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# Neart na Gaoithe Offshore Wind Farm

## Seascape, Landscape and Visual Impact Assessment Addendum

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# 1 Introduction

## Background

- 1.1 Following submission in 2012 of the Environmental Statement (ES) for the proposed Neart na Gaoithe Offshore Wind Farm by Neart na Gaoithe Offshore Wind Ltd (NnGOWL), a decision was taken to prepare and submit an addendum to the ES.
- 1.2 LUC was commissioned to provide additional material relating to seascape, landscape and visual impact assessment (SLVIA). This material covers the refinement of the Design Envelope (now referred to as the refined Design Envelope) undertaken by NnGOWL, and provides visualisations and commentary on the refined Design Envelope.
- 1.3 In addition, a cumulative appraisal has been undertaken to provide an overview of the likely impacts of the three offshore wind farms proposed in the Forth and Tay area. These are Neart na Gaoithe; Inch Cape; and Seagreen Phase I (formerly referred to as Round 3 Firth of Forth Phase I).

## Structure of this report

- 1.4 This report contains the following sections:
  - Section 2 provides an appraisal of the potential impacts of the revised offshore development scenario on seascape, landscape and visual amenity, in comparison with the development scenarios assessed in the ES, and also considers impacts on supplementary viewpoints; and
  - Section 3 presents a cumulative appraisal of Neart na Gaoithe, Inch Cape and Seagreen Phase I, considering the impacts of the three wind farms on views from the shore.

## Revised visualisations

- 1.5 This report is supported by a series of updated maps and visualisations, presented in a separate document. These figures illustrate the revised offshore development scenario, and provide an updated zone of theoretical visibility (ZTV) map, as well as updated wireframes and photomontages.
- 1.6 A set of updated cumulative ZTV maps and cumulative visualisations has also been prepared to accompany the cumulative appraisal. A complete figure list is provided in Appendix 1 of this report.

### SNH comments on visualisations

- 1.7 Scottish Natural Heritage (SNH) issued comments on the visualisations included in the SLVIA. NnGOWL has responded to these comments separately, and the updated visualisations have taken on board many of the suggestions put forward.
- 1.8 The visualisations are presented in a larger format than those included in the SLVIA, showing a 90-degree angle of view at a comfortable viewing distance. The updated visualisations also include location maps and detailed viewpoint data on each page. Cumulative visualisations are presented in the same format, showing all three of the proposed wind farms in each view.
- 1.9 SNH also recommended consideration of four additional viewpoint locations, for which wireframe views have been prepared. These are listed in Table 1.1 and impacts are assessed in Section 2 of this SLVIA addendum.

**Table 1.1 Supplementary viewpoint (SVP) locations**

No.	Location	Easting	Northing	Distance from site boundary (km)	Notes
SVP1	St Andrews, West Sands Road	350200	718000	29.9	Located on the dunes to the north of the town, at the edge of the Old Course
SVP2	Crail	361011	707261	18.4	Overlooking the harbour from a road which forms part of the Fife Coastal Path
SVP3	Scottish Seabird Centre, North Berwick	355438	685631	32.4	A popular attraction on the East Lothian coast, and representative of views from the beach and shore
SVP4	Tantallon Castle	359609	685048	29.2	A popular attraction on the East Lothian coast, and an important historical site

## Assessment methodology

- 1.10 Where new assessment is presented in this addendum text, this has been undertaken following the assessment methodology used in the ES, and presented in ES Appendix 21.1 Section 2.
- 1.11 It is acknowledged that new guidance has been published since the original assessment, notably the third edition of Guidelines for Landscape and Visual Impact Assessment (Landscape Institute and Institute of Environmental Management and Assessment, 2013). Guidance from the Landscape Institute indicates that assessments begun under the second edition of the GLVIA do not need to be updated to comply with the third edition. For consistency with the ES findings, the original methodology will continue to be applied.
- 1.12 Updated guidance has been published on *Assessing The Cumulative Impact Of Onshore Wind Energy Developments* (SNH, 2012). This document has been referred to in undertaking the updated cumulative appraisal, although the updated guidance does not differ substantially from the earlier guidance referred to in the ES since it sets out refined rather than new processes.

## 2 SLVIA Addendum

### Refinement of the Design Envelope

- 2.1 The SLVIA presented in the ES identified two alternative maximum effect scenarios based on the turbine and layout options being considered. These were defined as a maximum height scenario, and a maximum density scenario, and are set out in Table 2.1.

**Table 2.1 SLVIA assessment scenarios**

Scenario	Number of turbines	Tip height above LAT	Hub height above LAT	Rotor diameter	Indicative layout
Maximum height	80	197 m	115 m	164 m	B
Maximum density	128	175 m	115 m	120 m	A

- 2.2 Following submission of the ES, NnGOWL has refined the turbine and indicative layout options. The layout presented in the refined Design Envelope is indicative, and the final as-built layout may differ based on detailed investigation of site constraints.
- 2.3 The refined Design Envelope includes a single indicative layout, with up to 95 turbine locations including five 'contingency' locations. A maximum of 90 turbines will be built. The largest turbine under consideration remains the same.
- 2.4 Since only one indicative layout is under consideration, the maximum density scenario no longer applies, and for the purposes of this SLVIA addendum a single maximum effect scenario has been defined, as set out in Table 2.2.

**Table 2.2 Refined maximum effect scenario**

Number of turbines	Tip height above LAT	Hub height above LAT	Rotor diameter
90	197 m	115 m	164 m

- 2.5 For the purposes of preparing visualisations, five turbine locations furthest from land were assumed to be the 'contingency' locations, and the remaining 90 indicative turbine locations were modelled in. Two substations were also modelled.

### Appraisal of the refined scenario

- 2.6 The refined maximum effect scenario is within the Design Envelope parameters as set out in the ES. It is most similar to the maximum height scenario previously assessed in the ES. The refined scenario assumes the same turbine height of 197 m to tip, but includes a further ten turbines. The Design Envelope assessed in the ES included a maximum of 128 turbines, although it was considered that 128 turbines of the maximum height was not a realistic scenario for assessment. The difference in potential impact between a layout of 80 turbines and one of 90 turbines is therefore considered in this section.
- 2.7 Compared to the layouts previously assessed in the ES, the indicative layout of the refined Design Envelope is very similar in pattern, being based on an offset grid.

### Findings of the SLVIA

- 2.8 The SLVIA considered the two maximum effect scenarios, and drew conclusions with regard to both. In relation to impacts on visual amenity, the SLVIA concluded that:

*“although there would be discernible difference between the scenarios, the magnitude of effect, and significance of any impacts, would not change.”* (Appendix 21.1, paragraph 8.13)

- 2.9 Overall, the SLVIA concluded that:

*“the precise layout of the development, within the parameters defined in the Design Envelope, is unlikely to vary the finding of the SLVIA.”* (Appendix 21.1, paragraph 8.13)

### Consideration of the refined scenario

- 2.10 The refined maximum effect scenario is within the Design Envelope parameters as set out in the ES, and as noted above is similar in scale and layout to the maximum height scenario assessed in the SLVIA. It is therefore to be anticipated that the impacts predicted to arise from the refined scenario will be the same as those predicted to arise from the scenarios examined in the SLVIA.
- 2.11 Comparison of the ZTV maps for the refined scenario (Figures 1 and 2) and the SLVIA scenarios (ES Figures 21.4 to 21.6) indicates very little difference in extent or level of theoretical visibility.
- 2.12 The updated visualisations are presented in Figures 3 to 20. Comparison of these visualisations with those presented in the SLVIA (ES Figures 21.10 to 21.27) indicates limited difference in terms of overall appearance. The refined scenario appears more spaced out in views than the SLVIA maximum density scenario, which includes a greater number of turbines. As with any grid-based layout, the refined scenario presents some stacking of turbines in most views.
- 2.13 Overall the magnitude of change predicted to arise as a result of introduction of the refined scenario into views from each of the assessment viewpoints is not predicted to differ from the magnitude of change predicted for the SLVIA scenarios. The impacts on views will be as set out in the SLVIA.
- 2.14 The refined scenario will be located in the same area of sea, and will occupy the same angle of view, when seen from the coast. It is therefore concluded that impacts on seascape and landscape character areas will not differ, and will be as set out in the SLVIA.

### Supplementary viewpoints

- 2.15 Four supplementary viewpoints have been introduced at the recommendation of SNH. These are listed in Table 1.1, and are assessed below, following the approach and methodology set out in the SLVIA (ES Appendix 21.1, Section 2). Only the refined maximum effect scenario (Table 2.2) is considered.



<b>SVP1 St Andrews, West Sands Road</b>			
<i>OS grid reference</i>	350200, 718000	<i>Figure number</i>	21
<i>Regional Seascape Unit</i>	SA11 St Andrews Bay	<i>Landscape designation</i>	East Fife Area of Great Landscape Value
<i>Direction of view towards the site</i>	East	<i>Distance from site boundary</i>	29.9 km
<i>Estimated number of days on which the turbines would be visible (based on atmospheric visibility data set out in Table 2.1 in ES Appendix 21.1)</i>			197 days (54%)
<i>Location and Receptors:</i>			
<p>The viewpoint is located at the edge of the dunes and the beach which runs north of St Andrews. It is adjacent to West Sands Road which provides access to the beach and to the Old Course. Receptors at this location include walkers and visitors to the beach, and golfers.</p>			
<i>Sensitivity: High</i>			
This is a popular recreational location, with open seaward views across the outer Firth of Tay.			
<i>Current View:</i>			
<p>The view at this location looks east across the beach to the open sea. Around 1 km to the south is the town of St Andrews with steeples seen against the skyline. The north coast of the East Neuk of Fife extends eastward from St Andrews, as a series of headlands reducing in height. To the north-east the relatively low-lying coast of Angus can be seen as far as the De'ìls Head. To the north and inland there are views across the Old Course with occasional hills seen beyond.</p>			
<i>Changes:</i>			
<p>The wind farm will be visible directly to the east, occupying around 20 degrees of the view. The southern-most turbines will be partly hidden behind the Fife coast, with blade tips visible above the land. The majority of the turbines will be visible. The turbines will be seen against the skyline on the sea horizon. Looking east, the wind farm will appear backlit by the sun on clear mornings.</p> <p>At night time, navigation lighting is likely to be visible in reasonably clear conditions. The wind farm will introduce a number of steady offshore lights in the night time sea view, which will be seen in combination with the lights of St Andrews to the south.</p>			
<i>Magnitude of effect: <b>Medium-low</b></i>			
<i>Significance of Impact: <b>Moderate</b></i>			

<b>SVP2 Crail</b>			
<i>OS grid reference</i>	361011, 707261	<i>Figure number</i>	22
<i>Regional Seascape Unit</i>	SA13 East Neuk of Fife	<i>Landscape designation</i>	East Fife Area of Great Landscape Value
<i>Direction of view towards the site</i>	East	<i>Distance from site boundary</i>	18.4 km
<i>Estimated number of days on which the turbines would be visible (based on atmospheric visibility data set out in Table 2.1 in ES Appendix 21.1)</i>			270 days (74%)
<i>Location and Receptors:</i>			
<p>The viewpoint is located on the Fife coast at Crail. It is on West Braes, a minor road which overlooks Crail Harbour. West Braes forms part of the Fife Coastal Path, and receptors at this location include walkers using this route. Other receptors include residents of houses along West Braes, and residents and visitors to Crail moving about the village.</p>			
<i>Sensitivity: High</i>			
<p>This viewpoint is representative of local residents and walkers on a promoted footpath. Crail is a popular destination with visitors, and the viewpoint offers elevated views over the harbour and village.</p>			
<i>Current View:</i>			
<p>The viewpoint is slightly elevated (10m AOD) and looks north-east across rocky foreshore to the small stone-built harbour. The oldest part of the village, dominated by whitewashed walls and pantiled roofs, is clustered around the harbour and the hill to the north. Behind the harbour is Crail House with its cliff-top outlook tower. There are views along the coast to the next headland, where the Sauchope Links caravan park can be seen. From the headland around to the south are views across the open sea of the outer Forth. To the south-west the Isle of May is visible on the horizon, 8 km away. In the distance the East Lothian coast can be made out to the south. Views to west and north are obscured by rising ground and houses in the foreground.</p>			
<i>Changes:</i>			
<p>The wind farm will be visible directly to the east, occupying around 35 degrees of the view. The northern-most turbines will be seen at around 5 degrees from the headland at Sauchope Links. The whole wind farm will be visible as irregularly spaced array, with some stacking of turbines towards the centre of the site. The substations will be clearly visible from this location. The turbines will be seen against the skyline on the sea horizon. Looking east, the wind farm will appear backlit by the sun on clear mornings.</p> <p>At night time, navigation lighting is likely to be visible in reasonably clear conditions. The wind farm will introduce a number of steady offshore lights in the night time sea view. These will be seen in the context of street lighting in Crail and at the caravan park in season, though otherwise there is little lighting in this area.</p>			
<i>Magnitude of effect: <b>High</b></i>			
<i>Significance of Impact: <b>Major</b></i>			

<b>SVP3 Scottish Seabird Centre, North Berwick</b>			
<i>OS grid reference</i>	355438, 685631	<i>Figure number</i>	23
<i>Regional Seascape Unit</i>	SA17 Eyebroughy to Torness Point	<i>Landscape designation</i>	None
<i>Direction of view towards the site</i>	North-east	<i>Distance from site boundary</i>	32.4 km
<i>Estimated number of days on which the turbines would be visible (based on atmospheric visibility data set out in Table 2.1 in ES Appendix 21.1)</i>			153 days (42%)
<i>Location and Receptors:</i>			
<p>The viewpoint is located at the Scottish Seabird Centre, a visitor attraction on the sea front at North Berwick. The centre is housed in a purpose-built structure on the headland between the two bays, immediately east of the harbour. The Seabird Centre has an east-facing terrace overlooking the sea, and is sited adjacent to the main beach on Melbourne Road.</p> <p>Receptors at this location will include visitors to the Seabird Centre, who come to learn about bird life in the Forth, and view seabirds via remote cameras mounted on the Bass Rock. The location is also representative of views experience by the many people who visit the town, harbour and beach of North Berwick, as well as residents of the town.</p>			
<i>Sensitivity: High</i>			
<p>North Berwick is a popular visitor destination, with seafront attractions which bring people to the location. There are open views of the outer Firth of Forth, including the Bass Rock and the Isle of May. The Seabird Centre is visited by some 290,000 visitors per year (2009 figures<sup>1</sup>).</p>			
<i>Current View:</i>			
<p>The foreground of this view is the rocky foreshore at low tide. Views north east overlook the sea, which extends out to the horizon. To the north is the small rocky island of Craigleith, with the East Neuk of Fife coast behind, around 16km distant. Some 16 km to the north-east is the Isle of May, and 5 km to the east is the Bass Rock, the latter being much more prominent in the view. To the east the view looks along the coast to Horseshoe Point, 2.5 km away, where the golf course is visible on the coastal braes. The seafront of the town of North Berwick is seen to the south-east and south. From nearby locations on the headland there are views westward into the Firth of Forth, with the Lomond Hills in the distance.</p>			
<i>Changes:</i>			
<p>The wind farm will be seen to the north east on the sea horizon. The whole wind farm will be visible, occupying around 20 degrees of the view. The wind farm will be seen in a position roughly equidistant between the Isle of May to the north and the Bass Rock to the south, occupying most of the open sea between. Due to the low elevation of the viewpoint (at sea level), the turbine hubs will be seen close to the horizon, and the substations will be below the horizon. The turbines will appear as an irregularly-spaced array, with limited stacking apparent from this angle. Looking north-east, the wind farm will appear backlit by the sun on clear summer mornings.</p> <p>At night time, navigation lighting is likely to be visible in clear conditions. The wind farm will introduce a number of steady offshore lights in the night time sea view. These will be seen in the context of lighting around North Berwick Harbour, street lighting in the town, and nearby lighthouses at the harbour, the Bass Rock and Isle of May.</p>			
<i>Magnitude of effect: <b>Medium-low</b></i>			
<i>Significance of Impact: <b>Moderate</b></i>			

<sup>1</sup> The 2009 Visitor Attraction Monitor. VisitScotland.  
<http://www.moffatcentre.com/media/moffatcentre/documents/visitorattractionreports/vam2009.pdf>

<b>SVP4 Tantallon Castle</b>			
<i>OS grid reference</i>	359609, 685048	<i>Figure number</i>	24
<i>Regional Seascape Unit</i>	SA17 Eyebroughy to Torness Point	<i>Landscape designation</i>	North Berwick to Dunbar Coastline AGLV
<i>Direction of view towards the site</i>	North-east	<i>Distance from site boundary</i>	29.2 km
<i>Estimated number of days on which the turbines would be visible (based on atmospheric visibility data set out in Table 2.1 in ES Appendix 21.1)</i>			197 days (54%)
<i>Location and Receptors:</i>			
<p>Tantallon Castle is sited on the cliff-top of a rocky headland, 4 km east of North Berwick. The castle comprises a single curtain wall, defending the headland from the landward approach. To seaward the only defences are the steep cliffs on three sides. The castle is managed by Historic Scotland and is open to the public, with an admission fee, throughout the year. Receptors at this location will be visitors to the castle who come to view the remains of the historic building, and appreciate its dramatic cliff-top setting.</p>			
<i>Sensitivity: High</i>			
<p>Tantallon is visited by some 30,000 visitors a year (2009 figures<sup>2</sup>). The castle offers elevated views over the outer Firth of Forth.</p>			
<i>Current View:</i>			
<p>The Bass Rock is the most prominent feature in this view, rising sheer out of the sea some 2 km to the north. Beyond is the distant Fife Coast, extending east to Fife Ness, 25 km in the distance. The Isle of May is seen on the skyline, 15.5 km to the north-north-east. To the north-east and east is the open sea, with views along the coast to the south-east, looking across to the headland at Seacliff. In the foreground, the cliffs drop to a rocky foreshore, with westward views restricted by nearby Gin Head. North Berwick Law can be seen above the rolling arable farmland in inland views, and the Lammermuirs can be viewed in the distance to the south.</p>			
<i>Changes:</i>			
<p>The wind farm will be visible on the sea horizon to the north-east, occupying around 25 degrees of the view. The wind farm will be seen to the east of the Isle of May and the Bass Rock, separated from the former by approximately ten degrees of open sea, and from the latter by around 20 degrees of the view. The turbines will be seen as an irregularly spaced array, with limited stacking of turbines visible from this angle. The central part of the wind farm will be more clustered, while there are outlying turbines to the east.</p> <p>At night time, navigation lighting is likely to be visible in clear conditions. The wind farm will introduce a number of steady offshore lights in the night time sea view. This part of the East Lothian coast is not generally lit, and there are few onshore light sources close by. Offshore, the lighthouses at the Bass Rock and the Isle of May will be seen.</p>			
<i>Magnitude of effect: <b>Medium</b></i>			
<i>Significance of Impact: <b>Major-moderate</b></i>			

<sup>2</sup> *The 2009 Visitor Attraction Monitor*. VisitScotland  
<http://www.moffatcentre.com/media/moffatcentre/documents/visitorattractionreports/vam2009.pdf>

## Summary

- 2.16 The adoption of the refined maximum case scenario, set out in Table 2.2, would not change the findings of the SLVIA in relation to impacts on seascape, landscape and visual amenity.
- 2.17 At the recommendation of SNH, four supplementary viewpoints have been considered. The predicted impacts on views from these locations are summarised in Table 2.3. All four locations are considered to be representative of high sensitivity receptors, and significant impacts are predicted at each.
- 2.18 Major impacts are predicted at Crail, which is the closest of the four locations. Major-moderate impacts are predicted at Tantallon Castle, where there are elevated views across the outer Forth. At West Sands Road and the Scottish Seabird Centre, moderate impacts are predicted. At these sea level locations, the turbines begin to dip behind the horizon, reducing their visual presence in the view.

**Table 2.3 Summary of assessment of supplementary viewpoints**

Viewpoint	Distance from site boundary (km)	Sensitivity	Magnitude of change	Significance of impact
SVP1 St Andrews, West Sands Road	29.9	High	Medium-low	Moderate
SVP2 Crail	18.4	High	High	Major
SVP3 Scottish Seabird Centre	32.4	High	Medium-low	Moderate
SVP4 Tantallon Castle	29.2	High	Medium	Major-moderate

## Conclusions

- 2.19 The findings of this assessment of impacts on supplementary viewpoints are consistent with the pattern of impacts on sensitive views identified by the SLVIA. In relation to impacts on views, the SLVIA (ES Appendix 21.1, paragraph 8.10) concluded:
- "Significant (moderate or greater) impacts on viewers are predicted at up to 33 km of the offshore development, depending on the sensitivity of the viewer, and the nature of the existing view. Significant impacts at this distance would be restricted to high-sensitivity viewers with clear unobstructed seaward views, in conditions of good visibility during which the turbines would be clearly perceptible new features."*
- 2.20 Paragraph 8.11 provides more detail on the highest level of impact:
- "At distances of up to 22 km from the offshore development, major impacts have been predicted by the SLVIA. Again, these would only occur where high sensitivity receptors have clear seaward views in which the turbines would form a substantial feature."*
- 2.21 In conclusion, four supplementary viewpoints were considered and assessed at the recommendation of SNH. The assessment found significant impacts at each location, but this does not change the general conclusions of the ES relating to the predicted pattern of significant impacts on views across the study area.

## 3 Cumulative Appraisal

### Introduction

- 3.1 The SLVIA included a cumulative impact assessment, which, in line with good practice guidance current at that time,<sup>3</sup> examined the additional effect of Neart na Gaoithe, when introduced into a cumulative baseline which is assumed to include other unbuilt wind farms. The cumulative assessment is detailed in Section 7 of ES Appendix 21.1, and is summarised in ES Chapter 21.
- 3.2 The cumulative assessment considered other operational, consented and proposed wind energy developments which could potentially give rise to significant impacts on seascape, landscape and visual amenity. This included the offshore Inch Cape and Seagreen Phase I wind farms, which at the time of preparing the ES were at an early stage of development.
- 3.3 Since submission of the Neart na Gaoithe ES, there have been a number of changes in the cumulative baseline. Applications have been submitted for the Seagreen Phase I offshore wind farm, and for the Inch Cape offshore wind farm. This introduces greater certainty into the cumulative baseline since, while there is no guarantee that these offshore schemes will be built, there is now more detailed information about these proposals.
- 3.4 As such, an updated cumulative appraisal has been undertaken. This concentrates on the offshore proposals, but some note has been taken of changes in onshore wind farms. Table 3.1 presents a list of wind farms examined in the SLVIA, and identifies changes in status, as well as new proposals, identified for inclusion on the same basis (see ES Appendix 21.1 Section 7).
- 3.5 The wind farms in Table 3.1 have been included in the cumulative ZTV maps: ZTVs have been produced to show cumulative visibility of offshore wind farms (Figure 25) and of offshore and onshore wind farms (Figure 26).

**Table 3.1 Cumulative wind farm details**

Wind Farm	Status at the time of the SLVIA	Current status
Inch Cape (offshore)	Scoping	Application Submitted
Seagreen Phase I (offshore)	Scoping	Application Submitted
Kenly	Application Submitted	Application Submitted
Dunbar	Application Submitted	Application Submitted
South Cassingray	Application Submitted	Refused
Corse Hill (Nether Kelly)	Application Submitted	Refused
Drone Hill	Under Construction	Operational
Penmanshiel	Application Submitted	Application Submitted
Aikengall	Operational	Operational
Blackburn	Application Submitted	Application Submitted

<sup>3</sup> Scottish Natural Heritage (2005) *Guidance: Cumulative Effect of Wind Farms* Version 2 (and consultative draft of Version 3, 2009).

Wind Farm	Status at the time of the SLVIA	Current status
Aikengall II	Application Submitted	Consented
Crystal Rig I and II	Operational	Operational
Brockholes	Consented	Under construction
Tullo	Operational	Operational
St Johns Hill	Consented	Under construction
Fife Energy Park Offshore Demonstrator	n/a	Consent given
Bonerbo, Drumrack and Balmonth Farms	n/a	Application submitted
Lingo Farm	n/a	Application submitted

### The offshore developments

- 3.6 Updated Design Envelope information has been obtained from the developers of Inch Cape and Seagreen Phase I. Table 3.2 sets out the turbines which have been modelled into the cumulative visualisations presented in Figures 27 to 44.

**Table 3.2 Offshore wind farm details**

Wind Farm	No. of turbines	Tip height
Neart na Gaoithe	90	197
Inch Cape	213	198.5
Seagreen Phase I (includes Project Alpha and Project Bravo) <sup>4</sup>	150	209.7

### Cumulative appraisal: offshore wind farms

- 3.7 The cumulative appraisal examines the predicted view, with all three offshore developments present, from each of the SLVIA viewpoints and the four supplementary viewpoints. A series of criteria have been used, against which each of the three proposals is compared, allowing the relative impact of each scheme at each location to be identified.
- 3.8 The purpose of the appraisal was to present a side-by-side qualitative comparison of the three proposals and their interrelationships, rather than to make an assessment of the combined or total effects of the three developments. A combined assessment would be outside the remit of a single developer.
- 3.9 In preparing this appraisal, reference has been made to *Siting and Designing Windfarms in the Landscape* (SNH, 2009) which, although written with onshore wind farms in mind, does provide useful guidance as to the types of cumulative impact likely to occur, and ways in which

<sup>4</sup> Labelled as "Round 3 Firth of Forth" on Figures 27 to 44.

cumulative impacts can be reduced through siting and design. In particular, with reference to Chapter 5 of the SNH guidance, the appraisal considers how the three offshore wind farms:

- relate to landscape (ie seascape) character;
- establish patterns of development; and
- relate to one another.

3.10 As noted in Section 1, this appraisal takes note of updated guidance (SNH, 2012). However, the terminology applied is consistent with that used in the ES and defined in ES Appendix 21.1 Section 2.

### Criteria

3.11 At each viewpoint, the following factual and qualitative information is recorded for each wind farm:

- distance from the viewpoint, including an indication of where distance has the potential to affect the visibility of turbines and their position on the horizon, if applicable;
- direction and angle of view occupied, for each wind farm individually, and when viewed with other offshore wind farms;
- density and appearance of the layout, i.e. do the turbines form an evenly spread group or does overlapping occur, and does this vary across the spread of turbines;
- visual relationship with coastal landforms, including a comment on potential screening of the turbines by intervening landform, if applicable; and
- relationship with other wind farms, i.e. do the turbines form separate groups, will they be behind one another, or are they likely to be seen as one wind farm when viewed together..

3.12 This information is set out for each wind farm in Table 3.3, with a concluding column which sets out the relationships between the three developments in each view.

3.13 A summary is provided following Table 3.3. This draws conclusions as to the wind farm or combination of wind farms which are considered, based on the appraisal, to be most likely to give rise to significant cumulative effects. This commentary does not seek to pre-judge the findings of more detailed cumulative impact assessments of other offshore wind farms.



**Table 3.3 Cumulative Appraisal**

Viewpoint	Neart na Gaoithe	Inch Cape	Seagreen Phase I	Conclusions
2 St Cyrus (Figure 27)	Visible at a distance of approximately 50km to the south (bearing 166° to 175°). The turbines appear as a relatively even spread across the horizon.	Visible at a distance of approximately 25km to the south (bearing 146° to 167°). The turbines are more concentrated towards the south, appearing as a relatively even spread across the horizon. Towards the east the turbines appear in clusters, separated by gaps.	Visible at a distance of approximately 30km to the southeast (bearing 102° to 132°). The turbines appear as a relatively even spread across the horizon, with wider gaps appearing at the edges of the array.	Neart na Gaoithe and Inch Cape form a continuous spread of turbines across the horizon, with approximately 1.5° overlap. The Neart na Gaoithe turbines are lower on the horizon, and appear less visible due to distance. The Seagreen Phase I turbines form a separate group to the east. Together the turbines occupy over 73° of the land and sea view.
5 Dodd Hill (Figure 28)	Visible at a distance of approximately 44.4km to the south (bearing 121° to 134°). The turbines appear as a relatively even spread across the horizon, with wider gaps appearing towards the east.	Visible at a distance of approximately 35km to the east (bearing 84° to 108°). The turbines appear as a relatively even spread across the horizon in the centre of the array, with the turbines appearing in clusters separated by gaps at the edges of the array.	Visible at a distance of approximately 55km to the east (bearing 76° to 94°). The turbines appear as a relatively even spread across the horizon in the centre of the array, with the turbines appearing in clusters separated by gaps towards the edges of the array.	Inch Cape and Seagreen Phase I beyond form a continuous spread of turbines across the horizon to the east, with approximately 9° overlap. The Neart na Gaoithe turbines appear as a separate group to the south. Together the turbines occupy over 58° of the sea view.
6 Braehead of Lunan (Figure 29)	Visible at a distance of approximately 40.3km to the south-southeast (bearing 156° to 166°). The turbines appear as a relatively even spread across the horizon and towards the south are visible above the intervening landform.	Visible at a distance of approximately 20km to the southeast (bearing 113° to 147°). The turbines appear as a relatively even spread across the horizon, becoming more concentrated towards the south.	Visible at a distance of approximately 35km to the east (bearing 88° to 114°). The turbines appear as a relatively even spread across the horizon, with more clustering and overlap occurring towards the east.	Inch Cape and Seagreen Phase I form a continuous spread of turbines across the horizon, with approximately 1° overlap. The Neart na Gaoithe turbines appear as a separate group to the south-southeast, and are less visible than the Inch Cape turbines due to distance and angle of

Viewpoint	Neart na Gaoithe	Inch Cape	Seagreen Phase I	Conclusions
				view occupied. Together the turbines occupy over 78° of the sea view.
7 Arbroath (Figure 30)	Visible at a distance of approximately 32km to the southeast (bearing 140° to 154°). The turbines appear in distinct clusters or rows, with gaps in between.	Visible at a distance of approximately 20km to the east (bearing 82° to 124°). The turbines appear as a relatively even spread, with some clustering occurring in the centre of the array and towards the east. Overlapping turbines occur throughout the array.	Visible at a distance of approximately 40km to the east (bearing 72° to 96°). The turbines appear as a relatively even spread in the centre, with more gaps and outlying turbines appearing towards the north.	Inch Cape and Seagreen Phase I form a continuous spread of turbines across the horizon, with approximately 14° overlap. The Seagreen Phase I turbines are lower on the horizon and less visible due to distance, sitting behind the more visible Inch Cape turbines. The Neart na Gaoithe turbines form a separate group to the southeast. Together the turbines occupy over 82° of the sea view.
8 Carnoustie (Figure 31)	Visible at a distance of approximately 32.4km to the southeast (bearing 123° to 139°). The turbines appear as a relatively even spread across the horizon, with more gaps appearing towards the east.	Visible at a distance of approximately 25km to the east (bearing 73° to 105°). The turbines appear as a relatively even spread across the horizon, with some clusters appearing in the centre of the array and a higher degree of overlap occurring towards the south.	Visible at a distance of approximately 45km to the east (bearing 68° to 88°). At this distance the turbines are barely visible, sitting low on the horizon.	Seagreen Phase I lies behind Inch Cape, overlapping for approximately 15° but is barely visible as it sits low on the horizon. Neart na Gaoithe forms a separate group to the southeast, and is less prominent than Inch Cape as it sits lower on the horizon. Together the turbines occupy over 66° of the sea view.
9 Dundee Law (Figure 32)	Visible at a distance of approximately 45km to the southeast (bearing 109° to 123°). The turbines appear as a relatively even spread	Visible at a distance of approximately 45km to the east (bearing 76° to 97°). The turbines appear as a relatively even spread across	Visible at a distance of approximately 60km to the north (bearing 71° to 86°). At this distance the turbines are barely visible, sitting low on	Seagreen Phase I lies behind Inch Cape, overlapping for approximately 15° but is barely visible as it sits low on the horizon. Neart na Gaoithe

Viewpoint	Neart na Gaoithe	Inch Cape	Seagreen Phase I	Conclusions
	across the horizon, sitting above the intervening landform.	the horizon, above the intervening landform. There is a high degree of overlap and clusters / rows of turbines appear in the centre of the array.	the horizon. Intervening landform provides some screening of the turbines.	forms a separate group to the southeast. Together the turbines occupy over 52° of the sea and land view.
10 Tentsmuir (Figure 33)	Visible at a distance of approximately 32km to the southeast (bearing 104° to 124°). The turbines appear as clusters towards the east, and form a more even spread towards the south.	Visible at a distance of approximately 33km to the east (bearing 62° to 88°). The turbines appear as a relatively even spread, with a high degree of overlap and clusters / rows forming towards the north.	Visible at a distance of approximately 54.7km to the northeast (bearing 62° to 80°). At this distance the turbines are barely visible, sitting low on the horizon.	Seagreen Phase I lies behind Inch Cape, overlapping for approximately 18° but is barely visible as it sits low on the horizon. Neart na Gaoithe forms a separate group to the southeast. Together the turbines occupy over 62° of the sea view.
11 Strathkinness (Figure 34)	Visible at a distance of approximately 33.3km to the southeast (bearing 91° to 121°). The turbines appear as a relatively even spread across the horizon in the east, with the southern part of the array being screened by intervening landform and roadside vegetation in the foreground of the view.	Visible at a distance of approximately 35km to the northeast (bearing 56° to 78°). The turbines appear as a relatively even spread across the horizon towards the east, but form clusters / rows towards the north.	The tips of the turbines are visible at a distance of approximately 55km to the northeast (bearing 57° to 75°). The turbines form clusters / rows but at this distance are barely visible, sitting low on the horizon.	Seagreen Phase I lies behind Inch Cape, overlapping for approximately 18° but is barely visible as it sits low on the horizon. Neart na Gaoithe forms a separate group to the southeast, partially screened by intervening landform and vegetation. Together the turbines occupy over 65° of the sea and land view.
12 St Andrews, East Scores (Figure 35)	Visible at a distance of approximately 28.5km to the east (bearing 92° to 124°). The turbines appear as a relatively even spread across the horizon. The turbines in the south of the array are screened by intervening	Visible at a distance of approximately 33km to the northeast (bearing 52° to 77°). The turbines are more concentrated towards the east, appearing as a relatively even spread across the horizon. Towards the north	Visible at a distance of approximately 55km to the east (bearing 55° to 74°). At this distance the turbines are barely visible, sitting low on the horizon.	Seagreen Phase I lies behind Inch Cape, overlapping for approximately 19° but is barely visible as it sits low on the horizon. Neart na Gaoithe forms a separate group to the east, partially screened by intervening landform at Fife

Viewpoint	Neart na Gaoithe	Inch Cape	Seagreen Phase I	Conclusions
	landform at Fife Ness.	the turbines appear in clusters / rows, separated by gaps.		Ness. Together the turbines occupy over 72° of the sea and land view.
13 Fife Ness (Figure 36)	Visible at a distance of approximately 15.5km to the east (bearing 74° to 111°). The turbines appear as a relatively even spread across the horizon, with some overlapping occurring throughout, and clusters and outliers forming towards the north.	Visible at a distance of approximately 25km to the northeast (bearing 32° to 61°). The turbines appear as a relatively even spread across the horizon, with a high degree of overlapping occurring.	Visible at a distance of approximately 45km to the northeast (bearing 43° to 66°). At this distance the turbines are barely visible, sitting low on the horizon.	Seagreen Phase I lies partially behind Inch Cape, overlapping for approximately 16° but is barely visible as it sits low on the horizon. Neart na Gaoithe forms a separate group to the east, and is more prominent, being closer to the viewpoint and occupying a larger proportion of the view. Together the turbines occupy over 79° of the sea and land view.
14 Anstruther Easter (Figure 37)	Visible at a distance of approximately 22km to the east (bearing 67° to 94°). The turbines appear as a relatively even spread across the horizon towards the north, but form clusters separated by gaps towards the east.	Visible at a distance of approximately 30km to the northeast (bearing 35° to 58°). The turbines appear as a relatively even spread across the horizon, above the intervening landform. The majority of the wind farm is screened by the headland at Fife Ness.	The coast of Fife obscures views of the closer turbines, and the more distant turbines are below the horizon. This wind farm will not be seen in from this location.	Neart na Gaoithe and Inch Cape form separate groups in the view to the north east. The Neart na Gaoithe turbines are more prominent, being closer to the viewpoint and occupying a larger proportion of the view. Together the turbines occupy over 59° of the sea and land view.
15 Largo Law (Figure 38)	Visible at a distance of approximately 37.4km to the east (bearing 76° to 94°). The turbines appear in clusters, separated by gaps.	Visible at a distance of approximately 45km to the northeast (bearing 48° to 67°). The turbines are more concentrated towards the north, appearing as a relatively even spread across the horizon. Towards the east	Visible at a distance of approximately 65km to the northeast (bearing 52° to 69°). The turbines form clusters / rows but at this distance are barely visible, sitting low on the horizon.	Seagreen Phase I lies partially behind Inch Cape, overlapping for approximately 15° but is barely visible as it sits low on the horizon. Neart na Gaoithe forms a separate group to the east. Together the turbines occupy over 46°

Viewpoint	Neart na Gaoithe	Inch Cape	Seagreen Phase I	Conclusions
		the turbines appear in clusters, separated by gaps.		of the sea view, beyond the intervening landform.
16 Isle of May (Figure 39)	Visible at a distance of approximately 16.6km to the northeast (bearing 53° to 83°). The turbines appear as a relatively even spread across the horizon. Substations within the site are also visible at this distance.	Visible at a distance of approximately 33km to the north (bearing 24° to 47°). The turbines appear as a relatively even spread across the horizon, with some clusters forming in the centre of the array.	Visible at a distance of approximately 50km to the north (bearing 36° to 59°). At this distance the turbines are barely visible, sitting low on the horizon.	Neart na Gaoithe, Inch Cape and Seagreen Phase I form a continuous spread of turbines across the horizon. The Neart na Gaoithe turbines are more prominent, being closer to the viewpoint and occupying a larger proportion of the view. The Seagreen Phase I turbines are barely visible, sitting beyond Inch Cape and Neart na Gaoithe. Together the turbines occupy over 59° of the sea view.
17 North Berwick Law (Figure 40)	Visible at a distance of approximately 33.1km to the northeast (bearing 41° to 63°). The turbines appear as a relatively even spread across the horizon, above Bass Rock.	Visible at a distance of approximately 55km to the north (bearing 27° to 43°). The turbines appear as a relatively even spread across the horizon, but form clusters / rows in the centre of the array.	Visible at a distance of approximately 65km to the northeast (bearing 36° to 54°). At this distance the turbines are barely visible, sitting low on the horizon.	Neart na Gaoithe, Inch Cape and Seagreen Phase I form a continuous spread of turbines across the horizon. The Neart na Gaoithe turbines are more prominent, being closer to the viewpoint and occupying a larger proportion of the view. The Seagreen Phase I turbines are barely visible, sitting beyond Inch Cape and Neart na Gaoithe. Together the turbines occupy over 36° of the sea view.
18 Dunbar (Figure 41)	Visible at a distance of approximately 28.1km to the northeast (bearing 21° to 46°). The turbines appear as	Visible at a distance of approximately 45km to the northeast (bearing 16° to 31°). At this distance the	At 67 km distance, the turbines will not be visible as they will be behind the horizon as viewed from this	Neart na Gaoithe and Inch Cape form a continuous spread of turbines across the horizon. The Neart na Gaoithe

Viewpoint	Neart na Gaoithe	Inch Cape	Seagreen Phase I	Conclusions
	a relatively even spread across the horizon towards the north, forming clusters towards the east.	turbines are barely visible, sitting low on the horizon.	elevation.	turbines are more prominent, being closer to the viewpoint and occupying a larger proportion of the view. The Inch Cape turbines are barely visible, sitting beyond Neart na Gaoithe and low on the horizon. Together the turbines occupy over 30° of the sea view.
19 West Steel (Figure 42)	Visible at a distance of approximately 35km to the north (bearing 14° to 34°). The turbines appear as a relatively even spread across the horizon.	Visible at a distance of approximately 57.7km to the north (bearing 12° to 26°). The turbines appear as a relatively even spread across the horizon.	Visible at a distance of approximately 74km to the north (bearing 23° to 42°). At this distance the turbines would only be seen under the very clearest conditions.	Neart na Gaoithe, Inch Cape and Seagreen Phase I form a continuous spread of turbines across the horizon. The Neart na Gaoithe turbines are more prominent, being closer to the viewpoint and occupying a larger proportion of the view. Together the turbines occupy over 30° of the sea view, across the intervening landscape.
20 Coldingham Moor (Figure 43)	Visible at a distance of approximately 32.9km to the north (bearing 354° to 12°). The turbines appear as a relatively even spread across the horizon, with some clusters appearing towards the east of the array.	Visible at a distance of approximately 50km to the north (bearing 359° to 13°). The turbines appear as a relatively even spread across the horizon.	Visible at a distance of approximately 65km to the east (bearing 14° to 34°). The turbines appear as a relatively even spread across the horizon, but at this distance are barely visible, sitting low on the horizon.	Neart na Gaoithe, Inch Cape and Seagreen Phase I form an almost continuous spread of turbines across the horizon. Inch Cape sits behind Neart na Gaoithe, with Seagreen Phase I forming a separate group to the east. Together the turbines occupy over 40° of the sea view, across the intervening landscape.

Viewpoint	Neart na Gaoithe	Inch Cape	Seagreen Phase I	Conclusions
21 St Abbs Head (Figure 44)	Visible at a distance of approximately 33.1km to the north (bearing 344° to 359°). The turbines appear as a relatively even spread across the horizon, with more gaps appearing in the array towards the north.	Visible at a distance of approximately 50km to the east (bearing 352° to 5°). The turbines appear as a relatively even spread across the horizon.	Visible at a distance of approximately 65km to the northeast (bearing 9° to 29°). At this distance the turbines are barely visible, sitting low on the horizon.	Neart na Gaoithe and Inch Cape form a continuous spread of turbines across the horizon, with approximately 7° overlap. The Inch Cape turbines sit behind Neart na Gaoithe, lower on the horizon. The Seagreen Phase I turbines form a separate group to the east. Together the turbines occupy over 45° of the sea view, across the intervening landscape.
SVP1 St Andrews, West Sands Road (Figure 45)	Visible at a distance of approximately 30.1km to the east (bearing 94° to 115°). The turbines appear as a relatively even spread across the horizon, with the most southerly turbines being partially screened by intervening landform.	Visible at a distance of approximately 35km to the northeast (bearing 54° to 79°). Towards the east the turbines appear as a relatively even spread across the horizon. Towards the north they form clusters / rows separated by gaps.	Visible at a distance of approximately 56.5km to the northeast (bearing 57° to 75°). At this distance the turbines are barely visible, sitting low on the horizon.	Seagreen Phase I lies beyond Inch Cape and is barely visible at this distance, sitting low on the horizon. Neart na Gaoithe forms a separate group to the east. Together the turbines occupy over 61° of the sea view, across the intervening landscape.
SVP2 Crail (Figure 46)	Visible at a distance of approximately 19km to the east (bearing 71° to 102°). Towards the south the turbines appear as a relatively even spread across the horizon. Towards the north they form clusters / rows separated by gaps, with some outliers.	Located at a distance of approximately 31km to the northeast, the turbines will be screened by intervening landform, with only two tips theoretically visible towards the east.	Located at a distance of approximately 51.4km to the northeast, the turbines will be screened by intervening landform and will not be visible.	Seagreen Phase I and Inch Cape will not be visible from this location, and cumulative impacts will not occur.
SVP3 Scottish	Visible at a distance of approximately 32.5km to the	Visible at a distance of approximately 50.3km to the	Visible at a distance of approximately 69.6km to the	Inch Cape and Seagreen Phase I lie beyond Neart na

Viewpoint	Neart na Gaoithe	Inch Cape	Seagreen Phase I	Conclusions
Seabird Centre (Figure 47)	northeast (bearing 43° to 64°). The turbines appear as a relatively even spread across the horizon, to the north of Bass Rock.	northeast (bearing 27° to 44°). At this distance the turbines are barely visible, sitting low on the horizon.	northeast (bearing 36° to 55°). At this distance the turbines are barely visible, sitting low on the horizon.	Gaoithe but both are barely visible at distances of over 50km. Neart na Gaoithe is more prominent, being closer to the viewpoint and occupying a larger proportion of the view.
SVP4 Tantallon Castle (Figure 48)	Visible at a distance of approximately 29.4km to the northeast (bearing 37° to 61°). The turbines appear as a relatively even spread across the horizon.	Visible at a distance of approximately 48.4km to the northeast (bearing 23° to 40°). The turbines appear as a relatively even spread across the horizon, with clusters forming in the centre of the array.	Located at a distance of approximately 67.2km to the northeast (bearing 33° to 53°). At this distance the turbines are barely visible, sitting low on the horizon.	Neart na Gaoithe, Inch Cape and Seagreen Phase I form an almost continuous spread of turbines across the horizon. Seagreen Phase I lies behind Neart na Gaoithe but is barely visible at this distance. Neart na Gaoithe is more prominent, being closer to the viewpoint and occupying a larger proportion of the view. Together the turbines occupy over 38° of the sea view, across the intervening landscape.



## Summary

- 3.14 The three offshore wind farms will be visible from all of the assessed viewpoints, and will be seen together within the same 90-degree angle of view. The relative impact of each proposal varies according to the location of the viewpoint, chiefly depending on which wind farm is closest to the viewer in each case. The following sections summarise the findings set out in Table 3.3 in terms of four geographically grouped sets of locations in which impacts, though not identical in each case, are broadly similar.
- 3.15 The first group includes viewpoints 2, 5, 6 and 7, which are the most northerly of the viewpoints, and are located in northern Angus and Aberdeenshire. From these locations Inch Cape will always be the closest wind farm, at between 20 and 35 km from the viewpoint. The other two wind farms will be between 5 km and 25 km more distant than Inch Cape. In most cases, Inch Cape and Seagreen Phase I will be seen together in eastward views, with Neart na Gaoithe seen separately to the south. Only in the northern-most view (viewpoint 2) will Neart na Gaoithe be seen behind Inch Cape, though at almost twice the distance of the latter. In views from these locations, Inch Cape will be the most visible wind farm, and most likely to give rise to significant cumulative impacts in addition to Neart na Gaoithe and Seagreen Phase I.
- 3.16 The second group includes viewpoints 8 to 12, and SVP 1. These viewpoints are located around the outer Firth of Tay, in southern Angus, Dundee, and north-east Fife. From these locations, Seagreen Phase I begins to drop behind the horizon, and becomes less visible. The two nearer wind farms will be seen as separate development from each of these viewpoints, at similar distances from each viewpoint, and occupying a similar angle of the view. Inch Cape will appear denser due to the greater number of turbines proposed. Neither scheme will be more prominent than the other in views from these locations, and cumulative effects arising from either are likely to be similar.
- 3.17 The third group includes viewpoints 13 to 16 and SVP 2. These viewpoints are located around the outer Firth of Forth, including locations in the East Neuk of Fife and the Isle of May. In these views, Neart na Gaoithe is the closest wind farm, with Inch Cape being generally 10 km to 15 km further from the viewpoint. Seagreen Phase I is barely visible in most of these views, being distant and/or low on the horizon, and also appearing behind Inch Cape in the view. Neart na Gaoithe is the closest and most visible wind farm in views from these locations, and, of the three proposals, is the one most likely to give rise to significant cumulative impacts when seen in combination with the other wind farms. It is noted that in some views from the East Neuk coast (eg SVP 2), there will be no view of Inch Cape or Seagreen Phase I due to intervening landform, and hence no cumulative impact.
- 3.18 The fourth group includes viewpoints 17 to 21, SVP 3 and SVP4. These are located along the south coast of the outer Firth of Forth, in East Lothian and the Scottish Borders. From each of these locations, Neart na Gaoithe will be the closest offshore wind farm. The coastline is generally around 30 km from the proposed Neart na Gaoithe turbines from North Berwick to St Abbs Head. Inch Cape will be seen partly behind Neart na Gaoithe in each view, being entirely behind Neart na Gaoithe from the eastern viewpoints (eg 20 Coldingham Moor). Inch Cape will be no closer than 45 km from these viewpoints, and from locations close to sea level the turbines will begin to dip behind the horizon. Seagreen Phase I will be over 60 km from these viewpoints, and is unlikely to be visible except in the very clearest conditions. Neart na Gaoithe is the closest and most visible wind farm in views from these locations, and is most likely to give rise to significant cumulative impacts when seen in combination with the other wind farms. However, the limited visibility of Inch Cape, and of Seagreen Phase I in particular, suggests that cumulative impacts are likely to be less significant from the more south-easterly of these locations.

## Conclusions

- 3.19 Due to the open, flat nature of the seascape, there is little potential for visual confusion amongst the three wind farms. The appearance of the turbines in even-height arrays along the flat horizon will relate to the horizontal emphasis and simplicity of the open seascape.
- 3.20 The three wind farms will all present a similar appearance in the view, and the only variations will be the apparent height of the turbines (largely dependent on distance) and the relative density of the layouts proposed. In terms of turbine height, the two closer wind farms propose to deploy turbines of very similar proportions and overall height. The more distant Seagreen Phase I proposes a larger turbine, but based on this review of viewpoints, there is limited potential for contrasts of turbine scale, particularly given the lack of scale references in the seaward view.
- 3.21 Although wind farms are seen to overlap laterally in some views, there is generally sufficient distance between the developments to maintain a degree of visual separation, with the more distant wind farm being lower on the horizon, for instance.
- 3.22 Overall, the cumulative appraisal is consistent with the findings of the cumulative SLVIA carried out as part of the ES. This noted significant cumulative impacts arising from the addition of Neart na Gaoithe at six of the assessment viewpoints. In relation to the four groups identified above, the viewpoints where significant cumulative impacts were predicted are:
- Viewpoints 10 and 12 within the second group;
  - Viewpoints 13, 14 and 16 within the third group; and
  - Viewpoint 18 within the fourth group.
- 3.23 The first group represents areas where any significant cumulative impacts are more likely to arise as a result of Inch Cape, while the second group represents areas where both Inch Cape and Neart na Gaoithe may give rise to significant cumulative impacts. The third group represents the area where Neart na Gaoithe is most likely to give rise to significant cumulative impacts, while the fourth group represents areas where significant cumulative impacts are increasingly less likely. Seagreen Phase I is generally distant and makes the smallest contribution to significant cumulative impacts, except in the most northern viewpoints where it is at its closest point to the coast.

**Appendix 1**

Figure list

All figures are presented in a separate document.

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