Item: 3.2

Planning Committee: 31 August 2018.

Erect Five Wind Turbines, Meteorological Mast, Substation and Associated Infrastructure including Access Track at Hesta Head (Land Near), South Ronaldsay.

Report by Executive Director of Development and Infrastructure.

1. Summary

1.1.

The proposal is for a commercial wind farm comprising 5 wind turbines, each with a maximum blade tip height of 125 metres, a combined maximum installed capacity of 20.4 megawatts and a 25 year operational phase near Hesta Head, on the east coast of South Ronaldsay, north of the Windwick Road, and generally south of the existing telecommunications mast at Ward Hill. The development also includes an electrical substation, an anemometer mast, an access route from the A961 to the substation and each of the turbines, culverted water course crossings, a crane pad and assembly area adjacent to each turbine foundation, underground cabling connecting the turbines to the substation, and a temporary construction compound. A total of 89 objections have been received and 9 letters of support. The report considers the development in relation to National Planning Framework 3 and Scottish Planning Policy, as well as the Orkney Local Development Plan 2017 and relevant Supplementary Guidance. Issues considered in the report include: shadow flicker; noise; traffic; tourism and recreation; peat and carbon rich soils; water environment; aviation, defence and communications; visual amenity; ecology and nature conservation; ornithology; historic environment; landscape and visual impact; employment; shared ownership; energy output and carbon considerations; and the subsea cable transmission link. Many issues are already considered to have no unacceptable impact, through design iteration, mitigation, as could be controlled by planning conditions, or a combination. Consideration is finely balanced between the benefits and residual adverse effects. In the end, landscape impact concerns are considered to outweigh employment creation, socio-economic benefits of shared ownership, carbon displacement and contribution towards the needs case for the subsea transmission cable. As such, the application is recommended for refusal.

Application Number.	17/083/TPPMAJ.
Application Type.	Turbine Planning Permission Major.
Proposal.	Erect five wind turbines (maximum height 125m to blade tip), erect a meteorological mast (maximum height 81 metres), substation, and associated infrastructure including access track.
Location.	Hesta Head (Land Near), South Ronaldsay.
Applicant.	Hesta Head Wind Farm Limited, 16 Young Street, Edinburgh, EH2 4JB.
Agent.	JLL, c/o Steven Black, 7 Exchange Crescent, Conference Square, Edinburgh EH3 8LL.

1.2.

All application documents (including plans, consultation responses and representations) are available for members to view at the following website address:

http://www.orkney.gov.uk/Service-Directory/D/application_search_submission.htm (then enter the application number given above).

2. Site Description

2.1.

The application site is near Hesta Head, on the east coast of South Ronaldsay, north of the Windwick Road, and generally south of the existing telecommunications mast at Ward Hill. The elevation of the site ranges from approximately 35 metres and 118 metres Above Ordnance Datum (AOD) and covers an area of approximately 129 hectares. A location plan of the proposed site is attached as Appendix 1 to this report. The site is generally sloping agricultural land, extending from coastal cliffs on the east boundary of the site, with the A961 to the west. The site includes various drainage ditches, and the Berridale Burn skirts the southern boundary of the site.

2.2.

No residential properties are located within the application site. There are properties scattered in the wider countryside surrounding the site, including 13 residential properties within 1 kilometre of the closest turbine.

2.3.

The site includes sections of two core path routes, one crossing the site north-west to south-east, and another following the cliffs at the east of the site. There are no statutory designated landscapes within 5 kilometres of the site. There are no national or international cultural heritage designations within the site boundary. At its eastern edge the application site overlaps the designated Ward Hill Cliffs SSSI; the development footprint does not overlap.

3. Description of Proposed Development

3.1.

The proposal is for a commercial wind farm comprising 5 wind turbines, each with a maximum blade tip height of 125 metres, a combined maximum installed capacity of 20.4 megawatts and a 25 year operational phase.

3.2.

The specific turbine manufacturer and model have not yet been selected, and a 'candidate turbine' has been submitted. This is standard industry practice, allowing for the typical time delay between consent and construction of turbines of the scale proposed, and resultant availability of specific models and advances in technology. For the purposes of Environmental Impact Assessment (EIA) and consideration of the application, the operational attributes of the candidate turbine submitted set a maximum development scenario for the potential turbine model, including the maximum height to blade tip of 125 metres. Final details of the design and operation of the development would be controlled by planning condition.

3.3.

The development also includes the following:

- An electrical substation, including external switchgear in a fenced compound and building measuring 25 x 7.5 metres housing a control room and switch room.
- An anemometer mast, 81 metres in height, to record wind data throughout the lifetime of the development.
- A 5.5 metre width access route from the A961 to the substation and each of the turbines, surfaced with aggregate.
- Culverted water course crossings.
- A crane pad and assembly area adjacent to each turbine foundation, measuring 40 x 42 metres.
- Underground cabling connecting the turbines to the substation.
- A temporary construction compound measuring approximately 100 x 100 metres, noting a proposed construction period of 12 months.

3.4.

A micro-siting allowance of 50 metres is proposed for each wind turbine, and also micro-siting for the building, mast, access track and hardstanding to allow for local ground conditions or other environmental constraints revealed by pre-construction surveys. This is a standard industry practice. Assessment of potential environmental effects set out in submitted documents includes allowance for the micro-siting proposed. A planning condition would control micro-siting, to control environmental impacts and the layout and appearance of the development.

4. Relevant Planning History and Procedure

4.1. Site History.

Reference.	Proposal.	Location.	Decision.	Date.
15/213/SCO.	Request for scoping opinion, to erect 6 x wind turbines (maximum height 125 metres).	Hesta Head (Land Near).	Offer Observations.	17.06.15.
15/503/PP.	Erect a meteorological mast (maximum height 82.5 metres) for a period of 3 years	Hesta Head (Land Near).	Approved.	09.10.15.
17/535/VR.	Vary condition 01 of planning permission 15/303/PP to extend retention of temporary meteorological mast until 30 June 2018.	Hesta Head (Land Near).	Approved.	12.10.17.
18/265/VR	Vary condition 01 of planning permission 15/303/PP to extend retention of temporary meteorological mast until 30 December 2018.	Hesta Head (Land Near).	Withdrawn (mast taken down).	

4.2. Site Selection.

The developer notes that the Hesta Head development proposal follows a site selection process carried out across Orkney over a period of more than 7 years. Reasons provided for identifying Hesta Head as suitable include: the wind resource on the site; access from the public road; the absence of national or international cultural heritage designations within the site; and the location of national and international natural heritage designations.

4.3. Scoping Opinion.

4.3.1.

A request to adopt a scoping opinion was submitted to the Planning Authority in April 2015, submitted in accordance with Regulation 14 of The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011 ('the 2011 EIA Regulations'). The plan and description of the development submitted included 6 turbines. Having considered the characteristics of proposed development and environmental features likely to be affected by the development, the Planning Authority adopted a scoping opinion in June 2015.

4.3.2.

The scoping opinion included information from the Planning Authority and statutory and non-statutory consultation bodies. As part of the EIA process, feedback from the Council and consultation bodies was combined with desktop studies and site surveys to influence iterations of site layouts.

4.4. Pre-Application Consultation.

4.4.1.

The Town and Country Planning (Hierarchy of Development) (Scotland) Regulations 2009 applies to all applications for planning permission, and describes 'classes of development'. The proposed development is defined as 'Electricity Generation' and in this case, as the capacity of the proposed generation exceeds 20 megawatts, the development is classed as 'major development'.

4.4.2.

As 'major development', regulations 4 to 7 of The Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013 ('the 2013 DM Regulations') required the developer to consult the Community Council whose area the development is within and provide the Community Council with a copy of the proposal of application notice. The developer was required to hold a public event where members of the public could make comments to the developer with regards to the proposed development, and publish in a local newspaper circulating in the locality a notice containing prescribed information in relation to the development.

4.4.3.

Accordingly, a public exhibition was held in the Cromarty Hall in June 2016, and a newspaper advertisement was placed in The Orcadian two weeks in advance of the meeting, as well as additional publicity on Radio Orkney.

4.5. Planning Application and Environmental Statement.

4.5.1.

The developer has confirmed that the proposed site layout was developed to take account of site conditions, physical constraints, potential environmental impacts and technical considerations, as well as community feedback through the Pre-Application Consultation process. The planning application was submitted in March 2017, accompanied by an Environmental Statement (ES) prepared in accordance with the 2011 EIA Regulations. A critical design change between post-scoping and application submission was an increase in rotor diameter of each turbine (maintaining maximum height) and a corresponding reduction from 6 to 5 turbines.

4.5.2.

Following submission of the planning application and ES, consultation responses were received, with Scottish Natural Heritage (SNH) and the Royal Society for the Protection of Birds (RSPB) objecting in relation to a peregrine falcon nesting site at the eastern boundary of the application site. Subsequent discussions with Joint

Radio Company identified a reduced acceptable buffer surrounding the Ward Hill telecommunications mast. That buffer flexibility allowed the proposed turbine locations to be moved north-west, further from the cliffs at the east of the site where the nesting site was identified. That design iteration is the layout currently under consideration.

4.5.3.

In March 2018, following submission of the additional and amended information, the application and ES Addendum were subject to re-consultation, re-publication and re-notification, as required by the 2011 EIA Regulations and the 2013 DM Regulations.

4.5.4.

It should be noted that The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 came into force in May 2017, however those regulations contain transitional arrangements at Regulation 60 to the effect that the current application will be processed and determined in accordance with the 2011 EIA Regulations.

5. Representations

5.1.

A total of 89 objections have been received, and the list of objectors, supporters and neutral comments is attached as Appendix 2 to this report. It should be noted that where more than one representation is received from a household, it is defined as one ‘valid representation’. There are incidences of multiple letters from a single person, and separate representation from multiple individuals within a single household. So, whilst less than the total number of individual letters received, 89 is the correct number of ‘valid representations’. Of those, 67 submitted objections were a standard pro-forma letter.

5.2.

Objections have included a wide range of issues. Those issues have been categorised and listed below in order by the number of times an issue is included in a representation, starting with the most-raised issues. If a letter included both landscape and natural heritage, for example, then that letter has been counted below against both of those issues.

- 105: Landscape/visual impact.
- 88: Natural heritage (other than ornithology).
- 86: Ornithology.
- 87: Tourism.
- 82: Landscape capacity.
- 80: Core path.
- 80: Impact on recreation.
- 77: Coastal character.

- 76: Scale of development.
- 74: Contrary to policy/supplementary guidance.
- 71: Residential amenity.
- 57: Out of character with the area.
- 11: Historic environment.
- 10: Noise.
- 9: Location.
- 9: Community/financial benefit.
- 7: Infrastructure.
- 7: Number of existing wind turbines (overdevelopment).
- 6: Impact on other areas of mainland.
- 5: Powerlines/Infrastructure on the site.
- 4: Impact on other islands.
- 4: Shadow flicker.
- 3: Detrimental impact on business.
- 3: Potential future expansion of wind farms.
- 3: Change the character of the area from rural to industrial.
- 3: Aviation safety lighting.
- 3: Lack of information.
- 2: Health impacts.
- 2: Impacts on the environment.
- 2: Damage to roads, verges, accesses, heathland.
- 2: Meteorological mast.
- 1: Archaeology.
- 1: World Heritage Site.
- 1: Road safety.
- 1: Road infrastructure.
- 1: Lack of specification of wind turbines to be installed.
- 1: Design.
- 1: Public safety.

5.3.

A total of 10 letters of support have been received on the following issues:

- 9: Shared ownership.
- 8: Environmental benefits/carbon reduction.
- 7: Secure grid connection to Orkney.
- 7: Economic benefits.
- 7: Marine technology benefits.

- 2: Appropriate site.
- 2: Increase in renewable energy.
- 2: Export of energy.
- 1: Electric vehicle ownership.
- 1: Potential for future investment and development.
- 2: Support the needs case.
- 1: No detrimental impacts.

5.4.

A total of 6 neutral representations have been received on the following grounds:

- 5: Needs case and connection to mainland/grid.
- 2: Fuel poverty.
- 1: Compliance with Orkney Sustainable Energy Strategy.
- 2: Reductions in carbon.
- 1: Shared/community ownership.

6. Consultations

6.1. Statutory Consultees.

6.1.1.

The following agencies are the statutory consultation bodies as prescribed by the 2011 EIA Regulations:

- Highland Council (as an adjoining planning authority, where the development is likely to affect land in the district of that authority).
- Historic Environment Scotland (HES).
- Scottish Water (SW).
- Scottish Environmental Protection Agency (SEPA).
- Scottish Natural Heritage (SNH).

6.1.2.

In addition to those listed above, the following is a statutory consultation body as prescribed by the 2013 DM Regulations:

- OIC Roads Services (as roads authority).

6.1.3.

Following re-consultation on the most recent design iteration, no objections were raised in the responses received from the statutory consultation bodies. All other matters raised in consultation responses can be addressed by mitigation and monitoring, and planning conditions.

6.2. Other Consultees.

6.2.1.

- Arqiva (telecommunications company, providing infrastructure and broadcast transmission facilities).
- Civil Aviation Authority.
- Highlands and Islands Airports Limited.
- Joint Radio Company (industry-owned spectrum management consultancy and spectrum management organisation).
- Kirkwall Airport – Senior Pilot.
- Ministry of Defence.
- NATS (the main air navigation service provider in the UK).
- Ofcom (UK government-approved regulatory and competition authority for the broadcasting, telecommunications and postal industries).
- OIC Airfield Superintendent.
- OIC County Archaeologist.
- OIC Environmental Health.
- OIC Marine Services.
- OIC Development and Marine Planning – Access.
- OIC Development and Marine Planning – Environment.
- OIC Development and Marine Planning – Historic Environment.
- OIC Development and Marine Planning – Policy.
- Royal Society for the Protection of Birds (RSPB).

6.2.2.

One objection has been received from RSPB, which was submitted in response to the development as initially submitted. Confirmation has been received that the objection is maintained in relation to the current design iteration.

6.2.3.

No other consultation objections have been received, and all other matters raised in consultation responses can be addressed by mitigation and monitoring, and planning conditions.

7. Legal Aspects.

7.1.

Section 25 of the Town and Country Planning (Scotland) Act 1997 as amended (the Act) states “Where, in making any determination under the Planning Acts, regard is to be had to the development plan, the determination is, unless material considerations indicate otherwise...to be made in accordance with that plan…”

7.2.

Where a decision to refuse an application is made, the applicant may appeal under section 47 of the Act. Scottish Ministers are empowered to make an award of expenses on appeal where one party's conduct is deemed to be unreasonable. Examples of such unreasonable conduct are given in Circular 6/1990 and include:

- Failing to give complete, precise and relevant reasons for refusal of an application.
- Reaching a decision without reasonable planning grounds for doing so.
- Not taking into account material considerations.
- Refusing an application because of local opposition, where that opposition is not founded upon valid planning grounds.

7.3.

An award of expenses may be substantial where an appeal is conducted either by way of written submissions or a local inquiry.

8. Relevant Planning Policy and Guidance

The full text of the Orkney Local Development Plan 2017 and supplementary guidance can be read on the Council website at:

http://www.orkney.gov.uk/Service-Directory/D/Planning-Policies-and-Guidance.htm
The policies, supplementary guidance and planning policy advice below are relevant to this application.

- Orkney Local Development Plan 2017:
  - Policy 1 – Criteria for All Development.
  - Policy 2 – Design.
  - Policy 7D – Onshore Wind Energy Development.
  - Policy 8 – Historic Environment and Cultural Heritage.
  - Policy 9A – Natural Heritage Designations.
  - Policy 9B – Protected Species.
  - Policy 9C – Wider Biodiversity and Geodiversity.
  - Policy 9D – The Water Environment.
  - Policy 9E – Peat and Soils.
  - Policy 9G – Landscape.
  - Policy 10A – Core Paths and Access.
  - Policy 12A – Criteria for all Coastal Development.
  - Policy 13 – Flood Risk, SuDS and Waste Water Drainage.
  - Policy 14 – Transport, Travel and Road Network Structure.

- Supplementary Guidance and Planning Police Advice:
  - Supplementary Guidance – Energy (9 March 2017).
  - Supplementary Guidance – Historic Environment and Cultural Heritage (9 March 2017).
  - Supplementary Guidance – Natural Environment (March 2017).
  - Planning Policy Advice - Heart of Neolithic Orkney World Heritage Site (December 2010).
  - Planning Policy Advice – Landscape Capacity Assessment for Wind Energy in Orkney (July 2015).
  - Planning Policy Advice - Orkney Core Paths Plan (April 2011).
- National Policy and Guidance:
  - Scottish Planning Policy (2014).
  - National Planning Framework 3 (2014).
- Scottish Government Advice:
  - PAN 60 Planning for Natural Heritage 2008.
  - PAN 1/2011 Planning and Noise.
  - PAN 2/2011 Planning and Archaeology.
  - PAN 1/2013 Environmental Impact Assessment.
  - Onshore Wind Turbines 2014.
  - Scottish Government Good Practice Principles for Shared Ownership of Onshore Renewable Energy Development 2016.
- SNH Publications:
  - Assessing the Cumulative Impact of Onshore Wind Energy Developments (2012).
  - Spatial Planning for Onshore Wind Turbines – Natural Heritage Considerations (2015).
  - Siting and Designing Windfarms in the Landscape Version 3 (2017).
  - Visual Representation of Wind Farms Version 2.2 (2017).

9. Assessment

9.1. National Policy Context.

9.1.1. National Planning Framework 3.

The National Planning Framework 3 (NPF3) provides a statutory framework for Scotland's long-term spatial development. It is the spatial expression of the Government's Economic Strategy and plans for development and investment in infrastructure. The Government's vision for Scotland is presented as: a successful,

sustainable place; a low carbon place; a natural, resilient place; and a connected place.

9.1.2.

The introduction to Chapter 3 of NPF3 states the Government's ambition "to achieve at least an 80% reduction of greenhouse gas emissions by 2050". Paragraph 3.7 acknowledges the varied opinions in relation to wind energy, "Whilst there is strong public support for wind energy as part of the renewable energy mix, opinions about onshore wind in particular locations can vary. In some areas, concern is expressed about the scale, proximity and impacts of proposed wind energy developments. In others, it is recognised as an opportunity to improve the long-term resilience of rural communities."

9.1.3.

Paragraph 3.8 states the Government's aim by 2020 to reduce total final energy demand by 12%, and to meet at least 30% of overall energy demand from renewables, noting that the Scottish Energy Strategy published December 2017 sets two reviewed targets for the Scottish energy system, including the equivalent of 50% of the energy for Scotland's heat, transport and electricity consumption to be supplied from renewable sources by 2030. Continuing to capitalise on Scotland's wind resource is stated.

9.1.4.

Under the heading that 'Rural communities will benefit from well-planned renewable energy development', paragraph 3.23 makes reference to the balance between allowing appropriate development and protecting the most sensitive landscapes: "Onshore wind will continue to make a significant contribution to diversification of energy supplies. We do not wish to see wind farm development in our National Parks and National Scenic Areas. Scottish Planning Policy sets out the required approach to spatial frameworks which will guide new wind energy development to appropriate locations."

9.1.5.

More generally, in relation to maintaining a flexible strategy for diverse places, and coastal and island hubs, NPF3 makes reference to Kirkwall and Orkney, stating "…Ambitious plans for wave and tidal energy, together with the wider area's importance as a strategic location for shipping and energy infrastructure, provide significant new opportunities for the town…Improved grid connection will be a vital component in the future success of Orkney's marine energy sector. As part of this, there will be opportunities to develop new technologies and approaches to harness renewable power generation on and around the islands…"

9.1.6.

The 'Orkney Waters' are identified as an 'Energy Hub' and an area of co-ordinated action, and NPF3 acknowledges current electricity grid constraints at paragraph 3.40, "Strengthening the electricity grid will be essential in unlocking renewable resources, both onshore and offshore. Interconnectors to the Western Isles, Orkney

and Shetland and onshore connections for offshore renewables on other parts of the coast are all required to fully realise the potential for diverse and widely distributed renewable energy development."

9.1.7. Scottish Planning Policy.

Scottish Planning Policy (SPP) sets out national planning policies which reflect Scottish Ministers' priorities for the operation of the planning system and for the development and use of land and is a statement of Government policy on how nationally important land use planning matters should be addressed across the country. As a statement of Ministers' priorities, the content of SPP is a material consideration that carries significant weight, though it is for the decision-maker to determine the appropriate weight in each case. SPP sits alongside NPF3, which provides a statutory framework for Scotland's long-term spatial development.

9.1.8.

The Government's 'Purpose' is stated as creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth, and national outcomes articulate how that 'Purpose' is to be achieved. Three of those outcomes are of particular relevance:

- Outcome 1: A successful, sustainable place – supporting sustainable economic growth and regeneration, and the creation of well-designed, sustainable places.
- Outcome 2: A low carbon place – reducing our carbon emissions and adapting to climate change.
- Outcome 3: A natural, resilient place – helping to protect and enhance our natural and cultural assets and facilitating their sustainable use.

9.1.9.

In relation to Outcome 2, SPP states that NPF3 will facilitate the transition to a low carbon economy, particularly by supporting diversification of the energy sector. Paragraph 18 references the Climate Change (Scotland) Act 2009 and its targets to greenhouse gas emissions by at least 80% by 2050, with an interim target of reducing emissions by at least 42% by 2020. Paragraph 18 also reminds the duty set out in Section 44 of the Act for every public body to act:

- In the way best calculated to contribute to the delivery of emissions targets in the Act.
- In the way best calculated to help deliver the Scottish Government's climate change adaptation programme.
- In a way that it considers is most sustainable.

9.1.10.

Under the heading of 'Policy Principles', SPP introduces a "presumption in favour of development that contributes to sustainable development." Paragraph 29 confirms that policies and decisions should be guided by a list of principles, including the following:

- Giving due weight to net economic benefit.
- Responding to economic issues, challenges and opportunities, as outlined in local economic strategies.
- Supporting good design.
- Supporting delivery of infrastructure, for example transport, education, energy, digital and water.
- Supporting climate change mitigation and adaptation including taking account of flood risk.
- Having regard to the principles for sustainable land use set out in the Land Use Strategy.
- Protecting, enhancing and promoting access to cultural heritage, including the historic environment.
- Protecting, enhancing and promoting access to natural heritage, including green infrastructure, landscape and the wider environment.

9.1.12.

Under the heading of 'A Low Carbon Place', paragraph 153 addresses the delivery of renewable energy development, "Terrestrial and marine planning facilitate development of renewable energy technologies, link generation with consumers and guide new infrastructure to appropriate locations. Efficient supply of low carbon and low cost heat and generation of heat and electricity from renewable energy sources are vital to reducing greenhouse gas emissions and can create significant opportunities for communities. Renewable energy also presents a significant opportunity for associated development, investment and growth of the supply chain…Communities can also gain new opportunities from increased local ownership and associated benefits."

9.1.13.

Paragraph 154 states that the planning system should:

- Support the transformational change to a low carbon economy, consistent with national objectives and targets, including deriving:
    - 30% of overall energy demand from renewable sources by 2020.
    - 11% of heat demand from renewable sources by 2020.
    - The equivalent of 100% of electricity demand from renewable sources by 2020.
- Support the development of a diverse range of electricity generation from renewable energy technologies – including the expansion of renewable energy generation capacity – and the development of heat networks.
- Guide development to appropriate locations and advise on the issues that will be taken into account when specific proposals are being assessed.

9.1.14.

Paragraph 161 requires planning authorities to set out a spatial framework identifying areas “that are likely to be most appropriate for onshore wind farms as a guide for developers and communities”, as well as setting out the criteria that will be considered in deciding all applications for wind farms of different scales. Planning authorities are required to identify where there is strategic capacity for wind farms, and areas with the greatest potential for wind development.

9.1.15.

With reference to the interconnector and improved grid connection stated in NPF3, paragraph 165 of SPP confirms that grid capacity should not be used as a reason to constrain decisions on individual applications for wind farms, and that it is for wind farm developers to discuss connections to the grid with the relevant transmission network operator.

9.1.16.

Paragraph 169 confirms that proposals for energy infrastructure developments should always take account of spatial frameworks for wind farms, and for the purposes of determining applications for planning permission, considerations are likely to include:

- Net economic impact, including local and community socio-economic benefits such as employment, associated business and supply chain opportunities.
- The scale of contribution to renewable energy generation targets.
- Effect on greenhouse gas emissions.
- Cumulative impacts.
- Impacts on communities and individual dwellings, including visual impact, residential amenity, noise and shadow flicker.
- Landscape and visual impacts, including effects on wild land.
- Effects on the natural heritage, including birds.
- Impacts on carbon rich soils, using the carbon calculator.
- Public access, including impact on long distance walking and cycling routes and scenic routes identified in the NPF.
- Impacts on the historic environment, including scheduled monuments, listed buildings and their settings.
- Impacts on tourism and recreation.
- Impacts on aviation and defence interests and seismological recording.
- Impacts on telecommunications and broadcasting installations, particularly ensuring that transmission links are not compromised.
- Impacts on road traffic.
- Effects on hydrology, the water environment and flood risk.
- The need for conditions relating to the decommissioning of developments, including ancillary infrastructure, and site restoration.

9.2. Orkney Local Development Plan 2017.

9.2.1. Spatial Strategy.

In accordance with paragraph 161 of SPP, the Orkney Local Development Plan 2017 (the LDP) includes a Spatial Strategy Framework for windfarm development. The application site is within an area identified as 'Areas with Potential for Wind Farm Development'. That is identified in Policy 7 of the LDP as an area of least constraint to wind energy development, where wind energy development is likely to be supported in principle subject to the proposed development complying with the Development Criteria set out in Supplementary Guidance 'Energy' (the SG) and other material planning considerations. That final point is reemphasised in the SG, which clarifies that "It is not guaranteed that development within these areas will be technically feasible or appropriate and each application will be judged on its merits against the Development Criteria".

9.2.2. Development Criteria.

There are 9 Development Criteria in the SG, against which all developments are assessed, as follows:

- Development Criterion 1 – Communities and Amenity.
- Development Criterion 2 – Landscape and Visual Impact.
- Development Criterion 3 – Natural Heritage.
- Development Criterion 4 – Historic Environment.
- Development Criterion 5 – Tourism and Recreation.
- Development Criterion 6 – Peat and Carbon Rich Soils.
- Development Criterion 7 – Water Environment.
- Development Criterion 8 – Aviation, Defence and Communications.
- Development Criterion 9 – Construction and Decommissioning.

9.2.3.

Paragraph 1.11 of the SG makes a general statement regarding the balance between negative and positive impacts of wind energy development, "In the assessment of planning applications, the Council will strive to balance both positive and negative factors associated with a proposal prior to making a determination. Where there are significant adverse impacts on known constraints, the onus will be on the developer to demonstrate that the positive impacts, including net economic impact, the scale of contribution to renewable energy generation targets and the effects on greenhouse gas emissions, outweigh these."

9.2.4.

The proposed development has been assessed in relation to each of the SG Development Criteria, in the order set out. From the outset it was acknowledged that the proposed development would likely have some significant adverse effects, so consideration was not to establish any such effects, but to assess acceptability of impacts, balanced against other factors.

9.3. Shadow Flicker.

9.3.1.

The Government's document 'Onshore Wind Turbines' (2014) notes that in "certain combinations of geographical position, time of day and time of year, the sun may pass behind the rotor and cast a shadow over neighbouring properties. When the blades rotate, the shadow flicks on and off; the effect is known as 'shadow flicker'. It occurs only within buildings where the flicker appears through a narrow window opening. The seasonal duration of this effect can be calculated from the geometry of the machine and the latitude of the potential site."

9.3.2. Policy context

Paragraph 169 of SPP notes "impacts on communities and individual dwellings, including … shadow flicker" as a consideration for wind energy development. LDP policy 7D (i.a.) notes that wind energy developments will be assessed against various factors, including communities and amenity. Policy 1 (iv) requires development to protect amenity and have no unacceptable adverse impact on the amenity adjacent or nearby properties/users. Development Criterion 1 of the SG states Government advice that that there is unlikely to be a problem with shadow flicker with a separation of 10 times the wind turbine's rotor blade diameter from a dwelling house to the proposed location of a wind turbine, and that if turbines are proposed to be closer, the developer is required to demonstrate that there would no adverse impacts on the amenity of residential properties.

9.3.3.

The shadow flicker study area is a distance of 10 rotor diameters and 130 degrees either side of north, relative to each turbine. The proposed candidate turbine rotor diameter is larger than that presented in the original ES, and a revised assessment of shadow flicker effects has been carried out. The assessment identifies any receptors which may potentially be affected and the risk of shadow flicker calculated. The magnitude of shadow flicker effects varies both spatially and temporally, and depends on multiple environmental conditions coinciding at a particular point in time, which include the following:

- Time of day and year.
- Wind direction.
- Height of wind turbine and blade length.
- Position of the sun in the sky.
- Weather conditions.
- Proportion of daylight hours in which the turbines operate.
- Type and frequency of use of the affected space.
- Distance and direction of the wind turbine from the receptor.

9.3.4.

The desk based assessment, using OS address data and mapping, identified 18 receptors within the study area with the potential to experience shadow flicker,

located to the north, west and south-west of the proposed development. The ES Addendum confirms that there is no UK statutory guidance relating to the acceptable levels of shadow flicker but cites best practice guidelines used across Europe and the ES assessment uses the generally accepted quantitative guidance which adopts maximum limits of 30 hours per year or 30 minutes on the worst affect day.

9.3.5.

A model, using 'WindPro' software, was used to predict the potential number of hours per year, and minutes per day, each of the identified receptors may experience shadow flicker. The model results indicate that the predicted duration of shadow flicker that may be experienced by the 18 identified receptors in the study area is below the stated threshold of 30 hours per year, or 30 minutes per day on the worst affected day. The shadow flicker effect for all receptors is therefore assessed as being not significant.

9.3.6.

The developer would be required to provide a written Shadow Flicker Protocol, setting out a procedure for addressing any complaint received from a receptor within the study area, and mitigation options available to address any such complaint.

9.4. Noise.

9.4.1. Policy context.

Policy 1 (iv) of the LDP requires development to protect amenity and have no unacceptable adverse impact on the amenity adjacent or nearby properties/users. The SG notes there are two distinct noises generated from wind energy developments: mechanical noise and aerodynamic noise – and an assessment of noise is required.

9.4.2.

Baseline noise surveys were undertaken to establish the pre-existing sound levels at selected locations representative of local houses. An assessment has been carried out according to the recommendations of ETSU-R-97 'The Assessment and Rating of Noise from Wind Farms', as referred to within Government web-based planning guidance, and the best practice guidance published by the Institute of Acoustics 'A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise' and its associated Supplementary Guidance documents. That assessment was based on the candidate turbine.

9.4.3.

The methodology and baseline measurement locations were agreed with Environmental Health. Sound level measurement equipment was installed at three properties closest/representative of the closest properties to measure prevailing background noise levels and derive relevant noise limits for daytime and night time periods.

9.4.4.

Mitigation measures would be refined for the particular turbine model and its curtailment options, taking account of the time of day, wind speed and wind direction. Any turbine chosen would meet, or enable curtailment options to meet, the ETSU- R-97 limits. Environmental Health has no objections, subject to a planning condition to control noise. Noise during construction and decommissioning would also be controlled by planning condition.

9.5. Traffic Associated with Construction.

9.5.1.

A Route Survey Assessment has been completed for the anticipated delivery route for turbine components, from Hatston Pier to the site. An assessment of traffic and transport effects associated with the development has been completed, including an update since the original submission to allow for the increase in proposed rotor diameter, and therefore longer loads. Chapter 12 of the ES Addendum confirms that the following components would normally be classified as abnormal loads:

- Nacelle, hub and drivetrain (each transported separately).
- Blades (three per turbine, transported individually).
- Tower sections.

Components and equipment that do not classify as abnormal loads will be transported on regular Heavy Goods Vehicles (HGV) or other vans, and can include, but are not limited to:

- Cranes.
- Low loaders carrying smaller turbine components and associated crane equipment.
- Stone lorries.
- Concrete lorries.
- Flatbed materials and equipment delivery lorries.
- Miscellaneous deliveries in non-HGV vehicles.
- Staff transport.

A single site access junction from the A961 is proposed. The site access junction would be designed and constructed to accommodate all required construction vehicle types.

9.5.2.

A range of mitigation measures are proposed, including the implementation of a Construction Traffic Management Plan which would be controlled by planning condition. The purpose of that Plan would be to minimise effects of severance, driver delay, pedestrian delay, pedestrian amenity, fear and intimidation and accidents and safety to non-significant levels. Subject to submission of that Plan, to include details specified by Roads Services in the scoping opinion and again in the consultation

response, Roads Services has no objections. In addition, the developer would meet the costs of any additional maintenance and road repairs required on any access routes, resulting from the increase in traffic during the construction phase.

9.5.3.

The minimum separation distance between wind turbines and a public road or public right of way should be no less than the overall height of the wind turbine to blade tip, as required by Roads Services and Development Criterion 1 of the SG, and the overall height plus 10%, recommended as good practice by the trade association for the Renewable Industry, Renewable UK. All five turbines would exceed overall height plus 10%, 137.5 metres, from any public road or Core Path.

9.5.4.

Roads Services has no objections to the proposed development, in relation to construction or operation of the development, subject to conditions.

9.6. Landscape and Visual Impact.

9.6.1. Landscape Character Assessment.

The proposed site is located within the landscape type ‘Plateau Heaths and Pasture’, and bordering ‘Cliff Landscapes’ at the eastern edge of the site, as defined in the SNH Orkney Landscape Character Assessment (1998). The plateau heaths and pasture landscape character of the site is noted as having a ‘generally open and exposed character despite relatively low altitude’. The application site meets the description of being open and slightly elevated with a feeling of exposure. An identified landscape sensitivity of plateau heaths and pasture is that the ‘open plateau makes built structures highly visible from within the landscape’.

9.6.2. Landscape Capacity Assessment.

The ‘Landscape Capacity Assessment for Wind Energy in Orkney’ (2015) was commissioned by the Council to consider the capacity of the Orkney landscape to accommodate onshore wind energy development. That is based on an assessment of landscape sensitivity and value of the different landscape character types and areas of Orkney, and includes underlying capacity, effects of consented and operating development, and residual capacity and the level of further development that could acceptably be accommodated. It is adopted as Planning Policy Advice and is a material consideration.

9.6.3.

The landscape of South Ronaldsay is noted in the Landscape Capacity Assessment as generally undulating, with an elevated central spine of plateau heaths and pasture, as identified in the Landscape Character Assessment. In relation to base landscape capacity for wind energy development, the Landscape Capacity Assessment states that South Ronaldsay is most suited to more small-scale development, up to 50 metres, with capacity for occasional development of a greater size.

9.6.4.

However, in relation to plateau heaths and pasture, constraints are noted. It is stated that large turbines, defined in the Landscape Capacity Assessment as 50 to 80 metres, “would tend to dominate the low hills of this landscape type” and it is concluded that opportunities for wind turbine development are limited to “turbines typically up to 30 metres and occasionally between 30 and 50 metres would be acceptable in small groups located on the fringes of the character area, away from plateau tops”.

9.6.5. Policy Context

Policy 1(i) of the LDP states that development will be supported where “it is sited and designed taking into consideration the location and the wider…landscape and coastal character”. In relation to landscape, policy 7G(i) states that “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.” Policy 7G(ii) further notes that, “Consideration should be given to the siting, scale and design of the proposal, as well as the potential for the cumulative effects with other developments.”

9.6.6.

The first paragraph under Development Criterion 2 of the SG states that, “Wind energy development that is likely to have a significant adverse impact or cumulative impact on landscape character or visual amenity, which cannot be mitigated to the satisfaction of the planning authority to avoid unacceptable impacts, will not be permitted.”

9.6.7.

The SG goes on to clarify the distinction between landscape impacts and visual impacts, “Visual impacts and landscape impacts are interrelated yet distinct from each other. Visual impacts relate to what people can see from places that they frequent or from particular viewpoints, whilst landscape impacts relate to the physical effect that a proposed development may have, as well as the potential effect “on the feeling of a place” and the identity of a location. The landscape and visual impacts of a development are strongly influenced by turbine’s form, design, colour, size, relationship to other turbines and by any ancillary infrastructure. Sensitive siting and design can help to ensure that the visual impacts of potential wind energy developments in the landscape remain within acceptable limits. The siting and design of a proposed wind energy development should seek to reduce its potential landscape and visual impact by ensuring that the receiving landscape is able to accommodate the new development.”

9.6.8. Landscape Designations.

The proposed site is not located within a designated landscape, and there are no international or national landscape designations within the site boundary. The Hoy and West Mainland National Scenic Area (NSA) is within the 35 kilometre study

area, approximately 20 km north-west of the site. There are three Gardens and Designed Landscapes (GDL) within the 35 kilometre study area. Melsetter House is approximately 17 kilometres west of the site, and Balfour Castle approximately 27 kilometres north of the site. The third is the Castle of Mey, in Caithness. The eastern edge of the site is designated Coastal Zone within the LDP. The closest Wild Land Area (WLA) is the Hoy WLA, at a distance of over 17 kilometres to the north-west of the proposed development.

9.6.9. Theoretical Visibility.

In assessing effects on landscape, it is helpful to focus on those areas that are affected directly by the proposed development, ie areas which have a clear view of the wind turbines. The Zone of Theoretical Visibility (ZTV) maps illustrate the potential visibility of the turbines to hub height and blade tip height within a study area of 35 kilometres, and the extent of landform containment. Due to the slightly elevated and generally open and uncontained character of the landscape, as identified in the Landscape Character Assessment, theoretical visibility extends in most directions, across the majority of central and eastern South Ronaldsay, the southern edges of Burray, Deerness, Holm, Shapinsay, and Orphir, the eastern edges of Hoy, Walls and Flotta, the northern coast of Caithness to the south, and across the Pentland Firth to the south and east. Most of those listed locations with theoretical visibility are more than 10 kilometres from the proposed site, where visibility is more dispersed and fragmented. Beyond 20 kilometres visibility from land based areas of the Study Area would be very fragmented with views being obtained only from hill summits on Hoy, West Mainland, East Mainland, Tankerness, Shapinsay and Gairsay. The proposed development is theoretically visible from approximately 32.83 percent of the land based part of the study area. Many locations would not view it in its entirety due to the presence of intervening buildings, structures and localised landform features.

9.6.10. Seascape, Landscape and Visual Impact Assessment.

Chapter 6 of the ES Addendum includes a Seascape, Landscape and Visual Impact Assessment (SLVIA), taking into account the current design iteration. The SLVIA describes the key sensitivities and potential changes to the physical and visual environment resulting from the proposed development. As the proposed development is located within this narrow margin on the east coast of South Ronaldsay, it was appropriate to undertake a seascape as well as a landscape and visual impact assessment, with coastal character being made up of the coastal edge, its immediate hinterland and the sea. The receptors within the ES Addendum chapter are categorised as: seascape; landscape; and visual amenity.

9.6.11.

In accordance with the SG, the SLVIA was carried out in accordance with current best practice advice, and guidance from SNH and the Council. In addition to the LDP and SG, the following policy and guidance was referred to in preparation of the SLVIA chapter of the ES:

- ‘Guidelines for Landscape and Visual Assessment 3rd Edition’. Landscape Institute (LI) and Institution of Environmental Management and Assessment (IEMA) 2013.
- ‘Offshore Renewables – guidance on assessing the impact on coastal landscape and seascape’ (SNH) 2012.
- ‘Guidance for Landscape/Seascape Capacity for Aquaculture’ (SNH) 2008.
- ‘Visual Representation of Windfarms’ (SNH) 2014.
- ‘Siting and Designing Windfarms in the Landscape’ (SNH) 2014.
- ‘Assessing the Cumulative Impact of Onshore Wind Energy Developments’ (SNH) 2012.

9.6.12.

The SLVIA identifies and assesses the significance of potential effects of the proposed development, relative to baseline conditions and taking account of all mitigation measures proposed. The assessment of effects includes sensitivity to change of seascape and landscape, and for each assessing the susceptibility to the change and the value of the receptor. For landscape the baseline value ranges from very high where the landscape contributes to designations at national and international level, Wild Land Areas, and/or where there is evidence of high value associated with special interests, to negligible value where there are no specific features of natural heritage, cultural associations or other features of special interest.

9.6.13.

The sensitivity of visual receptors (people) to change is assessed, both in terms of susceptibility of visual receptors to the proposed change, and the value attached to views experienced by receptors. Very high susceptibility would be where there are users of strategic outdoor facilities, visitors to important landmarks, heritage assets or other attractions where views are an essential component of the experience, and/or residents at home with views of the proposed development. Value ranges from very high where there is a very high value placed on the view, such as a promoted viewpoint, to negligible where there is no evidence of value placed on a view.

9.6.14.

The magnitude of change is assessed for seascapes, landscape, and views and visual amenity, all in terms of size or scale; geographical extent; and duration and reversibility. In relation to views and visual amenity, assessment of size or scale ranges from ‘major’ where the development will be a dominant feature in the view, a strong contrast with the key visual characteristics of the baseline view with a high proportion of the development visible with no significant screening effects, and/or where the view is not curtailed by physical parameters, to ‘negligible’ where changes will not be readily discernible. The methodology for SLVIA is set out in full in chapter 6 of the ES. Methodology for the assessment of cumulative effects is also included, taking into consideration other relevant developments consented or within the planning system.

9.6.15.

The Seascape baseline for the study area identifies 4 National Seascape Areas, 39 Coastal Character Areas and 114 Local Coastal Character Areas. 31 Landscape Character Types were identified for landscape baseline. In total, 212 seascape, landscape and visual receptors were identified. In relation to visual amenity, 21 viewpoints are included in the Visual Impact Assessment. The impact of the development on sequential routes is also assessed, including A and B class roads within the study area, National Cycle Route 1, and core paths.

9.6.16. Mitigation.

Noting that the current proposed layout is the fourteenth design iteration (Iteration N), mitigation measures are included in the ES. In terms of design, these are listed as follows:

- Turbines located on the lower slopes on the eastern side of Ward Hill to increase the screening effects of topography and reduce the extent of infrastructure visible from locations to the north west.
- Turbines located inland of the coastal cliffs to reduce the potential perceived diminishment of the scale of the cliffs.
- Turbine number from 8 to 5 to reduce the extent of theoretical visibility and potential for overlapping blades.
- Turbine array of two relatively evenly spaced lines set back from the coastal cliffs (as far as other constraints permit).
- Turbines coloured semi-matt and light or pale grey in colour to reduce contrast when viewed against a background of sky.
- No lighting, eliminating night time effects.
- Access tracks would be aligned to existing field boundaries where these exist.
- Substation located close to the existing access track, positioned to reflect the typical orientation of the agricultural buildings in the locality and with the appearance of an agricultural building.

9.6.17. Assessment of effects.

The assessment predicted no significant effects on the Hoy and West Mainland National Scenic Area, the Hoy Wild Land Area, the two Special Landscape Areas within the study area (in Caithness), or the three Gardens and Designed Landscapes within the study area. The NSA and Gardens and Designed Landscapes have a very high sensitivity to change but, principally due to the distance of each from the proposed development site, the magnitude of change would be minor and the likely effect acceptable. The findings of the ES can therefore be accepted.

9.6.18.

The assessment predicts significant residual effects on nine Local Coastal Character Areas (LCCAs). This includes direct and indirect effects on the two LCCAs within which the proposed development is located (Halcro Head to Hesta Rock, and Hesta Rock to Bigore Head), as well as indirect effects on adjacent LCCAs along the coast to the north and south, the east coasts of Swona, the south-west coast of Burray,

and a section of the Holm coast to the east of the first barrier. Effects on the other 105 LCCAs in the study area were found to be non-significant.

9.6.19.

Effects on Landscape Character Types (LCTs) were also assessed. LCTs cover land areas which, at their coastal edges, may include or embed the LCCAs noted in the above paragraph. Although assessed separately, it should be noted that a significant effect on a seascape character unit and a landscape character unit which are embedded one within the other should not be regarded as two discrete effects. The assessment predicts significant residual effects on four of the 31 LCTs in the study area, and one unit of a fifth LCT. The LCTs predicted to experience significant effects are the two LCTs included within the proposed site boundary, those to the north, and the Holms LCT which includes Switha and Swona.

9.6.20.

An assessment of visual effects was undertaken from 21 representative viewpoints, selected in consultation with SNH and the Council. The assessment predicted that six of the viewpoints would experience significant effects during the operational phase of the development. These are: the car park at the Linklater Memorial at Windwick Bay; the public viewpoint on the A961 at Olad Summit; Burwick harbour, Wheems farm and campsite above Newark Bay; Point of Ayre in Deerness; and Duncansby Head public viewpoint in Caithness. No significant effects are predicted at any of the other viewpoints. Of those viewpoints listed, the first three were visited during the Planning Committee pre-meeting site visit, as well as Kirkhouse Point adjacent to St Peter's Kirk.

9.6.21.

Significant visual effects are predicted for the following routes: A961 both directions; B9041 Eastbound; B9042 Eastbound; B9043 Eastbound; B9044 Southbound; and NCR 1 Stromness to Burwick (clockwise). Additionally, significant visual effects were predicted for several core paths in the vicinity of the site, namely Core Path Sr5 which traverses the site, Core Path Sr1 which partly forms the site's eastern boundary along the coast, as well as Core Paths Sr2 (both directions), Sr3 (both directions), Sr4 (southeast bound), Sr6 (both directions) and Sr7 (southbound).

9.6.22.

SNH has stated the view that the proposed development is contrary to the findings of the Landscape Capacity Assessment for Wind Energy in Orkney and that "In view of this, 5 turbines of 125m tip height would far exceed the site's capacity to accommodate this development. As shown through the Seascape, Landscape and Visual Impact Assessment carried out, it would lead to significant landscape change and significant visual effects on the local and wider population. Furthermore, accepting significant landscape change at this site has the potential to limit capacity for further development of any scale, in the wider area." The development has been subject to an amended design iteration since that initial consultation response, but SNH confirms that, "The revisions to the proposal do not affect our previous advice with respect to landscape and visual impacts…"

9.6.23.

It is acknowledged that the proposed turbine locations have been carefully considered in relation to landform. However, the site generally is open. Due to that unenclosed landscape character combined with the elevation of the site, travelling from the Mainland south through South Ronaldsay, the relatively linear nature of the road and route through Holm, St Mary's, Lamb's Holm and Burray, and past St Margaret's Hope towards Burwick is such that the proposed development would be a feature ahead of the road user for much of the journey, and accepting that the impact would be insignificant from many individual locations on that route, the prominence of the turbines in the landscape would increase in closer proximity to the site. Leaving the Kirkwall town boundary and travelling east and south, the road user travels through countryside, with the sense of rurality and distance from the town increased across the barriers. In South Ronaldsay, the landscape itself is the dominant feature, and the interest created by the mosaic of landscape character types. Having the turbines as a backdrop and then a prominent feature in a central part of South Ronaldsay would diminish the experience of the journey.

9.6.24.

Similarly, the turbines would be unduly prominent from some of the approach to South Ronaldsay by ferry. That applies to parts of both the John O'Groats foot passenger ferry route, and the Pentland Ferries route into St Margaret's Hope. For both routes, the initial view of Orkney is across the Pentland Firth and it is the relationship of sea and landscape which is the dominant feature, with the Hoy hills to the west, and cliffs and hills surrounding Scapa Flow. The ES correctly notes the baseline conditions at Burwick of the harbour-related development, parking areas and the number of wooden poles in the immediate vicinity. For any visitor to the area, that development is not unexpected around a harbour, and the experience is one of leaving that behind and travelling north through the countryside of South Ronaldsay. The landform rises around East Mossetter and visibility of the cliffs and headland at Hesta from the road varies on the journey north. However, the turbines would be visible along that route, which would have the effect of shortening the landscape. Unlike the experience at Burwick which is generally transient, the turbines would form a backdrop for a longer journey. The impact from the Pentland Ferries route would be different, moving north and south past the turbines at sea rather than land. Again, the relationship between land and sea is critical at that entrance to Orkney, and the experience of entering Scapa Flow from the Pentland Firth, between Flotta and South Ronaldsay would be altered. The irregular coastline of cliffs and bays creates interest from the ferry, with a scatter of rural development and wartime structures on the cliff edges. For much of the ferry route, those coastal interests have a backdrop of the landform including the summit at Ward Hill. Currently, that landscape includes agricultural and domestic scale man-made features only, limited in number on elevated ground. One exception is the Ward Hill telecommunications mast, but is fixed, solitary and is a relatively small feature in the landscape.

9.6.25.

In terms of viewpoints, the turbines would be most prominent from VP1 the car park at the Linklater Memorial at Windwick Bay; and VP2 the public viewpoint on the

A961 at Olad Summit. At the public viewpoint, the main views of interest are south across the Pentland Firth and east looking over Scapa Flow and Flotta towards Hoy. The turbines would have a dominant presence if the landscape was viewed in an easterly direction, but for the reasons provided above, the proximity and impact of the turbines is not considered unacceptable in relation to the principal purpose of the public viewpoint as a location to view Scapa Flow. The nature of the impact from the Linklater Memorial carpark is different. It is an important location as a memorial to two ships lost in the seas off that coastline and also as a popular location to view the east coast cliffs and for recreational visits along the coastline. The view is dominated by the scale of rugged cliffs and it is a view free from large scale development. The turbines, and T5 in particular which would be visible from foundation to blade tip, would dominate the view and diminish the scale of the sea cliffs.

9.6.26.

The topography of South Ronaldsay is varied, with unpredictable skylines. The elevated nature of the site is such that there are open views into and out of the landscape, including from Scapa Flow as described above. It is accepted that the telecommunications mast currently breaks the skyline, but it is not a dominant feature. The scale of the landform is not considered to be of sufficient to accommodate the proposed development.

9.6.27.

The ES Addendum concludes that the significant cumulative effects would result for three seascape receptors and five landscape receptors. It is concluded in the ES that those effects would arise from the proposed development alone and the level of cumulative effects would be no greater than that arising from the development in isolation, or combinations of other developments.

9.6.28.

Policy 9G(i) requires that “All development proposals must be sited and designed to minimise negative impacts on the landscape…and seascape characteristics and landscape sensitivities that are identified in the Orkney Landscape Character Assessment…” The Planning Statement submitted in support of the application concludes that the development can be considered to accord with policy 9 on the basis that the design iteration process ‘has been gone through to minimise landscape impacts’. That statement can be accepted based on the particular number of turbines and blade tip height currently proposed. However, even accepting that this is an area with potential for wind farm development as identified in the LDP, the current submitted development, as amended, is not considered to be sited and designed to minimise negative impacts that a wind energy development would have on landscape and seascape characteristics.

9.7. Visual Amenity.

9.7.1.

A common statement within objections is that the turbines would be located too close to dwellings. It should be noted that there is no minimum separation distance between a wind turbine and a dwelling, and the acceptable separation

distance is largely determined by an assessment of the noise, shadow flicker and visual impact, which varies on an individual case-by-case basis. Those potential impacts of wind energy developments on the amenity enjoyed by residents of neighbouring houses is recognised in the ES Addendum as a key consideration.

9.7.2.

The open nature of the Orkney landscape means that most built development is likely to be visible. Combined with the dispersed settlement pattern, it is inevitable that any tall development will result in some effects on the visual amenity of residential properties. The presence of wind turbines near residential properties can have an adverse effect on residential amenity by appearing as a dominant presence in views from the property. No guidance has been published regarding the assessment of impacts on residential amenity or criteria which should be applied in considering the extent of any such impacts, however the Institute of Environmental Management EIA Quality Mark Article 'Residential visual amenity assessment: its place in EIA' provides criteria which can be used to inform any such assessment, as follows:

- The scale of change to the existing view from the property caused by the proposed development, including changes to its composition and the proportion of the view affected.
- The degree of contrast or integration of any new features in the view.
- The duration and nature of the impact, whether temporary or permanent, intermittent of continuous, for example.
- The angle of view in relation to the main activities of the receptor; and the relative size and proximity of new features in the view.

9.7.3.

Within the ES Addendum, impacts on the closest residential properties are assessed separately to the viewpoints, to form a judgement as to the scale of predicted impacts on residential amenity. All residential properties within 2 kilometres of the proposed development have been assessed (including those which have a financial involvement in the development, although there are precedents for these being disregarded on the basis that residents in those properties would be willing to accept greater impact on residential amenity because of the financial benefit they would gain). A total of 49 residential properties were identified within 2 kilometres of the proposed development; three were derelict or ruinous, so 46 were assessed.

9.7.4.

Wire line images for each of the residential properties were prepared and a preliminary analysis was carried out of the likely extent of visibility from each property and likely prominence of the proposed development, together with an analysis of the potential for cumulative impacts associated with the proposed development in conjunction with other wind energy developments. Properties were then subject to a detailed baseline appraisal and field verification to establish the following:

- The position and orientation of properties.
- The type of property (eg single storey detached dwelling).
- The distance and direction from the nearest turbine.
- The distance and direction from cumulative developments.
- The location and orientation of principal rooms and windows/openings relative to the wind farm.
- The position of external amenity spaces including gardens relative to the wind farm.
- The approaches to the dwelling within the curtilage of the property.
- The location of key viewpoints and key vistas/views within the dwelling and grounds of properties.
- The geographical extent of property likely to be subject to views towards the wind farm.
- The geographical extent of property likely to be subject to cumulative views.

9.7.5.

The desk study and field verification also identified the following:

- Whether views from within properties towards the development would be acute, oblique, peripheral or beyond peripheral.
- Whether the view would be open (ie unrestricted), filtered (eg through intervening vegetation), partially restricted (eg by intervening topography, buildings or vegetation), substantially restricted (due to the screening effect of intervening topography, buildings or vegetation), or entirely obscured.
- The vertical and horizontal subtended angle of views from properties likely to be affected by the wind farm.

9.7.6.

Having described the baseline context at each property (dwelling and garden ground) and likely visibility, an assessment of the magnitude of visual impact experienced at each property was undertaken, utilising a six-point scale, from ‘very large’ to ‘very small’.

9.7.7.

Six properties were assessed as being potentially subject to large impacts, where the proposed development would form a prominent element in views from several key locations of the property, resulting in considerable change to the quality and character of views from the property. Objections have not been received from any of those properties (nothing that three of the properties are financially involved in the project).

9.7.8.

27 properties were assessed as being potentially subject to medium impacts. At those properties, the development would form a noticeable element in views from the property, resulting in a perceptible change to the quality and character of certain

views from the property. An objection has been received from two of those 27 properties. 12 properties were assessed as being potentially subject to small impacts. At those properties, the development would form a small element in views from the property but would not affect their overall quality and/or character and would have little influence on the visual amenity of the property. An objection has been received from two of those 12 properties. Therefore, of the 88 valid objections, 4 are from properties within 2 kilometres of the proposed development.

9.7.9.

In defining impacts on residential visual amenity, it is important to note that the outlook from a private property is normally a private matter, not a public one. The difference between that private interest and what should be protected in the public interest has been the subject of focus in wind farm appeal decisions, and the public at large may be affected differently by the visual and other impacts of wind turbines than those who live close to them. If turbines are present in such number, size and proximity that they represent an overbearing and unavoidable presence in main views from a house or garden, there is every likelihood that the property could be regarded as an unattractive place in which to live. The closest properties to the proposed site are approximately 665 metres to the south, 919 metres to the west, and 704 metres to the north of the closest turbine within the proposed development. Those are greater distances than the turbine spacing within the development, and so when combined with the separation distance, the houses would have a sense of looking towards the wind farm as a cluster rather than any impression of being within the cluster. The ES acknowledges that determination of acceptability of predicted impacts at each property is a matter for the decision maker, in the absence of a technical standard. In this case, whilst a reason for objection to some properties within the 2 kilometre study area (and beyond), the impact on visual amenity is not considered to be so great or overwhelming on any individual property to merit being a reason for refusal of the application.

9.8. Ecology and Nature Conservation.

9.8.1. Designations.

The eastern boundary of the application site is located partially within the boundary of a Site of Special Scientific Interest (SSSI) identified as Ward Hill, a maritime cliff, rich with cliff-top plant communities. However, the proposed development footprint, including turbines, access tracks and associated infrastructure, is not located within the boundary of any international or national statutory designation for non-avian wildlife or natural heritage. The south-western end of the application site is located within the Olad Summit Local Nature Conservation Site (LNCS).

9.8.2. Local Nature Conservation Site.

The LNCS is an area predominantly of heather moorland and covers land on both sides of the public road. The exposed summit is wind and water eroded, while some relatively sheltered lower and wetter slopes are rich in flowering plants and sedges, and the variety of plant species further increases in the calcium-rich conditions surrounding springs. Juniper is locally common near the summit of Sandy Hill and scattered elsewhere. Waders, including oystercatcher, lapwing, snipe and curlew,

breed within the LNCS as well as small birds, including skylark and meadow pipet, and small numbers of Arctic and great skua.

9.8.3. Policy Context.

Policy 9A(3) states, “Development likely to negatively affect a Local Nature Conservation Site (LNCS)…will only be permitted where there is no feasible alternative location; and a) mitigative measures will be satisfactorily implemented to ensure that it will not affect the integrity of the area or the qualities for which it has been designated; or b) any such effects are clearly outweighed by social, environmental or economic benefits.”

9.8.4.

An Ecological Impact Assessment (EcIA) has been carried out in relation to key ecology and nature conservation issues, including the methods used to establish baseline conditions across the site and ecological effects resulting from the proposed development. Baseline ecological surveys were carried out in accordance with the CIEEM Guidelines for Preliminary Ecological Appraisal, specifically Phase 1 and National Vegetation Classification (NVC) surveys (including identification of vegetation communities indicating potential for groundwater dependence) and an otter survey. The Phase 1 habitat survey identified 15 habitat types, and the NVC survey recorded 10 habitat types and identified 5 areas of potentially high groundwater dependent terrestrial ecosystems (GWDTE) within the site.

9.8.5.

Each potential effect on ecological features resulting from the development was characterised using the following parameters: positive or negative impact; magnitude of the impact; geographical extent; duration; reversibility of the impact; and timing and frequency.

9.8.6.

Most of the development footprint would be located on habitat surveyed as improved grassland. Minor exceptions would be the southern corner of the construction compound, which overlaps a small area of semi-improved/marshy grassland, and a small section of the track to T5 which overlaps an area of marshy grassland. The access track to the turbines would make use of the middle section of the existing farm track to the Ward Hill telecommunications mast. A strip of dry heath lies adjacent to the existing access track immediately below the mast, however the turbine access route would cut south-east from the existing access track before that point, so the dry heather there would be unaffected. The layout of the development from the existing track and further into the site can therefore be considered to minimise impacts on the most sensitive habitats.

9.8.7.

The main impact on habitat resulting from the development would be due to the route of the proposed access track from its junction with the main road to the point it would enter an improved grassland field, before joining the existing track. Approximately the first 400 metres of the proposed track route is through habitat

identified as ‘Dry Dwarf Shrub and Heath’ with a small area of ‘Marshy Grassland’ in the Phase 1 habitat survey and identified as ‘Dry Heath’ with a small area of ‘Mire’ in the NVC survey results. That 400 metre section of proposed track is located within the Olad Summit LNCS.

9.8.8.

That habitat loss is acknowledged and concluded as ‘not significant’ in Chapter 7 of the ES Addendum, “Habitats identified as an Important Ecological Receptor, which are predicted to be affected by permanent habitat loss, are dry heath and mire. However, the loss of approximately 0.324 ha of dry heath and 0.003 ha of mire is at such a small scale as to be considered not significant.” It is also clarified that the access track route was subject to detailed study and design iteration, and it was concluded that safe access for abnormal load delivery vehicles from the A961 could not be achieved using the existing Ward Hill track.

9.8.9.

In the Development and Marine Planning consultation response, the Council’s Policy Officer (Environment) stated, “…I requested justification for the decision to route the western extent of the access track through the Olad Summit LNCS, rather than modifying the entrance to the existing track to Ward Hill. I understand from the applicant that this is the only area within the landholding available for development that provides sufficient space to allow safe turning of the abnormal load delivery vehicles off the A961. However, I recommend that alternative access options should continue to be explored, in order to avoid impact on the habitats and species of the LNCS. This part of Olad Summit LNCS consists of dry heath with patches of wet dwarf shrub heath and unimproved neutral grassland. Birds which breed on this site include curlew, lapwing, snipe and skylark, which are all national priorities for conservation. Common gulls, Arctic and great skua, oystercatcher and meadow pipit may also breed across the LNCS. Should the current proposal be approved, construction of the access track through the LNCS would lead to damage to, and loss of, heathland habitat and unimproved grassland, as well as the release of stored carbon from the underlying peat. It would also lead to disturbance to breeding birds. The Olad Summit LNCS site statement indicates that juniper, a plant species identified in the Scottish Biodiversity List as a priority for conservation, is found on the site. I recommend therefore that a further survey should be undertaken and if juniper is found to be present within any area that would be affected by the proposed development, appropriate mitigation measures to avoid loss of, or damage to, this species should be agreed with the planning authority.”

9.8.10.

Ecological mitigation measures are proposed within the ES Addendum, which would be incorporated into a Habitat and Species Management Plan (HSMP) with environmental management plans during construction and decommissioning phases, and the operation phase if required. Details on timelines would be included for undertaking mitigation for each identified important ecological feature. Environmental management plans would include the provision of and Ecological Clerk of Works (ECoW) to oversee the implementation of recommended mitigation. Generic

mitigation measures which would to apply to all important ecological features across the development site are set out in the ES Addendum, and include:

- Not more than 12 months prior to construction and/or decommissioning of the development, a suitably qualified ecologist would undertake repeat ecological surveys to update the baseline information.
- Survey results would be communicated to the contractor by the ECoW and fed into relevant environmental management plans.
- Avoidance of unnecessary disturbance to habitats by minimising the extent of ground clearance and other construction practices, and restoration works during decommissioning as far as practicable.
- Plant and personnel will be constrained to a prescribed working corridor using temporary barriers.
- Works compound, storage sites and access tracks sited and designed to avoid areas identified as being of ecological value by the ECoW.
- Trenches covered or to include ramps to prevent mammals being trapped and exposed pipes and trenches will additionally be checked each morning.

9.8.11.

A site restoration plan would be developed to control reinstatement of habitats lost temporarily during construction. Disturbed ground would be restored as soon as practicable using materials from the site. Access tracks would be allowed to re-seed naturally during operation.

9.8.12. Protected species.

An otter survey was carried out, with a study area extending to 250 metres surrounding the site boundary, for evidence indicating the presence of otter, including breeding holts, couches, footprints, shelters, spraints and faeces. No evidence of otter or suitable otter resting places was identified during the survey. In relation to bats, due to the geographical location of the site and its exposed coastal nature together with having little suitable habitat present, SNH agreed that an assessment of bats was not necessary. Subject to the repeat ecological surveys and mitigation measures referred to above, the development is not anticipated to have an adverse effect on otters or bats.

9.8.13.

The ES concludes that “No residual effects on ecology and nature conservation are predicted” as a result of the development. In relation to the proposed access track in particular and the LNCS designation, the key test of policy 9A(3) is whether development would be “likely to negatively affect a Local Nature Conservation Site (LNCS)” and if so, "only be permitted where there is no feasible alternative location; and a) mitigative measures will be satisfactorily implemented to ensure that it will not affect the integrity of the area or the qualities for which it has been designated; or b) any such effects are clearly outweighed by social, environmental or economic benefits.” The development would negatively affect the LNCS by creating an access track through a continuous area of habitat. However, it is accepted that the existing access track to Ward Hill is not suitable for the purposes of the wind farm, and an

explanation has been provided to confirm why there is no ‘feasible alternative’ for a safe access route other than through the LNCS.

9.8.14.

Further details and examples of habitat improvement and enhancement have been provided since submission of the ES Addendum, and which could be incorporated into the Habitat and Species Management Plan. This includes identification of an additional, currently unmanaged parcel of dry heath close to the summit of Ward Hill, which is 0.85 hectares in size. The developer has committed to enhancing that area to in part mitigate the 0.33 hectares that would be lost for the construction of the track.

9.8.15.

In relation to disturbance during operation of the development, the developer has committed to signage and/or other measures such as a gate on the access track to direct maintenance or other vehicles to use the existing Ward Hill track. At the rate anticipated, pedestrians using the track are unlikely to represent a significant disturbance to habitat and/or wildlife.

9.8.16.

The ES includes extensive survey of the whole affected area. The developer has committed to extensive updated survey work, and general and site-specific mitigation measures, which includes focussed surveys for species listed in the LNCS site statement including juniper. Construction and operational site management plans could be developed to include habitat creation, land management, and/or habitat restoration works elsewhere within this site as a measure to offset the direct impact. Although such works are not currently specified, those could be controlled by condition, and managed by the Ecological Clerk of Works provided. This would be sufficient to conclude that “mitigative measures will be satisfactorily implemented” as required by policy 9A of the LDP. Impact on ecology and nature conservation is therefore considered to be satisfactorily addressed.

9.9. Ornithology.

9.9.1. Policy Context.

Policy 9B of the LDP states, “(i.) Development likely to have an adverse effect on any protected species will not be permitted unless it can be justified in accordance with the relevant protected species legislation. (ii.) Where there is evidence to indicate that a protected species may be present on, or adjacent to, a development site and could be affected by the proposal, the Planning Authority may require an ecological survey and/or mitigation plan to be submitted with the planning application.”

9.9.2.

The proposed site is outwith any sites designated for ornithological interests at European or national levels, however there are several such sites with ornithological interests in the surrounding area. Switha, approximately 10 kilometres to the west of the site, is designated as a Special Protection Area (SPA) and a SSSI for its

wintering population of Greenland barnacle goose, and there is potential for connectivity with the proposed development as geese from Switha SPA/SSSI were recorded feeding in South Ronaldsay during field surveys. Pentland Firth Islands SPA and SSSI, approximately 6 kilometres at the closest proximity to the proposed development, are designated for their breeding population of Arctic tern. Scapa Flow proposed SPA (pSPA) is selected for its breeding population of red-throated diver and wintering populations of eight seabird species, all of which largely remain offshore. Pentland Firth pSPA has been selected to protect foraging areas for seabird species including Arctic tern, common guillemot, Arctic skua and breeding seabird assemblage. The absence or low levels of flight activity of the selected species indicates that the proposed development site is not an area of importance for those species, despite its proximity to the Scapa Flow pSPA and Pentland Firth pSPA.

9.9.3.

In its consultation response following submission of the original ES, SNH objected on the basis that there was insufficient information for potential impacts of the development on peregrine falcon to be assessed. The SNH response included, “We require this information due to the potential for this development to have an adverse impact on the peregrine population of the Orkney and Northern Caithness Natural Heritage Zone (NHZ 2). NHZ 2 contains two of the five Special Protection Areas (SPA) for peregrine in Scotland, Hoy and North Caithness Cliffs SPAs, plus part of East Caithness Cliffs SPA. Therefore, there is also potential for connectivity with the SPAs and an adverse impact on the peregrine feature of these sites.”

9.9.4.

Further ornithology surveys were carried out during the 2017 breeding season to provide additional supplementary information to refine the impact assessment. Chapter 8 of the ES Addendum provides an updated assessment of ornithological effects, from the construction, operation and decommissioning phases of the proposed development, and an update to the cumulative impact assessment. Species recorded during the ornithological survey work were considered for inclusion in the impact assessment if they fell into one or more of the following criteria:

- A qualifying interest of a SPA or pSPA or notified feature of a SSSI with connectivity to the proposed development.
- A special wildlife feature of a nearby LNCS.
- A Wildlife and Countryside Act 1981, Schedule 1 or EU Birds Directive Annex 1 listed species.
- A wider countryside species listed by SNH as potentially at risk of impacts from onshore wind farms.
- A Scottish Biodiversity List species.
- A red-listed or amber-listed species in the Birds of Conservation Concern 4.
- A species present in numbers of regional (breeding) or national (non-breeding) importance at the proposed development. (In line with the convention used for waterfowl, numbers of a species have been valued in this report as ‘important’ in a particular geographical context if they exceed 1% of that geographic population.)

9.9.5.

Based on desk study and survey records, species identified as requiring assessment in relation to the proposed development included: Greenland barnacle goose, peregrine, hen harrier, short-eared owl, great skua, redshank, curlew and snipe. Arctic tern was not recorded during any survey work, whooper swans occur in the surrounding area in relatively small numbers throughout the winter season but are unlikely to be present at or to fly over the site with any regularity, and red-throated divers are not expected to fly overland at the site. These and other species are excluded from the impact assessment, with explanations provided in the ES Addendum.

9.9.6.

Eight bird species are included in the impact assessment: Greenland barnacle goose, peregrine, hen harrier, short-eared owl, great skua, curlew, redshank and snipe. Potential impacts on each of these species was assessed for during construction and decommissioning, due to direct habitat loss and disturbance, and during the operation of the turbines, due to displacement and mortality due to collisions.

9.9.7.

The assessment determines that there would be no significant effects on Greenland barnacle goose or hen harrier. Mitigation measures would be implemented to avoid disturbance to breeding peregrine during construction and decommissioning. Broader mitigation measures would be implemented to address potential impacts to ornithological interests during construction and decommissioning, including carrying out ground works (site clearance and stripping of vegetation) outside the bird breeding season, and employment of a qualified ECoW as referred to above to carry out pre-construction breeding bird surveys and oversee any construction works as appropriate during the breeding season. Subject to implementation of those mitigation measures, no significant residual effects on birds as a result of the construction and decommissioning works are anticipated.

9.9.8.

Displacement of small numbers of breeding great skua, curlew, redshank, snipe and short-eared owl due to the presence and operation of the turbines was assessed as having a potentially significant effect at the very local scale only (non-significant in the context of the EIA Regulations). In relation to foraging Greenland barnacle goose, peregrine, hen harrier, short-eared owl and roosting short-eared owl, operational displacement was not anticipated to have any significant effects at any scale. No significant effects due to collision mortality are anticipated for Greenland barnacle goose, hen harrier, short-eared owl, great skua, snipe, curlew and redshank, for the proposed development in isolation or cumulatively.

9.9.9.

The final ornithological issue to be considered is therefore potential effects on the peregrine population. There is one peregrine breeding site adjacent to the proposed development, although the exact nest site is not known along a section of coastline,

and it is possible that alternative nest ledges are used between years which is typical of this species. The peregrine population is referred to in the assessment in relation to Natural Heritage Zone 2 (NHZ2), 'Orkney and North Caithness'. SNH notes the status of the SPA peregrine populations within or partly within NHZ:

- Hoy SPA. Currently in favourable condition. Entirely within NHZ2. Population size since classification (6 pairs) has remained stable at 6 pairs (2007) and 7 pairs (2013).
- North Caithness Cliffs SPA. Currently in unfavourable, declining condition. Mostly located in NHZ2. Population size since classification (6 pairs) was fairly stable to 2006 (5 pairs) but declined by 2014 (2 pairs).
- East Caithness Cliffs SPA. Currently in favourable condition. A small area is within NHZ2 (estimated 2 pairs), the majority in NHZ5. Population size since classification (6 pairs) has remained stable, with at least 5 pairs (2007, 2014).

9.9.10.

RSPB maintains an objection to the proposal, due to potential effects on the NHZ2 peregrine population, stating that insufficient information exists to conclude that there would not be an adverse impact on the SPAs within NHZ2 which are designated for peregrine.

9.9.11.

The current design iteration is a revised layout from that originally submitted with the ES and has an increased separation distance from the range centre resulting in a reduced collision risk. However, given the small population size of the NHZ2 peregrine population, the assessment was not able to robustly justify a conclusion of no significant effect resulting from collision mortality during the operation of the proposed development. Rationale is provided for the use of a 99% collision avoidance rate in modelling, as well as 98% which is the current SNH-recommended default value. On a precautionary basis, it is considered that the estimated collision mortality would be up to 0.196 birds per annum (equivalent to one bird every five years) applying a 99% avoidance rate, or an overall annual risk of 0.392 applying a 98% rate. The cumulative collision risk for the NHZ2 peregrine population was also assessed as a significant effect.

9.9.12.

SNH has confirmed that revisions to the proposal and the additional information provided by the applicant are sufficient for its objection to be withdrawn, with respect to the potential impacts of the development on peregrine falcon. The SNH response states that the modelled population decline presented for Hesta Head, and Hesta Head in combination with other wind farms, is likely to over-estimate impacts to the NHZ population for the following reasons:

- "SNH Collision Risk Modelling assumes that breeding birds are replaced almost immediately after being lost. If this does not happen (e.g. through territory abandonment or single birds not pairing up for some time), then the collision risk will over-estimate the rates of population decline. At Hesta Head (which contributes significantly to the cumulative total), the reality is that one pair could

be affected by a predicted collision rate of 0.4 birds per annum. This equates to a collision every 3 years (assuming a 98% avoidance rate). If one bird from the pair is lost, the site is either likely to be abandoned, or a replacement bird is recruited. Timescales for a lost bird being replaced are likely to be very variable, potentially occurring within the same breeding season, but this may be longer and is likely to depend on various factors. It is also very likely that if a bird was lost to collision this would be followed by a reduction in flight activity until such time as the site is re-occupied by a breeding pair.

- The modelling presented in the ES also assumes that the Hesta Head, and to a lesser extent Costa Head sites, will act as a "sink" for the whole NHZ population, through immediately drawing in breeding adults from existing pairs. This is unlikely to be the case. Peregrines are relatively site faithful to their natal area and any replacement bird at either site would likely be unpaired adult (>2 years old) or a sub-adult (1-2 years old). The Hesta Head and Costa Head sites are also unlikely to act as a "sink" for juveniles dispersing from SPA, which could disperse to a nest site within the SPAs or to another location within the NHZ."

9.9.13.

SNH confirms that whilst it has no objection because the significance of the impact is unlikely to be of national significance in its own right or in combination with other wind farms, and unlikely to result in an adverse effect on the integrity of Hoy, North Caithness Cliffs and East Caithness Cliffs Special Protection Areas for which peregrine falcon is a qualifying feature, the development would nonetheless have an adverse impact on peregrine falcons nesting on the cliffs adjacent to the development site, and possibly on the wider Orkney or Natural Heritage Zone breeding populations. Careful consideration must therefore be given to policy 9B(i) of the LDP, which states, "Development likely to have an adverse effect on any protected species will not be permitted unless it can be justified in accordance with the relevant protected species legislation."

9.9.14.

The developer has committed to implementing a compensatory measure in the form of a Peregrine Research and Management Plan for NHZ2 which would be undertaken to offset the significant residual effect of collision mortality, and as detailed in Chapter 8 of the ES Addendum. The plan would involve research over the first three years of operation of the development, to investigate the factors affecting the population status of peregrines in NHZ2. The aim would be to provide a better understanding of the reasons for the population remaining stable rather than increasing, and to inform a management plan which would be implemented through the lifetime of the development. The Peregrine Research and Management Plan would develop understanding of the NHZ2 peregrine population as well as measures which could be implemented to deliver a population benefit. Critically, those anticipated improvements in the regional peregrine population would mitigate and offset the significant residual effect of collision mortality on peregrines at both the project and cumulative level.

9.9.15.

As Competent Authority, the Council must consider whether any plan or project would have a 'likely significant effect' on a Natura site before it can be consented, and if so carry out an Appropriate Assessment. That process is known as Habitats Regulations Appraisal. Considering Hoy SPA, North Caithness Cliffs SPA and East Caithness Cliffs SPA as the Natura sites potentially affected by a plan or project, and in relation to peregrine as the relevant European non-priority interest, SNH in its HRA has concluded, "For the reasons outlined above it is considered unlikely that the proposed wind farm, either on its own or in combination with other wind farms, would adversely affect the SPA peregrine populations." Considering Switha SPA, in relation to Greenland barnacle goose (non-breeding) as the qualifying interest, SNH concludes, "For the reasons outlined above it is considered unlikely that the proposed Hesta Head wind farm, either on its own or in combination with other wind farms, would adversely affect the SPA barnacle goose population." SNH concludes that the proposal would not adversely affect the integrity of each Natura site, considered separately.

9.9.16.

In considering likely significant effects, the Council as Competent Authority is not obliged to follow the advice given by SNH. The Council's duty is to have regard to that advice. However, based on SNH's role as a statutory consultation body and appropriate national body on natural heritage issues, the Council is bound to accord considerable weight to SNH advice, and there would have to be cogent and compelling reasons for departing from that advice. The Council's HRA, attached as Appendix 3 to this report, concludes that Appropriate Assessment is not required.

9.9.17.

SNH has no objection to the development. The potential significant effect on the peregrine population must be acknowledged, tempered by the SNH statement that the assessment is likely to over-estimate impacts to the NHZ population. In terms of peregrine population, the proposed Peregrine Research and Management Plan would be designed to offset any impact on the NHZ2 population. Alongside the manageable impacts on other bird species, ornithology impacts therefore do not merit refusal of the application.

9.10. Historic Environment.

9.10.1. Policy Context.

Policy 8A of the LDP supports development "which preserves or enhances the archaeological, architectural, artistic, commemorative or historic significance of cultural heritage assets, including their settings…" It is stated that, "Development which would have an adverse impact on this significance will only be permitted where it can be demonstrated that: (i.) measures will be taken to mitigate any loss of this significance; and (ii.) any lost significance which cannot be mitigated is outweighed by the social, economic, environmental or safety benefits of the development."

9.10.2.

A total of 27 cultural historic assets have been identified within the site boundary, comprising 10 assets previously recorded on the Orkney Sites and Monuments Record (SMR, 6 previously recorded wartime buildings near the summit, and 11 assets revealed by the desk based assessment and walkover survey in relation to the proposed development). None of the assets are designated. Avoidance is the primary mitigation proposed, and permanent and temporary works are all located to minimise direct impacts on identified cultural historic assets. The amended layout submitted avoids an area of rig-and-furrow that would have been partly impacted in the previous layout. The County Archaeologist has identified potential for further archaeological remains. A combination of survey work, archaeological watching brief, and preservation in situ by micro siting infrastructure would be adequate mitigation.

9.10.3.

The County Archaeologist has stated that the methodology used to assess impact on cultural heritage "…has a tendency to oversimplify and thus reduce the potential for impact." In particular, the County Archaeologist states that the assessment underestimates impact on the setting of The Cairns of the Bu (known as 'The Cairns') which is an undesignated, nationally important, broch site. The ES Addendum in Chapter 9 concludes that "the operation of the wind farm would have no effect on the significance of the Cairns of the Bu and the ways in which setting contributes to its significance". However, the County Archaeologist provides a statement of the site's significance, "The Cairns is a site that in terms of its type, size and monumentality and level of preservation, bears comparison to the Broch of Gurness in the West Mainland, excavated in the 1930s, and now a much-visited property in the care of the State. The Cairns, set apart from modern settlement in a rural landscape, clearly has potential to become a similarly popular and highly visited site, but with further significance being drawn from the site through modern excavation techniques… Research at the Cairns of the Bu broch (Carruthers, M. pers.comm) indicates it to have been originally probably three storeys high and thus it is confirmed as having been a monumental building with distant views extending over land and the seas via the valleys to the West and East of the island of South Ronaldsay… The value of The Cairns as a broch site clearly includes its topographic position commanding views over two shores (as shown by Viewpoint CH4) and its dominance of and survival in a rich agricultural landscape, with access to a variety of resources… It is understood that the impact has been mitigated to an extent by reduction in turbine numbers, but there remains a residual negative impact. The consultants for the developers have decided against further mitigating the effects of their landscape choices for the turbines on the Historic Environment (para 9.7.10), as this would result in major change to design of the wind farm."

9.10.4.

The archaeology consultant on behalf of the developer has responded, stating, "…Clearly, there are differences of professional judgement here. These, however, are not methodological issues. Headland's approach to setting, together with the development of a clearly-defined methodology, is firmly compliant with policy and guidance, and the principles of proportionality that underpin PAN 1/2013

Environmental Impact Assessment…The approach that was used to assess the Proposed Development at Hesta Head has been found acceptable to local planning authorities and statutory consultees throughout the UK, and has been similarly tested at planning inquiries. Our position, therefore, is that the methodology employed is fully grounded in policy and guidance and that it provides an appropriate level of assessment of the predicted effects of the Proposed Development on the historic environment in general and the site of The Cairns in particular." The statement goes on to provide further guidance in relation to setting.

9.10.5.

The Cairns is a significant archaeological site, and assessment of the impact on its setting requires some judgement of its former prominence in the landscape and the key views to and from the structure. Given its topography, The Cairns would never have dominated the landscape, even if it was a prominent feature within it. The turbines would be a dominating feature in one wide view from The Cairns, but views through the valley to the west and to the sea to the east would not be affected.

9.10.6.

Since submission of the ES Addendum and the subsequent consultation response from the County Archaeologist, the developer has entered discussions with the site director overseeing the archaeological dig and research at The Cairns to discuss mitigation measures. Broad agreement has been reached on the scope of mitigation: firstly the dissemination of information through publication of literature and/or site interpretation boards; and secondly contribution to post-excavation work. In both approaches, the mitigation would help advance the understanding of The Cairns site.

9.10.7.

There are no Inventory Gardens and Designed Landscapes nor Inventory Historic Battlefields within 5 kilometres and the World Heritage Site is over 20 kilometres from the proposed turbines, which would not be seen on a sensitive ridgeline. St Margaret's Hope Conservation Area is just over 5 kilometres from the proposed development and is entirely outwith the ZTV.

9.10.8.

There are seven listed buildings within 5 kilometres of the turbines, which includes one category C listed building, five category B listed buildings, and the category A listed St Peter's Kirk at Kirkhouse point. St Peter's is visited and viewed in combination with other historic structures, including the kirkyard boundary wall, boat nousts and winches, and a stone base of a historic windmill. As those structures of interest are on the seaward side of the kirk, and the nousts and winches face into the sea and in the direction of the turbines on the horizon, the development would be prominent in views form the kirk. As well as changing the skyline, the turbines would introduce a presence and awareness of modern large-scale structures from a location where the structures are historic, of natural materials, and of human scale.

9.10.9.

There are five scheduled monuments within 5 kilometres of the proposed turbines, comprising two standing stones, two chambered cairns and a later prehistoric promontory fort. During the operational phase of the development, effects on Isbister chambered cairn and Hesta Head chambered cairn were assessed as negligible. Those operational effects cannot be further mitigated and would remain for the lifetime of the development.

9.10.10.

Historic Environment Scotland (HES) does not object to the application, in terms of the impact on the setting of any scheduled monument or category A listed building. However, contrary to the conclusion of Chapter 9 of the ES Addendum, HES considers the impact on the setting of Isbister cairn to be of higher magnitude than 'negligible'. The description of the cairn notes that, "We consider the setting of the monument to comprise the outward views that can be obtained from it, and the views looking towards the monument because it is a visible feature within the wider landscape."

9.10.11.

HES provides details of the assessment of impact on setting, "The proposed development will be visible in views north from the cairn and the approach to the cairn, at a distance of approximately 3.5km…We note that the ES identifies an impact of negligible magnitude, and therefore negligible significance, on the cairn. We consider some of the points raised in the assessment to be contrary to this conclusion. For example, it is stated that landward views from the cairn provide context to its place in the landscape and proximity to cultivable land…It is then stated that the proposed development would constitute a distraction from the appreciation of this. Given that the turbines would have an impact on an element of the setting of the cairn which contributes to its understanding, appreciation and experience, we consider this impact to be of higher magnitude than 'negligible'. This would appear to be in line with the methodology provided. However, we are content that, given the intervening distance, this impact is unlikely to be significant for our interests." Therefore, whilst HES has not objected, it does maintain some concerns regarding netting, but not of sufficient magnitude to merit an objection in the national interest.

9.10.12.

In relation to scheduled monuments, policy 8B(iv) states, "Where there is potential for a proposed development to have an adverse effect on the integrity of the setting of a scheduled monument, planning permission will only be granted where: there are exceptional circumstances; there is no practical alternative site; and there are imperative reasons of over-riding public need." It is in balance whether the development meets any of the three tests. However, HES has not objected to the development so it can be concluded that any impact would not be in the national interest. It is considered that the turbines would not significantly detract from the ability to understand identified historic environment assets in the context of their landscape setting. Including the design iterations already carried out and the contributions proposed for The Cairns excavation and research, mitigation measures

proposed are considered sufficient such that impact on the historic environment is not a reason for refusal.

9.11. Tourism and Recreation.

9.11.1. Core Paths.

In relation to core paths and access, policy 10A of the LDP required that "(i) Development should have no unacceptable adverse impact on statutory access rights, core paths, other public footpaths or rights of way. (ii.) Where a proposal will affect access rights, a core path, a right of way or other public paths it will be necessary to: a) Maintain or enhance the amenity value of the current route; or b) Provide an alternative."

9.11.2.

Chapter 13 of the ES Addendum assesses impacts on tourism and recreation, including a 10 kilometre radius study area in relation to recreation. Core paths Sr1 and Sr5 both pass through the site. The development would change the setting for users of those core paths near the site and also for wildlife watchers at Windwick Bay. There would be temporary disruption to walkers and wildlife watchers during construction and decommissioning phases, but alternative routes would be provided within the site. Routes would be re-established and improved during the operational phase, and some positive effects would result for the core path network, including improved access to Hesta Head. The Council's Policy Officer (Access) has no objections, and "It is welcomed that the applicant has undertaken to invest in access infrastructure".

9.11.3.

The importance of tourism generally to the economy of Orkney is acknowledged and analysed in the ES Addendum, noting that 80% of holidaymakers to Orkney visit for archaeological sites, and 73% for scenery and beaches, based on a 2015 Council/Marine Services study. It is further noted that visitor numbers have increased in recent years, in part due to cruise liners, but also improved transport links.

9.11.4.

Various studies are cited in the ES Addendum concerning the impact of wind energy development and the tourism industry, including a research report 'Wind Farms and Tourism Trends in Scotland' (2015) by BiGGAR Economics. Potential effects of the proposed development on tourist amenity in the study area were assessed to be negligible and not significant. In the absence of substantiated evidence to the contrary, it is considered that operation of the development would have no effect on tourism in Orkney. Whilst visitors would note the presence of the turbines, visitor numbers, repeat visits and visitor spend within the local area or wider region would not be affected negatively.

9.12. Peat and Carbon Rich Soils.

9.12.1.

Policy 9E of the LDP requires that, “(i) i. Development on areas of peat or carbon-rich soils will only be permitted where: a) it has been clearly demonstrated that there is no viable alternative; b) an acceptance assessment of the likely effects of the development on carbon dioxide emissions has been undertaken and submitted; and c) the economic and social benefits of the development clearly outweigh any potential detrimental effects on the environment, including likely carbon dioxide emissions, and (ii) Where development on peat or carbon-rich soil is permitted, the Council may ask for a peatland management plan to be submitted which is supported by an appropriate peat survey and clearly demonstrates how the unnecessary disturbance, degradation and erosion of peat and soils will be avoided and, where this is not possible, minimised and mitigated.”

9.12.2.

Chapter 10 of the ES Addendum confirms that, “…geological mapping shows no mapped areas of peat within the site boundary or in the immediate vicinity. During site survey work, no peat or peaty soils were observed in any proposed turbine locations, nor any proposed track or infrastructure locations with the exception of the area immediately around the proposed access from the A961. This area, comprising the land south of the western-most 400 m of proposed track entering the site, was observed to comprise heathland and marshy grassland, where there was considered to be potential for peat deposits. The area was therefore subject to targeted peat probing in November 2016…No peat was observed in the area north of the proposed track. Minimal peat, generally less than 10 cm thick but locally up to 20 cm thick, was identified in the area immediately south of the proposed track.”

9.12.3.

In its consultation response, SEPA notes that site investigation works and states, “We further note that pre-construction intrusive site investigation works will be undertaken to confirm ground conditions and aid micro-siting for all elements of infrastructure and that this will include further investigation of peat. This issue should therefore be considered further within the CEMP, confirming the location of any peat found on the site (though appropriate peat probing), demonstration of how impacts have been minimised and proposals for management, storage and re-use.”

9.12.4.

On the basis a Construction Environmental Management Plan (CEMP) is in place, SEPA has no objections. Based on geological survey information and investigation results to date, a site-specific carbon calculator exercise is not required and the development accords with policy 9E of the LDP.

9.13. Water Environment.

9.13.1.

Policy 9D of the LDP requires that, “(i.)…development proposals should seek to protect and, where possible, improve the water environment (river streams, lochs,

groundwater, estuaries, coastal waters (to 3 nautical miles) and wetlands including Groundwater Terrestrial Ecosystems). Where this is not possible, it must be clearly demonstrated that the development: a) will avoid causing deterioration in the water quality or overall status of water bodies and, for any water body currently not achieving good status, will not prevent it from being able to achieve good status in the future. b) includes the management and/or enhancement of existing habitats and, if appropriate, the creation of new habitats. c) will not significantly affect water quality, flows and sediment transport, either during construction or after completion. Where a development proposal is located adjacent to the water environment, and a bank-side (waterside) location is not essential to the proposal, an appropriate buffer zone between the development and the water body should be included, within which development should be avoided. (ii.) There is a presumption against unnecessary culverting and engineering activities in the water environment."

9.13.2.

The Phase 1 habitat survey and NVC survey discussed above have identified Groundwater Dependent Terrestrial Ecosystems (GWDTE) within the application site. In its consultation response, SEPA notes that a number of potential GWDTE have been identified but, based upon the information available, those habitats are heavily impacted and influenced by agricultural drainage. The geology suggests groundwater aquifers are unlikely. Taking that into consideration, together with the proposed location of the turbines and the mitigation that has been proposed, SEPA concludes that the risk to GWDTE is low and has no objections to the application subject to mitigation being included within the finalised CEMP.

9.13.3.

The CEMP would identify all environmentally sensitive features on site and incorporate detailed pollution prevention, site waste management and mitigation measures for all elements of construction and operation potentially capable of giving rise to pollution or causing environmental harm. Issues expected to be considered within the CEMP include: surface water drainage during construction and operation, details of water crossings and any water engineering works including appropriate mitigation, monitoring of mitigation measures (procedure and schedule), soil storage/management/re-use, details of timing of works (avoiding periods of heavy rainfall if possible), wet weather working plan, water management during construction, details of any dewatering including discharge locations and any required mitigation, buffer zones including mitigation where required and details of site waste management and re-use/disposal.

9.13.4.

The ES confirms that pre-construction intrusive site investigation would be carried out to inform detailed design and micro-siting, which would include groundwater monitoring and permeability testing. Targeted monitoring and assessment of groundwater levels and flows beneath the site would be carried out, including trial pits. The results, and any additional mitigation, would be agreed with SEPA in advance of construction. Tracks would have cross carriage drainage pipes laid at appropriate intervals within the newly laid material to allow for the flow of shallow groundwater.

9.13.5.

Subject to pre-construction intrusive site investigation, which would be used to inform micro-siting and avoid any additional impacts on GWDTE, and the preparation of a CEMP, it is considered that the development would adequately protect the water environment in accordance with policy 9D of the LDP.

9.14. Aviation, Defence and Communications

9.14.1.

The nearest television mast is at Keelylang, 23 kilometres north-west of the site. The Ward Hill telecommunications mast is located immediately north of the site boundary and houses six radio transmitters operated by the 3 networks. Following developer consultation with Joint Radio Company (JRC) it was established that an exclusion buffer around the mast was required, which the current design iteration takes account of. Marine Services has identified a Vessel Traffic Services (VTS) radar installation at Sandy Hill, within 2 kilometres of the site. The installation comprises marine radar, Automatic Identification System, microwave links, and VHF receiver and transmitter. There is no key aviation radar in the region to which the development would be visible.

9.14.2.

The site is 20 kilometres south of Kirkwall Airport, operated by HIAL. The maximum extent of the obstacle limitation surfaces associated with any aerodrome are just over 15 kilometres from the runway reference point, therefore the turbines are outside those safeguarding limits. HIAL required a study to be completed to confirm that the development would not impact on three procedures: direct arrivals for runway 09, direct arrivals for runway 27 and the missed approach for the RNAV approach to runway 27. Potential impacts on these three procedures were taken forward for further assessment. The application site is in a low priority military low flying training area; the MoD has no objection to the planning application.

9.14.3.

Marine Services has no objections to the development, subject to a financial bond being put in place for a period of one year from completion, to ensure that full coverage from the Sandy Hill radar site is protected, and to cover the cost of any need arising to alter or relocate the VTS radar installation.

9.14.4.

HIAL has stipulated that the development should be marked on all relevant charts as a locally prominent obstacle. The developer would commit to formal promulgation of development with the CAA in advance of its construction, to allow the development to be marked on aviation charts. Development would not conflict with the three procedures at Kirkwall Airport highlighted at section 9.14.2 above, due to the adequate separation between the identified Kirkwall Airport approaches and the proposed turbines. HIAL has no objection to the development, and there is no requirement for red aviation warning lights. MoD has no objections, subject to

installation of infrared lighting, which is not visible to the naked eye but required for MoD air safety.

9.14.5.

No residual effects are anticipated on television, telecommunications, marine radar or aviation infrastructure or stakeholders.

9.15. Socio-economics.

9.15.1. Employment.

Employment that would be created by the development can be split between construction/decommissioning and operational phases. The calculations behind the figures are set out in the submitted BiGGAR Economics report 'The Economic Benefits of Costa Head and Hesta Head Wind Farms' (March 2018). Figures are expressed as full time equivalent (FTE) posts; one FTE is equivalent to one employee working full time.

9.15.2.

During development and construction, employment would be up to 10.2 FTEs, noting a proposed construction period of 12 months. Employment during decommissioning would be similar.

9.15.3.

Employment during the operational phase of the development would be up to 3.8 FTEs. This is expressed in the ES Addendum as up to 94.3 FTE 'job years' over the anticipated 25-year lifetime of the development. The FTE figure is based on direct and supply chain economic impact. Example supply chain opportunities within onshore wind farm development are as follows:

- Archaeology – surveys, watching brief.
- Hydrology.
- Ecological Clerk of Works.
- Ornithology – surveys, ongoing research, management plan.
- Traffic and transport – surveys, traffic management and signage.
- Telecoms – IT and telephone services.
- Health and Safety contractors.
- Construction sub-contractors – building contractors, steel fixers, site compound, access tracks and crane pads, substation.
- Plant hire contractors – excavation, earthworks, craneage services, cabins, security, welfare.
- Electrical engineering – high voltage trained personnel, site cabling, substation.
- Construction materials – concrete, aggregates, building materials, geotextiles, culverts.
- Plant Hire – excavation, earthworks, site tracks, craneage, traffic management and signage, site compound.

- Ancillary support – security, welfare.
- Site investigation / geotechnical contractors.
- Operations and maintenance personnel.
- Turbine technicians.
- Labour hire companies – engineers, plant operatives, construction labourers, setting-out engineers.
- Local spend includes accommodation, air and ferry bookings, car and van hire.

9.15.4. Shared Ownership.

The developer is committed to offering a community ownership model of Shared Ownership whereby the local community and others can invest in the proposed development. Net economic benefit is a material planning consideration as detailed in Scottish Planning Policy, and Shared Ownership projects may generate positive social and economic impacts in an area. These potential socio-economic benefits of a Shared Ownership model are outlined in the Scottish Government document 'Good Practice Principles for Shared Ownership of Onshore Renewable Energy Developments' (2015), "We believe shared ownership should become the standard, and are committed to working with industry, community groups and other stakeholders to ensure this becomes a reality…Shared ownership projects may generate positive social and economic impacts as they are likely to build capacity and generate income locally."

9.15.5.

The commitment to a Shared Ownership scheme has been provided by the developer in Community Council meetings, a letter to residents within 5 kilometres of the proposed development, at group meetings and at the public exhibition. The offer for the local community to raise investment for the proposed development would be carried out in line with Government best practice, and Local Energy Scotland has been included in the process. The developer proposes a low minimum 'buy-in' as far as possible to maximise opportunities for local people and groups to participate in the scheme. A steering group with members of the South Ronaldsay and Burray Community Council has been established to investigate the best model for this investment and a Memorandum of Understanding between the developer and South Ronaldsay and Burray Community Council has been drafted and agreed in principle between parties.

9.15.6.

SG 'Energy' notes local and community ownership under the 'Other Positive Impacts' heading, "Local and community ownership can have a lasting impact, building businesses and community resilience and providing alternative sources of income. These factors can be taken into consideration when calculating the net economic and socio-economic impacts of a development."

9.16. Energy Output and Carbon Considerations.

9.16.1.

The anticipated total power output of the proposed development is between 18 megawatts and 20.4 megawatts, subject to the greatest turbine capacity available at the appropriate scale by the commissioning date; the 18 megawatts figure is based on each of the turbines having a capacity of 3.6 megawatts. Based on recorded wind speed data, and taking account of wind speed variability, the annual indicative total energy output for the site is expected to be in the region of 43,468 to 69,337 megawatt hours (MWh), indicating that the development would generate enough electricity to power up at least 10,161 average UK households. Taking account of the energy predicted to be consumed by the development over its life cycle (eg for raw materials, construction, decommission and disposal), it is predicted that the development would displace more than 449,500 tonnes of carbon dioxide over the 25-year lifetime of the project.

9.16.2.

The above figures for households and carbon displacement are based on the worst case 18 megawatts development capacity, and would be substantially higher if higher capacity turbines, still within the parameters of the design iteration, are available by the time of commissioning, therefore allowing up to a 20.4 megawatts total site capacity. The actual capacity of the development will depend on the final turbine model selected. There is potential for a marginal reduction in yield resulting from a potential requirement to operate turbines in a curtailed mode during certain wind conditions. However, based on analysis of available wind data for the site, any such reduction is considered likely to be minimal. Given that the estimated capacity factors used in the calculation of annual yield are conservative for the proposed site, the calculated energy generation and resultant carbon savings are considered realistic even taking account of any potential operational curtailment.

9.16.3.

Contribution to renewable energy generation targets is a material planning consideration, and SG ‘Energy’ supports a position that renewable energy generation is a legitimate consideration to balance against impacts on known constraints if a ‘major’ development only, “Other material factors when seeking to establish whether the impact on known constraints is unacceptable relate to the scale of any contribution to renewable energy generation targets and the effect of the proposal on greenhouse gas emissions…It is unlikely that a legitimate argument may be formulated in relation to these factors unless the proposal is a ‘major’ development (i.e. 20MW or greater). The developer should quantify the contribution that the development will make in relation to these factors as part of any Environmental Impact Assessment undertaken in support of any planning application.” The application is a major development, as specified. Whilst supplementary guidance states that renewable energy generation is only a legitimate consideration at 20 megawatts or greater, it should be noted that smaller scale wind farm would nonetheless contribute to targets. In relation to offsetting carbon emissions, within a wind farm appeal decision in the Highland Council area in 2014

(PPA-270-2108), a Reporter noted that "…although the proposed wind farm is relatively small (9.2MW) this would, in my view, still represent a significant benefit."

9.17. Subsea Cable Transmission Link.

9.17.1.

The Orkney grid is currently connected to Caithness by two 33kV cables with a combined capacity of 38 megawatts. Orkney is one of Britain's leading centres for innovation in renewable energy combined with significant renewable resources, from onshore wind to wave and tidal. Following the significant growth in small-scale renewable electricity generation, the existing Orkney electricity network reaches full capacity at times, preventing new electricity generators connecting and curtailing the output of some existing generators.

9.17.2.

It is initially proposed to install a 220kV HVAC subsea cable between Orkney and Caithness to relieve the pressure on the current system and allow new generators to connect, followed by a second cable of similar specification once further generation has committed and the economic case has been made for the further investment. To receive approval for a cable, the government regulator for gas and electricity markets in the United Kingdom, Ofgem, must agree that a 'needs case' demonstrates sufficient demand and value to Orkney and Scottish mainland customers.

9.17.3.

In March 2018, Scottish and Southern Electricity Networks (SSEN), operating as Scottish Hydro Electric Transmission (SHET) under licence, submitted to Ofgem, a Strategic Wider Works (SWW) 'Final Needs Case' for a subsea cable transmission link from Orkney to the Scottish mainland. The Needs Case includes a comprehensive analysis of the investment options available to meet a range of credible future generation scenarios in Orkney. The analysis concludes that the 'tipping point' to justify the investment for the first cable is no more than 70 megawatts, the point at which the cost of the investment is exceeded by the benefits of the renewable energy supplied to energy consumers. SSEN's analysis has been assessed by both National Grid, as the System Operator, and independent economic consultants. SSEN has therefore requested a conditional approval of the Needs Case from Ofgem subject to demonstration that 70 megawatts of generation have been committed to by developers.

9.17.4.

As stated earlier in the report, in National Planning Framework 3 (NPF3) the 'Orkney Waters' are identified as an 'Energy Hub' and an area of co-ordinated action and relieving current electricity grid constraints are stated as an objective, "Strengthening the electricity grid will be essential in unlocking renewable resources, both onshore and offshore. Interconnectors to…Orkney…are all required to fully realise the potential for diverse and widely distributed renewable energy development." NPF3 also refers to Kirkwall and Orkney, noting "…Ambitious plans for wave and tidal energy, together with the wider area's importance as a strategic location for shipping and energy infrastructure, provide significant new opportunities for the

town…Improved grid connection will be a vital component in the future success of Orkney's marine energy sector. As part of this, there will be opportunities to develop new technologies and approaches to harness renewable power generation on and around the islands…"

9.17.5.

Noting that the subsea cable transmission link is identified as national development in NPF3, which is the Government's statutory framework for Scotland's long-term spatial development, it is appropriate to provide material weight to the contribution that the development would make to the Needs Case. This development would contribute between 18 and 20.4 megawatts of the 'tipping point' of 70 megawatts of electricity generation required within Orkney, as stated by SHET.

9.17.6.

On the issue of grid constraints, Paragraph 165 of Scottish Planning Policy confirms that, "Grid capacity should not be used as a reason to constrain the areas identified for wind farm development or decisions on individual applications for wind farms." For the avoidance of doubt, the paragraphs above refer to the contribution of the proposed development to infrastructure identified as national development, but not the connection of the proposed development to the grid, which is an issue for wind farm developers to discuss with the relevant transmission network operator.

9.18. Orkney Energy Strategy.

9.18.1.

The Orkney Energy Strategy is the result of collaboration between the Council, Orkney Renewable Energy Forum, Community Energy Scotland and Highlands and Islands Enterprise, and prioritises "the need to attract, build and anchor innovation in business, people and infrastructure, to capitalise on Orkney's reputation as a location of choice for energy technology development and to harness the powerfully collaborative nature of the local community." The strategy sets an objective to build on Orkney's existing international competitive advantage and harness Orkney's potential in terms of growth, quality jobs and exports, by building on existing strengths demonstrated in innovation, energy research and development, technology, and the capability of supply chain. An Orkney energy vision is stated, of: "A secure and sustainable, low carbon island economy driven uniquely by innovation and collaboration, enabling the community to achieve ambitious carbon reduction targets, address fuel poverty and provide energy systems solutions to the world."

9.18.2.

However, in relation to research and innovation, and the energy industry generally in Orkney, constraints and special circumstances are also identified. Despite leading the way towards self-sufficient renewable generation, the strategy notes that access to energy markets is limited by inadequate electrical grid infrastructure, affecting the ability to export energy to the Scottish mainland. It is concluded that for Orkney to deliver and significantly contribute towards the low carbon ambitions of the Scottish and UK governments, significant investment in grid connectivity is required.

9.19. Renewable Energy Subsidy.

9.19.1.

The Scottish Government 'Climate Change Plan' (2017) includes a description of Contracts for Difference (CfD), a UK-wide subsidy scheme that provides a route to market for renewable electricity projects. CfD is designed to provide the UK consumer with value for money, whilst encouraging investment in low-carbon generation, by providing low-carbon electricity generators with price stabilisation for up to 15 years, and a CfD is a contract entered into by a low carbon electricity generator and the Low Carbon Contracts Company (LCCC), owned by UK Government. The UK Government sets a 'strike price' for each low carbon technology, which is a maximum price that it is willing to pay for electricity generation from a specified technology. Strike prices are designed to reflect the cost of investing in a technology. Throughout the term of a CfD, when the wholesale price of electricity is lower than the strike price set out in the contract, the LCCC will pay the difference to the generator. When the wholesale price is above the strike price, the generator will pay the difference back to the LCCC.

9.19.2.

CfD eligibility requirements include: a valid grid offer; land control; and planning consent. Proof of eligibility does not guarantee that a generator will receive CfD but provides the generator an opportunity to enter a competitive auction, to bid below the administrative strike price set by UK Government. A project provides a sealed bid to LCCC confirming the lowest price it can achieve, as well as binding construction and commissioning milestones. The bid must be below the strike price set by UK Government, and the lowest competent bid received by LCCC sets the clearing price for all projects in that technology.

9.19.3.

In 2013, a strike price was provided for Remote Island Wind projects that was reflective of the increased project risks and grid costs associated with investing in islands before a transmission cable was built. However, in 2015 before the second CfD auction, support for Remote Island Wind and marine and tidal projects was removed by UK Government and those projects were unable to participate. 'Remote Island Wind' is a UK Government term for projects in Orkney, Shetland or the Western Isles. The Scottish Government 'Scottish Energy Strategy' (2017) notes that the Scottish Government and its partners "pressed the UK Government consistently for a long period over the need to support remote island wind", to provide a distinct and meaningful opportunity for large wind developments in Orkney, Shetland and the Western Isles to compete for long-term contracts, through the CfD process. A Scottish Renewables Briefing Note 'Contracts for Difference for Renewable Generators' notes that in order to support remote island wind, in conjunction with the Scottish Government, UK Government, and the other island authorities, for over ten years the Council has sought to overcome the following barriers:

- No grid capacity and a moratorium on new connections.
- No transmission interconnector to UK mainland.

- Highest grid charges in UK, due to lack of interconnector.

9.19.4.

As a result of extensive collaboration between the island authorities and the industry, and in response to UK Government consultations, in July 2018 it was announced that Remote Island Wind projects have an opportunity to participate in the third CfD auction in May 2019, provided they meet eligibility criteria. This follows recognition by the UK Government that island wind projects can generate greater benefits to communities than projects on mainland UK, as well as contributing to the justification for an interconnector. However, Remote Island Wind projects must now bid directly against offshore wind projects, which have been able to achieve dramatic cost reductions due to their scale, both in terms of numbers of turbines, and increases in rotor diameter and tip height; Remote Island Wind projects are smaller and are subject to greater constraints by being located onshore. Critically, all further commercial renewable energy generation in Orkney is dependent upon a transmission link to the UK Mainland.

10. Other Issues

The following issues have been raised by objectors and/or are related to the proposed development but are not material planning considerations in the determination of the current application.

10.1. Electricity Transmission Infrastructure.

Any electricity transmission infrastructure associated with the proposed development is subject to a separate consenting regime. Discussions regarding the design, including types of poles, or routes of that potential infrastructure, are not material to determination of the current application.

10.2. Community Benefit Fund.

In line with Government advice, the development would provide a community benefit fund of £5,000 per megawatt per annum of installed capacity to the local community throughout the lifetime of the development.

10.3. Fuel Poverty Fund.

The developer has also committed to providing an additional £1,000 per megawatt per annum of installed capacity as an additional fuel poverty fund, provided the community entity in receipt of that fund would be willing to match fund it from the community benefit fund.

11. Conclusions

11.1.

Supplementary Guidance ‘Energy’ sets out that any decision for a wind farm development is a balance between potential benefits and anticipated adverse impacts on known constraints, as follows:

- All planning applications are determined by considering the potential benefits of a proposal and any anticipated adverse impacts on known constraints. The Council balance these factors as part of the assessment process before ultimately making a decision regarding the suitability of any application for planning permission.
- Whilst potential constraints are covered within the topic-specific policies in the Local Development Plan, and related supplementary guidance, it is likely that the most relevant benefits that a proposed energy development could have would surround net economic benefit; the scale of contribution to renewable energy generation targets; and the effects of a proposal on greenhouse gas emissions.
- Where there would be clear adverse impacts on known policy constraints or impacts on the subject areas included within the Development Criteria at 4.18 of this document, the scale of any positive impacts will help to establish whether, on balance, the identified adverse impacts are unacceptable.

11.2.

The application site is within a part of Orkney identified in the Spatial Strategy Framework of policy 7 of the Local Development Plan as ‘Areas with Potential for Wind Farm Development’. Consideration is therefore not whether the principle of the development is acceptable, but assessment of acceptability of the design and effects of the wind energy development proposed.

11.3.

The site selection process, and the number of design iterations since initial submission (and before) must be acknowledged. The site is one of least constraint. It is not within a designated landscape and is distant from the multiple designated landscapes in Orkney. The site has no international or national natural heritage designations, except for the eastern edge which is SSSI, but which is not affected by the development footprint. The site can accommodate the development without impacting aviation and defence interests. Levels of peat and carbon rich soils are low. When compared to other sites across Orkney equally distant from houses, the site is relatively free of constraints.

11.4.

In terms of issues that require mitigation, the dry heath habitat fragmentation would be offset by a larger area of enhancement in adjoining land and disturbance would be minimised, contributions would be made towards measures to promote the research and understanding of The Cairns archaeological site, and a research and management plan would improve the regional peregrine population.

11.5.

The only residual issue is therefore landscape impact. By its nature, wind energy development will result in some significant adverse impacts on landscape and visual receptors, but in accepting that, there is still a point at which the scale and impact of a development exceeds its landscape capacity. The site is elevated and unenclosed, and there are open views towards the site. The landscape is not of sufficiently large scale to accommodate the development, and the turbines would become the dominant feature from various important viewpoints. Approaching South Ronaldsay

by road from the north, or by sea from the south, the turbines would be visible. That includes the view of South Ronaldsay from parts of the route of the St Margaret's Hope ferry, which is the entrance to Orkney and first sense of the Orkney landscape for many visitors.

11.6.

The number of jobs created is considered insignificant, particularly if consideration is focussed on operational phase employment. Potential socio-economic benefits of Shared Ownership are acknowledged, noting that the investment opportunity is indicated as post-construction rather than earlier in the development process, the partner community body has not been finalised, and therefore quantified and evidenced local benefits from the shared ownership opportunity have not been detailed. Carbon displacement is material, noting that the development is close to the lower limit of 20 megawatts stated in supplementary guidance 'Energy', below which the supplementary guidance concludes that carbon displacement is not a legitimate argument in favour of the development, although that is balanced against Reporter appeal decisions which acknowledge the role of smaller wind farm developments. The contribution towards the 70 megawatts 'tipping point' for the needs case for the subsea cable is significant, noting the inclusion of the subsea cable in NPF3 and the associated potential economic development, research and innovation associated with the energy industry within Orkney.

11.7.

In conclusion, even in areas identified as having potential for wind farms and with least constraint, it is not guaranteed that development within those areas will be technically feasible or appropriate and each application will be judged on its merits. In this case, employment creation, socio-economic benefits of shared ownership, carbon displacement and contribution towards the needs case are not considered to outweigh conflict with Orkney Local Development Plan 2017 policies and associated supplementary guidance in relation to landscape impact. It is therefore recommended that the application **be refused**. It should be noted that this is a finely balanced recommendation and should the decision-maker place additional weight on any of the issues supporting development, that could legitimately tip the balance in favour of the development.

12. Recommendation

Refuse for the following reason:

The proposed site is located within the landscape type 'Plateau Heaths and Pasture', as defined in the SNH Orkney Landscape Character Assessment (1998). The application site is open and slightly elevated with a feeling of exposure, and a landscape sensitivity of plateau heaths and pasture is that the open plateau makes built structures highly visible from within the landscape. The 'Landscape Capacity Assessment for Wind Energy in Orkney' (2015) notes that turbines of a scale 50 to 80 metres "would tend to dominate the low hills of this landscape type" and that "turbines typically up to 30 metres and occasionally between 30 and 50 metres would be acceptable in small groups located on the fringes of the character area,

away from plateau tops". The site selection process and design iterations are all acknowledged, and absence of landscape designation, but the scale of turbines proposed exceeds the capacity of the landscape. The inevitability of significant impacts resulting from commercial scale wind energy development is also acknowledged, but at the scale proposed the landscape would be diminished, and the turbines would be a prominent feature in a skyline location, across a wide area of theoretical visibility. Impact from the Linklater Memorial is of concern, as a memorial to two ships lost off the coast, and as a popular location for wildlife watching and informal recreation, where the tall rugged cliffs and lack of large scale man-made structures are key to its character.

The development is considered contrary to Policy 7D of the Orkney Local Development Plan 2017 and Supplementary Guidance 'Energy', as listed below, on the basis that the wind energy development is likely to have a significant adverse impact on landscape character which cannot be mitigated to the satisfaction of the planning authority to avoid unacceptable impacts, and that enjoyment of the Linklater Memorial would be significantly compromised by new wind energy developments.

Policy 7 – Energy

D. Onshore Wind Energy Development

i. Proposals for wind energy developments of all scales, including extensions to existing developments and repowering, will be assessed against the following factors to ensure that there will be no significant adverse individual or cumulative impacts:

b. Landscape and Visual Impact.

SP1: Areas with Potential for Wind Farms

4.13 These areas have been defined by eliminating sensitive areas that require significant protection or are sensitive to wind farm development. It is not guaranteed that development within these areas will be technically feasible or appropriate and each application will be judged on its merits against the Development Criteria.

Development Criterion 2 – Landscape and Visual Impact

4.26 Wind energy development that is likely to have a significant adverse impact or cumulative impact on landscape character or visual amenity, which cannot be mitigated to the satisfaction of the planning authority to avoid unacceptable impacts, will not be permitted.

4.35 Views from recognised viewpoints, main routes, visitor attractions and core paths are used by residents, as well as visitors to Orkney. It is important that, wherever possible, our enjoyment of a place is not significantly compromised by new wind energy developments.

13. Contact Officer

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14. Appendices

Appendix 1: Location Plan.

Appendix 2: List of objectors/supporters/neutral comments.

Appendix 3: Habitats Regulations Appraisal.