

Chapter 12: Other Issues

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12 Other Issues

12.1 Introduction

12.1.1 This Chapter provides a summary of other environmental considerations which have been scoped out of detailed assessment, but may still be of relevance to the Proposed Development and the implementation of mitigation to offset potential effects. These considerations include:

- Air Quality;
- Noise;
- Land Use, Socio-economics, Access and Recreation;
- Traffic and Transport;
- Climate Change and Carbon Balance;
- Population and Human Health;
- Risk of Major Accidents and Disasters; and
- Materials.

12.1.2 This Chapter has been prepared by ASH, with inputs by VEFW.

12.1.3 The following sections provide a review of each of the issues covered in this Chapter.

12.2 Air Quality

12.2.1 The 2016 ES included an air quality assessment, following guidance published by the Institute of Air Quality Management (IAQM) 2014. Site based surveys for air quality were scoped out of the 2016 ES following consultation with SIC Environmental Health Department.

12.2.2 The B9075 does not lie within an area identified by SIC as a priority for improving air quality. Annual mean NO₂ (nitrogen dioxide), PM₁₀ (particulate matter of size fraction approximating to <100mm diameter) and PM_{2.5} (particulate matter of size fraction approximating to <2.5 mm) concentrations are not expected to exceed the air quality objectives (for the years 2015-2017).

12.2.3 The 2016 ES identified that construction phase impacts may arise due to fugitive dust emissions, which are commonly created by construction activities and exhaust emissions from the movement of vehicles and on-site plant. However, with the implementation of good practice measures such as monitoring of dust levels, screening stockpiles and implementing speed-limit for site traffic, no significant effects during construction were anticipated.

12.2.4 The assessment of operational phase air quality impacts were scoped out of the 2016 ES. It was assumed that while vehicular traffic on the road network would lead to emissions of air pollutants, the proposed changes were essentially a 'like-for-like' replacement of the existing B9075 and no changes to the existing traffic flows would be anticipated once the road is operational.

12.2.5 Given the nature and scale of the Proposed Development, with the implementation of appropriate mitigation measures, no significant effects are anticipated as a result of air quality impacts. Therefore an assessment on the potential effects of air quality assessment as a result of the Proposed Development is scoped out of the EIA Report.

12.2.6 However, the mitigation measures referred to in the 2016 ES again form part of the suite of mitigation measures put forward in this EIA Report for the Proposed Development. Mitigation measures to minimise any air quality impacts during construction are included in Appendix 12.1 (as per Appendix 12.2 of the 2016 ES). These mitigation measures and commitments are summarised within the schedule of mitigation measures (see Appendix 4.1). With mitigation measures in place it is considered that dust from construction is unlikely to cause a nuisance.

12.3 Noise

12.3.1 The 2016 ES included a noise assessment to compare predicted effects from construction and operation of the development with the assumed baseline noise environment. Site based surveys for noise were scoped out following consultation with SIC Environmental Health Department.

12.3.2 There is a single residential receptor (Sandwater) at the eastern extent of the B9075 and a small hamlet called Setter containing three residential receptors to the west. Basic noise levels for the A970 and B9075 were calculated in the 2016 ES, and are included in Appendix 12.3.

12.3.3 Noise would be emitted by equipment and vehicles used during the construction phase and by any operational traffic during the operation phase. The level of noise emitted by these sources, and the distance to receiver locations were the main factors assessed in the 2016 ES to determine potential effects of noise at receptor locations. Construction noise calculations are shown in Appendix 12.2.

12.3.4 Residential receptors considered in the 2016 ES included Sandwater House and Setter. No significant residual noise effects were assessed as a result of construction or operational activities at either property providing mitigation in the form of a noise management section within the CEMP is applied.

12.3.5 Given the nature and scale of the Proposed Development, with the implementation of appropriate mitigation measures, no significant effects are anticipated as a result of noise impacts. Therefore an assessment on the potential effects of noise assessment as a result of the Proposed Development is scoped out of the EIA Report. However, the mitigation measures referred to in the 2016 ES have been reviewed and updated as required in light of the changes associated with the Proposed Development to minimise any noise impacts during construction and/or operation. Mitigation measures and commitments are included in the schedule of mitigation (Appendix 4.1).

12.4 Land Use, Socio-economics, Access and Recreation

12.4.1 The 2016 ES included a desk based assessment on the potential land use, socio-economic, access and recreation effects resulting from the construction and operation of the B9075 road improvement works within a 1 km buffer.

- 12.4.2 The surrounding area is sparsely populated and comprises of undulating barren, open heather moorland of limited agricultural value. There is a core path that leaves the B9075 at the eastern extent, heading south to facilitate access to the banks of Sandwater Loch. This forms part of a variety of outdoor-based recreational activities in the area which include walking, bird watching, fishing, cycling and horse-riding.
- 12.4.3 Overall the 2016 ES predicted that there would be no significant effects as a result of the road improvement works as long as mitigation measures identified to prevent or minimise predicted impacts or enable effects to be beneficial were implemented. These include designing the road in line with latest highway standards, the installation of signage and segregated pedestrian walkways during construction, and use of local suppliers to maximise beneficial effect upon the local economy.
- 12.4.4 The Proposed Development would be completely 'off-line' compared to the previous proposal and therefore impacts upon access and recreational users would likely be reduced during construction as there would be segregation from the works.
- 12.4.5 As discussed in Chapter 4 of this EIA Report, a Recreational Management Plan will be prepared in discussion with SIC that will set out the principles for promoting access in the area, including retaining access to Sandwater Loch, and access to the wind farm. The plan will also allow for potential reinstatement of the existing road (in part), if this is considered to be desirable. It is anticipated that the Recreational Management Plan will be covered by a Condition of Consent thereby ensuring that SIC have an input into the design and are content with what is developed.
- 12.4.6 A detailed assessment on land use, socio-economics, access and recreation is therefore scoped out of this EIA Report. However, appropriate mitigation measures have been developed and included in the schedule of mitigation (Appendix 4.1).

12.5 Traffic and Transport

- 12.5.1 An assessment on traffic and transport effects was carried out and documented in the 2016 ES. This considered the potential for increased traffic on the public road network (A970 and relevant section of B9075), the potential for congestion, journey delay, safety and degradation of the road surface.
- 12.5.2 The A970 forms a main strategic road on the mainland island, running north to south and forming a spine road for the island. It is a single carriageway for the entire length. The existing B9075 is a single carriageway B classified road that forms a strategic route across the island, running east to west between the A970 and A971.
- 12.5.3 The 2016 ES considered that minor effects on congestion and journey delay are likely as a result of the road improvement works and traffic management would be required during the construction phase. There would also be the possibility of temporary road closures during key activities.
- 12.5.4 The Proposed Development would be completely 'off line' from the existing B9075 road. Therefore, during construction, all 'general public' traffic will be separated from the construction works and the potential for construction impact would be minimised.

12.5.5 A detailed assessment on traffic and transport is therefore scoped out from the EIA Report as no significant effects are anticipated to occur.

12.5.6 However, a Traffic Management Plan (TMP) has been prepared for Viking Wind Farm and construction traffic associated with the Proposed Development would be managed in accordance with this TMP.

12.6 Climate Change and Carbon Capture

12.6.1 With regard to climate change, in the context of the EIA process climate change is considered both in relation to the contribution of the Proposed Development to increasing or decreasing gaseous emissions with global warming potential (GWP), and in relation to climate change adaptation.

12.6.2 Emissions associated with the construction phase of the Proposed Development would be limited to temporary and short term emissions of exhaust gases from vehicles and construction plant, and the potential for the release of carbon dioxide as a result of dewatering and exposing peat and peat soils during construction. Neither source is considered likely to be significant in terms of GWP. Long term, emissions would not be expected to differ from that of the existing road.

12.6.3 With peat deposits present in excess of 4-5m, the design of the Proposed Development has required careful consideration. The earthworks design philosophy that has been adopted negates significant peat excavation, disturbance to the existing B9075, and limits environmental impact, with a mix of floating and founded sections of road proposed.

12.6.4 The peat volumes for the Proposed Development have been calculated utilising the excavated areas identified along the route and modelling the cut volume of peat based on peat probing data. The total excavated peat volume along the route (with an overall length of 2090m), has been estimated to give rise to the temporary displacement of 31,150m³ of peat. The temporarily displaced peat is estimated to comprise approximately 28,450m³ of acrotelmic peat and 2,700m³ of catotelmic peat. Further detail on volumes and reuse of excavated peat is provided in Appendix 10.4: Peat Management Plan.

12.6.5 In terms of climate adaptation, consideration would be given to the potential implications of climate change on road design (e.g. design for increased flood risk); however, no potential for significant impacts have been identified and a detailed assessment of climate change is therefore scoped out of the EIA.

12.7 Population and Human Health

12.7.1 Potential effects on population and human health as a result of the Proposed Development could relate to air quality, noise, and major accidents/disasters during construction. None of these topics are considered to result in a significant effect and are therefore scoped out of the EIA Report. A detailed assessment of population and human health is also therefore scoped out of the EIA, although mitigation measures relevant to air quality and noise in particular are proposed in order to minimise potential effects where practicable.

12.8 Risk of Major Accidents and / or Disasters

- 12.8.1 Given the nature of the Proposed Development, and its remote location, the risk of a major accident or disaster is considered to be extremely low. Furthermore, the Principal Designer would need to fully assess risks and mitigate as appropriate during the design stage as part of the requirements of the Construction (Design and Management) Regulations (2015).
- 12.8.2 Relevant types of accident and / or disasters could include:
- Severe weather events, including high winds, high rainfall leading to flooding, or extreme cold leading to ice and heavy snow;
 - Wildfire;
 - Traffic related accidents; and
 - Mass movement associated with ground instability.
- 12.8.3 In many cases, these above risks would be no greater for the Proposed Development than similar risks associated with the existing road.
- 12.8.4 All construction traffic would be managed in accordance with a detailed TMP prepared for Viking Wind Farm, to be agreed with Shetland Islands Council. The TMP would outline mitigation measures aimed at designing out the risk of accidents.
- 12.8.5 The design of the Proposed Development involves the proposal to float sections of the new road over deep peat (generally where peat is greater than 1m and ground slopes are a maximum of 5%). The sections of floated road would minimise peat excavations, reduce excavated peat volumes and leave vegetation and soils intact. For the founded sections, the design of the transition lengths to or from peat would adopt current good practice that permits a gradual change in subgrade flexibility and thereby limits potential differential settlements.
- 12.8.6 Given design considerations, and implementation of relevant mitigation measures, a detailed assessment of the risk of major accidents and / or disasters is scoped out of the EIA.

12.9 Materials

- 12.9.1 Construction of the Proposed Development will require raw materials and is likely to generate both surplus material and waste. No significant residual effects on the environment have been predicted as a result of the Proposed Development therefore a detailed materials assessment has not been completed. Nevertheless, this section outlines measures for minimising and mitigating impacts, where possible.
- 12.9.2 For all potential waste arisings, the Contractor would be required to comply with The Waste Management Licensing (Scotland) Regulations 2011 (WML). Consideration would also be given to SEPA guidance on sustainable waste management, such as the 'Regulatory Guidance: Promoting the Sustainable Re-use of Greenfield Soils in Construction' (March 2010), 'Guidance on the Production of Fully Recovered Asphalt Road Planings' and appropriate SEPA Pollution Prevention Guidelines (PPGs). If necessary, the Contractor would consult SEPA for advice. If wastes could not be legitimately re-used on site, they

- would be removed to a licensed recycling or disposal facility in line with regulatory requirements.
- 12.9.3 Construction, mitigation and environmental protection measures will be included in the CEMP (see Appendix 4.2).
- 12.9.4 A Site Waste Management Plan (SWMP) would be developed either as part of the CEMP or as a separate document, and would be updated during construction of the Proposed Development.
- 12.9.5 The plan would identify, prior to the start of construction works, the types and likely quantities of wastes that may be generated. It would set out how waste would be reduced, re-used, managed and disposed of in accordance with WRAP Guidance. The SWMP would be developed by the Contractor before commencement of the construction phase and would set out how all construction phase materials would be managed.
- 12.9.6 Implementation of the SWMP would minimise waste at source, during detailed design and construction, by facilitating measures to maximise re-use of materials on-site and reduce the need for new construction materials. Regular reviews of, and updates to, the SWMP would enable the monitoring of the effectiveness of the mitigation measures at minimising waste generation, especially disposal to licensed landfill.
- 12.9.7 Excavated peat would be managed in accordance with a Peat Management Plan (PMP). The total excavated peat volume along the route has been estimated to give rise to the temporary displacement of 31,150m³ of peat. The temporarily displaced peat is estimated to comprise approximately 28,450m³ of acrotelmic peat and 2,700m³ of catotelmic peat. The Proposed Development is expected to achieve an overall peat balance. All excavated material will be required for reuse as part of the works and no surplus peat is anticipated. This is detailed in a Stage 1 Peat Management Plan prepared for the Proposed Development (see Appendix 10.4).