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.

6.1.2 The Proposed Development comprises the construction of the six proposed turbines, each 149.9m to blade tip, and associated infrastructure, including access tracks, substation compound and 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 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, 15 Landscape Character Units (LCUs), three Regional Coastal Character Areas (RCCAs), two designated landscapes, 13 viewpoints and four principal visual receptors.

6.1.4 The effects of the Proposed Development are assessed as being relatively localised. The Zone of Theoretical Visibility models (ZTVs) illustrate an especially contained pattern in which visibility is largely concentrated within the viewshed of the Wide Firth, which extends a minimum of 2 km and a maximum of 8 km from the Proposed Development. As a direct result of this largely contained pattern of visibility, the landscape and visual receptors assessed are all located within a 15 km radius of the Proposed Development. This has been identified as the zone within which there is likelihood that significant effects may arise.

6.1.5 In respect of the physical effects on landscape elements, the assessment found that the direct effect on the agricultural land as a result of the construction of the Proposed Development will be not significant.

6.1.6 In respect of effects on landscape character, the assessment found there will be significant effects within a 5 to 6 km radius of the Proposed Development, with 13 LCUs either wholly or partially significantly affected. These LCUs are either close to the site or located around the Wide Firth from where a strong visual association with the site arises. All LCUs beyond this radius will undergo non significant effects. In terms of coastal character, the Proposed Development will give rise to significant effects on the Wide Firth RCCA, largely owing to the strong association between the site and the surrounding coastal landscapes, and very localised significant effects from the more sensitive parts of the Kirkwall RCCA and Shapinsay RCCA. All other RCCAs will not be significantly affected.

6.1.7 In respect of landscape designations, the assessment found that there will be no significant effects on national and regional landscape designations within the study area. While the overall effect on Balfour Castle GDL was found to be not significant, a localised significant effect associated with the more exposed southern terraces was identified. A detailed assessment of the effects on the special qualities of the Orkney - Hoy and West Mainland NSA found that the Proposed Development will not give rise to any significant effects on this designation.

6.1.8 In respect of effects on visual amenity, the assessment found that 12 of the 13 viewpoints assessed will be significantly affected during the construction and operational phases of the Proposed Development. These viewpoints are all located within an approximate 6 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 6 km range will not be significantly affected as a result of the Proposed Development.

6.1.9 In terms of the principal visual receptors assessed, it was found that the more elevated or exposed parts of Kirkwall, to the east, and Finstown, to the west, will be significantly affected during the construction and operational phases, while the remaining parts of these settlements and all other settlements in the study area will not be significantly affected. The A965 between Finstown and Kirkwall will also be significantly affected, along with the southern part of the A966, owing to the proximity and openness of views to the Proposed Development from these sections of road. The remainder of the A966 and all other routes, will not be significantly affected during either the construction and operational phases.

6.1.10 The most relevant wind farms to the cumulative assessment are operational and these form part of the baseline situation. The assessment of the Proposed Development in addition to the cumulative situation is covered by the main assessment as this takes into account all the operational wind farms, including Hammars Hill and Burgar Hill and the single turbines at Rennibister and Crowness Business Park. There will be no significant cumulative effects on any landscape or visual receptors largely owing to the relatively small scale of the cumulative wind farms, both in terms of the number of turbines and their size, which prevents wind farms becoming the prevailing characteristic of landscape character or visual amenity.

6.1.11 In summary, the Proposed Development will give rise to significant effects on landscape character and visual amenity within the localised extent of approximately 5 to 6 km. 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 close range and this reflects the natural containment of the site owing to its low-lying location and enclosure from the surrounding moorland hills.

6.1.12 All effects during the construction of the Development will be short-term and reversible and all effects during the operation of the Development will be long-term and reversible. All effects are assumed to 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 Volumes 3 and 4:

- 6.1: Landscape and Visual Impact Assessment Methodology (Volume 4);
- 6.2: Residential Visual Amenity Assessment (RVAA) (Volume 4); and
- 6.3: Viewpoint Selection (Volume 3).

6.2.3 This chapter includes the following elements:

- legislation, policy and guidance;
- consultation;
- assessment methodology and significance criteria;
- baseline conditions;
- receptors brought forward for assessment;
- standard mitigation and likely effects;
- residual effects; 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 based on National Parks and National Scenic Areas and are defined as 'Areas where wind farms will not be acceptable'. Group 2 areas 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 (2km from cities, towns and villages identified on the Local Development Plan). Group 2 areas are defined as 'Areas of Significant Protection'. Group 3 areas have 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 western and central parts of the site lie within a Group 3 area, where there is potential for wind farm development, while the eastern part lies within a Group 2 area, which is an area of significant protection, relating to the 2km buffer zone applied to Kirkwall's settlement boundary.

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 Spatial Strategy Framework presented in the OLDP shows the western and central parts of the site as an 'Area with Potential for Wind Farms' and the eastern part of the site as an 'Area of Significant Protection.' The restriction on the eastern side of the site appears to be part of a buffer around the nearby settlement of Kirkwall. 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 6.13:

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);
- Advice Note 01/11 Photography and Photomontage in Landscape and Visual Impact Assessment (Landscape Institute, 2011);
- Visual representation of development proposals Technical Guidance Note 02/17 (Landscape Institute 31 March 2017);
- Assessing the Cumulative Impact of Onshore Wind Energy Proposed Developments (SNH, 2012);
- Landscape Character Assessment Guidance for England and Scotland (SNH and TCA, 2002);
- Scottish Natural Heritage consultation on draft guidance: Assessing impacts on Wild Land Areas - technical guidance (2017);
- Residential Visual Amenity Assessment (RVAA)-Technical Guidance Note 2/19. (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.

Landscape Capacity Study for Wind Energy in Orkney (2014)

6.3.25 The Landscape Capacity Study for Wind Energy in Orkney (LCSWEO) 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.

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 20MW could be accommodated without exceeding the underlying landscape capacity*." In respect of the site, while it is not identified as an "*area with highest underlying capacity"* in Figure A of the LCSWEO, it is also not identified as an "*area with no underlying capacity"* or an "*area where cumulative impact limits further development*". It is instead, identified as an "*area with limited underlying capacity*".

6.3.27 The fact that the site is set on the coastal edge and offset from the moorland hills to the south, is considered favourably in the following statement: "*Away from the uplands, capacity for turbines taller than 50m is found in the coastal lowlands in the more remote peninsulas and headlands, typically of landscape types Low Island Pastures, Undulating Island Pastures and Low Moorland where there is a strong relationship with the wider seascape and an often undramatic coastline, although turbines still require careful siting to avoid impacts to sensitive coastlines and coastal features."* As specified in the description, the site has "*a strong relationship with the wider seascape"* and the coastline is largely featureless.

6.3.28 Within the more detailed assessment of the landscapes which occur in West Mainland, the following reference is of particular relevance; *"Capacity for similar scale developments also exists along the settled Inclined Coastal Pastures occurring along the southern and western coasts, which often benefit from the back clothing of Moorland Hills.'* The site is located in the Inclined Coastal Pasture LCT and is also back-clothed by the Moorland Hills.

6.3.29 'Table 6.2a West Mainland: Summary of Landscape Capacity and Proposed Limits to Future', attributes a low capacity to the Inclined Coastal Pasture LCT in respect of the very large turbine typology (80 to 125 m), but also identifies a low capacity for all LCTs across West Mainland.

6.3.30 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.*"

6.3.31 In the Appeal Decision Notice for the proposed 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 this appeal and agreeing with the reservations expressed.

6.3.32 In the LCSWEO, 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

6.3.33 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 in order to provide

additional clarity regarding the material factors, outlined within Supplementary Guidance: Energy, to be considered in the assessment of planning applications.

6.3.34 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."

6.3.35 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 2019. Key information provided by consultees relevant to this LVIA assessment is provided in Table 6.1. A more detailed response to OICs request for alternative viewpoint is presented in Appendix A6.3: Viewpoint Selection.

Table 6.1 – Consultation on LVIA matters

Consultee name and date	Consultee Comment	Consultant Comments / Actions
Scottish Natural Heritage Scoping Opinion 21/10/2019	*'Since responding to your scoping consultation our service level statement has been amended and we no longer advise on landscape where the development is outwith a National Scenic Area (NSA) or Wild Land Area or unlikely to have an adverse effect on either.'*	The site is located outwith all NSAs and WLAs and is unlikely to have significant effect on the Orkney – Hoy and West Mainland NSA and Hoy WLA, owing to separation distances and limited visibility. This finding concurs with SNH's comment regarding the unlikely nature of adverse effects arising in respect of the WLA or NSA.
Orkney Island Council Scoping Opinion 06/11/2019	*'In line with previous comments and the scoping response I would advise that the visualisation points have been selected below differ from a number that you had proposed, given that the proposed turbines would be the largest structures within the landscape, a comprehensive assessment of the impact of the proposal on the setting of Kirkwall and Wide Firth and to the manner in which it will be experienced. Key views to be considered should include approaching ferry and cruise traffic to Hatston Pier, the experience of people approaching Kirkwall from the West (including cumulative impacts experienced on the*	The viewpoint list from scoping was refined following site work to ensure that viewpoints were showing the fullest visibility from the most representative viewpoints and in locations that were not jeopardising the safety of the assessor. Following correspondence with OIC, four additional viewpoints have been added to the

Consultee name and date	Consultee Comment	Consultant Comments / Actions
	approach to Kirkwall with existing turbines and those currently within the planning system), the impact on the views at the Eastern, southern gateway to Kirkwall and the setting of the settlement. In addition, views from historic environment assets and other sensitive receptors such as villages, core paths and viewpoints (for example at Wideford Hill) should be considered to assess the potential impacts of the development. All visualisations should be undertaken in accordance the SNH guidance 'Visual representation of wind farms' it is essential that all photographs are taken in good visibility, clear skies etc. *If lighting is required, a basic visualisations showing the existing view alongside an approximation of how the wind farm might look at night with aviation lighting will be required, this will be required where the wind farm is likely to be regularly viewed at night (e.g. from a settlement, transport route) agreement of these will be needed if lighting is required.'*	LVIA including Craigiefield on Car Ness, the A961 to the south of Kirkwall, Quanterness to the immediate south of the site and Cuween to the south-west of the site, with a number of different types of visual receptors assessed in respect of each viewpoint. All visualisations have been prepared in accordance with SNH guidance. No visible lighting is required on the turbines as their height to blade tip is below 150m (149.9m), which is the height above which visible lighting is required as set out in the Policy Statement of the Civil Aviation Authority.

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 (149.5m). 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, 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. A significant effect is, in reality, 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 6.11. 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 were unlikely to be relevant to the assessment.

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 character typology, Wild Land Areas, operational and potential cumulative wind farms, and views

from settlements and routes, including roads, railway lines, National Cycle Routes, long-distance walking routes and recreational sailing 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 key in the assessment.

Site Visit

6.5.6 Field surveys have been carried out across the 40 km radius study area, although the focus 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 in order to visit the aspects of the landscape and visual resource that have been identified through the desk study and 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, 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, including a wide range of receptors, landscape character, and directions and distances from the Proposed Development.

Methodology for the Assessment of Effects

6.5.7 The significance of the potential effects of the Proposed Development has been classified by professional consideration of the sensitivity of the receptor and the magnitude of the potential impact. This section summarises the methodology and guidance used to carry out the LVIA, which is described in full in Appendix A6.1.

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 A6.1. ◘

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 A6.1.

6.5.13 Levels of sensitivity; high, medium-high, medium, medium-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 effect 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 A6.1.

6.5.15 Levels of magnitude of change; high, medium-high, medium, medium-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: **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
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.

Cumulative Assessment

6.5.20 Significant cumulative landscape and visual effects arise where the addition of the Proposed Development to, or in combination with, other wind farms and/or other major 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 cumulative assessment of the Proposed Development. Consented and application-stage wind farms are considered only in the cumulative assessment. Cumulative ZTVs have been prepared to illustrate theoretical visibility of the Proposed Development in conjunction with operational Hammars Hill and Burgar Hill Wind Farms (Figures 6.12 and 6.13), and consented Costa Head and Hesta Head (Figures 6.14 and 6.15). The cumulative wirelines in Figures 6.16 to 6.28 also demonstrate how limited the influence of these two consented wind farms will be on the cumulative situation. As there are no application wind farms and consented wind farms with a limited influence, the potential cumulative effects will all relate to the operational and under construction wind farms. As these from part of the baseline, the assessment of cumulative effects is contained in the main assessment. This includes the assessment of the effects of the Proposed Development in the context of operational Hammars Hill Wind Farm and Burgar Hill Wind Farm, which are both located to the north-west of the Proposed Development at a minimum distance of 8.91 km and 12.79 km respectively, as well as the single turbines at Rennibister and Crowness Business Park at a minimum distance of 1.33 km and 1.59 km respectively.

Cumulative Guidance

6.5.22 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.

6.5.23 *"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).*

6.5.24 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).

6.5.25 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.

6.5.26 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.

6.5.27 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.

6.5.28 In respect of the Proposed Development, the absence of any other medium or large scale wind farms on the Orkney Islands notably reduces the potential for significant in-combination effects from arising. The most relevant operational wind farms are Hammars Hill and Burgar Hill, which are both located to the north-west of the Proposed Development at a minimum distance of 8.91 km and 12.79 km respectively, as well as the single turbines at Rennibister and Crowness Business Park at a minimum distance of 1.33 km and 1.59 km respectively. Collectively, these developments form a baseline in which the horizontal and vertical extents are especially well contained, such that even with the addition of the Proposed Development, a wind farm landscape will not arise.

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, 12 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 as the turbines will be removed on 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 thirteen viewpoint locations, which are representative of the visual amenity of visual receptors in the area surrounding the Proposed Development. 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, all thirteen of the viewpoints also have accompanying photomontages. These use the baseline photography and add onto this a computer-generated model of the Proposed Development. More detailed information on graphic production is included in the Assessment Methodology in Appendix A6.1.

Limitations to Assessment

6.5.42 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)

6.5.43 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 5m 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.

6.5.44 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

6.5.45 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

tip heights of the turbines above ground level from those that are assumed in the assessment and shown in figures. Such variation may also affect ZTVs.

6.5.46 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.

6.5.47 Not all areas of the study area are publicly accessible, and this has limited the specific assessment of views from residential and other properties, for example. Not all parts of the study area have been visited due to time and accessibility constraints, for example the Wide Firth other than the public ferry routes. 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;
- 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 Mainland of Orkney, to the west of Kirkwall. It occupies an area of the coastal plain, known as Quanterness. This is a relatively level piece of land, albeit with a gradual fall from the moorland hill fringes in the south towards the coastal edge to the north. The shoreline of Quanterness is relatively low and smooth with a rocky shore to the east and sandy shore to the west. The landcover comprises farm fields of pasture and arable crops, with enclosure from fences and occasional drystone dykes. There are no trees on the site and those that grow in the surrounding area are small and swept by onshore winds. The character of this coastal landscape is open and exposed, with an absence of visual foci or features of interest.

6.6.3 The site is situated on the southern shore of the Wide Firth, which is enclosed by the Mainland of Orkney to the south, west and north, and with the Island of Shapinsay to the north-east and Gairsay to the north. Relative to the shoreline to the west and the east, Quanterness projects out into the Wide Firth, increasing the prominence of the site in views along this southern coast, as well as from the other mainland and island coasts which wrap around this body of water. While the coastal edges are low, their outline fluctuates between indented sandy bays and projected rocky headlands. Holms, which are small rounded islands, and skerries, which are small outcrops of rock, occur intermittently across the water.

6.6.4 On the landward side, the site is enclosed by landform which rises gradually from the coastal edge to the moorland hills. The predominant land use is farming and a subtle transition is evident across this cross section, from larger fields of improved pasture and some arable crops occurring close to the coast, transitioning into smaller fields of semi-improved pasture occurring across the hill fringes and then back to larger fields of rough grazing towards the hill tops. Wideford Hill (225 m Above

Ordnance Datum (AOD)) occupies the land to the south of the site, while Keelylang Hill (221 m AOD) sits further to the south-west; these hills forming an important backdrop to the site and the coastal plains.

6.6.5 The settlement pattern in this area typically comprises towns and villages set along the coastal edge, with dispersed settlement across the rural area. Kirkwall is the largest town in Orkney. Its town centre is situated approximately 2.7 km to the south-east of the site boundary. Its low-lying location, set around the Bay Of Kirkwall, combined with the rising landform of Wideford Hill to the west, creates a sense of enclosure around the town. The small residential cluster at Hatston and Hatston Industrial Estate, occupy a more elevated position on the western edge of Kirkwall, from which the site is more readily visible. Finstown is the small village which lies approximately 4.1 km to the west of the site boundary, following a predominantly linear pattern along the main roads with the principal outlook north-east towards the Wide Firth.

6.6.6 The A965 is the main road between Kirkwall in the east and Stromness in the west, with the section to the west of Kirkwall following the coastal edge and passing in close proximity to the site. The minor road that connects Kirkwall with Finstown wraps around the southern side of Wideford Hill. The other road of relevance is the A966, which extends north from Finstown to the north of West Mainland.

6.6.7 There is an existing influence on landscape character from operational wind farms located on the Mainland of Orkney. Operational Hammars Hill and Burgar Hill Wind Farms are the two main commercial wind farms visible from this local area, albeit located to the north-west, in the moorland hills of West Mainland at a minimum distance of 8.91 km and 12.79 km from the closest proposed turbine, respectively. The single turbines at Rennibister and Crowness Business Park are located within the closer range at 1.33 km and 1.59 km.

Landscape Character

6.6.8 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.

6.6.1 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.

6.6.2 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 Orkney Landscape Wind Energy Capacity Study (OLWECS) written by Land Use Consultants in 2014 and adopted by OIC in 2015. The OLWECS also uses the LCTs presented in the original LCA and the updated data set, and therefore this information is used as the basis of this assessment.

6.6.3 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.

6.6.4 The distribution of the LCTs and relevant LCUs within the 40 km study area is shown in Figure 6.2, and in conjunction with the ZTV in Figure 6.7. This shows the very limited extent of visibility, largely concentrated around the Wide Firth. The LCTs / LCUs that show theoretical visibility and which require to be assessed in detail include the following;

- Inclined Coastal Pastures LCT – Quanterness LCU;

- Inclined Coastal Pastures LCT – Coubister LCU;
- Inclined Coastal Pastures LCT – Gorseness LCU;
- Rolling Hill Fringe LCT – Wideford Hill LCU;
- Rolling Hill Fringe LCT – Burrien Hill LCU;
- Moorland Hills LCT – Wideford Hill LCU;
- Moorland Hills LCT – West Mainland LCU;
- Ridgeline Island Landscapes LCT – Shapinsay LCU;
- Low Island Pastures LCT – Kirkwall LCU;
- Coastal Basins LCT – Isbister LCU;
- Peatland Basins LCT – Breck of Cruan LCU;
- Isolated Coastal Knolls LCT – Gorseness LCU;
- Undulating Island Pastures LCT – Kirkwall LCU; and
- Whaleback Islands LCT – Gairsay LCU.

6.6.5 The ZTV 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

6.6.6 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.

6.6.7 The distribution of the RCCAs within the 40 km study area is shown in Figure 6.2, and in conjunction with the ZTV in Figure 6.7. This shows the very limited extent of visibility, largely concentrated around the Wide Firth. The RCCAs that show theoretical visibility and which require to be assessed in detail include the following;

- RCCA 16: Wide Firth;
- RCCA 17: Kirkwall; and
- RCCA 14: West Shapinsay.

6.6.8 These are assessed, along with the LCTs / LCUs in Section 6.12.

Landscape Planning Designations

6.6.9 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.

6.6.10 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 6.8. 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

6.6.11 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 6.8 shows theoretical visibility of the Proposed Development to occur on the north-east margins of the Orkney – Hoy and West Mainland NSA. Section 6.13 presents an assessment of the effects of the Proposed Development on the Orkney – Hoy and West Mainland NSA.

Gardens and Designed Landscapes

6.6.12 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.

6.6.13 There are three nationally important Inventory Gardens and Designed Landscapes (GDL) within the study area as shown in Figure 6.3. These are Balfour Castle at approximately 5km to the north-east, Skaill House at approximately 18 km to the west, and Melsetter House at approximately 28km to the south-west. The ZTV in Figure 6.8 shows that there will be no visibility of the Proposed Development from the GDLs of Skaill House and Melsetter House, such that there will be no effect.. The ZTV shows that theoretical visibility will be almost continuous across Balfour Castle GDL. A full assessment of the effects of the Proposed Development on Balfour Castle GDL is presented in Section 6.13.

Wild Land Areas

6.6.14 In 2017, SNH published a consultation draft version of 'Assessing Impacts on Wild Land technical guidance', which was open for consultation between 26th January and 7th April 2017. Some 140 responses have been received by SNH. 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.

6.6.15 No part of the site is located within a Wild Land Area (WLA) as shown in Figure 6.3. The only WLA on Orkney is the Hoy WLA, which lies a minimum distance of approximately 19 km to the south-west. The Blade Tip ZTV in Figure 6.5a shows the limited extent and low levels of visibility that will occur across the WLA. The even more limited extent and lower levels of visibility shown in the Hub Height ZTV in Figure 6.6a confirms that where visibility occurs it will mostly comprise blade tips. From this information, it can be concluded that it is unlikely that the Proposed Development will give rise to significant effects on the Hoy WLA and therefore this WLA has been discounted from the assessment. This approach concurs with the scoping opinion from SNH where it considered that an adverse effect on the Hoy WLA will be unlikely to arise (Table 6.1).

Viewpoints

Viewpoints

6.6.16 The LVIA is informed by a series of thirteen viewpoints which are selected to represent visibility from landscape character types, landscape planning designations 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 that are included demonstrate a lower level of visibility from certain locations.

General Visibility

6.6.17 The ZTVs in Figure 6.5a and 6.5b illustrate the limited extent of theoretical visibility across the wider study area, with more visibility occurring across the seaward rather than the landward areas. It shows theoretical visibility to be largely concentrated in the Wide Firth, with bands of theoretical visibility extending across the waters to the north and north-east. The combination of the low-lying location of the Proposed Development and the scale of the enclosing hills from the south through the west to the north-west means that theoretical visibility in these directions is largely contained within the close range of approximately 3 to 8 km, where theoretical visibility is shown to be almost continuous. While the ZTV shows patches of visibility spilling west and south-west, out to upland areas across the West Mainland and across the Island of Hoy, these patches are relatively small and the extent to which the turbines will be visible will be limited. The ZTV shows visibility extending across Scapa Flow to the south, to reach Flotta, Burray and South Ronaldsay, although showing low levels at distances beyond 10 km and with the intervening landform of Wideford Hill reducing the extent to which the turbines will be visible.

6.6.18 To the north and north-east, the ZTV shows visibility extending east across the Shapinsay Sound and north-east across the Stronsay Firth. This draws theoretical visibility out to the south and south-west coasts of the islands of Shapinsay, Rousay, Eday, Westray, Sanday and Stronsay. The influence of the Proposed Development on these islands will, however, be moderated by separation distances combined with the presence of intervening landform, which will reduce the extent of actual visibility. The exception occurs in respect of Shapinsay where views towards the Proposed Development will be uninterrupted and within an approximate range of 6 to 15 km of the Proposed Development.

6.6.19 To the south-east, the ZTV shows theoretical visibility occurring patchily across the south-east part of the Mainland of Orkney beyond Kirkwall Airport. The visibility is shown to extend across the flatter headlands on the northern side of this area and the more elevated landscapes through the centre. Wirelines from this area show that visibility will typically comprise blades and tips seen set behind intervening landform and from distances between 8 and 18 km. The limited extent of visibility combined with the separation distance will moderate the effects of the Proposed Development on visual receptors in this area.

6.6.20 In summary, the ZTV shows a concentration of almost continuous and close range visibility across the viewshed of the Wide Firth basin. It is in this area that it will be most likely for significant effects to arise and therefore, the most appropriate location of representative viewpoints.

Viewpoint selection

6.6.21 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) and 6.5b (15 km) and the hub height ZTV on 6.6a (40 km) and 6.6b (15 km).

6.6.22 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	Wideford Hill	341247	1011678	1.76 km south	Walkers on the hill Moorland Hills LCT
2	Hatston	343051	1012969	1.02 km south-east	Road-users on the A965 / Residents at Hatston Moorland Hill Fringe LCT
3	A965 west of Quanterness	338327	1012672	2.59 km south-west	Road-users on the A965 / Residents in rural area Moorland Hill Fringe LCT
4	Kirkwall Harbour	345178	1011382	3.67 km south-east	Residents to east of harbour / Road-users / Visitors and workers at the harbour Coastal Basin LCT
5	Finstown	336118	1013668	4.45 km west	Road-users on the A965 / Residents in Finstown Inclined Coastal Pasture LCT
6	A966 north of Coubister	337385	1016451	4.15 km north-west	Road-users on the A965 / Residents in rural area Rolling Hill Fringe LCT
7	Gorseness / NCR1	339524	1018736	4.99 km north	Road-users on NCR1 / Residents in rural area Coastal Basin LCT
8	Balfour Castle	347472	1016401	5.54 km north-east	Residents and workers at Balfour Castle / Residents in Balfour / Ferry passengers Ridgeland Islands LCT / Balfour Castle GDL
9	Kirkwall to Shapinsay Ferry	345984	1014162	3.46 km north-east	Ferry and cruise liner passengers and workers Wide Firth RCCA
10	Craigiefield	345717	1012316	3.57 km east	Residents at Craigiefield / Walkers / Road-users on minor roads Coastal Basin LCT
11	A961, Kirkwall	345015	1009011	5.30 km south-west	Road-users on A961 / Residents on south and south-east side of Kirkwall Plateau Heath and Pasture LCT
12	Quanterness	341802	1012931	0.67 km south	Road-users on the A965 / Residents at Quanterness Rolling Hill Fringe LCT
13	Cuween	336420	1012764	4.35 km south-west	Residents in rural area / Walkers / Road-users on minor roads Rolling Hill Fringe LCT

Principal Visual Receptors

6.6.23 A number of visual receptors such as settlements and travel routes are considered in the assessment as views from them may be affected by the Proposed Development. It is not possible to consider every potential visual receptor 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, where people are likely to be located, are shown in Figure 6.4 and in conjunction with the blade tip ZTV in Figure 6.9.

Settlements and Residents

6.6.24 The historic development of Orkney has had a bearing on the settlement pattern evident today. Between the 12th and 18th centuries, the land was divided into narrow strips, known as rigs and this led to a dispersed pattern of settlement across the rural landscape, as farmers lived on, or near their land. Despite the rig system being abolished in the 18th century, it wasn't until the mid-19th century, when landlords imposed a reconfiguration of the land, that the rigs started to be consolidated into larger fields and the houses grouped into clusters. In rural areas, this mix of dispersed and, either, isolated or clustered farmstead and houses, remains. The site, and the area to the south of the site, present an example of where rigs have been consolidated to form larger fields and crofts have been replaced by farms, with a small number of isolated farmsteads occurring. In contrast, further to the west of the site, field size is typically smaller and there is a greater occurrence of more dispersed clusters of houses.

6.6.25 Historically, larger settlements on Orkney originated in sheltered inlets where the water was sufficiently deep for boats to be moored. These settlements developed into harbours, with built development tightly packed to be close to the water and to benefit from the sheltering effect from the dense urban form. Kirkwall originated in this way and developed into Orkney's main centre and largest town. Many of the ferries connecting the other Orkney Islands come in and out of Kirkwall Harbour. Kirkwall town centre is situated approximately 2.7 km to the east of the eastern site boundary. While the settlement boundary in the LDP is shown to extend out to 573 m from the eastern site boundary there is no development in this area and the closest residential settlement within the built extent of the town is approximately 2.2 km to the south-east, while the isolated residential development at Hatston is approximately 1.7 km to the south-east.

6.6.26 Finstown, which lies approximately 4.1 km to the west of the western site boundary, also originated around a sheltered bay and evolved as a settlement for fisher folk but has not expanded to the same extent as Kirkwall. Finstown is predominantly a linear settlement set along the A965 and A966 which align with the southern and western coastal edges of the Bay of Firth. While most of the properties are orientated onto the roads, those on the northern edge also have an open aspect over the bay.

6.6.27 The Orkney Local Development Plan identifies areas which it regards as 'Settlement' and these identified boundaries are shown in Figure 6.4 and in conjunction with ZTV in Figure 6.9. None of the Settlements lie within 2 km of the Proposed Development, with the exception of Kirkwall. Settlements which are relevant to the assessment include Kirkwall to the south-east, Finstown to the west and Gorseness to the north.

6.6.28 The settlements of relevance to the LVIA are represented by the following viewpoints; Viewpoint 2: Hatston, West of Kirkwall, Viewpoint 4: Kirkwall Harbour, Viewpoint 5: Finstown and Viewpoint 7: Gorseness / NCR1. These are assessed in detail in Section 6.13 of this chapter.

Road Routes

6.6.29 The road pattern across Orkney generally comprises main roads following the flat coastal edges and minor roads crossing the hillier interiors, although there are some exceptions to this rule. The A965 is the main road that connects Kirkwall in the east and Stromness in the west. As it passes round the northern side of Wideford Hill, it also passes to the immediate south of the site. The openness of the landscape means that views from the road are largely uninterrupted, with views extending north across the Wide Firth and inland towards the Moorland Hills. The A966 is the other main road in this area, which extends north from Finstown towards the north of West Mainland. As this road is inset

from the coastal edge, the views are not so closely associated with the Wide Firth, although medium to long range views are drawn over the surrounding landscape in which the Moorland Hills around Wide Firth are a defining feature.

6.6.30 The network of main roads is complemented by a network of B roads, other minor roads and tracks to ensure that a substantial area of the Mainland of Orkney is accessible to vehicles. The minor road that connects Kirkwall with Finstown is situated to the south of Wideford Hill, such that it does not pass the site, although the site is visible from the western section of this road on the approach into Finstown.

6.6.31 National Cycle Route 1 (NCR1) follows sections of various roads to establish a route across the Mainland of Orkney. Those sections of relevance to this assessment include the minor road that forms a connecting loop from the A966 through Gorseness, the B9055 across the Ness of Brodgar and the minor road that connects the A965 west of Finstown to the A964 east of Swanbister.

6.6.32 The roads of relevance to the LVIA are represented by the following viewpoints; Viewpoint 2: Hatston, West of Kirkwall (A965), Viewpoint 3: A965 east of Quanterness, Viewpoint 5: Finstown (A965), Viewpoint 6: A966 north of Coubister and Viewpoint 7: Gorseness / NCR1. These are assessed in detail in Section 6.13 of this chapter.

Walking Routes

6.6.33 The most important long distance walking route on Orkney is the St Magnus Way which weaves a route back and forth from coast to coast across the mainland whilst covering much of the length from north to south. The sections of most relevance to this assessment occur between Dounby and Finstown and Finstown and Orphir. More specifically, it will only be the approach into Finstown from the north-west and the route out to the south that have the potential to be affected by the Proposed Development. The ZTV in Figure 6.9 shows that theoretical visibility will be screened from the remaining sections by the intervening landform. There are also a number of shorter Core Paths around the site, the most relevant of these being K4 that connects Kirkwall with Wideford Hill and the Wideford Hill Chambered Cairn, although much of this route is set behind Wideford Hill and it will only be from select points that the Proposed Development will be visible. There is also Core Path WM7 providing access from the A965 near Holm Point to Keelylang Hill and Core Path WM8 providing access to the Cuween Cairn from the sane starting point as WM7.

6.6.34 Those walks of relevance to the LVIA are represented by the following viewpoints; Viewpoint 1: Wideford Hill and Viewpoint 5: Finstown. These are assessed in detail in Section 6.13 of this chapter.

Ferry Routes

6.6.35 Ferry routes from Kirkwall run to the islands of Shapinsay, Westray, North Ronaldsay, Eday, Sanday and Stronsay, as well as back to Aberdeen on the Mainland of Scotland. While all these ferry routes pass in and out of Kirkwall Bay, beyond this, the Aberdeen route takes an east-west course while the island ferries broadly follow a north-south course. As the island ferries cross Wide Firth, passengers gain uninterrupted views south-west to Quanterness where the site is located, although the extent of these views may be limited in poor weather conditions.

6.6.36 The crossing to Shapinsay takes 40 minutes and with six crossings on weekdays, five on Saturdays and two on Sundays this ensures Shapinsay is fairly well connected to the Mainland of Orkney. The crossings to the other islands take an hour or longer and with fewer crossings per day, while the ferry to Aberdeen takes 7 hours with only three crossings per week. There are also more than 140 cruise liners which visit Orkney annually, using the piers at both Hatston and Kirkwall.

6.6.37 The ZTV shown in Figure 6.9 shows 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 continuous across Wide Firth and extending across Shapinsay Sound to the east, Stronsay Firth to the north-east and Sanday Sound beyond this, and over the eastern side of Westray Firth and Rapness Sound to the north. The extent of this visibility relates to the openness of the water and the relatively flat landform of many of the islands. It means that visibility from the ferry routes to many of the Orkney Islands will be largely continuous albeit distant beyond Wide Firth and with a much wider seascape and landscape around.

6.6.38 The key ferry routes with potential to be affected by the Proposed Development include Kirkwall to Shapinsay, and Kirkwall to Westray, Eday and Sanday. Passengers on cruise liners will also be affected. These visual receptors are represented by Viewpoint 9: Kirkwall to Shapinsay Ferry and are assessed in detail in Section 6.13 of this chapter.

Trends and Projected Future Baseline

6.6.39 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.

6.6.40 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.

6.6.41 In terms of future development on the islands, Figure 6.11 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. There are currently no application stage wind farms of turbines over 50m. 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. 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.

6.6.42 The Proposals Plan in the Orkney Local Development Plan illustrates the allocated land uses on the western edge of Kirkwall, closest to the Proposed Development. These comprise Business and Industrial land-use allocations set along the northern side of Grainshore Road and the A965 and adjacent to the coastline. They also comprise some housing land-use allocations set close to the existing modern development at Hatston. These developments will draw the more urban character of Kirkwall into this rural-urban fringe.

Cumulative Wind Farm Developments

6.6.43 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."*

6.6.44 The developments to be included 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'.*

6.6.45 While the baseline presented in the LVIA would be altered by the introduction of further wind farms, the cumulative map in Figure 6.11, combined with the cumulative ZTVs in Figures 6.12 to 6.15, and the cumulative wirelines in Figures 6.16 to 6.28, together illustrate the absence of any application wind farms and the limited influence of any consented wind farms. The cumulative assessment, therefore, focuses on the cumulative effect of the Proposed Development in conjunction with the operational and under construction wind farms and as such, is presented along with the main assessment in Sections 6.12 and 6.13.

6.6.46 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 8th November 2019. Any changes in the cumulative situation after this date have not been considered in the CLVIA.

6.6.47 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 50m are not included within the assessment.

6.6.48 A total of 30 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. Furthermore, the Moorland Hills LCT which surround the western and southern parts of Wide Firth will screen or limit the extent to which other cumulative wind farms are inter-visible with the Proposed Development.

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
Rennibister	Operational	1	67	1.33 / SW	Yes
Crowness Business Park	Operational	1	67	1.59 / SE	Yes
Hammars Hill	Operational	5	67	8.91 / NW	Yes
Howe, Shapinsay	Operational	1	67	9.23 / NE	Yes
Holodykes	Operational	1	80	11.58 / NW	No – single turbine / very limited inter-visibility
Burgar Hill	Operational	6	116	12.79 / NW	Yes

Name	Status	Number of turbines	Blade tip height in m	Distance in km / Direction	Referenced in LVIA
Kingarley Hill	Operational	1	67	15.64 / N	No – single turbine / limited inter-visibility / distant location
Northfield	Operational	1	70	16.41 / SSE	No – single turbine / limited inter-visibility / distant location
Upper Stove, Deerness	Operational	1	67	16.67 / ESE	No – single turbine / limited inter-visibility / distant location
Barnes of Ayre	Operational	3	67	19.04 / ESE	No – limited inter-visibility / distant location
West Hill, Flotta	Operational	1	100	20.40 / SSW	No – single turbine / limited inter-visibility / distant location
Sandy Banks	Operational	1	77	21.34 / NE	No – single turbine / limited inter-visibility / distant location
Stronsay Development Trust	Operational	1	67	21.38 / ENE	No – single turbine / limited inter-visibility / distant location
Ore Brae, Hoy	Operational	1	67	22.76 / SW	No – single turbine / limited inter-visibility / distant location
Spurness Point	Operational	5	100	26.80 / NE	No – limited inter-visibility / distant location
Newark	Operational	1	59.7	31.13 / N	No – single turbine / limited

Name	Status	Number of turbines	Blade tip height in m	Distance in km / Direction	Referenced in LVIA
					inter-visibility / distant location
Gallowhill	Operational	2	67	32.08 / N	No – limited inter-visibility / distant location
Westray Development Trust	Operational	1	77	32.36 / N	No – single turbine / limited inter-visibility / distant location
Work Farm	Under construction	2	67	5.25 / E	Yes
Akla	Under construction	1	100	8.45 / SW	No – single turbine / limited inter-visibility / distant location
Berriedale	Under construction	1	67	20.70 / S	No – single turbine / limited inter-visibility / distant location
Bu Farm Repowering	Under construction	3	75	21.09 / ENE	No – limited inter-visibility / distant location
Costa Head	Consented	4	125	18.7 / NW	No – limited inter-visibility / distant location
Hoy Community Turbine	Consented	2	74	23.01 / SSW	No - limited inter-visibility / distant location
Hesta Head	Consented	5	125	25.36 / S	No - limited inter-visibility / distant location
Rennibister Extension	Scoping	5	125	0 .2 / SE	No available information regarding layout or turbines

Name	Status	Number of turbines	Blade tip height in m	Distance in km / Direction	Referenced in LVIA
Rothiesholm Head	Scoping	8	125	20.70 /ENE	No - limited inter-visibility / distant location
Hoy	Scoping	7	150	23.15 / SSW	No - limited inter-visibility / distant location
Faray	Scoping	8	150	24.47 / N	No - limited inter-visibility / distant location
Halcro Head	Scoping	6	125	27.25 / S	No - limited inter-visibility / distant location

6.6.2 The wind farms which have the potential to influence the cumulative assessment include operational Hammars Hill at approximately 8.91 km to the north-west and operational Burgar Hill at approximately 12.79 km in the same direction, albeit with some screening from the intervening Moorland Hills. The single turbines which will have an influence include Rennibister at 1.33 km and Crowness Business Park at 1.59 km.

6.6.3 Cumulative ZTVs have been generated for the Proposed Development in conjunction with operational Burgar Hill (Figure 6.12) and operational Hammars Hill (Figure 6.13), and these show a broad extent of inter-visibility highlighting their relevance to the cumulative assessment. Cumulative ZTVs have also been generated for the Proposed Development in conjunction with consented Costa Head (Figure 6.14) and consented Hesta Head (Figure 6.15), and these show very limited inter-visibility highlighting their lack of relevance and justifying their scoping out of the cumulative assessment.

6.6.4 The cumulative effects that will arise as a result of the addition of the Proposed Development will relate chiefly to open water and coastlines, open farmland and elevated locations from where it may be possible to see the Proposed Development simultaneously and in succession as part of wider views that contain other wind farms. Cumulative effects may also arise through sequential visibility of the Proposed Development from the roads and core paths on the Mainland of Orkney and ferries on the Wide Firth, since other wind farms are visible from these routes.

6.6.5 All operational and under construction sites are included in the main assessment as they form a part of the baseline situation. Their presence has the potential to influence the assessment of effects on landscape character and the assessment of effects on views. As there are no application wind farms and the consented wind farms are unlikely to have a notable influence on the cumulative situation, other cumulative scenarios are not assessed in this LVIA.

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

- Agricultural land.

Landscape Character Types and Units

- Inclined Coastal Pastures LCT – Quanterness LCU;
- Inclined Coastal Pastures LCT – Coubister LCU;
- Inclined Coastal Pastures LCT – Gorseness LCU;
- Rolling Hill Fringe LCT – Wideford Hill LCU;
- Rolling Hill Fringe LCT – Burrien Hill LCU;
- Moorland Hills LCT – Wideford Hill LCU;
- Moorland Hills LCT – West Mainland LCU;
- Ridgeline Island Landscapes LCT – Shapinsay LCU;
- Low Island Pastures LCT – Kirkwall LCU;
- Coastal Basins LCT – Isbister LCU;
- Peatland Basins LCT – Breck of Cruan LCU;
- Isolated Coastal Knolls LCT – Gorseness LCU;
- Undulating Island Pastures LCT – Kirkwall LCU; and
- Whaleback Islands LCT – Gairsay LCU.

Coastal Character Areas

- RCCA 16: Wide Firth;
- RCCA 17: Kirkwall; and
- RCCA 14: Shapinsay.

Landscape Designations

- Orkney – Hoy and West Mainland NSA; and
- Balfour Castle GDL.

Viewpoints and Principal Visual Receptors

- Viewpoint 1: Wideford Hill;
- Viewpoint 2: Hatston;
- Viewpoint 3: A965 west of Quanterness;
- Viewpoint 4: Kirkwall Harbour;
- Viewpoint 5: Finstown;
- Viewpoint 6: A966 north of Coubister;
- Viewpoint 7: Gorseness / NCR1;
- Viewpoint 8: Balfour Castle;
- Viewpoint 9: Kirkwall to Shapinsay Ferry;
- Viewpoint 10: Craigiefield, Car Ness;

- Viewpoint 11: A961, Kirkwall;
- Viewpoint 12: Quanterness; and
- Viewpoint 13: Cuween.

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 lies within an area of Inclined Pastoral Valley LCT which is characterised by low and relatively flat land which slopes gently down to the coastal edge. Quanterness is a broad coastal shelf that sits out into Wide Firth, with the backdrop of Wideford Hill and the wider Moorland Hills LCT to the south. The land is used as farmland and is characterised by a geometric field pattern of fences and occasional stone dykes. It is largely uninhabited with the exception of farmsteads and cottages on the western and southern edge. There is an existing single turbine associated with Rennibister Farm to the west and a single turbine at Crowness Business Park to the east.

6.8.3 The suitability of the site for wind farm development relates principally to its confined visibility, which limits the extent of visibility from the wider area, as demonstrated in the ZTVs in Figures 6.5a and 6.5b. The location of the Proposed Development on the low-lying coastal edge, combined with the enclosure formed by the Moorland Hills LCT, which wrap around from the south through the west to the north, ensures that theoretical visibility is largely contained within the viewshed of Wide Firth. Wideford Hill, to the immediate south, acts as a screen that largely prevents visibility from extending south beyond the close range.

6.8.4 The Inclined Coastal Pastures LCT has a simple and open character, without any distinct landmark features. This simplicity forms a relatively neutral baseline which can accommodate the proposed turbines without visual conflict arising, which might arise if other features were present. The two features which are evident are the single turbines at either end of the site. As these are also wind turbines, there will be unity in the overall appearance of this area, although the single turbines are notably smaller in size.

6.8.5 LCSWEO highlights the sensitivity of the Moorland Hills LCT as a location for wind farm development owing to their likely prominence across the Mainland of Orkney. The Proposed Development will be located a minimum of 210 m below the summit of Wideford Hill and this will notably reduce the extent and influence of their visibility across the study area. Furthermore, Wideford Hill forms a substantial backdrop to the Proposed Development, that helps to contain the perceived scale of the proposed turbines. The influence of the Proposed Development is notably less owing to its location on the Inclined Coastal Pastures LCT than it will be, were it located on the ridge of the Moorland Hills LCT.

6.8.1 The settled and cultivated nature of much of the Orkney Islands means that the landscape has been extensively modified and that there are few natural or semi-natural areas. A dispersed settlement pattern and enclosed farmland occurs across much of Orkney, such that there is a human influence in almost every part. This reduces the sense of remoteness and wildness, which will otherwise add to the sensitivity of landscape and visual receptors.

Layout Design

6.8.2 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 likley landscape and visual effects. This helps to create a wind farm which is appropriate for the existing landscape character and visual features of an area. 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.

6.8.3 In order to minimise negative effects on the landscape and views, a number of design principles were considered. Insofar as was 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 Information above, and are set out as follows:

- To create a 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 Development in views from around the Wide Firth appears as a compact and well-defined group in which the turbines relate well to the landform and each other;
- To group turbines to create a balanced and coherent image, avoiding where possible overlapping of turbine rotors in lines or the occurrence of outliers, and favouring an irregular cluster;
- To ensure that the infrastructure follows the pattern of the landscape, by tying in with existing field tracks and field boundaries, where possible; and
- To site the sub-station compound and temporary construction compound within the central part of the site, thus increasing the separation distance from visual receptors.

6.8.4 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. The key viewpoints from Wideford Hill, Finstown, Kirkwall, the A965, the A966 and Gorseness 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	Construction plant, temporary construction compound, meteorological mast, construction cranes.	Temporary physical effects on landscape fabric Temporary effects on landscape character Temporary effects on visual amenity	Physical landscape features e.g. agricultural land Landscape character receptors – landscape character types and designated landscapes Views – experienced by different receptors e.g. residents, road users, walkers
Operation	Turbines, access tracks, meteorological mast, substation compound, site office, transformers	Long term effects on landscape character Long term effects on visual amenity	

6.9.3 The effects of the Proposed Development on the landscape and visual receptors will arise principally from the construction, operation and decommissioning of the turbines, substation compound, temporary construction compound 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 wide spread 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. There is therefore no additional mitigation to be considered in the LVIA.

6.10.2 The residual effects (i.e. those which remain after mitigation) that the Proposed Development will have on landscape and visual receptors 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, there is only one element involved; agricultural land. The methodology for the assessment of physical effects is described in full in Appendix A6.1.

Agricultural Land

6.11.2 The proposed design will necessitate the removal of approximately 12.7 Ha of agricultural land within the site boundary.

Baseline

6.11.3 Agricultural land is by far the predominant land use on Orkney and largely characterises the Orkney landscape. Farms are typically small in scale with small to medium sized fields, enclosed by post and wire fencing or drystone dykes and containing improved or semi-improved pasture or arable crops. The site comprises medium sized fields containing improved pasture or single species arable crops. These fields are separated from the broader agricultural landscape to the south by the A965, which is the main road between Kirkwall and Stromness. Agricultural practices in this area are intensive and the farmland is well managed. There are no hedgerow boundaries or trees on the site and no other areas of natural vegetation. While some drystone dykes exist, field boundaries are generally delineated by post and wire fences and this maintains a largely open appearance to the landscape.

Sensitivity

6.11.4 The value of the agricultural land is medium. There are no national or regional landscape designations which would otherwise denote a special value. The land has been modified from its natural state by centuries of farming, such that there is no natural vegetation and the vegetation which occurs comprises either improved pasture or single species arable crops, grown on an annual programme, with the land left bare for part of the year post harvest. There will, therefore, be no loss to natural vegetation and little loss to bio-diversity. The value of the land relates more to its potential productivity as farmland.

6.11.5 The susceptibility of the agricultural land to the Proposed Development is medium. The proposed turbines and associated infrastructure will be located on the agricultural land which occupies the site. This will result in the loss of agricultural land where access roads, crane pads and turbine foundations were constructed. The susceptibility of the agricultural land is moderated by the extent to which it has already been modified by cultivation and the limited extent of the land to be disturbed in proportion to the remainder of the site and the wider provision of agricultural land across Orkney.

6.11.6 The combination of the value of the agricultural land and its susceptibility to the Proposed Development gives rise to an overall **medium to low** sensitivity.

Magnitude of change

6.11.7 During the construction phase, the Proposed Development will lead to the loss of patches of the existing agricultural land where new access tracks, permanent hard-standings, turbine foundations, the substation compound and the temporary construction compound will be constructed, as illustrated in Figure 1.2. The effect of this loss will be moderated by the fact that the majority of the agricultural land will remain unaffected and continue to be used for improved pasture or arable crops. Furthermore, no mature or well-established vegetation will be lost, and crop bio-diversity value is limited by the cultivation of single species in each field. Post construction, areas of temporary removal will be reinstated.

6.11.8 Taking all these factors into account, the Proposed Development will give rise to a **medium** magnitude of change on the site.

Significance of Effect

6.11.9 The effect of the construction of the Proposed Development on the agricultural land of the site will be **not significant**. This finding relates to the modified state of the agricultural land, the limited extent of the agricultural land that will be lost, and the wider extent of agricultural land across Orkney which limits the scarcity value of this physical element.

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 Shapinsay LCU of the Ridgeline Landscape Islands 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 A6.1.

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 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 6.7 and 6.10. The following LCTs / LCUs have the potential to undergo significant effects and therefore require a detailed assessment in the LVIA.

- Inclined Coastal Pastures LCT – Quanterness LCU;
- Inclined Coastal Pastures LCT – Coubister LCU;
- Inclined Coastal Pastures LCT – Gorseness LCU;
- Rolling Hill Fringe LCT – Wideford Hill LCU;
- Rolling Hill Fringe LCT – Settiscarth LCU;
- Moorland Hills LCT – Wideford Hill LCU;
- Moorland Hills LCT – West Mainland LCU;
- Ridgeline Island Landscapes LCT – Shapinsay LCU;
- Low Island Pastures LCT – Kirkwall LCT;
- Coastal Basins LCT – Isbister LCU;
- Coastal Basins LCT – Kirkwall LCU;
- Peatland Basins LCT - Breck of Cruan LCU;
- Isolated Coastal Knolls LCT – Gorseness LCU;
- Undulating Island Pastures LCT – Kirkwall LCU; and
- Whaleback Islands LCT – Gairsay 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.

Inclined Coastal Pastures LCT (302) – Quanterness LCU

Baseline

6.12.9 The Inclined Coastal Pasture LCT occurs intermittently around the coastlines of the Mainland of Orkney and its islands. This LCT is characterised by relatively low lying pastoral farmland, set along the coastal edge where the landform falls gently towards the shoreline. The field pattern is typically recti-linear with a predominant alignment towards the coastal edge. While traditional stone dykes emphasise the enclosure, the more common post and wire fences lack the same definition. Settlement typically comprises small scale clusters of resettled crofts where field patterns are of a smaller scale, or occasional large farmsteads or isolated properties. Coastal roads tend to follow the alignment of the coastal edge with access being drawn either seaward or landward off these routes.

6.12.10 SNH's Orkney Landscape Character Assessment (1998) makes the following comment regarding the relationship between this LCT and the sea; "*The orientation of the land to the sea is a particularly significant feature of this landscape, as the fields appear to drop away and merge with the sea. Views out to sea and to other islands are, therefore, extensive, while views inland are more restricted by topography.*"

6.12.11 The Quanterness LCU of this type is true to this description, with views drawn across the Wide Firth to the north and contained by the Moorland Hills LCT to the south. The LCU extends along the coastal edge from Finstown in the west to Hatston in the east. It follows the southern shoreline of the Wide Firth with the landform rising from sea level to approximately 40 or 50 m AOD where it joins the transitional Rolling Hill Fringe LCT. The western half of this LCU is set further south than the eastern

half, which is set further north, such that it sits out into the Wide Firth with water to the west and east. This eastern half is where the site is located and is referred to on maps as Quanterness.

6.12.12 The western half of this LCU is more influenced by roads and settlement with the A965 set along the coastline and the minor road set to the south of this. Farmsteads and clusters of properties are accessed from both, and small fields of pasture and arable crops cover the gently sloping landform. The eastern half of this LCU is less influenced by roads and settlements, with the A965 set along the southern edge and no properties extending onto the landform that protrudes out into the water. The fields of pasture and arable crops here are larger and farmsteads are set either to the west or south of the main road.

6.12.13 While this band of farmland is unremarkable in its own right, it is its relationship with the sea to the north and the hills to the south which enhance its character. While the coastal edge is low and relatively smooth, there are some rocky and indented sections that add interest. The coastline also forms part of the wider landform enclosure around Wide Firth with small holms and islands featuring in these waters and larger islands beyond. Wideford Hill (225m AOD) and Kellylang Hill (221m AOD) are not big hills but are big enough to create a substantial backdrop and a sense of enclosure to this coastal landscape.

Sensitivity

6.12.14 The value of this LCU is medium. The Quanterness LCU of this LCT is not covered by any national or regional landscape designations which will otherwise denote a special value. Furthermore the landscape is typical of much of Orkney's coastline, comprising fields of pasture set within a geometric field pattern. The value of this landscape relates more to its relationship with the sea and hills, and the visual interest that relates to this transitional area.

6.12.15 The susceptibility of this LCU to the effects of the Proposed Development is high. This finding relates principally to the fact that the Proposed Development will be located in this LCU and therefore the LCU will experience direct and close range indirect effects. It is also an open and exposed landscape with a strong horizontal emphasis and few vertical features.

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

Magnitude of change

6.12.1 During the operational phase, the magnitude of change will be **high**. All six turbines and the associated infrastructure of the Proposed Development will be located in this LCU. The ZTV in Figure 6.7 shows theoretical visibility to be continuous across this LCU and the openness of the landscape means that actual visibility will be commensurate in extent. While the effect will relate principally to the presence of the turbines, the location of the access tracks, substation and permanent met mast will also add to the effect.

6.12.2 The turbines will change the character of this coastal landscape in two key respects. Firstly, they will introduce large scale vertical elements into a landscape that has a strong horizontal emphasis and this contrast will accentuate their height. Secondly, they will appear as modern artefacts in a landscape that, although settled and cultivated, comprises mostly small scale and rural development and land uses. The turbines will appear at variance with the rural character and will redefine its baseline character.

6.12.3 Those factors which will moderate the overall effect of the turbines includes their location on the lower coastal plain to which the Moorland Hills LCT forms a substantial backdrop. Not only does this mean that the turbines will be set in the lowest lying part of the landscape, thus reducing their prominence, but also the presence of the hills will provide a scale of landform that is comparatively larger and therefore will remain as the dominant landform feature in this local area. Furthermore, the presence of single turbines to the west and east and a number of masts on Wideford Hill to the south, establish modern artefacts with a vertical form as an influence on the baseline landscape character, despite these structures being notably smaller in size. Their presence reduces the effect that the addition of the turbines will have on the landscape character as it will not be altered to the same extent, were there no similar structures existing here.

6.12.4 During the construction phase, the magnitude of change will also be **high**. With all six of the turbines and all the associated infrastructure, including tracks, substation compound, temporary construction compound, cranes and other plant located in this LCU, there will be direct and indirect effects on landscape character. The presence of these components and the activities associated with construction will be at variance with the agricultural land uses, which underpin the baseline character of this landscape.

Significance of effect

6.12.5 The effect of the Proposed Development on the Quanterness LCU of the Inclined Coastal Pasture LCT will be **significant** during the construction and operational phases. The location of all six turbines and associated infrastructure in this LCU will redefine the character of the local landscape over the short term, in respect of the construction effects and over the long term in respect of the operational effects.

Significance of cumulative effect

6.12.6 The cumulative baseline comprises operational Hammars Hill Wind Farm at approximately 8.7 km to the north-west of the closest LCU boundary and the single turbines of Rennibister and Crowness Buisness Park to the immediate west and east of the site. The contribution Hammars Hill makes to the cumulative baseline is limited by its relatively small scale and distance, such that it occupies only a small proportion of the wider landscape influences on this LCU. While the single turbines have a notable presence at either side of the site, the fact that they are both relatively small single turbines also limits their contribution to the cumulative baseline, as their sphere of influence is contained.

6.12.7 While the solus effect of the Proposed Development will be significant as stated above, the in-conjunction cumulative effect will be **medium to low** in terms of magnitude of change and **not significant**. The effects on this LCU will relate principally to the Proposed Development with only a weak baseline influence from the operational wind farms.

Inclined Coastal Pastures LCT (302) – Coubister LCU

Baseline

6.12.8 The general characteristics of this LCU are consistent with the general description of the LCT presented in respect of the Quanterness LCU above.

6.12.9 The Coubister LCU forms the north-western shore of the Bay of Firth, which is a small sub-bay in the south-west corner of the Wide Firth, where Finstown is situated. The landform slopes gently down from the Rolling Hill Fringe LCT to the north-west, to the shoreline to the south-east. The field pattern follows this alignment with typically long and narrow fields directed towards the coastal edge. The fields contain mostly improved pasture with some fields also of arable crops. There are no trees and very little enclosure, such that the landscape is open and exposed. The coastline is low and rocky with skerries extending into the Firth. The A966 marks the western boundary of this LCU and the minor coastal road marks the northern boundary. There are a number of dispersed farmsteads and properties in this area with a cluster at Coubister.

Sensitivity

6.12.10 The value of this LCU is medium. This LCU is not covered by any national or regional landscape designations which would otherwise denote a special value. Furthermore the landscape is typical of much of Orkney's coastline, comprising fields of pasture set within a geometric field pattern. The value of this landscape relates more to its relationship with the sea and hills, and the visual interest that relates to this transitional area.

6.12.11 The susceptibility of this LCU to the effects of the Proposed Development is medium to high in the southern part of the LCU and medium across all remaining parts. While it is located a minimum distance of approximately 3.1 km to the nearest turbine, across the Bay of Firth, the orientation of this Inclined Coastal Plain towards Quanterness creates an association which adds to its susceptibility. They are also both open and exposed landscapes with a strong horizontal emphasis and few vertical features.

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

Magnitude of change

6.12.13 During the operational phase, the magnitude of change will be **medium to high** across the LCU. The ZTV in Figure 6.7 shows theoretical visibility to be continuous across this LCU and the openness of the landscape means that actual visibility will be similar in extent. The proposed turbines will be seen at ranges between approximately 3.1 km from the closest LCU edge to the closest turbine and approximately 4.9 km from the furthest LCU edge.

6.12.14 While the Proposed Development will not be located within this LCU, it will have a notable visual influence on its character owing to the association of the Coubister LCU with the Quanterness LCU as these landscapes form opposing sides across the Bay of Firth. The six turbines will form the most influential part of the Proposed Development owing to their large scale and vertical form, relative to the predominantly horizontal form of the relatively flat Quanterness coastal plain. Furthermore, these modern structures, will appear in contrast to the predominantly rural and semi-natural character of the wider area.

6.12.15 The effects of the Proposed Development will be moderated by some of the baseline features, most notably Wideford Hill and Keelylang Hill, which form an important backdrop to the coastal edge that will help to counter the influence of the large scale turbines and make them appear contained. The presence of masts on these hills and single turbine on the coast also moderate the effects of the turbines, as they indicate an existing presence of modern artefacts in the local landscape and, although notably smaller than the turbines, they are similarly distinct vertical features.

6.12.16 During the construction phase, the magnitude of change will be **medium to high**. This LCU is located a minimum distance of approximately 3.1 km from the closest turbine. This means that the construction of the turbines and the presence of the tall cranes will be a readily apparent feature, seen clearly across the bay. Many of the ground level construction processes and components, such as construction of the access tracks, will not form such a notable feature owing to their smaller scale, although may still be visible. The incomplete appearance of the turbines and the periodic activity of the cranes will create an influence on this LCU which will be at variance with the predominantly rural character of the baseline landscape.

Significance of effect

6.12.17 The effect of the Proposed Development on the Coubister LCU of the Inclined Coastal Plains LCT will be **significant** across this LCU out to approximately 5 km during the construction and operational phase. The orientation of this LCU towards the Quanterness LCU and the association which arises from them occupying opposing sides the Bay of Firth, will heighten the influence that the Proposed Development will have on this coastal landscape.

Significance of cumulative effect

6.12.1 The cumulative baseline comprises operational Hammars Hill Wind Farm at approximately 5.5 km to the north-west and the single turbines of Rennibister and Crowness Business Park to the immediate west and east of the site. The contribution Hammars Hill makes to the cumulative baseline is limited by its relatively small scale and distance, such that it occupies only a small proportion of the wider landscape influences on this LCU. While the single turbines have a notable presence on the opposing side of the Bay of Firth, the fact that they are both one relatively small turbine also limits their contribution to the cumulative baseline, as their sphere of influence is contained.

6.12.2 While the solus effect of the Proposed Development will be significant as stated above, the in-conjunction cumulative effect will be **medium to low** in terms of magnitude of change and **not significant**. The effects on this LCU will relate principally to the Proposed Development with only a weak baseline influence from the operational wind farms.

Inclined Coastal Pastures LCT (302) – Gorseness LCU

Baseline

6.12.1 The general characteristics of this LCU are consistent with the general description of the LCT presented in respect of the Quanterness LCU above. While this LCU extends all the way up the coast to Costa in the north, it is only the most southern part that has the potential to be affected.

6.12.2 The Gorseness LCU is located at a minimum distance of approximately 3.2 km to the north of the Quanterness LCU with the Wide Firth separating them. This LCU is mostly set along a coastline where the incline is from west to east, such that the landform is orientated due east towards Shapinsay Island. It is only across the southern part where an association with the Quanterness LCU to the south occurs. The Gorseness LCU is relatively well inhabited with a cluster of houses in Gorseness and a dispersal of houses across the surrounding rural, coastal edge. The road and field pattern is strongly recti-linear with east to west alignment forming the main access to the coast and north to south running across this. The larger settlement of Kirkwall is also visible on the more distant coastline to the south-east, with the single turbines at Rennibister and Crowness Business Park visible on the coastal edge of Quanterness.

Sensitivity

6.12.1 The value of this LCU is medium. This LCU is not covered by any national or regional landscape designations which would otherwise denote a special value. Furthermore the landscape is typical of much of Orkney's coastline, comprising fields of pasture set within a geometric field pattern. The value of this landscape relates more to its relationship with the coastal landscape around the Wide Firth and the Island of Shapinsay to the east, and the association that is drawn between these coastal landscapes and seascapes.

6.12.2 The susceptibility of this LCU to the effects of the Proposed Development is medium to high in the southern part of this LCU and medium in all remaining parts. While the principal orientation of the wider Gorseness LCU is east towards the Island of Shapinsay, the orientation of the southern part is south-east towards the coastal landscapes around the Wide Firth, where the site is located, and the relatively close proximity gives rise to a strong association between these LCUs.

6.12.3 The combination of the value of this LCU and its susceptibility to the effects of the Proposed Development results in an overall **medium to high** sensitivity in the southern part of this LCU and **low** across the remaining parts.

Magnitude of change

6.12.4 During the operational phase, the magnitude of change on this LCU will be **medium to high** in the southern part and with **no change** across all remaining parts. The ZTV in Figure 6.7 shows that theoretical visibility of the Proposed Development will be almost continuous across the southern part of this LCU, while there will be no visibility across the remaining parts, which form the majority of the LCU. Despite the main orientation of the wider LCU being east towards the Island of Shapinsay, the orientation of the southern part to the south and its relatively flat and very open landform will ensure that the Proposed Development will have a notable influence on the character of this LCU. With visibility of the closest turbine occurring between approximately 3.2 km and 7.4 km, this LCU will be influenced by the six large scale turbines which will be present along the southern coastal edge of the Wide Firth. While the presence of the masts on the opposing hilltop, and single turbines and settlement of Kirkwall on the opposing shoreline, will to some extent moderate the effect, the turbines will, nonetheless, appear at variance with the predominantly rural and small scale character of development in the wider landscape.

6.12.5 During the construction phase, the magnitude of change on this LCU will be **medium to high** across the southern part of the LCU and **negligible** across all remaining parts. While some of the ground level construction works may be visible from this LCU, it will be the presence of the tall cranes and the six emerging turbines that will have the greatest influence on landscape character. They will be seen set on the opposing coastal edge, appearing more exposed than they might otherwise owing to the openness of the intervening water and the foreshortening effect that this is likely to have.

Significance of effect

6.12.6 The effect of the Proposed Development on the Gorseness LCU of the Inclined Coastal Pasture LCT will be **significant** across the southern part of the LCU out to approximately 6 km from the closest turbine, during both the construction and operational phases. In this case, the medium sensitivity combined with the medium to high magnitude of change will lead to a significant effect whereby the influence of the large scale turbines, set on the opposing side of the Wide Firth will have a notable influence on the character of this coastal landscape. The effect on all remaining parts of the LCU beyond approximately 6 km will be **not significant** as there will either be no visibility or visibility will occur in an area where the predominant orientation of the landform is east towards Shapinsay.

Significance of cumulative effect

6.12.7 The cumulative baseline comprises the operational Hammars Hill Wind Farm seen between approximately 3.4 km and 6.5 km to the north-west from those parts of the LCU where visibility of the Proposed Development arises, and the single turbines of Rennibister and Crowness Business Park to the immediate west and east of the site. The contribution Hammars Hill makes to the cumulative baseline is limited by its relatively small scale and distance, such that it occupies only a small proportion of the wider landscape influences on this LCU. While the single turbines have a notable presence on the opposing side of the Bay of Firth, the fact that they both consist of one relatively small turbine also limits their contribution to the cumulative baseline, as their sphere of influence is contained and limited.

6.12.8 While the solus effect of the Proposed Development will be significant as stated above, the in-conjunction cumulative effect will be **medium to low** in terms of magnitude of change and **not significant**. The effects on this LCU will relate principally to the Proposed Development with only a weak baseline influence from the operational wind farms.

Rolling Hill Fringe LCT (313) – Wideford Hill LCU

Baseline

6.12.9 The Rolling Hill Fringe LCT forms the transitional landscape between the Quanterness LCU of the Inclined Coastal Pastures LCT and the Wideford Hill LCU of the Moorland Hills LCT. It is characterised by rolling landform, typically in the range of 20 to 150m with occasional steep slopes in places. The land use is predominantly farmland with improved pasture and arable crops, set in fenced fields occupying the lower slopes and semi-improved and rough pasture set in fenced or drystone dyke enclosures on the middle slopes. This landscape transitions into the unenclosed moorland of the Moorland Hills LCT across the upper slopes and hill tops.

6.12.10 In terms of roads and settlement, these are typically more evident across the lower slopes and less evident across the middle slopes. While the A965 sits close to the coastal edge, the minor road traverses this LCU to wrap around the southern side of Wideford Hill. Isolated farmsteads and small clusters of properties are accessed from, or off this road, with only tracks extending onto the hill side.

6.12.11 The Wideford Hill LCU extends from south-east of Finstown, forming a parallel band to the south of the Quanterness LCU of the Inclined Coastal Plain LCT and wrapping around the northern and eastern flanks of Wideford Hill to cover a broader area of land to the south-west of Kirkwall. While the landform is generally rolling, the predominant fall and orientation is northwards towards the sea, apart from where the LCU wraps around the east and south of Wideford Hill. This area has been extensively modified by agricultural practices and is largely characterised by small fields of improved and semi-improved pasture, as well as some arable crops in the lower margins.

Sensitivity

6.12.12 The value of this LCU is medium. This LCU is not covered by any national or regional landscape designations which would otherwise denote a special value. Furthermore the landscape is typical of much of Orkney's farmed landscape, comprising fields of pasture set within a geometric field pattern. The value of this landscape relates more to its role within the wider setting, whereby it forms the transitional area between the coastal landscape to the north and the moorland hills to the south.

6.12.13 The susceptibility of this LCU to the effects of the Proposed Development is medium to high in the parts that lie to the south and west of the site and low or negligible for the parts that lie to the east and south of Wideford Hill. This difference in rating relates to the different associations that exist between the LCUs. The areas of the LCU that lie to the east and south of Wideford Hill have no strong association with the LCU in which the Proposed Development will be located. The areas that lie to the south and west of the site, however, merge with the Quanterness LCU of the Inclined Coastal Pasture LCT and are influenced more strongly by its character and land uses.

6.12.14 The combination of the value of this LCU and its susceptibility to the effects of the Proposed Development results in an overall **medium to high** sensitivity for those parts to the south and west of the site and **medium to low** for those parts to the immediate east and south of Wideford Hill.

Magnitude of change

6.12.15 During the operational phase, the magnitude of change will be **high** for those parts of the LCU to the south of the site, **medium to high** for those parts to the west of the site, and **low**, **negligible** or **no change** for those parts to the immediate east and south of Wideford Hill. As the ZTV shows, theoretical visibility is almost continuous across those parts of the LCU to the south and west of the site and owing to the openness of the landscape, actual visibility will be similar in extent. The six turbines will form the principal influence on landscape character, owing to their scale and proximity, with the closest being set along the northern edge of this LCU. In respect of the part of the Wideford Hill LCU to the immediate south of the site, the magnitude of change will be **high** owing to the location of the turbines between this LCU and Wide Firth and the effect this will have on the connection between the LCU and the water. They will appear large in scale and at variance with the rural character of the Quanterness LCU.

6.12.16 To the west of the site, the turbines will not have such an immediate influence owing to their location to the north-east, largely because their location will not interrupt the connection of this part of the LCU with the Wide Firth. The turbines will, nonetheless, form a notable influence owing to their close range, with the closest turbine approximately 1.7 to 4.8 km, and with their position on a prominent promontory of land. Here, the magnitude of change on landscape character will be **medium to high**.

6.12.17 The ZTV in Figure 6.7 shows that theoretical visibility falls away to the immediate east of Wideford Hill with only low levels of visibility occurring and then to the south, there is no theoretical visibility. This is owing to the screening effect of Wideford Hill, beyond which the turbines are largely concealed. The magnitude of change in these areas is, therefore, reduced to either **low, negligible** or **no change**.

6.12.18 During the construction phase, a similar attribution of magnitude of change is applied across this LCU owing to similar extents of visibility, albeit with less visibility occurring where screening by landform occurs, especially when the turbines are at an early stage of construction. The rising landform of the Rolling Hill Fringe LCT means that from the south and west of the site, a fuller view into the site will occur, such that ground level construction works may be more readily visible. The emerging turbines and presence of the tall cranes will form the principal feature and from the relatively close range of this LCU, will give rise to a notable influence on landscape character.

Significance of effect

6.12.19 During construction and operation, the effect of the Proposed Development on those parts of the Wideford Hill LCU of the Rolling Hill Fringe LCT to the south and west of the site will be **significant** owing to their relatively close proximity and the influence that the turbines will have on their small scale and rural character. The effect on those parts of the LCU to the immediate east and south of Wideford Hill will be **not significant** owing to limited or no visibility.

Significance of cumulative effect

6.12.20 Operational Hammars Hill Wind Farm and Burgar Hill Wind Farm are the only two wind farms with the potential to influence cumulative effects on the Wideford Hill LCU. In addition, the Rennibister single turbine to the west of the site and the Crowness Business Park single turbine to the east of the site, will also have an influence on the cumulative effect.

6.12.21 The cumulative magnitude of change will, however, be **medium to low**, owing to the relatively distant and limited influence of the cumulative wind farms, compared to the influence of the Proposed Development. While the solus effect of the Proposed Development will be significant as stated above, the in-conjunction cumulative effect will be **not significant**, as by comparison, the operational wind farms will appear distant, small in scale and occupying only a small proportion of the wider landscape that forms the external influence on the landscape character of the Quanterness LCU. In respect of the single turbines, their influence will be limited by their relatively contained vertical and horizontal extent and their location close to the Proposed Development helps to contain these similar structures within the one area.

Rolling Hill Fringe LCT (313) – Settiscarth LCU

Baseline

6.12.22 The general characteristics of this LCU are consistent with the general description of the LCT presented in respect of the Wideford Hill LCU above.

6.12.23 The Settiscarth LCU forms a narrow band of rising landform, with the Breck of Cruan LCU of the Peat Basin LCT to the east and the West Mainland LCU of the Moorland Hills LCT to the west. This is a small LCU with a predominant north to south orientation, following the contours of the landform, and forming an easterly aspect. It extends from north of Coubister in the south to north of Settiscarth in the north, set to the west of the A966 and encompassing the minor road that traverses the lower hill slopes between Finstown and Settiscarth. The landform rises gently from the edge of the Peat Basin LCT in the east, to the steeper slopes of the Moorland Hill LCT in the west. The landcover is predominantly small to medium sized fields of improved pasture with mostly post and wire fenced enclosures, adding to the openness of this landscape. Farmsteads and other properties occur intermittently along the roadside with a more notable cluster at Settiscarth, in the valley of the Burn of Bluebrae.

Sensitivity

6.12.24 The value of this LCU is medium. This LCU is not covered by any national or regional landscape designations which would otherwise denote a special value. Furthermore the landscape is typical of much of Orkney's farmed landscape, comprising fields of pasture set within a geometric field pattern. The value of this landscape relates more to its role within the wider setting, whereby it forms the transitional area between the Peat Basin LCT and Coastal Basin LCT to the east and the Moorland Hills LCT to the west.

6.12.25 The susceptibility of this LCU to the effects of the Proposed Development is medium. As the landform is relatively low-lying and its orientation is eastwards, the association of this LCU with the Quanterness LCU to the south-east is weakened, although still relatively close and mainly separated by the open sea of the Wide Firth. The principal contextual influence comes from the more immediate Peat Basin LCT to the east and Moorland Hills LCT to the west. There is also an existing influence of wind farm development on the part of the Moorland Hills LCT to the north, with a separation distance of only 3.5 km to the closest turbine at Hammars Hill. This LCU will, nonetheless, be susceptible to the influences of the Proposed Development, despite the presence of intervening landscapes and seascapes.

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

Magnitude of change

6.12.27 During the operational phase, the magnitude of change will be **medium**. The ZTV in Figure 6.7 shows that theoretical visibility is almost continuous across the LCU with the exception of the valley around Settiscarth where intervening landform screens visibility. The closest edge of this LCU to the closest turbine is approximately 3.9 km, while the furthest is approximately 7.1 km. The location of the Settiscarth LCU, well inset from the coastal edge, combined with its relatively low-lying location, means that the surrounding landscape to the east and south-east is occupied by farmland. The Wide Firth has a limited presence and influence on this LCU and the Quanterness LCU does not appear as closely associated with this LCU, as it does from the LCUs around the coastal edge.

6.12.28 The six turbines will, nonetheless, have a notable influence owing to their relative proximity, as well as their tall scale and modern character, which will appear largely at variance with the rural context of the wider landscape. The effect will, however, be moderated by the presence of the turbines at Hammars Hill, the closest turbine of which is at a range of between approximately 3.5 km and 6.4 km to the north-east, which means that there will be an existing influence on the character of this LCU from the same type of development.

6.12.29 During the construction phase, the magnitude of change will be **medium**. The construction works on the ground will not form a readily apparent feature and, therefore, the principal feature visible from this LCU during the construction phase will be the emerging turbines and the tall cranes used in their construction. While these will be seen as modern and relatively large scale artefacts, they will occupy only a small proportion of the wider landscape context to the Settiscarth LCU, in which the adjacent Moorland Hills LCT will continue to form the defining influence.

Significance of effect

6.12.30 The effect of the Proposed Development on the character of the Settiscarth LCU of the Rolling Hill Fringes LCT will be **significant** in the southern part out to approximately 6 km and **not significant** in all remaining parts during the construction and operational phase. This finding relates to the proximity of the Proposed Development, despite the closer influence of the Moorland Hills LCT.

Significance of cumulative effect

6.12.31 The cumulative ZTV in Figure 6.13 shows that Hammars Hill Wind Farm is already visible across much of the LCU, the closest turbine of which is at a range of between approximately 3.5 km and 6.4 km. Figure 6.12 shows that Burgar Hill Wind Farm is not visible from this area. Hammars Hill Wind Farm comprises five turbines, each 67 m to blade tip, making them of limited vertical extent. They occupy a very small section of the Moorland Hills LCT ridgeline and an even smaller proportion of the wider landscape context, in which the main association is across the coastal landscapes to the east, although the ridgeline does also have an influence owing to its scale and the enclosure it creates.

6.12.32 The addition of the Proposed Development to the cumulative situation will give rise to a **medium** cumulative magnitude of change, as with its six turbines located in the opposite direction, it will spread the influence of this type of development in respect of the LCU. The effect will be moderated by the fact that it will also occupy only a small proportion of the wider landscape context and be similarly offset from the main easterly aspect of the Settiscarth LCU, thus limiting the association. Overall, the limited extents of both developments will limit the overall cumulative effect which will be **not significant**.

Moorland Hills LCT (314) – Wideford Hill LCU

Baseline

6.12.33 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 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.

6.12.34 The Wideford Hill LCU of this LCT occupies the upland area to the south of the Wideford Hill LCU of the Rolling Hill Fringe LCT. This upland area is formed by Wideford Hill (225m AOD) in the north-east, Keelylang Hill (221m AOD) in the central south and Hill of Heddle (135m AOD) in the north-west, and collectively forming a well-defined ridgeline that encloses the coastal landscapes of Wide Firth to the north and separates them from the south-west of the Mainland of Orkney. Both Wideford Hill and Keelylang Hill are marked by the presence of masts on, or near, their summits. These form landmark features within the local landscape and the access roads that lead to them. open them up to recreational use and reduce their sense of remoteness and wildness. Despite this, their moorland landcover and absence of enclosure does make them appear less modified than the surrounding improved pasture.

6.12.35 The elevation of this upland LCU means that its association with the wider landscape reaches further than the lowland LCUs. While the primary influence on the character of the Wideford Hill LCU comes from the upland landscape itself, there is also an influence from the surrounding lowland landscapes and seascapes that form the wider setting. The baseline influence on this LCU comes from a predominantly rural setting of lowland farmland set across a series of islands of varying size, with the arrangement of these islands and intermediate firths and sounds presenting an attractive setting. Across the Mainland of Orkney, there is also an influence from the small scale settlement that typically lines the coastal edges and extends into the glens, as well as influence from the larger scale wind farm developments, located to the north-west of this LCU.

Sensitivity

6.12.36 The value of this LCU is medium to high. While there are no national or regional landscape designations which would otherwise denote a special value, in the context of a predominantly low-lying and farmed landscape, this LCU provides an upland landscape which is valued because of the contrast it presents in terms of landform and landcover.

6.12.37 The susceptibility of this LCU to the effects of the Proposed Development are medium to high across the summits, ridgeline and north-facing slopes of Wideford Hill, Keelylang Hill and Hill of Heddle and low or negligible across all remaining parts. On the northern side of the ridgeline, the slopes of Wideford Hill are north facing and the slopes of Keelylang Hill are north-east facing, both broadly orientated towards Quanterness LCU, thus forming an association between these landscapes. On the southern side of the ridgeline there is no association with the Quanterness LCU.

6.12.38 The combination of the value of this LCU and its susceptibility to the effects of the Proposed Development results in an overall **medium to high** sensitivity across the summits, ridgeline and north-facing slopes of Wideford Hill, Keelylang Hill and Hill of Heddle and **low** across all remaining parts.

Magnitude of change

6.12.39 During the operational phase, the magnitude of change will be **medium to high** across the summits, ridgeline and north-facing slopes of Wideford Hill, Keelylang Hill and Hill of Heddle and **low**, **negligible** or **no change** across all remaining parts. As the ZTV in Figure 6.7 illustrates, the ridgeline forms a viewshed in which the slopes to the north are subject to theoretical visibility of the Proposed Development while the slopes to the south are not. Wideford Hill forms the closest part of this LCU, set at a minimum distance of 0.8 km from the closest turbine. In contrast, the furthest point is south of Finstown at approximately 6.3 km.

6.12.40 The Proposed Development will form a close range and large scale feature that will appear broadly at variance with the relatively undeveloped and rural character of the Moorland Hills LCT and its presence will redefine the landscape character of the northern half of this LCU. Despite the proximity, there are a number of factors which prevent the magnitude of change from being rated as high. Most notably the relatively low-lying elevation of the site which means that the turbines will be set below the upper parts of the Wideford LCU, thus reducing their prominence. Furthermore, the elevated nature of this LCU means that there is a more expansive landscape context visible, such that the Proposed Development will be seen to occupy a smaller proportion of the wider landscapes and seascapes surrounding this LCU.

6.12.41 During the construction phase, the magnitude of change will be **medium to high** across the summits, ridgeline and north-facing slopes of Wideford Hill, Keelylang Hill and Hill of Heddle and **low**, **negligible** or **no change**, across all remaining parts. The elevation of this LCU means that construction of infrastructure will have an influence on the character of this LCU as well as the construction of the turbines, as the whole of the site is exposed to the summits and northern slopes of this upland area. The construction of the large scale and modern Proposed Development will appear at variance with the predominantly rural character of the LCU, despite the relatively open and simple landscape of the Moorland Hills LCT.

Significance of effect

6.12.42 During the construction and operational phases, the effect of the Proposed Development on this LCU will be **significant** across the summits and northern slopes of Wideford Hill and Keelylang Hill and **not significant** across remaining parts of the LCU. This assessment relates to the close proximity of the Proposed Development to the Wideford Hill LCU and the effect it will have on its landscape character.

Significance of cumulative effect

6.12.43 The Proposed Development will form a close range wind farm development that will have a significant solus effect, as described above. Operational Hammars Hill, at approximately 10.2 km and Operational Burgar Hill, at approximately 13.1 km are the only notable cumulative wind farms with an influence on the Wideford Hill LCU. In comparison to the close range and large scale of the Proposed Development, these other two wind farms will appear distant and small scale, and as such, their influence on the cumulative situation will be limited. Furthermore, they are located in the same northerly sector as the Proposed Development and this will, therefore, contain the influence of this type of development and prevent it from spreading into other sectors. The cumulative magnitude of change will, therefore, be **medium to low** and the effect will be **not significant**.

Moorland Hills LCT (314) – West Mainland

Baseline

6.12.44 The general characteristics of this LCU are consistent with the general description of the LCT presented in respect of the Wideford Hill LCU above.

6.12.45 The West Mainland LCU of this type comprises a relatively large group of hills, extending from near Finstown in the south up to Loch of Swanney in the north. Their alignment is broadly north to south with a well-defined ridgeline set in this direction. The ridgeline takes in the high points of Burrien Hill (220 m AOD), Mid Tooin (221 m AOD) and Mid Hill (193 m AOD), and although not especially high hills, they form an important backdrop and sense of enclosure to the coastal and island landscapes on either side.

6.12.46 The peat and heather moorland of this upland LCU appears markedly distinct from the surrounding farmland owing to the dark browns compared to the bright greens of the improved pasture farm fields, as well as the more open and unenclosed pattern of the land. This area is used predominantly for rough grazing although peat cutting is also evident, especially around the B9057. There is very little habitation in this LCU and road access is limited to the B9057 and the other minor road at Breck of Cruan further south, both of which pass east to west over the hills. A number of tracks also extend into the upland area, mostly relating to farming uses although one accessing the mast on Fibla Fiold and two further to the north accessing Hammars Hill and Burgar Hill Wind Farms. These landmark features denote the human influence present in this upland landscape.

Sensitivity

6.12.47 The value of this LCU is medium to high. While there are no national or regional landscape designations which would otherwise denote a special value, in the context of a predominantly low-lying and farmed landscape, this LCU provides an upland landscape, which is valued because of the contrast it presents in terms of landform and landcover.

6.12.48 The susceptibility of this LCU to the effects of the Proposed Development is medium. The north to south orientation of this upland area means that it forms a closer association with the neighbouring landscapes to the west and east, than to the south-east, where the Proposed Development will be located. The exception occurs in the south of the LCU with the south-eastern slopes of Cuiffie Hill (145 m AOD) and Burrien Hill facing towards the Proposed Development. Furthermore, there are two operational wind farms in this LCU which means that there is an existing and closer range influence from this type of development.

6.12.49 The combination of the value of this LCU and its susceptibility to the effects of the Proposed Development results in an overall **medium to high** sensitivity in the southern part of the LCU and **medium** or **low** in all remaining parts.

Magnitude of change

6.12.50 During the operational phase, the magnitude of change will be **medium** in the southern part of the LCU around Cuiffie Hill and Burrien Hill, **medium to low** around Milldoe and Hammars Hill and with **no change** to the west of the ridgeline and in the northern part of the LCU. The ZTV shows theoretical visibility extending across the east facing slopes and summits of the hills but not the west facing slopes. Furthermore, visibility extends from Finstown in the south, but only as far as Mid Tooin (221m AOD) and Hammars Hill (164m AOD) in the north. It is this north-westerly ridgeline formed between these two high points that prevent visibility extending further north across the northern part of this LCU.

6.12.51 This LCU of the Moorland Hills LCT does not have the same association with the Quanterness LCU, as the coastal landscapes do, owing to its location in the interior of the island and the separation of this interior from Wide Firth and the Quanterness LCU by a number of other intervening LCUs. Those parts of this LCU which gain visibility range between approximately 5.1 km and 9.0 km from the closest turbine.

6.12.52 The magnitude of change is moderated by the closer range influence of Hammars Hill Wind Farm, which is located in this West Mainland LCU. This establishes this type of development as an integral feature of the baseline landscape character and means that the Proposed Development will not form a new or unfamiliar feature. The Proposed Development will, nonetheless, present a relatively close range and large scale wind farm development that will have an influence across these eastern hill slopes, especially in the southern extents which are closer and where the influence of Hammars Hill is less notable.

6.12.53 During the construction phase, the magnitude of change will be **medium** in the southern part of the LCU around Cuiffie Hill and Burrien Hill, **medium to low** around Milldoe and Hammars Hill and with **no change** to the west of the ridgeline and in the northern part of the LCU. Although, the turbines will only be complete at the end of the construction phase, it will be their incomplete structures and the presence of tall cranes that will have still have a notable influence on the character of this LCU as they will appear at variance with the predominantly rural character of the wider landscape.

Significance of effect

6.12.54 During the construction and operational phases, the effect of the Proposed Development on the West Mainland LCU of the Moorland Hills LCT will be **significant** in the southern part of the LCU out to approximately 6 km and **not significant** in all remaining parts. This assessment relates to the location of much of this LCU in the interior of West Mainland which reduces the association with the Wide Firth and the coastal landscapes which occur around it.

Significance of cumulative effect

6.12.55 The cumulative ZTV in Figure 6.12 shows that Burgar Hill Wind Farm has no visibility in this area. The cumulative ZTV in Figure 6.13 shows that Hammars Hill Wind Farm is already visible across much of the LCU and, furthermore, is located within the north-eastern corner of this LCU. This wind farm comprises five turbines, each 67 m to blade tip, and although not a large scale wind farm, has a notable influence on the baseline character of the northern part of this LCU.

6.12.56 The addition of the Proposed Development to the cumulative situation will give rise to a **medium** cumulative magnitude of change in the northern part and a **medium to low** cumulative magnitude of change in the southern part. Hammars Hill Wind Farm is of limited horizontal and vertical extents and it will only be in the closer range northern part of the LCU that it will have a notable influence on the cumulative situation. While the addition of the Proposed Development in the opposite direction to the south, will increase the perceived spread of this type of development, the small number of turbines in each of these wind farms limits the proportion of the wider landscape context which they occupy, keeping their influence contained and allowing the wider landscape to remain as the defining feature. The cumulative effect will be **not significant**.

Ridgeline Island Landscapes LCT (297) – Shapinsay LCU

Baseline

6.12.57 The Ridgeline Island Landscapes LCT is very similar to the Inclined Coastal Pastures LCT, with the main difference being that the former lacks the backdrop of the hinterland evident in the latter. This LCT is associated with Orkney's long narrow islands, which have a single central ridgeline along their length, and although Shapinsay is broader, the distinct ridgeline is still evident. A key characteristic of this LCT is the way in which the land use patterns have been determined by the geometry of the ridgeline, for example with the alignment of roads following the ridgeline and creating spurs perpendicularly and field patterns fitting in with the recti-linear geometry. Furthermore, the slope of the landform is fairly consistent, such that the land falls evenly from the ridgeline to the coast.

6.12.58 In the case of the Shapinsay LCU, Major Balfour, who owned the island, carried out a series of agricultural improvements during the mid-19th century. The plans involved implementing a grid iron pattern of roads, drystone dyke field boundaries and drainage ditches in order to increase the productivity of the land. The Balfours were also responsible for founding Balfour village in 1785 and planting Orkney's largest woodland around Cliffdale House, before it was extended into Balfour Castle by Major Balfour in 1847, with the grounds improved and enhanced with the introduction of more designed elements.

6.12.59 Maps of Shapinsay show the low central ridgeline is delineated by the route of the B9058, which follows a broadly north-east to south-west alignment. Minor roads and access tracks extend off this following a predominantly geometric alignment, with the field pattern, which infills this framework also conforming to the geometric layout. Other than the woodland at Balfour Castle, this island is largely bare of tree cover, with low and exposed landform and intermittent crofter's cottages or other properties. The predominant land use is improved pasture and there is a single turbine along the south coast.

Sensitivity

6.12.60 The value of this LCU is medium to high. While there are no national or regional landscape designations covering the island as a whole, there is GDL designation covering Balfour Castle on the south-west coast and this denotes a special value. Although not formally recognised through a landscape designation, Shapinsay Island as a whole is of historic value owing to the planned nature of the farmed landscape, as well as the village of Balfour and the road system connecting other settlement on the island.

6.12.61 The susceptibility of this LCU to the effects of the Proposed Development is medium. Shapinsay is a relatively small and flat island set in a seascape with islands all around. While the Mainland of Orkney is the closest and potentially most influential of these islands, in terms of the effects of the wider context on landscape character, there are other influences, including Stronsay to the north-east and Eday to the north. The south of the island faces out towards the Low Island Pastures LCTs which occur across the northern headlands to the east of Kirkwall. The west of the island faces out towards the Inclined Coastal Pastures LCT and Isolated Coastal Knolls LCT of the Gorseness headland. While there is no strong or direct association with the Quanterness LCU, the openness of the water ensures that there is a connection between this area and the island.

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

Magnitude of change

6.12.63 During the operational phase, the magnitude of change will vary across this LCU with the closer range parts on the south-western shore being subject to a **medium** magnitude of change and the other remaining parts being subject to a **medium to low, low** or **negligible** impact, with those parts where there will be no visibility being subject to **no change**.

6.12.64 The ZTV in Figures 6.7 and 6.10 shows theoretical visibility extending across the southern and western sides of the island. While the subtle rise in landform through the centre of the island is enough to screen visibility from much of the northern half of the island, patches do also extend onto the peninsula to the north-east where the landform rises gently. The openness of the Ridgeline

Islands LCT means that theoretical visibility will largely equate to actual visibility, apart from where dense woodland cover occurs around Balfour House.

6.12.65 At a minimum distance of 4.6 km to the closest turbine, the south-west corner of the island is the closest part of this LCU to the Proposed Development. Operational wind farms are already visible from this area, as shown in the cumulative ZTVs in Figure 6.12 and 6.13, and while they are relatively distant and small in scale, they nonetheless, establish wind farm development as a baseline influence on this LCU. The Proposed Development will, however, present a closer range and larger scale example and the prominence of the turbines, on the coastal edge, will ensure they have a notable influence on the local landscape character of this south-western corner of the island. The effect will be moderated by the low-lying location of the turbines and the enclosure and containment that the backdrop of the Moorland Hills LCT will present.

6.12.66 While the Proposed Development will also be visible along the west and south of the island, it will not occur within the main outlook from these coastal edges and will be located a greater distance from these parts of the LCU. The influence will gradually diminish inland and the magnitude of change will either be medium to low or lower. From the north-east peninsula, where visibility occurs along the slightly elevated landform, the extent of the intervening landform of the island itself, will increase the sense of separation and this will also reduce the influence of the Proposed Development on this part of the LCU.

6.12.67 During the construction phase, the magnitude of change will vary across this LCU as described in respect of the operational phase above. While the separation distance will mean that many of the ground level construction works will not be readily visible from this LCU, the emerging structures of the turbines and the tall cranes used in their construction will have an influence on landscape character, accentuated by the openness of the intervening water and the exposed nature of the Quanterness coastline.

Significance of effect

6.12.68 During the construction and operational phases, the effect of the Proposed Development on the Shapinsay LCU of the Ridgeline Islands LCT will be **significant** in the south-west corner out to approximately 6 km from the closest turbine, and **not significant** across all remaining parts of the LCU. This assessment reflects the limited proportion of the wider landscape and seascape context which influences the character of the island and concludes that the Proposed Development will not redefine the landscape character of Shapinsay as a whole.

Significance of cumulative effect

6.12.69 Operational Hammars Hill Wind Farm and Burgar Hill Wind Farm are the only two wind farms with the potential to influence cumulative effects on the Shapinsay LCU. Burgar Hill comprises six turbines at 116 m to blade tip and is located approximately 14.6 km to the north-west from the closest edge of the LCU. Visibility is shown to extend across the west of the island and occur more patchily across the remaining extent. Hammars Hill comprises five turbines at 67 m to blade tip and is located approximately 9.4 km to the north-west. Visibility is shown also to extend across the west of the island and occur more patchily across the remaining extent. The small number of turbines, their relatively small scale, particularly in respect of Hammars Hill combined with their distance from this LCU, particularly in respect of Burgar Hill, limits the influence they have on the cumulative baseline.

6.12.70 As the influence of wind farm development in the baseline is largely contained to the north-west, the addition of the Proposed Development to the south-west will spread this influence into a new sector. While this will add to the cumulative magnitude of change, the small number of turbines in each development combined with their distance from this LCU means that they will occupy only a small proportion of the wider landscape context, which will remain as the overall defining influence on the character of this LCU. The cumulative magnitude of change will be **medium to low** and the cumulative effect will be **not significant**.

Low Island Pastures LCT (298) – Kirkwall LCU

Baseline

6.12.71 The Low Island Pasture LCT is flat and low-lying with heights generally below 10 m AOD. This LCT typically occurs on the coastal edge, although on the Island of Sanday it extends into the interior. These low landforms often extend into the surrounding water as small headlands off the main island making them exposed to the elements, especially the possibility of flooding or inundation by the sea. The Low Island Pasture LCTs are often formed from sand deposits and some contain coastal dunes with Machair or links grasslands. Most are, however, farmed with improved pasture and some arable crops, set into a geometric pattern of small fields and with post and wire fences. The flatness of this landscape means that any vertical features stand out, including even buildings and walls. It also means that from this LCT, extensive and unobstructed views occur although the angle of the views are especially low in level.

6.12.72 The Kirkwall LCU of this type forms the low headland to the north-east of the town of Kirkwall. To the north and east there are three smaller headlands, creating the outline of a claw on plan. The shoreline is mostly rocky with indents where sandy bays occur. The landform is mostly set at 10 m with a slight increase to 20 m to the south. The farmland comprises small fields of improved pasture and arable crops set in a tight geometry of fields. The farmland extends up to the coastal edge apart from at the Head of Work where an area of dunes and natural grasslands occur.

6.12.73 Minor roads extend to access each of the three small headlands with a small scattering of buildings along the central and eastern tracks, while along the western track a more consolidated and modern development occurs along the shore at Craigiefield to the south of the LCU. A sewage works is situated on the Head of Work, while the remainder of the buildings in this LCU are relatively small scale and residential. From the western shore, views extend west across the Bay of Kirkwall to Hatston Industrial Estate, and south-west into Kirkwall, the extent of development denoting the more urban nature of this area. This stretch of water is busy with ferries and large commercial ships frequently passing in and out of Kirkwall, as well as even larger cruise ships in the summer months. A single turbine is located on the eastern coast of this LCU.

Sensitivity

6.12.74 The value of this LCU is medium. This LCU is not covered by any landscape designations which would otherwise denote a special value. Furthermore the landscape is typical of much of Orkney's coastline, comprising fields of farmland set within a geometric field pattern. The value of this landscape relates more to its relationship with the Bay of Kirkwall and Wide Firth and the visual interest that occurs along this coastal edge.

6.12.75 The susceptibility of this LCU to the effects of the Proposed Development is medium. While the relative proximity of this LCU to the Quanterness LCU and the orientation of the western coast in this westerly direction ensures that there is some association between these LCUs, it also has associations with Shapinsay to the north-east and Inganess Bay to the south-east.

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

Magnitude of change

6.12.77 During the operational phase, the magnitude of change will be **medium** along the western coastal edge and **medium to low** across all remaining parts of the LCU. There is a subtle ridgeline that runs through this LCU marked by the minor road extending north-east to the Head of Work. To the west, the landform falls west and to the east the landform falls east. The ZTV in Figure 6.7 and 6.10 reflects this pattern with visibility shown to be concentrated to the west of the ridgeline. The exception occurs where visibility is shown to occur along the Head of Holland, although from here, the extent of intervening landform will moderate the influence of the Proposed Development and the magnitude of change.

6.12.78 The western coastal edge of the LCU is orientated west towards the Quanterness LCU and the Proposed Development will be seen as a prominent feature set along the coastal edge. The

Proposed Development will be set on the opposite side of the Bay of Kirkwall and the closest turbine will be at a minimum distance of approximately 3.3 km from the closest edge of the LCU.

6.12.79 There are, however, a number of factors that prevent the magnitude of change from being rated higher than medium. The turbines will occur along a coastal edge where the settlement of Kirkwall and the Hatston Industrial Estate with its single turbine at Crowness Business Park will occur. These developments, in addition to the masts set on Wideford Hill, present a landscape where development forms part of the baseline character. The prominence of the turbines will also be tempered by their relatively low-lying coastal location, with the larger mass of Wideford Hill to the south, forming a useful scale comparison. Furthermore, the Proposed Development will be seen side on and, therefore, at its narrowest horizontal extent, such that it will occupy only a small proportion of the wider landscape context, in which there are other notable influences such as nearby Shapinsay Island.

6.12.80 During the construction phase, the magnitude of change will be **medium** along the western coastal edge and **medium to low** across all remaining parts of the LCU. The construction works will not be so readily evident from this LCU owing to the extent and influence of Kirkwall in the intervening area, as well as the partial screening by landform. Construction works at ground level will be largely screened and while the structures of the emerging turbines and the tall cranes will be readily visible, these will be seen in the context the urban development of the town and industrial estate.

Significance of effect

6.12.81 During the construction and operational phases, the effect of the Proposed Development on this LCT will be **significant** along the western coastal edge out to approximately 4.5 km and **not significant** in all remaining parts of the LCU. This assessment reflects the influence that urban development already has on this LCU, as well as the wider influence of the surrounding landscapes and seascapes.

Significance of cumulative effect

6.12.82 The cumulative magnitude of change will be **medium to low** and the cumulative effect will be **not significant.** While there will be an apparent influence form the Proposed Development, the influence from other wind farms and single turbines will be relatively weak, owing to their relatively distant location and relatively small scale. This, therefore, limits the in-conjunction effect that will be experienced from this LCU.

Coastal Basins LCT (301) – Isbister LCU

Baseline

6.12.83 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 with often 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.

6.12.84 The Isbister LCU of the Coastal Basins LCT is fairly extensive, forming a band of low-lying land extending from the Point of Backaquoy and Bay of Isbister, inland to Rendall to the north. This area is flat and level, with an elevation mostly at or below 10 m. The basin is defined by Gorseness Hill (124m AOD) and Enyas Hill (141m AOD) to the east, Hammars Hill (164m AOD) to the north and Mid Tooin (221m AOD) and Burrien Hill (200m AOD) to the west, albeit with an area of the Peat Basin LCT as a transitional landscape along this margin.

6.12.85 The predominant land use is farming, with the flat landscape divided by walls or fences into a series of recti-linear fields of arable and improved pasture. Typical of this type, there is a small loch inset from the shoreline of the Bay of Isbister, although not much evidence of wetlands across the wider basin. While the A966 runs along the western margin of this LCU, the roads which access the farmsteads and the dispersed properties are narrow minor roads and tracks. While separated a

minimum of 3 km from the Quanterness LCU, the orientation of the Isbister LCU south-east towards the Bay of Isbister, is also towards the Quanterness LCU, set on the opposite side of the Wide Firth.

Sensitivity

6.12.86 The value of this LCU is medium. This LCU is not covered by any landscape designations which would otherwise denote a special value. Furthermore the landscape is typical of much of Orkney's coastline, comprising fields of farmland set within a geometric field pattern. The value of this landscape relates more to its relationship with the Bay of Isbister and Wide Firth and the visual interest that relates to this coastal edge, as well as the enclosure and contrast formed by the surrounding hills.

6.12.87 The susceptibility of this LCU to the effects of the Proposed Development is medium to high in the southern half and medium in the northern half of this LCU. While the relative proximity of this LCU to the Quanterness LCU and the orientation of the Coastal Basin and Bay of Isbister in this south-easterly direction ensures that there is some association between these LCUs, although there are also associations with the more immediate surrounding hills and coastal edges especially in the northern half of the LCU.

6.12.88 The combination of the value of this LCU and its susceptibility to the effects of the Proposed Development results in an overall **medium to high** sensitivity in the southern half and **medium** in the northern half of the LCU.

Magnitude of change

6.12.89 During the operational phase, the magnitude of change will be **medium to high** along the coastal edge, **medium** inland and **medium to low** in the northern half. The ZTV in Figure 6.7 shows theoretical visibility occurring continuously across the LCU with all six turbines visible. The openness of this landscape means that actual visibility will be largely equivalent to theoretical visibility. The six turbines will form a notable feature seen set on the opposing side of the Wide Firth. Further inland, the influence of the Proposed Development will diminish as the association with the Wide Firth and Quanterness LCU weakens and the surrounding farmland becomes a stronger influence on landscape character.

6.12.90 The closest turbine will be located approximately 2.3 km from the closest edge of this LCU and approximately 8.5 km from the furthest edge. From the southern parts of the LCU the turbines will appear as large scale elements. Furthermore, their strong vertical form will appear at variance amidst a predominantly low-lying island landscape. The orientation of the Isbister LCU towards the south-east, where the Proposed Development will be located, will raise the influence of the turbines and while the Wide Firth separates these landscapes, it can also give rise to a foreshortening effect, whereby the simplicity and openness of the water makes the turbines appear as a more immediate feature.

6.12.91 During the construction phase the magnitude of change will be **medium to high** along the coastal edge and **medium to low** further inland. This LCU has a strong relationship with Wide Firth and the coastal landscapes which surround it. This is why that even at the construction phase, the Proposed Development will have a notable effect on the character of this LCU. It will appear as a large scale development, with the emergence of tall vertical structures constructed using tall cranes. While the landscape is open and simple in character, this construction phase will appear at variance with the predominantly rural character. Further inland the influence of the Proposed Development on landscape character will be notably reduced by the greater distance and lesser association.

Significance of effect

6.12.92 During the operational and construction phases, the effect of the Proposed Development on the southern part of the Isbister LCU of the Coastal Basins LCT will be **significant** out to approximately 6 km, while the effect on the northern part beyond approximately 6 km will be **not significant**, largely as a result of the greater influence of the enclosing high ground. Despite the separation of this LCU from the Quanterness LCU by the Wide Firth, the orientation of the Isbister LCU south-east towards the Proposed Development, will increase its influence on the character of this coastal basin.

Significance of cumulative effect

6.12.93 The cumulative ZTV in Figure 6.13 shows that Hammars Hill Wind Farm is already visible across much of the LCU seen at a minimum distance of approximately 0.5 km and a maximum distance of approximately 6.8 km. The cumulative ZTV in Figure 6.12 shows that Burgar Hill Wind Farm has no visibility in this area. Hammars Hill comprises five turbines each 67 m to blade tip, making them of limited vertical extent. They occupy a small section of the Moorland Hills LCT ridgeline and an even smaller proportion of the wider landscape context, in which the main association is across the coastal landscapes to the east, although the ridgeline does also have an influence owing to its scale and the enclosure it creates.

6.12.94 The addition of the Proposed Development to the cumulative situation will give rise to a **medium** cumulative magnitude of change in the northern part and a **medium to low** cumulative magnitude of change in the southern part. Hammars Hill Wind Farm is of limited horizontal and vertical extents and it will only be in the closer range northern part of the LCU that it will have a notable influence on the cumulative situation. While the addition of the Proposed Development in the opposite direction to the south, will increase the perceived spread of this type of development, the small number of turbines in each of these wind farms limits the proportion of the wider landscape context which they occupy, keeping their influence contained and allowing the wider landscape to remain as the defining feature. The cumulative effect will be **not significant**.

Coastal Basins LCT (301) – Kirkwall LCU

Baseline

6.12.95 The general characteristics of the landform of this LCU are consistent with the general description of the LCT presented in respect of the Isbister LCU above. The land cover and land uses are, however, very different.

6.12.96 The Kirkwall LCU of the Coastal Basins LCT comprises a basin shaped landform, defined by rising landform of 20 to 50 m around the edges and with smooth relief falling towards a concave coastal edge. The basin is enclosed by the rising landform of Hatston to the west and Craigiefield to the east and opening out towards the Bay of Kirkwall to the north. To the south, the relatively low-lying landform extends to meet the small Enclosed Bays LCT of Scapa Flow. But unlike the rural LCUs of this LCT, which are characterised by coastal wetlands and lochs or fields of arable or improved pasture, the Kirkwall LCU is characterised by the harbour and the urban development that has grown around it.

6.12.97 As SNH's citation of the LCT describes, there is a strong association between the basin and the bay as the shape of the landform means that the land is orientated in this direction. While the enclosure of the built form reduces the visual connection from much of the town, where open aspects or gaps occur, this association is readily evident. Furthermore, as the SNH citation describes, skylines become all important, with the enclosure of the surrounding landform, often accentuated by the additional height and vertical form of buildings and adding to the sense of containment. The townscape comprises many highly valued historic buildings, including St Magnus' Cathedral and the ruins of the Bishop's Palace and Earl's Palace.

Sensitivity

6.12.98 The value of this LCU is medium. This LCU is not covered by any national or regional landscape designations which would otherwise denote a special value. It has been transformed from its natural landscape by the extent of urban development, such that the shape of the landform is the only recognisable characteristic.

6.12.99 The susceptibility of this LCU to the effects of the Proposed Development is medium to low. Many of the key characteristics associated with the natural landscape of the Coastal Basin LCT have been lost due to the extent and density of built development across this LCU. This inevitably lowers the susceptibility of the LCU to the effects of the Proposed Development because there is already an extensive baseline influence from built development, including the industrial estate at Hatston with its single turbine at Crowness Business Park, and the masts on Wideford Hill. A susceptibility does

occur, owing to the scale of the proposed turbines which will make this type of development larger and potentially more prominent than existing developments in this area.

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

Magnitude of change

6.12.101 The magnitude of change will be **medium to high** from Hatston, **medium** along the eastern coastal edge between Kirkwall Harbour and Craigiefield and **medium to low, low** to **no change** across the remaining parts of the LCU. The ZTV in Figures 6.7 and 6.10 show theoretical visibility to occur almost continuously across the LCU with all six turbines visible. The exception occurs across the western and southern section where lower levels of theoretical visibility occur owing to the screening effect of intervening Wideford Hill. Actual visibility from much of the LCU will be notably reduced or completely screened owing to the enclosure of built form.

6.12.102 The Proposed Development will be most readily visible from the northern end around Hatston where the landscape is largely open and the extent of development is limited. At a minimum distance of 1.1 km to the closest turbine, this part of the LCU is closest to the Proposed Development and, as such, the turbines will appear large in scale and at variance with the relatively rural character, albeit with Hatston Industrial Estate and single turbine also located at Crowness Business Park.

6.12.103 Relatively full visibility will also occur along the eastern coastline extending along the headland from Kirkwall Harbour to Craigiefield at distances of approximately 3.5 km. The orientation of this part of the LCU westwards towards the site will increase the influence that the Proposed Development will have on this urban and semi-rural area. Again, the magnitude of change will be moderated by the existing influence of the urban development, especially with the larger scale and modern developments on the harbour side and the cruise liners, passenger ferries and other large scale commercial ships passing in and out of the harbour.

6.12.104 In those remaining parts of the LCU, it is likely that the extent of visibility will be moderated by the screening effect of built form. Where turbines are visible, they will be seen against the close range context of built development and this will ensure the magnitude of change remains medium to low.

6.12.105 During the construction phase, the magnitude of change will be **medium to high** from Hatston, **medium** along the eastern coastal edge between Kirkwall Harbour and Craigefield and **low** to **no change** across the remaining parts of the LCU. The proximity of Hatston means that the emerging structures of the turbines and the tall cranes used in their construction will form close range and large scale features. While at a slightly more distant range, there will still be a notable influence from the turbines and cranes, largely owing to the orientation of this part of the LCU towards the site. From all remaining parts of the LCU the influence will be moderated by the enclosure of the surrounding built form of the town.

Significance of effect

6.12.106 During the construction and operational phases, the effect of the Proposed Development on the Kirkwall LCU of the Coastal Basins LCT will be **significant** in the north-western corner of the LCU, owing to the closer range and more open aspect of this area. The effect on all remaining parts will be **not significant** owing largely to the influence and enclosure of built form and the influence of the harbour and associated shipping movements, which will limit the extent of visibility and the comparative influence of the Proposed Development.

Significance of cumulative effect

6.12.107 The cumulative magnitude of change will be **medium to low** and the cumulative effect will be **not significant**. While there will be an apparent influence form the Proposed Development, the influence from other wind farms and single turbines will be relatively weak, owing to their relatively distant location and relatively small scale. This, therefore, limits the in-conjunction effect that will occur.

Peatland Basin LCT (309) – Breck of Cruan LCU

Baseline

6.12.108 The Peatland Basin LCT is associated with low-lying areas of land either on the coast or around inland water bodies. The accumulation of deep peat in these low-lying altitudes makes this LCT locally unique. The land is typically very flat with a range between 10 and 20 m. It is made distinct from the other low-lying farmed landscapes owing to its peatland or wet grassland vegetation which is typically unenclosed and uncultivated. Owing to the instability of the peaty soils, there is very little settlement in this LCT with roads occasionally cutting across the basins.

6.12.109 The Breck of Cruan LCU lies along the western margin of the Isbister LCU of the Coastal Basins LCT and the eastern margin of the Rolling Hill Fringe LCT of the Burrien Hill LCU. The Peatland Basin LCT essentially forms the western side of the coastal basin landform, it is made distinct by the presence of largely undisturbed peatland. The dark colour of the peatland vegetation, the exposed ditches and the areas where extraction has occurred, appears in contrast to the light colours of the surrounding improved pasture and arable crops of the farmland.

6.12.110 The relatively low lying landform limits the extent to which this LCU connects with the wider landscape. The principal association is with the Rolling Hill Fringes LCT and the Moorland Hills LCT to the west, as these landforms rise above and enclose the Peatland Basin LCT. In contrast, the Coastal Basin LCT to the east is flat, creating a more open aspect in which tiers of fields extend all the way to the coastal edge. While there is very little development in this area and relatively sparse rural development in the wider area, Hammars Hill Wind Farm is evident to the north, as an example of wind farm development in the Moorland Hills LCT.

Sensitivity

6.12.111 The value of this LCU is medium. This LCU is not covered by any national or regional landscape designations which would otherwise denote a special value. Its value relates to the peatland and wet grassland landcover that characterises this area and sets it apart from the broad extents of the Orkney landscape that have been modified by farming. The value of this landscape also relates to its relationship with the surrounding hills and farmland, although it is more land-locked within the interior than the adjacent Coastal Basin LCT.

6.12.112 The susceptibility of this LCU to the effects of the Proposed Development is medium. The location of this LCU recessed inland from the coastal edge, increases its association with neighbouring LCUs but reduces its association with the more distant Quanterness LCU which is separated by the intervening Coastal Basin LCT. The exception occurs within the southern part of this LCU which lies to the south-east of the A966 and more closely influenced by the coastal edge.

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

Magnitude of change

6.12.114 During the operational phase, the magnitude of change will be **medium to high** in the southern part, to the south-east of the A966 and **medium** in all remaining parts of the LCU. The ZTV in Figures 6.7 and 6.10 show theoretical visibility of all six turbines to be continuous across the LCU and the openness of the LCU means that actual visibility will be almost equivalent. The LCU will be located a minimum distance of approximately 3.3 km from the closest turbine, extending to a maximum distance of 7.4 km along the northern edge.

6.12.115 Although this LCU is inset from the coastal edge, such that it lacks an immediate association with the Wide Firth, it is still close enough to be influenced by the coastal landscapes, including Quanterness LCU to the south-east. Its landscape character is more notably influenced by the surrounding inland LCUs, especially the West Mainland LCU of the Moorland Hills LCT which is situated to the immediate west of the Breck of Cruan LCU. Furthermore, the northern half of this LCU is a minimum distance of approximately 1.6 km from operational Hammars Hill Wind Farm. This means there is a baseline influence from a commercial scale wind farm, such that the addition of the Proposed Development will not appear as a new or unfamiliar type of development in this context.

6.12.116 During the construction phase, the magnitude of change will be **medium to high** in the southern half of the LCU and **medium** in the northern half. As it will only be at the end of the construction phase that the turbines will be seen at their full height, the influence of the Proposed Development during this phase will be limited by the typically lower height, as well as the slightly weaker association between this inland LCU and the site.

Significance of effect

6.12.117 During the construction and operational phases, the effects of the Proposed Development on the Breck of Cruan LCU of the Peatland Basin LCT will be **significant** in the southern part out to approximately 5 km and **not significant** in all remaining parts of the LCU. This finding relates to the stronger association between the southern part of this LCU and the Quanterness LCU and the comparatively weaker association with the northern part.

Significance of cumulative effect

6.12.1 The cumulative ZTV in Figure 6.13 shows that Hammars Hill Wind Farm is already visible across much of the LCU seen at a minimum distance of 1.6 km. The cumulative ZTV in Figure 6.12 shows that Burgar Hill Wind Farm has no visibility in this LCU. Hammars Hill comprises five turbines each 67 m to blade tip, making them limited in vertical extents. They occupy a very small section of the Moorland Hills LCT ridgeline and an even smaller proportion of the wider landscape context, in which the main association is with the uplands to the immediate west, although the ridgeline does also have an influence owing to its scale and the enclosure it creates.

6.12.2 The addition of the Proposed Development to the cumulative situation will give rise to a **medium** cumulative magnitude of change, as with its six turbines located in the opposite direction, it will spread the influence of this type of development in respect of the LCU. The effect will be moderated by the fact that the Proposed Development will also occupy only a small proportion of the wider landscape context, which will remain as the defining influence on the character of this LCU. Overall, the limited extents of both developments will limit the overall cumulative effect which will be **not significant**.

Isolated Coastal Knolls LCT (304) – Gorseness LCU

Baseline

6.12.3 The Isolated Coastal Knolls are low rounded hills set on low-lying coastlands. Typically, they rise from a base elevation of 50 m to heights ranging between 90 and 150 m AOD. Despite being relatively small, it is their contrast with the flat or gently undulating landform around the coastal edge, along with their simple profile of well-defined slopes and broad summits that makes them appear distinctive. Landcover is broadly similar to that of the surrounding LCTs with fields of improved pasture set within a geometric pattern enclosed by a mix of post and wire fencing and drystone dykes.

6.12.4 The Gorseness LCU of the Isolated Coastal Knolls LCT occupies the eastern most section of West Mainland's eastern coastline. It lies in between the Inclined Coastal Pasture LCT to the east and the Coastal Basin LCT to the west. The landform encompasses two conical shaped hills with broad summits, which are conjoined; Gorseness Hill, at 124m AOD, forming the southern summit and Enyas Hill, at 141m AOD, forming the northern summit. To the north-east, Hackland Hill forms a lower and more gently sloping knoll.

6.12.5 Minor roads and settlement occur around the lower margins of this LCU, but do not extend onto the slopes, with the exception of a farm track onto Gorseness Hill. While the farmland does extend onto the slopes and summits, the character changes with improved pasture replaced by rough grasslands and the presence of enclosure becoming less regular. While the character of this LCU and the surrounding LCUs is predominantly rural and agrarian, Hammars Hill Wind Farm is readily visible to the north-west at close range.

Sensitivity

6.12.6 The value of this LCU is medium to high. While there are no landscape designations which would otherwise denote a special value, in the context of a predominantly low-lying landscape, this LCU

provides an upland landscape, albeit small in scale but which, nonetheless, is valued locally because of the contrast it presents in terms of landform and landcover.

6.12.7 The susceptibility of this LCU to the effects of the Proposed Development is medium. The broadly conical shape of the hills and their elevation above the low-lying coastal landscapes means that they have an association with surrounding landscapes in all directions. The aspect of the south facing slopes is, however, across the Wide Firth to the landscapes on the opposite side, including towards the Quanterness LCU.

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

Magnitude of change

6.12.9 During the operational phase, the magnitude of change will be **medium** across the southern slopes of Gorseness Hill and Enyas Hill and with **no change** across the northern slopes. The ZTV in Figures 6.7 and 6.10 show theoretical visibility occurring across the southern slopes of Gorseness Hill and Enyas Hill. These hills effectively screen visibility from the remainder of the LCU such that there is either no or low levels of visibility occurring. The closest edge of the LCU will be located a minimum of approximately 5.3 km from the closest turbine, making the proposed turbines appear as medium scale features in this landscape context.

6.12.10 Those factors which increase the influence of the Proposed Development on the character of this LCU include the elevation of the landform and the direct outlook from the south-facing slopes, as well as the scale of the turbines and their location on a readily visible coastal edge. Those factors which moderate the influence include, not only the separation distance, but also the presence of intervening landform and seascape which will add to the sense of separation. Furthermore, as there are only six turbines, they will occupy a very small proportion of the much wider landscape which presents an external influence on the character of this Isolated Coastal Knolls LCT.

6.12.11 During the construction phase, the magnitude of change will be **medium** across the southern slopes of Gorseness Hill and Enyas Hill and with **no change** across the northern slopes. At a minimum distance of 5.3 km between the closest turbine and closest LCU boundary, many of the smaller scale construction works will not be discernible and while the emerging turbines and the associated cranes will be readily visible, their incomplete nature will moderate the influence they will have from this range.

Significance of effect

6.12.12 During the construction and operational phases the effect of the Proposed Development on the Gorseness LCU of the Isolated Coastal Knolls LCT will be **significant** out to 6 km and **not significant** beyond this range. This finding reflects the wider landscape and seascape context which influences the character of this LCU and which prevent the Proposed Development from becoming the defining feature, apart from along the closest range edge.

Significance of cumulative effect

6.12.1 The cumulative ZTV in Figure 6.13 shows that Hammars Hill Wind Farm is already visible across much of the LCU seen at approximately 1.1 km from the closest edge and 4.1 km from the furthest edge. This wind farm comprises five turbines each 67 m to blade tip. It occupies a very small proportion of the wider landscape context, in which the main association is across Wide Firth to the south and not the north towards Hammars Hill. The cumulative ZTV in Figure 6.12 shows that Burgar Hill Wind Farm has no visibility in this area. The addition of the Proposed Development to the cumulative situation will give rise to a **medium to low** cumulative magnitude of change, as with its six turbines, it will also occupy only a small proportion of the wider landscape context and be similarly offset from the main southerly aspect of the Wide Firth, thus limiting the association. The cumulative effect will, therefore, be **not significant**.

Undulating Island Pastures LCT (299) – Kirkwall LCU

Baseline

6.12.2 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 of 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.

6.12.3 The Kirkwall LCU of the Undulating Pastures LCT occupies the undulating landform to the immediate east of the Kirkwall LCU of the Coastal Basin LCT. This LCU differs from SNH's citation most notably owing to the extent of urban development occupying the south-west corner. The landform rises from north to south covering a range of 20 m up to 80 m AOD. There is a broad north to south ridge, with the land to the west facing west and the land to the east facing east. The exception occurs in the south where the land is more undulating.

6.12.4 While the predominant land use across this LCU is agriculture, the eastern and southern settlement boundaries of Kirkwall extend into this area. The southern expansion is more modern, while the eastern expansion comprises a mix with some development dating back to the 19th and early 20th Century, as well as more modern developments.

Sensitivity

6.12.5 The value of this LCU is medium. There are no national or regional landscape designations which would otherwise denote a special value, and the landscape is largely characterised by undulating fields of improved pasture, which is largely typical of much of Orkney.

6.12.6 The susceptibility of the LCU to the Proposed Development is medium. The southern part of this LCU is slightly elevated compared to the lower-lying coastal landscapes which surround it, such that it is potentially more susceptible to the influence that the Proposed Development in the Quanterness LCU will give rise to. This susceptibility is, however, tempered by the close range influence of the urban development which encroaches into this LCU. Although the northern part of the LCU is less developed, it is also lower-lying, such that the Proposed Development won't have such a notable influence.

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

Magnitude of change

6.12.8 During the operational phase, the magnitude of change will be **medium to low.** The ZTV in Figures 6.7 and 6.10 show almost continuous visibility of all six turbines across this LCU. The Proposed Development will be located a minimum distance of approximately 4.1 km from the closest western boundary of this LCU and 5.6 km from the furthest. Although there is no strong or direct relationship between this LCU and the Quanterness LCU, where the Proposed Development will be located, the land does generally fall north-west towards the site.

6.12.9 The effect of the Proposed Development on the Kirkwall LCU will be moderated by the extent and range of different landscape types and land uses occupying the intervening area. Most notably, the presence of the town of Kirkwall in this LCU and the adjacent LCU, which denote the extent to which human development has altered the natural landscape. It is within this fore to middleground context, that the addition of the turbines towards the background context, will have a reduced effect. The turbines will, however, appear as a different type of development, with their greater vertical scale and modern appearance and this will add to their influence on landscape character.

6.12.10 During the construction phase, the magnitude of change will be **low**. The construction works will not be so readily evident from this LCU owing to the extent and influence of Kirkwall in the intervening area, as well as the partial screening by landform. Construction works at ground level

will be largely screened and while the structures of the emerging turbines and the tall cranes will be visible, these will be seen behind the urban development of the town and industrial estate.

Significance of effect

6.12.11 During the construction and operational phases, the effect of the Proposed Development on the Kirkwall LCU of the Undulating Island Pastures LCT will be **not significant**. Despite the relative proximity of the LCU to the Proposed Development, the existing influence of the urban area in this LCU and the adjacent LCU, will moderate the influence of the turbines such that they will not redefine the character of this LCU.

Significance of cumulative effect

6.12.12 The cumulative magnitude of change will be **medium to low** and the cumulative effect will be **not significant**. While there will be an apparent influence form the Proposed Development, the influence from other wind farms and single turbines will be relatively weak, owing to their relatively distant location and relatively small scale. This, therefore, limits the combined effect that will occur.

Whaleback Islands LCT (296) – Gairsay LCU

Baseline

6.12.13 In the Orkney archipelago, this LCT occurs across nine small and either sparsely populated or uninhabited islands, including Gairsay, Egilsay and Faray. 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 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.

6.12.14 The Whaleback Islands LCT covers the whole of Gairsay. This is a small island that lies approximately 7.3 km north of the northern site boundary, set in the Gairsay Sound between West Mainland to the west and Shapinsay to the east. It comprises one oval shaped hill which rises to a high point of 102 m AOD, with a lower coastal shelf to the south and a small coastal island joined by an isthmus to the south-east. There are only a few inhabited properties on the island, including a large farmstead on the south-west coast, and also a couple of abandoned crofts. There are no roads on the island, only a track connecting the two jetties. The flatter land to the south and west is used as improved pasture with a geometric field pattern super-imposed across the landform. The steeper land, which occupies the remainder of the island, is covered in rough grasses and heather moorland with no enclosure.

6.12.15 While the island is only approximately 1.0 km from West Mainland and approximately 2.5 km from Shapinsay, the SNH citation describes there being a sense of isolation and solitude. It also highlights how the Whaleback Islands form focal points in views from surrounding islands. Conversely, views from Gairsay are drawn out to neighbouring Shapinsay and West Mainland, as well as Wyre and Egilsay to the north. The Quanterness LCU, where the site is located, is visible from Gairsay, although not visible as one of the closer range coastlines. Hammars Hill forms a visible feature on the Moorland Hills to the west at a minimum distance of approximately 4.7 km.

Sensitivity

6.12.16 The value of this LCU is medium to high. While there are no national or regional landscape designations covering the island, the Whaleback Islands LCT is a characteristic feature of the Orkney archipelago and there is value in terms of the scenic qualities of this small island and its unique shape.

6.12.17 The susceptibility of this LCU to the effects of the Proposed Development is medium. Gairsay is a relatively small and flat island set in a seascape with islands all around. While West Mainland is the

closest and potentially most influential of these islands, in terms of the effects of the wider context on landscape character, there are other influences, including Shapinsay to the east and Wyre and Egilsay to the north. The south of the island faces out towards the Wide Firth and while the central part of the mainland, where the site is located, is visible this forms a more distant coastline, relative to the closer range coastlines. While there is no strong or direct association with the Quanterness LCU, the openness of the water ensures that there is a connection between this area and the island.

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

Magnitude of change

6.12.19 During the operational phase, the magnitude of change will be **medium**. The ZTV shows that visibility of the Proposed Development will occur across the southern slopes of the island but not the northern slopes. The Proposed Development will be seen at a minimum distance of 7.3 km, such that the turbines will be readily visible and be seen as medium scale elements.

6.12.20 Those factors which moderate the magnitude of change include the closer range influence of the coasts of West Mainland and Shapinsay, which set the local context to the island. It is in contrast to these coastlines that the Quanterness coastline will appear comparatively more distant and less prominent. Furthermore, the turbines of the Proposed Development will be seen against the baseline context in which Hammars Hill Wind Farm presents a closer range development at approximately 4.7 km to the west. This will mean that the Proposed Development will not be introducing a new or unfamiliar influence on the landscape character of this LCU.

6.12.21 During the construction phase, the magnitude of change will be **medium to low**. The construction works will not be so readily evident owing to the separation distance between the island and the site, combined with the lesser extent of the final development that will be visible.

Significance of effect

6.12.22 During the construction and operational phase, the effect of the Proposed Development on the Gairsay LCU of the Whaleback Islands LCT will be **not significant**. While the Proposed Development will have an influence, it will not be of a sufficient magnitude to redefine the landscape character of this LCU, largely owing to its comparatively more distant location.

Significance of cumulative effect

6.12.23 Operational Hammars Hill Wind Farm and Burgar Hill Wind Farm are the only two wind farms with the potential to influence cumulative effects on the Gairsay LCU. Burgar Hill comprises six turbines at 116 m to blade tip and is located approximately 8.8 km to the north-west from the closest edge of the LCU. Visibility is shown to extend across the west and south of the island. Hammars Hill comprises five turbines at 67 m to blade tip and is located approximately 4.7 km to the west. Visibility is shown also to extend across the west and south of the island. The small number of turbines, their relatively small scale, particularly in respect of Hammars Hill combined with their distance from this LCU, particularly in respect of Burgar Hill with Hammars Hill located closer, limits the influence they have on the cumulative baseline.

6.12.24 As the influence of wind farm development in the baseline is largely contained to the west and north-west, the addition of the Proposed Development to the south will spread this influence into a new sector. While this will add to the cumulative magnitude of change, the small number of turbines in each development combined with their distance from this LCU means that they will occupy only a small proportion of the wider landscape context, which will remain as the overall defining influence on the character of this LCU. The cumulative magnitude of change will be **medium** and the cumulative effect will be **not significant**.

Residual Effects on Coastal Character Areas

6.12.25 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).

6.12.26 The three Regional Coastal Character Areas which are especially relevant to this assessment include the following:

- RCCA 16: Wide Firth;
- RCCA 17: Kirkwall; and
- RCCA 14: West Shapinsay.

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

RCCA 16: Wide Firth

Baseline

6.12.28 The Wide Firth RCCA extends from Scara Taing, to the north of Tingwall, right round the western coast of Wide Firth to the western pier at Kirkwall, taking in the Bay of Isbister, the Bay of Firth, Holm of Grimbister and Damsay. This coastline is characterised by its settled nature with agricultural land extending right up to the shoreline, with the exception of some short sections where marsh or wetlands occur. This assessment considers the effects of the Proposed Development on the coast between Broad Taing and the western pier at Kirkwall. The section to the north of Broad Taing, up to Scara Taing, has an easterly aspect such that it relates more to Shapinsay and Gairsay rather than Quanterness to the south.

6.12.29 The coastline is low-lying and gently indented. The orientation of the different sections varies relative to their broader position around the Wide Firth and their specific position along the indented edge. The broad orientation varies from being south-facing from Broad Taing to Bay of Isbister, south-east facing from Point of Backaquoy to Scarva Taing, east-facing over a short section in the northern part of Finstown, north-east facing from Finstown to Rennibister, and then north-facing over Quanterness. The coastline comprises sandy bays and rocky skerries with an often wide inter-tidal zone of rocky platforms. Features include the Holm of Grimbister and Damsay which sit out in the Bay of Firth to the east of Finstown. There is a strong maritime influence with the sounds and smells of the sea are readily evident.

6.12.30 The seascape is semi-enclosed by the way in which the landform wraps around the bay from Broad Taing round to the Headland of Car Ness and the enclosure which the presence of Shapinsay to the north-east and Gairsay to the north, form in these directions. This juxtaposition between land and sea gives rise to a strong visual relationship between opposing mainland shores and islands, with the islands appearing in framed or open views from this RCCA and conversely views of this RCCA occurring from the islands.

6.12.31 The farmland comprises fields of improved pasture and arable with the recti-linear field pattern typically orientated towards the coastal edge. While much of the landform is either inclined plain or coastal basin, it does rise up in the hinterland to form the hill fringes and moorland hills. The SNH citation for this RCCA makes the following comment; "*The settled agricultural nature of the coast and the lack of ruggedness, reduces the sense of wildness experienced when viewing the wider vista of vista of sea and neighbouring islands.*"

6.12.32 This is a settled, as well as cultivated landscape, with farmsteads and other properties dispersed around the coast. To the north and west these are accessed by a network of minor roads and tracks, while to the south the A965 sits so close to the shoreline that properties either fit in the narrow band available or are set to the south of the road. At Quanterness, there are no properties across the broad headland to the north of the A965. At Finstown, the human interventions of the pier, slipway and bridge over The Ouse, along with the town, create a more man-made influence on the coastal character. The masts on Wideford Hill and the single turbines at Rennibister and Crowness Business Park, albeit relatively small in scale, add to the modern artefacts visible from the Wide Firth RCCA.

Sensitivity

6.12.33 The value of the Wide Firth RCCA is medium. There are no regional or national designations which would otherwise denote a special value. The value of this coastal area relates to the association between opposing shores around the Wide Firth and the neighbouring islands.

6.12.34 The susceptibility of the Wide Firth RCCA to the effects of the Proposed Development is medium to high. The coast of the Wide Firth is largely inward looking with views drawn between opposing shorelines. As the site is located at Quanterness, on the southern coastal edge of this RCCA, this and other surrounding sections of the coastline will be readily susceptible to the effects of the Proposed Development.

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

Magnitude of change

6.12.2 The magnitude of change on the Wide Firth RCCA will be **high**, **medium to high** or **medium**. The ZTV in Figure 6.7 shows that theoretical visibility will be continuous across the RCCA and the openness of the coastal edge means that actual visibility will be comparable, with the exception of Finstown where the enclosure of built form will reduce visibility in localised areas. The magnitude of change will be high at Quanterness where there will be direct and indirect effects on coastal character owing to the presence of turbines, tracks and other infrastructure in this area and close to the coastal edge. The turbines will appear at variance with the coastal character owing to their strong vertical form in contrast to the low horizontal coastal landscape and seascape and their modern and man-made appearance in contrast to the semi-natural appearance of the farmed landscape.

6.12.3 The indirect effects on coastal character between Finstown and Rennibister will be medium to high. The Proposed Development will introduce a new, relatively close range and large scale feature that will be seen as part of the coastal landscape that is set out into the Wide Firth. While the magnitude of change in Finstown will drop to medium or lower in parts where there is greater enclosure from built form, along the coast, to the north of the town, the magnitude of change will be medium to high owing to the orientation towards the east where the Proposed Development will be situated. This medium to high rating will continue along the coastline to Black Taing as this section is orientated south-east towards the Proposed Development and this association of views across the water will accentuate the prominence of the turbines. From the Bay of Isbister round to Broad Taing, despite the slightly greater separation distance combined with the wider influences from the surrounding landscapes and seascapes, the orientation of the coastline will still broadly be towards the Proposed Development, and the magnitude of change will remain medium to high.

6.12.4 While the Proposed Development will form a new and defining feature within this RCCA, the overall effect will be moderated by the following factors. Firstly, Quanterness has already been modified by cultivation for improved pasture and arable farming; there is no natural landcover and the farmed land extends up to the shoreline. This means that the baseline character of this coastal landscape has no sense of wildness or remoteness owing to the extent and intensity of modification. Secondly, Quanterness provides a well-defined coastal plain with which the Proposed Development forms a clear relationship, thus ensuring containment and preventing encroachment into other landscapes. Thirdly, the proximity of the Proposed Development to the coastal edge ensures that it is low-lying, such that the moorland hills in the hinterland, and around the wider bay, form some sense of enclosure.

Significance of effect

6.12.5 The effect of the Proposed Development on the Wide Firth RCCA will be **significant** from Broad Taing round to the western pier at Kirkwall and **not significant** between Broad Taing and Scara Taing. This finding relates principally to the strong association which occurs between the coastal areas set around the Wide Firth.

Significance of cumulative effect

6.12.6 The cumulative magnitude of change will be **medium to low** and the cumulative effect will be **not significant.** The other wind farm visible from this area is Hammars Hills on the moorland hills to the

north-west. Whilst this is readily visible, it appears a relatively distant and small scale feature, occupying only a small proportion of the wider landscape and seascape context as experienced from the Wide Firth RCCA. There are also single turbines evident across the farmed landscape, the two most relevant to this assessment are at Rennibister and Crowness Business Park. The fact that these are single turbines and grouped within broadly the same area as the Proposed Development reduces their influence on the cumulative situation. Therefore, while the solus effect of the Proposed Development on the Wide Firth RCCA will be significant, the cumulative effect will be **not significant**, as the influence from the other turbines is not of a sufficient scale to give rise to a wind farm landscape.

RCCA 17: Kirkwall

Baseline

6.12.1 The Kirkwall RCCA covers the coastal inlet to the south-east of Wide Firth. It extends from Hatston Pier in the west to the headland at Car Ness in the east, with the harbour and town of Kirkwall set in the deep inlet between. The predominant orientation is northwards across the Bay of Kirkwall, with views extending to Shapinsay to the north-east and Gairsay to the north. The harbour and the town centre are set in the low-lying coastal basin, while expansion of the settlement has extended up the enclosing slopes to the west and the east.

6.12.2 This RCCA is largely characterised by urban development. Kirkwall has an especially active harbour, its deep waters making it suitable for large commercial ships, including ferries and cruise liners. There are also a large number of recreational vessels moored here and that pass through. The movement of the boats in and out combined with the constant action of waves and often windy conditions, all contribute towards a dynamic coastal character. This industrial character extends westwards around the coast to where the large sheds and factories of the Hatston Industrial Estate occur, marked in the landscape by Crowness Business Park's single turbine. Eastwards around the coast and up onto the eastern slopes above Kirkwall, the character is predominantly residential.

6.12.3 Out to Car Ness, a more rural character unfolds, with fields of improved pasture set across a relatively flat and low-lying coastal headland. While there is settlement, it is mostly dispersed, albeit with a nucleated group at Craigiefield. Kirkwall forms the main focus in views around the Bay of Kirkwall, and as the citation states; "*The built form of Kirkwall is consistently visible within this RCCA and there is little or no sense of wildness."*

Sensitivity

6.12.4 The value of the Kirkwall RCCA is medium. There are no regional or national designations which would otherwise denote a special value. The value of this coastal area relates to the setting of the historic town of Kirkwall and the views north across the Bay of Kirkwall from the settled coastline.

6.12.1 The susceptibility of the Kirkwall RCCA to the effects of the Proposed Development is medium. The key baseline influence on the coastal character of the Wide Firth is the urban development associated with Kirkwall, including the presence on Hatston Industrial Estate on the western shore. This context moderates the susceptibility of the RCCA to the Proposed Development as a broad extent of existing development already forms part of this area.

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

Magnitude of change

6.12.3 The magnitude of change on the character of the Kirkwall RCCA will be **medium**. The ZTV in Figures 6.7 and 6.10 show that all six turbines will be theoretically visible almost continuously across this RCCA. The enclosure of the bay by the surrounding headlands coupled with the further enclosure by built form across much of this RCCA means that actual visibility will be more limited. Typically the turbines will be seen set behind the Hatston Industrial Estate. While there is a relatively small existing turbine at Crowness Business Park, the larger proposed turbines will appear comparable in height owing to the effect of perspective as a result of their greater distance.

6.12.4 The main factor which will moderate the effect of the Proposed Development on the Kirkwall RCCA is the activity associated with the harbour. As well as the Kirkwall Harbour, there is also the Hatston Harbour at the western edge of this RRCA. Both of these are used for regular ferry services to the Mainland of Scotland and the other islands as well as for cruise liners in the summer months. The urban influence also extends along the coastline owing to the presence and visibility of urban development, some of which is fairly large in scale. While the influence of the shipping lane is still evident out at Car Ness, the urban influence diminishes, although Kirkwall and Hatston are still visible. It is from this western coastal edge that the Proposed Development, on the opposing Quanterness shoreline, will have a more notable effect.

Significance of effect

6.12.5 The effect of the Proposed Development on the Kirkwall RCCA will be **not significant** with the exception of a localised **significant** effect along the western coastal edge of Car Ness. This finding relates principally to the existing extent of urban and industrial development present in this RCCA and in particular the influence of large scale commercial boats, ferries and cruise liners passing in and out of the harbour.

Significance of cumulative effect

6.12.6 While the single Crowness Business Park turbine will have an influence on the cumulative situation this will be limited owing to there being only one turbine and it being notably smaller than the proposed turbines. The addition of the Proposed Development will be seen in the same sector as the existing turbine and this prevents the spread of this influence into other sectors of the views experienced from this RCCA. Overall, the cumulative magnitude of change will be **medium to low** and the cumulative effect will be **not significant**.

RCCA 14: West Shapinsay

Baseline

6.12.1 The West Shapinsay RCCA extends to cover the western, southern and northern coasts of Shapinsay. The RCCA comprises a mix of rock platforms, shingle beaches, sandy bays and ayres. The special features of the west coast include curving, shingle shores and fragmented, rock platforms with low cliffs set behind. The south coast is more regularly indented with small, sandy beaches between the rocky outcrops. The seascape is contained by islands on almost every aspect, with Gorseness on West Mainland to the west, Car Ness on the East Mainland to the south, Gairsay, Rousay and Egilsay to the north-west, Eday to the north and Stronsay to the north-east. While Car Ness is the closest part of the Mainland of Orkney the wider coastline around Wide Firth is visible, including the site at Quanterness.

6.12.2 In terms of human influence, there are fish farms off the south coast and a regular ferry service from Kirkwall which connects to the ferry pier at Balfour Village. Other than the village, settlement comprises dispersed farmsteads and other properties across the island, set within the strict geometric pattern of roads and fields that characterise the rural hinterland. The Howe single turbine is visible near the south coast, while the distant features of Hammars Hill and Burgar Hill can be seen to the north-west and the single turbines at Crowness Business Park and Rennibister to the south-west.

Sensitivity

6.12.3 While there are no national or regional landscape designations covering the island as a whole, there is a GDL designation covering Balfour Castle on the south-west coast and this denotes a special value. Although not formally recognised through a landscape designation, Shapinsay Island as a whole is of historic value owing to the planned nature of the farmed landscape, as well as the village of Balfour and the road system connecting other settlement on the island.

6.12.4 The susceptibility of the Shapinsay RCCA to the effects of the Proposed Development is medium in the south-west corner and medium to low in all remaining parts of the RCCA. Shapinsay has four distinct aspects broadly relating to its western, southern, northern and eastern coasts and each of these relates to a different seascape and distant coastline. This means that there is a broad range of external influences acting on these coastal edges. This moderates the susceptibility of the RCCA

to the Proposed Development as its influence will be largely limited to the south-west coast of the island.

6.12.5 The combination of the value of this RCCA and its susceptibility to the effects of the Proposed Development results in an overall **medium to high** sensitivity on the south-west coast and **medium** across all remaining parts of the RCCA.

Magnitude of change

6.12.1 During the operational phase, the magnitude of change will vary across this RCCA with the closer range parts on the south-western shore being subject to a **medium** magnitude of change and the other remaining parts being subject to a **medium to low, low** or **negligible** change, with those parts where there will be no visibility being subject to **no change**.

6.12.2 The ZTV in Figures 6.7 and 6.10 show theoretical visibility extending across the southern and western coasts of the island but that visibility across the northern coast will be more patchy. The openness of the RCCA means that theoretical visibility will largely equate to actual visibility. At a minimum distance of approximately 4.6 km to the closest turbine, the south-west corner of the island is the closest part of this RCCA to the Proposed Development and it is from here that the proposed turbines will form a new influence on the coastal character.

6.12.3 There are a number of factors which will moderate this influence and prevent it from redefining the character of this RCCA. Firstly, there is no strong association between the RCCA and the site at Quanterness. Furthermore, there are a broad range of opposing coastlines with an influence on this coastal edge. Secondly, the Proposed Development will occupy a small proportion of the much wider coastal landscape which influences this RCCA. Thirdly, while a medium magnitude of change will occur across the south-west corner, the remainder of the RCCA will not be affected to the same extent.

6.12.4 During the construction phase, the magnitude of change will vary across this LCU as described in respect of the operational phase above. While the separation distance will mean that many of the ground level construction works will not be readily visible from this RCCA, the emerging structures of the turbines and the tall cranes used in their construction will have an influence on coastal character, mostly within the localised area in the south-west of the RCCA, with a lesser influence along the other sections of coastline.

Significance of effect

6.12.1 The effect of the Proposed Development on the Shapinsay RCCA will be **not significant** with the exception of a localised **significant** effect on the south-west corner out to approximately 6 km. This finding relates principally to the broad range of external influences that act upon this extensive RCCA and the limited extent of this RCCA that the Proposed Development will affect.

Significance of cumulative effect

6.12.1 The other wind farms with theoretical visibility affecting Balfour Castle GDL are Hammars Hill and Burgar Hill, both to the north-west at minimum distances of 9.8 km and 14.4 km respectively. The relatively small scale of these wind farms combined with their relatively distant locations means that they will occupy only a small proportion of the much wider 360 degree view and, therefore, have a relatively weak influence on the cumulative situation. It is in this context that the addition of the Proposed Development will give rise to only a **medium to low** cumulative magnitude of change and the cumulative effect will be **not significant**.

Residual Effects on Landscape Designations

6.12.2 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 and 6.10. Through a preliminary assessment involving field and desk studies, the following landscape designations were found to have the potential to be significantly affected.

- Orkney – Hoy and West Mainland National Scenic Area; and
- Balfour Castle GDL.

6.12.3 The effects on these landscape planning designations are assessed below. The effects of the Proposed Development can vary widely across a landscape planning designation and the distinction where significant and not significant effects may occur within the same designated area is of particular importance in the assessment. Where this is the case, the assessment has defined boundaries through the designation which express the differing effects of the Proposed Development.

Orkney – Hoy and West Mainland NSA

Baseline

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

6.12.5 The Orkney – Hoy and West Mainland NSA covers the northern half of the Island of Hoy and the south-western corner of the Mainland of Orkney, with the designated area extending out to cover the coastal edge and surrounding seascape. Hoy is famous for the dramatic Coastal Cliffs LCT which lines the western edge of the island and the Rugged Hills and Moorland Hills LCTs which form the upland backdrop. While the Coastal Cliffs LCT extends north into West Mainland, the inland landscapes comprise a mix of the Coastal Hills and Heath LCT, east of which lies the large Loch Basin LCT associated with the Loch of Stenness and Loch of Haray.

6.12.6 The Special Qualities of the Orkney – Hoy and West Mainland NSA are presented in Table 6.6 below, along with comment regarding the potential for the Proposed Development to affect each Special Quality. The Proposed Development is located a minimum distance of approximately 6.9 km from the closest NSA boundary and the limited extent of visibility is shown on Figures 6.8a and 6.8b.

Table 6.6 – Magnitude of Change on the Special Qualities of the Orkney NSA

Special Quality	Potential for the Proposed Development to affect the Special Quality
A palimpsest of geology, topography, archaeology and land use.	The Proposed Development will have no effect on this special quality.
An archaeological landscape of World Heritage Status. *By their location, shape and vertical presence, the Neolithic monuments of the Ring of Brodgar, the Stones of Stenness and the grass-covered tomb of Maes Howe, are distinctive landmarks of international renown. They lie within a landscape of low-lying farmland, which has been farmed for millennia. Wilder moors and hills rise to the east, and the Hills of Hoy form the backdrop to the south. Unusually for Orkney, there are few clear views of the open sea. The area feels enclosed, in the middle of a vast lowland amphitheatre of glistening loch and fertile pasture.*	The Proposed Development will have a limited effect on the setting of the World Heritage Site largely owing to the limited extent of visibility, with wirelines from this area showing that typically only a small number of blades and tips will be visible at a distance of approximately 9.9 km with the majority of the Proposed Development screened by the intervening landform. While the turbines will be seen in the context of the wilder moors and hills to the east, the limited extent of visibility, combined with the wide range of existing human artefacts with an influence on the baseline character of the WHS, including wind turbines and masts, will

Special Quality	Potential for the Proposed Development to affect the Special Quality
	reduce the potential for a significant effect to arise.
The spectacular coastal scenery.	The Proposed Development will have no effect on this special quality as there will be no visibility of the Proposed Development from the coastal areas of the NSA.
Sandstone and flagstone as an essence of Orkney.	The Proposed Development will have no effect on this special quality.
A long settled and productive land and sea.	The Proposed Development will have no effect on this special quality.
The contrast between the fertile farmland and the unimproved moorland.	The Proposed Development will have no effect on this special quality.
A landscape of contrasting curves and lines.	The Proposed Development will have no effect on this special quality.
Land and water in constantly changing combinations under the open sky.	The Proposed Development will have no effect on this special quality.
The high hills of Hoy. *The high, rounded hills of Hoy form a spectacular backdrop to much of West Mainland. With their corries, deep U-shaped valleys and patterned ground, these rugged, moorland hills reflect their glacial history.*	The Proposed Development will have a very limited effect on this special quality as it will only be visible from the most elevated summits and north-east facing upper slopes and from distances beyond 20 km. The Proposed Development will also not be seen in views of the high hills of Hoy as experienced from the West Mainland.
The townscape of Stromness, its setting and its link with the sea.	The Proposed Development will have no effect on this special quality as it will not be seen in views to or from Stromness.
The traditional buildings and crofting patterns of Rackwick.	The Proposed Development will have no effect on this special quality.

Sensitivity

6.12.7 The value of the Orkney – Hoy and West Mainland NSA is high as it is a national designation applied in this area to signify the national importance of the scenic landscape.

6.12.8 The susceptibility of the NSA to the effects of the Proposed Development is medium. Not only is the minimum distance between the closest turbine and the closest boundary of the NSA approximately 6.9 km, there is also a ridgeline of moorland hills dividing these two separate parts of the island. The lack of direct association between these two landscapes moderates the susceptibility of this closest part of the NSA to the effects of the Proposed Development.

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

Magnitude of change

6.12.10 Table 6.6 highlights that of the 11 special qualities used to describe the Orkney – Hoy and West Mainland NSA, the Proposed Development will affect only two of these; namely '*An archaeological landscape of World Heritage Status'* and the '*High Hills of Hoy'*.

6.12.11 The ZTV in Figure 6.8 shows that the extent of areas with visibility of the Proposed Development across the NSA will be very patchy. The three LCTs where visibility will arise include the Loch Basin and Coastal Hills and Heaths LCTs to the west and the Rugged Hills LCT to the south-west. The Loch Basin LCT forms the main part of the World Heritage Site and the Rugged Hills LCT forms the main part of the Hills of Hoy, and therefore, these two LCTs are relevant to the assessment of the effects on the special qualities of the NSA associated with these areas.

6.12.12 The ZTV in Figure 6.8 shows a relatively narrow band of theoretical visibility occurring across the Loch Basin LCT beyond a minimum distance of approximately 9 km. Wirelines from these areas show that the Neolithic monuments of the Ring of Brodgar, the Stones of Stenness and the grass-covered tomb of Maes Howe will not be affected by the Proposed Development, but that parts of the wider area will gain some limited visibility.

6.12.13 The six turbines will typically be seen as tips and blades with the majority of the Proposed Development screened by intervening landform. They will occupy only a small proportion of the much wider 360 view from this landscape, in which there are already a number of baseline influences from human artefacts, such as houses and roads in the Loch Basin and turbines and masts on the surrounding hills. The influence of the Proposed Development on the special qualities associated with the World Heritage Site will be limited and the magnitude of change will be **low**.

6.12.14 The ZTV shows that the extents of visibility across the Hills of Hoy will be very localised with only small patches occurring on the summits and upper slopes of Cuilags, Ward Hill and Hellia. Wirelines from these areas show that visibility will comprise blades and tips seen beyond the intervening ridgeline of the Moorland Hills LCT at a minimum distance of approximately 21 km. The magnitude of change on the Hills of Hoy will be **low**.

Significance of effect

6.12.15 The effect of the Proposed Development on the Special Qualities of the Orkney – Hoy and West Mainland NSA will be **not significant**. The Special Qualities will remain unaffected with the exception of 'An archaeological landscape of World Heritage Status' and the 'High Hills of Hoy' and the effect on these special qualities will be **not significant** owing chiefly to a combination of the limited extents of visibility, the separation distances from which visibility will occur and the existing influence from human artefacts.

Significance of cumulative effect

6.12.16 The cumulative effect of the Proposed Development on the NSA will be limited by a combination of the limited extent to which the Proposed Development will be visible and the limited extent to which the other cumulative wind farms will be visible. The cumulative ZTV in Figure 6.12 shows visibility of Burgar Hill from a minimum of approximately 10.5 km, while Figure 6.13 shows very limited visibility of Hammars Hill from a minimum of approximately 23.2 km. The addition of the Proposed Development to this cumulative situation will give rise to a **low** cumulative magnitude of change and the cumulative effect will be **not significant**.

Balfour Castle GDL

Baseline

6.12.17 Balfour Castle occupies the south-west corner of Shapinsay Island. The 'castle' is a Category A Listed Scots Baronial Mansion which dates back to 1847. Earlier buildings on this estate include the 17th century House of Sound and associated walled gardens, albeit with the original house being rebuilt in the 18th century. This is situated on the western boundary of the current estate although the walled gardens are currently disused. Cliffdale was built in 1819 and was designed to be the focus of a designed landscape which included the extensive policy woodlands. When Balfour Castle was built to the immediate south, Cliffdale was incorporated as service accommodation.

6.12.18 Improvements to the landscape setting were part of the design of Balfour Castle. They included the construction of a portcullis gateway and gate lodge at the eastern entrance, next to the harbour and the construction of a new entrance and access from Balfour village to the north-east, marked by a gateway with pyramidal piers. To the west of the castle, three formal gardens were constructed, each sunken with paths around and steps down, with the gardens containing flower beds. These have more recently been reconstructed with the first garden containing a formal pond with paving and flower beds around, the second garden containing a parterre maze and the third garden containing an open lawn. Another key feature that was constructed at this time was the walled gardens to the north-east of Balfour Castle, which still remain today, albeit largely un-planted. On the southern side of the house, formal lawns were laid out, with a ha-ha constructed to mark the separation from the improved pasture which extends down to the shoreline. The overall pattern of the designed landscape followed a geometric grid which tied in with the wider field pattern which was superimposed across the island in the form of roads, field boundaries and drainage ditches.

6.12.19 The prominent location of Balfour Castle and its designed landscape, on the south-west corner of this relatively small and flat island, make it a readily visible landmark feature from the Mainland of Orkney and the ferry approach, especially in clear conditions. The policy woodland at Balfour Castle forms a unique feature in the context of Orkney, where tree cover is otherwise extremely scarce. Balfour Castle has been designed with a principal orientation to the south, such that views from the interior are directed south towards Car Ness on the Mainland of Orkney, with Kirkwall readily visible and Quanterness and Wideford Hill also visible further round to the south-west. From the open aspect of the southern lawns, a broad extent of the Mainland of Orkney is readily visible in clear views. While the views are typically characterised by the rural landscapes and seascapes, development is also present with Kirkwall and Hatston seen in views to the south-west, and Hammars Hill and Burgar Hill Wind Farms seen in views to the north-west.

Sensitivity

6.12.20 The value of Balfour Castle GDL is high. In the Historic Environment Scotland (HES) citation, the six criteria used to assess importance are rated as follows; artistic interest, architectural value and scenic value are rated as outstanding, while historic value, horticultural value and nature conservation value are rated as high.

6.12.21 The susceptibility of the GDL to the effects of the Proposed Development is medium. The majority of the GDL is enclosed by woodland or high stone walls, such that views are contained and the character is largely introverted. It will, therefore, only be from the eastern approach and the open lawns on the south side of Balfour Castle that the Proposed Development will be visible. From these areas there is already visibility of Hammars Hill and Burgar Hill wind farms to the west and north-west and while this will ensure that the addition of the Proposed Development will not present a new or unfamiliar feature, it will also introduce this type of development into a new part of the surrounding landscape context. Balfour Castle is owned privately and the house and gardens are therefore not publicly accessible. This means that it is principally the residents and estate workers who will be susceptible to the effects. The openness of the lawns on the southern side, does however mean that the Proposed Development will be likely to have a notable influence on this aspect of the GDL.

6.12.22 The combination of the value of the GDL and its susceptibility to the Proposed Development will give rise to an overall **medium to high** rating for sensitivity.

Magnitude of change

6.12.23 The ZTV in Figure 6.8 shows theoretical visibility to be almost continuous across the GDL. Actual visibility across the main part of the GDL will be largely precluded by the extent of dense and mature tree cover. This means that the Proposed Development will have **no effect** on the landscape character of the core part to the GDL where many of the more ornamental parts of the garden are situated. The two more open parts of the GDL occur to the south of the house and to the north and west of the main garden.

6.12.24 To the south of the house, the landscape comprises a series of grassed and open terraces, which afford open views south across Wide Firth to the Mainland of Orkney. The developed nature of the

mainland is evident owing to the urban development of Kirkwall to the south-west, with the Hatston Industrial Estate, with its large sheds and single turbine at Crowness Business Park, readily visible to the west of the town. At the western end of Quanterness, the Rennibister single turbine is also visible along with the masts on the summit of Wideford Hill. The presence of these existing developments on the Mainland of Orkney, along with the almost constant movement of vessels in the bay, will moderate the effects of the Proposed Development as it will be seen in the context of similar types of development. The group of six turbines will form a relatively compact and well-contained group that will occupy only a small proportion of the wider landscape and seascape influence on this part of the GDL. Their location to the south-west means that they will be offset from the main direction of views to Car Ness to the south. The larger scale and dynamic nature of the proposed turbines will, nonetheless, give rise to a **medium** magnitude of change, and they will form a notable feature on the opposing side of the Wide Firth, seen at a minimum of approximately 4.6 km. This **medium** magnitude of change also extends across the west of the GDL, which although comprising farm fields, is also closely associated with the coastal edge and the openness of views that this provides.

6.12.25 The boundary of the GDL extends to the north of the main garden to include an area of farmland. The openness of this landscape means that the almost continuous theoretical visibility will match the actual visibility of the Proposed Development that will occur across this area. The magnitude of change will, however, be moderated by the dense and mature woodland that separates the farmland from the shoreline to the south and in so doing, which reduces the association between this part of the GDL and the Quanterness site on the opposite side of the Wide Firth. The magnitude of change across the farmland area will be **medium to low**.

Significance of effect

6.12.26 The effect of the Proposed Development on Balfour Castle GDL as a whole will be **not significant,** although there will be a localised **significant** effect across the open terraces to the south of Balfour House and the farm fields to the west. This assessment relates chiefly to the extent and density of mature tree cover which prevents visibility from occurring across most of the GDL.

Significance of cumulative effect

6.12.27 The other wind farms with theoretical visibility affecting Balfour Castle GDL are Hammars Hill and Burgar Hill, both to the north-west at minimum distances of 9.8 km and 14.4 km respectively. The relatively small scale of these wind farms combined with their relatively distant locations means that they will occupy only a small proportion of the much wider 360 degree view and, therefore, have a relatively weak influence on the cumulative situation. It is in this context that the addition of the Proposed Development will give rise to only a **medium to low** cumulative magnitude of change and the cumulative effect will be **not significant**.

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 and photomontages 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 6.16 to 6.28 where a photograph of each view is accompanied by a computer-generated wireline and a photomontage.

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.

Viewpoint 1: Wideford Hill

Baseline

6.13.3 This viewpoint is located close to the summit of Wideford Hill, to the south of the southern coastal edge of Wide Firth, where the site is located. Although the summit is only 225m AOD, the relatively

low-lying landscape of the Mainland of Orkney and surrounding islands, means that it forms a prominent feature in the local landscape. The summit, which is marked on OS maps as a formal viewpoint, offers broad and expansive views. There are four main masts on Wideford Hill, three close to the summit and one on the southern side. There is also a road, connecting the minor road to the south with the summit, thus making this hill readily accessible. Wideford Hill Chambered Cairn is situated on the north-western side of the hill and the effects of the Proposed Development on this feature are assessed in Chapter 10: Cultural Heritage.

6.13.4 The elevated position of the viewpoint gives rise to expansive views northwards over Quanterness to Wide Firth. The bay is enclosed by a curved upland ridge of moorland hills, which extends from the viewpoint westwards and then northwards to wrap around Wide Firth. Despite the hills being relatively low, in the context of the even lower-lying coastal and island landscapes they form an important definition around the bay. To the north-east, lies the low and level landscape of Shapinsay with the outlines of the more distant islands beyond. Views towards the south are largely enclosed by the brow of the hill and the masts, but beyond these lies the southern coast of the Mainland of Orkney and Scapa Flow.

6.13.5 The character of this area is very much influenced by a cultivated and settled landscape. While the foreground is characterised by the unenclosed and rough moorland grasses of the hill-top, in contrast, the middleground is characterised by the enclosed farm fields of Quanterness. The urban development of Kirkwall and Hatston is visible to the east, marking the influence of settlement along this coastal edge, with Finstown and other rural settlement also readily visible to the west. In terms of larger scale development in the rural area, the masts form a close range and notable influence on the character of the views and while at a more distant range, Hammars Hill Wind Farm and Burgar Hill Wind Farm beyond are visible on the upland ridge to the north-west.

Sensitivity

6.13.6 The value of this view is medium to high. The viewpoint is marked on O.S. maps as a formal viewpoint and this identifies the summit of Wideford Hill as a location people will visit with the intention of enjoying the view. The proximity of the viewpoint to Kirkwall means that the expectation of viewers will be that urban areas as well as rural areas will be visible. The value is prevented from being rated high owing to the absence of any national or regional landscape designations which would otherwise denote a special value.

6.13.7 The susceptibility of walkers on Wideford Hill to the effects of the Proposed Development will be medium to high. Those factors which add to the susceptibility of walkers includes the principal draw of the view being northwards towards Wide Firth, where the site will be visible, the relatively close range of the site to the viewpoint and the elevated perspective which the hill-top viewpoint affords. Viewers may either be walkers, whose views will be free-ranging or road-users who may park up to experience the views for a longer duration. While there are no benches, there is an interpretation board which marks the importance of this viewpoint for visitors. Those factors which detract from the susceptibility of walkers includes the presence of the masts, which establish large scale modern artefacts as a baseline feature, and the settled and cultivated character of the coastal landscape where the Proposed Development will be located.

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 to high**. The wireline in Figure 6.16e and photomontage in Figure 6.16f show that all six turbines will be visible to their full extents. At a minimum distance of 1.75 km to the closest turbine, they will be seen as close range structures and from this elevated viewpoint, all site infrastructure will also be readily visible.

6.13.10 The Proposed Development will change the character of this view by introducing large scale and dynamic vertical structures into this coastal landscape. Although seen in the context of the masts on the hill, the turbines will be seen to introduce modern wind farm development into an agricultural area. They will form the focus of the views of walkers on Wideford Hill.

6.13.11 Those factors which will moderate the effect and prevent the magnitude of change from being rated high, include the presence of the masts on Wideford Hill. These moderate the effect by establishing modern structures as an existing feature of the baseline view, which means that the addition of the turbines will not change the character of the baseline view to the same extent as if there were no masts. Furthermore, the turbines will all be seen set below the skyline and this helps to contain the perceived vertical extent of the Proposed Development and allow distant views over them.

6.13.12 During construction, the magnitude of change will also be **medium to high**. From this elevated viewpoint, the construction processes will be readily visible, the most notable feature of which will be the activities associated with the construction of the turbines and other site infrastructure. The presence of the emerging tall turbines and tall cranes will draw the attention of walkers on Wideford Hill and form a new focus in their views.

Significance of effect

6.13.13 The effect of the Proposed Development on walkers on Wideford Hill will be **significant** during both the construction and operational phases. Despite the existing influence of the masts on the hill-top, the close range and vertical scale of the proposed turbines will make them the focus in the views of walkers on Wideford Hill.

Significance of cumulative effect

6.13.14 The cumulative effect on the views of walkers on Wideford 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 more distant Hammars Hill and Burgar Hill Wind Farms and Rennibister single turbine, on the cumulative situation is so limited that in conjunction with the Proposed Development the cumulative magnitude of change will be **medium to low** and the cumulative effect will be **not significant**.

Viewpoint 2: Hatston

Baseline

6.13.15 Hatston is the area to the north-west of Kirkwall. Hatston is a place name that refers to the farm and cluster of residential properties located to the north of the A965 as well as the industrial estate set along the coastal edge. The viewpoint is located where the A965 meets the western junction into the Hatston Industrial Estate. It has been selected to represent the views of road-users in this area and through Hatston Industrial Estate, as well as residents at Hatston Farm and residential properties. The view looks north-west towards the site.

6.13.16 In terms of landscape character, the A965 marks the transition between the Inclined Coastal Pasture LCT to the north and the Rolling Hill Fringes LCT to the south. The Inclined Coastal Pasture LCT can be seen to gently fall away northwards towards the coastal edge, the landscape open, lest for intermittent post and wire fences and occasional hedgerows or drystone dykes. The Rolling Hill Fringes LCT presents a different type of landform which rises up more steeply to the south of the road, albeit with both landscapes characterised by large fields of improved pasture and occasional arable. Hatston Farm and residential properties are visible on the hillside with Wideford Hill visible beyond, marking the defining presence of the Moorland Hills LCT.

6.13.17 While the farmed fields are typical of much of the Orkney landscape, it is their proximity to the coast which adds to the character of this view, with the rocky shoreline visible beyond the close range fields and the broader extents of the Wide Firth opening up the views to West Mainland to the north-west and Shapinsay to the north-east. In the wider view, Hatston Industrial Estate presents a more urban character to the east, with its single turbine forming a landmark feature on the coastal edge.

Sensitivity

6.13.18 The value of this view is medium. There are no formal viewpoints and this viewpoint is not covered by any national or regional designations which would otherwise denote a special value.

6.13.19 The susceptibility of road-users in this area is medium to high. This eastern section of the A965 passes close to the site and the access road to the industrial estate is aligned in a north-westerly

direction towards it. As this landscape is especially open, this means that road-users experience clear views of the site from substantial sections of Grainshore Road and the A965. The susceptibility of road-users is prevented from being rated high owing to the presence of urban development on the industrial estate and in Kirkwall as well as the modified nature of the rural landscape. Road-users are also transient which means that their views will only be affected over relatively short periods of time. These factors denote the existing human influences present in this area.

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 road-users will be **high**. The wireline in Figure 6.17e and photomontage in Figure 6.17f show visibility will comprise all six turbines albeit to variable extents, with the closest three turbines seen to almost their full extents, while the towers of Turbines 1, 2 and 3 being either partly or wholly concealed by intervening landform. With a minimum distance of 1.04 km to the closest turbine, they will be seen as close range, large scale, and dynamic vertical structures. They will be seen at variance with the character of the rural farmed landscape and will form a new focus in the views of road-users.

6.13.22 This assessment has been made despite the existing influence of urban development to the east and south-east of the viewpoint, including Hatston Industrial Estate and the town of Kirkwall. Whilst this establishes a baseline in which built development has an existing influence on the views of road-users, it is of a smaller scale than that of the Proposed Development and situated to the rear of the view.

6.13.23 During construction, the magnitude of change on the views of road-users and residents will be **high**. The presence of tall cranes and emerging tall turbines on this exposed coastal edge will make a notable feature. Furthermore, the openness of the landscape will mean that the construction plant and ground level construction works will be visible from the road, adding to the overall extent of development visible.

Significance of effect

6.13.24 The effect of the Proposed Development on road-users in the Hatston area will be **significant** during both the construction and operational phases. Despite the existing influence of urban development in this area, the close range and vertical scale of the proposed turbines will make them the focus in the views of road-users and residents.

Significance of cumulative effect

6.13.25 The cumulative effect on the views of road-users and residents in the Hatston area will be **not significant**. While the solus effect of the Proposed Development will give rise to a significant effect, as assessed above, the combined effect with the cumulative wind farms and single turbines will give rise to only **medium to low** magnitude of change. The more distant Hammars Hill and Burgar Hill Wind Farms at distances of approximately 10.7 km and 14.6 km to the north-west will have a limited effect on the cumulative situation owing to their distant location and small proportion of the wider views they occupy. While there will be a cumulative effect with the single turbine at Crowness Business Park, this will not be significant as the single turbine will be seen as a single feature with limited vertical and horizontal extents.

Viewpoint 3: A965 west of Quanterness

Baseline

6.13.26 The A965 is the main road between Kirkwall and Stromness. Between Kirkwall and Finstown it broadly follows the southern coastal edge of Wide Firth, passing along the southern boundary of the site. This viewpoint is located to the west of the site, at the layby on the northern side of the road, approximately 450 m west of Ingashowe Farm. The view looks east towards the site and is representative of the views of road-users on the A965, as well as residents in this rural area.

6.13.27 The current focus of this easterly view is Wideford Hill (225 m AOD) which forms a local landmark feature owing to its elevation amidst a relatively low-lying and flat coastal landscape and the small

masts which mark its summit. Its upland character is emphasised by the larger patches of dark brown rough moorland. These contrast with the smaller patches of bright green improved pasture which denote the more intensive farming practices employed across the lower slopes and flats. The smoothly convex hill slope leads down to the flat coastal edge, which appears open and exposed. Dispersed farmsteads and their associated single turbines stand out as built features in this predominantly rural landscape.

6.13.28 The moorland hills, although relatively low, nonetheless form a well-defined ridgeline which wraps around the south and west of the Bay of Firth and extends towards the north, where Hammars Hill Wind Farm can be seen as a small and distant feature. These hills provide contrast to, as well as contain the coastal landscapes. The main attraction of the wider views is northwards, from the rocky shoreline out over the Wide Firth, where the outline of distant islands sit low against the horizon.

Sensitivity

6.13.29 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. Views from this section of the A965 and from surrounding properties are, however, experienced by locals and visitors, and this raises the local value of the view.

6.13.30 The susceptibility of road-users in this area is medium to high. East-bound road-users are generally travelling in direct alignment towards the site and this raises their susceptibility. Although west-bound road-users are travelling in the opposite direction with the site behind them, they will have already passed within close proximity of the site. 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.

6.13.31 The susceptibility of residents in this area would also be medium to high. There are a number of rural farmsteads and other isolated properties, accessed from the A965 and the minor road to the south. While orientations vary slightly, the majority either face southwards onto the A965 or northwards towards the Wide Firth. The farmsteads typically have some degree of enclosure and screening from outbuildings while the views from the isolated properties typically have more open garden grounds. Views from properties and gardens have the potential of lasting over a longer duration.

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

Magnitude of change

6.13.33 During operation, the magnitude of change on the views of road-users and residents will be **medium to high**. The wireline in Figure 6.18d and photomontage in Figure 6.18e shows that all six of the turbines will be visible to almost their full extents, with the closest turbine at approximately 2.60 km from the viewpoint. From this predominantly rural western aspect, the Proposed Development will introduce six large scale and dynamic structures that will appear similar in scale to Wideford Hill. Their pronounced vertical form will be accentuated by the pronounced horizontal form of the coastal edge. The modern appearance of these structures and the dynamic motion of their blades mean they will appear at variance with the rural character, although some smaller single turbines do form part of the baseline character.

6.13.34 The magnitude of change is prevented from being assessed as high owing principally to the relationship between the Proposed Development and Wideford Hill. The location of the proposed turbines on the low-lying coastal shelf means that they are set below the summit of Wideford Hill. This helps to reduce their perceived scale as they appear contained by the enclosing, and slightly larger landform. Furthermore, this relatively small number of six turbines ensures that the group appears well-contained, with none of the turbines extending beyond the coastal shelf.

6.13.35 During construction the magnitude of change will 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

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

Significance of cumulative effect

6.13.37 The cumulative effect on the views of road-users and residents in the area of the A965 to the west of Quanterness 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 other wind farm and single turbines is so limited that in conjunction with the Proposed Development the cumulative magnitude of change will be **medium to low** and the cumulative effect will be **not significant**. Hammars Hill is the only wind farm readily visible from this area, but at a distance of 9.67 km, will have a limited effect. In terms of the Rennibister single turbine, the fact that it is seen in closer range, means that it will appear comparable in scale to the more distant proposed turbines and this, along with its limited vertical and horizontal extents, will limit the cumulative magnitude of change.

Viewpoint 4: Kirkwall Harbour

Baseline

6.13.38 Kirkwall Harbour is the main feature of the town. It is from here that ferries pass in and out of the Bay of Kirkwall, connecting the town to the surrounding islands and back to the Mainland of Scotland. The viewpoint is located on Cromwell Road, which lies to the east of Kirkwall Harbour. This provides an elevated position from which the site is more clearly visible than from within the confines of the harbour. The viewpoint is located approximately 3.34 km from the western site boundary and the view looks north-west towards the site. It is representative of the views of road-users, residents and walkers in this area, as well as ferry passengers passing in and out of the harbour.

6.13.39 The focus of the view is Kirkwall Harbour, owing to the attraction of the boats and their movement in the waves and wind, as well as the activity of ferries and other boats sailing in and out. The harbourside is occupied by a series of medium sized sheds and the harbour walls extend northwards out into the bay. Hatston Industrial Estate is seen behind the masts on the boats, occupying the coastal edge on the opposite side of Kirkwall Bay, with its single turbine forming a landmark feature. Wideford Hill forms the upland backdrop to the scene and a sense of containment to the town.

6.13.40 In the wider view, traditional, detached houses contain the western and southern aspects and with their orientation also across the harbour, they are likely to experience views towards the site. This location of the viewpoint within a built-up urban area, ensures that the baseline is already influenced by old and modern developments. On the seaward side, to the north, the views extend across the open water to the more distant landform of West Mainland.

Sensitivity

6.13.41 The value of this view is medium to high. While there are no formal viewpoints which would otherwise denote a special value, the value of the view relates to the importance of Kirkwall Harbour as an attraction to locals and visitors and the visual amenity associated with this location.

6.13.42 The susceptibility of residents along this open aspect of the town is medium to high. The principal outlook of properties along this coastal edge is north-west across the harbour and in the direction of the site. While these views have potential to be experienced over longer periods, they do already feature Kirkwall Harbour and Hatston Industrial Estate and this prevents the susceptibility from being rated high. For walkers, open views towards the site are experienced across Kirkwall Bay. The susceptibility of road-users is, however, medium. This is because their views are channelled along the alignment of the road which is mostly oblique to the direction of the site, and intervening walls reduce the openness of their views.

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

Magnitude of change

6.13.44 During operation, the magnitude of change to the views of residents, walkers and road-users will be **medium**. The viewpoint will be located a minimum distance of 3.67 km from the closest turbine. As the wireline in Figure 6.19d and photomontage in Figure 6.19e shows, all six of the proposed turbines will be visible, with Turbines 4, 5 and 6 seen to almost their full extents and the towers of Turbines 1, 2 and 3 seen partially or wholly screened by the intervening landform. The turbines appear very evenly spaced and contained on the lower coastal plain.

6.13.45 As the photomontage in Figure 6.19 shows, the prominence and influence of these turbines will be moderated by the presence of development around the harbour area and Hatston Industrial Estate on the opposing shore. The comparison of the turbines with these closer range features will act to diminish their perceived scale. The wireline and photomontage also show how the turbines will be set below the summit of Wideford Hill and how this will also moderate the prominence of these structures by making them appear contained by the scale of the wider landscape. While the extent of existing development experienced from this location will reduce the overall effect, the Proposed Development will still form a notable addition that will redefine the character of views from this harbour area.

6.13.46 During construction, the magnitude of change will also be **medium**. This assessment reflects the extent to which the site and many of the construction processes will be screened by the intervening landform and land uses. While the emerging turbines and the tall cranes used to construct them will, however, be readily visible, their influence of views from the harbour area will be moderated by the extent of existing and close range development in this area.

Significance of effect

6.13.47 The effect of the Proposed Development on the views of residents, walkers and road-users will be **significant**. This takes into account the sensitivity of the views of residents and walkers especially, and despite the baseline character of views being largely influenced by the urban development of the harbourside and wider town.

Significance of cumulative effect

6.13.48 The cumulative effect on the views of road-users, walkers and residents around Kirkwall Harbour 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 more distant Hammars Hill and Burgar Hill Wind Farms on the cumulative situation will be limited. In terms of the Crowness Business Park single turbine, the fact that it is seen in closer range, means that it will appear comparable in scale to the more distant proposed turbines. This factor in combination with the limited vertical and horizontal extents of the Crowness Business Park turbine and its location behind a cluttered foreground of vertical elements, will limit the change. The cumulative magnitude of change in conjunction with the Proposed Development will be **medium to low** and the effect will be **not significant**.

Viewpoint 5: Finstown Pier

Baseline

6.13.49 Finstown is a small town located 9 km to the west of Kirkwall and approximately 4.1 km from the western site boundary. It occupies the south-west corner of the Bay of Firth at an important junction between the A965 Kirkwall to Stromness Road and the A966 to the north of the island. The viewpoint is located at the slipway, from where views open out across the Bay of Firth and extend east towards the site. While this viewpoint is broadly representative of the views of residents and road-users in Finstown, views are largely contained by the enclosure of the built form and it is only from the few open sections along the coastline and from properties on higher ground, that clear views towards the site can be gained.

6.13.50 The main draw in views from the slipway is north across the Bay of Firth and Wide Firth. Beyond the low and rocky shoreline, the water stretches out to meet the distant enclosure of the West Mainland, which wraps around from the west, with the headland at Crookness forming the northern shoreline. The moorland hills create enclosure around much of this bay, extending from Wideford Hill (225m AOD) in the east, round the south of Finstown, to Cuiffie Hill (145m AOD) in the west. To the south, the built development of Finstown is evident, with typically low and detached houses set along traditional streets.

6.13.51 The view towards the site looks east. In this view, Wideford Hill forms the main feature, owing to its elevated landform and large blocks of moorland landcover. The masts on the top and single wind turbines at the base are evidence of human artefacts in this otherwise, predominantly rural landscape. Other built features include the jetty, which stretches out across the foreground, and the cluster of houses set around its base. The coastal edge, where the site is located, forms a very discreet landscape feature from this viewpoint owing to its relatively low-lying and flat landform.

Sensitivity

6.13.52 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.

6.13.53 The susceptibility of visual receptors to the effects of the Proposed Development is medium to high. The pier area forms the main public space is Finstown. There is a large car park and some open space and this provides a popular stopping point for road-users on the A965. While the susceptibility of road-users passing by will be moderated by the contained and transitory nature of their views, for those stopping at the car park, their views will be of longer duration and for people venturing out to the pier and the shoreline, free-ranging views of the wider landscape will be experienced.

6.13.54 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, with a **medium** sensitivity for transitory road-users.

Magnitude of change

6.13.55 During operation, the magnitude of change on visitors to Finstown Pier, the adjacent car park and adjacent section of the A965, will be **medium to high**. The wireline in Figure 6.20d and photomontage in Figure 6.20e show that all six turbines will be visible with the closest turbine at approximately 4.45 km. They will all be visible to practically their full height and seen set on the low and level coastal edge below Wideford Hill. They will make a notable addition in the more open views from the village owing to their vertical scale, moving blades and modern appearance which will appear at variance with this simple landscape. The vertical form of the proposed turbines will be accentuated by the horizontal form of the coastal edge, as well as through comparison with smaller scale features in the landscape, including the single turbines and rural properties.

6.13.56 Those factors which will moderate the effects of the Proposed Development on visual receptors in Finstown include the location of the Proposed Development to the east, when the principal orientation along the shoreline is north, and while the remainder of the town is largely inward looking. This reduces the prominence of the Proposed Development where visibility does occur. The Proposed Development also comprises a relatively small number of turbines, which form a contained group and occupy a small proportion of the wider extent of the open views. The turbines will also be seen in a sector of the view where single turbines and masts form a baseline feature, and while the Proposed Development will be notably larger in scale, it will not introduce a new or unfamiliar feature.

6.13.57 During construction, the magnitude of change on visitors to Finstown Pier and the adjacent car parkwill be **medium to high**. Seen at a minimum range of 4.43 km, the presence of emerging turbines and tall cranes will form a readily apparent and eye-catching feature from this section of the open shoreline, adjacent car park and adjacent section of the A965.

Significance of effect

6.13.58 During both construction and operation, the effect of the Proposed Development on the views of visitors to the open shoreline will be **significant.** This finding relates to the prominent feature the

Proposed Development will form along the open and exposed coastline of Quanterness. While walkers and visitors stopping at the pier will have a heightened sensitivity, transitory road-users will also be affected.

Significance of cumulative effect

6.13.59 The cumulative effect on the views of road-users, walkers and residents in Finstown will be **not significant**. While the solus effect of the Proposed Development will give rise to a significant effect for receptors excluding road users, as assessed above, the influence of the more distant Hammars Hill Wind Farm and 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 6: A966 north of Coubister

Baseline

6.13.60 The A966 is the main road that connects the A965 at Finstown with the northern coast of the West Mainland of Orkney. It is a relatively straight road over flat terrain which makes it a fast route with views largely channelled along its length. The openness of the surrounding landscape means that the views of road-users out to either side are largely uninterrupted. There are a small number of farmsteads and houses dispersed along the A966 with occasional clusters forming small nucleated settlements. This viewpoint is representative of the views of road-users and residents. While the viewpoint is located approximately 4.15 km from the Proposed Development, the A966 falls within a range of approximately 3.9 km to 7.8 km. The view looks south-east across the Bay of Firth to the site at Quanterness.

6.13.61 The view is largely characterised by the farmland which surrounds the viewpoint. It comprises medium to large sized fields of improved pasture enclosed by post and wire fencing. The landform is relatively flat with subtle undulations, creating an open and exposed landscape with little variation or definition, other than the few dispersed farmsteads and properties which occur. While farmland fills the fore to middleground, the moorland hills occupy the background, with a thin sliver of water seen to separate the two in views towards the site. The distinctive profile of Wideford Hill is visible as a distant feature.

6.13.62 While the moorland hills to the south and south-west form a relatively distant and low-lying ridgeline, to the west of the viewpoint, they form a closer range and more prominent feature. Although not high, Cuiffie Hill (145m AOD) to the south-west and Burrien Hill (202m AOD) to the west, form locally prominent hills which present a contrasting upland character and influence on the character of the views from the A966 and farmsteads and properties in this area. Hammars Hill Wind Farm is the only other wind farm readily visible from this viewpoint, the six turbines seen set along the ridgeline of the moorland hills to the north at approximately 5.7 km. Other smaller single turbines are evident across the farmed landscape and at the base of Wideford Hill on the opposite side of the Wide Firth.

Sensitivity

6.13.63 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.

6.13.64 The susceptibility of residents and road-users who experience views in this area is medium to high. 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 A966 is inset from the coastal edge, views will still extend to the opposite shore of the Wide Firth. In respect of residents, many of the properties will gain views towards the site, with their views likely to be for a longer duration.

6.13.65 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

6.13.66 During the operational phase, the magnitude of change will be **medium to high**. The wireline in Figure 6.21 shows that all six of the turbines will be seen at almost their full extents from approximately 4.15 km to the closest turbine. They will be seen set beyond the surrounding farmland of the West Mainland and on the opposite coastal edge of the Wide Firth. They will form a prominent feature owing to the openness of the landscape and their exposed position along the shoreline. The Proposed Development will become a focal feature owing to the strong vertical form of the turbines amidst the predominantly simple horizontal form of the landscape and seascape.

6.13.67 The magnitude of change is prevented from being rated higher than medium owing to a combination of the separation distance between the viewpoint and the proposed turbines, the more limited connection between this area and the Wide Firth, and the existing influence of human artefacts on this area. With the Proposed Development being located in the background landscape of the view and without the fore-shortening effect of open water, which is evident from viewpoints closer to the coastal edge, the separation distance will be more apparent. Furthermore, the proposed turbines will not have such a notable influence on views from the A966 and associated properties, as there will not be such a strong association with the Wide Firth and coastal landscapes, but instead, a closer association with the surrounding farmland and nearby coastal hills to the west. The presence of Hammars Hill Wind Farm to the north, albeit relatively distant and small scale, will ensure that the Proposed Development will not appear as a new or unfamiliar feature in the wider views.

6.13.68 During the construction phase, the magnitude of change will be **medium to high**. The key features will be the emerging turbines and the tall cranes used in their construction. The site will be visible from the A966 and many of the associated properties and, although only at its full scale towards the end of the construction phase, will nonetheless form an eye-catching feature to visual receptors owing to the incomplete appearance of the turbines and the construction activities.

Significance of effect

6.13.69 The effect of the Proposed Development on road-users on the A966 and residents in this rural area, as represented by this viewpoint, will be **significant** during the construction and operational phases. Despite the slightly weaker association between this inland area and the site, the Proposed Development, will form a focus in the wider landscape.

Significance of cumulative effect

6.13.70 The cumulative effect on the views of road-users and residents around this area will be **not significant.** The only other wind farm readily visible from this area is Hammars Hills approximately 5.7 km to the north-west. Its relatively small scale means that it will occupy only a small proportion of the wider views and this will limit its influence on the cumulative situation and in conjunction with the Proposed Development the cumulative magnitude of change will be **medium to low** and the effect **not significant**.

Viewpoint 7: Gorseness and NCR1

Baseline

6.13.71 This viewpoint is located on the minor road which connects the A966 to Gorseness. It is located to the east of the staggered junction where a minor road extends north to Hackland and a minor road south to Crookness. The viewpoint is representative of the views of road-users in this area, including cyclists on NCR1, which coincides with this minor road. It is also representative of the views of residents who live in the mostly dispersed, although occasionally clustered, houses in this rural landscape. The viewpoint lies approximately 4.99 km to the north-east of the Proposed Development with the view looking south-west across the coastal edge and the Wide Firth to the north coast of the central part of the Mainland of Orkney.

6.13.72 The view is characterised by the close range surrounding farmland, with its low cover of improved pasture or arable crops and poorly defined fenced enclosures. This landscape forms part of the Coastal Basin LCT, characterised by its low-lying and relatively flat landform, which is defined by gently rising landform to the west, north and east. In contrast, the views to the south are drawn out

over the low coastal edge and across the open expanse of the Bay of Firth, to arrive at the opposite coastal edge of Quanterness, where the moorland hills form an enclosing backdrop. This natural orientation of the landform is reflected in the orientation of many of the properties and some of the minor roads in this area.

6.13.73 In views to the south, the openness and flatness of the landscape, means that anything that rises above the horizon, stands out as a stark feature, including the farmsteads and other residential properties, despite their modest scale. In contrast, the rising landform to the east, south and west adds a vertical dimension to the wider view, that prevents built features in the landscape from appearing so prominent. The exception to this is Hammars Hill Wind Farm which sits on the ridgeline of the moorland hills to the north-west, such that it forms an elevated and readily visible feature.

Sensitivity

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

6.13.75 The susceptibility of residents and road-users in this area is medium to high. While the houses and the roads are separated from the site by the Wide Firth, the principal orientation of the houses is south-east towards the site, and some of the roads are also orientated in this direction. The landscape is so open that views from almost all road sections are uninterrupted.

6.13.76 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

6.13.77 During the operational phase, the magnitude of change will be **medium**. The Proposed Development will be located 4.99 km to the south of the viewpoint, set on the coastal edge on the opposite side of the Bay of Firth. The wireline in Figure 6.20 shows that all six turbines will be clearly visible with almost all seen to their full extents. They will be evenly spaced across the coastal edge, with Turbine 1, 2 and 3 partially back-clothed by the lower slopes of Wideford Hill.

6.13.78 In the context of the horizontal emphasis of this low-lying and open landscape, the vertical scale and movement of the turbines will add to their prominence in views from Gorseness. The turbines will be seen to be comparable in height with Wideford Hill, which could potentially emphasise the scale of the turbines. Furthermore, the simplicity of the baseline view, which broadly comprises open farmland and open water, combined with the absence of any focal features, means that the Proposed Development will appear at variance and draw the attention of residents and road-users.

6.13.79 There are also a number of factors which moderate the magnitude of change and prevent it from being rated high. Firstly, there is the location of the proposed turbines on the low-lying coastal edge, which sets them at the lowest elevation possible and, in so doing, reduces their prominence in the view. Secondly, there is the presence of Wideford Hill, which has the effect of containing the scale of the turbines by being slightly taller that the tallest tip and forming a backdrop to the three turbines on the right. Albeit comparatively small in scale, there are also existing human influences evident in this view, including the single turbines at Rennibister the masts on Wideford Hill, and settlement at Kirkwall, as well as the modification caused by farming, widely evident across the rural landscape. The presence of these human artefacts and land uses establishes a baseline character which will not undergo the same magnitude of change compared to a landscape in which there is little or no existing human influence.

6.13.80 During the construction phase, the magnitude of change will be **medium**. The most notable features will be the structures of the emerging turbines and the tall cranes required for their construction. In the context of such an open and simple landscape, the construction of the turbines will form a notable feature that will draw the attention of visual receptors across the water.

Significance of effect

6.13.81 The effect of the Proposed Development on views of residents and road-users in the Gorseness area will be **significant** during both the construction and operational phases. This finding relates principally to the proximity from which the Proposed Development will be visible and the contrast

made by the vertical scale of the turbines when viewed from this predominantly horizontal landscape.

Significance of cumulative effect

6.13.82 The cumulative effect on the views of road-users and residents in the Gorseness 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 Hammars Hill Wind Farm and other single turbines on the cumulative situation is so limited that in conjunction with the Proposed Development the cumulative magnitude of change will be **medium to low** and the effect **not significant**.

Viewpoint 8: Balfour Castle

6.13.83 An assessment of the effects of the Proposed Development on Balfour Castle GDL is presented in Section 6.12. This considers the potential effects on the special features of this designed landscape. Balfour Castle is also included here as a representative viewpoint, in order to represent the visual amenity of residents and estate workers at Balfour Castle, as well as residents of the nearby Balfour Village and visitors to the Island of Shapinsay. The effects on the Listed Building are assessed separately in Chapter 10: Cultural Heritage.

Baseline

6.13.84 The viewpoint is located at the front entrance on the southern side of Balfour Castle. It is representative of the views of residents and workers at the castle, as well as residents, road-users and visitors across the island. The viewpoint is located approximately 5.54 km to the north-east of the site with the view looking south-west across the Wide Firth towards the north coast of the Mainland of Orkney.

6.13.85 The key views from Balfour Castle and the wider south coast of Shapinsay is south towards the Mainland of Orkney. More specifically, the principal orientation of Balfour Castle and Balfour Village is due south across The String to Car Ness, which is a headland that sits to the north-east of Kirkwall and at a minimum distance of approximately 1.5 km, is the closest part of the Mainland of Orkney. The landform on the Mainland of Orkney is typically low and level, set close to the horizon such that big skies tend to dominate the views. The most prominent landform feature is Wideford Hill to the south-west, which despite being only 225m in height, stands out amidst the low-lying coastal landscapes.

6.13.86 While settlement on Shapinsay is typically small scale and sparse, with the exception of Balfour Castle, the larger settlement of Kirkwall is readily apparent on the opposite shore, along with the Hatston Industrial Estate at Hatston. The single turbines in the farmed landscape and the masts on Wideford Hill are just discernible as small and distant features.

Sensitivity

6.13.87 The value of views from Balfour Castle GDL is high owing to its designation as a GDL. In Historic Environment Scotland (HES) citation they rate the six criteria used to assess importance as follows; artistic interest, architectural value and scenic value are rated as outstanding, while historic value, horticultural value and nature conservation value are rated as high. The value of the views from the remainder of Shapinsay is medium as there are no landscape designations to denote a special value.

6.13.88 The susceptibility of the visual receptors to the effects of the Proposed Development is medium to high. While the site does not lie within the principal southerly sector of views from Balfour Castle and Balfour Village, it is visible in the predominantly open views to the south-west. The susceptibility of viewers is moderated by the private nature of Balfour Castle GDL which means that only residents and estate workers will be affected, however, the public domain of the ferry slipway and Balfour Village are also represented by this viewpoint, although from these locations, views to the site are not so readily visible.

6.13.89 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

6.13.90 During the operational phase, the magnitude of change will be **medium**. The wireline in Figure 6.23 shows that all six of the proposed turbines will be readily visible and seen to their full extents. They will be seen a minimum distance of 5.54 km from the viewpoint, such that they will be seen as medium scale features in views from Shapinsay. The openness of the foreground landscape and middleground seascape, creates a simple and uninterrupted outlook which increases the relative prominence of the proposed turbines.

6.13.91 The magnitude of change is prevented from being rated high owing to a combination of the separation distance, the low-lying location of the proposed turbines and the existing human influences evident in the view. The separation distance of 5.54 km to the closest turbine means that the six turbines will occupy a small proportion of the wider view and appear as a relatively well contained group. Their location on the lower coastal edge, not only means that their elevation is the lowest it can be, but also relative to the upland landscape, their low-lying elevation is accentuated. The turbines are partly back-clothed and the tips sit below the summit of adjacent Wideford Hill. While there are no other large scale wind farms visible from this viewpoint, there are some single turbines visible on the mainland shore, as well as the masts on Wideford Hill and the urban area of Kirkwall and Hatston Industrial Estate. These features all moderate the magnitude of change by establishing a baseline where development is already evident.

6.13.92 During the construction phase, the magnitude of change will be **medium**. Views will occur from Balfour Castle and other open sections along the south coast of Shapinsay and will comprise the presence of the emerging turbines and the tall cranes used in their construction. These structural components will form a focus in the view and draw the attention of visual receptors, despite the location of the construction works to the south-west while the main draw is to the south.

Significance of effect

6.13.93 The effect of the Proposed Development on residents, visitors and road-users on Shapinsay will be **significant**. Despite the location of the turbines outwith the main southerly alignment of the view, and their separation distance from the viewpoint, they will form a new focal feature, especially in light of the openness and simplicity of the surrounding landscapes and seascapes.

Significance of cumulative effect

6.13.94 The cumulative effect on the views of residents and visitors to Balfour Castle and Shapinsay 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 Hammars Hill and Burgar Hill Wind Farms on the cumulative situation is so limited that in conjunction with the Proposed Development the cumulative magnitude of change will be **medium to low** and the effect **not significant**.

Viewpoint 9: Kirkwall to Shapinsay Ferry

Baseline

6.13.95 This viewpoint is located on the Kirkwall to Shapinsay ferry as it crosses the Bay of Kirkwall and the Wide Firth. The viewpoint is representative of the views of passengers on the ferry and will be similar to views obtained by people on cruise liners and other vessels passing in and out of the Bay of Kirkwall. While some passengers stay in their cars, from where there are no views, or the passenger lounge, where there are limited views, especially during bad weather, some venture onto the back deck to experience the panoramic views across the Wide Firth. The crossing takes approximately 40 minutes and with six crossings on weekdays, five on Saturdays and two on Sundays, this ensures Shapinsay is fairly well connected to the Mainland of Orkney.

6.13.96 Views from the ferry are characterised by the combination of the surrounding sea, and surrounding land beyond. Despite the openness of the sea, in almost every sector, land encloses the view, such that the sea seldom extends all the way to the horizon. The Mainland of Orkney forms the majority of the land that encloses the Wide Firth, forming the east, south, west and north-west shorelines. To the north, lies distant Gairsay and to the north-east lies Shapinsay. The mainland coast to the east is the closest range to the ferry route, with the detail of the rocky shoreline and farmed landscape readily visible.

6.13.97 Amidst the predominantly low-lying and relatively flat landscapes visible from the ferry, Wideford Hill forms the most notable landform feature, despite being only 225m high. On Shapinsay the most notable feature is the woodland associated with Balfour Castle as this is untypical of the Orkney landscape. While the character of the landscapes visible from the ferry are typically farmed and rural, the urban development of Kirkwall, including the harbour and the boats, are readily visible. Wind farm development is evident in views from the ferry with Hammars Hill and Burgar Hill Wind Farms seen as distant features, located 11.29 km and 16.58 km to the north-west and the single turbines at Crowness Business Park and at Rennibister also visible to the east and west of the Quanterness site.

Sensitivity

6.13.98 The value of the view is medium. There are no formal viewpoints and the Wide Firth is not covered by any national or regional scenic designations.

6.13.99 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. While the arrival into Orkney will be important for many passengers, their susceptibility may be moderated by the unremarkable nature of the relatively flat surrounding landscapes and the existing influence of developments on the Mainland of Orkney.

6.13.100 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

6.13.101 During operation, the magnitude of change will be **medium to high**. The wireline in Figure 6.24c shows that all six turbines will be visible to their full extents. They will be seen from approximately 3.6 km at Kirkwall Harbour and from approximately 6.0 km at Shapinsay Slipway. The proposed turbines will be at their most apparent from where the ferry passes into, or out of, the Bay of Kirkwall, to the east of Quanterness. The exposed nature of the Quanterness shoreline in views from the Wide Firth, as well as the strong vertical form of the proposed turbines in contrast to the strong horizontal form of the coastal edge, ensures that the Proposed Development will form a prominent feature. 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 turbines on the same shore will serve to accentuate the larger scale of the proposed turbines.

6.13.102 The magnitude of change is prevented from being rated high owing principally to the extent of existing development evident along this mainland shoreline. In addition to the town of Kirkwall which occupies most of the coastal basin, there is its harbour area, which comprises larger scale sheds and boats and which present a more industrial character. Hatston Industrial Estate, on the western side of the town, adds further to the larger scale and industrial development with the single turbine at Crowness Business Park establishing renewable structures as part of the baseline character. This coastline lacks any sense of remoteness or wildness which would otherwise increase the magnitude of change.

6.13.103 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, construction will be apparent from the closer range sections of the ferry route. The magnitude of change will not be higher than medium owing to the relatively small number of turbines being constructed and the existing human influences experienced along this coast, as described above.

Significance of effect

6.13.104 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 the

Quanterness site in views from the Wide Firth, which will ensure that the Proposed Development will form a focal feature.

Significance of cumulative effect

6.13.105 The cumulative effect on the views of passengers on ferries across Wide Firth 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 Hammars Hill and Burgar Hill Wind Farms, as well as the single turbines at Crowness Business Park and Rennibister on the cumulative situation is so limited that in conjunction with the Proposed Development the cumulative magnitude of change will be **medium to low** and the effect **not significant**.

Viewpoint 10: Craigiefield, Car Ness

Baseline

6.13.1 Craigiefield is a small settlement situated on the eastern shoreline of the Bay of Kirkwall to the north-east of the town of Kirkwall. It is a small linear settlement with properties mostly accessed from the minor road that skirts the shoreline and extends north to the headland of Car Ness. The viewpoint is located approximately 3.5 km from the western site boundary and the view looks north-west towards the site. It is representative of the views of residents living along this shoreline, as well as road-users and walkers on this minor road and in the local area.

6.13.1 Craigiefield comprises a small group of two-storey, modern, detached properties. They are accessed from the minor road which sits tight against the low and rocky shoreline. There is a strong coastal influence in this area owing to its proximity to the exposed coastal edge. The orientation of the properties is north-east such that their views are directed across the Bay of Kirkwall to Hatston Industrial Estate with its ferry pier and single turbine at Crowness Business Park as well as large industrial sheds. The site at Quanterness is also located in this direction, albeit at a greater distance and seen to the right of Hatston. The road follows the north-east to south-west alignment of the shoreline such that views are either drawn out across The String to Shapinsay or back across the Bay of Weyland to Kirkwall. While Hatston and Quanterness are visible from the road, their position perpendicular to the field of view of road-users limits their prominence.

6.13.2 The landscape around Craigiefield is characterised by low and gently undulating landform which accommodates fields of open pasture enclosed by post and wire fencing. The landscape appears open and exposed with typically small scale and rural development dispersed across it. Kirkwall presents a broader extent of urban development with larger scale buildings evident at Hatston. Water-borne traffic, in and out of the Bay of Kirkwall, adds to the urban and dynamic character of the outlook, with commercial ships, ferries, cruise liners and other recreational vessels frequently passing.

Sensitivity

6.13.3 The value of this view is medium for residents, walkers and road-users. There are no formal viewpoints and no national or regional designations which would otherwise denote a special value.

6.13.4 The susceptibility of residents along this open shoreline is medium to high. The principal outlook of properties along this coastal edge is north-west across the Bay of Kirkwall and in the direction of the site. Similarly, for walkers, open views towards the site are experienced. The susceptibility of road-users is, however, medium. This is because their views are transient and channelled along the alignment of the road, which is parallel to the shoreline and mostly oblique to the direction of the site. The proximity of the road to the coast does, however, ensure clear views across the water are experienced.

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

Magnitude of change

6.13.6 During operation, the magnitude of change to the views of residents and walkers will be **medium to high,** while for road-users it will be **medium**. The Proposed Development will be located a

minimum distance of 3.57 km to the closest turbine. As the wireline in Figure 6.25 shows, all six of the proposed turbines will be visible, seen to almost their full extents and appearing contained on the lower coastal plain. Residents and walkers will experience views that are drawn across the Bay of Kirkwall to the Proposed Development, and although road-users will be travelling perpendicular to the direction of these views, their proximity to the coastline means that open views are presented in this westerly direction, these factors adding to the prominence of the Proposed Development.

6.13.7 As the photomontage in Figure 6.25 shows, the prominence and influence of these turbines will be moderated by the presence of Hatston Industrial Estate in the same sector of the view. The comparison of the turbines with the closer range single turbine will act to diminish their perceived scale. The wireline and photomontage also show how the turbines will be set below the summit of Wideford Hill and how this will also moderate the prominence of these structures by making them appear contained by the scale of the wider landscape. While the Proposed Development will form a readily visible feature within views from the harbour and surrounding area, the extent of existing development experienced from this location will reduce the overall effect.

6.13.8 During construction, the magnitude of change will also be **medium to high** for residents and walkers and **medium** for road-users. This assessment reflects the extent to which the site and many of the construction processes will be screened by the intervening landform and land uses. The emerging turbines and the tall cranes used to construct them will, however, be readily visible, although their influence on views will be moderated by the extent of existing and close range developments in this area, as well as the frequent passage of large ships, ferries and cruise liners on the water.

Significance of effect

6.13.9 The effect of the Proposed Development on the views of residents, walkers and road-users will be **significant**. This assessment relates chiefly to the principal orientation of residents across the Bay of Kirkwall to the site and the open views of walkers, despite the urban influence of Kirkwall and the busy shipping flows in and out of the bay.

Significance of cumulative effect

6.13.10 The cumulative effect on the views of road-users, walkers and residents around Kirkwall Harbour 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 more distant Hammars Hill and Burgar Hill Wind Farms on the cumulative situation will be limited. In terms of the Crowness Business Park single turbine, the fact that it is seen in closer range, means that it will appear comparable in scale to the more distant proposed turbines and as part of the same cluster and these factors, along with its limited vertical and horizontal extents, will limit the cumulative magnitude of change that in conjunction with the Proposed Development will be **low** and the effect **not significant**.

Viewpoint 11: A961, Kirkwall

Baseline

6.13.11 This viewpoint is located on the A961 as it approaches the southern edge of Kirkwall. The A961 is the main road which connects Kirkwall with South Ronaldsay. On the southern approach into Kirkwall, the road traverses the upper slopes above Scapa Bay, which lies to the south-west, and the Kirkwall coastal basin, which lies to the north-east. With the landform rising to the east and south and falling away to the west and north, the views naturally open up across the town and out to the bay of Kirkwall to the north and Wideford Hill to the west. The site lies in the open sector to the north-west.

6.13.12 This viewpoint is representative of the views of road-users on the A961 and residents in the more elevated and exposed properties in the southern and south-eastern parts of the town. The defining feature of the view is the town of Kirkwall, largely owing to the expansive overview which the elevated location of the A961 affords. With the western limits visibly contained by the rising landform, the town appears to fit within its landscape setting. While largely characterised by small scale residential developments, there are also a number of larger developments, reflecting the role of the town as the main centre for the Orkney Islands. These include the large and modern Balfour Hospital on the southern edge in the lower lying coastal basin and the wider extent of large scale

retail and other business uses around the Peerie Sea. The large sheds and single turbine of Crowness Business Park are also visible closer to the more distant coastal edge.

6.13.13 In contrast to the extent of urban development, a more rural landscape is visible to the west, albeit with a generous scattering of properties occurring across it. The landscape is modified by agriculture, with a pattern of medium sized fields of improved pasture cast across the gently undulating landform, which rises up through the hill fringes to the moorlands of Wideford Hill. Here the mottled browns denote the semi-natural moorland landcover, while the masts mark the human influence extending into this upland landscape. There is also a notable scattering of single turbines visible.

Sensitivity

6.13.14 The value of this view is medium. There are no formal viewpoints and no regional or national designations which would otherwise denote a special value. The local value of the view relates to the visual amenity of road-users on this open stretch of the A961 and residents in these more elevated and exposed properties on the southern and south-western side of the town.

6.13.15 The susceptibility of residents and road-users to the Proposed Development is medium to high. North-bound road-users and local residents may experience open views across Kirkwall and Hatston to the site. The susceptibility of residents is higher owing to the potentially longer duration of their views, compared to road-users, whose views will be transitory. There is also an existing influence of urban development which will limit susceptibility.

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

Magnitude of change

6.13.17 During operation, the magnitude of change to the views of road-users and residents will be **medium**. The Proposed Development will be located a minimum distance of 5. km from the viewpoint. As the wireline in Figure 6.26e shows, all six of the proposed turbines will be visible, with Turbine 5 seen almost to its full extent, the towers of Turbines 3, 4 and 6 seen partially screened by the intervening landform and Turbines 1 and 2 only visible as tips. The photomontage in Figure 6.26f shows that while the influence of the proposed turbines will be moderated by the extent of urban development across the fore to middleground, their prominence will, however, be accentuated by their scale comparison with these smaller scale structures. They will be seen in the context of this attractive view of Kirkwall in its coastal setting.

6.13.18 The wireline and photomontage also show how the turbines will be set below the summit of Wideford Hill and party concealed by the eastern flank. This will moderate the prominence of these structures by making them appear contained by the scale of the wider landscape. While the Proposed Development will form a readily visible feature within views from the A961 and surrounding area, the extent of existing development experienced from this location will reduce the overall effect.

6.13.19 During construction, the magnitude of change will be **medium to low**. This assessment reflects the extent to which the site and many of the construction processes will be screened by the intervening landform and land uses. While the emerging turbines and the tall cranes used to construct them will, however, be readily visible, their influence of views from this urban area will be moderated by the extent of existing and close range developments in this area.

Significance of effect

6.13.20 The effect of the Proposed Development on the views of road-users on the A961 and nearby residents will be **not significant**. This takes into account the baseline character of views from this area which are largely influenced by the urban development of the wider town, as well as the separation distance and the extent to which the turbines will be screened by the intervening landform.

Significance of cumulative effect

6.13.21 The cumulative effect on the views of road-users and residents around the south and south-western side of Kirkwall will be **not significant**. While Hammars Hill and Burgar Hill are theoretically visible from this area, their relatively small scale and distant location means that they will have a very limited influence on the cumulative situation. Similarly, the single Crowness Business Park turbine will make a limited contribution to the cumulative baseline. The addition of the Proposed Development will give rise to a **low** cumulative magnitude of change and the cumulative effect will be **not significant**.

Viewpoint 12: Quanterness

Baseline

6.13.1 This viewpoint is located to the north of Quanterness House and south of the A965. It is immediately south of the site and has been included to represent the views of residents in this rural area and road-users on the A965. Residential development is sparse with Quanterness Cottages and Quanterness House being the only close range properties with Saverock Farm to the east and Rennibister Farm to the west. The A965 is the main road on Orkney, connecting the two main settlements of Kirkwall and Stromness.

6.13.2 The viewpoint is set on the gently rising hill fringes, which affords an elevated view north across the open expanse of farmland which characterises Quanterness. The coastal plain is low and gently undulating, its simplicity accentuated by the large open fields of improved pasture and occasional arable, with few features other than fences, stone dykes and occasional farm buildings. While the view extends over the Wide Firth, the extent of the seascape is contained by West Mainland, where it wraps around the west and north-west of the bay, the long and low ridgeline providing some sense of enclosure. To the north, the whaleback form of Gairsay can be seen, while to the north-east, the flatter form of Shapinsay is also visible.

6.13.3 The main feature through this area is the A965, which is one of the busiest roads on the island and which is a notable human intervention in an otherwise, predominantly rural area. This section of the A965 marks an important transition for east-bound road-users travelling into Kirkwall and west-bound road-users travelling out into the rural area. The simplicity of the landscape presents an immediate contrast with the built up development of Kirkwall, where the single turbine at Crowness Business Park forms a notable feature.

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. The local value of views in this area relate to the visual amenity of road-users and residents.

6.13.5 The susceptibility of road-users and residents in this area is high. The principal outlook of properties in this area is north across Quanterness to Wide Firth and this raises the susceptibility of residents as their views are directly toward the site. The susceptibility of both west and east-bound road-users is high because they pass along the southern site boundary and their currently open outlook will be notably changed.

6.13.6 The combination of the value of the view and the susceptibility of residents and road-users 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 residents and road-users will be **high.** The Proposed Development will be located a minimum distance of 0.67 km to the closest turbine. As the photomontage in Figure 6.27 shows, all six of the proposed turbines will be visible, along with the tracks, permanent met mast and substation compound. From this especially close range, the turbines will appear large in scale and their modern appearance will appear at variance with the rural character of the farmland.

6.13.8 The views of local residents will be notably altered as the proposed turbines will appear in their principal outlook towards the Wide Firth. Road-users will pass within close proximity of the

proposed turbines and this previously open expanse will appear somewhat enveloped by these tall vertical structures. The Proposed Development will form a new and defining focus in this area.

6.13.9 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 A965 and surrounding residential properties. The emerging turbines and the tall cranes used to construct them will form close range and especially prominent features that will change the local character of this area.

Significance of effect

6.13.10 The effect of the Proposed Development on the views of residents and road-users will be **significant**. This takes into account the very close proximity of this viewpoint and the visual receptors which they represent.

Significance of cumulative effect

6.13.11 The cumulative effect on the views of residents and road-users in the Quanterness 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 Hammars Hill Wind Farm and the single turbines at Crowness Business Park and Rennibister 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: Cuween Cairn

Baseline

6.13.1 This viewpoint is located at Cuween Chambered Cairn to the south-east of Finstown. It has been included to represent the views from this rural hinterland to the coastal edge, extending from Hill of Heddle to the west, through Cuween in the centre, to Grimbister to the east. It is representative of the views of the views of road-users on the rural roads, residents in the rural properties and walkers on the rural footpaths.

6.13.2 The view is largely enclosed by rising landform to the south and west, while in contrast, an open aspect occurs to the north and east. The natural orientation of the view is north-east across the Bay of Firth, in which the Holm of Grimbister and Damsay form something of a focus despite both being relatively flat and featureless. The attraction of the wider seascape largely relates to the definition and enclosure which the moorland hills form as they wrap around the Wide Firth to the west, south and east. Wideford Hill forms a landmark feature to the east, owing to its distinctive form and the smooth sweep of the downslope onto the coastal plain.

6.13.3 The settled nature of this rural area is evident in the extent of dispersed and small clusters of properties which occur and while this diminishes the undeveloped appearance of this landscape, all the development is small in scale and rural in character. While the larger structures of the single turbines and hill-top masts are also evident, their more distant location means they appear relatively small in scale.

Sensitivity

6.13.4 The value of this view is medium. There are no formal viewpoints in this area and no regional or national landscape designations which would otherwise denote a special value. The local value of the view relates to the visual amenity associated with residents, road-users and walkers in this rural area.

6.13.5 The susceptibility of residents in this rural area is medium to high. While there is a range of different orientations on offer, the majority of properties align north-east across the Bay of Firth, and with the site lying in this sector, this raises the susceptibility of residents. Similarly for walkers, the main path between Grimbister and Heddle, aligns to the north-east and furthermore, the openness of the landscape means that the site is likely to be visible from most of the rural paths. The susceptibility of road-users is considered to be slightly lower owing to the largely perpendicular angle of views form the minor roads in this area and the more contained and shorter duration of views as experienced from within travelling vehicles.

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

Magnitude of change

6.13.7 During operation, the magnitude of change to the views of residents and walkers will be **medium to high**, while the magnitude of change to the views of road-users will be **medium**. The Proposed Development will be located a minimum distance of 4.35 km from the viewpoint. As the wireline in Figure 6.28 shows, all six of the proposed turbines will be visible, seen to their full extents and apart from T3 and T5 overlapping, the turbines appear to be evenly spaced.

6.13.8 While not all properties in this rural area will be orientated towards the Proposed Development, views generally from this rural area will be affected by the addition of the six turbines. Those factors which contribute to the magnitude of change include the natural orientation of this hill fringe north-east towards the location of the Proposed Development, the exposed coastal edge on which the Proposed Development will be situated and the dynamic, large scale and modern appearance of the proposed turbines in contrast to the medium scale and rural appearance of the landscape. The strong vertical form of the proposed turbines will be accentuated by the strong horizontal form of the coastal edge.

6.13.9 Those factors which detract from the cumulative magnitude of change include the small number of turbines and how they collectively form a relatively compact group, the containment of this group within the coastal plain, which ensures it does not spread the influence into other landscapes, and the benefit of this open and relatively flat landscape and adjacent seascape in providing a simple setting that can accommodate the turbines. The photomontage in Figure 6.28 also shows how the turbines will be set below the summit of Wideford Hill, thus moderating the prominence of these structures by making them appear contained by the scale of the wider landscape. While the Proposed Development will form a readily visible feature within views from this rural area, it will occupy only a small proportion of the wider view.

6.13.10 During construction, the magnitude of change to the views of residents and walkers will be **medium to high**, while the magnitude of change to the views of road-users will be **medium**. From paths and properties, open views towards the site will be experienced in which the construction of the turbines and the activity of the cranes will form an eye-catching feature. While these structures will also be visible from the minor roads in the area, the more oblique direction of the views will ensure the effects are not as pronounced.

Significance of effect

6.13.11 The effect of the Proposed Development on the views of residents, walkers and road-users will be **significant**. This finding relates to the openness of the views of many walkers and residents towards the Proposed Development and the prominence of the turbines seen set on this exposed coastal edge.

Significance of cumulative effect

6.13.12 The cumulative effect on the views of residents and road-users in the Cuween 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 Hammars Hill Wind Farm and the single turbine at Rennibister on the cumulative situation is so limited that in conjunction with the Proposed Development the cumulative magnitude of change will be **medium to low** and the cumulative effect will be **not significant.**

Principal Visual Receptors

6.13.13 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.

6.13.14 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;

- A965;
- A966;
- Kirkwall; and
- Finstown.

A965

Baseline

6.13.1 This principal visual receptor is represented by Viewpoint 2: Hatston, Viewpoint 3: A965 west of Quanterness, Viewpoint 5: Finstown and Viewpoint 12: Quanterness. The A965 is the main road between Kirkwall and Stromness. Between Kirkwall and Finstown it broadly follows the southern coastal edge of Wide Firth, passing along the southern boundary of the site. The ZTV in Figure 6.9 shows that theoretical visibility occurs along the length of the section between Kirkwall and Finstown, while there is practically no theoretical visibility along the 12 km section between Finstown and Stromness. This assessment considers the effects on road-users travelling on this section of the A965.

6.13.2 From its origin at the waterfront in Kirkwall, the eastern section of the A965 starts its route inland with Hatston Industrial Estate separating the road from the coast. Once past the high point at Hatston, it swings north towards the coast and then follows a course inset from the coastal edge with the flat expanse of Quanterness, separating the road from the sea. At Rennibister the A965 meets the coast again and then sits tight to the shoreline all the way into Finstown. The principal attraction in the views of road-users on this section of the A965 is the seascape views, with a special association between Rennibister and Finstown where the road is immediately adjacent to the coastal edge. Wideford Hill also forms an important landmark feature, separating Kirkwall from Finstown but also forming a real focus to road-users travelling in both directions.

6.13.3 The influences along this route vary with a very urban character occurring at the Kirkwall end, whereby the western end of the town accommodates larger scale industrial and retail developments, as well as small scale residential developments spilling out into the rural interface. In contrast, the urban development in Finstown is mostly small in scale, in-keeping with the village character. The predominantly rural landscape between these two towns, can be divided into the Quanterness area to the east and the Grimbister area to the west. The Quanterness area is characterised by a relatively sparse settlement pattern in which isolated farmsteads and cottages occur. Here the farmland appears more consolidated and fields are typically medium or large. The Grimbister area has a greater concentration of rural properties, albeit following a fairly dispersed pattern with some small clusters. Here the farmland appears less consolidated and fields are typically small or medium. While Hammars Hill Wind Farm can be seen on the distant ridgeline of moorland hills to the north-west, it is the closer range single turbines at Crowness Business Park and Rennibister that have a more immediate influence on the views of road-users, both sitting fairly close to the A965, one at either end of the Quanterness area.

Sensitivity

6.13.4 The value of the views on the A965 is medium. There are no formal viewpoints and this route is not covered by any national or regional landscape designations, which would otherwise denote a special value. Views from this section of the A965 between Kirkwall and Finstown, are however, experienced by locals and visitors, and this raises the local value of the view.

6.13.5 The susceptibility of road-users on the A965 between Kirkwall and Finstown ranges between medium and high. At either end, where views are partly contained by the enclosure of built form the susceptibility of road-users is less than in the Quanterness section which passes along the southern boundary of the site. It is, however, the alignment of east-bound road-users in the Grimbister section and west-bound road-users in the Hatston section, where views will align towards the site, that susceptibility will also be notably higher. Although the views of road-users will be transient, the length of road over which their views will be affected, raises the duration of the effect.

6.13.6 The combination of the value of the view and the susceptibility of road-users on the A965 between Kirkwall and Finstown 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 road-users between Kirkwall and Finstown will be **medium** or **medium to high** in Finstown to Rennibister and Kirkwall to Hatston and **high** in the Quanterness section. The ZTV in Figure 6.9 shows that theoretical visibility along this section of the A965 will be continuous and the openness of the landscape means that actual visibility would broadly match these extents. The exceptions occur at either end of this section, where the urban development of Kirkwall and Finstown will limit visibility owing to the enclosure of the built form and the screening of wider views that this creates. For example, while the ZTV shows low levels of visibility occurring from the start of the A965 in the centre of Kirkwall, actual visibility will not occur until approximately 300m west of the roundabout and will initially comprise blades and tips seen beyond the intervening landform. It will only be towards the junction with Hatston Road, as represented by Viewpoint 2, that the full extents of the proposed turbines will be readily visible.

6.13.8 In Finstown, while theoretical visibility is shown to occur continuously along the route, over the western approach, as the road descends towards the A966 junction, glimpsed visibility between the buildings will gradually be reduced and while an open section occurs for approximately 200m east of the junction, in the eastern half of the town, the enclosure of the surrounding buildings will limit visibility. As the density of the urban form loosens, the views will open up and the full extents of the proposed turbines will be readily visible.

6.13.9 From Finstown to Grimbister, the Proposed Development will be within the views of east-bound road-users, albeit not direct with the road set east-south-east and the site offset to the east. All six turbines will be visible and will appear as a large scale and notable addition to this predominantly rural area. While the closer range of the Rennibister turbine will make the proposed turbines appear comparable in scale, this favourable comparison will diminish on approach to the site.

6.13.10 In the Quanterness section, the road will pass especially close to the proposed turbines and the magnitude of change will be high. The turbines will appear as large scale structures and will be prominent in views along this section of the road. In the approach out of Kirkwall from the east, the partial screening formed by the north-eastern flank of Wideford Hill will gradually diminish, such that by the junction with Hatston Road, all six turbines will be revealed. Again, the proximity of the road to these large scale structures will give rise to a notable change in the views of road-users.

6.13.11 While the Proposed Development will form a new focus to road-users on the A965, there are a number of factors that will temper the overall effect. Firstly, there is the fact that the turbines are contained on the coastal shelf, thus forming a clear association between this well-defined landscape and preventing the spread of development into neighbouring landscapes. Secondly, there is the relationship between the Proposed Development and Wideford Hill, whereby the much lower lying location of the proposed turbines and their location offset from the hill fringe, reduces their impingement on Wideford Hill, which is an important landmark feature in views from the A965. Thirdly, the small number of turbines means that they form a relatively small group with limited horizontal extents, albeit from these close range views, more notable vertical extents.

6.13.12 During construction the magnitude of change on the views of road-users between Kirkwall and Finstown will be **medium** or **medium to high** in Finstown to Rennibister and Kirkwall to Hatston and **high** in the Quanterness section. 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 the Quanterness section, ground level works such as the construction of the access tracks, turbine foundations, hardstanding crane pads and substation compound, will be readily visible and will add to the overall effect and possibly parts of the Grimbister section to the west, at ground level.

Significance of effect

6.13.13 The effect of the Proposed Development on the views of road-users on the A965 between Kirkwall and Finstown will be **significant** during construction and operation. This assessment relates to the full extents of visibility at a relatively close range, which will be experienced from notable sections of the A965, and which means that the Proposed Development will form a new and defining focus in the views of road-users.

Significance of cumulative effect

6.13.14 The cumulative effect on the views of road-users on the A965 between Kirkwall and Finstown 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 Hammars Hill Wind Farm and the Rennibister and Crowness Buisness Park single turbines is limited for the following reasons. Hammars Hill Wind Farm is situated approximately 10 km to the north-west and appears as a distant feature occupying a small proportion of the wider views experienced from the A965 and therefore has a weak influence on the cumulative situation. While the single turbines at Rennibister and Crowness Buisness Park are much closer to the A965, the fact that they both comprise a single turbine limits the contribution they make to the overall cumulative effect. Furthermore, their scale will be diminished by the comparatively much larger scale of the proposed turbines, especially in the Quanterness section where the turbines are seen at their largest scale. Furthermore, the cumulative effect will be moderated by all these turbines being grouped in broadly the same area. In conjunction with the Proposed Development the cumulative magnitude of change will be **medium to low** and the cumulative effect will be **not significant**.

A966

Baseline

6.13.1 The A966 is the main road that connects the A965 at Finstown with the northern coast of the West Mainland of Orkney. It is a relatively straight road over flat terrain which makes it a fast route with views largely channelled along its length. The openness of the surrounding landscape means that the views of road-users out to either side are largely uninterrupted. There are a small number of farmsteads and houses dispersed along the A966 with occasional clusters forming small nucleated settlements. Visibility from the A966 falls within a range of 3.9 km to 7.8 km from the Proposed Development. The ZTV in Figure 6.9 shows theoretical visibility to be continuous along the A966 from Finstown to the high point just south of the Tingwall junction.

6.13.2 Apart from the few short sections in Finstown and Norseman where there is some degree of enclosure from built form, actual visibility matches theoretical visibility. This is due to the flat landcover of the agricultural landscape and the absence of trees or hedges which combine to create an open and largely featureless landscape. From the A966, the main features are the farmsteads and other houses dispersed across this rural landscape. The A966 is not as closely associated to the Wide Firth as the A965, largely owing to its location inset from the coastal edge. Instead, the primary influence comes from the surrounding farmland and the moorland hills which flank the western side of the road. In respect of the influence that the site at Quanterness has on baseline views, for north-bound road-users travelling out of Finstown, the site does not form a noticeable feature largely owing to its position to the east, perpendicular to the northerly direction of travel. With travel further north, the position of the site relative to road-users becomes more and more oblique, thus further reducing its prominence.

6.13.3 In contrast, the site is potentially more apparent in the views of south-bound road-users. The A966 is routed to the south-south-west and the site is situated to the south-east, such that direct views towards the site are not experienced by south-bound road-users. The openness of the landscape does, however, mean that views in the direction of the site are largely unobstructed, although its

low-lying position means that it is often not readily visible and it is the well-defined outline of Wideford Hill that forms a landmark feature in this direction.

6.13.4 Views of road-users on the A966 are largely characterised by the surrounding farmland, which comprises medium to large sized fields of improved pasture enclosed by post and wire fencing. The landform is relatively flat with subtle undulations, creating an open and exposed landscape with little variation or definition, other than the few dispersed farmsteads and properties which occur. While farmland fills the fore to middleground of the coastal basin, the hill fringes and moorland hills form enclosure, within the close range in the case of the hills to the immediate west and within the distant range in the case of the hills to the south of Wide Firth.

6.13.5 Hammars Hill Wind Farm is the only wind farm readily visible from this route, the six turbines seen set along the ridgeline of the moorland hills to the north at a minimum distance of 1.5 km. While this is seen as a distant feature from the southern end of the A966, by Rendall it forms a closer range and more prominent feature. Other smaller single turbines are evident across the farmed landscape surrounding the A966, while on the opposite side of the Wide Firth, the single turbine at Rennibister is visible as a small and distant feature.

Sensitivity

6.13.6 The value of the views is medium. There are no formal viewpoints in this area and no national or regional landscape designations that will otherwise denote a special scenic value. The value of the views, therefore, relates to the visual amenity of road-users on the A966 and adjoining minor roads.

6.13.7 The susceptibility of road-users who experience views in this area is medium. The A966 is inset from the coastal edge, and this reduces the association of road-users and residents with the Wide Firth and the coastal landscapes that surround it. South-bound road-users will be more susceptible to the effects of the Proposed Development than north bound road-users owing to their broadly south-facing field of view within which the site occurs.

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** sensitivity.

Magnitude of change

6.13.9 During the operational phase, the magnitude of change on road-users on the A966 between Finstown and south of the Tingwall junction will be **medium** to **medium high,** with the higher magnitude of change occurring in the southern part closest to the Proposed Development. The ZTV in Figure 6.9 shows that all six of the turbines will be theoretically visible along the full length of this section with theoretical visibility being broadly similar with the exception of short sections in Finstown and Norseman where built form screens views.

6.13.10 All six of the turbines will be visible almost to their full extents in south-bound sections where the landform falls towards the coast, and with bases obscured where the landform rises. They will be seen set beyond the surrounding farmland of the West Mainland and on the opposite coastal edge of the Wide Firth. They will form a prominent feature owing to the openness of the landscape and their exposed position along the shoreline. The Proposed Development will become a focal feature owing to the strong vertical form of the turbines amidst the predominantly horizontal form of the landscape and seascape.

6.13.11 The prominence of the Proposed Development in the views of south-bound road-users will be most evident in the southern section over the approach into Finstown, which although it will be experienced at a more oblique angle to the direction of travel, the Proposed Development will nonetheless be closer in range. The relatively small number of turbines will mean that the group will appear well-contained and will be clearly associated with the coastal plain. On the section of the A966 to the north of Breck of Cruan, the proposed turbines will not have such a notable influence on views of road-users, as there will not be such a strong association with the Wide Firth and coastal landscapes, but instead, a closer association with the surrounding farmland and nearby coastal hills to the west. The presence of Hammars Hill Wind Farm to the north, albeit relatively distant and small scale, will ensure that the Proposed Development will not appear as a new or unfamiliar feature in the wider views.

6.13.12 During the construction phase, the magnitude of change will be **medium**. The key features will be the emerging turbines and the tall cranes used in their construction. The site will be visible from the A966 and, although only at its full scale towards the end of the construction phase, will nonetheless form an eye-catching feature to south-bound road-users owing to the incomplete appearance of the turbines and the associated construction activities.

Significance of effect

6.13.13 The effect of the Proposed Development on road-users on the A966, will be **not significant** during the construction and operational phases, with the exception of the southern section, where the effect will be **significant**. While this finding relates to the lack of direct views from the road towards the Proposed Development, the separation between the A966 and the coastal landscapes unified by the Wide Firth, and the existing influence of Hammars Hill Wind Farm close to the north of the A966, the southern section will not be affected to the same degree by these factors.

Significance of cumulative effect

6.13.14 The cumulative effect on the views of road-users on the A966 will be **not significant.** The only other wind farm readily visible from this area is Hammars Hills at a range of 5.7 km to the north-west. Its relatively small scale means that it will occupy only a small proportion of the wider views from the A966 and this will limit its influence on the cumulative situation. The addition of the Proposed Development will therefore give rise to only a **medium to low** cumulative magnitude of change and the effect will be **not significant**.

Kirkwall

This settlement is represented by Viewpoint 4: Kirkwall Harbour and Viewpoint 11 A961, Kirkwall.

Baseline

6.13.1 Kirkwall is set within a well-defined coastal basin enclosed by steeply rising landform to the east and to the west. Kirkwall originated in this sheltered inlet where the water was sufficiently deep for boats to be moored and where fisher folk settled. It then developed into a harbour, with built development tightly packed to be close to the water's edge and to benefit from the sheltering effect created between the buildings. Kirkwall became Orkney's main centre, largest town and busiest harbour. Many of the ferries connecting the other Orkney Islands come in and out of Kirkwall Harbour and in the summer months, the depth of the harbour means large cruise liners can dock here.

6.13.2 The historic core of the town contains St Magnus Cathedral which dominates the town's skyline as well as the nearby ruins of the Bishop's Palace and Earl's Palace. While many historic buildings survive along the older street in the core of the town, there has also been modern infill. In Victorian times, the settlement expanded onto the eastern shoreline and up onto the eastern slopes, and streets of these historic villas survive today. More modern developments have expanded the settlement further to the south-east and south, with new larger scale developments, such as retail outlets and the Balfour Hospital changing the scale and character of the town.

6.13.3 While residential development along the harbour front and the eastern shore has a strong relationship with the sea, the development inset from this coastal edge is largely enclosed by the tight urban form such that few external influences occur. Visibility out to the surrounding seascape and landscapes only occurs in more elevated and exposed parts of the town, where roads align with open views or the built form opens up to allow views out. While the main draw in these views is the Bay of Kirkwall to the north, Wideford Hill also forms an important landmark feature to the west, especially from the eastern slopes, which have a natural west-facing orientation. While not a feature in these views, the site at Quanterness sits to the north of the hill.

Sensitivity

6.13.1 The value of the views from Kirkwall are medium. There are no formal viewpoints in this area and no national or regional landscape designations, which would otherwise denote a special value.

6.13.2 The susceptibility of the majority of residents in Kirkwall to the effects of the Proposed Development ranges from medium to low, to high. While the views of residents are typically either contained

within the settlement or orientated north across the Bay of Kirkwall, there are more elevated or exposed properties and streets, especially across the rising slopes to the east and south of the town, from which the site is potentially visible.

6.13.3 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 in Kirkwall.

Magnitude of change

6.13.4 The ZTV in Figure 6.9 shows theoretical visibility to extend across most of Kirkwall, with all six turbines theoretically visible from the majority of the town and lower numbers visible from the western edge where there is some screening from the eastern flank of Wideford Hill. Actual visibility will be greatly reduced by the extent of built form which encloses many of the street spaces and keeps views contained within the close range. The exception to this rule occurs in the more exposed and elevated parts of the town, principally those exposed parts around the harbourside and along the eastern shoreline and those elevated parts on the eastern and southern slopes of the town.

6.13.5 During operation, the magnitude of change on the views of residents will be **medium** in the exposed and elevated parts and **medium to low** or **no change** in all remaining parts. Where visibility arises the Proposed Development will be seen to the north-west at distances ranging between 2.1 and 6.5 km. The number of turbines visible will vary depending on the extent of views available from each property or street but will be a maximum of six. They will be seen set beyond the urban development of Kirkwall which fills the coastal basin and spreads up the enclosing slopes. While much of the development is relatively small scale, the larger retail developments around the Peerie Sea and industrial developments at Hatston establish a more heavily developed character. While the extent of existing development will moderate the effect of the Proposed Development, the turbines will still be seen as large scale and dynamic vertical structures that will create a new defining feature where visibility arises.

6.13.6 During construction, the magnitude of change on the views of residents will be **medium to low** in the exposed and elevated parts and **low** or **no change** in all remaining parts. This assessment reflects the extent to which the site and many of the construction processes will be screened by the intervening landform and land uses. While the emerging turbines and the tall cranes used to construct them will be readily visible, their influence on views from Kirkwall will be moderated by the extent of existing and close range developments in this area.

Significance of effect

6.13.1 During both construction and operation, the effect of the Proposed Development on residents at the more exposed and elevated properties will be **significant**, while the effect on all remaining residents will be **not significant**. This finding relates to the contained nature of many of the views experienced by residents in Kirkwall, although visibility of the Proposed Development where it does occur in more elevated and exposed parts, will redefine the character of these views.

Significance of cumulative effect

6.13.2 The cumulative effect on the views of residents in Kirkwall 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 more distant Hammars Hill and Burgar Hill Wind Farms on the cumulative situation will be limited. In terms of the Crowness Buisness Park single turbine, the fact that it is seen in closer range, means that it will appear comparable in scale to the more distant proposed turbines and this, along with its limited vertical and horizontal extents, will limit the cumulative magnitude of change that in conjunction with the Proposed Development will be **low** and the effect **not significant**.

Finstown

6.13.3 This settlement is represented by Viewpoint 5: Finstown.

Baseline

6.13.1 Finstown is a small village located 9 km to the west of Kirkwall and approximately 4.1 km from the western site boundary. It occupies the south-west corner of the Bay of Firth at an important junction between the A965 Kirkwall to Stromness Road and the A966 to the north of the Mainland of Orkney.

The village has a predominantly linear pattern set along the west to east alignment of the A965, but with also spurs along the A966 to the north and Heddle Road to the south. The town comprises mostly single and two storey residential properties, mostly detached or semi-detached, with some terraced sections in the older core of the town. While the majority of the properties are set along traditional streets there are also some modern infill developments, set behind the main axis of streets.

6.13.2 The key feature of Finstown is its position between the enclosing edge of the moorland hills and the open edge of the Wide Firth. This creates a natural orientation, which most of the properties respond to, through their orientation towards the water. Properties along the A965 coastal edge therefore face north-east, while those on the A965 face east. While other properties in the settlement follow this general pattern of alignment, their views are more contained by neighbouring buildings. The exception occurs across some of the more elevated parts, such as the modern residential developments at Jewdale Drive and Damsay View and the section of the A965 on its approach into Finstown.

6.13.3 The main views from the town are north across the Bay of Firth and Wide Firth. Beyond the low and rocky shoreline, the water stretches out to meet the distant enclosure of the West Mainland, which wraps around from the west, with the headland at Crookness forming the northern shoreline. To the east Wideford Hill forms the main feature, owing to its elevated landform and large blocks of moorland landcover. The masts on the top and single wind turbines at the base are evidence of human artefacts in this otherwise, predominantly rural landscape.

Sensitivity

6.13.4 The value of the views from Finstown is medium. While there are no formal viewpoints in this area and no national or regional landscape designations, which would otherwise denote a special value, there is local value attached to the residential visual amenity of people living in the town.

6.13.5 The susceptibility of the majority of residents in Finstown to the effects of the Proposed Development ranges from medium to low, to medium to 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.

6.13.6 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 Finstown.

Magnitude of change

6.13.7 During operation, the magnitude of change on walkers on the open shorelines and residents at elevated or exposed properties will be **medium to high**, while the magnitude of change on all remaining residents will be **medium to low, low** or **no change**. While the ZTV in Figure 6.9 shows that theoretical visibility will be continuous across the town, actual visibility will be reduced by the extent of surrounding built form.

6.13.8 Where visibility does occur, for example from Jewdale Drive and Damsay View, all six turbines will be visible at a minimum distance of approximately 4.6 km. They will all be visible to practically their full height and seen set on the low and level coastal edge below Wideford Hill. They will make a notable addition in these more open views from the town owing to their movement, their scale and their modern appearance. The Proposed Development will also be readily visible from the open shoreline adjacent to the A965 where the jetty is located and the open shoreline adjacent to the A966 where the primary school is located and will form a new focus in views across the Bay of Firth.

6.13.9 Those factors which will moderate the effects of the Proposed Development on visual receptors in Finstown include the location of the Proposed Development to the east, when the principal orientation along the shoreline is north, and the remainder of the town is largely inward looking. The Proposed Development also comprises a relatively small number of turbines, which form a contained group and occupy a small proportion of the wider extent of the open views. The turbines

will be clearly associated with the coastal plain and their low-lying location below Wideford Hill will act to reduce their prominence within this landscape context. They will also be seen in a sector of the view where single turbines and masts form a baseline feature, and while the Proposed Development will be notably larger in scale, it will not introduce a new or unfamiliar feature.

6.13.10 During construction, the magnitude of change on walkers along the open shorelines and residents at the more exposed and elevated properties will be **medium**, while the magnitude of change on all remaining residents and road-users will be **medium to low, low** or **no effect**. Although seen at a range of 4 to 5 km, the presence of emerging turbines and tall cranes will form a readily apparent and eye-catching feature from open shorelines and elevated or exposed properties orientated east towards the site.

Significance of effect

6.13.11 During both construction and operation, the effect of the Proposed Development on the views of walkers along the open shorelines and residents at the more exposed and elevated properties will be **significant**, while the effect on all remaining residents and road-users will be **not significant**. This finding relates to the contained nature of many of the views experienced by residents and road-users in Finstown, although visibility of the Proposed Development where it does occur in more elevated and exposed parts, will redefine the character of these views.

Significance of cumulative effect

6.13.12 The cumulative effect on the views of road-users, walkers and residents in Finstown 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 more distant Hammars Hill Wind Farm and 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**.

6.14 Summary

6.14.1 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.

6.14.2 The Proposed Development comprises the construction of the six proposed turbines, each 149.9m to blade tip, and associated infrastructure, including access tracks, substation compound and permanent meteorological mast. The proposed turbines will not be lit with visible lighting. The site layout is shown in Figure 2.1.

6.14.3 The site is situated on the Mainland of Orkney, on the coastal edge to the west of Kirkwall. The site lies within a landscape classified as Inclined Coastal Pasture LCT and characteristically comprises open fields of improved pasture and arable crops. The main road between Stromness and Kirkwall is the A965, which passes along the southern site boundary.

6.14.4 There are relatively few operational wind farms and turbines in the study area. The most notable is Hammars Hill located in the moorland hills, 8.91 km to the north-west of the site. In the local area, there is a single turbine at Rennibister at a minimum distance of 1.33 km and a single turbine at Crowness Buisness Park at a minimum distance of 1.59 km.

6.14.5 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, 15 Landscape Character Units, three Regional Coastal Character Areas, two designated landscapes, 13 viewpoints and four principal visual receptors. Photomontages have been prepared for all 13 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 6.15 show plans of the Study Area, landscape receptors, visual receptors and ZTVs of the Development on its own and in combination with other cumulative windfarms, while Figures 6.16 to 6.28 show the photographs, wirelines and photomontages from the representative viewpoints.

6.14.6 The effects of the Proposed Development are assessed as being relatively localised. The ZTVs illustrate an especially contained pattern in which visibility is largely concentrated within the viewshed of the Wide Firth, which extends a minimum of 2 km and a maximum of 8 km from the Proposed Development. As a direct result of this largely contained pattern of visibility, the landscape and visual receptors assessed are all located within a 15 km radius of the Proposed Development. This has been identified as the zone within which there is likelihood that significant effects may arise.

6.14.7 In respect of the physical effects on landscape elements, the assessment found that the direct effect on the agricultural land 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 extensively modified by agricultural practices. Improved pasture and arable will be relatively easy to re-establish either post-construction, depending on the short or long term use of the area.

6.14.8 In respect of effects on landscape character, the assessment found there will be significant effects within a 5 to 6 km radius of the Proposed Development, with eleven LCUs either wholly or partially significantly affected. These LCUs are either close to the site or located around the Wide Firth 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 the Wide Firth RCCA, largely owing to the strong association between the site and the surrounding coastal landscapes, and very localised effects from the more sensitive parts of the Kirkwall RCCA and Shapinsay RCCA. All other RCCAs will not be significantly affected.

6.14.9 In respect of landscape designations, the assessment found that there will be no significant effects in respect of national and regional landscape designations within the study area. While the overall effect on Balfour Castle GDL was found to be not significant, a localised significant effect associated with the more exposed southern terraces was assessed. A detailed assessment of the effects on the special qualities of the Orkney - Hoy and West Mainland NSA found that the Proposed Development will not give rise to any significant effects.

6.14.10 In respect of effects on visual amenity, of the 13 viewpoints assessed, the assessment found that 12 will be significantly affected during the construction and operational phases of the Proposed Development. These viewpoints are all located within an approximate 6 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 6 km range will not be significantly affected as a result of the Proposed Development, owing to the very limited extent of visibility, largely contained within the viewshed of the Wide Firth.

6.14.11 In terms of the principal visual receptors assessed, it was found that the more elevated or exposed parts of Kirkwall to the east and Finstown to the west will be significantly affected during the construction and operational phases, while the remaining parts of these settlements and all other settlements in the study area will not be significantly affected. The A965 between Finstown and Kirkwall will also be significantly affected, largely owing to its close proximity to the site as well as alignment towards in approaches from the west and east. The southern part of the A966 will also be significantly affected owing to proximity and openness of views to the Proposed Development. The remainder of the A966 and all other routes, will not be significantly affected during both the construction and operational phases.

6.14.12 The most relevant wind farms to the cumulative assessment are operational and these form part of the baseline situation. The assessment of the Proposed Development in addition to the cumulative situation is covered by the main assessment as this takes into account all the operational wind farms, including Hammars Hill and Burgar Hill and the single turbines at Rennibister and Crowness Buisness Park. There will be no significant cumulative effects largely owing to the relatively small

scale of the cumulative wind farms, both in terms of the number of turbines and their size, which prevents wind farms becoming the prevailing characteristic of landscape character or visual amenity. This assessment applies to both consideration of the cumulative effects of the Proposed Development in conjunction and in combination with the other cumulative wind farms.

6.14.13 The RVAA in Appendix 6.3 has considered the impact of the Proposed Development on the visual amenity of residents within a 2 km radius. The assessment found that only two of the 40 properties assessed will reach the 'Residential Visual Amenity Threshold' making this a matter for the planning balance. Both these properties, namely 1 Quanterness Cottages and 2 Quanterness Cottages, are currently occupied by tenants and are owned by a party that has a commercial interest in the Proposed Development.

6.14.14 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 5 to 6 km. It will give rise to significant effects on visual amenity out to approximately 6 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 close range and this reflects the natural containment of the site owing to its low-lying location and enclosure from the surrounding moorland hills. The site has capacity for wind farm development owing to the simplicity and openness of the landform. The localised area which will be subject to significant effects is already influenced by built development and a modified landscape.

6.14.15 All effects during the construction of the Development will be short-term and reversible and all effects during the operation of the 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
Agricultural Land	Medium to low	Medium	Not significant	N/A	N/A	N/A
Inclined Coastal Pastures LCT Quanterness LCU	Medium to high	High	Significant	High	Significant	Medium to low Not significant
Inclined Coastal Pastures LCT Coubister LCU	Medium to high	Medium to high	Significant	Medium to high	Significant	Medium to low Not significant
Inclined Coastal Pastures LCT Gorseness LCU	Medium to high – south Low – remainder of LCU	Medium to high – south Low or no change – remainder of LCU	Significant – south Not significant – remainder of LCU	Medium to high – south Low or no change – remainder of LCU	Significant – south Not significant – remainder of LCU	Medium to low Not significant
Rolling Hill Fringe LCT Wideford Hill LCU	Medium to high – south and west of site Medium to low – east and south of Wideford Hill	High – south of site / Medium to high – west of site Low, negligible or no change – east and	Significant – south and west of the site Not significant – east and south of Wideford Hill	High – south of site / Medium to high – west of site Low, negligible or no change – east and	Significant – south and west of the site Not significant – east and south of Wideford Hill	Medium to low 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
		south of Wideford Hill		south of Wideford Hill		
Rolling Hill Fringe LCT Settiscarth LCU	Medium	Medium	Significant – south Not significant – remainder of LCU	Medium	Significant – south Not significant – remainder of LCU	Medium Not significant
Moorland Hills LCT Wideford Hill LCU	Medium to high – northern side Low – southern side	Medium to high – northern side Low, negligible or no change – southern side	Significant – northern side Not significant – southern side	Medium to high – northern side Low, negligible or no change – southern side	Significant – northern side Not significant – southern side	Medium to low Not significant
Moorland Hills LCT West Mainland LCU	Medium to high – south Medium or low – remainder of LCU	Medium – south Medium to low- north No change - west	Significant - south Not significant	Medium – south Medium to low- north No change - west	Significant - south Not significant - remainder of the LCU	Medium – north Medium to low - south Not significant
Ridgeline Island Landscapes LCT Shapinsay LCU	Medium to high	Medium – south-west / Medium to low – south / Low or no change – remainder of LCU	Significant – south-west Not significant – remainder of LCU	Medium – south-west / Medium to low – south / Low or no change – remainder of LCU	Significant – south-west Not significant – remainder of LCU	Medium to low 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
Low Island Pastures LCT Kirkwall LCU	Medium	Medium – west coast Medium to low – remainder of LCU	Significant – west coast Not significant– remainder of LCU	Medium - west Medium to low - – remainder of LCU	Significant – west coast Not significant - remainder of LCU	Medium to low Not significant
Coastal Basins LCT Isbister LCU	Medium to high – south Medium - north	Medium to high– south Medium - centre Medium to low- north	Significant – south out to approx. 6 km Not significant - north	Medium to high– south Medium - centre Medium to low- north	Significant – south out to approx. 6 km Not significant - north	Medium - north Medium to low - south Not significant
Coastal Basins LCT Kirkwall LCU	Medium	Medium to high – north-west Medium – east Medium to low / Low / No change – remainder of LCU	Significant – north-west Not significant – remainder of the LCU	Medium to high – north-west Medium – east Medium to low / Low / No change – remainder of LCU	Significant – north-west Not significant – remainder of the LCU	Medium to low Not significant
Peatland Basins LCT Breck of Cruan LCU	Medium	Medium to high- south Medium - north	Significant - south Not significant - north	Medium to high - south Medium - north	Significant - south Not significant - north	Medium 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
Isolated Coastal Knolls LCT Gorseness LCU	Medium	Medium – south No change- north	Significant – south Not significant - north	Medium – south No change - north	Significant - south Not significant - north	Medium to low Not significant
Undulating Island Pastures LCT Kirkwall LCU	Medium	Low	Not significant	Medium to low	Not significant	Medium to low Not significant
Whaleback Islands LCT Gairsay LCU	Medium	Medium to low	Not significant	Medium	Not significant	Medium Not significant
Wide Firth RCCA	Medium to high	High / Medium to high / Medium Medium to low	Significant - remainder of RCCA Not significant - north	High / Medium to high / Medium Medium to low	Significant - remainder of RCCA Not significant - north	Medium to low Not significant
Kirkwall RCCA	Medium	Medium	Significant – Car Ness Not significant – remainder of LCU	Medium	Not significant – Car Ness Not significant – remainder of LCU	Medium to low Not significant
West Shapinsay RCCA	Medium to high – south-west Medium – remainder of LCU	Medium – south-west Medium to low / Low / No change – remainder of the LCU	Significant – south-west Not significant – remainder of LCU	Medium – south-west Medium to low / Low / No change – remainder of the LCU	Significant – south-west Not significant – remainder of LCU	Medium to low 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
Orkney – Hoy and West Mainland NSA	Medium to high	Low	Not significant	Low	Not significant	Low Not significant
Balfour Castle GDL	Medium to high	Medium – south-west Medium to low – farmland to north No change - woodland	Significant – south - west Not significant – remainder of GDL	Medium – south-west Medium to low – farmland to north No change - woodland	Significant – south - west Not significant – remainder of GDL	Medium to low Not significant
VP1: Wideford Hill	Medium to high	Medium to high	Significant	Medium to high	Significant	Medium to low Not significant
VP 2: Hatston	Medium to high	High	Significant	High	Significant	Medium to low Not significant
VP 3: A965 west of Quanterness	Medium to high	Medium to high	Significant	Medium to high	Significant	Medium to low Not significant
VP 4: Kirkwall Harbour	Medium to high – residents and walkers / Medium – road-users	Medium	Significant	Medium	Significant	Medium to low 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 5: Finstown	Medium to high – walkers and visitors Medium – road-users	Medium to high	Significant	Medium to high	Significant	Low Not significant
VP 6: A966 north of Coubister	Medium to high	Medium to high	Significant	Medium to high	Significant	Medium to low Not significant
VP 7: Gorseness	Medium to high	Medium	Significant	Medium	Significant	Medium to low Not significant
VP 8: Balfour Castle	Medium to high	Medium	Significant	Medium	Significant	Medium to low Not significant
VP 9: Kirkwall to Shapinsay Ferry	Medium to high	Medium to high	Significant	Medium to high	Significant	Medium to low Not significant
VP 10: Craigiefield, Car Ness	Medium to high – residents and walkers Medium – road-users	Medium to high– residents and walkers Medium – road-users	Significant	Medium to high – residents and walkers Medium – road-users	Significant	Low 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 11: A961, Kirkwall	Medium	Medium to low	Not significant	Medium	Not significant	Low Not significant
VP 12: Quanterness	Medium to high	High	Significant	High	Significant	Low Not significant
VP 13: Cuween	Medium to high – residents and walkers / Medium – road-users	Medium to high - residents and walkers / Medium – road-users	Significant	Medium to high - residents and walkers / Medium– road-users	Significant	Low Not significant
A965	Medium to high	High – Quanterness / Medium to high or medium – Kirkwall to Hatston and Finstown to Rennibister	Significant	High – Quanterness / Medium to high or medium – Kirkwall to Hatston and Finstown to Rennibister	Significant	Medium to low Not significant
A966	Medium	Medium to high – southern section Medium – northern section	Significant – southern section Not significant – northern section	Medium to high – southern section Medium – northern section	Significant – southern section Not significant – northern section	Medium to low 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
Kirkwall	Medium to high	Medium to low – elevated or exposed parts Low or no change - remaining visual receptors	Significant - elevated or exposed parts Not significant - remaining visual receptors	Medium – elevated or exposed parts Medium to low, low or no change - remaining visual receptors	Significant - elevated or exposed parts Not significant - remaining visual receptors	Low Not significant
Finstown	Medium to high	Medium to high – elevated or exposed parts Medium to low, low or no change - remaining visual receptors	Significant - elevated or exposed parts Not significant - remaining visual receptors	Medium to high – elevated or exposed parts Medium to low, low or no change - remaining visual receptors	Significant - elevated or exposed parts Not significant - remaining visual receptors	Low Not significant

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