale feature, occupying a small proportion of a much wider landscape and seascape context. While it will be associated with the island of Hoy, its location at the southern end will ensure that it does not impinge on the higher and more scenic hills in the north of the island. The Proposed Development would also introduce an additional influence in a context in which human artefacts and modified landscapes are readily evident, especially in respect of the under-construction Akla turbine within this LCU.

6.12.125 During the construction phase, ground level construction works will be imperceptible from much of the LCU. The emerging wind turbines and associated activity of tall cranes will, however, be more readily evident and will have some influence on the character of the LCU, albeit limited by the separation distance and the weakness of the association between the landscapes. The magnitude of change will be lower than during operation, with a **low** magnitude of change arising.

Significance of effect

6.12.126 The effect of the Proposed Development on the character of the Ward Hill LCU will be not significant**.** This finding relates chiefly to the separation distance between the LCU and the Proposed Development, the limited association between the LCU and the site and the wider influences that have a bearing on the character of the LCU.

Significance of cumulative effect

6.12.127 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

**Rolling Hill Fringe LCT (313a) – Scorra Dale**

Baseline

6.12.128 The Rolling Hill Fringe LCT is a transitional landscape between the rolling lower slopes of upland areas and the upper parts of low-lying loch landscapes or coastal pastures. The predominantly rolling topography lies between 20 m and 110 m AOD, with improved pasture on lower slopes, and rough grassland on upper slopes that give way to unenclosed moorland. Occasional burns descend through the landscape with few small lochs in depressions at the foot of slopes. Scattered farms and small holdings lie on lower elevations with wide expanses of farmland above and an associated wide-spread road network that becomes less dense towards upper slopes.

6.12.129 The Scorra Dale LCU is located on the southern coast of the Mainland of Orkney. It forms a transitional landscape between the lower slopes of Moorland Hills LCT in the Ward Hill LCU and the upper Inclined Coastal Pastures LCT of the Orphir LCU. Typical of the Rolling Hills LCT, this LCU predominantly comprises farmland of improved pasture and rough grassland with unenclosed moorland above. Few burns are present, and scattered farms and small holdings gravitate to the low road network. The LCU is distinguished by Hill of Midland lying at 158 m AOD, above the 20 m to 110 m AOD typical of the rolling hills. It is situated over 10 km from the site of the Proposed Development.

Sensitivity

6.12.130 The value of the Scorra Dale is medium to high. The Hoy and West Mainland NSA covers the LCU west of Scorra Dale and Quoyclarks and this denotes the special landscape value attributed to this area. The area to the east of Scorra Dale and Quoyclarks lies outwith the NSA boundary and, therefore, has a lesser value.

6.12.131 The susceptibility of the Scorra Dale LCU to the effects of the Proposed Development is medium to low. The convex shape of the hill slopes, combined with their elevated nature, means that this LCU is influenced by a wide range of surrounding landscapes and seascapes over a wide area. This reduces the susceptibility of this LCU to the effects of the proposed development as its influence will be diluted amidst many other influences, including those derived from other large-scale man-made artefacts such as rigs, ferries and other vessels in Scapa Flow. There is also the under-construction single turbine at Akla, The Proposed Development would be experienced from an LCU which has been modified by agricultural land-uses, with scattered settlement evident towards the southern boundary.

6.12.132 The combination of the high value of the Scorra Dale LCU and its medium to low susceptibility to the effects of the Proposed Development gives rise to a **medium** sensitivity rating.

Magnitude of change

6.12.133 The Proposed Development will not physically alter the strong pattern of elements and features within this LCU. During the operational phase, the magnitude of change to the Scorra Dale LCU will be **medium to low**. The ZTV in Figure 6.7a shows that theoretical visibility of the Proposed Development will comprise six turbines visible from most of the Scorra Dale LCU, with the exception of the southern part of the LCU, north of the Hill of Midland. The closest proposed turbine will be situated approximately 10.4 km from the LCU with all six proposed turbines discernible on the low moorland hills in the distance. While the introduction of these vertical and modern artefacts will introduce a new influence on the character of the Scorra Dale LCU, this will be moderated by the

small proportion of the wider seascape and landscape context which they will occupy, combined with the existing influence from other human influences, including the rigs, ferries and other vessels and single turbines, including closer-range Akla on the hill to the immediate north.

6.12.134 During the construction phase, the magnitude of change to the Scorra Dale LCU will be **low**. Much of the low-level construction works will be screened by landform, with activity above the skyline apparent from much of the LCU. As their construction nears completion, the emerging wind turbines will become an increasingly apparent influence, albeit present at distances of more than 10 km from this LCU.

Significance of effect

6.12.135 The effect of the Proposed Development on the Scorra Dale LCU during operation and construction will be not significant. This finding primarily relates to the level of association between Hoy and the Scorra Dale LCU, alongside the anticipated visibility of the Proposed Development and its limited influence on the character of the LCU.

6.12.136 This takes into consideration the medium sensitivity of the LCU to the Proposed Development and the low magnitude of change resulting from its construction and operation.

Significance of cumulative effect

6.12.137 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

**Rugged Hills LCT (316a) – Ward Hill LCU**

Baseline

6.12.138 The Rugged Hills LCT occurs on north Hoy and constitutes two distinct upland areas divided by a u-shaped valley, with the Cuilags LCU to the west and Ward Hill LCU to the east. Together these landscapes form the only extensive glacially eroded landscapes in Orkney, and with summits ranging from 300 m to 479 m (AOD) form the highest hills. The Rugged Hills LCT is characterised by rounded ridgelines and steep sided slopes, with scree or crags in places, and falling into surrounding u-shaped valleys or coastal plains. The landcover is predominantly rough moorland and montane vegetation with small burns running through incisions in the lobed slopes.

6.12.139 The Ward Hill LCU is located in the north-east of Hoy and is typical of the Rugged Hills LCT characteristics. It is centred on Ward Hill, which, at 479 m AOD, forms the highest peak. Ward Hill is visible from many other parts of Orkney and provides an elevated and exposed vantage point for long distance views across the other islands and across the sea. Ward Hill and The Cuilags also form a landmark feature, particularly in views from ferry sea crossings and the Orkney Mainland. There is a distinct absence of human development or land-uses in this LCU, which presents a sense of naturalness and remoteness. There is, however, widespread evidence of human influence outwith this LCU and across most of the surrounding seascapes and landscapes. This is seen in the form of rigs, ferries and other vessels on the waters, single turbines and ferry terminals on the land and widespread rural settlement and cultivation of the land.

Sensitivity

6.12.140 The value of the Ward Hill LCU of the Rugged Hills LCT is high. The Hoy and West Mainland NSA covers the LCU and this denotes the special landscape value attributed to this area.

6.12.141 The susceptibility of the Ward Hill LCU to the effects of the Proposed Development is medium. This LCU has aspects in all directions, such that its associations with wider seascapes and landscapes is wide ranging. It is only the southern aspect towards the site that would be susceptible to the effects of the Proposed Development, while the other aspects would gain no visibility and, furthermore, would be influenced by the Cliffs LCT and North Atlantic to the west, Stromness and the settled Mainland of Orkney to the north, and Scapa Flow and the islands to the east. Susceptibility is also moderated by the separation distance and the existing human influences which have a bearing on the baseline character, albeit outwith the LCU.

6.12.142 The combination of the high value of the Ward Hill LCU and its medium susceptibility to the effects of the Proposed Development gives rise to a **medium to high** sensitivity rating.

Magnitude of change

6.12.143 The Proposed Development will not physically alter the strong pattern of elements and features within this LCU. During the operational phase, the magnitude of change to the character of the Ward Hill LCU will be **medium to low**. The ZTV in Figure 6.7a shows that theoretical visibility of the Proposed Development will form a localised patch across the ridgeline and southern upper slopes of Ward Hill, while there will be no visibility across the majority of the LCU. The proposed turbines will be seen from a distance of approximately 8 km to 10 km, set on the low moorland hills in the south of the island, beyond the higher moorland hills in the centre of the island. The small number of turbines combined with their relatively compact layout means that they will occupy a small proportion of the wider context.

6.12.144 Visibility on Ward Hill is shown to extend along the curved ridgeline between Howes of Quoyawa in the east, through Ward Hill (479 m) in the north and onto the head of Red Glen in the west. Visibility will extend south from the ridgeline to cover the upper slopes and occurs within a range between approximately 8 km and 10 km. The geographical extent is limited such that the visual influence is relatively localised within this much wider area of the Rugged Hills LCT.

6.12.145 While the Rugged Hills LCT and the Moorland Hills LCT to the south are largely characterised by the natural and undeveloped landscape, there are influences in the wider landscapes and seascapes including the presence of rigs, ferries and other vessels out in Scapa Flow to the east and settlements and masts across West Mainland to the north, which together reduce the susceptibility of this LCU to the effects of the Proposed Development. The Proposed Development will, nonetheless, appear at variance within the largely undeveloped context, the modern, moving and vertical structures, contrasting with the broadly horizontal and relatively natural landscape.

6.12.146 During the construction phase, the magnitude of change to the Ward Hill LCU will be **medium to low**. Much of the low-level construction works will be screened by intervening landform, with activity above the skyline apparent from much of the LCU. As their construction nears completion, the emerging wind turbines will become an increasingly apparent influence, albeit present at distances of between 8 km and 10 km from this LCU.

Significance of effect

6.12.147 The effect of the Proposed Development on the Ward Hill LCU during operation and construction will be not significant. This finding relates to a combination of the localised extent of visibility across this LCU, the much wider landscape and seascape influences acting on this LCU, including human influences within these and the separation distance between this LCU and the Proposed Development.

Significance of cumulative effect

6.12.148 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

**Undulating Island Pastures LCT (299a) - East Flotta LCU**

Baseline

6.12.149 The Undulating Pastures LCT is characterised by low hills rising to approximately 90 m AOD with an undulating and variable landform of ridges and depressions but without any distinct landform features. The principal land use is farming and the landcover comprises medium to large fields of improved pasture enclosed by fences and occasionally drystone dykes. It is a relatively open and exposed LCT with few trees or shrubs and typically views extending out from the more elevated parts towards the sea or over adjacent landscapes. Farmsteads are randomly dispersed across this landscape with occasional other nucleated or isolated settlement.

6.12.150 This LCU comprises the settled eastern side of the island of Flotta. The low landscape is predominantly farmed pasture and lacks any distinct landform features. Medium to large fields lie in a rectilinear pattern enclosed by fences and occasionally drystone dykes. Trees or shrubs being

largely absent, this part of the island is relatively open and exposed. Settlement largely comprises isolated farmsteads evenly dispersed over the landscape. Coastal defences remaining from the Second World War are characteristic of the LCU and are valued as scheduled monuments. Other human artefacts include the large scale oil terminal to the north and single turbine on West Hill to the west. The LCU is representative of the Undulating Pastures LCT.

Sensitivity

6.12.151 The value of the East Flotta LCU is medium. National or regional landscape designations do not cover the island, which would otherwise denote a special landscape value.

6.12.152 The susceptibility of the East Flotta LCU to the effects of the Proposed Development is medium to low. The landscape of east Flotta is associated with Orkney's Mainland beyond Scapa Flow, Burray and South Ronaldsay east of the Sound of Hoxa and other islands in the Pentland Firth. The influence of Hoy's Moorland Hills is weakened by the intervention of West Hill. The susceptibility of the East Flotta LCU is moderated by agricultural land-uses, settlement and associated roads, as well as the larger developments associated with the oil terminal and the single turbine.

6.12.153 The combination of the medium value of the LCU and its medium to low susceptibility to the effects of the Proposed Development means the overall sensitivity rating is **medium.**

Magnitude of change

6.12.154 The Proposed Development will not physically alter the strong pattern of elements and features within this LCU. During the operational phase, the magnitude of change to the character of the East Flotta LCU will be **medium to low**. The Proposed Development will be visible from several areas of the LCU, either due to elevation or distance from West Hill which largely screens the view west. The proposed turbines will lie a minimum of approximately 6.5 km from the closest edge of this LCU. Where visibility of the proposed turbines does occur, they will appear at variance with the largely open and undeveloped character of the Moorland Hills LCT. This effect will, however, be moderated by the extent of development and modified land both within the East Flotta LCU and the neighbouring LCUs to the west and north, which have a much more immediate influence on landscape character.

6.12.155 During the construction phase, the magnitude of change to the LCU will be similar to the magnitude described during the operational phase. The intervening landform of West Hill will screen the ground level construction works and will partly conceal visibility of the emerging turbines and the tall cranes used in their construction. While those visible components will have an influence on the character of this LCU, this will be moderated most notably by the closer range of the oil terminal and the single turbine on West Hill.

Significance of effect

6.12.156 The effect of the Proposed Development on the East Flotta LCU will be not significant. This finding relates to the limited influence that the Proposed Development will have on the landscape character across eastern Flotta. This reflects the medium sensitivity of the LCU and medium to low magnitude of change to the character of the LCU resulting from operation and construction of the Proposed Development.

Significance of cumulative effect

6.12.157 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

**Whaleback Islands LCT (296)**

Baseline

6.12.158 In the Orkney archipelago, this LCT occurs across nine small and either sparsely populated or uninhabited islands, including Fara and South Walls. The Whaleback Islands LCT is characterised by a smooth convex landform, which forms a dome shape over these roughly oval shaped islands. The landform is low-lying with heights ranging between 20 m and 50 m AOD, and while mostly convex, there are also local undulations, terraces and depressions. There is an absence of trees and the

farmland, which covers most of these islands, consists of fields of improved pasture, with arable in the more fertile and sheltered patches. There are also areas of rough grasses, heather moorlands and peat bogs where the land remains uncultivated. The coastal edge comprises mostly shingle beaches and low rock platforms with occasional low cliffs forming more of a feature. Settlement typically comprises occasional large farmsteads and scattered crofts accessed by a limited network of minor roads and tracks.

Landscape Character Units

- Fara LCU covers the island of Fara within Scapa Flow and separated from Hoy by Gutter Sound to the west and Flotta beyond the Weddel Sound to the south; and
- South Walls LCU covers the tethered island of South Walls, connected to the south coast of Hoy by an ayre.

**Whaleback Islands LCT (296b) – Fara LCU**

Baseline

6.12.159 Fara lies approximately 3 km north-east of the site, with Gutter Sound and Weddel Sound to the west and south respectively. This small island rises to one low, shallow hill, Thomson's Hill, which lies at 43 m AOD. The low-lying island is largely covered by moorland with small rectilinear fields to the north. Uninhabited since the 1960s, a few abandoned crofts remain widely scattered near the coast. There are no roads on the island, only a track connecting the jetty on the west coast to the fields. Nearby islands associated with the landscape of Fara are Flotta to the south-east, and Rysa Little and Cava to the north. The open expanse of Scapa Flow to the east strongly influences the island.

Sensitivity

6.12.160 The value of this LCU is medium. There are no national or regional landscape designations covering the island, which would otherwise denote a special landscape value.

6.12.161 The susceptibility of the Fara LCU to the effects of the Proposed Development is medium to high. Fara is a relatively small and flat island set in a seascape with islands all around. Hoy is the closest and most influential of these, due to its size and its parallel orientation in respect of Fara. There is a strong association with Hoy's Moorland Hills LCT, lying across the Gutter Sound beyond the Inclined Coastal Pastures LCT, along Hoy's eastern coast. The enclosure these hills present combined with their largely undeveloped character, raises the susceptibility of the LCU to the Proposed Development.

6.12.162 Due to the combination of the medium value and medium to high susceptibility to the effects of the Proposed Development, the sensitivity of Fara is rated **medium to high**.

Magnitude of change

6.12.163 The Proposed Development will not physically alter the strong pattern of elements and features within this LCU. During the operational phase, the magnitude of change to the character of the Fara LCU will be **medium to high** with **no change** to areas without visibility of the Proposed Development. The ZTV in Figure 6.7a shows that theoretical visibility of the Proposed Development is continuous across the island, with the exception of the east coast due to the screening effect of intervening landform. The proposed turbines will be seen at a minimum distance of approximately 3.2 km and will be readily visible as large scale and dynamic structures, set within the close-range landscape setting of the island. The small number of proposed turbines and their compact layout will ensure their influence is contained within a small proportion of the surrounding context to the Fara LCU.

6.12.164 The proposed turbines will appear largely at variance with the baseline character in which there is a distinct absence of development in the Fara LCU and the Moorland Hills LCT. This effect will, however, be moderated by the presence of human influences within the wider landscape and seascape, with ferries and other vessels passing through Gutter Sound and the presence of the oil terminal and single turbine on Flotta. The modification of the east coast of Hoy, which contains farmland, dispersed settlement, roads and overhead cables, will also moderate the effect. The

effects of the proposed turbines will be limited by their low number and layout. The character of the east coast will be uninfluenced by the Proposed Development.

6.12.165 During the construction phase, the magnitude of change to the Fara LCU will be **medium**. While ground level construction works are likely to be screened from the LCU by intervening landform, the emerging wind turbines and associated tall cranes will be partially visible. These will appear as prominent vertical structures, at variance with the relatively low-lying moorland hills and their apparent absence of development. The magnitude of change will generally be lower than during operation, approaching similar levels nearing completion.

Significance of effect

6.12.166 The combination of the **medium to high** sensitivity and **medium to high** magnitude of change during the construction and operational phases will be significant. This finding relates principally to the proximity of the Proposed Development to the Fara LCU, the strong association of the Fara LCU with the moorland hills where the Proposed Development will be located and the relatively undeveloped character of both landscapes.

Significance of cumulative effect

6.12.167 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

**Whaleback Islands LCT (296a) – South Walls LCU**

Baseline

6.12.168 The tethered island of South Walls is largely oval in shape, with the small promontory of Cantick Head extending from the south east and forming the bay of Kirk Hope. It is separated from Hoy by Longhope, North Bay and Aith Hope where a causeway connects to Hoy. Rising to a high point of 57 m AOD in the west, the island is low-lying and covered by small to medium sized rectilinear fields. Roads run along the northern coastline (B9047) and along the low east-west ridge with perpendicular straight roads connecting to crofts, widely distributed throughout the flat and treeless landscape. Several listed buildings are scattered along the coast road, with anti-aircraft batteries dating from the Second World War towards the interior and a 19$^{th}$ century battery and Martello tower on the north-east coast at Hackness.

6.12.169 The Moorland Hills LCT, present beyond Longhope and the Inclined Coastal Pasture LCT of Hoy's south coast, extends across and encloses views north from South Walls. Farmland on the coast, the valley mouth of Burn of Ore and Wee Fea beyond are clearly visible. Single turbines are located at Ore Brae, on Hoy and West Hill, on Flotta.

Sensitivity

6.12.170 The value of the South Walls LCU is medium. This reflects the absence of any national or regional landscape designations covering the island, which would otherwise denote a special landscape value.

6.12.171 The susceptibility of the South Walls LCU to the effects of the Proposed Development is medium to high. South Walls is a small, low island set in a seascape of nearby islands to the north and east with open sea at the Pentland Firth to the south-west. The low moorland hills in the south of Hoy are closely associated with the character of the South Walls LCU, due to their proximity and the opposing nature of these two landscapes on either side of the intervening water. The susceptibility of the South Walls LCU is, however, moderated by human influences which are evident in the form of the single turbines at Ore Brae and West Hill, as well as the extent of farmland and small-scale rural development along the coast of Hoy and across South Walls.

6.12.172 Due to the combination of medium to high value and medium to high susceptibility, the LCU's overall sensitivity to the effects of the Proposed Development is **medium to high**.

Magnitude of change

6.12.173 The Proposed Development will not physically alter the strong pattern of elements and features within this LCU. During the operational phase, the magnitude of change to the character of the

South Walls LCA will be **medium to high**. The ZTV, in Figure 6.7a, shows that visibility of the Proposed Development will be consistently high across South Walls, except the south coast and several areas south of the islands low crest. The site lies a minimum of approximately 3.3 km to the north, set on the south facing slopes of Wee Fea within the Hoy Central Hills LCU of the Moorland Hills LCT. Despite the existing influence of the single turbines, the Proposed Development will introduce a much more notable influence on the landscape character of the South Walls LCU, owing to the large scale and dynamic appearance of the turbines, which will appear at variance with the open and broadly horizontal nature of the moorland hills. The effect will, nonetheless, be moderated by the extent of human modification across both landscapes, which detract from any sense of wildness or remoteness.

6.12.174 During the construction phase, the magnitude of change will be **medium to high**. Construction works will be clearly visible at relatively close range. Due to the site's location on the ridgeline and southern slopes of Wee Fea, ground level works, including the construction of tracks, hard-standings and foundations, and turbine bases, will be evident, along with the upper level works of turbine construction, involving the presence and activity of tall cranes. These features will detract from the open and simple character of the moorland hills.

Significance of effect

6.12.175 The effect of the Proposed Development on the South Walls LCU during operation and construction will be significant. This finding reflects the strong association between Hoy and South Walls, the proximity and high visibility of the Proposed Development across South Walls, and also takes into account the existing human influences evident in these landscapes. This takes into consideration the medium to high sensitivity of the South Walls LCU and the medium to high magnitude of change during both construction and operation.

Significance of cumulative effect

6.12.176 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

### *Residual Effects on Coastal Character Areas*

6.12.177 In addition to the assessment of effects on landscape character, this LVIA also includes the assessment of effects on coastal character. This makes reference to Orkney and Caithness Coastal Character Assessment, which has been produced by Land Use Consultants with the involvement of SNH, OIC, The Highland Council and Marine Scotland. This report describes the entire coastline of Orkney and North Caithness by breaking it down into Regional Coastal Character Areas (RCCA) and then further into Local Coastal Character Areas (LCCA).

6.12.178 The Regional Coastal Character Areas which are especially relevant to this assessment are all classified as Type 12: Deposition Coast of Islands and include the following:

- 23: Orphir;
- 24: Stromness and Clestrain Sound;
- 31: Cava, Rysa Little and Fara;
- 32: South East Hoy;
- 33: Flotta;
- 34: North Bay, Longhope and Switha; and
- 38: West Burray and South Ronaldsay.

6.12.179 The assessment below considers the potential impact of the Proposed Development on these eight RCCAs with reference to their constituent LLCAs.

**RCCA 23: Orphir**

Baseline

6.12.180 The Orphir RCCA covers the south coast of the Orkney Mainland facing onto Scapa Flow from Houton Point in the west to Waulkmill Bay in the east. Its character is defined by a series of shallow bays generally facing south onto Scapa Flow. These vary from almost enclosed to wide and open with a hinterland of undulating agricultural land, wetlands and elevated moorland. The coast is fairly settled with clustered or dispersed settlement orientated towards the coast and connected by a network of minor roads and the A964. A ferry terminal lies within the Bay of Houton, semi-enclosed by the tidal island, Holm of Houton.

The low-lying coastal edge is characterised by rock platforms and stretches of rock and shingle. Small sandy beaches lie within Swanbister Bay and the smaller Waulkmill Bay, which is a popular recreational location. The coast has a wide intertidal zone predominantly backed by low cliffs of 5 m to 10 m in height. Panoramic vistas of the southern isles are framed by the coastline, with the oil terminal on Flotta prominent in many views.

Sensitivity

6.12.181 The value of the Orphir RCCA is medium. This RCCA is not covered by any landscape designations that denote a special value and the coastal landscape is typical of much of Orkney's farmed coastline.

6.12.182 The susceptibility of the Orphir RCCA to the effects of the Proposed Development is medium between Houton Head and Toy Ness, reducing to medium to low between Toy Ness and The Lash. The south-east facing coastline is orientated away from the site with open views across Scapa Flow towards the southern islands. The westernmost parts of the RCCA are orientated towards, closer to and more closely associated with Hoy. The open expanse of Scapa Flow weakens this association in respect of the coastline east of Toy Ness. The character of the coastline is moderated by a modified hinterland predominated by arable and pastoral land uses, the presence of rigs and oil tankers within Scapa Flow, and the oil terminal and associated wind turbine and gas flare on Flotta.

6.12.183 The medium value of the Orphir RCCA and the medium susceptibility of the coastline between Houton Head and Toy Ness to the effects of the Proposed Development leads to a sensitivity rating of **medium**. The low susceptibility of the remaining coastline means its overall sensitivity is rated **medium to low**.

Magnitude of change

6.12.184 The Proposed Development will not physically alter the pattern of elements and features of this RCCA. During the operational phase, the magnitude of change on the Orphir RCCA will be **medium to low** between Houton Head and Toy Ness, reducing to **low** between Toy Ness and The Lash, with **no change** to north-east facing coastlines at Piggar and Waulkmill Bay. Theoretical visibility of the proposed turbines is continuously high across the RCCA apart from these two areas. Actual visibility will be comparable due to the open waters of Scapa Flow.

6.12.185 The Proposed Development will introduce wind farm development as an external influence on the character of this RCCA. The proposed turbines will constitute vertical elements contrasting with the low-lying moorland hills of southern Hoy, albeit seen in a separate part of the island landscape from the high hills to the north. The effect of the Proposed Development will be further moderated by the improved pasture and arable farming, which makes up the coastal hinterland and which detracts from any sense of wildness or remoteness along the Orphir coastline. Further east, distance from the site combined with the increasing influence of Scapa Flow and associated artefacts, weakens the association with Hoy, thus lowering the magnitude of change for this section of coastline.

6.12.186 During the construction phase, the magnitude of change will be marginally lower than that described during the operational phase. Distance, combined with screening by intervening landform, will mean that ground level construction works will not be visible, while the construction of the emerging turbines using tall cranes will be visible as a distant feature.

Significance of effect

6.12.187 The effect of the Proposed Development on the Orphir RCCA will be not significant during both the construction and operational phases. This finding relates principally to the separation distance between this coastline and the Proposed Development, and the wider influences that act on the character of this coastline including rigs and tankers present in Scapa Flow.

Significance of cumulative effect

6.12.188 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

**RCCA 24: Stromness and Clestrain Sound**

Baseline

6.12.189 The south-west coast of the Orkney Mainland is covered by this RCCA which extends from Skerry of Ness in the west to Houton Head in the south-east. Generally south and south-west facing it encompasses Stromness Harbour, the Inner and Outer Holms, Bay of Navershaw, and Bay of Ireland.

6.12.190 The character of this south-facing RCCA largely derives from the low-lying coastal edge and the strong influence of Stromness. To the west the coast is defined by the urban edge of Stromness and associated piers, harbour and marina. The narrow harbour is further enclosed by the Inner Holm and Outer Holm. East of Stromness the coast forms the Bay of Ireland and extends along the Clestrain Sound. Overall, the gently indented coastline is low-lying with an intertidal zone characterised by wide rocky bands that connect the Outer and Inner Holms with the Mainland. Skerries lie near Sailhouse Bay. Wide views across the Clestrain sound are complemented by contained views of neighbouring islands and westward glimpses of the Atlantic. Hoy High lighthouse on Graemsay is a continuously visible focal point.

Sensitivity

6.12.191 The value of the Stromness and Clestrain Sound RCCA is high. The entire Stromness and Clestrain coastline is covered by the Hoy and West Mainland National Scenic Area in recognition of the scenic quality of the Atlantic coastline and the associated rounded hills of Hoy.

6.12.192 The susceptibility of the Stromness and Clestrain Sound RCCA to the effects of the Proposed Development is medium. The coast of Stromness and Clestrain Sound is largely inward looking with views drawn between opposing shorelines. Within these, Graemsay and the rugged hills of northern Hoy are prominent features for much of this coastline. The character of the coastline is associated with the rugged hills of Hoy, becoming weaker towards the north. The harbour edge of Stromness heavily influences the western coast and arable and pastoral land use is predominant within the immediate hinterland, moderating the character and susceptibility of the coastline. Distance, the scale of the surrounding seascape and landscapes of neighbouring islands, and the screening effect of the northern hills of Hoy further reduce susceptibility.

6.12.193 The combination of the high value of this RCCA and its medium susceptibility to the effects of the Proposed Development leads to an overall sensitivity rating of **medium to high**.

Magnitude of change

6.12.194 The Proposed Development will not physically alter the pattern of elements and features of this RCCA. During the operational phase, the magnitude of change on the Stromness and Clestrain Sound RCCA will be **medium to low** at Houton Head and within approximately 10 km of the site, decreasing to **low** to **no change** across the remaining coastline. Theoretical visibility of the Proposed Development is continuous between Houton Head and Bu Point. The coastline west of Bu Point has no theoretical visibility of the Proposed Development. Actual visibility will be comparable due to the openness of the coastal edge.

6.12.195 The Proposed Development will introduce the external influence of a wind farm. The proposed turbines will be partially visible on the distant skyline and will appear in contrast with the surrounding moorland hills owing to their vertical form, movement and modern appearance. Houton Head, the southernmost section of coastline, is more strongly associated with Hoy due to

closer proximity and the southern orientation of the coastline - the effects of the Proposed Development on the character of the RCCA will be greatest here.

6.12.196 The magnitude of change will decrease north of Houton Head due to the orientation of the coastline westwards and the closer association of this section of coastline with the opposing northern Hoy coastline. Across the Clestrain Sound from the west facing coastline, the rugged hills of Hoy are closer than the site. Increasing distance from the site combined with the increasing influence of Graemsay, Stromness and the Atlantic Ocean beyond, reduces the magnitude of change as the coastline progresses northwards.

6.12.197 While the Proposed Development will introduce a new external influence on this RCCA, its effect will be moderated by the improved pasture, arable farming and dispersed settlement in the hinterland. This extends up to the shoreline and excludes natural landcover such that the baseline character of this coastal landscape has little sense of wildness or remoteness.

6.12.198 During the construction phase, the magnitude of change to the Stromness and Clestrain Sound RCCA will be marginally lower than that described during the operational phase. The relative strength of the association with northern Hoy's hills, combined with the apparent extent of construction activity and its duration will limit the effects of construction. The screening of low-level construction and partial visibility of the construction of the turbines will make a limited change to the overall character of the RCCA.

Significance of effect

6.12.199 The effect of the Proposed Development on the Stromness and Clestrain Sound RCCA will be not significant during the construction and operational phases. This finding relates to the relatively weak association between northern Hoy and the Houton Head area that decreases to the north; the limited visibility of the Proposed Development and the relatively stronger influence from the hills of north Hoy, Graemsay, Stromness and the Atlantic Ocean.

Significance of cumulative effect

6.12.200 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

**RCCA 31: Cava, Rysa Little and Fara**

Baseline

6.12.201 This RCCA covers the coastline of the islands of Cava, Rysa Little and Fara to the west of Scapa Flow. These three, small, teardrop-shaped islands are separated by narrow sounds that provide routes for vessels as well as sheltered locations for fish farms. The islands have relatively smooth and un-indented coastlines of low cliffs, rock platforms and shingle shores. Fara has the only indented bay of the three, which includes a small sand and shingle beach at Fall Sand. The intertidal zone is characteristically narrow. A lighthouse lies on Calf of Cava, with a shingly ayre connecting to the island. A small jetty lies on the western shore of Fara.

6.12.202 The three islands are relatively indistinct in views across Scapa Flow. Cava and Fara merge into the backdrop of Hoy in longer views from the Mainland of Orkney and appear as minor features in shorter range views. Smallest of the three, Rysa Little continues to appear as part of Hoy. The three islands are seen in close up views from the Houton to Lyness ferry.

Sensitivity

6.12.203 The value of the Cava, Rysa Little and Fara RCCA is medium. National or regional landscape designations, which would otherwise denote a special landscape value, do not cover the islands.

6.12.204 The susceptibility of the Cava, Rysa Little and Fara RCCA to the effects of the Proposed Development is medium. The open and exposed coastlines of the islands have a strong horizontal emphasis that is largely devoid of vertical features. The enclosing landscape of neighbouring Hoy to the west is closely associated with the character of the islands. The undeveloped and relatively natural islands are susceptible to the Proposed Development which would contrast with this character. Cava being

inset further into Scapa Flow than Little Rysa, means it has a slightly reduced association with Hoy. West Hill on Flotta is the only readily visible turbine from this RCCA.

6.12.205 The combination of the medium value of this RCCA and its medium susceptibility to the effects of the Proposed Development results in an overall **medium** sensitivity.

Magnitude of change

6.12.206 The Proposed Development will not physically alter the pattern of elements and features of this RCCA. During the operational phase, the magnitude of change on the character of the RCCA will be **medium** along western coastlines while **no change** will occur across remaining areas without visibility. The Proposed Development will have a notable visual influence on the western coastlines of the islands derived from the close association of the RCCA with the Hoy Central Hills LCU. Theoretical visibility of the Proposed Development is continuously high across the islands' western coastlines. Actual visibility will be comparable due to the surrounding narrow sounds. Seen at relatively close range the proposed turbines will be an addition to the landscape detracting from the naturalness of the islands and their almost unaltered coastlines. The contained layout and low number of turbines will limit the apparent extent of the Proposed Development and its effect. Landform will screen views from the eastern coastline of the islands, such that no change will be made to their character.

6.12.207 During the construction phase, the magnitude of change across this RCCA will approach the magnitude described in respect of the operational phase. The emerging turbines and tall cranes used in their construction will be partially visible from the western coastlines of Cava, Rysa Little and Fara, while hills on Hoy will largely screen ground level construction works. While the introduction of construction works to the RCCA will be intrusive, its effect will be limited by the proportion of works visible, their scale relative to the surrounding landscape of Hoy's central hills, and their duration.

Significance of effect

6.12.208 At both the operational and construction phases of the Proposed Development, its effect on the Cava, Rysa Little and Fara RCCA will be significant across the west-facing coastlines within approximately 6.5 km of the site and not significant across the eastern coastlines facing Scapa Flow. This finding relates to the close association between Hoy and the western coastlines of all three islands, the anticipated visibility of the Proposed Development and the largely undeveloped baseline character of the islands.

Significance of Cumulative Effect

6.12.209 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

**RCCA 32: South East Hoy**

Baseline

6.12.210 This RCCA covers the south east coast of Hoy, from Green Head in the north to Crock Ness in the south, including Lyrawa Bay, Pegal Bay, Mill Bay, Ore Bay, and the coastal settlement of Lyness. The coastline is strongly indented by headlands and bays, with sheltered coastal waters and narrow sounds set away from open sea and steep hills forming the hinterland and providing panoramic views over the coast. The uninhabited northern part of this RCCA contrasts with the relatively developed coastline and associated activities in the Lyness area.

6.12.211 The south-east coastline between Green Head and Crock Ness comprises three long, narrow bays with broad headlands and then the broader Pegal Bay. The outer headlands have a narrow rocky foreshore, while within the bays, intertidal sand and shingle deposits are particularly extensive. In the north, pebbly sandstone headlands occur, while to the south, a lower-lying coast comprises Upper Stromness Flags. Human influences reflect this difference, with the northern coast being undeveloped, while the southern coast is lightly developed and with a concentration of activity around Lyness Harbour. Rising moorland on Hoy, to the west, and Fara, to the east, provides a sense of containment and shelter.

6.12.212 The intricate, low-lying coastline between Green Head and Ruberry includes more elevated, highly exposed parts and sheltered bays near Rysa Little. Framed views out across Scapa Flow are generally dominated by the low horizontal profile of the islands and the Mainland of Orkney, interspersed with sections of open sea. There is a sense of semi-containment provided by the rising backdrop of moorland to the west on Hoy and Cava, Rysa Little and Fara to east. The coastline between Ruberry to The Point is characterised by two bays of contrasting scale with the larger of the two having very shallow waters and a deep intertidal zone. The low-lying, gently inclined, hinterland includes pasture and arable land, scattered dwellings and farmsteads.

6.12.213 The coastline between The Point and Crock Ness includes Lyness Harbour and numerous piers and man-made structures. The hinterland of rough grass and pasture is scattered with dwellings, farmsteads, harbour buildings and infrastructure, light industrial sheds and building conversions, as well as World War II structures and ruins, including a disused wartime camp site. Views are predominantly focused on the complex pattern of man-made elements and industry, particularly within Lyness itself, and the frequent passage of boat traffic. Manmade influences include the B9047, access tracks, existing fish farms and onshore infrastructure, as well as the small-scale boat traffic, including fish farm maintenance boats and the Houton to Lyness ferry.

Sensitivity

6.12.214 The value of the South East Hoy RCCA is rated medium. No regional or national designations, which would otherwise denote a special landscape value, cover the coastal area.

6.12.215 The susceptibility of the South East Hoy RCCA to the effects of the Proposed Development is medium to high between Crock Ness and Ruberry, and medium to low between Ruberry and Green Head. The coast of South East Hoy is largely inward looking with views drawn between opposing shorelines. This coastline and other surrounding sections of coastline on neighbouring islands will be readily susceptible to the effects of the Proposed Development as the site is located in the Hoy Central Hills LCU, inland of this coastal area. The coastal area is uninfluenced by wind farm development, although the single turbines at Ore Brae and West Hill have some influence on the character of the RCCA.

6.12.216 The medium value of this RCCA and medium to high susceptibility to the effects of the Proposed Development between Crock Ness and Ruberry make for a sensitivity rating of **medium to high**. The sensitivity rating for the section of coastline of Ruberry and Green Head is **medium**, reflecting its medium to low susceptibility.

Magnitude of change

6.12.217 The Proposed Development will not physically alter the pattern of elements and features of this RCCA. The magnitude of change on the South East Hoy RCCA will be **medium to high** between Crock Ness and Lyness, **medium to low** between Lyness and Ruberry and **low** or **no change** between Ruberry and Green Head. Theoretical visibility of the Proposed Development will be continuously high from Crock Ness to Ruberry, and partial across Green Head and Pegal Head with remaining coastline having little to no visibility due to landform. Actual visibility will be largely comparable due to the openness of the coastal edge, except at Lyness and other smaller areas of development where built form will reduce visibility in localised areas.

6.12.218 Between Ruberry and Lyness, the magnitude of change to the character of the RCAA will be **medium to high**. The Proposed Development will introduce a new, close range and large-scale feature in the adjacent Hoy Central Hills LCU of the Moorland Hills LCT. These hills are closely associated with the coastal area, such that the addition of the Proposed Development will have a notable influence on the character of the coastal landscape. The medium to high rating will continue south of Lyness, into the area around Ore Bay, from where the location of the Proposed Development on the south facing slope of Wee Fea and the valley of the Burn of Ore will be readily evident. The vertical form of the turbines will contrast with the horizontal coastal landscape and seascape and their modern appearance will contrast with the semi-natural appearance of the farmed hinterland.

6.12.219 Between Ruberry and Green Head, the magnitude of change will be **medium to low**. Despite the relative proximity of this coastline to the Proposed Development, the extents of visibility will be limited and where visibility does occur, the proposed turbines will be largely screened by the

intervening landform, such that not all the turbines will be visible and those that are will be mostly screened. Furthermore, the orientation of this coastline is in the opposite direction to the Proposed Development and this further moderates its influence.

6.12.220 While the Proposed Development will form a new feature uncharacteristic of this RCCA, the overall effect will be moderated by the following factors. The coastal landscape of South East Hoy has little sense of wildness or remoteness. The landscape extending to the shoreline has been modified by pastoral and arable farming to the exclusion of natural landcover. Dwellings, harbour buildings and infrastructure, and World War structures and ruins reflect a high human influence further detracting from the naturalness of the landscape.

Significance of effect

6.12.221 The effect of the Proposed Development on the South East Hoy RCCA will be significant between Crock Ness and Ruberry, and not significant between Ruberry and Green Head. This finding relates principally to the strong association between the south east coastline and the central hills of Hoy.

Significance of cumulative effect

6.12.222 The cumulative magnitude of change in respect of the operational and under construction turbines will be low and the cumulative effect will be not significant.

**RCCA 33: Flotta**

Baseline

6.12.223 This RCCA includes the entire coastline of Flotta and the adjacent Calf of Flotta. The island of Flotta lies within Scapa Flow between the islands of Hoy, to the west and South Ronaldsay, to the east. The coastline is characterised by a rugged southern coast and smoother north and west coasts, framing the inlet of Pan Hope with a contrasting pattern of farms and houses behind extending across the island.

6.12.224 The island's coastline is rounded to the west, indented along the south coast, with the deep inlet of Pan Hope to the east and defined by the long headland of Golta extending north-east. The narrow rocky shoreline has stretches of sand and shingle, particularly at the shallow sandy bay of Pan Hope. The exposed south-east coast has low cliffs of up to 20 m while rocky bays to the west reveal extensive areas of Stromness Flags. The coastline between these areas is low lying and sheltered with a narrow fringe of shingle. Two piers lie on the north coast where an extensive oil terminal forms the focus of a busy seascape, and with two jetties further east on the Golta headland. Farmland and wartime installations emphasise the strong human influence across the island. On Golta and the west coast the hinterland is characterised by gently sloping moorland and rough grassland with a smooth profile. This is relatively natural except for ruined wartime structures including coastal batteries and access tracks for the airstrip to the west. The West Hill wind turbine and oil terminal are prominent in many views.

Sensitivity

6.12.225 The value of the Flotta RCCA is medium. Regional or national designations, which would otherwise denote a special value, do not cover the area.

6.12.226 The susceptibility of the Flotta RCCA to the effects of the Proposed Development is medium across the west coast from Sutherland Pier to Innan Neb and medium to low across remaining parts of the RCCA. The west coast faces out towards the south-east corner of Hoy and although more closely associated closer range Crock Ness, is also influenced by the wider moorland hills which enclose the coastal edge. To the north-west, the active seascape around the ferry terminal and extensive oil terminal influence the northern coastline. Along the east and south coast, agricultural hinterland extends from Curries Firth to Innan Neb. These factors reduce the susceptibility of the RCCA to the Proposed Development. Single small wind turbines at West Hill and at Ore Brae on Hoy establish turbines as a feature of the baseline character.

6.12.227 The sensitivity of the Flotta RCCA to the effects of the Proposed Development is **medium** across the west coast and **medium to low** across remaining parts of the RCCA.

Magnitude of change

6.12.228 The Proposed Development will not physically alter the pattern of elements and features of this RCCA. During the operational phase, the magnitude of change on the character of the RCCA will be **medium** along the west facing coastline, where visibility of the Proposed Development is continuous, with a **low** magnitude of change or **no change** along the remaining parts of the coastline where visibility is limited or there is no visibility. The Proposed Development will present a new influence on the character of this RCAA owing to the large scale and dynamic nature of the proposed turbines, seen set in the moorland hills behind the opposing shoreline. While the proposed turbines will appear at variance with the largely undeveloped character of the moorland hills, the change is moderated by the existing influence of the single turbines, the oil terminal and the movement of ferries and other boats.

6.12.229 During the construction phase, the magnitude of change across this RCCA will approach the magnitude described in respect of the operational phase. Distance to the site means that some of the ground level construction works will be readily visible from this RCCA. The emerging structures of the turbines and tall cranes used in their construction will influence the western area of the RCCA, with little to no influence along the other sections of coastline. These factors moderate the effect of the Proposed Development to the RCCA.

Significance of effect

6.12.230 The effect of the Proposed Development on the Flotta RCCA will be not significant during the construction and operational phases. This finding relates to the broader range of external influences acting on the character of this RCCA and its separation distance from Hoy.

Significance of cumulative effect

6.12.231 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

**RCCA 34: North Bay, Longhope and Switha**

Baseline

6.12.232 This RCCA covers the south coast of Hoy and the north coast of South Walls, extending from Crockness on Hoy south to Cantick Head on South Walls. It includes the coasts of the long inlet of Longhope and North Bay, and the small island of Switha. The RCCA is largely characterised by the long, sheltered inlet opening to Switha Sound and the open Pentland Firth beyond.

6.12.233 Longhope's coastline is strongly enclosed, sheltered and deeply indented. It is largely rocky and broken in places by shingle shores and sandy bays. North Bay is shallow and contains several skerries. Point of Hackness and Switha mainly comprise rock platforms and shingle bays. Pronounced cliffs at The Ool on Switha are atypical. Cantick Head and Switha's south coast are exposed with strong tidal currents and a calmer, sheltered northern shore. Around Longhope, settlement has developed along the coastline most substantially at the village of Longhope. Standing stones on Switha and disused defence structures at Hackness indicate long term human influence.

Sensitivity

6.12.234 The value of the North Bay, Longhope and Switha RCCA is medium. Regional or national designations, which would otherwise denote a special value, do not cover the area.

6.12.235 The susceptibility of the North Bay, Longhope and Switha RCCA to the effects of the Proposed Development is medium to high across the northern coastline of South Walls and medium to low across remaining parts of the RCCA. The southern coastline of Hoy is strongly associated with the opposing coast of South Walls. The coastline of South Walls is associated with Flotta north beyond Switha Sound, South Ronaldsay to the east and the Pentland Firth to the south. The northern coastline of South Walls is strongly influenced by the opposing coastline on Hoy and the hills beyond. Switha is influenced by the coastline of Flotta and the coast of South Walls, where channelled views of Hoy beyond the islands weakens the association between Switha and Hoy, reducing its susceptibility. The settled hinterland and farmland, as well as the single turbines at West Hill and Ore Brae moderate the susceptibility of this RCCA.

6.12.236 The sensitivity of the North Bay, Longhope and Switha RCCA to the effects of the Proposed Development is **medium to high** across the north coast of South Walls and **medium** across remaining parts of the RCCA.

Magnitude of change

6.12.237 The Proposed Development will not physically alter the pattern of elements and features of this RCCA. During the operational phase, the magnitude of change on the character of the RCCA will be **medium to high** across the north coast of South Walls, **medium** across the south coast of Hoy, and **low** or **no change** along the remaining coastline where visibility of the Proposed Development is either limited or does not occur. Theoretical visibility of the Proposed Development is continuously high across almost all the North Bay and Longhope coast and the north coast of Switha. The south facing coastlines of Switha, South Walls, and the Crowtaing to Cemy section of the Kirk Hope coast, have no theoretical visibility of the Proposed Development. Open coastlines and seascapes mean that actual visibility will be comparable. The proposed turbines will form an external influence that will change the contextual character of the moorland hills to the north of this RCCA owing to their large vertical and dynamic structures, which will appear at variance with the baseline landscape.

6.12.238 During the construction phase, the magnitude of change across this RCCA will be similar to the magnitude described during the operational phase. There is the potential that ground level construction works will be visible from the South Walls coastline where the fullest visibility occurs, but likely to be party or wholly screened by intervening landform from other parts of this RCCA. The presence of the emerging turbines and tall cranes used in their construction will have an influence over a wider extent.

Significance of effect

6.12.239 The effect of the Proposed Development on the North Bay, Longhope and Switha RCCA will be significant along the northern coast of South Walls and southern coast of Hoy, within approximately 6.5 km of the site and not significant across the remaining coastlines. This finding relates to the close association between Hoy and the coastline of the Longhope inlet, the anticipated visibility of the Proposed Development and the limited extent of this RCCA that the Proposed Development will affect.

Significance of cumulative effect

6.12.240 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

**RCCA 38: West Burray and South Ronaldsay**

Baseline

6.12.241 This RCCA covers the eastern shore of Scapa Flow and includes several islands. It extends south from Howequoy Head on the Mainland of Orkney to include Lamb Holm, Glimps Holm and the Churchill Barriers, the west coast of Burray and Hunda, Water Sound and Widewall Bay, to The Nev on South Ronaldsay. The RCCA is characterised by alternating areas of land and sea with sheltered coasts facing Scapa Flow. Views occur across Scapa Flow to the hills of Hoy and the Mainland of Orkney, and historic defence structures are evident along this coastline, including the Churchill Barriers.

The coastline is low lying and rocky between Howequoy Head and Hoxa, with shingle ayres and taings, notably linking Hunda to Burray. At the narrowest points between the islands, deposition beaches have built up against the four Churchill Barriers. The coastline is enclosed and shallow at Widewall Bay with extensive intertidal areas of sand and gravel, becoming higher and more rugged south of Croo Taing rising to modest cliffs at Harrabrough and The Nev. The sea has cut small geos and caves into these. Further south, relatively high, rugged cliffs shelter the coastline from the south-west. Defence structures on the coastline provide focal viewpoints.

Sensitivity

6.12.242 The value of the West Burray and South Ronaldsay RCCA is medium. Regional or national designations, which would otherwise denote a special landscape value, do not cover the area.

6.12.243 The susceptibility of the West Burray and South Ronaldsay RCCA to the effects of the Proposed Development is medium at the western extremities of the Widewall Bay headlands, reducing to medium to low, along the northern coastline. The westernmost parts of the RCCA from Croo Taing to Bloie Geo and from Moi Geo to North Lobers are orientated towards and associated with the island of Flotta and the more dramatic outline of the island of Hoy beyond. Between Needle Point and Croo Taing the northern coastline is more closely associated with Hunda to the north and the Mainland of Orkney beyond. The susceptibility of this RCCA is moderated slightly by the existing influence of the single West Hill turbine and the rigs and vessels on Scapa Flow.

6.12.244 The sensitivity of the West Burray and South Ronaldsay RCCA to the effects of the Proposed Development is **medium** across the west coast and **medium to low** across remaining parts of the RCCA.

Magnitude of change

6.12.245 The Proposed Development will not physically alter the pattern of elements and features of this RCCA. During the operational phase, the magnitude of change on the character of the RCCA will be **medium to low** at Hoxa Head, extending out to approximately 12 km from the site. The magnitude of change for remaining parts of the coastline will be **low** with **no change** for sections of coastline without visibility of the Proposed Development. Theoretical visibility is continuous from The Golt to Bloie Geo on the northern headland of Widewall Bay and from Herston Taing to The Nev on the southern headland. Actual visibility will be equivalent due to the open sea adjoining the coastline.

6.12.246 The Proposed Development will be visible from the RCCA as a relatively distant feature, occupying a small proportion of the wider landscape and seascape context. While the interaction of this external influence will relate largely to the variance it will present in respect of the largely undeveloped context in which it will occur, the presence of some large and small-scale developments and the extent to which the hinterland landscapes to the coast have been modified by human interventions, will moderate this change. The westernmost parts of the northern headland will be most influenced, while coastline without visibility of the Proposed Development will remain unchanged.

6.12.247 During the construction phase, the magnitude of change will be marginally lower than that described during the operational phase. The emerging turbines and associated construction activity at height will be barely visible from the RCCA and be of short duration.

Significance of effect

6.12.248 The effect of the Proposed Development on the West Burray and South Ronaldsay RCCA will be not significant. This finding relates principally to the distance between this RCCA and the Proposed Development, as well as the influence of the wider landscape and seascape context and the human influences which already occur in this context.

Significance of cumulative effect

6.12.249 The cumulative magnitude of change in respect of the operational and under construction turbines will be **low** and the cumulative effect will be not significant.

### *Residual Effects on Landscape Designations*

6.12.250 The landscape designations that cover the local study area of a 15 km radius are shown in Figure 6.3 and in conjunction with the ZTV in Figures 6.8, 6.10a and 6.10b. Through a preliminary assessment involving field and desk studies, Orkney – Hoy and West Mainland National Scenic Area was found to have the potential to be significantly affected. The effect on this NSA is presented in Appendix 6.2.

6.12.251 In response to HES's request, the effects on Melsetter House GDL is assessed in Chapter 10: Cultural Heritage.

**Orkney – Hoy and West Mainland NSA**

Appendix 6.2 presents a detailed assessment of the effects of the Proposed Development on the Special Landscape Qualities (SLQs) of the Hoy and West Mainland National Scenic Area (NSA). It

follows guidance set out in Scottish Natural Heritage's (SNHs) Working Draft 11 entitled 'Guidance for Assessing the Effects on Special Landscape Qualities' (November 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).

6.12.252 The finding of this assessment is that only one of the 11 SLQs will be significantly affected, namely the High Hills of Hoy, across a localised area in the Moorland Hills LCT on the southern boundary of the designated area, between 5 km and 6.5 km from the Proposed Development. Three other SLQs will be affected by the Proposed Development but not significantly, while the remaining seven SLQs will not be affected.

### *Residual Effects on Wild Land Area*

6.12.253 Appendix 6.3 presents a detailed assessment of the effects of the Proposed Development on the Wild Land Qualities (WLQs) of the Hoy WLA. The assessment follows guidance set out in SNH's draft version of 'Assessing Impacts on Wild Land Technical Guidance' (2017) ('the 2017 Draft Guidance'). SNH, on its website, states that the 2017 Draft Guidance is the appropriate guidance to be applied in the assessment of effects on WLAs in place of the original 2007 Guidance and while responses on the 2017 Draft Guidance are considered.

6.12.254 Appendix 6.3 presents a detailed assessment of the effects of the Proposed Development on the Wild Land Qualities (WLQs) of the Hoy WLA. In order to assist the assessment, the Hoy WLA has been divided into a Sub-area East and Sub-area West. The finding of this assessment is that four of the six WLQs will be significantly affected where they are experienced in Sub-area East. In Sub-area West, while there will also be significant effects, these will occur in three small localised areas, while the majority of Sub-area West will remain unaffected by the Proposed Development.

## 6.13 Residual Effects on Visual Receptors

### *Assessment of Effects on Views*

6.13.1 The first stage in the Assessment of Effects on Views comprises an evaluation of the effects at each of the representative viewpoints. This is carried out on site, using wirelines to inform the assessment. The viewpoint locations are shown in conjunction with the ZTV in Figures 6.5a, 6.5b and 6.10. The viewpoints are illustrated in Figures 6.15 to 6.30 with a detailed location plan, a photograph of each view and a computer-generated wireline. For 15 of the 16 viewpoints, there is also a computer-generated photomontage of the Proposed Development. There is no photograph or photomontage for Viewpoint 16: Withi Gill since, through the consultation process, SNH requested only a wireline to represent this viewpoint.

6.13.2 In the wirelines, the Proposed Development turbines are shown in red, operational wind farms are shown in black, under construction wind farms are shown in purple and consented wind farms are shown in green. The turbine numbers shown, correspond with those shown on Figure 1.2.

**Viewpoint 1: Knap of Trowieglen**

Baseline

6.13.3 This viewpoint is located on the summit of Knap of Trowieglen, which, at 399 m AOD, is the highest hill in the upland core of the island. The hill is accessed from the single-track road located to the north and aligned east-west through the U-shaped valley which separates the Rugged Hills LCT to the north, from the Moorland Hills LCT to the south. While the distance between the road and the summit is only 2 km, there is no path, and the combination of the steep terrain and the deep vegetation makes walking challenging. This viewpoint has been selected to represent the views of walkers and is also representative of the views from the Hoy WLA and the Hoy and West Mainland NSA.

6.13.4 The elevated position of the viewpoint gives rise to expansive views in all directions, with the characterising features being the, open, moorland landscape at the core of the island, and the influence of the surrounding seascape and other islands beyond. The hills are smooth and rounded

with a blanket cover of moorland vegetation and an absence of trees. Collectively, they form an upland mass, with the broadly undulating topography of each hill defined by the indents of small burns, radiating out from the high point of the Knap of Trowieglen.

6.13.5 The baseline photographs in Figures 6.15b to 6.15e, illustrate the 360 degree view from the summit. The quadrant of this baseline photograph and the photomontage, presented in Figure 6.15c, shows the view towards the south-east. This sector of the view comprises lower hills and the presence of development, most notably the single turbine and industrial oil terminal on Flotta, but also smaller scale residential development on the south-east coast around Lyness. The more attractive sectors occur to the north (Figure 6.15e), where views are drawn towards the higher and more dramatic Rugged Hills LCT, and to the east (Figure 6.15c), where the open expanse of Scapa Flow is seen enclosed by the Mainland of Orkney to the north and Burray and Ronaldsay islands to the east and south, respectively. The view also extends across the Pentland Firth to the north coast of Mainland Scotland, where distant wind farms are visible in clear conditions. The sector to the west and the south presents a simple landscape of open and undeveloped moorland hills, with glimpsed views through to the coastal cliffs

Sensitivity

6.13.6 The value of this view is high. While the viewpoint is not marked on OS maps as a formal viewpoint, the summit of the hill marks a natural viewpoint, which people will visit with the intention of enjoying the view and its location within the NSA increases expectations about the scenic quality of the views. While the viewpoint is located on the southern edge of the Hoy and West Mainland NSA, the south-east sector of the view is across an area that has no recognised scenic value. However, the viewpoint and view to the south lie within the Mapped Interest of Hoy WLA, which indicates that wildness characteristics are likely to be apparent.

6.13.7 The susceptibility of walkers on Knap of Trowieglen to the effects of the Proposed Development will be medium to high. Those factors which moderate the susceptibility of walkers include the main attraction of the wider view being northwards towards the Rugged Hills LCT and eastwards across Scapa Flow. In the view to the south-east, where the site is located, the susceptibility of walkers is tempered by the existing influence of the wind turbine and oil terminal on Flotta, as well as rigs and tankers in Scapa Flow, which along with the islands and coastline indentations present a more complex part of the view. Despite these external influences, the character of the view is largely characterised by an open and undeveloped upland landscape, which is likely to match the expectations of walkers in this area. During site work, no other walkers were seen in this area and in light of the absence of parking, signs, paths or onward routes to other attractions, and the challenging terrain, it is assumed that relatively few walkers are attracted to this Moorland Hills LCT.

6.13.8 The combination of the value of the view and the susceptibility of the visual receptors to the Proposed Development gives rise to an overall **medium to high** sensitivity.

Magnitude of change

6.13.9 During operation, the magnitude of change will be **medium**. At a minimum distance of 6.05 km to the closest turbine, they will be seen as close-range structures, albeit either partially or wholly screened by the intervening landform. The wireline in Figure 6.15f and photomontage in Figure 6.15g, show that only four of the six turbines will be visible from this viewpoint, and of those four, two will be seen as tips, making them barely discernible, while the remaining two will be seen to just below the hub.

6.13.10 The Proposed Development will change the character of this view by introducing large scale and dynamic vertical structures onto the edge of this upland landscape. Although smaller scale single turbines and more distant wind farms are visible in the wider view, the proposed turbines will be seen to draw the influence closer to the moorland hills at the heart of Hoy. They will form a new focus in the views of the small number of walkers on Knap of Trowieglen.

6.13.11 Those factors which will moderate the magnitude of change and prevent it from being rated high or medium to high, include the fact that with six turbines, the Proposed Development is already a small wind farm and with a further four turbines essentially screened, this will notably reduce the influence of the Proposed Development. The two remaining turbines will be partially screened by

the intervening landform, thus reducing their vertical, as well as horizontal extent. Furthermore, their location behind the ridgeline ensures that the turbines do not encroach into the core of the upland area and ensures that their association appears to be with the landscape beyond the immediate moorland hills. The proposed turbines will occupy a small proportion of one of the less remarkable sectors of the wider view, with the rugged hills to the north, Scapa Flow to the east and the moorland hills to the west and south, remaining largely unaffected.

6.13.12 During construction, the magnitude of change impact will also be **medium**. All the ground level works associated with the infrastructure and the construction of four of the six turbines will be largely screened by the intervening landform. Visibility during the construction period will be limited to the presence and activity of tall cranes and the emergence of T1 and T6 as they are built. While the presence of these structures will form an eye-catching feature, they will occupy only a very small proportion of the wider scenic view.

Significance of effect

6.13.13 The effect of the Proposed Development on walkers on Knap of Trowieglen will be significant during both the construction and operational phases. Despite the existing influence of development in the south-east sector of the view, the addition of the proposed turbines will redefine the character of the views of walkers on Knap of Trowieglen by creating a new focus.

Significance of cumulative effect

6.13.14 The cumulative magnitude of change will be **low** and the cumulative effect on the views of walkers on Knap of Trowieglen will be not significant. This finding relates to the limited influence of the single operational turbines on West Hill, Flotta and Ore Brae, Hoy.

**Viewpoint 2: West Hill, Flotta**

Baseline

6.13.15 Flotta is the small island off the south-east coast of Hoy. The western and northern parts are defined as Low Moorland LCT while the eastern part as Undulating Island Pasture LCT. The Low Moorland LCT comprises one small hill with a high point of 59 m AOD. This is West Hill and is marked on OS maps as a formal viewpoint with views in all directions. There is a 100 m tall single turbine at the high point, with a number of access tracks drawn to this point from the B9046, to the north-east and east. The viewpoint is representative of visitors to this formal viewpoint.

6.13.16 To the north of West Hill, lies Flotta oil Terminal, which has been operating for over 40 years and which processes on average 100,000 barrels of crude oil a day. The plant comprises large storage tanks and flare stacks, as well as masts and a jetty where tankers can be moored for long periods of time. It forms a prominent, large-scale development on an otherwise largely rural island and with very few other large scale structures on the surrounding islands, although with the Ore Brae single wind turbine visible to the immediate west on Hoy, and oil rigs which are intermittently located in Scapa Flow to the north and north-east.

6.13.17 In terms of landscape character, the western flank of West Hill is open and largely undeveloped. In contrast, the eastern flank is settled and cultivated with a grid pattern of roads, tracks, walls and fences, subdividing the land into small plots with a relatively even dispersal of properties apart from the concentrated cluster which occurs at Whome. While the orientation of these settled areas is either south or east, in contrast, the western flank of West Hill is orientated west towards Hoy. With the oil terminal to the north and the settled farmland to the east, the most attractive sectors from the viewpoint are west and north-west across the Weddel Sound to Hoy.

Sensitivity

6.13.18 The value of this view is medium to high. Despite the absence of any landscape designations, which would otherwise denote a special scenic value, the presence of the formal OS viewpoint, marks the importance of West Hill as a natural outlook.

6.13.19 The susceptibility of visitors to the Proposed Development is medium. The main factor which moderates their susceptibility is the presence and influence of the Flotta Oil Terminal situated approximately 0.5 km to the north, which establishes large scale energy infrastructure as a defining

feature of the baseline views. The susceptibility of visitors to this viewpoint, is, however, accentuated by the westward draw of the view towards Hoy and the location of the site.

6.13.20 The combination of the value of the view and the susceptibility of the visual receptors to the Proposed Development gives rise to an overall **medium to high** sensitivity.

Magnitude of change

6.13.21 During operation, the magnitude of change on the views of visitors to the West Hill Viewpoint will be **medium to high**. The wireline, in Figure 6.16f and photomontage in Figure 6.16g, show visibility will comprise all six turbines seen to almost their full extents, with the base of T5 partly concealed by the intervening landform. At approximately 6.19 km to the closest turbine, the Proposed Development will be seen as a prominent feature in the middle range of the view, with the tracks cutting across the hill slopes also visible and adding to the overall effect.

6.13.22 Those factors that contribute to the **high** part of the magnitude of change rating include the location of the Proposed Development on Hoy, which forms the main attraction in views from this viewpoint, and, furthermore, its location following the natural alignment of views directly west. Also, comparisons between the scale of the proposed turbines and the scale of the landform upon which the turbines sit, will accentuate the large scale of the turbines. Further comparison with the single Ore Brae turbine will add to this perception.

6.13.23 Those factors that contribute to the **medium** part of the magnitude of change rating include the notable influence of the Flotta Oil Terminal which establishes large scale industrial development as an established feature of the baseline view. The close range of this development means that it is the defining feature of views from this viewpoint. Also, the Proposed Development will be seen associated with the lower moorland hills in the south of the island, which are less remarkable in scenic terms, than the higher hills in the core and north of the island. In terms of the design of the Proposed Development, the small number of turbines means that it forms a compact and legible group. Its location on Wee Fea (173 m AOD) means that it is clearly contained within a defined and simple landform feature, spanning across a relatively small part of the view, which continues to be characterised by the wider coastal hills and seascape.

6.13.24 During construction, the magnitude of change on the views of visitors to the viewpoint will be **medium to high**. The presence of tall cranes and emerging tall turbines, seen on the exposed eastern coastal edge of Hoy, will form a notable feature. Furthermore, the openness of the landscape will mean that the construction plant and ground level works, including the construction of the tracks and foundations, will be visible from this viewpoint, adding to the overall extent of development visible.

Significance of effect

6.13.25 The effect of the Proposed Development on visitors to the West Hill Viewpoint will be significant during both the construction and operational phases. Despite the presence and influence of the existing Flotta Oil Terminal to the immediate north, coupled with the separation distance of 6.19 km between the viewpoint and the Proposed Development, the orientation of the main draw of the view being westwards towards the Proposed Development means that it will redefine the character of the view.

Significance of cumulative effect

6.13.26 The cumulative magnitude of change on the views of visitors will be **low** and the cumulative effect will be not significant. While the West Hill turbine presents an especially close-range influence on the view, the fact that it is a single turbine limits its influence on the wider cumulative situation.

**Viewpoint 3: Longhope, South Walls**

Baseline

6.13.27 South Walls is a small island off the south coast of Hoy, joined to Hoy by The Ayre over which the B047 forms the connection. It is typical of its Whaleback Island LCT classification, with its gently rounded landform rising to a low plateau of gently undulating summits, the highest of which is Gallow Tuag at 57 m. The viewpoint is located in Longhope, which is the only settlement on South

Walls. Longhope is situated at South Ness on the north-west coast, opposite North Ness on the Hoy coast, marking the shortest crossing over Moasound and with the inland loch of North Bay to the south-west. The viewpoint is representative of the views of residents in Longhope, as well as road-users on the B9047.

6.13.28 The foreground of the view is characterised by the harbour area with its pier, storage sheds and yards, boats, cars and lorries. The view looks north across Moasound to Hoy and reflects the orientation of most of the properties in Longhope. This is with the exception of those on the eastern extent which are orientated more towards the north-east. In this view Hoy is characterised by the combination of the settled and cultivated Inclined Coastal Pastures LCT, which lines the south coast of Hoy, and the Moorland Hills LCT, which forms the upland hinterland.

6.13.29 Farmsteads and rural properties are dispersed across the coastal fringe, where farm fields of rough and semi-improved pasture form an open landscape. The hills behind also comprise an open landscape, with a blanket of moorland, heather and grasses, covering the smooth landform of the rounded hills. While there is no settlement on the hills, a mast can be seen on Binga Fea to the west. In the wider view to the north-east, the single turbine which marks the summit of West Hill on Flotta is readily visible, although the oil terminal is completely concealed by the intervening landform.

Sensitivity

6.13.30 The value of this view is medium. There are no formal viewpoints which would otherwise denote a special value, and this viewpoint is not covered by any national or regional landscape designations. While more distant parts of the view to the north are covered by the Hoy and West Mainland NSA, the majority of the view is undesignated.

6.13.31 The susceptibility of residents in this area, to the proposed development, is high. This reflects the fact that most of the properties are orientated northwards towards Hoy and the site. It also reflects the general openness of both the South Walls and Hoy coastlines and the stepped elevation of the properties in Longhope, which means that many of them are afforded a relatively open view. The more permanent nature of the views of residents increases their susceptibility as their views will potentially be affected over longer periods of time.

6.13.32 The susceptibility of road-users is medium. The orientation of the B9047 follows the east-west orientation of the coastline, such that views towards Hoy and the site are typically at an oblique angle, apart from the eastern extent of Longhope where they align more closely. The transient nature of the views of road-users moderates their susceptibility as their views will only be affected for relatively short periods of time.

6.13.33 The combination of the value of the view and the susceptibility of residents to the Proposed Development gives rise to an overall **medium to high** sensitivity, while for road-users it will be **medium**.

Magnitude of change

6.13.34 During operation, the magnitude of change on the views of road-users and residents will be **medium to high**. The wireline in Figure 6.17d and photomontage in Figure 6.17e, show that, with the exception of T4, the turbines will be visible to almost their full extents, with the closest turbine at approximately 3.43 km from the viewpoint. Within this predominantly rural context, the Proposed Development will introduce six large scale and dynamic structures that will appear comparable in scale to Wee Fea. The modern appearance of these structures and the dynamic motion of their blades mean they will appear at variance with the predominantly rural character, although some single turbines and small-scale developments do form part of the baseline character. Certain sections of the access tracks will also be visible from this viewpoint and will add the overall magnitude of change by conveying the sense that the hills are being opened up to access.

6.13.35 The magnitude of change is prevented from being assessed as **high** owing to a combination of the following factors. Firstly, the horizontal extent of the Proposed Development is limited by the small number of turbines. This means that the group appears legible and well contained, occupying only a small proportion of the wider view. Secondly, while the Proposed Development will feature in the main northern sector of views from the settlement, it will be offset slightly in the hills to the north-

west, while the principal outlook is centred on the eastern coastal edge of Hoy. Thirdly, while there are no other large-scale developments visible from this viewpoint, there is enough visible development that prevents the view from being regarded as pristine or undeveloped, including Longhope Harbour and the Ore Brae and West Hill single turbines.

6.13.36 During construction the magnitude of change will also be **medium to high**. The construction of the turbines will form the most readily visible feature of the Proposed Development, owing to the gradually increasing height of the emerging turbines and the presence and activity associated with the tall cranes used in their construction.

Significance of effect

6.13.37 The effect of the Proposed Development on the views of road-users and residents in Longhope will be significant during construction and operation. This assessment relates to the relatively full extent of visibility at a relatively close range, which means the Proposed Development will form a new and defining focus in views from this area.

Significance of cumulative effect

6.13.38 The cumulative magnitude of change will be **low** and the cumulative effect on the views of residents and road-users at Longhope will be not significant. This finding relates to the limited influence of the single operational turbines on West Hill, Flotta and Ore Brae, Hoy.

**Viewpoint 4: A961 OS viewpoint South Ronaldsay**

Baseline

6.13.39 The A961 is the main road that connects the south coast of South Ronaldsay, via Burray, to the Mainland of Orkney, at Kirkwall. The OS viewpoint is situated on the southern section of the A961, where it follows its north-south route through South Ronaldsay. It is marked by a layby at a localised high point (87 m AOD) on the western side of the road, and from where views open up to the west. Views to the east are contained within the close range by the adjacent landform, while to the north and south they extend to the middle range. The viewpoint is representative of the views of stationary road-users at the layby and transitory road-users on the A961.

6.13.40 The view is largely characterised by the open farmland which occupies the fore to middle ground. Fields of rough and semi-improved grasslands, enclosed by post and wire fences, create an open landscape in which the key features are the dispersed farmsteads and other rural properties. Clusters of farm sheds, occasional single turbines, the transmission line and the main road denote the modified nature of this rural landscape.

6.13.41 Despite its location, 16.75 km from the viewpoint, the focus of the view from the layby is Hoy. It is seen to the west, across the open water of Scapa Flow and is recognisable by its distinct upland profile. The high Rugged Hills LCT occurs in the north, the Moorland Hills LCT in the middle, with the elevation of hills decreasing to the south, where the low Whale Back Island LCT of South Walls occurs. While the separation distance reduces the discernibility of detail on Hoy, especially in poor visibility, development, including the West Hill turbine on Flotta and the Ore Brae turbine on Hoy are readily visible in fair to good visibility, albeit as distant and small scale features.

Sensitivity

6.13.42 The value of this view is medium to high. While there are no national or regional landscape designations which would otherwise denote a special scenic value at the viewpoint, the viewpoint is marked on OS maps as a formal viewpoint and the layby does provide road-users with the opportunity to stop safely and enjoy the view. Northern Hoy and parts of the distant mainland are designated as an NSA and this adds to the value of the view.

6.13.43 The susceptibility of stationary road-users at this layby is medium to high, while the susceptibility of transitionary road-users on the A961 is medium. The speed of road-users on this 60 mph section of road, combined with the oblique angle at which Hoy and the site occur relative to the road, moderates the susceptibility of transitory road-users. In contrast, stationary road-users are typically orientated towards the west and their views will be for longer duration.

6.13.44 The combination of the value of the view and the susceptibility of stationary road-users to the Proposed Development gives rise to an overall **medium to high** sensitivity, while the sensitivity of transitory road-users is **medium**.

Magnitude of change

6.13.45 During operation, the magnitude of change on the views of road-users will be **medium to low**. The viewpoint will be located a minimum distance of 16.75 km from the closest turbine. As the wireline in Figure 6.18f and photomontage in Figure 6.18g, show, all six of the proposed turbines will be visible. They will be seen set in the lower moorland hills to the south of the island, albeit close enough to the coastal edge to be fully visible in views from the east. Despite their distance, the scale of the turbines will appear larger than the West Hill turbine on Flotta and the Ore Brae turbine on Hoy, as well as in comparison with the scale of the hills upon which they sit.

6.13.46 As the photomontage in Figure 6.18g shows, the prominence and influence of these turbines will be moderated principally by the minimum separation distance of 16.75 km from the viewpoint. This means they will appear as relatively distant and small-scale components, occupying only a small proportion of the wider view in a layout that appears legible. Their association with the smaller hills at the southern end of the island means that they will not directly affect the views to the more dramatic hills in the north. They will also be largely back clothed by the hills behind and this will further reduce their prominence.

6.13.47 During construction, the magnitude of change will also be **medium to low**. While the emerging turbines and the tall cranes used to construct them will be readily visible in clear conditions, their influence on views from the A961 viewpoint will be moderated by their distant location and the presence of other development, most notably the large scale rigs that are intermittently present in Scapa Flow.

Significance of effect

6.13.48 The effect of the Proposed Development on the views of stationary and transitory road-users during construction and operation will be not significant. This finding relates principally to the separation distance between the viewpoint and the Proposed Development, the association of the Proposed Development with the less dramatic skyline at the southern end of Hoy and the extent of back-clothing by the hills which helps to reduce their prominence.

Significance of cumulative effect

6.13.49 The cumulative magnitude of change will be **low** and the cumulative effect on the views of stationary and transitory road-users will be not significant. This finding relates to the limited influence of the single operational turbines on West Hill, Flotta and Ore Brae, Hoy.

**Viewpoint 5: St Margaret's Hope Ferry**

Baseline

6.13.50 St. Margaret's Hope Ferry connects Gills Bay on the north coast of the Scottish Mainland with St. Margaret's Hope on South Ronaldsay. The ferry route crosses the Pentland Firth and Hoxa Sound, with South Ronaldsay to the east and South Walls, Flotta and Hoy to the west. This route offers the shortest crossing for a vehicle and passenger ferry, between Mainland Scotland and the Orkney Islands. The ferry takes approximately one hour and makes three crossings a day. The viewpoint is representative of the views of passengers on the ferry. There is a viewing deck from which views of the surrounding seascape and islands can be experienced.

6.13.51 In views from the ferry towards Hoy, other small islands sit to the fore, such that there are no uninterrupted views of Hoy. The islands to the fore are, however, all relatively low-lying, such that they either partly or wholly screen out the coastal edge, but with the moorland hills mostly visible above. The viewpoint is located to the south-east of the south-east corner of Hoy, from where the Whale Back Island LCT of South Walls is situated to the fore. In views from this south-easterly direction, the Rugged Hills LCT at the north of the island is not visible and rather than the dramatic profile experienced in views from the east, the profile from the south-east is lower and less scenic.

6.13.52 Some of the small islands the ferry passes are uninhabited, while most are sparsely populated and farmed. Evidence of development is typically small scale and rural, with the main exceptions being the West Hill wind turbine and oil terminal stack on Flotta, as well as the ferry terminals at either end and occasionally other passing boats.

Sensitivity

6.13.53 The value of the view is medium. There are no formal viewpoints in this area and no national or regional landscape designations, which would otherwise denote a special value.

6.13.54 The susceptibility of ferry passengers to the effects of the Proposed Development is medium. While not all ferry passengers are interested in enjoying the open views from deck, this number is often further reduced by the high winds and other harsh weather conditions often experienced on deck. In good conditions, this hour-long journey presents expansive views to numerous small to medium sized islands and many passengers will take the opportunity to enjoy these views, with the expectation of seeing natural landscapes and seascapes. The presence of existing developments and the transience of the ferry does, however, moderate the susceptibility of ferry passengers to the effects of the Proposed Development.

6.13.55 The combination of the value of the view and the susceptibility of ferry passengers to the Proposed Development gives rise to a **medium** sensitivity.

Magnitude of change

6.13.56 During operation, the magnitude of change will be **medium.** The wireline in Figure 6.19e shows that all six turbines will be visible to their full extents. They will be seen at a minimum distance of 8.40 km from the viewpoint, compared to approximately 6 km from St Margaret's Hope and 21 km from Gills Bay. They will be seen over the majority of the route, with the exception of patches of no visibility next to Flotta and Swona. The separation distance means that they will occupy a small proportion of the wider view and the small number of turbines means that they will form a relatively compact and well contained group. The back clothing provided by the moorland hills will act to moderate the prominence of the turbines, although T1 and T6 extend slightly above this threshold.

6.13.57 The elevation of the turbines means that they will be seen above the landform of the intervening islands and will introduce a large scale type of development into views of Hoy, thus giving rise to a notable change from the baseline character of the views. Their prominence will, however, be moderated by comparisons of scale with the closer range landform of the intervening islands, as well as their association with a more distant landscape. While the influence of other developments in ferry views, including the Ore Brae turbine on Hoy, and West Hill turbine and oil terminal flare on Flotta, will mean that the Proposed Development will not appear as a completely new feature, the scale of the turbines will appear notably larger, and this contributes to the medium rating for the magnitude of change.

6.13.58 The ZTV in Figures 6.5a and 6.10 shows that visibility of the Proposed Development will occur from the majority of the route, with the exception of a small patch to the east of Flotta and south-west of Swona where the intervening landform will screen visibility. The Proposed Development will be most readily apparent from the closest range section between the south-east of Flotta and the east of South Walls, where uninterrupted views extend between these islands. The magnitude of change will diminish with distance towards the Mainland of Scotland as the proposed turbines become a more distant and smaller scale feature and the surrounding influences of the wider view increasingly prevail.

6.13.59 During construction, the magnitude of change will be **medium to low**. While ground level construction works will be mostly screened by the landform of the intervening islands, the presence of the emerging turbines and the tall cranes used in their construction will be readily visible to ferry passengers in clear conditions. The prominence of the site will be moderated by the variable screening of the intervening islands. The magnitude of change will not be higher than medium to low owing to the relatively small number of turbines being constructed and the existing human influences evident from this ferry route.

Significance of effect

6.13.60 During both construction and operation, the effect of the Proposed Development on the views of ferry passengers will be not significant**.** This finding relates to the separation distance between the ferry route and the Proposed Development, the influence of the intervening islands and the relatively small number of turbines being proposed.

Significance of cumulative effect

6.13.61 The cumulative magnitude of change will be **low** and the cumulative effect on the views of ferry passengers between Gills Bay and St Margaret's Hope will be **not significant**. This finding relates to the limited influence of the single operational turbines on West Hill, Flotta and Ore Brae, Hoy.

**Viewpoint 6: A964, Orphir**

Baseline

6.13.62 The A964 is the main road that connects Kirkwall with Stromness following the southern coast of the Mainland of Orkney. Settlement along this route is predominantly rural and dispersed, with the exception being the scattered village at Orphir, a small nucleated settlement, with properties set on either side of the main road. Set on land rising from the coastal edge, the settlement occupies an elevated outlook with a predominant orientation south-eastwards across Scapa Flow, although many of the properties are single storey. The viewpoint is located on the western edge of Orphir, from where open views towards Hoy occur. It is representative of the views of road-users on the A964, as well as residents of Orphir and other rural settlements along this south coast.

6.13.63 Orphir lies on the cusp between the Inclined Coastal Pasture LCT to the south and the Rolling Hill Fringe LCT to the north. This transition is evident with the land falling gently southwards to the coastal edge and rising more steeply northwards to form low rolling coastal hills. The Inclined Coastal Plain LCT is characterised by open fields of semi-improved and rough pasture, with enclosure limited to post and wire fencing. Apart from around Orphir, settlement comprises dispersed farmsteads and rural dwellings, which together with the A964 and the pole mounted transmission lines, denote the settled nature of this landscape.

6.13.64 Views from Orphir extend beyond the coastal edge and over Scapa Flow, with the islands of Ronaldsay and Flotta featuring centrally and Hoy offset slightly to the south-west. While the lower moorland hills in the south of the island are readily visible, the higher moorland and rugged hills in the north of the island are screened by the intervening, closer range, rolling hills. The views present an attractive combination of seascape and islands, and while development is mostly sparse, small scale and rural, the presence of rigs in Scapa Flow has a notable effect by establishing large scale modern structures as a feature of the baseline views. There is also a distant influence from the West Hill turbine on Flotta to the south, and the closer-range under-construction Akla turbine in the hills to the north.

Sensitivity

6.13.65 The value of the view is medium. There are no formal viewpoints in this area and no national or regional landscape designations that would otherwise denote a special scenic value. While more distant views to the west extend to the Hoy and West Mainland NSA, the content of the view is largely undesignated.

6.13.66 The susceptibility of residents and road-users who experience views in this area is medium to high and medium, respectively. While the susceptibility of road-users is moderated by the transitory nature and, therefore, short duration of their views, the openness of the landscape means that even though the A964 is inset from the coastal edge, views still extend south across Scapa Flow, with Hoy clearly visible to the south-west, albeit mostly at an oblique angle to the direction of travel. Despite many of the properties being single storey, residents will gain views towards the site owing to the rising landform and openness of the coastal landscape, with their views likely to be for a longer duration.

6.13.67 The combination of the value of the view and the susceptibility of the visual receptors to the Proposed Development gives rise to an overall **medium to high** sensitivity for residents and **medium** sensitivity for road-users.

Magnitude of change

6.13.68 During the operational phase, the magnitude of change on residents and road-users will be **medium to low**. The wireline in Figure 6.20 shows that all six of the turbines will be visible, from approximately 12.46 km to the closest turbine. Owing to the partial screening of the intervening landform, they will be seen to varying degrees, with two turbines as blades, two just above hubs and two just below hubs. They will be seen set on the low moorland hills in the southern part of Hoy, their perceived scale being increased through comparison with the small hill on which they sit. They will be readily visible from much of the settlement, albeit offset to the south-west, outwith the central south to south-easterly orientation of views.

6.13.69 The magnitude of change is moderated by the separation distance between the viewpoint and the Proposed Development. At a minimum distance of approximately 12.46 km, the Proposed Development will be seen as a medium scale and distant feature, occupying only a small proportion of the much wider view across Scapa Flow. The six turbines will form a relatively small and compact group, clearly associated with the lower moorland hills of Hoy. While the magnitude of change will be raised by the fact that the Proposed Development will form the only readily visible wind farm in this view, it will be moderated by the fact that there are single turbines already present, and intermittently large scale rigs present in Scapa Flow.

6.13.70 During the construction phase, the magnitude of change will be **medium to low**. The minimum separation distance of approximately 12.46 km, combined with the intervening landform, means that ground level works will not be visible and the emerging turbines and the tall cranes used in their construction, will form only distant and small to medium scale features.

Significance of effect

6.13.71 The effect of the Proposed Development on road-users on the A964 and residents in Orphir and the surrounding rural area, as represented by this viewpoint, will be not significant during the construction and operational phases. This assessment relates to the separation distance of these visual receptors from the Proposed Development combined with the partial concealment of turbines by intervening landform and the existing influence of baseline development on views from this area.

Significance of cumulative effect

6.13.72 The cumulative magnitude of change will be **low** and the cumulative effect on the views of residents and road-users at Orphir will be not significant. This finding relates to the limited influence of the single operational turbines on West Hill, Flotta and Ore Brae, Hoy.

**Viewpoint 7: A964, Clestrain**

Baseline

6.13.73 Clestrain is a rural area set within the Inclined Coastal Pasture LCT, which occurs along the eastern coastal edge of Clestrain Sound. The small island of Graemsay occurs to the west, Stromness to the north-west and Hoy to the south-west. The viewpoint is representative of the views of residents occupying the dispersed properties in this rural area, as well as road-users on the A964. It is located at the junction with the minor road that cuts across the higher slopes above the A964. The view towards the site is orientated south, across Bring Deeps and along the eastern coast of Hoy.

6.13.74 The fore to middle ground of the view is characterised by the gentle fall of the coastal pastures towards the western coastal edge. The post and wire enclosure of the fields and the absence of tree cover adds to the openness of this landscape, in which farmsteads and rural dwellings are exposed as small scale developments. The A964 is straight and fast and although traffic flows are light, it detracts from the otherwise relatively peaceful nature of this rural landscape.

6.13.75 The background of the view is characterised by the rugged hills which sit at the northern end of Hoy and include Ward Hill (479 m AOD) and Cuilag (433 m AOD). While the hills are not high, their steep

slopes and craggy rock faces seen in the context of their island location, presents a dramatic and scenic feature. In contrast, the landform falls away towards the south of the island where the moorland hills appear comparatively much lower and more rounded. While Stromness is visible to the north-west, there is very little large scale development visible from the Clestrain area, other than the Graemsay and Hoy ferries and other large vessels passing in and out of Scapa Flow.

Sensitivity

6.13.76 The value of this view is medium to high. There are no formal viewpoints in this area and no national or regional designations which would otherwise denote a special value. The wider views do, however, look onto the Hoy and West Mainland NSA to the west and north and this raises the value.

6.13.77 The susceptibility of residents and road-users in this area is medium to high. The landform falls gently away from the east towards the coastal edge to the south-west, with the orientation of many of the properties following the natural south-westwards outlook towards Graemsay and the north of Hoy and fewer orientated towards the south of Hoy, where the site is located. Residents do, nonetheless, experience views from their garden grounds and access tracks. While the views of road-users will be transitory and typically shorter in duration than those of residents, the alignment of south-bound road-users will mean that their views are channelled towards the south-east, with the site located in this sector, albeit more towards the south.

6.13.78 The combination of the value of the view and the susceptibility of the visual receptors to the Proposed Development gives rise to an overall **medium to high** sensitivity.

Magnitude of change

6.13.79 During the operational phase, the magnitude of change will be **medium to low.** The Proposed Development will be located 12.74 km to the south of the viewpoint, set just over the ridgeline of the low moorland hills in the south of the island. The wireline in Figure 6.21d and photomontage in Figure 6.20e, show that all six turbines will be visible, albeit to varying degrees owing to the partial screening of the close-range intervening landform. Two will be visible as blades, two visible to just below their hubs and two with towers largely visible. They will be evenly spaced behind the ridgeline and form a relatively compact group.

6.13.80 The main factor contributing to the magnitude of change relates to the limited influence of large-scale development in the baseline view and the contrasting form and movement of the turbines apparent on the skyline. This will increase the variance in character introduced by the Proposed Development by making it appear disassociated from the largely undeveloped baseline character. This effect is moderated to some extent by the influence of ferries and boats passing through the sound, as well as the extent of small scale development along the coastal edge, both of which denote the settled nature of the Orkney Islands.

6.13.81 Those factors which further moderate the magnitude of change include the minimum separation distance of approximately 12.74 km, which means the Proposed Development will appear as a relatively small scale and distant feature in this view, as well as the location of the Proposed Development in the southern part of Hoy, which means that the more scenic rugged hills in the north will not be directly affected. Furthermore, the Proposed Development will be situated outwith the main draw of the views of residents, which is predominantly west and south-west and this will moderate its prominence and influence in views from Clestrain. The exception occurs in respect of south-bound road-users, where their views are broadly southwards and in which the Proposed Development will form more of a feature. The speed and transitory nature of the road-users combined with the separation distance will ensure that the magnitude of change is no greater than medium to low.

6.13.82 During the construction phase, the magnitude of change will be **medium to low**. While the majority of the ground level works will be screened by the close-range intervening landform, the structures of the emerging turbines and the tall cranes required for their construction will be visible on the distant ridgeline. Their distant location and the limited horizontal extents means they will occupy only a small proportion of the much wider view, in which more attractive features occur.

Significance of effect

6.13.83 The effect of the Proposed Development on views of residents and road-users in the Clestrain area will be not significant during both the construction and operational phases. This finding relates principally to the separation distance between the visual receptors and the Proposed Development, as well as the location of the Proposed Development in the lower-lying southern part of the island, separate from the higher hills to the north of the island, which will remain largely unaffected.

Significance of cumulative effect

6.13.84 The cumulative magnitude of change will be **low** and the cumulative effect on the views of residents and road-users in the Clestrain area will be not significant. This finding relates to the limited influence of the single operational turbines on West Hill, Flotta and Ore Brae, Hoy.

**Viewpoint 8: Dunnet Head**

Baseline

6.13.85 Dunnet Head is the most northerly point on the north coast of Mainland Scotland. Identified as part of the High Cliffs and Sheltered Bays LCT, this rocky headland sits out into the Pentland Firth, with Dunnet Head, defined by steep cliffs around a small coastal hill at 129 m AOD, which is marked on OS maps as a formal viewpoint. There is also a lighthouse situated on the northern point. Dunnet Head is accessed from the B855 and car parking, seating and interpretation boards reflect the importance of this location as a visitor attraction. The viewpoint is representative of the views of visitors to this location.

6.13.86 The principal draw of views from this location is northwards across the Pentland Firth. These views are broad and expansive, extending across open sea to the north-west and focussing on the Orkney Islands to the north-east. Hoy is the closest of the islands, seen at a minimum distance of approximately 18 km, while South Walls and South Ronaldsay are visible further to the east. Hoy is characterised by the high, red sandstone cliffs of the western coastal edge and the rugged hills and higher moorland hills seen set within the hinterland. In contrast, the moorland hills to the east are lower and less remarkable, with the landform seen to merge in with the low island profiles of South Walls and Flotta. Development on the Orkney Islands is not readily visible with the exception of the West Hill turbine which marks out Flotta and the small and distant Ore Brae turbine on Hoy, albeit barely discernible from this range.

6.13.87 On Mainland Scotland, while the high and rocky cliffs form a scenic feature around Dunnet Head, the surrounding farmland extends close to the coastal edge, creating an open and exposed landscape with a distinct absence of tree cover. Development is typically small-scale and rural, although with Forss Wind Farm readily visible on the coastal edge to the west and Baillie Hill Wind Farm set inland.

Sensitivity

6.13.88 The value of the view from Dunnet Head is high owing to its recognition as a formal viewpoint on OS maps and its importance as a visitor attraction. The scenic value of this coastal area is also reflected by its inclusion in the Duncansby Head SLA.

6.13.89 The susceptibility of visual receptors to the effects of the Proposed Development is medium to high. Visitors making the approximate 6 km journey from the A836, do so, largely to appreciate the views from the most northerly point on Mainland Scotland. The views are drawn northwards from the coastal edge and Hoy does form the closest feature, albeit set at a minimum distance of approximately 18 km.

6.13.90 The combination of the value of the view and the susceptibility of the visual receptors to the Proposed Development gives rise to an overall **high** sensitivity.

Magnitude of change

6.13.91 During the operational phase, the magnitude of change will be **medium to low**. The wireline in Figure 6.22e and the photomontage in Figure 6.22f show that all six of the proposed turbines will be visible, albeit to varying degrees, with the towers of four turbines mostly concealed by

intervening landform and the towers of the remaining two turbines only partly concealed. They will be located a minimum distance of 18.56 km from the viewpoint, such that they will be seen as small-scale features in views from Dunnet Head.

6.13.92 Those factors which contribute to the **medium** part of the magnitude of change rating, include the location of the Proposed Development on Hoy, which forms the key focal feature in views from Dunnet Head and therefore raises the relative prominence of the proposed turbines, detracting from the main features of the cliffs and high hills to a degree. The limited influence of other development and operational wind farms, especially in respect of the view towards Hoy, increases the variance that the Proposed Development will introduce relative to the baseline character of the view.

6.13.93 Those factors which contribute to the **low** part of the magnitude of change rating, include the notable separation distance and the small number of turbines, which will ensure the Proposed Development appears as a compact and well contained, small-scale feature. Furthermore, its location, offset from the main feature of the Hoy cliffs and high hills, means that there will be no direct effects on these more scenic parts and the effects will be associated with the less prominent lower hills, seen to the east in this view.

6.13.94 During the construction phase, the magnitude of change will be **low**. The majority of the construction works will be screened by the intervening landform, such that it will only be the presence and activity of the cranes, and the emerging turbines, mostly only from the hubs up, that will be visible. While these tall vertical structures will appear at variance with the largely undeveloped character of the view, their relatively small scale, combined with the presence of some other turbines in the view and wider view, will moderate the overall effect.

Significance of effect

6.13.95 The effect of the Proposed Development on visitors to Dunnet Head will be not significant. This finding relates principally to the separation distance of approximately 18.56 km between the visual receptors and the Proposed Development, as well as the limited extent to which the Proposed Development will be visible.

Significance of cumulative effect

6.13.96 The cumulative magnitude of change on visitors to the viewpoint will be **low** and the cumulative effect will be not significant. This finding reflects the limited cumulative influence from the Proposed Development and other cumulative wind farms owing to their distance from this viewpoint.

**Viewpoint 9: Duncansby Head**

Baseline

6.13.97 While Dunnet Head forms the most northerly point on Mainland Scotland, Duncansby Head forms the most north-easterly point, located approximately 2 km east of the small village of John O' Groats. As Land's End and John O' Groats are widely regarded as the two most distant points on the Island of Great Britain, John O' Groats attracts a large number of visitors. It also forms a key staging post on the North Coast 500 route, which has become increasingly popular with cyclists and other road-users. Many visitors travel on to Duncansby Head, making this the end point on their route. The viewpoint has been included to represent the views of visitors to this popular attraction.

6.13.98 Similar to Dunnet Head, Duncansby Head comprises a rocky headland with a lighthouse on the tip and a small coastal hill (63 m AOD) which is marked on OS maps as a formal viewpoint. It does differ in that views are not just northwards over the Pentland Firth, but also open up eastwards across the North Sea, with views south-west including attractive stacks and the Beatrice offshore wind farm beyond. As the Orkney Islands are the only substantial islands in views from Duncansby Head, they form the key feature. South Ronaldsay is the closest island, visible to the east, with the Mainland of Orkney in the centre and Hoy and Flotta visible to the west.

6.13.99 Hoy is recognisable by its steep cliffs on the western side. The effect of the high hills of Hoy is, however, reduced from this distant and southerly aspect, with the lower moorland hills to the south of the island forming the key characterising feature. While there is little visible evidence of

development on the islands from this distant range, the West Hill turbine on Flotta is visible in clear conditions and occasionally ferries and other boats can be seen passing over the Pentland Firth. On Mainland Scotland, visibility of operational wind farms is limited to a small number of the Stroupster turbines to the south-west.

Sensitivity

6.13.100 The value of the view from Duncansby Head is high owing to its recognition as a formal viewpoint on OS maps and its importance as a visitor attraction. The scenic value of this coastal area is also reflected by its inclusion in the Duncansby Head SLA.

6.13.101 The susceptibility of visual receptors to the effects of the Proposed Development is medium. Visitors making the approximate 2 km journey from John O' Groats, do so, largely to appreciate the views from the most north-easterly point on Mainland Scotland. The views are not, however, so closely associated with Hoy as they are from Dunnet Head, with views drawn more towards the closer island and cliffs of South Ronaldsay, set at a minimum distance of approximately 10 km. There are also more artefacts in the foreground, including the lighthouse and associated car park, which detract from the wider view.

6.13.102 The combination of the value of the view and the susceptibility of the visual receptors to the Proposed Development gives rise to an overall **medium to high** sensitivity.

Magnitude of change

6.13.103 During operation, the magnitude of change will be **low**. The wireline in Figure 6.23c shows that all six turbines will be visible, with four seen practically to full extents, and two with towers partially concealed. They will be seen from a distance of approximately 23.66 km, such that they will appear as relatively small scale and distant features and occupy only a small proportion of the much wider view available from this viewpoint. The Proposed Development will, nonetheless, detract from the skyline of Hoy.

6.13.104 Despite the very limited influence of operational wind turbines on this view, the effect of adding the Proposed Development will be limited by its substantial separation distance from the viewpoint as well as the other following factors. Firstly, the Proposed Development will comprise a small number of turbines that will form a compact group and appear contained within a distinct landform area. Secondly, the prominence of the turbines will be further reduced by the back clothing provided by the upland hinterland, and generally avoids turbines notably breaching the sensitive skyline. Thirdly, the scenic qualities of Hoy are moderated by the distance and direction of the view, and the Proposed Development appears associated with the less dramatic lower moorland hills to the south.

6.13.105 During construction, the magnitude of change will be **low**. This reflects the substantial separation distance of the viewpoint from the site which will make many of the smaller scale construction works not readily visible. While the presence and activity of the tall cranes and construction of emerging turbines will be visible in clear conditions, their relatively small scale and the back clothing provided by the hills will reduce their prominence, especially in respect of the much wider available views.

Significance of effect

6.13.106 The effect of the Proposed Development on visitors to Duncansby Head will be not significant. This finding relates principally to the separation distance of approximately 23.66 km between the visual receptors and the Proposed Development, as well as position of the small group of proposed turbines largely below the upland skyline of Hoy.

Significance of cumulative effect

6.13.107 The cumulative magnitude of change on visitors to the viewpoint will be **low** and the cumulative effect will be not significant. This finding reflects the limited cumulative influence from the Proposed Development and other cumulative wind farms owing to their distance from this viewpoint.

**Viewpoint 10: Ward Hill**

Baseline

6.13.108 At 479 m AOD, Ward Hill is the highest hill on Hoy and the highest hill on the Orkney Islands. It is situated in the north-east of Hoy in an upland landscape classified as Rugged Hills LCT. Ward Hill has a distinctive profile with steep sides and a rounded top. It is well defined within its seascape and landscape context owing to the contrast with the low-lying coastal edge to the north-east, the U-shaped valley which wraps around the eastern and southern sides, and the Glens of Kinnaird which separate Ward Hill from Cuilags (433 m AOD) from the north-west to south-west. Ward Hill forms a dramatic landform feature in the iconic skyline of Hoy, especially when viewed from the islands to the east, and the Mainland of Orkney to the north-east.

6.13.109 This viewpoint is representative of the views of walkers on this hill. Ward Hill can be accessed from any aspect, although all routes ascend very steep slopes and with routes from the north-east ascending over rocky crags. The broad ridgeline, which caps the steep slopes, curves round to enclose a broad convex bowl below. From the summit, expansive views extend in all directions, northwards towards the Mainland of Orkney, eastwards across Scapa Flow, westwards across the western part of the Rugged Hills LCT and southwards across the Moorland Hills LCT.

6.13.110 The view towards the site is orientated south across the Moorland Hills LCT, which forms the core of the island. This area is characterised by relatively low and smoothly rounded hills, which, together with the blanket covering of moorland grasses and heather, forms an expansive and open upland landscape. There is a distinct absence of development in this landscape, which adds to its sense of remoteness.

Sensitivity

6.13.111 The value of this view is high. The viewpoint is located in the Hoy and West Mainland NSA and although not marked on OS maps as a formal viewpoint, the summit of Ward Hill provides a natural viewpoint.

6.13.112 The susceptibility of walkers on Ward Hill is medium. There are no paths or sign posts and the route does not lead to any other visitor attractions. Ward Hill presents a steep ascent, and while this will deter many walkers from attempting this hill climb, for those that do, an appreciation of the panoramic views from the summit will be part of the incentive. Walkers can often be more aware than other visual receptors of their surroundings and often take time to enjoy the views. The susceptibility of walkers is, however, moderated by the fact that the site lies more than 9 km from the viewpoint and within a contained horizontal extent of a much wider view, with other more scenic sectors. Furthermore, there is already the influence of other developments in this view with rigs, tankers and ferries often visible in Scapa Flow.

6.13.113 The combination of the value of the view and the susceptibility of walkers to the Proposed Development gives rise to an overall **high** sensitivity.

Magnitude of change

6.13.114 During operation, the magnitude of change to the views of walkers will be **medium**. The Proposed Development will be located a minimum distance of 9.66 km to the closest turbine. As the wireline in Figure 6.24 shows, all six of the proposed turbines will be visible, seen set in the lower moorland hills on the eastern side of the island. The intervening landform will reduce the extent to which the turbines will be visible, with the bases of Turbine 1 and Turbine 6 being screened, the towers of Turbines 2, 3 and 5 being mostly screened and Turbine 4 visible only as a blade.

6.13.115 As the photomontage in Figure 6.24g shows, the prominence and influence of these turbines will be moderated by their distance from the viewpoint, such that they will appear as relatively small scale features, occupying a very small proportion of a much more expansive and panoramic view. The experience of walkers, whereby they enjoy views over to the north coast of Mainland Scotland, over Scapa Flow to the Mainland of Orkney, Burray and South Ronaldsay and over the western coast and core of Hoy, will remain unaffected.

6.13.116 The fact that the proposed turbines will be seen set in the lower and less remarkable hills below Ward Hill, which also mark the less scenic southern end of the island, will reduce their prominence and influence on the character of the view. Furthermore, they will be seen in a sector of the view where the Flotta Oil terminal flare and nearby single turbine are visible, while in the wider view the rigs, tankers and ferries in Scapa Flow will also moderate the effect.

6.13.117 During construction, the magnitude of change will also be **medium** for walkers. This assessment reflects the extent to which the site and many of the construction processes will be screened by the intervening landform. The emerging turbines and the tall cranes used to construct them will, however, be visible above the ridgeline, although their influence on views will be moderated by their distance from this viewpoint, which will ensure they feature as relatively small scale components. The presence of other developments in the wider view as well as the frequent passage of large ships, ferries and cruise liners on the water.

Significance of effect

6.13.118 The effect of the Proposed Development on the views of walkers during construction and operation will be **significant**. This assessment relates chiefly to the sensitivity of walkers on Ward Hill and the largely undeveloped context in which the proposed turbines will be seen.

Significance of cumulative effect

6.13.119 The cumulative effect on the views of walkers on Ward Hill will be **low** and the cumulative effect will be **not significant**. This finding relates to the limited influence of the single operational turbines on West Hill, Flotta and Ore Brae, Hoy, and the more distant operational wind farms on Mainland Scotland.

**Viewpoint 11: Lyness Naval Cemetery**

Baseline

6.13.120 This viewpoint is located at the entrance into Lyness Naval Cemetery which sits on the lower eastern hill slopes of Wee Fea to the west of Lyness. The Naval Cemetery served the Scapa Flow Base at Lyness and was opened in 1915 and closed in 1946. It contains 445 graves of British Empire and Commonwealth Servicemen from the First World War and 200 graves from the Second World War. It is Category B listed, the key features being the pavilions, war memorial and boundary wall, as well as the graves and 'Cross of Sacrifice'. The value of this location relates to its importance in respect of the history of both world wars. The viewpoint is representative of the views of visitors to the cemetery, which is situated a short drive from the ferry terminal and adjacent to the B9048. The cemetery presents a convenient attraction for visitors, with provision for parking.

6.13.121 The cemetery is located on the lower slopes of Wee Fea (173 m AOD) landform above the small settlement of Lyness. The fall of the slope, from the south-west to the north-east, means that views open up across the coastal edge, with the Mainland of Orkney visible in the background. Views to the south-east and south are largely contained by a slight rise in landform with disused buildings and a pole mounted transmission line forming features along the enclosing ridgeline. The rising landform of Wee Fea marks the southern extent of the moorland hills which extend north into the core of the island. A broad band of mostly coniferous trees, forms an uncharacteristic feature, running up the hillslope of these otherwise open and exposed hills.

6.13.122 Amidst the muted tones and rough textures of the moorland landcover, the bright green and well maintained grass of the Lyness Naval Cemetery stands out in stark contrast. Enclosed by a low, stone wall with trees and bushes stunted and moulded by the coastal winds, the 'Cross of Sacrifice' forms the central feature, with two small pavilions on either side and rows of small, stone gravestones, spaced evenly across the grassed surface. The main axis from the entrance gate follows a geometric alignment towards the south-south-west, with the cross axis running west-north-west to east-south-east.

Sensitivity

6.13.123 The value of this view is medium to high. While there are no formal viewpoints in this area and no regional or national designations which would otherwise denote a special value, the historical and cultural importance of the cemetery adds to the value of views from within it.

6.13.124 The susceptibility of cemetery visitors to the Proposed Development is medium to high. While the focus of visitors' attention is the cemetery, the setting of the cemetery is also important as it has an influence on the overall experience. An essential characteristic of the cemetery's design is the stark contrast it presents with its surroundings, with its intensively modified and neatly set out gardenesque style. While the surrounding landscape is less modified, there are still a number of modifications which prevent it from appearing natural and mark out the influence of human interventions, for example, the forestry belt, the pole-mounted transmission line, a single turbine and the used and disused buildings. The site of the Proposed Development is also in close proximity to the viewpoint and there is a strong relationship between the two locations.

6.13.125 The combination of the value of the view and the susceptibility of visitors to the effects of the Proposed Development gives rise to an overall **medium to high** sensitivity.

Magnitude of change

6.13.126 During operation, the magnitude of change on the views of visitors will be **high**. The Proposed Development will be located a minimum distance of 1.18 km from the viewpoint. As the wireline in Figure 6.25f shows, all six of the proposed turbines will be visible. Turbine 1 will be the most prominent, seen to its full extent and set on Wee Fea to the west-south-west of the viewpoint. Turbine 6 will be seen just over the top of the hill, such that only the base of its tower will be screened. Turbine 2 will also be seen almost to its full extents, albeit with the tower partly concealed by the intervening forestry. Turbines 3 and 5 will only be visible as blades and Turbine 4 as a tip.

6.13.127 Despite three of the six turbines being largely concealed behind intervening landform or tree cover, and the limited horizontal extent of this small group of turbines, the magnitude of change will still be high. This finding relates to the proximity and prominence of the closest turbines as well as their form and movement, which contrast with the baseline view. At 1.18 km, Turbine 1 will be seen as an especially close range and large scale feature and its influence will be increased by its location on top of Wee Fea and scale comparisons with the Naval Headquarters building and trees in the foreground. The turbines will alter the setting to the cemetery by introducing a new focal feature that will draw the attention of visitors away from the cemetery itself.

6.13.128 During construction, the magnitude of change will be **high**. While much of the ground level construction works will be screened by intervening landform and tree cover, infrastructure works associated with Turbine 1 will be readily visible, along with sections of the access track leading up to it. Furthermore, the presence and activity of tall cranes on the site, combined with the emergence of the turbines as they are constructed, will form a close-range and large-scale feature. The construction of the wind farm would appear at variance with the scale and character of the hills and will create a new focus within the setting of the cemetery. There would also be an effect owing to the movement of construction traffic on the hillside track to the south and south-west of the cemetery.

Significance of effect

6.13.129 The effect of the Proposed Development on the views of visitors to the cemetery will be **significant**. This finding relates to the combination of the sensitivity of visual receptors at this location, the close proximity of the Proposed Development and the prominence of the closest turbines.

Significance of cumulative effect

6.13.130 The cumulative magnitude of change will be **low** and the cumulative effect on the views of visitors to the Lyness Naval Cemetery will be **not significant**. This finding relates to the limited influence of the single operational turbines on West Hill, Flotta and Ore Brae, Hoy.

**Viewpoint 12: North Walls School, south of Lyness**

Baseline

6.13.1 This viewpoint is located on the B9047, adjacent to North Walls Primary School and approximately 1.7 km south of Lyness. The school is situated in a rural location, characterised by surrounding fields of semi-improved grazing, with only a small cluster of rural properties to the north. The viewpoint is situated on an elevated section of the B9047 with the level of the road falling away to the north and south. From here, the view opens up towards the moorland hills to the west. The viewpoint is representative of the views of pupils, staff and visitors at the school, residents of rural dwellings in the area and road-users on the B9047.

6.13.2 The viewpoint marks a transition in character, changing both from east to west and north to south. To the east, the coastal landscape is defined as Inclined Coastal Pasture LCT, comprising fields of mostly improved pasture but also some crops. To the west, this transitions into Moorland Hills LCT, with the landform rising and the landcover changing to rough moorland grasses and heather. There is no settlement or other development in this upland landscape, with the exception of the Former Naval Headquarters and Ore Brae single turbine to the north-west and the mast on Bing Fea (156 m) to the east.

6.13.3 From north to south, the landscape transitions from the low-lying coastal edge around Lyness, over the intervening hill, to the low-lying coastal edge around North Bay. The natural outlook from the elevated landform, where the viewpoint is located, is drawn south across the narrow band of water towards South Walls. This is marked by the principal orientation of the school being in this direction. In contrast, the moorland hills to the west and north-west, provide more of an upland setting to this location, rather than the key focus of views.

Sensitivity

6.13.4 The value of this view is medium. There are no formal viewpoints in this area and it is not covered by any regional or national landscape designations, which would otherwise denote a special value. While distant parts of the view are covered by the Hoy and West Mainland designation, the majority of the view is undesignated.

6.13.5 The susceptibility of school-users and residents in this area is high. Although the principal outlook of the school is south-south-west, with many of the nearby properties sharing a similar outlook, there is a possibility that oblique views may occur from the north-north-west side aspect, although the site lies more to the north-west. There will, however, be open views from the open space associated with the school and this is the same for the garden grounds and access tracks of the nearby properties. The susceptibility is increased by the duration of the views, which for school-users and residents, is typically for longer periods in the day.

6.13.6 In terms of road-users, their susceptibility to the Proposed Development is **medium to high**. The north-south alignment of this section of the road, means that views to the north-west are oblique to the direction of travel, albeit less so for north-bound compared to south-bound road-users, and the openness of the landscape means that views of road-users are also open. The susceptibility of road-users is, however, moderated by the transitory and short-lived nature of their views.

6.13.7 The combination of the value of the view and the susceptibility of school-users, residents and road-users to the Proposed Development gives rise to an overall **medium to high** sensitivity.

Magnitude of change

6.13.8 During operation, the magnitude of change on the views of school-users, residents and road-users will be **high.** The Proposed Development will be located a minimum distance of 2.25 km to the north-west of the viewpoint. As the photomontage in Figure 6.26g shows, all six of the proposed turbines will be visible, along with the tracks, hard-standings and permanent met mast. They will be seen set on the hill slopes of Wee Fea and all seen to practically their full height. From this relatively close range, the turbines will appear large in scale and their modern appearance and movement will appear at variance with the rural character of the farmland in the foreground and moorland in the middle ground.

6.13.9 The views of school-users and residents will be notably altered by the presence of the Proposed Development. Although they may not experience direct views from their internal working and living spaces, oblique views of the proposed turbines may occur and, more notably, the turbines will be readily visible from associated outdoor spaces and access ways around properties. North-bound road-users on the B9047 will experience oblique views of the proposed turbines, which will appear as prominent structures on Wee Fea. The existing presence of the Ore Brae turbine establishes turbines as a baseline feature in this view, and despite its much smaller size, its closer proximity to the viewpoint means it appears to be of a similar scale to the proposed turbines. The Proposed Development will form a new and defining focus in this area.

6.13.10 During construction, the magnitude of change will also be **high**. This assessment reflects the extent to which the site and many of the construction processes will be exposed in views from the B9047, nearby school and surrounding residential properties. The emerging turbines and the tall cranes used to construct them will form relatively close and especially prominent features that will change the local character of this area. The openness of the hill side, means that the construction of the access track, including sections built up with embankments, and the construction of hard-standings, including areas of cut into the hill side, will be readily visible and add to the overall effect.

Significance of effect

6.13.11 The effect of the Proposed Development on the views of school-users, residents and road-users will be **significant**. This takes into account the relatively close proximity of this viewpoint to the Proposed Development and the sensitivity of the visual receptors in this area.

Significance of cumulative effect

6.13.12 The cumulative effect on the views of school users, residents and road-users in the North Walls area will be **not significant.** While the solus effect of the Proposed Development will give rise to a significant effect, as assessed above, the influence of the Ore Brae single turbine on the cumulative situation is so limited, that in conjunction with the Proposed Development, the cumulative magnitude of change will be **low** and the cumulative effect will be **not significant**.

**Viewpoint 13: Bakingstone Hill**

Baseline

6.13.1 This viewpoint is located at the summit of Bakingstone Hill (152 m AOD) which is a low hill approximately 3 km to the south-west of Wee Fea (173 m AOD), where the site is located. Bakingstone Hill occupies the south-west corner of the Hoy WLA. It is reached via a track off the B9047, which accesses the mast on Binga Fea and the reservoir at Heldale Water, from which a further 2 km walk over deep vegetation takes walkers to the summit. The viewpoint is representative of walkers on this hill, although the assessor has seen no other walkers on this hill and there is little evidence that walkers frequent this hill.

6.13.2 Bakingstone Hill is a low and shallow hill, with broadly spaced contours on every aspect apart from to the south, where slightly steeper slopes fall towards Heldale Water before rising on the opposite side to form similarly low enclosing hills. The summit of Bakingstone Hill is broad and gently rounded. The western coastal edge, which lies less than 2 km to the west, is visible from this viewpoint, with glimpsed views of cliff tops seen beyond the moorland hills. To the north, the landform gradually rises to form a series of higher moorland hills, within which, human influences are not readily evident. To the east, the view is channelled along the valley of the Burn of Ore, toward the eastern coastal edge of Hoy, where the Ore Brae and West Hill single turbines form more visible markers of human influence.

6.13.3 The view looks north-east towards Wee Fea (173 m AOD), where the site is located. The hills are characterised by the low and gently undulating landform and its dark-coloured, blanket covering of heather moorland and grasses. Together, these components form a simple and open landscape, of low and broadly undulating hills which surround the viewpoint. In addition to the turbines and mast, other developments readily visible include the pumping station on the south shore of Heldale Water and associated track and car park, and the large sheds set on the south-eastern flank of Binga Fea.

Sensitivity

6.13.4 The value of this view is medium to high. While there are no formal viewpoints in this area and no regional or national landscape designations which would otherwise denote a special value, the viewpoint and much of the view are covered by the Mapped Interest of Hoy WLA (41).

6.13.5 The susceptibility of walkers on Bakingstone Hill is medium to high. The susceptibility of walkers is generally increased by the largely undeveloped nature of the landscape, the greater awareness of walkers of their surroundings and their appreciation of open and longer-lasting views. In respect of walkers on Bakingstone Hill, their susceptibility is moderated by readily evident human influences, including the Binga Fea mast, the Ore Brae and West Hill single turbines, the reservoir and associated buildings and the access track.

6.13.6 The combination of the value of the view and the susceptibility of walkers to the Proposed Development gives rise to an overall **medium to high** sensitivity.

Magnitude of change

6.13.7 During operation, the magnitude of change on the views of walkers will be **high**. The Proposed Development will be located a minimum distance of 2.65 km to the north-east of the viewpoint. As the wireline in Figure 6.27f and photomontage in Figure 6.28g show, all six of the proposed turbines will be visible, seen practically to their full extents. While T2 and T4 are seen to overlap from this particular viewpoint, the proposed turbines appear generally to be evenly spaced.

6.13.8 The **high** part of the magnitude of change rating relates to the large scale and movement of the development, its relative proximity to the viewpoint and the variance in character it will introduce relative to the largely undeveloped open moorland landscape which surround the viewpoint. The proposed turbines will appear large in scale in comparison to the scale of the hill and the movement of the blades will introduce a dynamic element into a relatively undynamic landscape.

6.13.9 The **medium** part of the magnitude of change rating relates to the small number of turbines proposed and the compact group they form, which means they occupy only a small proportion of a much wider view. Furthermore, they occupy the sector of the view in which development, including single turbines, a mast and an oil terminal, already have a limited influence, and do not directly affect those sectors where there is an absence of human influences. From the perspective of this viewpoint, the turbines are seen set on the southern slopes of Wee Fea and into the Burn of Ore valley, such that they appear relatively well contained by landform and avoid the more prominent locations on the higher moorland hills to the north.

6.13.10 During construction, the magnitude of change on the views of walkers will be **high**. This viewpoint provides an elevated perspective into the site, from which most of the ground level construction works of the access tracks and turbines will be readily visible, although the intervening ridgeline will conceal the construction compound and ground level works around T1. A key feature will be the construction of the turbines using tall cranes. The scale of these emerging structures and the activity associated with their construction will form a prominent feature from Bakingstone Hill.

Significance of effect

6.13.11 The effect of the Proposed Development on the views of walkers on Bakingstone Hill will be **significant**. This finding relates principally to the proximity of the viewpoint to the Proposed Development, despite the influence from other human artefacts and modern land-uses in this area.

Significance of cumulative effect

6.13.12 The cumulative effect on the views of walkers on Bakingstone Hill will be **not significant.** While the solus effect of the Proposed Development will give rise to a significant effect, as assessed above, the influence of the Ore Brae and West Hill single turbines on the cumulative situation is so limited that in conjunction with the Proposed Development the cumulative magnitude of change will be **low** and the cumulative effect will be not significant**.**

**Viewpoint 14: Houton to Lyness Ferry**

6.13.13 This viewpoint is located on the Houton to Lyness ferry as it crosses the Bring Deeps and Gutter Sound. The viewpoint is representative of the views of passengers on the ferry and will be similar to views obtained by people on other vessels passing alongside the eastern coast of Hoy. While some passengers stay in their cars, from where there are no views, or the passenger lounge, from where there are limited views, some venture onto the upper side-decks to experience the open views east across Scapa Flow and west across Hoy. The crossing takes approximately 40 minutes and with six crossings on weekdays and four on Saturdays, this ensures Hoy is fairly well connected to the Mainland of Orkney. The ferry also connects Houton and Lyness with Flotta, and with Longhope as the first and last port of call each day.

6.13.14 Views from the ferry are characterised by the combination of the surrounding seascape and enclosing landscape beyond. Despite the openness of the sea, land encloses every sector of the view, such that the sea is seldom seen to extend all the way to the horizon. Scapa Flow is enclosed by the Mainland of Orkney to the north and north-east, Burray to the east, South Ronaldsay to the south-east, Flotta and Fara to the south-west and Hoy to the west. Most visible from the ferry are the small islands of Cava, Rysa Little and Fara, between which the ferry route weaves, and the larger island of Hoy, which is situated to the west. Cava and Rysa Little are low-lying, uninhabited holms, with rocky coastal edges and abandoned crofts, amidst a mix of moorland and remnant fields.

6.13.15 The main attraction for passengers on the ferry is Hoy. The north-west to south-east alignment of the island means that the more dramatic rugged hills in the north are not so prominent and it is the lower moorland hills that characterise the views to the island. The smoothly rounded profiles of the hills merge to form an upland mass, with the dark and muted hues of the moorland landcover contrasting with the greens of the cultivated coastal edge. Development is not readily evident in the core of these hills, while to the south, the mast on Binga Fea and the single Ore Brae turbine are partly visible, along with small scale development associated with Lyness and its historic role as a naval base, including the prominent Naval Headquarter's on the eastern flank of Wee Fea. While the Flotta Oil Terminal is visible from the more distant northern sections of the route, from the viewpoint it is concealed by intervening islands and it is only the West Hill turbine and flare stack that are readily visible.

Sensitivity

6.13.16 The value of the view is medium. There are no formal viewpoints and the Gutter Sound is not covered by any national or regional scenic designations. While the Hoy and West Mainland NSA is visible in views to the north and north-west, it does not cover the central and southern hills of Hoy, relevant to this viewpoint.

6.13.17 The susceptibility of passengers on the ferry is medium to high. This relates to the experience of passengers, many of whom will have a heightened awareness of their surroundings owing to the openness and availability of panoramic views from the ferry, potentially experienced for a sustained period of time over a relatively short duration. While the undeveloped moorland hills set the character for much of Hoy, evidence of development in the form of rigs, tankers and ferries in Scapa Flow, and small scale single turbines, masts, and rural development along coastal edges, prevent the susceptibility of passengers from being high, as development is seen as an established part of the baseline view and the ferry is transient.

6.13.18 The combination of the value of the view and the susceptibility of viewers leads to an overall **medium to high** rating for sensitivity.

Magnitude of change

6.13.19 During operation, the magnitude of change will be **medium to high**. The wireline in Figure 6.28e shows that all six turbines will be visible, albeit to variable extents, with T1 and T6 seen to almost full extents, the tower of T2 partially concealed and the tower of T5 fully concealed and then T3 and T4 seen as a blades. They will be seen from a minimum distance of approximately 3.48 km at a point out in Gutter Sound to the north-east of the Proposed Development. The proposed turbines will be at their most apparent from where the ferry passes into, or out of, Lyness, travelling to or from Houton, Flotta or Longhope. As shown on the photomontage in Figure 6.28f it is also possible to see

the substation and compound as well as access tracks within this view. It sits at a similar elevation on the hill side to the Former Naval Headquarters, which is more visible due to its skyline location.

6.13.20 The exposed nature of the Hoy coast and hinterland, in combination with the strong vertical form and movement of the proposed turbines, ensures that the Proposed Development will form a prominent feature on the skyline. The openness and simplicity of the seascape mean that there will be a fore-shortening effect whereby the proposed turbines may appear closer than they actually are and the presence of the smaller scale single turbine and rural dwellings on the same shore will serve to accentuate the larger scale of the proposed turbines.

6.13.21 The magnitude of change is moderated slightly by the presence of existing development evident in this area, albeit relatively dispersed, lower-lying and notably smaller in scale than the Proposed Development. In addition to the small-scale development associated with Lyness, the Ore Brae turbine is visible on the coastal edge and a blade of the West Hill turbine visible on Flotta. This coastline lacks any sense of remoteness or wildness which would otherwise increase the magnitude of change.

6.13.22 During construction, the magnitude of change will be **medium to high**. This reflects the visual draw that the presence of the emerging turbines and the tall cranes used in their construction will have on ferry passengers. The prominence of the site will be accentuated by the openness of the water and clear views of the turbines, with construction being apparent from the closer range sections of the ferry route.

Significance of effect

6.13.23 The effect of the Proposed Development on the views of ferry passengers will be significant during the construction and operational phases. This assessment relates chiefly to the prominence of Wee Fea upon which the turbines will be located, in views from the ferries approaching and leaving Lyness ferry terminal, and which will ensure that the Proposed Development will form a focal feature in the views of passengers.

6.13.24 The effect of the Proposed Development on the full route is assessed under Principal Visual Receptors below, where the assessment concludes that a significant effect would occur between Cava and Lyness but not between Houton and Cava.

Significance of cumulative effect

6.13.25 The cumulative effect on the views of passengers on ferries approaching and leaving Lyness ferry terminal will be **not significant**. While the solus effect of the Proposed Development will give rise to a significant effect, as assessed above, the influence of the single turbines at West Hill and Ore Brae on the cumulative situation is so limited that in conjunction with the Proposed Development the cumulative magnitude of change will be **low** and the effect not significant.

**Viewpoint 15: Burray, A961**

Baseline

6.13.26 The A961 is the main road that connects the south coast of South Ronaldsay, via Burray, to the Mainland of Orkney, at Kirkwall. This viewpoint is situated on the northbound side of the A961, where it follows south-west to north-east alignment through the north of Burray. It is marked by a layby at a localised high point (37 m AOD) and from where views open up between the north-west and south-west. While views to the east are less expansive owing to the rising landform, views to the north and south extend across the islands to Holm Sound. The viewpoint is representative of the views of stationary road-users at the layby and transitory road-users on the A961.

6.13.27 The view is characterised by the variable arrangement of indented coastlines and islands which form a visually interesting integration between land and sea. This is especially true in the view to the north, where the A961 is seen to cross a causeway to Glimps Holm with East Mainland beyond and to the south-west, where the view extends over the western peninsula of Burray to the Holm of Hunda. The land cover appears less exceptional than the landform, with fields of semi-improved grasslands, enclosed by post and wire fences, creating an open landscape in which the key features are the dispersed farmsteads and other rural properties. Clusters of farm sheds, occasional single

turbines, the transmission line and the main road denote the modified nature of this rural landscape.

6.13.28 The alignment of the layby means views open naturally across Scapa Flow towards the north-west and the Mainland of Orkney. Rigs are often located here and ferries, as well as tankers, and other vessels can be seen crossing the waters. In clear conditions. Despite its location at 18.94 km from the viewpoint, Hoy is seen as a readily visible feature. It is seen to the west and south-west, across the open water of Scapa Flow and is recognisable by its distinct upland profile. The high Rugged Hills LCT occurs in the north, the Moorland Hills LCT in the middle, with the elevation of hills decreasing to the south. While the separation distance reduces the discernibility of detail on Hoy, especially in poor visibility, development, including the West Hill turbine on Flotta and mast on Binga Fea, are readily visible in fair to good visibility, albeit as distant and small scale features.

Sensitivity

6.13.29 The value of this view is medium. There are no national or regional landscape designations which would otherwise denote a special scenic value at the viewpoint. The north of Hoy and parts of the distant West Mainland are designated as an NSA, while the majority of the view is undesignated.

6.13.30 The susceptibility of stationary road-users at this layby is medium to high, while the susceptibility of transitionary road-users on the A961 is medium. While the speed of road-users on this 60 mph section of road, moderates the susceptibility of transitory road-users, the alignment of this local section towards the south-west, places the Proposed Development in the forward views of south-bound road-users and this adds to their susceptibility. In contrast, the views of stationary road-users can be more focussed and for a longer duration, and although the main orientation of the views from the layby is north-west, an open view also occurs towards the Proposed Development on Hoy to the south-west.

6.13.31 The combination of the value of the view and the susceptibility of stationary road-users to the Proposed Development gives rise to an overall **medium to high** sensitivity, while the sensitivity of transitory road-users is **medium**.

Magnitude of change

6.13.32 During operation, the magnitude of change on the views of road-users will be **medium to low**. The viewpoint will be located a minimum distance of 18.94 km from the closest turbine. As the wireline in Figure 6.29f and photomontage in Figure 6.29g, show, all six of the proposed turbines will be visible. They will be seen set in the lower moorland hills to the south of the island, albeit close enough to the coastal edge to be fully visible in views from the east. Despite their distance, the scale of the turbines will appear slightly larger than the West Hill turbine and in comparison with the scale of the hills upon which they sit.

6.13.33 As the photomontage in Figure 6.29g shows, the prominence and influence of these turbines will be moderated principally by the minimum separation distance of 18.94 km from the viewpoint. This means they will appear as relatively distant and small-scale features, occupying only a small proportion of the wider view in a layout that appears compact and well-contained within a defined section of the landform. Their association with the smaller hills at the southern end of the island means that they will not directly affect the views to the more dramatic hills in the north. The landform of Burray and Hunda, present in the fore to middle ground of this sector of the view, prevent the distinct appearance of the island of Hoy as a whole, and these closer range landforms interrupt and reduce the prominence of the southern part of the island. The proposed turbines will, nonetheless, be readily visible and seen set against the skyline, albeit outwith the main draw of the view which will continue to be west across Scapa Flow to the northern high hills of Hoy and north to Glimps Holm and the Mainland of Orkney.

6.13.34 During construction, the magnitude of change will be **low**. While the emerging turbines and the tall cranes used to construct them will be readily visible in clear conditions, their influence on views from the A961 viewpoint will be moderated by their distant location and the presence of other development, most notably other single turbines and the rigs that are intermittently present in Scapa Flow.

Significance of effect

6.13.35 The effect of the Proposed Development on the views of stationary and transitory road-users during construction and operation will be not significant. This finding relates principally to the separation distance between the viewpoint and the Proposed Development, the location of the Proposed Development on the less prominent southern end of the island and the main draw of views from this layby to the west, north-west and north.

Significance of cumulative effect

6.13.36 The cumulative magnitude of change will be **low** and the cumulative effect on the views of stationary and transitory road-users will be not significant. This finding relates to the limited influence of the single operational turbines on West Hill, Flotta and at Ore Brae, Hoy.

**Viewpoint 16: Withi Gill**

Baseline

6.13.37 This viewpoint is located in the core of the Hoy WLA, set between North Dale to the north-east and West Dale to the south-east, on a low hill named as Withi Gill (359 m AOD). This viewpoint lies approximately 2 km to the south-east of Viewpoint 1: Knap of Trowieglen. The viewpoint has been selected to represent North Dale and West Dale, which were recommended as viewpoints by SNH. It provides a more elevated location from which a fuller extent of the Proposed Development will be visible and from a more remote and wild part of the WLA than North Dale and West Dale, which are both valley landscapes.

6.13.38 Withi Gill lies approximately 4 km from the west coast and 5 km from the east coast. It is accessed from the east coast, from where the B9047 crosses Pegal Burn, next to Pegal Bay and where a picnic spot and limited parking is provided by the road-side. In the absence of any paths or signs, and in the presence of deep vegetation, the walk into the core of the moorland hills is long and challenging. Although this area is limited in extent, there is a sense of remoteness which increases with distance from the settled east coast, and movement towards the unsettled west coast. The orientation of the landform is broadly west-east, with the burns running off the moorland hills towards the eastern seaboard and the intermediate ridges falling gradually in height.

6.13.39 The view is characterised by the moorland hills which surround the viewpoint. They form a simple landscape of smoothly rounded hills, coloured a dark hue by the blanket covering of heather moorland. They are largely featureless, apart from the small groups of upland lochans or the incised courses of burns. To the south, the moorland hills roll on, getting gradually lower in height. To the west, the sea can be seen either side of the Red Hill of Sneuk although the western coastal edge is screened by the intervening landform. To the north, the dominant feature is the broad and rounded mass of the Knap of Trowieglen, with the steeper and more dramatic profile of Ward Hill seen in the distance beyond. To the north-east, the settled and cultivated landscapes of the Mainland of Orkney are evident, with the view extending around to the east to capture the islands of Burray and Ronaldsay. Larger scale development is also often evident in the form of rigs in Scapa Flow. To the south-east, lower moorland hills mark the transition to the eastern coastal edge, where the developments associated with the Flotta oil terminal and the West Hill turbine are evident in the distance.

Sensitivity

6.13.40 The value of this view is medium to high. There are no formal viewpoints in this area and no regional or national landscape designations which would otherwise denote a special value.

6.13.41 The susceptibility of walkers in this WLA is medium to high. In the moorland hills surrounding the viewpoint, there is a distinct absence of development. This is a simple landscape comprising open and undeveloped moorland, where the sense of remoteness increases with passage westwards from the east coast. This heightens the susceptibility of walkers as the baseline character of their views are largely characterised by a largely unmodified landscape. There is, however, sufficient evidence of large and small-scale developments in the surrounding landscapes and seascapes to prevent susceptibility being rated high.

6.13.42 The combination of the value of the view and the susceptibility walkers to the Proposed Development gives rise to an overall **medium to high** sensitivity.

Magnitude of change

6.13.43 During operation, the magnitude of change on the views of walkers will be **medium to high**. The Proposed Development will be located a minimum distance of 4.23 km south-east of the viewpoint. As the wireline in Figure 6.30a shows, all six of the proposed turbines will be visible, albeit with the lower parts of the towers screened by the intervening landform of Moi Fea and Wee Fea. The six turbines will be seen evenly spaced and will form a relatively compact group.

6.13.44 While development is evident in the wider view, the Proposed Development will introduce a larger scale and closer range development that will increase the influence of modern artefacts on the character of the views of walkers. The proposed turbines will be seen at a minimum distance of 4.23 km, making them appear large in comparison to their landform setting and with the movement of the blades forming a dynamic feature in a largely undynamic landscape.

6.13.45 The magnitude of change will be moderated mainly by the relatively compact appearance of the six turbines and their containment behind the intervening upland landform. Furthermore, they will be seen in the sector of the view where development is already visible, including the West Hill turbine and oil terminal on Flotta, while the other sectors, where development is not evident, will remain unaffected. The Proposed Development is also seen set on the lower moorland hills towards the eastern coast and this comparatively lower-lying location avoids the more prominent locations that occur across the higher moorland hills to the north and west.

6.13.46 During construction, the magnitude of change on the views of walkers will be **medium to high**. The location of the Proposed Development on the opposite side of the intervening landform means that ground level construction works and the construction compound, will be screened from this viewpoint. It will, therefore, only be the presence of the cranes and the emergence of the upper parts of the turbines that will be readily visible. These will, nonetheless, form a notable feature that will appear at variance with the largely undeveloped character of the moorland landscape.

Significance of effect

6.13.47 The effect of the Proposed Development on the views of walkers will be significant. This finding relates to the relative proximity of walkers to the Proposed Development, and the largely undeveloped nature of the moorland landscape despite the presence of large and small-scale developments within the wider landscape and seascape.

Significance of cumulative effect

6.13.48 The cumulative effect on the views of walkers on Withi Gill will be not significant. While the solus effect of the Proposed Development will give rise to a significant effect, as assessed above, the influence of the Ore Brae and West Hill single turbines on the cumulative situation is so limited that in conjunction with the Proposed Development the cumulative magnitude of change will be **low** and the cumulative effect will be not significant**.**

### *Assessment of Effects on Principal Visual Receptors*

6.13.49 The second part of the assessment of effects on views is the assessment of the effects that the Proposed Development will have on the views from principal visual receptors. The principal visual receptors considered in the assessment include people in settlements and on route corridors, including roads, walking routes and national cycle routes, all of which are shown in Figure 6.4, and shown in conjunction with the ZTV in Figure 6.9.

6.13.50 The principal visual receptors assessed in detail have been selected as they have potential to undergo significant effects as a result of the Proposed Development. Not all principal visual receptors are relevant to the assessment, as not all have the potential to undergo a significant effect, and that is why a preliminary assessment to identify the most important and sensitive receptors has been carried out. This has involved the use of ZTVs and wirelines to indicate the extents, level and nature of theoretical visibility and site work to determine the extents, level and

nature of actual visibility. This process has identified the people associated with the following principal visual receptors as requiring detailed assessment:

- B9047;
- Houton to Lyness Ferry;
- Lyness;
- Longhope;
- H7 Wee Fea Core Path; and
- F1 West Hill Circular Core Path.

**B9047**

6.13.51 This principal visual receptor is represented by Viewpoint 3: Longhope, South Walls, Viewpoint 11: Lyness Naval Cemetery and Viewpoint 12: North Walls School.

Baseline

6.13.52 There are no 'A' class roads on Hoy and South Walls and, other than the very short B9048 in Lyness and B9049 in Moaness, the B9047 is the only 'B' class road on these islands. It runs along the eastern coast of Hoy and the northern coast of South Walls, connecting Moaness in the north-east of Hoy, with Longhope on South Walls, via Lyness in the south-east of Hoy. The ZTV in Figure 6.9 shows that theoretical visibility occurs between South Walls in the south and Lyrawa Hill in the north, with no visibility along the section to the north of this. This assessment considers the effects on road-users travelling on the section of the B9047 between South Walls and Lyrawa Hill.

6.13.53 To the north of Lyness, the B9047 follows the shape of the coastline, receding westwards around the low-lying bays and river mouths and extending eastwards to skirt around the elevated slopes of the moorland hills. This creates a course which weaves westwards and eastwards along the coastline and a profile, which rises and falls over the hill slopes, which fall towards the eastern coast. From Lyness, the B9047 passes north through the lower-lying Inclined Coastal Pasture LCT, where the landform falls gently from the edge of the Moorland Hills LCT towards the coastal edge. The road passes around the sandy beach at Mill Bay and then follows the more prominent rocky coastline of Rysa. From here, the road takes a sharp turn westwards, into the Moorland Hills LCT, traversing the eastern flank of Shiel Hill (137 m) above Pegal Bay and then dipping down to cross Pegal Burn before rising over the eastern flank of Pegal Hill (121 m). The road then descends in a north-westerly direction over Lyrawa Burn, to rise up the opposite side, inland around the western flank of Lyrawa Hill, before extending on round the middle eastern slopes of Kingie Lang (280 m).

6.13.54 The influences along this northern part of the B9047 vary from the settled and cultivated character of the Inclined Coastal Pasture LCT between Lyness and Pegal Bay, and the less modified and uninhabited character of the Moorland Hills LCT between Pegal Bay and Kingie Lang. The small clusters of residential development in Lyness and dispersed settlement along the eastern coastal edge, combined with the presence of agricultural fields denote the modified nature of this landscape. In contrast, the moorland hills present little evidence of modification other than the presence of a pole-mounted transmission line and the B9047, which skirts along the eastern seaboard. Views drawn out over the coastal edge do, however, feature larger scale developments, including the oil terminal and single turbine on Flotta and the rigs in Scapa Flow.

6.13.55 To the south of Lyness, the B9047 heads south-west, then takes a sharp turn south-east, passing up and over the slightly elevated headland of Crockness, with the Moorland Hills LCT to the west and the Inclined Coastal Pastures LCT to the east. The single Ore Brae turbine is a feature in this area and Viewpoint 12 is located adjacent to North Walls School. The road then drops down to meet the coastal edge at North Ness, with a sharp turn south-west and then continuing on to wrap around the settled and cultivated shore of North Bay. The B9047 crosses 'The Ayre' which links Hoy with South Walls and continues tight along the north coast of South Walls, through Longhope to Myre Bay, before turning south to meet its end point at Kirk Hope.

6.13.56 The influences along this southern part of the B9047 are largely derived from the settled and cultivated character of the coastal edge. The section between Lyness and 'The Ayre' is classified as Inclined Coastal Pasture LCT while the section between 'The Ayre' and Kirk Hope is classified as Whaleback Island LCT. Rural dwellings are dispersed along much of the length of this southern section of the B9047, mostly set along the coastal edge with views drawn out over the adjacent water. In addition to these small scale developments, there are also some larger scale developments visible from the road, including the single Ore Brae turbine, the mast on Binga Fea and the single West Hill turbine and oil terminal on Flotta.

Sensitivity

6.13.57 The value of the views on the B9047 between South Walls and Lyrawa Hill is medium to high. While this section of the route is not covered by any national or regional landscape designations, which would otherwise denote a special value, there is a scenic viewpoint on Lyrawa Hill, albeit looking out over Scapa Flow, in the opposite direction to the location of the Proposed Development, and on the margin between limited and no visibility as shown on the ZTV in Figure 6.9.

6.13.58 The susceptibility of road-users on the B9047 between South Walls and Lyrawa Hill is medium. In the absence of any substantial vegetative cover, views from the B9047 are open and although the undulating landform contains views from the lower sections of the road, from the upper sections they are more extensive.

6.13.59 In the northern section, the main attraction in the views of road-users is east and north-east, across the coastal edge and Scapa Flow, towards the Mainland of Orkney, while the moorland hills of the hinterland act as more of a backdrop to these coastal scenes. Their prominence is, however raised, in sections, most notably on Pegal Hill, where the road aligns towards the site for south-bound road-users. Although the views of road-users will be transient, there would be visibility of the Proposed Development from long sections of the route.

6.13.60 In the southern section, between Lyness and North Ness, the inland setting of the road away from the coast, means that the views of road-users are drawn more towards the moorland hills, where the Proposed Development will be located, albeit where also the single Ore Brae turbine and the Binga Fea masts already have an influence. From the northern coast of North Bay, views are drawn south across North Bay, while from the southern coast, they are drawn northwards, back towards the site, again raising the susceptibility of road-users.

6.13.61 The combination of the value of the views and the susceptibility of road-users on the A965 between South Walls and Lyrawa Hill to the Proposed Development gives rise to an overall **medium to high** sensitivity.

6.13.62 While the section of the B9047 to the north of Lyrawa Hill lies in the Hoy and West Mainland NSA and therefore would potentially have a higher sensitivity, the ZTV in Figure 6.9 shows that there is no or very limited visibility from this section and for this reason this section is not included in this assessment.

Magnitude of change

6.13.63 The ZTV in Figure 6.9 shows how the extent of visibility reflects the underlying LCTs, with visibility shown to be continuous in the northern section between Lyness and Pegal Bay where the gently falling coastal edge of the Inclined Coastal Pasture LCT occurs and then intermittent between Pegal Bay and Lyrawa Hill where the rolling landform of the Moorland Hills LCT extends up to the coastal edge. In the southern section, the ZTV shows visibility to be almost continuous from Lyness to North Ness and all the way round North Bay and over South Walls.

6.13.64 During operation, the magnitude of change on the views of road-users between Lyrawa Hill and Kirk Hope on South Walls will range from **high** through **medium** to **no change**.

6.13.65 In the section of the B9047 between Pegal Bay in the north and North Ness in the south, the magnitude of change will be **high**. This section is closest to the Proposed Development, set within a range of approximately 1.2 km to 2.8 km of the closest proposed turbine. This means that the turbines will appear as relatively large scale and dynamic structures. While the closest section occurs around Lyness to the east, the views of road-users will be mostly perpendicular to the Proposed

Development, while further north and south of this, their views will be at more of an oblique angle making the Proposed Development more readily visible in views.

6.13.66 In the section of the B9047 which passes across the Moorland Hills LCT to the north of Pegal Bay, visibility will occur on the more elevated south facing slopes but be screened from the north facing and lower lying slopes. Where visibility does occur, across the south facing slopes of Pegal Hill at a range of approximately 3 km to 4 km and the south facing slopes of Lyrawa Hill at approximately 4.5 km to 6 km, the proposed turbines will be seen set behind the intervening hill ridge of Wee Fea and the magnitude of change will be **medium**. Where visibility does not occur, there will be **no change**.

6.13.67 In the section of the B9047 around North Bay, the magnitude of change will be **medium to high**. The Proposed Development will be seen at a range of approximately 3 km to 4.5 km. While the ZTV shows that visibility will mostly comprise six turbines their prominence will be tempered by the combination of views around the bay being principally drawn inwards over the water, the variable direction of road-users such that their views are seldom directed towards the site and the partial screening of the Proposed Development by the intervening low moorland hills, especially from the western end of the bay.

6.13.68 The magnitude of change in the section of the B9047 as it follows the northern coastline of South Walls will be **medium to high**. This reflects the openness of this coastline and its principal orientation towards the north where the site is located although the direction of the road is mostly perpendicular or oblique to this, albeit with the eastern section more closely aligned towards the site. Without so much occurrence of intervening landform, all six turbines will be mostly fully visible.

6.13.69 While the Proposed Development will form a new focus in the views of road-users on the B9047, there are a number of factors that will temper the overall effect. Firstly, there is the fact that the Proposed Development comprises a relatively small number of turbines which are seen as a well-contained group. They are also associated with the least sensitive part of the island in respect of existing influences from development, with the settlement of Lyness and remnant structures from the naval base to the east, the single Ore Brae turbine to the south and the West Hill single turbine and oil terminal on Flotta to the east. There is also the relationship between the Proposed Development and the moorland hills, whereby the proposed turbines will be seen associated with the smaller hills to the south-east and will not affect the views from the B9047 to the more sensitive high hills to the north.

6.13.70 During construction the magnitude of change on the views of road-users between Lyrawa Hill and Lyre Bay will correlate with the **medium**, **medium to high, high** or **no change**, as assessed in respect of the operational phase above. The construction of the turbines will form the most readily visible feature of the Proposed Development, owing to the gradually increasing height of the emerging turbines and the presence and activity associated with the tall cranes used in their construction. From parts of the Lyness to North Walls section and the South Walls section, ground level works such as the construction of the access tracks, turbine foundations, hardstanding crane pads and substation compound, will be potentially visible and will add to the overall effect.

Significance of effect

6.13.71 The effect of the Proposed Development on the views of road-users on the B9047 between Lyrawa Hill on Hoy and Lyre Bay on South Walls will be **significant** during construction and operation. The significant effect covers an extent of approximately 6 km to the north and 6 km to the south. This assessment relates to the extent to which the Proposed Development will be visible in close to middle range views and from notable sections of the B9047, and the contrast it will present in respect of the predominantly undeveloped moorland hills within which it will be seen. The effect on the remaining section of the B9047 to the north of Lyrawa Hill will be **not significant**.

Significance of cumulative effect

6.13.72 The cumulative magnitude of change will be **low** and the cumulative effect on the views of road-users on the B9047 will be **not significant.** This finding relates to the limited influence of the single operational turbines on West Hill, Flotta and Ore Brae, Hoy.

**Houton to Lyness Ferry**

6.13.73 This ferry route is represented by Viewpoint 14: Houton to Lyness Ferry.

Baseline

6.13.74 The Houton to Lyness vehicle and passenger ferry connects the Mainland of Orkney at Houton with Hoy at Lyness. This is an integrated route which starts and finishes each day at Longhope and also connects with Flotta. The viewpoint is representative of the views of passengers on the ferry and will be similar to views obtained by people on other vessels passing along the eastern coast of Hoy. While some passengers stay in their cars, from where there are no views, or the passenger lounge, from where there are limited views, some venture onto the upper side decks to experience the open views east across Scapa Flow and west across Hoy. The crossing takes approximately 40 minutes and with six crossings on weekdays and four on Saturdays, which ensures Hoy is fairly well connected to the Mainland of Orkney.

6.13.75 Views from the ferry are characterised by the combination of the surrounding seascape and enclosing landscape beyond. Despite the openness of the sea, land encloses every sector of the view, such that the sea is seldom seen to extend all the way to the horizon. Scapa Flow is enclosed by the Mainland of Orkney to the north and north-east, Burray to the east, South Ronaldsay to the south-east, Flotta and Fara to the south-west and Hoy to the west. Most visible from the ferry are the small islands of Cava, Rysa Little and Fara, between which the ferry route weaves, and the larger island of Hoy, which is situated to the west. Cava and Rysa Little are low-lying, uninhabited holms, with rocky coastal edges and abandoned crofts, amidst a mix of moorland and remnant fields.

6.13.76 The main attraction for passengers on the ferry is Hoy. The north-west to south-east alignment of the island means that the more dramatic rugged hills in the north are not so prominent and it is the lower moorland hills that characterise the views from the ferry. The smoothly rounded profiles of the hills merge to form an upland mass, with the dark and muted hues of the moorland landcover contrasting with the greens of the cultivated coastal edge. Development is not readily evident in the core of these hills, while to the south, the mast on Binga Fea and the single Ore Brae turbine are partly visible, along with small scale development associated with Lyness and remnants of its historic role as a naval base. Rigs in Scapa Flow and the Flotta Oil Terminal are visible from the more distant northern sections of the route, while from the southern sections, these features are often concealed by intervening islands and it is only the West Hill turbine and flare stack that are readily visible.

Sensitivity

6.13.77 The value of the view is medium to high. There are no formal viewpoints and the Gutter Sound is not covered by any national or regional scenic designations. Views to the north-west and north cover parts of the Hoy and West Mainland NSA.

6.13.78 The susceptibility of passengers on the ferry is medium to high. This relates to the experience of passengers, many of whom will have a heightened awareness of their surroundings owing to the openness and availability of panoramic views from the ferry, potentially experienced for a sustained period of time. While the undeveloped moorland hills set the character for much of Hoy, evidence of development in the form of rigs, tankers and ferries in Scapa Flow, and small scale single turbines, masts, and rural development along coastal edges, prevent the susceptibility of passengers from being high, as development is seen as an established part of the baseline views.

6.13.79 The combination of the value of the view and the susceptibility of viewers leads to an overall **medium to high** rating for sensitivity.

Magnitude of change

6.13.80 During operation, the magnitude of change will range from **medium to low** at the Houton end, through **medium** and **medium to high**, to **high** at the Lyness end. From most of the route, all six proposed turbines will be visible, albeit always partly concealed by intervening landform and seen at a gradually increasing scale on approach. Existing developments are visible from the ferry route, most notably the oil terminal and single turbine on West Hill, Flotta and the single turbine at Ore Brae, Hoy, as well as the ferries and other large scale vessels passing through these waters. While the presence of these developments moderates the effect of the Proposed Development, it will

appear notably more prominent owing to the vertical and dynamic nature of the turbines and their presence as a group in a previously undeveloped moorland landscape.

6.13.81 At Houton, the magnitude of change on passengers will be **medium to low** owing to the separation distance of 9 km from the Proposed Development and the close-range influence of the ferry terminal and other vessels. This rating will increase to **medium** as the ferry passes through Scapa Flow toward Cava, and while the influence from rigs and other vessels in Scapa Flow would reinforce the influence of human artefacts on the views of passengers, the Proposed Development would start to form a notable focal feature at the southern end of the island. This will gradually transition to **medium to high** with passage past the west coast of Cava, as the ferry comes within 5 km of the Proposed Development and the wider influences, across Scapa Flow become closed out. Through the Gutter Sound the magnitude of change will continue as **medium to high** as the Proposed Development is seen to occupy a prominent position, inset from the coastal edge and forming a comparatively large-scale feature. As the ferry comes into its destination at Lyness, the alignment of the ferry towards Wee Fea will emphasise the prominence of the Proposed Development making the magnitude of change **high**.

6.13.82 During construction, the magnitude of change will largely match the ratings assessed in respect of the operational phase, albeit slightly lower owing to the extent to which ground and lower level construction works will be screened by the intervening landform of the hills along the coastal edge. There will still, however, be a visual draw that the presence of the emerging turbines and the tall cranes used in their construction will have on ferry passengers. The prominence of the site will be accentuated by the openness of the water and clear views of the turbines, with construction being apparent from the closer range sections of the ferry route.

Significance of effect

6.13.83 The effect of the Proposed Development on the views of ferry passengers will be significant during the construction and operational phases between Cava and Lyness and not significant between Houton and Cava. This assessment relates chiefly to the prominence of Wee Fea upon which the turbines will be located, in views from the ferries approaching and leaving Lyness ferry terminal, and which will ensure that the Proposed Development will form a focal feature in the views of passengers.

Significance of cumulative effect

6.13.84 The cumulative effect on the views of passengers on ferries approaching and leaving Lyness ferry terminal will be **not significant**. While the solus effect of the Proposed Development will give rise to a significant effect, as assessed above, the influence of the single turbines at West Hill and Ore Brae on the cumulative situation is so limited that in conjunction with the Proposed Development the cumulative magnitude of change will be **low** and the effect **not significant**.

**Lyness**

6.13.85 This settlement is represented by Viewpoint 11: Lyness Naval Cemetery. A detailed Residential Visual Amenity Assessment (RVAA) has been carried out and is presented in Appendix 6.4.

Baseline

6.13.86 Lyness is a small village located on the eastern coast of Hoy, in the southern more settled part of the island. It occupies a small headland to the north of Ore Bay, where the ferry terminal is situated, with ferries connecting Lyness to the island of Flotta and the Mainland of Orkney at Houton. This assessment is representative of the views of residents who live in Hoy as well as visitors to the island.

6.13.87 Lyness served as an important naval base during both WWI and WWII. In the early years of WWII, up to 12,000 naval personnel are reported to have been based here and accommodated in huts grouped in camps in and around Lyness, although these have almost all now been demolished. Other features present at this time included the recreation centre, which accommodated a cinema, restaurant and shops, the shell of which was made form corrugated metal and which still exists. There were also 16 large oil containers close to the harbour, of which one still remains, and vast underground tanks built into the eastern flank of nearby Wee Fea (173 m), which are still present today. The most notable remnant is the large concrete structure of the Naval Headquarters, which

occupies a commanding position on the lower hill slopes of Wee Fea (173 m) to the west of Lyness, while the Naval Cemetery, which sits below, remains perfectly intact.

6.13.88 While only a small proportion of the original naval base remains today, the remnants do still have an influence on the character of the area, principally because they differ in terms of their larger scale, more utilitarian style and use of concrete and corrugated metals, in contrast to both the traditional and modern dwellings in the settlement. The few dwellings that make up Lyness are mostly well dispersed around the coastal edge and along the B9047, such that there is no centre to the settlement. The mix of derelict buildings and other artefacts detract from the attractiveness of the place.

6.13.89 The main views from the settlement vary depending on specific locations, albeit with most dwellings being orientated towards the eastern coastal edge, and views inland towards Wee Fea and the other moorland hills, occurring more incidentally. Beyond the low and rocky shoreline, the water stretches out to meet the close enclosure of Fara, with Flotta close behind. While Fara is uninhabited, development on Flotta is most evident, through the presence of the single turbine on West Hill and the oil terminal to the north of this.

Sensitivity

6.13.90 The value of the views from Lyness is medium. There are no formal viewpoints in this village and no national or regional landscape designations, which would otherwise denote a special value. While distant parts of the Hoy and West Mainland NSA may be visible from this settlement, the landscape in the view is largely undesignated.

6.13.91 The susceptibility of residents in Lyness to the effects of the Proposed Development is high. While the views of residents are typically either contained within the settlement or orientated north across the Bay of Firth, there are more elevated or exposed properties from which the site is potentially visible. Furthermore, there are a number of public spaces within the town from which the views of residents and visitors will potentially be susceptible, including the open waterfronts adjacent to the A965 and A966 and the elevated section of the A965 to the west of the town.

6.13.92 The combination of the value of the view and the susceptibility of the visual receptors to the Proposed Development gives rise to a **medium to high** sensitivity for residents in Lyness.

Magnitude of change

6.13.93 During operation, the magnitude of change on the views of residents will be **high**. The ZTV in Figure 6.9 shows theoretical visibility to be almost continuous across the coastal area where the settlement of Lyness is dispersed. The wireline in Figure 6.25f and photomontage in Figure 6.25g, are representative of the views from Lyness Cemetery, and show that all six of the turbines will be visible to almost their full extents, with the closest turbine at approximately 1.18 km from the viewpoint. Within this predominantly rural context, the Proposed Development will introduce six large scale and dynamic structures that will appear similar in scale to Wee Fea. The modern appearance of these structures and the dynamic motion of their blades mean they will appear at variance with the predominantly rural character, although some single turbines and small-scale developments do form part of the baseline character. Certain sections of the access tracks will also be visible from this viewpoint and will add to the overall magnitude of change by conveying the sense that the hills are being opened up to access.

6.13.94 The viewpoint at Lyness Naval Cemetery shows the worst-case scenario, as it is taken from the closest edge of the village and with the fullest extent of visibility, and although no properties share this elevated patch, there are close range properties to the east and south-west. The principal orientation of the village is seawards, whether that be north from the northern edge, east from the eastern edge or south from the southern edge of the headland, while the properties along the B9048 and B9047 are orientated in towards the road. There are few properties orientated inland towards Wee Fea where the Proposed Development would be located and as such, Wee Fea and the other moorland hills present a backdrop in views from the village, rather than the principal focus. They do, nonetheless, form an important sense of enclosure and backdrop to the village.

6.13.95 Despite the lack of focus of properties towards Wee Fea, the close proximity of this settlement to the Proposed Development and the general openness of the landscape, even taking into account the localised enclosure from buildings in the village, means that the Proposed Development will introduce a notable change on the character of views from the village. While views may be experienced from interior residential spaces, they will be most notably affected from garden grounds and residential streets.

6.13.96 During construction, the magnitude of change will also be **high**. The construction of the turbines will form the most readily visible feature of the Proposed Development, owing to the gradually increasing height of the emerging turbines and the presence and activity associated with the tall cranes used in their construction. The proximity of the village to the site, means that residents will also be aware of ground level construction works, including track, compound, hard-standing and foundation construction and visibility of these works will add to the overall effect.

Significance of effect

6.13.97 During both construction and operation, the effect of the Proposed Development on the views of residents in Lyness will be **significant**. This finding relates to the proximity of the Proposed Development to the settlement despite the more outward looking orientation of the village.

Significance of cumulative effect

6.13.98 The cumulative magnitude of change will be **low** and the cumulative effect on the views of residents in Lyness will be **not significant**. This finding relates to the limited influence of the single operational turbines on West Hill, Flotta and at Ore Brae, Hoy.

**Longhope**

6.13.99 This settlement is represented by Viewpoint 3: Longhope, South Walls.

Baseline

6.13.100 South Walls is small island off the south coast of Hoy, joined by a narrow ayre over which the B9047 forms the connection. It is typical of its Whaleback Island LCT classification, with its gently rounded landform rising to a low plateau of gently undulating summits, the highest of which is Gallow Tuag at 57 m. The only settlement on South Walls is Longhope. It is situated at South Ness, on the north-west coast, opposite North Ness on the Hoy coast, marking the shortest crossing over Moasound and with the inland loch of North Bay to the south-west.

6.13.101 The foreground of the view is characterised by the harbour area with its pier, storage sheds and yards, boats, cars and lorries. The view looks north across Moasound to Hoy and reflects the orientation of most of the properties in Longhope, with the exception of those on the eastern extent which are orientated more towards the north-east. Hoy is characterised by the combination of the settled and cultivated Inclined Coastal Pastures LCT, which lines the south coast of Hoy, and the Moorland Hills LCT which forms the upland hinterland.

6.13.102 Farmsteads and rural properties are dispersed across the coastal fringe, where farm fields of rough and semi-improved pasture form an open landscape. The hills behind also comprise an open landscape, with a blanket of moorland heather and grasses, covering the smooth landform of the rounded hills. While there is no settlement on the hills, a mast can be seen on Bing Fea to the west. In the wider view to the north-east, the single turbine which marks the summit of West Hill on Flotta is readily visible, although the oil terminal is completely concealed by the intervening landform.

Sensitivity

6.13.103 The value of this views is medium. There are no formal viewpoints which would otherwise denote a special value, and neither the view nor this settlement are not covered by any national or regional landscape designations.

6.13.104 The susceptibility of residents in this area, to the Proposed Development, is high. This reflects the fact that most of the properties are orientated northwards towards Hoy and the site. It also reflects the general openness of both the South Walls and Hoy coastlines and the stepped elevation of the properties in Longhope, which means that many of them are afforded a relatively open view. The

more permanent nature of the views of residents increases their susceptibility as their views will potentially be affected over longer periods of time.

6.13.105 The combination of the value of the view and the susceptibility of residents to the Proposed Development gives rise to an overall **medium to high** sensitivity.

Magnitude of change

6.13.106 During operation, the magnitude of change on the views of residents will be **medium to high**. The wireline in Figure 6.17d and photomontage in Figure 6.17e, show that all six of the turbines will be visible to almost their full extents, with the closest turbine at approximately 3.43 km from the viewpoint. Within this predominantly rural context, the Proposed Development will introduce six large scale and dynamic structures that will appear similar in scale to Wee Fea. The modern appearance of these structures and the dynamic motion of their blades mean they will appear at variance with the predominantly rural character, although some single turbines and small scale developments do form part of the baseline character. Certain sections of the access tracks will also be visible from this viewpoint and will add the overall magnitude of change by conveying the sense that the hills are being opened up to access and further developed.

6.13.107 The magnitude of change is moderated to some extent by the limited horizontal extent of the Proposed Development owing to the small number of turbines. This means that the group appears well contained and occupies only a small proportion of the wider view. Also, while there are no other large scale developments visible from this viewpoint, there is enough visible development that prevents the view from being regarded as pristine or undeveloped, including Longhope Harbour and the single turbine on Flotta, although in contrast, these are low-lying.

6.13.108 During construction the magnitude of change will also be **medium to high**. The construction of the turbines will form the most readily visible feature of the Proposed Development, owing to the gradually increasing height of the emerging turbines and the presence and activity associated with the tall cranes used in their construction.

Significance of effect

6.13.109 The effect of the Proposed Development on the views of road-users and residents in Longhope will be **significant** during construction and operation. This assessment relates to the relatively full extent of visibility at a relatively close range, which means the Proposed Development will form a new and defining focus in views from this area.

Significance of cumulative effect

6.13.110 The cumulative magnitude of change will be **low** and the cumulative effect on the views of residents in Longhope will be **not significant**. This finding relates to the limited influence of the single operational turbines on West Hill, Flotta and Ore Brae, Hoy.

**North Walls Core Path: H7 Wee Fea**

6.13.111 This core path is represented by Viewpoint 11: Lyness Naval Cemetery and the Cultural Heritage Viewpoint 10.12: Formal Naval Headquarters.

Baseline

6.13.112 H7 Wee Fea is an OIC Core Path, situated in the south-east of Hoy. It links the small settlement of Lyness with the formal scenic viewpoint on the south-eastern flank of the low hill Wee Fea. The starting point of the approximately 1 mile route is at the junction between the B9048 and the B9047. From the Hoy Hotel, the path follows an access track to the west-north-west, up a gentle slope and passing to the south of the Lyness Naval Cemetery. From the western edge of the settlement, the path follows the access track further up an increasingly steep slope, set to the immediate north of a broad coniferous plantation. The path then wraps around the western end of the plantation, realigning southwards, passing by the large and derelict concrete block of the former Naval Base Headquarters and reaching the formal scenic viewpoint after a short distance.

6.13.113 The view from the viewpoint is orientated south-east largely because this is the direction in which the land falls away and the view naturally opens up. The view looks out across the rocky headland

of Crockness on the eastern coast of Hoy, to the northern coast of South Walls to the south, and the western coast of Flotta to the east. The view is largely characterised by the complex arrangement of islands and intervening sounds. Human influence is evident in the settled and cultivated character of the coastline and the presence of some larger developments, such as the mast on Binga Fea, the single turbine at Ore Brae and the single turbine and oil terminal on Flotta. The wider extent of the view is contained to the north-east by the presence of the Naval Headquarters and the coniferous plantation, and by the rising landform of Wee Fea from the north round to the south-west, with views characterised by the open and largely undeveloped hills.

6.13.114 It is anticipated that there will need to be closures of H7 Wee Fea during the construction process (see Chapter 16). We will look to provide an alternative route to closures to the core path where possible. Following construction full access will be restored and tracks around the wind farm will provide additional improved access to the site. In addition, work undertaken with respect to cultural heritage would allow Hoy's wartime heritage to be more accessible for local communities and visitors to the island.

Sensitivity

6.13.115 The value of the views from H7 Wee Fea is high. While there are no national or regional landscape designations, which would otherwise denote a special value, there is a formal OS mapped viewpoint at the western end of the route.

6.13.116 The susceptibility of walkers to the effects of the Proposed Development is medium to high. Walkers tend to be slow moving with part of their purpose usually involving appreciation of their surroundings. While views from a substantial part of the path are concealed behind the coniferous plantation, at the Lyness end they are open towards Wee Fea and at the viewpoint end they are open and especially close range. While development does form a baseline influence in the experience of walkers on this route, most notably in the form of the close range and large structure of the Naval Headquarters, as well as the West Hill turbine and oil terminal on Flotta to the east.

6.13.117 The combination of the value of the view and the susceptibility of walkers on H7 Wee Fea to the Proposed Development gives rise to a **medium to high** sensitivity.

Magnitude of change

6.13.118 During operation, the magnitude of change on walkers on H7 Wee Fea will be **high**. This core path lies especially close to the Proposed Development with the western end coinciding with parts of the site. While the ZTV in Figures 6.9 and 6.10a shows that theoretical visibility will be continuous along the core path, actual visibility will be reduced by the screening effect of the coniferous plantation along the central section. Actual visibility will, however, be clear in the eastern section through Lyness and the western section onto the site.

6.13.119 From the section of the core path through Lyness, the proposed turbines will be seen as large scale and dynamic structures, and although mostly set behind the intervening ridgeline of Wee Fea, all will be visible to some extent, with the closer range turbines seen to their full extents. Furthermore, modifications to the landform will be evident, where cut and fill have been required in the construction of access tracks, turbine foundations and hard-standings and this will add to the overall change to the context of the route.

6.13.120 From the section of the core path into the site, many components of the site infrastructure will be experienced at close range including the upgraded track, substation compound, met mast, turbine foundations, hard-standings and the turbines themselves. The presence of these large scale modern artefacts will notably change the baseline character of the largely undeveloped moorland hills, albeit with some influence from past and present developments.

6.13.121 During construction, the magnitude of change on walkers on H7 Wee Fea will be **high**. The close range of walkers in Lyness and especially close range of walkers on the site means they will experience the broad range of ground level and more elevated construction works, with the construction of the turbines and presence and activity of the cranes presenting a particular focus.

Significance of effect

6.13.122 During both construction and operation, the effect of the Proposed Development on the views of walkers on H7 Wee Fea will be **significant**. This finding relates to the close proximity of the Proposed Development to this core path, especially in the section closest to the formal viewpoint. The Proposed Development will form the new defining feature in the views of walkers.

Significance of cumulative effect

6.13.123 The cumulative magnitude of change will be **low** and the cumulative effect on the views of walkers on H7 Wee Fea will be **not significant**. This finding relates to the limited influence of the single operational turbines on West Hill, Flotta and Ore Brae, Hoy.

**Flotta Core Path: F1 West Hill Circular**

Baseline

6.13.124 The F1 West Hill Circular Core Path forms a circular walking route around the coast of the southern part of Flotta. The path starts from the B9045, just south of the ferry terminal and oil terminal, taking the road junction to the west and wrapping around the western coastal edge of the island, past the disused airfield. This western half of the southern island is classified as Low Moorlands LCT with the landform rising to the single summit of West Hill, where a single turbine is located. The landcover comprises rough moorland vegetation and this creates an open and less modified character. The shoreline is low with narrow sandy and shingly beaches and occasional rocks.

6.13.125 Once round the southernmost tip at Innan Neb, the character transitions to the settled and cultivated character of the Undulating Island Pasture LCT, in which the landscape is organised into a geometric pattern of small fields with roads and tracks passing between to access the dispersal of rural farmsteads and dwellings. The narrower core path stays close to the southern coastal edge, before following the minor road up the eastern side of the island and the B9045 across the northern side. This route passes through the small settlement of Whome before descending back down past the oil terminal, back to the start point.

6.13.126 Flotta is surrounded by other close-range islands, with Hoy to the west, South Walls to the south and South Ronaldsay to the east. This means that views from the F1 West Hill Circular Core Path are typically drawn out across the intervening waters towards the opposing island coasts and hinterlands. Where the core path passes along the western coast of Flotta, the views connect with the Crock Ness headland opposite, albeit with views extending across the wider low moorland hills of southern Hoy. Used and disused settlement is evident along this coastline with the Ore Brae turbine visible at the foot of the hills behind.

Sensitivity

6.13.127 The value of the views from F1 West Hill Circular is medium. There are no formal viewpoints in this area and no national or regional landscape designations, which would otherwise denote a special value. While views to the north cover parts of the Hoy and West Mainland NSA, the main views from the path focus on the central and southern hills of Hoy which are not designated.

6.13.128 The susceptibility of walkers to the effects of the Proposed Development is medium. While views from the southern, eastern and northern sections of the route are drawn out in those directions, form the western edge, the views are drawn towards the south-east corner of Hoy, where the Proposed Development will be located and this raises the susceptibility of walkers. Their susceptibility is, however, moderated by the presence of human influences on Flotta, such as the nearby disused airfield, the West Hill single turbine and the oil terminal and those on Hoy, such as the coastal settlements and the Ore Brae single turbine.

6.13.129 The combination of the value of the view and the susceptibility of walkers on F1 West Hill Circular to the Proposed Development gives rise to a **medium** sensitivity.

Magnitude of change

6.13.130 During operation, the magnitude of change on walkers on the western section of F1 West Hill Circular, will be **medium to high**, while on the remaining sections to the south, east and north, the

magnitude of change will be **medium to low**, **low** or **no change**. The ZTV in Figure 6.9 shows that theoretical visibility will be continuous across the western section, with all six turbines visible within a range of 4.5 km to 5.5 km, while visibility will be more intermittent in the southern, eastern, and northern sections, reflecting the variable screening effect of the intervening landform of West Hill. The magnitude of change on these other aspects will be lower because of lower levels of visibility, but also the stronger association these aspects have with the opposing coastlines in their respective directions, as well as the stronger influence of the settled and cultivated landscape in the south and east and the industrial landscape in the north.

6.13.131 While the influence of human artefacts also occurs along the western shoreline in the form of the road, disused airfield and single turbine on West Hill, the underlying character is of a moorland hill side, where there is little modification from agriculture and little evidence of residential development. Furthermore, walkers on this western aspect are afforded clear and open views towards the opposing coastline of Hoy, where the turbines will be seen as a prominent feature set on Wee Fea and appearing to be of a similar scale as the hill. Despite the movement of walkers predominantly north or south along this section and, therefore, the oblique angle at which the Proposed Development will occur, it will, nonetheless, form a new focus in views.

6.13.132 During construction, the magnitude of change on walkers along the western section of the core path will be **medium** as the views of walkers will be affected by the activities and presence of artefacts associated with the construction works. While some aspects of the ground level construction works may be visible from this range, including the cut and fill required to accommodate the tracks and turbines, the presence of emerging turbines and tall cranes will form the most apparent and eye-catching feature, seen from the western open shorelines. The magnitude of change on walkers on the other sections will be **medium to low, low** or **no change**, reflecting the lower levels and incidences to which the construction works will be visible.

Significance of effect

6.13.133 During both construction and operation, the effect of the Proposed Development on the views of walkers around the western section of F1 West Hill Circular will be **significant**, while the effect on walkers on the remaining sections will be **not significant**. This finding relates to the exposed and relatively close-range nature of views from the western half of the core path, compared to the lesser extent of visibility and different direction of views from the other parts.

Significance of cumulative effect

6.13.134 The cumulative magnitude of change will be **low** and the cumulative effect on the views of walkers on F1 West Hill Circular will be **not significant**. This finding relates to the limited influence of the single operational turbines on West Hill, Flotta and Ore Brae, Hoy.

## 6.14 Cumulative Assessment

### *Introduction*

6.14.1 All operational and under construction wind farms have been included as part of the baseline situation considered in the main assessment presented in Section 6.12 and 6.13. The cumulative effect of the Proposed Development in conjunction with the operational and under construction wind farms is considered in more detail in this section, in relation to two potential cumulative scenarios.

- Cumulative Scenario 1 assesses the effects of adding the Proposed Development to a cumulative situation comprising all operational, under construction and consented wind farms.
- Cumulative Scenario 2 assesses the effects of adding the Proposed Development to a cumulative situation comprising all operational, under construction, consented and application wind farms.

6.14.2 The very limited occurrence and size of operational, under construction, consented and application wind farms means that the potential for landscape and visual receptors to undergo significant cumulative effects is limited.

**Methodology for the cumulative assessment**

6.14.3 The methodology used in the assessment of cumulative effects differs in some respects from that used in the rest of the assessment. The full methodology for the cumulative assessment is described in Appendix 6.1.

6.14.4 In Sections 6.12 and 6.13, the cumulative effect of the Proposed Development in conjunction with the operational and under construction wind farms has been considered. In this Section 6.14, the intention is to establish whether or not the addition of the Proposed Development, in combination with other relevant existing and proposed wind farms, may lead to a landscape character or view where wind farm developments become a prevailing characteristic as a result of the addition of the Proposed Development, albeit that they may become one of a number of prevailing characteristics.

6.14.5 It should be noted that even if the Proposed Development itself is assessed to have a significant effect it does not necessarily follow that the cumulative effect will also be significant.

**Wind Farm sites included in the cumulative assessment**

6.14.6 Table 6.6 in Section 6.6 sets out which of the cumulative sites will be relevant to the cumulative assessment. Cumulative sites that lie within a 40 km radius of the Proposed Development have been listed in Table 6.6 and their locations shown in Figure 6.12.

6.14.7 Cumulative ZTVs that show the visibility of the cumulative site along with the visibility of the Proposed Development have been run for consented Hesta Head Wind Farm and application Quanterness Wind Farm, and are shown in Figures 6.13 and 6.14, respectively. These show the theoretical extent of visibility of each wind farm in conjunction with the Proposed Development. Hesta Head is considered relevant to the assessment of Viewpoint 4: A961 OS Viewpoint, South Ronaldsay and is referred to in the assessment below. The cumulative ZTV with Quanterness shows the limited extent of inter-visibility across the study area.

6.14.8 The cumulative sites are shown in the cumulative wirelines for each of the representative viewpoints in Figures 6.15 to 6.30 In these wirelines, the Proposed Development turbines are shown in red; operational wind farms are shown in black, under-construction wind farms are shown in purple; consented wind farms are shown in green and appeal and application wind farms are shown blue.

6.14.9 In some instances, wind farms show up in the wirelines although they are beyond their own study area radius. Where this occurs, the wind farm is not included in the written assessment as it lies outwith its own study area radius and is therefore considered to lie beyond the radius within which it may contribute to a significant cumulative effect.

### *Assessment of cumulative effects on landscape character*

6.14.10 The assessment of cumulative effects on landscape character considers the same receptors as the assessment of effects on landscape character carried out previously in this chapter. These are in two groups:

- Landscape character types; and
- Designated areas.

6.14.11 The detailed methodology for the assessment of cumulative effects on landscape character is described in Appendix 6.1.

6.14.12 The first stage in the cumulative assessment of the landscape character types and designated areas is a filtering process to ascertain which of them have the potential to undergo significant cumulative effects as a result of the Proposed Development. This process is carried out through a desk study and site survey which examines the visibility of the wind farm in conjunction with other wind farm

sites from the landscape character types and designated areas around the study area, using the ZTV and wirelines.

6.14.13 This filtering process has concluded that none of the landscape character receptors have potential to undergo significant effects. This finding relates to the very limited occurrence, size and distance of consented and application wind farms in combination with the very limited occurrence, size and distance of baseline operational and under construction wind farms and the very limited interaction of the character change resulting from the Proposed Development with that of these wind farms as part of its possible future context in either Cumulative Scenario 1 or 2.

### *Assessment of cumulative effects on visual receptors*

6.14.14 The assessment of cumulative effects on views is carried out using the same two categories of effects on views as described previously in this chapter:

- Assessment of effects on representative viewpoints; and
- Assessment of effects on principal visual receptors.

6.14.15 The detailed methodology for the assessment of cumulative effects on views is described in Appendix 6.1.

6.14.16 The first stage in the cumulative assessment of the representative viewpoints and principal visual receptors is a filtering process to ascertain which of them have the potential to undergo significant cumulative effects as a result of the Proposed Development. This process is carried out through a desk study and site survey which examines the visibility of the wind farm in conjunction with other wind farm sites from the landscape character types and designated areas around the study area, using the ZTV and wirelines.

6.14.17 This filtering process has concluded that only one of the viewpoints has potential to undergo significant effects; namely Viewpoint 4: A961 OS Viewpoint, South Ronaldsay. This finding relates to the very limited occurrence, size and distance of consented and application wind farms in combination with the very limited occurrence, size and distance of baseline operational and under construction wind farms and the very limited interaction of the visibility of the Proposed Development with that of these wind farms as part of its possible future context in Cumulative Scenario 2.

6.14.18 The cumulative effects of the Development on Viewpoint 4: A961 OS Viewpoint, South Ronaldsay, which has potential to undergo significant cumulative effects, are assessed in full below.

**Viewpoint 4: A961 OS Viewpoint, South Ronaldsay**

Scenario 1

6.14.19 Scenario 1 comprises all consented wind farms in conjunction with all operational and under-construction wind farms. The cumulative wireline in Figure 6.18e shows that the five consented Hesta Head turbines will be visible at a minimum distance of approximately 1.0 km. This is the only consented development that will be readily visible. The operational developments in the cumulative baseline comprise West Hill, seen clearly at 11.0 km to the west, Ore Brae, seen as a small element at 16.5 km to the west, and Hammars Hill, seen as distant and very small scale turbines on the skyline to the north at 35.1 km. In addition, two under construction single turbines are also visible with Berriedale at 5.8 km to the north and Akla at 21.4 km to the north-west. These wind farms and single turbines are seen from a local context in which pole-mounted transmission lines align the road and a mast is located on nearby Ward Hill (118 m AOD).

Cumulative magnitude of change

6.14.20 The cumulative magnitude of change as a result of adding the Proposed Development to the Scenario 1 cumulative baseline comprising Hesta Head will be **medium to low**. At a minimum distance of 1 km, Hesta Head will form the closest wind farm to the viewpoint and will have the greatest influence on the views of road-users. All five of the 125 m to blade tip turbines will be seen to almost their full extents, set within relatively close proximity on the eastern side of the road.

6.14.21 Those factors which contribute to the **medium** part of the rating include the fact that the Proposed Development is located in almost the opposite direction to Hesta Head and this has the effect of maximising the influence of wind farm development around the wider view, although this effect is moderated by the existing presence of the West Hill and Ore Brae turbines in the same sector as the Proposed Development. Also, the prominence of the Proposed Development will be accentuated by its location on Hoy which is the key attraction in views from this road, albeit located in the lower southern part of the island and not associated with the more dramatic high hills to the north.

6.14.22 Those factors which contribute to the low part of the rating include the separation distance between the viewpoint and the Proposed Development of 18.94 km which means that the Proposed Development will be seen as a relatively distant feature and will occupy only a small proportion of the wider view. Furthermore, the influence of the proposed turbines will be moderated through comparisons with the closer range Hesta Head turbines, which will make them appear smaller and a further development of a similar type already evident.

Cumulative significance of effect

6.14.23 The cumulative level of effect on stationary and transitory road-users on the A961 will be **not significant**. This finding reflects the limited proportion of the wider view that the Proposed Development will occupy, as well as the greater influence that consented Hesta Head wind farm will have on the views of road-users.

Scenario 2

6.14.24 Scenario 2 comprises all application wind farms in conjunction with all operational, under-construction and consented wind farms. The cumulative wireline in Figure 6.18d shows that Quanterness Wind Farm is the only application wind farm readily visible from this viewpoint. It is seen at a distance of 25.7 km and appears as four turbine tips or blades set below Wideford Hill. Figure 6.18d also shows that Berriedale is the only application single turbine readily visible, at a distance of 4.6 km, seen to the immediate right of the consented Hesta Head Wind Farm. The limited influence of Quanterness and Berriedale means that these developments would have a limited effect on the cumulative situation and will not alter the cumulative assessment made in respect of Scenario 1.

## 6.15 Summary

6.15.1 The assessment of landscape and visual effects has been carried out to identify the significant effects that are likely to arise as a result of the Proposed Development. It has considered the effects on landscape and visual receptors, as well as the cumulative effect of the Proposed Development in addition to other wind farm developments. The process involved identifying those receptors with potential to be significantly affected and assessing the potential impacts that the construction and operation of the Proposed Development will give rise to. The significance of the effects has been assessed through combining the sensitivity of each receptor with a prediction of the magnitude of change that will occur as a result of the Proposed Development.

6.15.2 The Proposed Development comprises the construction of six proposed turbines, each 149.9m to blade tip, and associated infrastructure, including access tracks, a water crossing, crane hardstandings, underground cabling, possible external transformers, on-site substation and maintenance building, a temporary construction compound, borrow pit search area and a permanent meteorological mast. The proposed turbines will not be lit with visible lighting. The site layout is shown in Figure 1.2.

6.15.3 The site is situated on the island of Hoy, close to the eastern coastal edge, and to the immediate west of the village of Lyness. The site lies within a landscape classified as Moorland Hills LCT and characteristically comprises low, rounded, smooth hills covered in heather and moorland grasses. The main road on the island is the B9047 which passes along the eastern coast. The central and western parts of the island are largely undeveloped.

6.15.4 The study area for the Proposed Development covers a radius of 40 km and within this area, those receptors with the potential to be significantly affected have been assessed in detail. This has included one landscape element, 17 Landscape Character Units, seven Regional Coastal Character

Areas, one designated landscape, 16 representative viewpoints and six principal visual receptors. Photomontages have been prepared for 15 of the 16 representative viewpoints. The figures also include a wireline of the Proposed Development on its own and wirelines with all other cumulative developments. These visualisations have helped assist in the assessment process. Figures 6.1 to 6.14 show plans of the study area, landscape receptors, visual receptors and ZTVs of the Proposed Development on its own and in combination with other cumulative wind farms, while Figures 6.15 to 6.30 show the photographs, wirelines and photomontages (for 15 of the 16 viewpoints) from the representative viewpoints and Figures 6.31 to 6.34 show additional wirelines included to further inform the assessment.

6.15.5 The effects of the Proposed Development are assessed as being relatively localised. The ZTVs in Figure 6.5a, 6.5b and 6.10 show a concentration of visibility across the south-east corner of Hoy and the surrounding small islands, with visibility becoming increasingly patchy towards the north of Hoy as higher hills screen visibility to an increasing extent. The openness of Scapa Flow and the Pentland Firth means visibility extends out from the Proposed Development to the north, east and south to meet the coastal edges of the Mainland of Orkney, Burray, South Ronaldsay and Mainland Scotland. Visibility is typically concentrated along the facing coastal edges, albeit with patches extending inland over lower ground and higher facing slopes.

6.15.6 In respect of the physical effects on landscape elements, the assessment found that the direct effect on the rough moorland, as a result of the construction of the Proposed Development, will be not significant. The losses will comprise only a small proportion of a much wider landscape resource and will occur in an area where the landscape has already been modified by tracks and former naval land uses. Rough moorland will be relatively easy to re-establish either post-construction or post-decommissioning, depending on the short or long-term use of the area.

6.15.7 In respect of effects on landscape character, the assessment found there will be significant effects within a 6.5 km radius of the Proposed Development, with five of the 17 LCUs assessed, either wholly or partly significantly affected. These LCUs are either close to the site on Hoy or cover nearby islands off the east and south coast from where a strong visual association with the site arises. All LCUs beyond this radius will undergo not significant effects. In terms of coastal character, the Proposed Development will give rise to significant effects on three of the RCCAs, also within a 6.5 km radius of the Proposed Development and largely owing to the strong association between the site and the surrounding coastal landscapes. All other RCCAs will not be significantly affected.

6.15.8 Appendix 6.2 presents a detailed assessment of the effects of the Proposed Development on the Special Landscape Qualities (SLQs) of the Hoy and West Mainland NSA. The finding of this assessment is that only one of the 11 SLQs will be significantly affected, namely the High Hills of Hoy, across a localised area in the Moorland Hills LCT on the southern boundary of the designated area, between 5 km and 6.5 km from the Proposed Development. Three other SLQs will be affected by the Proposed Development but not significantly, while the remaining seven SLQs will not be affected.

6.15.9 Appendix 6.3 presents a detailed assessment of the effects of the Proposed Development on the Wild Land Qualities (WLQs) of the Hoy WLA. In order to assist the assessment the Hoy WLA has been divided into a Sub-area East and Sub-area West. The finding of this assessment is that four of the six WLQs will be significantly affected where they are experienced in Sub-area East. In Sub-are West, while there will also be significant effects, these will occur in three small localised areas, while the majority of Sub-area West will remain unaffected by the Proposed Development.

6.15.10 In respect of effects on visual amenity, of the 16 viewpoints assessed, the assessment found that eight will be significantly affected during the construction and operational phases of the Proposed Development. These viewpoints are all located within an approximate 10 km radius of the Proposed Development. The viewpoints will mostly be affected owing to either their close proximity to the construction works and operation of the Proposed Development, or their greater sensitivity. All viewpoints beyond this 10 km range will not be significantly affected as a result of the Proposed Development, owing to the greater distance and wider seascape and landscape influences.

6.15.11 In terms of the principal visual receptors assessed, it was found that residents of the two closest range settlements, namely Lyness and Longhope, will be significantly affected during the

construction and operational phases. Road-users on the B9047, which connects these two settlements, will also be significantly affected along much of its length, with the exception of the northern section, where there will be no visibility. A significant effect will occur in respect of ferry passengers on the Lyness to Houton ferry between Cava and Lyness. In terms of core paths, walkers on H7 Wee Fea will be significantly affected owing to their especially close range and on the western section of F1 West Hill Circular, owing to the strong association between these opposing coastlines. These significant effects will all be relatively local, occurring within 9 km, with principal visual receptors beyond this extent not being significantly affected.

6.15.12 This assessment considers the cumulative effect of the Proposed Development with all operational, under construction, consented and application wind farms and single turbines above 50 m. There are very few operational, under construction, consented and application wind farms and single turbines in the study area. There are no operational or under construction wind farms within a 20 km radius of the Proposed Development, and only three single operational turbines and two single under-construction turbines in this area. There is one consented wind farm at 18 km and the closest application wind farm is at 23 km. There will be no significant cumulative effects largely owing to the very small number, small size and relatively distant location of the cumulative wind farms. This prevents wind farms becoming the prevailing characteristic of landscape character or visual amenity.

6.15.13 The RVAA in Appendix 6.4 has considered the impact of the Proposed Development on the visual amenity of residents within a 2 km radius, which includes the village of Lyness. The assessment found that, although many of the properties will be subject to significant effects, none of the predicted effects on visual amenity experienced at properties have potential to reach the Residential Visual Amenity Threshold.

6.15.14 In summary, the Proposed Development will give rise to significant effects on landscape character during the construction and operation of the Proposed Development, albeit contained within the localised extent of approximately 6.5 km. It will give rise to significant effects on visual amenity out to approximately 10 km during the construction and operation of the Proposed Development. While landscape and visual receptors beyond these ranges may be affected by the influence of the Proposed Development, these effects will not be significant. There will be no significant cumulative effects. In respect of the wider 40 km study area, all effects will be relatively close-range and this reflects the wider human influences which occur across the surrounding seascapes and landscapes. While the sensitivity of the island of Hoy is recognised through the NSA designation and WLA mapped interest, the Proposed Development would be located in the south-eastern corner of the island, which is already influenced by built development and a modified landscape. There will, nonetheless, be significant effects as a result of the Proposed Development in this localised area.

6.15.15 All effects during the construction of the Proposed Development will be short-term and reversible and all effects during the operation of the Proposed Development will be long-term and reversible. All effects will be adverse in nature.

**Table 6.8: Summary of Residual Significant Effects**

| Receptor | Sensitivity | Construction - magnitude of change | Construction- significance of effect | Operation - magnitude of change | Operation - significance of effect | Cumulative magnitude of change / effect |
|---|---|---|---|---|---|---|
| **Rough Moorland** | Medium to low | Medium | Not significant | N/A | N/A | N/A |
| **Coastal Basin LCT (301): Widewall Bay LCU** | Medium | Low<br>No effect | Not significant | Low<br>No effect | Not significant | Low<br>Not significant |
| **Enclosed Bays LCT (305): Swanbister Bay LCU** | Medium to low | Low<br>No effect | Not significant | Low<br>No effect | Not significant | Low<br>Not significant |
| **Holms LCT (295): Cava and Rysa Little LCU** | Medium | Medium to low | Not significant | Medium | Significant | Low<br>Not significant |
| **Holms LCT (295): Calf of Flotta and Switha LCU** | Medium | Medium to low | Not significant | Medium to low | Not significant | Low<br>Not significant |
| **Holms LCT (295): Hunda LCU** | Medium | Low | Not significant | Low | Not significant | Low<br>Not significant |

| Receptor | Sensitivity | Construction - magnitude of change | Construction- significance of effect | Operation - magnitude of change | Operation - significance of effect | Cumulative magnitude of change / effect |
|---|---|---|---|---|---|---|
| **Holms LCT (295): Swona LCU** | Medium | Low | Not significant | Low | Not significant | Low<br>Not significant |
| **Inclined Coastal Pasture LCT (302); Lyness LCU** | Medium to high | Medium to high | Significant | Medium to high | Significant | Low<br>Not significant |
| **Inclined Coastal Pasture LCT (302); Orphir LCU** | Medium to high | Medium to low<br>Low | Not significant | Medium to low<br>Low | Not significant | Low<br>Not significant |
| **Inclined Coastal Pasture LCT (302); Hoxa LCU** | Medium<br>Low | Medium to low<br>Low / no change | Not significant | Medium to low<br>Low / no change | Not significant | Low<br>Not significant |
| **Low Moorland LCT (311): West Flotta LCU** | Medium | Medium to low | Not significant | Medium | Not significant | Low<br>Not significant |
| **Moorland Hills Orkney LCT (314): Hoy Central Hills LCU** | Medium to high | High / medium to high / medium<br>Low / no change | Significant<br>Not significant | High / medium to high / medium<br>Low / no change | Significant<br>Not significant | Low<br>Not significant |
| **Moorland Hills Orkney LCT (314): Ward Hill** | Medium to high | Low / no change | Not significant | Low / no change | Not significant | Low<br>Not significant |

| Receptor | Sensitivity | Construction - magnitude of change | Construction- significance of effect | Operation - magnitude of change | Operation - significance of effect | Cumulative magnitude of change / effect |
|---|---|---|---|---|---|---|
| **Rugged Hills Orkney LCT (316): Ward Hill LCU** | Medium to high | Medium to low | Not significant | Medium to low | Not significant | Low<br>Not significant |
| **Rolling Hill Fringe LCT (313): Scorra Dale LCU** | Medium | Low | Not significant | Medium to low | Not significant | Low<br>Not significant |
| **Undulating Island Pasture LCT (299); East Flotta LCU** | Medium | Medium to low | Not significant | Medium to low | Not significant | Low<br>Not significant |
| **Whaleback Islands LCT (296); Fara LCU** | Medium to high | Medium | Significant | Medium to high | Significant | Low<br>Not significant |
| **Whaleback Islands LCT (296); South Walls LCU** | Medium to high | Medium | Significant | Medium to high | Significant | Low<br>Not significant |
| **RCCA 23: Orphir** | Medium<br>Medium to low | Medium to low / low / no change | Not significant | Medium to low / no change | Not significant | Low<br>Not significant |
| **RCCA 24: Stromness and Clestrain Sound** | Medium to high | Medium to low / low / no change | Not significant | Medium to low / low / no change | Not significant | Low<br>Not significant |

| Receptor | Sensitivity | Construction - magnitude of change | Construction- significance of effect | Operation - magnitude of change | Operation - significance of effect | Cumulative magnitude of change / effect |
|---|---|---|---|---|---|---|
| **RCCA 31: Cava, Rysa Little and Fara** | Medium | Medium<br>No change | Significant – western coasts<br>Not significant – eastern coasts | Medium<br>No change | Significant – western coasts<br>Not significant – eastern coasts | Low<br>Not significant |
| **RCCA 32: South East Hoy** | Medium to high – southern and central section<br>Medium – northern section | Medium to high<br>Medium to low / low / no change | Significant – Crockness to Ruberry<br>Not significant – remaining coasts | Medium to high / medium<br>Medium to low / low / no change | Significant – Crockness to Ruberry<br>Not significant – remaining coasts | Low<br>Not significant |
| **RCCA 33: Flotta** | Medium– western coast<br>Medium to low – remaining coasts | Medium– western coast<br>Low / no change – remaining coasts | Not significant | Medium– western coast<br>Low / no change – remaining coasts | Not significant | Low<br>Not significant |
| **RCCA 34: North Bay, Longhope and Switha** | Medium to high – north coast South Walls<br>Medium – remainder of RCCA | Medium to high – north coast of South Walls<br>Medium – south coast of Hoy | Significant | Medium to high – north coast of South Walls<br>Medium – south coast of Hoy | Significant | Low<br>Not significant |

| Receptor | Sensitivity | Construction - magnitude of change | Construction- significance of effect | Operation - magnitude of change | Operation - significance of effect | Cumulative magnitude of change / effect |
|---|---|---|---|---|---|---|
| **RCCA 38: West Burray and South Ronaldsay** | Medium – west coast<br>Medium to low – remaining parts | Medium to low – west coast<br>Low / no change – remaining parts | Not significant | Medium to low – west coast<br>Low / no change – remaining parts | Not significant | Low<br>Not significant |
| **VP1: Knap of Trowieglen** | Medium to high | Medium | Significant | Medium | Significant | Low<br>Not significant |
| **VP 2: West Hill, Flotta** | Medium to high | Medium to high | Significant | Medium to high | Significant | Low<br>Not significant |
| **VP 3: Longhope, South Walls** | Medium to high – residents / Medium – road-users | Medium to high | Significant | Medium to high | Significant | Low<br>Not significant |
| **VP 4: A961 OS Viewpoint, South Ronaldsay** | Medium to high – stationary road-users / Medium – transitory road-users | Medium to low | Not significant | Medium to low | Not significant | Low<br>Not significant |
| **VP 5: St Margaret's Hope Ferry** | Medium | Medium to low | Not significant | Medium | Not significant | Low<br>Not significant |

| Receptor | Sensitivity | Construction - magnitude of change | Construction- significance of effect | Operation - magnitude of change | Operation - significance of effect | Cumulative magnitude of change / effect |
|---|---|---|---|---|---|---|
| **VP 6: Orphir, A964** | Medium to high – residents / Medium – road-users | Medium to low | Not significant | Medium to low | Not significant | Low<br>Not significant |
| **VP 7: Clestrain, A964** | Medium to high | Medium to low | Not significant | Medium to low | Not significant | Low<br>Not significant |
| **VP 8: Dunnet Head, Mainland** | High | Low | Not significant | Medium to low | Not significant | Low<br>Not significant |
| **VP 9: Duncansby Head, Mainland** | Medium to high | Low | Not significant | Low | Not significant | Low<br>Not significant |
| **VP 10: Ward Hill** | High | Medium | Significant | Medium | Significant | Low<br>Not significant |
| **VP 11: Lyness Naval Cemetery** | Medium to high | High | Significant | High | Significant | Low<br>Not significant |
| **VP 12: North Walls School** | Medium to high | High | Significant | High | Significant | Low<br>Not significant |

| Receptor | Sensitivity | Construction - magnitude of change | Construction- significance of effect | Operation - magnitude of change | Operation - significance of effect | Cumulative magnitude of change / effect |
|---|---|---|---|---|---|---|
| **VP 13: Bakingstone Hill** | Medium to high | High | Significant | High | Significant | Low<br>Not significant |
| **VP14: Houton to Lyness Ferry** | Medium to high | Medium to high | Significant | Medium to high | Significant | Low<br>Not significant |
| **VP15: A961 Burray** | Medium to high – stationary road-users / Medium – transitory road-users | Low | Not significant | Low | Not significant | Low<br>Not significant |
| **VP 16: Withi Gill** | Medium to high | Medium to high | Significant | Medium to high | Significant | Low<br>Not significant |
| **B9047** | Medium to high | High / medium to high / medium<br>No effect – north of Lyrawa Hill | Significant<br>Not significant – north of Lyrawa Hill | High / medium to high / medium<br>No effect – north of Lyrawa Hill | Significant<br>Not significant – north of Lyrawa Hill | Low<br>Not significant |
| **Houton to Lyness Ferry** | Medium to high | High / Medium to high / medium | Significant | High / Medium to high / medium | Significant | Low<br>Not significant |

| Receptor | Sensitivity | Construction - magnitude of change | Construction- significance of effect | Operation - magnitude of change | Operation - significance of effect | Cumulative magnitude of change / effect |
|---|---|---|---|---|---|---|
| **Lyness** | Medium to high | High | Significant | High | Significant | Low<br>Not significant |
| **Longhope** | Medium to high | Medium to high | Significant | Medium to high | Significant | Low<br>Not significant |
| **H7 Wee Fea Core Path** | Medium to high | High | Significant | High | Significant | Low<br>Not significant |
| **F1 West Hill Circular Core Path** | Medium | Medium<br>Medium to low / low / no change | Significant – western section<br>Not significant – remaining section | Medium to high<br>Medium to low / low / no change | Significant – western section<br>Not significant – remaining section | Low<br>Not significant |

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