2012 SLVIA BASELINE

INTRODUCTION

16.1. This chapter of the Environmental Statement (ES) describes the impact of the Seagreen Project on the existing landscape and seascape character, as well as providing an assessment of the visual impacts of the Seagreen Project within the Zone of Theoretical Visibility (ZTV).

16.2. The aspects of the Seagreen Project considered in this chapter are Project Alpha, Project Bravo, the Transmission Asset Project and the meteorological masts, as described in Chapter 5: Project Description in this ES. Throughout this chapter, this assessment will be referred to as a Seascape, Landscape and Visual Impact Assessment (SLVIA). The assessment considers impacts upon:

- seascape / landscape character and quality; and
- visual amenity caused by change in the appearance of the landscape or seascape as a result of the Seagreen Project.

16.3. This assessment does not consider the onshore cables and substation works from mean high water springs (MHWS) to the point of connection to the electrical network at Tealing Substation, as this will be considered under a separate planning application and associated ES to be submitted to Angus Council under the Town and Country Planning (Scotland) Act 1997 (as amended).

16.4. With specific reference to the Department of Trade and Industry (DTI) publication '*Guidance on the Assessment of the Impact of Offshore Wind Farms: Seascape and Visual Impact Report*' (2005) (referred to hereafter as the DTI guidance on SVIA), this assessment considers:

- direct impacts or physical changes to seascape (for example through development on the coastal edge);
- indirect impacts on the character and quality of the seascape (for example through the development of offshore wind turbine generators (WTGs), substation(s) and meteorological mast(s) causing changes in the perception of the seascape);
- direct impacts on the visual amenity of visual receptors (for example, changes in available views of the sea and their content due to the development of OWFs); and
- indirect impacts on visual receptors in different places (for example an altered visual perception leading to changes in public attitude, behaviour and how they value or use a place).

16.5. The SLVIA has been prepared by Pegasus Environmental (part of the Pegasus Planning Group).

16.6. All figures (Figures 16.1 to 16.56) can be found in ES Volume II: Figures, Part 2. Appendices K1 to K4 can be found in ES Volume III: Appendices.

CONSULTATION

16.7. Detailed consultation has taken place between the Forth and Tay Offshore Wind Developer Group (FTOWDG), Scottish Natural Heritage (SNH), Marine Scotland and local authorities

(including Angus Council, Fife Council, East Lothian Council and Scottish Borders Council), on issues relating to seascape, landscape and visual amenity. The nature and extent of these consultations is outlined below.

16.8. The FTOWDG was formed to agree on collaborative studies and data collection and where possible to agree on consistent methodologies for impact assessment. It represents the developers of the three offshore wind farms currently proposed in the area (The Seagreen Project, Neart na Gaoithe and Inch Cape).

16.9. The FTOWDG undertook consultation through two meetings with SNH, Marine Scotland and local authorities (including Angus Council, Fife Council, East Lothian Council and Scottish Borders Council) on 15th June and 26th July 2011. The key outcome of this consultation was agreement on a list of viewpoints, which was adopted by all developers for the purposes of SLVIA. These viewpoints are listed in Appendix K1.

16.10. A series of discussion documents were prepared by FTOWDG, most recently on the Approach to Assessment of Landscape, Seascape and Visual Cumulative Effects (FTOWDG, 2011). This set out a methodology and approach to the assessment of cumulative impacts, which will form the basis for SLVIA for all FTOWDG developments.

16.11. A Regional Seascape Character Assessment, including an appraisal of sensitivity to offshore wind farm development, was undertaken by the landscape consultants representing the developers of FTOWDG. This document is included in Appendix K2, and will serve as a baseline for assessing impacts on seascape character for all FTOWDG developments. Seascape character is discussed further in the Sections 'Assessment Methodology' and 'Impact Assessment – Operation'.

16.12. The assessment methodology including extent of the study area, viewpoint selection and significance matrices have been agreed with SNH, through email correspondence on 21 September 2011.

16.13. Table 16.1 summarises the issues that were highlighted by the consultees in the Scoping Opinion received from Marine Scotland in January 2011 and indicates which sections of the chapter addresses each issue.

Table 16.1 Summary of consultation and issues

Date	Consultee	Issue	Relevant chapter paragraph
January 2011	SNH & Joint Nature Conservation Committee (JNCC)	SNH recommend that SLVIA is carried out in accordance with best practice guidance documents.	16.20 – 16.21
January 2011	SNH & JNCC	SNH make the following recommendations: Wind farm design should be resolved through an iterative EIA process, ensuring that the schemes in this development cluster are complementary and respect design principles; That there is a liaison meeting between the FTOWDG and SNH to discuss SLVIA for each proposal, and cumulatively, prior to work being commissioned; That Chartered Landscape Architects, preferably a team of two, carry out (cumulative) SLVIA;	Undertaken during the FTOWDG process

Date	Consultee	Issue	Relevant chapter paragraph
		That developers, preferably co-ordinated through FTOWDG, make contact with Natural England in respect of cross-border impacts; and That a cumulative SLVIA is co-ordinated jointly via FTOWDG.	
January 2011	SNH & JNCC	In respect of this Round 3 zone, potential cumulative landscape and visual impacts will arise for each individual wind farm proposal in the zone with: a. Other offshore wind farm proposals in the same zone. (Zone 2) b. Other offshore wind farm proposals in the same region. (The outer Firths of Forth & Tay) c. Other onshore wind farms approved / in the planning system.	16.357 – 16.436
January 2011	SNH & JNCC	For the cumulative visual impact assessment, SNH recommend an initial ZTV for cumulative study out to a radius of 50km, noting that onshore patterns of wind farm development will be relevant to the study.	16.357 – 16.436
January 2011	SNH & JNCC	Viewpoints should be selected after negotiation with Marine Scotland, SNH and the relevant planning authorities and public consultation.	16.9, 16.12, 16.39 – 16.47, 16.80, 16.138 – 16.143
January 2011	SNH & JNCC	Viewpoint selection should be based on the identification of potentially sensitive receptors (people, places and activities) and potentially significant views, locations or landscapes, taking into account the likely impacts of the development. Viewpoints will ideally be the same for EIA assessment as they will be for Cumulative Impact Assessment. Viewpoints should be selected to cover a range of view types and viewers.	16.9, 16.12, 16.39 – 16.47, 16.80, 16.138 – 16.143
January 2011	SNH & JNCC	Any (cumulative) SLVIA report should provide the following information to reference each visualisation: the precise location of the viewpoint (including 12 figure OS grid reference and a brief description), its orientation to and distance from the proposed development, the viewpoint height, nature of view (width of view in degrees and bearing of key foci within view) and conditions of assessment – including date, time of day, weather conditions and visual range. It is helpful if this information is presented alongside each visualisation including a small insert map (based on a 1:50,000 OS base map) to show the viewpoints detailed location and direction.	16.357 – 16.436
January 2011	SNH & JNCC	The characteristics visible from each viewpoint that are sensitive to wind farm development should be described and assessed, particularly in relation to the changes the development would cause. Factors such as season, weather, air clarity, movement, orientation to prevailing winds, elevation of the wind farm in relation to the viewer, and any screening elements may be relevant. The design and layout of the turbines and other components of the wind farm, as it would appear from each viewpoint, should also be described and assessed.	16.220 – 16.334

Date	Consultee	Issue	Relevant chapter paragraph
January 2011	SNH & JNCC	Details of the types of receptors, and an assessment of their sensitivity, should be included.	16.53 – 16.62, 16.68 – 16.188

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Published Guidance

16.14. This SLVIA has been undertaken in accordance with current best practice as outlined in the following published guidance documents:

- DTI in association with the Countryside Agency, Countryside Council for Wales and Scottish Natural Heritage (2005). Guidance on the Assessment of the Impact of Offshore Wind Farms: Seascape and Visual Impact Report;
- Landscape Institute and the Institute of Environmental Management and Assessment (2002). Guidelines for Landscape and Visual Impact Assessment, 2nd Edition; and
- Swanwick, C (2002) Landscape Character Assessment – Guidance for England and Scotland. The Countryside Agency and Scottish Natural Heritage.

16.15. Elements of best practice have also been adapted from the following documents:

- Horner + Maclennan and Envision (2006) Visual Representation of Wind Farms – Good Practice Guidance. Report for Scottish Natural Heritage, The Scottish Renewables Forum and the Scottish Society of Directors of Planning;
- Hill, M, Briggs, J, Minto, P, Bagnall, D, Foley, K, Williams, A. (2001) Guide to Best Practice in Seascape Assessment. The Countryside Council for Wales, Brady Shipman Martin and University College Dublin;
- Scott, K.E., Anderson, C., Dunsford, H., Benson, J.F. and MacFarlane, R. (2005) An assessment of the sensitivity and capacity of the Scottish seascape in relation to offshore wind farms. Scottish Natural Heritage Commissioned Report No.103 (ROAME No. F03AA06);
- Scottish Natural Heritage (2008) Guidance on Landscape/ Seascape Capacity for Aquaculture. Natural Heritage Management;
- University of Newcastle (2002) Visual Assessment of Wind Farms Best Practice. Scottish Natural Heritage Commissioned Report F01AA303A;
- Scottish Natural Heritage (2003) Guidance on Cumulative Effects of Wind Farms. Version 2 revised 13.04.05;
- Landscape Institute (2011) Photography and Photomontage in Landscape and Visual Impact Assessment. Advice Note 01/11;
- Landscape Institute and the Institute of Environmental Management and Assessment (2002) Guidelines for Landscape and Visual Impact Assessment, 2nd Edition;
- Countryside Council for Wales (2004) Studies to Inform Advice on Offshore Renewable Energy Developments: Visual Perception versus Photomontage; and

- DECC (2009) UK Offshore Energy Strategic Environmental Assessment: Future Leasing for Offshore Wind Farms and Licensing for Offshore Oil and Gas Storage (OESEA2), Environmental Report.

Types of Impact Considered

16.16. The SLVIA assesses both the long term impacts relating to the operational lifetime of the Seagreen Project and also the short term impacts associated with its construction and decommissioning. Where appropriate, the SLVIA also considers any residual impacts once the Seagreen Project has been decommissioned and removed.

16.17. The SLVIA not only assesses the impacts associated with the Wind Turbine Generators (WTGs) but also any related impacts resulting from any offshore meteorological mast(s), offshore substation(s), the Export Cable Route (ECR) and landfall.

16.18. The SLVIA also assesses cumulative impacts caused by the WTGs of the Seagreen Project (Project Alpha and Project Bravo) and in conjunction with other existing, consented and proposed offshore and onshore wind farm sites within the study area, which is described in Section 'Cumulative Impact Assessment'. A detailed methodology relating to the assessment of landscape, seascape and visual cumulative impacts, prepared on behalf of the FTOWDG, can be found in Appendix K1 of ES Volume III: Appendices. The cumulative assessment methodology presented in Appendix K1 has been developed by specialist landscape consultants (SLR Consulting, Land Use Consultants and Pegasus Planning Group) appointed by the three FTOWDG developers Repsol, Mainstream and Seagreen. The approach set out has been adopted by each of the developers' consultants in writing the relevant cumulative sections of each developer's ES. The cumulative methodology has been agreed with the local authorities, SNH and Marine Scotland on 15th June and 26th July 2011, as per Section 'Consultation'.

16.19. ZTVs and visualisations produced as part of the seascape/landscape and visual impact assessment process were also available to assist in the assessment of impacts on cultural heritage and archaeological resources (Chapter 17: Archaeology and Cultural Heritage of this ES).

Design Sensitivity Analysis

16.20. In July 2011, a 'Design Sensitivity Analysis' was undertaken by SLR Consulting on behalf of FTOWDG, with input from LUC and Pegasus Planning Group. Generic layouts for each of the three proposed offshore wind farms (Neart na Gaoithe, Inch Cape and the Seagreen Project) were compared in terms of their potential impacts. The results of the Design Sensitivity Analysis were provided to SNH, Marine Scotland, and local authorities.

16.21. For each of the three developments, three different turbine dimension scenarios were provided by the respective developers, as follows:

- maximum height of turbine, with related maximum spacing requirements;
- intermediate height of turbines, with intermediate spacing requirement; and
- minimum height of turbine, with minimum spacing requirements.

16.22. Layouts were generated on the basis of these turbine dimension scenarios based on three different generic design concepts, as follows:

- regular grid;
- offset grid; and
- series of arcs.

16.23. A range of wireframe visualisations were generated, illustrating views of the various scenarios from each of these design viewpoints. These wireframes were reviewed and ranked independently by three landscape architects, associated with the FTOWDG developers, according to which layouts demonstrated the most balance, coherence and greatest degree of 'legibility', and avoided serried ranks of turbines extending from the viewpoint.

16.24. The analysis concluded that an offset grid layout was the most visually preferable of the three layout scenarios, in the greatest number of views. However, the consultants agreed that the preference was not strong, and that different layouts appear better in some views than others.

Existing Environment

16.25. The existing environment is described in the following sections, covering Project Alpha, Project Bravo and the Transmission Asset Project. For the purposes of the physical environment, the Project Alpha and Project Bravo sites may be considered as offshore. Whilst the Transmission Asset Project has elements which are offshore, the primary effects are associated with the near shore environment, particularly where the Export Cable makes its landfall.

Project Alpha

16.26. The baseline study establishes the existing seascape, landscape and visual conditions of Project Alpha and its study area (Figure 16.1). This study helps to gain an understanding of what makes the seascape and landscape distinctive, what its important components or characteristics are, and how it is changing prior to the introduction of Project Alpha. The baseline study is instrumental in the identification of the seascape and landscape character receptors and visual receptors and views to be included in the assessment.

16.27. At its closest point, Project Alpha is located approximately 27km east of the coastline. Figures 16.1 to 16.17, presented in ES Volume II, Part 2, relate to Project Alpha.

16.28. The baseline study is presented in five sections as follows:

- relevant landscape designations and policy;
- landscape character;
- seascape character;
- physical and human influences on the landscape/ seascape; and
- visual receptors and views.

Relevant Landscape Designations and Policy

16.29. Various nationally and regionally designated areas and features are located within the study area and have been considered in the assessment. There are three ways in which such designations are relevant to the assessment:

- the presence of a designation can give an indication of a recognised value that may increase the sensitivity of a landscape character receptor or viewpoint, and may therefore affect the significance of the impact on that receptor or viewpoint;
- the presence of a relevant designation can lead to the selection of a viewpoint within the designated area, as the viewpoint will provide a representative outlook from that area; and
- designated areas may be included as landscape receptors so that the impacts of the wind farm on these features of the landscape that have been assigned particular value can be specifically assessed. If necessary, impacts on certain designated areas can then be avoided or reduced through the re-design of the wind farm as part of the assessment process.

16.30. All statutory and non-statutory landscape designations are high sensitivity receptors. There are no statutory designated areas (National Parks and National Scenic Areas) within the 50km study area. Non statutory and other designations are described in the following sections.

Historic Gardens and Designed Landscapes (HGDL)

16.31. Historic Gardens and Designed Landscapes (HGDL) are an important consideration in the assessment. The Inventory of Gardens and Designed Landscapes in Scotland is a list of nationally important sites that meet the criteria published in the Scottish Historic Environment Policy (SHEP) (Historic Scotland, 2011). There are currently 386 gardens in the Inventory (October 2010), of which 14 sites lie within the study area and are illustrated in Figure 16.5. These are as follows:

- Glenbervie House;
- Arbuthnott House;
- Fasque House;
- The Burn;
- Dunninald;
- Carig House;
- House of Dun;
- Kinnard Castle;
- Brechin Castle;
- House of Pitmuies;
- Guthrie Castle;
- The Guynd;
- Edzell Castle; and
- Cambo.

16.32. The SHEP, states that, where relevant, policies will inform planning authorities' consideration of individual planning applications. Regulation 25 and paragraph 5(4) (a) of Schedule 5 of The Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2008 requires planning authorities to consult Scottish Ministers on 'development which may affect a historic garden or designed landscape'. Historic

Scotland's opinions on such applications will be a material consideration in the planning authority's determination of the case. HGDLs are assessed as being of high sensitivity.

16.33. The closest of any of the HGDLs to Project Alpha is Arbuthnott House (in Angus), located 34km to the west of the Project Alpha site. An assessment of the impacts on the visual setting of registered HGDLs has been carried out and is presented in paragraph 16.242 of this chapter. Chapter 17: Archaeology and Cultural Heritage in this ES assesses the impact on the setting of cultural heritage features within the study area.

16.34. The HGDLs within the study area are covered by the Aberdeenshire, Angus and Fife Councils. The relevant policies covered by the Local Plans, which protect the HGDL and its setting are described in Appendix K3 which can be found in ES Volume III: Appendices.

Special Landscape Areas (SLA)

16.35. Where landscapes are highly valued locally, to ensure that the landscape is not damaged by inappropriate development, planning authorities often assign these landscapes a local designation. These designations play an important role in developing an awareness of the landscape qualities that make particular areas distinctive, which give communities a sense of place. The names used for such local landscape designations currently vary from one local authority to another. For example, they have been termed 'Areas of Great Landscape Value', 'Special Landscape Areas', 'Sensitive Landscape Character Areas' and 'Areas of Landscape Significance' by different authorities within Scotland. However, recent guidance published by SNH and Historic Scotland suggests that the name be standardised to Special Landscape Area (SLA) which for the purpose of this assessment is the adopted terminology.

16.36. There are four SLAs within the study area illustrated in Figure 16.5: three (Areas of Landscape Significance) in Aberdeenshire and one (Area of Great Landscape Value) in Fife.

16.37. Project Alpha is located a minimum distance of 27km from the nearest SLA. SLAs may influence the location of a representative viewpoint or may add to the value of the landscape character receptor or view and thus increase its sensitivity. The planning policies that cover this designation refer to development within or adjacent to the designated area and it is therefore only, when the site itself is covered by such a designation, or immediately next to the designation, that the policy is applicable. The impacts of the development on the landscape character and visual amenity of SLAs can be judged from the assessment of landscape character areas and representative viewpoints taken from within these areas.

16.38. The SLAs within the study area are covered by the Aberdeenshire and Fife Councils. The relevant policies covered by the Local Plans, which protect the SLAs, are described in Appendix K3 which can be found in ES Volume III: Appendices.

Landscape Character

16.39. Landscape character is the distinct and recognisable pattern of elements that consistently occurs in a particular type of landscape, and how this pattern is perceived. Impacts on landscape character arise either through the introduction of new elements, that physically alter the existing pattern, or through visibility of a development, which may alter the way in which the pattern is perceived.

16.40. Landscape character information is based on a combination of the desk and site surveys, and the relevant SNH Landscape Character Assessment documentation, which comprises the following:

- South and Central Aberdeenshire Landscape Character Assessment (Environmental Resources Management, 1998);
- Landscape Character Assessment of Aberdeen (Nicol I. et al, 1996);
- Tayside Landscape Character Assessment (Land Use Consultants, 1999); and
- Fife Landscape Character Assessment (David Tyldesley and Associates, 1999).

16.41. These reviews divide the landscape into tracts of land that are referred to as landscape character types and areas. The boundaries and descriptions of the landscape character types and areas provided are based upon the published information and confirmed in the desk study and site appraisal.

16.42. The study area extends over four council areas, namely; Aberdeenshire, Aberdeen City, Angus and Fife.

16.43. Within Aberdeenshire, five landscape character areas have been identified in the study area, and are illustrated on Figure 16.3. These are:

- area 8: Howe of The Mearns;
- area 9: Garvock and Glenbervie;
- area 12: Central Wooded Estates;
- area 13: Kincardine Plateau; and
- area 18: The Mounth.

16.44. Within Aberdeen City, five landscape character areas have been identified in the study area, and are illustrated on Figure 16.3. These are:

- area 21: Countesswells/ Milltimber/ Kennerty;
- area 22: Dee Valley;
- area 24: Kincorth and Tullos Hills;
- area 26: Den of Leggart; and
- area 27: Loirston.

16.45. Within Angus Council, seven landscape character types have been identified in the study area, and are illustrated on Figure 16.3. These are:

- type 1: Highland Glens (1b: Mid Highland Glens);
- type 3: Highland Summits and Plateaux;
- type 5: Highland Foothills;
- type 10: Broad Valley Lowland;
- type 12: Low Moorland Hills;
- type 13: Dipslope Farmland; and
- type 15: Lowland Loch Basin.

16.46. Within Fife Council, one landscape character type has been identified in the study area, and is illustrated on Figure 16.3.

- type C6: Lowland Open Sloping Farmland.

16.47. The sensitivity of the landscape to offshore wind farm development, as represented by the landscape character types and areas, has been assessed for the purposes of this SLVIA.

16.48. It should be noted that the coastal edges of the study area have been separated out as Regional Seascape Units and assessed separately. Therefore the coastal elements of the landscape character types and areas which lie on the coast are reduced, potentially reducing their sensitivity to offshore development.

16.49. In total, eighteen landscape character types and areas have been identified within the study area. The key characteristics and sensitivities of these are described in Table 16.6.

Table 16.2 Landscape Character Types/ Areas within Study Area

Landscape Character Type / Area	Relevant Key Characteristics	Sensitivity to offshore wind turbine development (refer to criteria in Table 16.2)
South and Central Aberdeenshire Landscape Character Assessment (SNH Review No. 102)		
Area 8: Howe of the Mearns	• Almost uniformly flat; • Intensive agriculture within large geometric fields; • Corridor for road and rail links; • Mature beech woodlands and straight beech avenues; and • Expansive views framed by surrounding upland.	Medium An agricultural area, where the sea forms a backdrop rather than a key part of the landscape.
Area 9: Garvock and Glenbervie	• Large scale landscape with open rolling ridges; • Large fields of arable land and pasture and red soils; • Radio masts prominent on high points; • Numerous archaeological remains; and • Long distance views across Howe of the Mearns to The Mounth.	Medium Although coastal views are a characteristic of this landscape, these views tend to be restricted to the more open areas. Elsewhere, coastal influence is limited, and the potential for offshore development to impact upon overall character is therefore reduced.
Area 12: Central Wooded Estates	• Rolling landscape of low hills and wide valleys; • Strong wooded structure associated with numerous estate policies; • Clumps of trees atop mounds and hillocks; • Mixed farmland with varying size and pattern of fields; • Numerous towns and villages; and • Long views across open farmland contrast with sudden enclosure by woodland as one passes through area.	Low A rural landscape of strong character, which is not primarily influenced by coastal views.

Landscape Character Type / Area	Relevant Key Characteristics	Sensitivity to offshore wind turbine development (refer to criteria in Table 16.2)
Area 13: Kincardine Plateau	• Undulating landform falling gently towards coast; • Pasture and marginal farmland; • Exposed mounds and hills with windblown trees; and • Gradual transition between strong moorland character to west and coastal character to east.	Low Although there are views out to other landscapes, the key characteristics of this type are not vulnerable to changes in these views.
Area 18: The Mounth	• Smooth rolling landform and rounded summits; • Substantial highland outcrop forming prominent undulating ridge that dominates views south of Aberdeen; • Numerous old routeways which are now used as footpaths for walkers; and • Wild and exposed character with commanding views into tranquil farmed lowland of Howe of the Mearns.	Low Although there are views out to other landscapes, the key characteristics of this type are not vulnerable to changes in these views.
Landscape Character Assessment of Aberdeen (SNH Review No. 80)		
Area 21: Countesswells/ Milltimber/ Kennerty	• The topographical variety; • The extent and variety of woodland and trees; • Suburban edges are generally visually contained by planting; • Stone dykes as well as fences as field boundaries; and • Distant views to hills.	Low A landscape of strong character, which is not primarily influenced by coastal views.
Area 22: Dee Valley	• The large-scale valley landform that stretches from the countryside into the city; • The extent and variety of woodland • The contrast between developed north bank and rural south bank; and • Views of River Dee.	Low A landscape of strong character, which is not primarily influenced by coastal views.
Area 24: Kincorth and Tullos Hills	• Hill topography forms a distinctive edge to the city and screens industrial development; • Open character and dominated by heath vegetation; and • Wide views over the city.	Low A landscape of strong character, which is not primarily influenced by coastal views.
Area 26: Den of Leggart	• Shallow valley landform; • Stone dykes diving land into small fields; • Sparse traditional settlement; and • Views northwards to the city.	Medium Coastal views are not a specific characteristic of this landscape, although several areas lie close to the coast
Area 27: Loirston	• Presence of Loirston Loch; • Presence of nearby large scale industrial development; • Major roads traversing the area; • Open character of the landscape, with few trees and little variety of vegetation; and • Frequently abrupt edge of the urban area.	Medium Coastal views are not a specific characteristic of this landscape, although several areas lie close to the coast
Tayside Landscape Character Assessment (SNH Review No. 122)		

Landscape Character Type / Area	Relevant Key Characteristics	Sensitivity to offshore wind turbine development (refer to criteria in Table 16.2)
Type 1: Highland Glens (1b: Mid Highland Glens)	• Concentration of agricultural activity on narrow, but distinct valley floor; • Predominance of rough grazing, bracken, heather moorland on valley slopes; • Rapids, gorges and waterfalls where bands of harder rocks occur; • Moderately settled; • Proliferation of forts and castles; and • Substantial areas of commercial coniferous forestry.	Low Coastal views are a feature of only limited parts of this landscape type. The presence of offshore features is unlikely to affect the experience of the wooded valleys, due to the limited nature of views.
Type 3: Highland Summits and Plateaux	• Distinct summits and ranges, separated by fault line lochs; the hills are sharply defined and often craggy; • Vegetation patterns closely reflect altitude and exposure; • Most of the area managed as open moorland; • Little or no settlement; • Extensive plantations; and • One of the remotest and wildest landscapes in the UK.	Low Although there are views out to other landscapes, the key characteristics of this type are not vulnerable to changes in these views.
Type 5: Highland Foothills	• Complex geological structure resulting from their position along the line of the Highland Boundary Fault; • Glacial deposits; • Steep whale backed hills and south-west to north-east valleys; • Winding, gorge-like main river valleys; and • Complex, sometimes disorientating landscape with glimpses of Highland and lowland.	Low Although there are views out to other landscapes, the key characteristics of this type are not vulnerable to changes in these views.
Type 12: Low Moorland Hills	• Eastern outliers of the Sidlaws; • Combination of low, rounded hills and craggy, ridged upland; • Moorland character evident in areas of heather and gorse; • Extensive woodland; and • Panoramic views.	Low Although the sea is visible from the tops of some of these hills, it does not form a characteristic of the landscape
Type 13: Dipslope Farmland	• Extensive area of land, generally sloping from north-west to south-east; • Dominated by productive agricultural land; • Low woodland cover, except on large estates and rive corridors; and • Limited visual impact of Dundee and Arbroath.	Medium An agricultural area, where the sea forms a backdrop rather than a key part of the landscape.
Type 15: Lowland Loch Basin	• Broad basins formed where sandstones have been eroded away leaving harder enclosing rocks; • Extensive mudflats; • Rich natural heritage; • Dominance of water, sky and distant shores; and • Framed views.	High Coastal influence and views of the sea are a key characteristic of this landscape, and offshore development has the potential to affect its character.
Fife Landscape Character Assessment (SNH Review No. 113)		

Landscape Character Type / Area	Relevant Key Characteristics	Sensitivity to offshore wind turbine development (refer to criteria in Table 16.2)
Type C6: Lowland Open Sloping Farmland	• Predominantly large, open, sloping arable fields, often with no boundaries or with mainly wire fences, low hedges and little vegetation cover; • Sometimes extensive seaward and landward views owing to elevation and openness; • Distant or occasional views of the sea, the Firths or the estuaries; • Views across or to the Coastal Hills or the Lowland Hills and Valleys; • General lack of tree cover; • Some dominant point features mainly buildings, structures or tree groups; and • A large scale, open or exposed landscape where the character is strongly influenced by the weather conditions and views of the sky.	Medium Although coastal views are a characteristic of this landscape, these views tend to be restricted to the more open areas. Elsewhere, coastal influence is limited, and the potential for offshore development to impact upon overall character is therefore reduced.

Seascape Character

16.50. Seascape characterisation begins by identifying the spatial extent of the seascape units. The 2001 Guide to Best Practice in Seascape Assessment (Hill et al, 2001) defines seascape units based on physical size from major seascape units through intermediate sized seascape units down to micro seascape units.

National Seascape Units

16.51. National Seascape Units are defined as an extensive section of the coast with an overriding defining characteristic such as coastal orientation or landform, defined by major headlands of national significance. The SNH Commissioned Report No. 103 (Scott, K.E. et al, 2005) divides the Scottish coastline into 33 indicative National Seascape Areas. These areas were assessed for their sensitivity to a fixed scenario for offshore wind energy development.

16.52. There are three National Seascape Units in the study area which are illustrated in Figure 16.3:

- area 2: Firth of Forth;
- area 3: East Fife/ Firth of Tay; and
- area 4: North East Coast.

16.53. The key characteristics and sensitivities are summarised in Table 16.7 below:

Table 16.3 National Seascape Units

National Seascape Unit / Area	Key Characteristics	Sensitivity (as defined in Report No. 103) (Scott, K.E. et al, 2005)
Area 2: Firth of Forth	Semi-open character in outer Firth within a broad bay but with views funnelled towards open sea. Inner Firth forms a narrow plane of water, strongly contained by hills.	Medium
Area 3: East Fife / Firth of Tay	Medium to large scale overall. Containment of hills reduces scale in Inner Firth, flatter coastal landform and greater expanse of open sea increases scale in Outer Firth.	Medium
Area 4: North East Coast	Long, east-facing generally 'straight' coastline with many small indentations and few significant headlands and with open views out to North Sea.	Low – Medium

Regional Seascape Units

16.54. As part of the collaborative approach to impact assessment being undertaken by the FTOWDG, a common seascape character baseline has been prepared which ensures consistency between SLVIAs for the offshore wind farms in the Firth of Forth and Tay area.

16.55. The Seascape Character Assessment (SCA) was undertaken following discussions between FTOWDG, SNH and local authorities (including Angus Council, Fife Council, East Lothian Council and Scottish Borders Council). The SCA has been developed jointly by the landscape consultants representing the developers in the FTOWDG. The methodology and approach was developed by the three landscape consultants and subsequently agreed with SNH. In order to streamline the characterisation process, each landscape consultancy was assigned responsibility for regional units across separate areas. This characterisation, which includes descriptions of all the regional units and their sensitivities, is set out in Appendix K2 which can be found in ES Volume III: Appendices.

16.56. Regional Seascape Units are a subdivision of the national units and are defined by regional headlands, islands and coastal features.

16.57. Nine regional units have been identified within the study area. These are illustrated in Figure 16.3 and the descriptions and sensitivities of each are set out in Appendix K2 which can be found in ES Volume III: Appendices.

- SA2: Greg Ness to Cove Bay (Sensitivity: Medium);
- SA3: Cove Bay to Milton Ness (Sensitivity: Medium);
- SA4: Montrose Bay (Sensitivity: High);
- SA5: Long Craig (Sensitivity: Medium);
- SA6: Lunan Bay (Sensitivity: High);
- SA7: Lang Craig to The Deil's Heid (Sensitivity: High);
- SA8: Arbroath to Monifieth (Sensitivity: Medium);
- SA12: St Andrews to Fife Ness (Sensitivity: High); and
- SA13: East Neuk of Fife (Sensitivity: High).

Physical and Human influences on the landscape/ seascape within the study area

Geology, Soils, Landform and Topography

16.58. The coastal landscape within the study area is defined and heavily influenced by its underlying geology and topography.

16.59. The north-west of the study area gently slopes towards the coastal edge, where it generally gives way to low-lying cliffs or steep slopes above the sea. The shoreline is rocky and there are no areas of sandy foreshore exposed at low tide, aside from the small shingle beach at Cove Bay to the south of Aberdeen. The Grampian foothills to the north-west form a distant backdrop to the coastal zone, which gently slopes to the coastline. At the local scale, the coastline has many small coves and inlets with sea caves and natural arches, being seen together with shingle beaches, rock platforms, and other natural features of the coastal environment.

16.60. The west of the study area is a predominantly gently sloping and low-lying seascape, and is mostly flat around Montrose Bay, where there is a strong horizontal emphasis. Vertical elements are provided by the dunes, the cliffs and coniferous plantations in some areas. South of Usan, the coastal edge gains in height with steep slopes between the shoreline and the fields above. The cliffs of Rickle Craig are approximately 50m high, although sloping down to the natural harbour at Boddin and the promontory of Boddin Point. The low lying coastline between Arbroath and Monifieth has a strong horizontal emphasis, heightened on the coastal edge by extensive rocky platforms, interspersed with lengths of sandy beach.

16.61. The south-west of the study area includes a small area of Fife. The area is a mix of relatively straight, but indented coastal edge, marked by low cliffs, rocky platforms and the occasional sandy bay, giving way to an undulating agricultural hinterland.

Land Cover and Vegetation

16.62. To the north-west of the study area, there is a contrast between rocky coastline, interspersed with small coves and shingle beaches, and adjacent agricultural land. Agricultural land extends almost to the coastal edge. As this is primarily grazing land, it

creates a buffer zone between the developed land to the west and the coastline itself. Tree cover is largely restricted to the occasional shelterbelt, as well as wooded areas around farmhouses and small settlements. Intensively managed farmland extends to the coastal edge, thus limiting the sense of naturalness. This contrasts with the coastline and sea itself, which has a strong sense of the natural environment, particularly where the waves crash against rugged cliffs.

16.63. The west of the study area is a contrast of flat and gently sloping agricultural hinterland with rocks, small beaches, dunes and grassland. Coniferous plantations extend to the south of the River North Esk. Woodland and shelterbelts surround the village of Lunan. There are limited areas of grassland at the top of cliffs supporting rare plant species.

16.64. To the south-west of the study area, the diverse coastal edge comprises small sandy bays, extensive wave-cut rock platforms, low cliffs and narrow, wooded dens with gently undulating agricultural landscape sloping down to the coastal edge. Landward areas of agricultural fields are intensively managed but field boundaries and features are poorly maintained.

Buildings, Settlement and Infrastructure

16.65. Parts of the coastline within the study area are developed, including major towns, such as Carnoustie, Arbroath, Montrose and Stonehaven.

16.66. In the north-west of the study area, industrial buildings form a backdrop to the coastal zone. South of this infrastructure is Cove Bay, a mainly residential suburb of Aberdeen. There are a number of small to medium sized towns, including Portlethen, Newtonhill and Stonehaven, all of which function primarily as commuter towns to Aberdeen. These are interspersed with frequent smaller fishing and harbour settlements, often situated at the top of slopes overlooking the coast. Outside of the settlements, development is limited.

16.67. There is movement in this area associated with the Dundee to Aberdeen railway line and the coastal road which runs between Aberdeen and Cove Bay. Due to the area's relatively close proximity to Aberdeen, shipping movements associated with the harbour, together with planes and helicopters using Aberdeen Airport, are also intermittently apparent.

16.68. The west of the study area is occupied by the larger coastal towns of Montrose, Arbroath and Carnoustie. Montrose has an important commercial port for the offshore oil and gas industry, and is also home to industrial development, both around the port and on the northern outskirts of the town. Some of the smaller villages in the area include St Cyrus, Lunan and Auchmithie. The seascape is influenced locally by the presence of Montrose and Arbroath Links and the resort facilities along the beachfront. The A92 runs through the area, although the coast itself is not always visible from the road. Aside from motor vehicles, there are some movements of shipping and also recreational users of the beach and sea as well as recreational users of the Links.

16.69. Large scale development is limited to the south-west of the study area. Kingbarns is the only small village in the area. A disused airfield and occasional larger scale commercial development are located south-west of Fife Ness, which has a small lighthouse. Within the coastal zone, there is movement associated with the golf courses and coastal footpaths, as well as movement associated with agricultural work in the surrounding fields.

Principal Visual Receptors and Views

16.70. Potential visual receptors of Project Alpha are located both onshore, and offshore, although the vast majority of views are likely to be experienced from the coastline. Visual receptors have been identified within 50km of the site boundary.

16.71. Likely viewers (principal visual receptors) include:

- residents living in any of the settlements or individual residences across the area which lies within the Project Alpha ZTV;
- tourists visiting, staying in, or travelling through this part of Scotland;
- recreational users of the landscape, including those using golf courses, cycle routes and footpaths;
- recreational users of the marine environment, including those involved in yachting, and passengers on ships;
- travellers (tourists, workers, visitors or local people) using transport (road and rail) routes passing through the study area;
- people working in the countryside or in any of the towns, villages or settlements residences across the area which lies within the Project Alpha ZTV;
- people travelling by aeroplane above the study area; and
- people working in the marine environment, such as fishermen and crews of ships.

16.72. Settlements, transport and recreational routes and beaches are described briefly below and their locations are shown in Figure 16.7.

Settlements

16.73. There are many settlements in the study area, from which there are principal visual receptors due to the sensitivity of residential viewers.

16.74. Aberdeen is situated just outside the northern edge of the study area. The main towns in the study area include Stonehaven, Montrose, Arbroath, Brechin, Carnoustie, Portlethen, Inverbervie and Laurencekirk. A number of key villages include Newtonhill, Glenbervie, Gourdon, Fettercairn, Johnshaven, St Cyrus, Hillside, Inverkeilor, Friockheim and Kingbarns.

16.75. The sensitivity of settlements to visual impacts is characterised by the sensitivity of residential properties within those settlements. Therefore, as per Table 16.2, all settlements are assessed as high sensitivity receptors.

Route corridors – roads, railways, cycle routes and footpaths

16.76. There are numerous route corridors, many of which are associated with urban development, while others provide access to the wider countryside. It is not possible or necessary to assess the potential impacts of Project Alpha on every route individually, however, some of the key routes have been considered in the assessment, and these serve as illustrations of likely impacts on more minor routes in similar locations. Two principal criteria have been considered in determining the inclusion of routes in the assessment; firstly, the extent to which the route traverses the study area or extends across a notable part of it; and secondly, the importance of the route in terms of recognition, signage, traffic volume and usage.

16.77. Using these criteria, two major roads are considered to be appropriate for inclusion as receptors: the A92 and the A90. Other key receptor routes include: the A957, A935, A934, A933, A937, A930, B979, B9077, B967, B966, B974, B9120, B9134, B9113, B965, B961, B9127 and B9128. As per Table 16.2, all motorways and A roads are assessed as low sensitivity receptors as the views are transient and fast moving, whilst B roads and unclassified roads are assessed as medium sensitivity receptors.

16.78. One National Cycle Network Sustrans route traverses primarily along the coastline: National Cycle Network 1 (NCN1), which extends along the Angus and Aberdeenshire coastline to Aberdeen. As per Table 16.2, users of cycle routes are high sensitivity receptors as these routes are nationally important and designated routes, and whose attention is focused on the landscape.

16.79. The study area includes one mainline railway (East Coast Mainline Railway), connecting Aberdeen with Dundee, via Carnoustie, Arbroath and Montrose. As per Table 16.2, users on railways are medium sensitivity receptors.

16.80. There is a long distance footpath in the study area, known as the Fife Coastal Path. It runs throughout the Fife coastline from Largo Bay to Tayport. As per Table 16.2, users of long distance footpaths are high sensitivity receptors as these routes are nationally important and designated routes, and whose attention is focused on the landscape.

16.81. Users of aeroplanes over the study area (including on approach to or departure from Aberdeen and Dundee airports) are considered as low sensitivity receptors.

Recognised vantage points

16.82. Elevated locations along the coast act as formal vantage points which have a good view out to sea. These are at Fife Ness, Newtonhill and St Cyrus (Beach Road). There are also beach level locations at Arbroath, Montrose, Carnoustie, Stonehaven, Lunan, Johnshaven and Inverbervie which act as informal vantage points out to sea.

16.83. In addition, there are various car parks off the A92, which are located on top of cliffs and act as informal vantage points out to sea.

16.84. Further inland, there are hilltop viewpoints at Drumtochy Forest and Durris Forest, and other locations which enable coastal and marine views.

16.85. All the above identified vantage points will have a high sensitivity to change as viewers at these locations tend to pause and take in the view and often focus on the horizon.

Recreational receptors

16.86. Apart from informal recreational activities such as walking and cycling, there are a small number of other recreational activities that take place along the coast. There are several golf courses within the study area which have several clubs using them and comprise more than one course at each links. These include Stonehaven Golf Club in Aberdeenshire, Montrose Golf Links, Arbroath Golf Links and Carnoustie Golf Links, in Angus, and the Crail Golfing Society in Fife. Golf courses are assessed as having a medium sensitivity to change as the focus of golfers is on the sport rather than the surroundings.

16.87. There are no country parks within the study area.

Tourist attractions

16.88. Many of the tourist attractions within the study area are located in the settlements of the Project Alpha study area. Within these settlements there are numerous hotels, cafes, bars and tourist

shops as well as specialist attractions such as museums and visitor centres. Where there is direct visibility of aspects of Project Alpha from these, they are assessed as having a high sensitivity.

16.89. One of the other attractions for tourists is the coast's beaches that allow direct views out to sea and have a high sensitivity to change. These include the beaches of St Cyrus, Montrose, Lunan Bay, Arbroath, Elliot, East Haven, Carnoustie, Barry Sands North, Buddon Sands, Cambo and Balcomie, as shown on Figure 16.7.

16.90. Within the study area, there are numerous camp sites and caravan parks, many of which are oriented towards the sea and have a high sensitivity to change. The key ones include Wairds Park Caravan Site and East Bowstrips Caravan Park to the north of Montrose and Seaton Estate Holiday Village in Arbroath.

Marine receptors

16.91. In addition to the land based potential visual receptors, there are also people out at sea who may have views in the direction of Project Alpha.

16.92. The seascape is relatively busy, traversed by commercial and recreational vessels, many of which are associated with ports and harbours in the Firths of Tay and Forth outside the study area (see Chapter 15: Shipping and Navigation). No commercially operated pleasure cruises have been identified along this section of the coast.

16.93. The Bell Rock Lighthouse is situated approximately 17.5km from Arbroath, and 22.5km from St Andrews on the Fife coast and approximately 28km from Project Alpha. It is approximately 35m in height. It is a well-preserved and operational lighthouse built between 1806 and 1811, and is the oldest surviving rock built lighthouse in Britain. The lighthouse was automated in 1988. From its location there are wide views over the surrounding seascape with the coasts of Angus, Fife, the Lothians and the Scottish Borders in the distance. However, due to the distance from the shore, the Bell Rock Lighthouse is rarely seen from the land, as anything more than a small white feature or as an intermittent light during the night. In anything but clear weather conditions, the Bell Rock Lighthouse is not visible from the land. Although, there are a limited number of boat trips a year to the lighthouse, landing is almost unlikely and unadvisable because it is automated and unmanned, therefore any views would be transient to visitors, who would have a medium sensitivity to change.

Viewpoints

16.94. A combination of desk studies, site visits and an interpretation of the ZTVs identified eight viewpoints that were regarded to be representative of the range of views towards Project Alpha from the coastline. They are not intended to cover every single view possible, but are intended to be representative of a range of receptor types (e.g., residents, walkers, tourists, road users, etc.), and also different directions and distances from the Project Alpha site.

16.95. The viewpoints used for this assessment were selected according to the following criteria:

- being publicly accessible;
- having a reasonably high potential number of viewers or being of particular importance to the viewer(s) affected;
- providing a representative range of viewing distances (i.e., short, medium and long distance views) and elevations;
- representing a range of viewing experiences (i.e., static views, for example from settlements, designated viewpoints or car parks, and points along sequential views, for example from public highways and walking and cycling routes); and

- representing a range of visual receptor types (i.e., residential, recreational, and travelling people).

16.96. Viewpoints for the SLVIA have been considered and agreed by meeting and subsequent email correspondence with Scottish Natural Heritage (SNH) on 21st September 2011.

16.97. The viewpoint assessment has been used to inform and illustrate the assessment of impacts on seascape and landscape character and the assessment of impacts on views.

16.98. The locations of the Project Alpha viewpoints are illustrated in Figure 16.9. Table 16.8 lists the viewpoints and provides information on their location, reasons for selection, and distance from the Project Alpha site.

16.99. All except two viewpoints are at coastal locations close to or within settlements which already have moderate levels of street lighting or residual lighting pollution from the settlement. The two viewpoints where views would be obtained from more natural viewpoints are Fife Ness (VP8) and White Caterthun Hill Fort (VP3). In both cases visitors are likely have returned home before full nightfall. The viewpoint receptors are therefore considered to have low sensitivity to night-time lighting at the Project Alpha site.

Table 16.4 Project Alpha Viewpoints

No.	Viewpoint Name	Easting	Northing	Council Area	Distance to Project Alpha (km)	Receptor	Reason for inclusion	Maximum Sensitivity of Receptor
1	Garron Point (Stonehaven Golf Club)	388587	787597	Aberdeenshire	38	Golfers	A links golf course, located on a headland which enables unobscured views south along the coast	Medium
2	Beach Road, Kirkton, St Cyrus	375195	764644	Aberdeenshire	32	Visitors, walkers	Car park offering beach access, and wide elevated views over Montrose Bay, on a coastal footpath	High
3	White Caterthun Hill Fort	354818	766084	Angus	32	Visitors	Inland location, offering views over Strathmore and the Angus coast beyond, signposted and interpreted historic site	High
4	Montrose	372689	757962	Angus	33	Residents visitors	Main car park/access point for the Montrose Bay beach and coast, promenade enables views across the seascape	High
5	Braehead of Lunan	368987	752602	Angus	35	Cyclists, residents, road users	Representative of views from a hamlet, located on NCN1, enabling views south over Red Head	High
6	Arbroath	363910	741080	Angus	40	Walkers, residents	Elevated location above car park, on way marked coastal footpath	High
7	Carnoustie	356249	734093	Angus	49	Residents, visitors	Recently upgraded promenade with car parking and beach access.	High
8	Fife Ness, Lochaber Rock	363842	709766	Fife	50	Walkers, visitors	Easternmost point of Fife, unobstructed views across the outer Firth and Tay, on the Fife Coastal Path	High

Project Bravo

Viewpoints

16.100. Viewpoint selection for Project Bravo was the same as for Project Alpha, set out in paragraphs 16.138 to 16.141 of this chapter, except that VP3 has been omitted as it lies outside the study area of Project Bravo and therefore there are seven viewpoints for Project Bravo.

16.101. The locations of the Project Bravo viewpoints are illustrated in Figure 16.26. Table 16.11 below lists the viewpoints and provides information on their location, reasons for selection, and distance from the site.

16.102. For the purposes of consistency, the viewpoint numbers are the same as per Project Alpha. However, VP3 has been discounted as it lies outside the study area of Project Bravo

16.103. All except one viewpoint is at coastal locations close to or within settlements which already have moderate levels of street lighting or residual lighting 'pollution' from the settlement. Fife Ness (VP8) is the only viewpoint where views would be obtained from a more 'natural' viewpoint. In this case, visitors are likely to have returned home before full nightfall. The viewpoint receptors are therefore considered to have low sensitivity to night-time lighting at the Project Bravo site.

Table 16.5 Project Bravo Viewpoints

No.	Viewpoint Name	Easting	Northing	Council Area	Distance to Project Bravo (km)	Receptor	Reason for inclusion	Maximum Sensitivity of Receptor
1	Carron Point (Stonehaven Golf Club)	388387	787397	Aberdeenshire	50	Golfers	A links golf course, located on a headland which enables unobscured views south along the coast	Medium
2	Beach Road, Kirkton, St Cyrus	375195	764644	Aberdeenshire	43	Visitors, walkers	Car park offering beach access, and wide elevated views over Montrose Bay, or a coastal footpath	High
4	Montrose	372689	757962	Angus	42	Residents, visitors	Main car park/access point for the Montrose Bay beach and coast. promenade enables views across the seascape	High
5	Braehead of Lunan	368987	752602	Angus	43	Cyclists, residents, road users	Representative of views from a hamlet, located on NCN1, enabling views south over Red Head	High
6	Arbroath	365910	741080	Angus	45	Walkers, residents	Elevated location above car park, on way marked coastal footpath	High
7	Carnoustie	356249	734093	Angus	52	Residents, visitors	Recently upgraded promenade with car parking and beach access.	High
8	Fife Ness, Lochaber Rock	363842	709766	Fife	52	Walkers, visitors	Easternmost point of Fife, unobstructed views across the outer Firth and Tay, on the Fife Coastal Path	High

Curvature of the Earth

16.104. The potential impact of the curvature of the earth on visibility of the WTGs is explained in Table 16.19.

Table 16.6 Effects of curvature of the earth on WTG visibility

Distance from Project Bravo	Amount of WTG visible to a viewer at 1.7m AOD (beach level) (based on 209.7m turbine (approximately 210m), with 167m rotor diameter)		Amount of WTG visible to a viewer at 50m AOD (sea cliff/ headland) (based on 209.7m turbine (approximately 210m), with 167m rotor diameter)	
	Height (Tip height)	Components Visible	Height (Tip height)	Components Visible
10km	208m	Tower, hub and blades	210m	Tower, hub and blades
15km	203m	Most of tower, hub and blades	210m	Tower, hub and blades
20km	195m	Most of tower, hub and blades	210m	Tower, hub and blades
25km	183m	Upper two-thirds of tower, hub and blades	210m	Tower, hub and blades
30km	168m	Upper half of tower, hub and blades	210m	Tower, hub and blades
35km	150m	Upper half of tower, hub and blades	206m	Most of tower, hub and blades
40km	128m	Upper third of tower, hub and blades	199m	Most of tower, hub and blades
45km	103m	Blades above hub only	189m	Upper two thirds of tower, hub and blades
50km	74m	Tips of blades visible only	175m	Upper two thirds of tower, hub and blades

16.105. Based on the assumptions presented in Table 16.20, it can be concluded that at any point along the coast (every point of which is over 38km from Project Bravo), the nearest WTGs of Project Bravo will be visible for approximately 24% of each year (equivalent to 88 days per year). At 38km, the WTGs that will be visible will comprise the upper third of the tower, hub and blades. Conversely therefore, it can be concluded that there will be no views of the WTGs from anywhere along the coast for approximately 76% of the year (equivalent to 277 days per year). The photomontages presented in this ES (Figures 16.27 to 16.33), represent the very 'worst case scenario', as the baseline photographs were taken on one of the clearest days of 2011.

16.106. The figures in Table 16.20 indicate that the Project Bravo WTGs will be visible on good weather days (typically high pressure with no haze in the sky) and is acknowledged that these are the days more likely to attract larger visitor numbers to the coast.

16.107. Tables 16.21 and 16.22 combine all the various factors that will dictate how prominent the WTGs will be from within the National and Regional Seascape Character Areas and provides an overall rating for the magnitude of change on each Seascape Character Area.

Cumulative Impacts of the Seagreen Project together with Other Schemes

16.108. In order to consider the cumulative impact of the Seagreen Project with other sites, information about the other projects has been extracted from relevant application documents. Details and assumptions made about the other sites within the 65km cumulative search area, considered in the cumulative assessment are presented in Table 16.26 below and presented on Figure 16.35.

16.109. Details of three onshore wind farms in Aberdeenshire currently at the scoping stage were unavailable and have therefore been discounted from the cumulative assessment however, they are presented on Figure 16.35 and Table 16.26 below.

Table 16.7 Cumulative wind farm details

Site Name	Number of WTGs	Maximum blade tip height (m)	Distance to the Seagreen Project (km)	Application Stage	Council
Offshore wind farms					
Neart na Gaoithe	80 - 128	175 - 197	27	Submitted	N/A
Inch Cape	188	152 - 215	9	Scoping	N/A
Onshore wind farms					
Kenly	6	100	54	Planning	Fife
South Cassingray	2	100	63	Planning	Fife
Michelin Tyre Factory (Dundee)	3	105	58	Operational	Dundee City
Port of Dundee	2	127	60	Scoping	Dundee City
Frawney	7	110	62	Scoping	Angus
Muir of Pert	1	100	40	Scoping	Angus
Hatton Mill	1	100	42	Scoping	Angus
Kinblethmont	5	125	40	Scoping	Angus
Dodd Hill	5	126	58	Scoping	Angus
North Mains of Cononsyth	1	66.7	46	Consented	Angus
East Memus, Forfar	1	86.45	60	Consented	Angus
Corse Hill (Nether Kelly)	7	126	44	Planning	Angus
Pickerton, Guthrie	1	77	48	Planning	Angus
Tealing Farm	1	94	63	Planning	Angus
Woodside, Aberlemno	1	74	52	Planning	Angus
Whitefield of Dun Farm, Montrose	1	67	38	Planning	Angus
Glaxo Smith Kline, Cobden Street, Montrose	2	132	32	Planning	Angus
Reidhall Farm, Edzell	1	74	46	Planning	Angus
Fordoun Saw Mill	1	77	38	Consented	Aberdeenshire
Droop Hill	3	80	40	Consented	Aberdeenshire
Jacksbank	3	100	40	Consented	Aberdeenshire

Site Name	Number of WTGs	Maximum blade tip height (m)	Distance to the Seagreen Project (km)	Application Stage	Council
Hillhead of Auquhirie	3	92.5	36	Consented	Aberdeenshire
Mid Hill I	25	126.5	48	Consented	Aberdeenshire
Rubberatkins	1	66.6	60	Consented	Aberdeenshire
St John's Hill	9	80	31	Consented	Aberdeenshire
Meikle Carewe	12	70	44	Consented	Aberdeenshire
Kempston Hill	-	-	39	Scoping	Aberdeenshire
Learney Estate	-	-	64.5	Scoping	Aberdeenshire
Wynford	-	-	59	Scoping	Aberdeenshire
Tullo	7	100	34	Operational	Aberdeenshire
Mid Hill II	9	126.5	47	Planning	Aberdeenshire
South Lasts Farm	1	86.45	50	Planning	Aberdeen City

16.110. Trends can be identified relating to the pattern of developments across the 65km study area with reference to Figure 16.35 and Table 16.26. Existing and proposed developments are seen to be grouped by region, corresponding to hill ranges and areas of upland moorland, as well as developed coastal areas. The following areas and groupings have been identified:

- medium-scale wind development across the coastal and inland areas between Montrose and Aberdeen;
- dispersed medium and small-scale development across the coastal and lowland areas to the north of Montrose;
- small-scale wind farms and turbines through lowland areas of Angus between Strathmore and the coast;
- medium-scale wind farms in the Sidlaw Hills in Angus;
- small-scale and single turbine developments in and around the city of Dundee, often in association with industrial sites;
- limited small-scale proposals across the north western fringes of the Ochil Hills and north Fife; and
- two relatively isolated proposals in east Fife.