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## 13. Summary of Significant Effects

### 13.1 Introduction

- 13.1.1 **Chapters 5 to 12** of the Environmental Impact Assessment Report (EIA Report) present the findings of the assessment of effects of the Proposed Development on a topic-by-topic basis. The significance of these effects has been assessed using criteria defined in the topic chapters. Where appropriate, the significance of effects has been categorised as Major, Moderate, Minor or Negligible. In the context of the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 (the 'EIA Regulations'), effects assessed as being of 'Major' or 'Moderate' significance are considered as significant effects. Where this differs for certain topic chapters, this has been clearly stated, and details are provided for how significant effects have been defined for that assessment.
- 13.1.2 In line with Schedule 4 of the EIA Regulations, PAN 1/2013, and other relevant EIA guidance, the EIA Report has focused on identifying likely significant environmental effects (both positive and negative) of the Proposed Development, during construction and operation (including cumulatively) to inform decision making.
- 13.1.3 Tables **13.1 - 13.4** below summarise the predicted likely significant effects of the Proposed Development prior to and following the implementation of committed additional mitigation (over and above the proposed good practice and embedded mitigation measures which are considered in the initial assessment judgements). All effects are adverse unless otherwise stated.
- 13.1.4 Effects in relation to shadow flicker and aviation are considered separately within **Chapter 4: Development Description** of the EIA Report. The nature of these topics means that the assessments are focussed more on identifying if impacts will be acceptable or not rather than significant in EIA terms, and as such the significance of effect has not been determined. The assessments have, however, determined that shadow flicker and aviation impacts should be acceptable, and mitigation measures are available if needed.

### 13.2 Summary of Significant Effects

- 13.2.1 No significant effects are predicted in relation to the following topics, and these are therefore not discussed further in this chapter:
- **Chapter 8: Ornithology;**
  - **Chapter 9: Hydrology, Geology, Hydrogeology and Peat;** and
  - **Chapter 10: Noise and Vibration.**
- 13.2.2 Prior to committed mitigation, **Significant** effects are predicted in relation to the following topics:
- **Chapter 5: Landscape and Visual Impact Assessment;**
  - **Chapter 6: Cultural Heritage;**
  - **Chapter 7: Ecology (Beneficial);**
  - **Chapter 11: Access, Traffic and Transport;** and
  - **Chapter 12: Climate Change (Beneficial).**
- 13.2.3 Following additional mitigation, **Significant** effects remain for the following topics:
- **Chapter 5: Landscape and Visual Impact Assessment;**
  - **Chapter 7: Ecology (Beneficial);** and
  - **Chapter 12: Climate Change (Beneficial).**

### 13.3 Landscape and Visual Impact

- 13.3.1 It should be noted that wind turbines, as tall man-made structures, introduce features which are likely to bring about landscape and visual change. Measures to reduce effects upon the landscape resource and upon views and visual amenity are predominantly achieved through the design process, as described in **Chapter 3: Site Selection and Design Strategy** and the supporting **Design and Access Statement**. As all mitigation for landscape and visual

effects is embedded within the final design for the Proposed Development, all effects summarised in this section are effectively residual effects as no additional mitigation is proposed (see **Table 13.1**)

### Significant Landscape Effects

- 13.3.2 Significant effects have been predicted on the landscape resource of the Site itself during construction (**Major**) and operation (**Major**).
- 13.3.3 Significant effects on landscape character during operation are predicted for:
- The host LCT 156- Peninsula: **Significant (Major)** effects are predicted within approximately 4 km of the north and south of the Site reducing to **Significant (Moderate)** within approximately 7 km.
  - Designated Landscape:
    - Rhins Coast Regional Scenic Area (RSA): Localised and significant effects are predicted on the landscape character within approximately 7 km to the north and south of the Site, and within the RSA. These localised effects on the landscape character are not judged to comprise the overall integrity of the RSA.

### Significant Visual Effects

- 13.3.4 Significant effects on views are predicted at 11 of the 17 LVIA viewpoints assessed. The majority of significant visual effects are contained within 5 km, representing closer proximity and more open views to the north, east and south of the Site.

#### Viewpoints

- 13.3.5 **Major** effects are predicted from:
- Viewpoint 1: Core Path, west of Meikle Galdenoch;
  - Viewpoint 2: Core Path, Larbrax Moor;
  - Viewpoint 3: Meikle Galdenoch, near Parking Area;
  - Viewpoint 4: B738, near Lochlaw Cottage; and
  - Viewpoint 11 – Parking Area, near Killantringan Lighthouse.
- 13.3.6 **Moderate** effects are predicted from:
- Viewpoint 5 – B738, near Meikle Galdernoch;
  - Viewpoint 6 – Agnew Monument;
  - Viewpoint 8 – Slewdown Hill;
  - Viewpoint 9 – High Aucheneel;
  - Viewpoint 12 – South Cairn; and
  - Viewpoint 16 – Stranraer to Belfast Ferry.

#### Routes

- 13.3.7 **Major to Moderate** effects are predicted from:
- Southern Upland Way: within 7 km from sections with visibility; and
  - Rhins of Galloway Coastal Path: within 7 km from sections with visibility;
- 13.3.8 **Major** effects are predicted from:
- Core Paths within 5 km: This may extend up to 7 km from Core Paths along the coastal edge, where direct views towards the Proposed Development are available.

### Cumulative Effects

- 13.3.9 The effects identified in the cumulative assessment will reflect those identified in the primary assessment (which considers operational and under construction wind farms as part of the baseline).

## 13.4 Cultural Heritage

- 13.4.1 During construction and prior to mitigation, the assessment predicted a **Major** adverse direct effect on Loch More, burnt mound (2), which lies within the micro-siting allowance. Following mitigation, including the marking off and avoidance of the asset, the effect is reduced to none. A **Major** adverse effect is also predicted on buried archaeology. Following mitigation, including undertaking an archaeological watching brief during ground-breaking works, the effect is reduced to **Minor** (not significant) (see **Table 13.2**).

## 13.5 Ecology

- 13.5.1 The assessment has predicted no significant adverse effects are likely in relation to direct and indirect impacts on blanket bog and wet modified bog habitats during construction. The implementation of peatland restoration measures through the Biodiversity Enhancement Management Plan (an outline of which is provided in **Appendix 7.5**) is likely to result in a **Moderate beneficial (significant)** effect on peatland habitats within the Site in the long-term (see **Table 13.3**).

## 13.6 Access, Traffic and Transport

- 13.6.1 During the construction phase, and prior to mitigation, **Significant (Major)** and **(Moderate)** effects are predicted for path users within the Site, road users and residents on the B738 and A77 due to increased traffic volumes. Following the application of mitigation, such as the implementation of a Construction Traffic Management Plan (CTMP), Staff Travel Plan and Abnormal Load Management Plan, the effects are reduced to **Minor** (not significant) (see **Table 13.4**).

## 13.7 Climate Change

- 13.7.1 During the operational phase of the Proposed Development, carbon lost during the manufacture and construction will be offset, as well as the emissions lost to construction traffic and backup generation requirements. The assessment on climate change as presented in **Chapter 12**, predicts that there will be an overall **Significant beneficial** effect associated with the Proposed Development on its own (**Moderate**) and cumulatively (**Major**) effect with respect to the collective avoidance of greenhouse gas emissions (see **Table 13.5**).

## 13.8 Interrelated Effects

- 13.8.1 The EIA Regulations (Schedule 4, Paragraph 5) require that EIA Reports consider the interrelationships between aspects of the environment likely to be significantly affected by a development. It is considered that the following effects are interrelated:
- As highlighted in **Chapter 6**, some potential interactions may arise on the setting of heritage assets with the landscape changes (presented in **Chapter 5**). Taking into consideration the distinction of effects arising from the Proposed Development on the surrounding landscape and those affecting the setting of key heritage assets, it is assessed that there are no significant interrelated effects between these topics.
  - **Chapter 7** highlighted that effects in **Chapter 8** and **Chapter 9** are most likely to produce a measurable effect on ecological receptors. Interrelated effects could potentially occur due to loss or reduction in quality of habitats via hydrological changes. These are already taken account of via the assessment of GWDTEs in **Chapter 9**. Changes to the ornithological assemblage as a result of the Proposed Development may also affect protected species, either as prey items or as competitors, but the level of change is likely to be negligible.
  - Ornithological features may be affected by effects identified in **Chapter 7** and **Chapter 9**. Interrelated effects could potentially occur due to loss or reduction in quality of suitable habitats for breeding, or indirect effects on foraging due to the changes in conditions for prey items. The relevant effects in this respect have been considered for the purposes of the ornithological assessment presented in **Chapter 8**. It is assessed that there are no significant interrelated effects between these topics.

- **Chapter 9** highlights that the excessive levels of suspended sediment in watercourses as a result of construction activities can have an effect on watercourse ecology and fish (see **Chapter 7**). However, with embedded, good practice and additional site-specific mitigation (e.g. adherence to GPP, SuDS, buffers etc) there is considered to be no significant residual effect on water quality of the downstream watercourses.
- There is potential for interrelationships with traffic and transport effects in relation to amenity including visual effects, noise and hazardous loads. Visual effects and noise are addressed in **Chapter 5** and **Chapter 10** respectively. It is assessed that there are no significant interrelated effects between these topics.

**Table 13.1 : Summary of Significant Landscape and Visual Effects**

| Predicted Effects   | Primary LVIA Assessment Findings (operational and under construction wind farms included in the baseline)  | Cumulative Assessment Findings               |
|---|--|--|
| <b>Landscape and Visual Amenity</b>                         |  |  |
| <b>Construction Effects on Landscape Receptors</b>          |  |  |
| The Site  | Major  | N/A  |
| <b>Operational Effects on Landscape Receptors</b>           |  |  |
| The Site  | Major  | N/A  |
| 156 – Peninsula LCT   | Major effect within approximately 4 km, to the north and south of the Site reducing to Moderate within approximately 7 km. Effects to east will be contained by policy woodland.   | Will reflect findings of primary assessment. |
| Rhins Coast Regional Scenic Area (RSA)                      | Localised and significant effects on landscape character within approximately 7 km to the north and south of the Site, and within the RSA (see LCT assessment findings). Beyond this, effects will fall below the threshold of significance. <b>These localised effects on landscape character are not judged to compromise the overall integrity of the RSA.</b> Furthermore, and from large areas of this locally designed landscape, the qualities of the RSA will be able to be experienced unaltered. | Will reflect findings of primary assessment. |
| <b>Operational effects on Visual Receptors (Viewpoints)</b> |  |  |
| Viewpoint 1- Core Path, west of Meikle Galdenoch            | Major  | Will reflect findings of primary assessment. |
| Viewpoint 2 – Core Path, Larbrax Moor                       | Major  | Will reflect findings of primary assessment. |
| Viewpoint 3 – Meikle Galdenoch, near Parking Area           | Major  | Will reflect findings of primary assessment. |
| Viewpoint 4 – B738, near Lochlaw Cottage                    | Major  | Will reflect findings of primary assessment. |

| Predicted Effects  | Primary LVIA Assessment Findings (operational and under construction wind farms included in the baseline)  | Cumulative Assessment Findings               |
|--|--|--|
| Viewpoint 5 – B738, near Meikle Galdernoch                 | Moderate   | Will reflect findings of primary assessment. |
| Viewpoint 6 – Agnew Monument                               | Moderate   | Will reflect findings of primary assessment. |
| Viewpoint 8 – Slewdown Hill                                | Moderate   | Will reflect findings of primary assessment. |
| Viewpoint 9 – High Aucheneel                               | Moderate   | Will reflect findings of primary assessment. |
| Viewpoint 11 – Parking Area, near Killantringan Lighthouse | Major  | Will reflect findings of primary assessment. |
| Viewpoint 12 – South Cairn                                 | Moderate   | Will reflect findings of primary assessment. |
| Viewpoint 16 – Stranraer to Belfast Ferry                  | Moderate   | Will reflect findings of primary assessment. |
| <b>Operational effects on Visual Receptors (Routes)</b>    |  |  |
| Southern Upland Way  | Major to moderate, within 7 km from sections with visibility   | Will reflect findings of primary assessment. |
| Rhins of Galloway Coastal Path                             | Major to moderate, within 7 km from sections with visibility   | Will reflect findings of primary assessment. |
| Core Paths within 5 km                                     | Major within 5 km. This may extend up to 7 km from Core Paths along the coastal edge, where direct views towards the Proposed Development are available. | Will reflect findings of primary assessment. |

**Table 13.2 : Summary of Significant Cultural Heritage Effects**

| Predicted Effects  | Significance | Committed Additional Mitigation                            | Significance of Residual Effect |
|--|--------------|--|---------------------------------|
| <b>Cultural Heritage</b>   |              |  |                                 |
| <b>Construction</b>  |              |  |                                 |
| Potential adverse direct effect on Loch More, burnt mound (2), which lies within the micro-siting allowance. | Major        | Mark off and avoid during construction works.              | None                            |
| Potential adverse effects on buried archaeology.   | Major        | Archaeological watching brief to be carried out during any | Minor (not significant)         |



| Predicted Effects | Significance | Committed Additional Mitigation | Significance of Residual Effect |
|-------------------|--------------|---------------------------------|---------------------------------|
|                   |              | ground-breaking works.          |                                 |

**Table 13.3: Summary of Significant Ecology Effects**

| Predicted Effects  | Significance          | Committed Additional Mitigation | Significance of Residual Effect |
|--|-----------------------|---------------------------------|---------------------------------|
| <b>Ecology</b>   |                       |                                 |                                 |
| <b>Operation</b>   |                       |                                 |                                 |
| Implementation of peatland restoration measures through the BEMP | Moderate (beneficial) | N/A                             | Moderate (beneficial)           |

**Table 13.4: Summary of Significant Traffic and Transport Effects**

| Predicted Effects   | Significance                 | Committed Additional Mitigation   | Significance of Residual Effect |
|---|------------------------------|---|---------------------------------|
| <b>Traffic and Transport</b>  |                              |   |                                 |
| <b>Construction</b>   |                              |   |                                 |
| <b>B738 Users and Residents</b>   |                              |   |                                 |
| Severance   | Major ( <b>Significant</b> ) | CTMP – will be secured through a planning condition and delivered by the Contractor.<br><br>Abnormal Load Transport Management Plan – will be prepared and delivered by the Abnormal Load supplier.<br><br>Staff Travel Plan – will be delivered by the Principal Contractor. | Minor (Not significant)         |
| Fear & Intimidation   | Major ( <b>Significant</b> ) | CTMP – will be secured through a planning condition and delivered by the Contractor.<br><br>Abnormal Load Transport Management Plan – will be prepared and delivered by the Abnormal Load supplier.<br><br>Staff Travel Plan – will be delivered by the Principal Contractor. | Minor (Not significant)         |
| Large Loads   | Major ( <b>Significant</b> ) | Abnormal Load Transport Management Plan – will be prepared and delivered by the Abnormal Load supplier.   | Minor (Not significant)         |
| <b>A77 Users and Residents at Craigenquarroch (including approach to Portpatrick)</b> |                              |   |                                 |

| Predicted Effects                             | Significance                     | Committed Additional Mitigation   | Significance of Residual Effect |
|---|----------------------------------|---|---------------------------------|
| Severance                                     | Moderate<br><b>(Significant)</b> | CTMP – will be secured through a planning condition and delivered by the Contractor.<br><br>Abnormal Load Transport Management Plan – will be prepared and delivered by the Abnormal Load supplier.<br><br>Staff Travel Plan – will be delivered by the Principal Contractor. | Minor (Not significant)         |
| Fear & Intimidation                           | Moderate<br><b>(Significant)</b> | CTMP – will be secured through a planning condition and delivered by the Contractor.<br><br>Abnormal Load Transport Management Plan – will be prepared and delivered by the Abnormal Load supplier.<br><br>Staff Travel Plan – will be delivered by the Principal Contractor. | Minor (Not significant)         |
| Large Loads                                   | Moderate<br><b>(Significant)</b> | Abnormal Load Transport Management Plan – will be prepared and delivered by the Abnormal Load supplier.   | Minor (Not significant)         |
| <b>Core Path / Path Users within the Site</b> |                                  |   |                                 |
| Severance                                     | Major<br><b>(Significant)</b>    | CTMP – will be secured through a planning condition and delivered by the Contractor.<br><br>Provision of an Outdoor Access Management Plan if required.   | Minor (Not significant)         |
| Pedestrian Delay                              | Major<br><b>(Significant)</b>    | CTMP – will be secured through a planning condition and delivered by the Contractor.<br><br>Provision of an Outdoor Access Management Plan if required.   | Minor (Not significant)         |
| Non-motorised User Amenity                    | Major<br><b>(Significant)</b>    | CTMP – will be secured through a planning condition and delivered by the Contractor.<br><br>Provision of an Outdoor Access Management Plan if required.   | Minor (Not significant)         |
| Fear & Intimidation                           | Major<br><b>(Significant)</b>    | CTMP – will be secured through a planning condition and delivered by the Contractor.<br><br>Provision of an Outdoor Access Management Plan if required.   | Minor (Not significant)         |
| Road Safety                                   | Major<br><b>(Significant)</b>    | CTMP – will be secured through a planning condition and delivered by the Contractor.<br><br>Provision of an Outdoor Access Management Plan if required.   | Minor (Not significant)         |

| Predicted Effects | Significance                  | Committed Additional Mitigation   | Significance of Residual Effect |
|-------------------|-------------------------------|---|---------------------------------|
| Large Loads       | Major<br><b>(Significant)</b> | Abnormal Load Transport Management Plan – will be prepared and delivered by the Abnormal Load supplier. | Minor (Not significant)         |

**Table 13.5: Summary of Significant Climate Change Effects**

| Description of Effect                                 | Significance          | Committed Additional Mitigation Measures | Significance of Residual Effect |
|---|-----------------------|--|---------------------------------|
| <b>Climate Change</b>                                 |                       |  |                                 |
| <b>Operation</b>                                      |                       |  |                                 |
| Carbon Losses and Savings (climate change mitigation) | Moderate (beneficial) | None                                     | Moderate (beneficial)           |
| <b>Cumulative</b>                                     |                       |  |                                 |
| Carbon Losses and Savings (climate change mitigation) | Major (beneficial)    | None                                     | Major (beneficial)              |