CHAPTER 20: OTHER MARINE USERS AND ACTIVITIES

Technical Summary

There are relatively few other industries operating within the region with which the Seagreen Project has the potential to interact with or impact upon. There is no active oil and gas activity, no aggregate dredging, no overlap with pipelines or cables and limited overlap with disposal sites, other wind farms and military practice areas. Industries with which there are potential impacts (i.e. fisheries and shipping) are considered in their own right within the topic specific technical chapters of this Environmental Statement. Therefore, there are no pathways for significant impacts from the Seagreen Project to other users and activities and no cumulative impacts are anticipated with other projects.

INTRODUCTION

20.1. This chapter of the ES discusses the other marine users and activities relevant to the Seagreen Project which are additional to those already covered in specific chapters of the ES (i.e. Chapter 14: Commercial Fisheries, Chapter: 15 Shipping and Navigation and Chapter 18: Military and Civil Aviation). The other marine users and activities considered in this chapter are not of a large scale within the WSA and region and as such are included collectively in this chapter rather than discussed in individual chapters. The marine users and activities covered by this chapter are:

- other offshore wind farm projects;
- oil and gas activities;
- marine aggregate extraction;
- marine disposal sites;
- military exercise areas;
- telecommunications and electricity cables, pipelines;
- capital and maintenance dredging; and
- other relevant marine developments.

20.2. In addition to the marine users and actives listed above this chapter also briefly considers unexploded ordnance (UXO) in relation to the construction and operation of the Seagreen Project.

20.3. Figures 20.1 and 20.2 illustrate the other marine users and activities of relevance to the Seagreen Project.

20.4. This chapter provides a statement of the significance of the potential impacts of the Seagreen Project, on the other identified marine users and activities, over the construction, operation and decommissioning phases of the Seagreen Project.

20.5. This chapter of the ES was produced by Royal Haskoning. All figures referred to in this chapter can be found in ES Volume II: Figures.

CONSULTATION

20.7. No concerns of significance to this chapter have been highlighted by the consultees who responded to the Seagreen Scoping Report (Marine Scotland Scoping Opinion, November 2011). The only point of relevance to this section raised in consultation was a general statement regarding consideration of other industries in potential cumulative impact assessments (see Table 20.1). Few other industries operate in proximity to the Seagreen Project; those industries with the potential for significant interactions with the Seagreen Project are, as noted above, discussed in other technical chapters within this ES.

Table 20.1 Summary of consultation and issues

Date	Consultee	Issue	Response or relevant Chapter/ Section
January 2011	MOD	All issues raised by the MOD were in relation to aviation interests.	Chapter 18: Military and Civil Aviation
January 2011	SNH and JNCC	We advise that not all cumulative / in-combination impacts are unique to wind farms, and as such it is necessary to include other industries (e.g. aggregate,) in this assessment.	This chapter covers other industries (not covered by other technical chapters within this ES) to ensure that all potential impacts and interactions are covered.

ASSESSMENT METHODOLOGY

Study Area

20.8. This chapter focuses on two geographical study areas; the Immediate Study Area (ISA) and the WSA. The ISA comprises the geographical area covering the Seagreen Project (i.e. Project Alpha, Project Bravo and the Transmission Asset Project including the ECR corridor). None of the other marine users or activities covered by this chapter are currently operating within the ISA itself; therefore, the ISA is merely used for the purpose of defining the distance of the Seagreen Project from these users and activities.

20.9. Expert judgement has been used to consider how other projects or activities might have an influence on, or be influenced by, the Seagreen Project and therefore which projects or activities should be included in this chapter. As a result of this judgement and the scale of the Seagreen Project, the WSA includes activities up to 60 kilometres (km) from the ISA, which is displayed in Figure 20.1. While it is unlikely that there will be any interaction between the Seagreen Project and these distant activities, their consideration ensures that a full and proper impact assessment can be made. The ISA boundary is illustrated in Figures 20.1 and 20.2; and the WSA is illustrated in Figure 20.1.

20.10. It should be noted that the terrestrial boundary for the Seagreen Project offshore works is delineated by the MHWS tidal limit. All onshore works (comprising transition pits, onshore cabling and a new substation at the grid connection point near Tealing in Angus) terminate at MLWS and are being assessed as part of a separate EIA and consent application. This results in an overlap of study areas between the offshore and onshore applications which is the same approach adopted for previous Round 1 and Round 2 offshore wind farms.

Data Collection and Survey

20.11. No specific data collection or surveys have been carried out for this assessment; characterisation of the existing environment has been informed through desk study of available data. Key data sources that have been used include:

- Kingfisher Information Service[1] - Cable Awareness (locations of submarine cables);
- The Crown Estate (offshore wind farm lease sites and aggregates license areas); and
- UK DEALI[2] (oil and gas infrastructure).

20.12. Where other data sources have been referred to they are fully referenced.

Approach to Assessment

20.13. The generic EIA methodological approach presented in Chapter 6: EIA Process of this ES, was adapted to provide an assessment framework for this chapter. It should be noted that the assessment of impacts for other marine users and activities is not related to the natural environment, these impacts have been assessed in other technical chapters within this ES. In this chapter the assessment provides a qualitative discussion of the potential impacts of the Seagreen Project upon the operation of other marine users and activities. Table 20.2 shows how value and sensitivity has been defined for other marine users and activities.

Table 20.2 Definition of terms relating to the value and sensitivity of other marine users and activities as Receptors

Value/ Sensitivity	Definition
High	Value: Strategically important infrastructure Sensitivity: Activity / receptor has no or very limited capacity to accommodate the proposed form of change or interaction.
Medium	Value: Regionally important Sensitivity: Activity / receptor has limited capacity to accommodate the proposed form of change or interaction.
Low	Value: Locally important Sensitivity: Activity / receptor is capable of accommodating the proposed change or interaction.
Negligible	Value: Not considered to be particularly important Sensitivity: Activity / receptor is generally capable of accommodating the proposed change or interaction.

20.14. Table 20.3 shows how magnitude of impact has been defined. As this assessment does not have a standard methodology the definitions provided are specific to the other users within the zone of influence.

1 Kingfisher provides the positions and route information of submarine cables in the seas around the UK

2 UK DEAL is an online gateway to information on the UK offshore oil and gas Industry it provides information such as the location of all wells, surveys, licences and infrastructure;

Table 20.3 Definition of terms relating to the magnitude of potential impacts upon other marine users and activities.

Magnitude	Definition
High	Fundamental, permanent / irreversible changes, over the majority (>50%) activity / asset, and / or fundamental alteration to key characteristics or features of the particular infrastructure or asset. Impact certain or likely to occur.
Medium	Considerable, permanent / irreversible changes, over the much (<50%) of the activity / asset, and / or discernible alteration to key characteristics or features of the particular infrastructure or asset. Impact certain or likely to occur.
Low	Discernible, temporary (throughout project duration) change, over a minority (<10%) of the activity / asset, and / or limited but discernible alteration to key characteristics or features of the particular infrastructure or asset. Impact will possibly occur.
Negligible	Discernible, temporary (for part of the project duration) change, or barely discernible change for any length of time, over a small area (<3%) of the feature or asset, and/ or slight alteration to key characteristics or features of the particular infrastructure or asset. Impact unlikely or rarely to occur.
No change	No loss of extent or alteration to infrastructure or asset.

20.15. Table 20.4 combines the descriptions of magnitude with the level of sensitivity / value of the receptor to provide a prediction of overall significance of the impact. The boxes shaded in red represent an impact which is likely to be considered significant within an EIA context.

Table 20.4 Significance prediction matrix

Value / Sensitivity	Magnitude			
	High	Medium	Low	Negligible
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Negligible	Minor	Negligible	Negligible	Negligible

20.16. As can be seen from Table 20.4 impacts can range from major to negligible. An impact of moderate or major significance would be considered to be significant in relation to the EIA Regulations.

EXISTING ENVIRONMENT

20.17. This section reports on the existing environment within the WSA and establishes a baseline from which the impact assessment can be made. Given that there are few other marine users or activities currently operating within the Project Alpha site, the Project Bravo site or the ECR corridor and landfall, the ISA or individual project boundaries are used to measure distances within the WSA.

Other Offshore Wind Farms (OWF)

20.18. Within the WSA there are a number of other existing and planned OWF developments. Some of these developments are being proposed as demonstrator sites for developers and associated supply chain companies. These projects are summarised in Table 20.5 (their locations are illustrated in Figure 20.1).

20.19. During 2008, The Crown Estate requested initial expressions of interest from companies and consortia wishing to be considered for developing commercial scale wind farms within STW. Two of these projects remain under development, Neart na Gaoithe and Inch Cape. Neart na Gaoithe is approximately 27km south west from Project Alpha and 30km south west from Project Bravo, and Inch Cape is approximately 9km west from Project Alpha and 12km west from Project Bravo.

20.20. Further from the sites, approximately 40km to 80km away are a number of small demonstrator projects which are in the planning and development phase at the time of writing. These are the Hywind Demonstration site, European Offshore Wind Development Centre, and Methil Offshore Wind Farm. It is expected that these projects would involve the installation of up to 11 WTGs.

20.21. Although a number of additional OWF projects are located along the west coast of Scotland, these are located in excess of 90km from the ISA and are considered to be too distant from the projects to be influenced by, or have an influence on, the Seagreen Project.

Table 20.5 OWF projects in the WSA

Project	Developer / Owner	Distance and direction (from Project Alpha)	Capacity	Status/timescale
Inch Cape	Inch Cape Offshore Wind Limited (Repsol Nuevas Energias)	8.67km- west	905 MW	Concept/ early planning. Submission of consent anticipated to be beginning of 2013, offshore construction to start in 2016 and to be operational by 2019
Neart na Gaoithe	Mainstream Renewable Power	27.42km south-west	420MW	Concept/ early planning. Submission of consent July 2012, offshore construction to start in 2015 and to be operational in 2017
Hywind Demonstration Site (Hywind II)	Statoil	48.15km - north	3-5 WTGs (capacity unknown)	Concept / early planning. Further details unknown
European Offshore Wind Development Centre	Aberdeen Offshore Wind Limited	58.24km - north	84MW	Consent application submitted (Aug 2011) Installation of four turbines in 2013 (could be operational in the same year), installation of remaining 7 turbines in 2014 (test site for developers and associated supply chain companies)
Methil Offshore Wind Farm (2B Energy Prototype)	2-B Energy UK	76.76km - west	12MW	Consent authorised (Nov 2011). Installation could begin in 2012 (demonstration site for up to two turbines)

Source: 4COffshore, 2012

Military Practice and Exercise Areas (PEXAs)

20.22. Military Practice and Exercise Areas (PEXAs) are areas available for training used by the MOD and, in many cases, involve the firing of live ammunition. To the east of the ISA, PEXA D613a/ b is used for air combat training. There is an overlap of approximately 316 hectares (ha) between D613b and Project Bravo. PEXA D604 is located at Barry Buddon (see Figure 20.2) and overlaps with the proposed ECR landfall at Carnoustie. PEXA D604 is utilised for firing and parachute dropping.

20.23. Note that whilst the south-east corner of Project Bravo previously overlapped with PEXA DA609, this PEXA site has now been completely withdrawn from use (NATS, 2012). Potential impacts associated with military aviation are assessed in Chapter 18 Military and Civil Aviation in this ES and are not discussed further in this chapter.

Marine disposal sites

20.24. There are no active or disused marine disposal sites within the Project Alpha, Project Bravo or Transmission Asset Project sites. There are several currently licensed sea disposal sites in coastal waters inshore of the Project Alpha or Project Bravo sites receiving material arising from port and harbour dredging activities. The closest disposal site is located 0.5km north of the ECR corridor however; no further detail is available at present in respect to the activities at this site (Figure 20.2). There are three further active disposal sites situated within 50km of the ISA (at the closest point) (Middle Bank, Montrose and Pittenweem) (Figure 20.2). Three closed disposal sites are situated 15km, 47km and 06km from the ISA (Bell Rock, St Abbs Head and Dunbar, respectively) (Figure 20.2).

20.25. In addition there are two closed offshore sewage sludge disposal sites located approximately 17km and 50km to the south-west of the ISA (see Figure 20.2). The sites were used intermittently for disposal between 1978 and 1998.

Oil and gas operations and ancillary structures

20.26. There are currently no active licence blocks located within or in close proximity to the ISA. The majority of blocks surrounding the ISA are open but have never previously been licensed. The blocks at the northwest boundary of the Project Alpha and Project Bravo ISA, are open and were previously licensed (see Figure 20.1). A single historical exploratory well (found to be dry, which was plugged and abandoned in 1985) is present within the ISA (within the Project Bravo site), and three other exploratory wells are located between 8km and 12km to the north-east of the ISA (see Figure 20.1). No other oil or gas infrastructure is present in the ISA.

20.27. On 1 February 2012, the Secretary of State for Energy and Climate Change invited applications for Licenses in the 27th Seaward Licensing Round. Applications for Licenses were accepted up until the 1st May 2012 (DECC, 2012), at the time of writing licenses have not been awarded. However, given the lack of existing activity and the limited historical oil and gas activity in this part of the North Sea, it is considered that there is limited potential for exploration within the ISA.

20.28. There are no oil or gas pipelines located within the ISA. The nearest marine gas pipeline is located approximately 7.5km east of the ECR in mouth of the River Tay (Figure 20.1). This pipeline which is known as FM13 is owned and operated by national grid and a section crosses the River Tay between Monifieth and Tayport. The next closest gas pipeline is over 100km from the ISA (St Fergus) and the nearest oil pipeline is 75km from the ISA (Cruden Bay) (UK DEAL, 2012).

Subsea cables

20.29. There are no active or disused, subsea cables located in the ISA. The nearest active cables are Cantat 3 and Pangea North (both telecommunications cables) located over 200km south of the ISA (Kingfisher, 2012).

Unexploded ordnance

20.30. Much of the UK coast and adjacent sea area has been subject to military activity in the past, in particular from activities during World War II. Therefore, there is the potential for wreckage and UXO to be encountered on the seabed, including such items as sunken sea mines, air delivered bombs, naval ammunition (including torpedoes and depth charges), munitions from wrecks and land based defence ammunition.

20.31. Although there are potential health and safety impacts associated with the presence of UXO during all phases of development, these are not assessed within this ES. Potential health and safety impacts will be fully assessed as part of a UXO specific risk assessment which will be informed by the geophysical survey data. UXO risk and response will be factored into the detailed design process and in the development of method statements and their associated health and safety risk assessments.

Aggregate extraction

20.32. No licensed aggregate extraction currently takes place within the ISA the closest site is 58km from the ISA (Figure 20.2). It should be noted that there are a number of historic aggregate licence areas within the WSA (in the Firth of Forth and the Firth of Tay) and there is potential for these to be re-opened for extraction in the future. The nearest historic aggregate licence area is located 16km from the ISA. No further information (including spatial locations for mapping) regarding these sites is available at the time of writing (July 2012).

Capital and maintenance dredging

20.33. No licensed dredging activities currently take place within the ISA. Maintenance and capital dredging activity is concentrated in estuarine and coastal waters associated with the harbours and ports within the Firth of Forth and the Firth of Tay. The closest dredging activity to the ISA takes place over 80km away, near Edinburgh, and it is considered to be too far to be influenced by, or have influence on, the Seagreen Project.

Other relevant marine activities

20.34. The Dundee Waterfront Development is located approximately 50km from the ISA, within the Firth of Tay. In 1998, the Dundee Partnership assessed potential options for re-integrating the Central Waterfront with Dundee City Centre. The resultant master plan extends into 2030 and includes the extension of the city centre down to the waterfront, improved transport, amenities waterside development and development of land at the port for renewable energy manufacturing (Dundee Waterfront, 2012). The port extension is however considered to be too distant from the ISA to be directly adversely influenced by, or have influence on, any phase of development of the Seagreen Project. Depending on the supply chain decisions made for the Seagreen Project, there are potential positive indirect impacts of the Seagreen Project on the port of Dundee (See Chapter 19: Socio-economics).

20.35. The Forth Replacement Crossing (FRC) is a major infrastructure project for Scotland. Construction was scheduled to commence in 2011 and to be delivered in 2016 (Transport Scotland, 2012) and it is considered to be too far away to be influenced by, or have influence on, any phase of development of the Seagreen Project.

20.36. No other on-going or planned coastal developments are considered to be of relevance to the Seagreen Project.

ASSESSMENT OF IMPACTS – WORST CASE SCENARIO

20.37. There is little or no spatial overlap between the Seagreen Project and other marine users and activities. The key potential impacts on these users and activities from construction, operation and decommissioning of the Seagreen Project will therefore arise from any conflicts between vessel movements, arising from spatial and temporal overlaps between the other marine activities and the Seagreen Project. The magnitude of the impact will relate to the spatial overlap between the activities and operations and the time scales or periods of disturbance.

20.38. The overlaps relate to all phases of the development of the Seagreen Project and will mainly relate to movement of vessels and plant and to location of temporary infrastructure and works. These must be regarded as logistical issues and as such can be defined as manageable. The worst case scenario will therefore arise when there is the intention of two or more users to undertake activities within the same spatial area, at the same time, or, when one activity has the potential to prevent another from going ahead. An in-depth assessment of navigational risk and the impact of the Seagreen Project on shipping and navigation is presented in Chapter 15: Shipping and Navigation of this ES.

20.39. Given that there is little or no spatial overlap between the Seagreen Project and other marine users and activities, unlike other chapters, the following impact assessments deals with Project Alpha, Project Bravo and the Transmission Asset Project (as covered spatially by the ECR corridor) together to avoid unnecessary duplication.

IMPACT ASSESSMENT – CONSTRUCTION PHASE

Effects on other OWFs

20.40. The Hywind and the European Offshore Wind Development Centre are located a significant distance from the ISA (approximately 60km to the north) and the Methil project is located within the Firth of Forth (approximately 45km to the southwest) of Project Alpha. Given the distance of these other OWF from the ISA it is considered that there is little scope for significant interaction between construction vessel operations (Chapter 15: Shipping and Navigation) and therefore no pathway for any impacts to occur.

20.41. Neart na Gaoithe and Inch Cape are located in close proximity to the Seagreen Project (27.4km and 8.8km respectively from the Project Alpha site) and may potentially have overlapping construction periods (see Table 20.5). The Transmission Asset Project inner boundary passes within 300m of the Inch Cape northern limit. These projects are considered to be regionally important and therefore are considered to have medium sensitivity to potential impacts. There is no known overlap of infrastructure between the projects. The potential for impacts between the Seagreen Project and the Inch Cape and Neart na Gaoithe projects may result from construction vessel movement, potential use of shoreside support facilities and temporary location of plant; however, these would be dependent on spatial overlaps and the timing of construction works with the highest potential impacts occurring if construction activities take place at two or even all three projects concurrently.

20.42. No information currently is available on the likely use of local loadout port facilities for the construction of any of the proposed OWFs. As a result, taking the worst case, there is some potential for projects to use the same loadout port and so increase the risk of competition for loadout space and shoreside facilities.

20.43. Reflecting the lack of available information on loadout ports at this early stage in the project design development of all of the wind farms, the magnitude of the potential impact is assessed as low to negligible. As most impacts are unlikely and any impacts that do occur will be temporary, and of short duration the potential impacts are therefore assessed as of negligible to minor adverse and **not significant**. This assessment is based on the assumption that during the construction of the Seagreen Project, all effort will be made to reduce, remove or manage potential conflicts to ensure minimal negative interaction.

Mitigation

Mitigation

Consultation with the relevant wind farm project managers/ developers and operators to ensure logistics management is appropriate and to allow discussion of concerns and facilitate resolution of any potential issues.

To this end Seagreen will continue to participate in on-going communication between the parties involved.

Residual Impact

20.44. Following the application of mitigation, i.e. appropriate consultation and any resultant logistics management, the residual impact for Project Alpha, Project Bravo and the Transmission Asset Project will be reduced to negligible and therefore **not significant**.

Effects upon Military PEXAs

20.45. There are two PEXAs that are affected by the Seagreen Project (see Figure 20.2). The south east corner of Project Bravo extends into PEXA D613b. The second PEXA (D604) is at Barry Buddon, where it is proposed that the ECR would come ashore. Project Alpha does not have a spatial overlap with a PEXA.

20.46. The PEXAs are considered to be of high sensitivity due to the nature of the use and their strategic importance to the military.

20.47. The magnitude of the potential impact on the PEXA D604 is assessed as negligible as the impacts due to the presence of construction vessels and plant will be temporary and works will only be carried out after consultation with the MOD. There will be no loss or alteration of the PEXA.

20.48. With regard to PEXA D613b at the edge of Project Bravo, the magnitude of the potential impact is considered to be negligible as the spatial overlap is very small (316ha which is 0.03% of the PEXA area which is 926,247ha). At this stage, it is not possible to state whether any infrastructure would be located within this overlap, however, PEXA D613b should be a consideration of the detailed design process. It is assumed that given that it is adjacent to Project Bravo, some construction traffic may enter the PEXA for transit even if there is no overlap of infrastructure. Again, the impacts during construction will be temporary (due to the presence of construction vessels and plant) and works will only be carried out after consultation with the MOD.

20.49. It should be noted that the MOD made no comment with regard to potential impacts upon PEXAs within their scoping response (Marine Scotland, 2011).

20.50. The impact of Project Bravo and the Transmission Asset Project on PEXAs is therefore assessed as of minor adverse and **not significant**. These predictions are based on an understanding that the design will be regulated to meet the requirements of the military danger areas. It is also predicted that there will be no impact of project Alpha on PEXAs.

Mitigation

Mitigation

Seagreen will consult with the MOD to ensure logistics management is appropriate and to allow discussion of concerns and facilitate resolution of any potential issues.

To this end mitigation will be an on-going process of communication between the parties.

Residual Impact

20.51. Following the application of mitigation, i.e. appropriate consultation and any resultant logistics management, the residual impact for Project Bravo and the Transmission Asset Project will be reduced to negligible and therefore **not significant**. As there is no overlap with Project Alpha, there will be no impact with regard to this project.

Effects upon marine disposal sites

20.52. There are no marine disposal sites within the Seagreen Project site. There is a disposal site located approximately 0.5km north of the ECR, Marine disposal sites are assessed as having medium sensitivity at regional level as they are a regionally important resource.

20.53. There is potential for interaction of marine disposal activities during the installation of the export cables. Given that there is no spatial overlap and the limited duration for cabling works through the disposal site, the magnitude of impact is considered to be low.

20.54. Impacts should be avoided in the first instance by routing the cables within the ECR corridor to maximise distance from the disposal areas and discussion may be required with Marine Scotland as the Licensing Authority and relevant operators to ensure that the timing of installation avoids conflict with disposal activities.

20.55. The potential impact is assessed as of minor adverse and **not significant** for the Transmission Asset Project and as having no impact for Projects Alpha and Bravo.

Mitigation

Mitigation

Seagreen will consult with the relevant Licensing Authority and operators to ensure logistics management is appropriate and to allow discussion of concerns and facilitate resolution of any potential issues.

To this end mitigation will be an on-going process of communication between the parties.

Residual Impact

20.56. Following the application of mitigation, i.e. appropriate consultation and any resultant logistics management, the residual impact for the Transmission Asset Project will be reduced to negligible and therefore **not significant**. There will be no impacts upon marine disposal sites from Project Alpha and Project Bravo.

Effects on other non-wind farm marine activities

20.57. This assessment includes potential impacts during the construction phase upon:

- oil and gas operations;
- subsea pipelines and subsea cables;
- aggregate extraction;
- dredging activities; and
- other relevant marine activities.

20.58. Figures 20.1 and 20.2 show the locations of these other marine activities (or potential for them) in relation to the Seagreen Project and the ISA.

20.59. There are no active or disused cables located within the ISA and therefore no pathways for impacts. There are no pipelines located within the ISA and therefore no pathways for impacts. There are no currently licensed aggregate dredging areas within the ISA (Figure 20.2) and therefore at present no pathways for impacts.

20.60. With regard to oil and gas activities, licence blocks are shown in Figure 20.1 and it can be seen that licence blocks cover the whole of the WSA. These blocks are currently on offer for exploration within the current licensing round (DECC, 2012), however at the time of writing (April 2012) there are no known applications for development within the ISA or in proximity to it and therefore at present no pathways for impacts.

20.61. Given the status of all of these activities at the present time, there will be no impacts upon other marine activities from Project Alpha, Project Bravo or the Transmission Asset Project.

IMPACT ASSESSMENT – OPERATION PHASE

Potential impact on other OWFs

20.62. Activity associated with the operation of the Seagreen Project will be significantly reduced when compared to the construction phase. Monitoring and maintenance vessels will require access (it is estimated that there will be between 1,320 – 1,760 vessel movements associated with routine maintenance for Project Alpha and Project Bravo per annum), and as a result these could represent potential for disturbance or disruption to Inch Cape and Neart na Gaoithe. Given the number of vessel movements it is considered that ongoing liaison between the OWF operators will be required. However, as a result of the lack of spatial overlaps between infrastructure of the other OWFs and the Seagreen Project, it is not anticipated that operational activities at the Seagreen Project will impact upon other OWFs. Overall, negligible and **not significant** impact is anticipated on other OWFs during this phase.

Mitigation

Mitigation
Seagreen will consult with the relevant OWF operators to ensure concerns are raised and where necessary issues resolved.

Residual Impact

20.63. Following the application of mitigation, i.e. appropriate consultation and any resultant logistics management, the residual impact for Project Alpha, Project Bravo and the Transmission Asset Project will remain negligible and therefore **not significant**.

Effects upon Military PEXAs

20.64. The PEXAs are considered to be of high sensitivity due to the nature of the use and their strategic importance to the military.

20.65. With regard to the PEXA D604 at Barry Buddon, as the installed cables is essentially maintenance free there would be no pathways for impact unless there was a requirement for unscheduled maintenance on the export cables at this point. Any unscheduled or emergency maintenance would be subject to appropriate agreement and permissions and are not considered here. The magnitude of the potential operational impact on PEXA D604 is assessed as negligible. There will be no loss or alteration of the PEXA.

20.66. With regard to the PEXA D613b within and adjacent to Project Bravo, the magnitude of the potential impact on is considered to be negligible as the potential spatial overlap (if infrastructure is placed within the PEXA) is small. Again, it must be assumed that even if there is no infrastructure within the PEXA, maintenance vessels may enter the PEXA as the transit to and from the Project Bravo site. The impacts will be temporary and works carried out after consultation with the MOD.

20.67. Project Alpha does not have a spatial overlap with a PEXA and therefore no impact is predicted.

20.68. The impact of Project Bravo and the Transmission Asset Project on PEXAs is therefore assessed as of minor adverse and **not significant**.

Mitigation

Mitigation

Consultation when required with the MOD to ensure logistics management is appropriate and to allow discussion of concerns and facilitate resolution of any potential issues.

Residual Impact

20.69. Following the application of mitigation, i.e. logistics management and communication systems, the residual impact for Project Bravo and the Transmission Asset Project will be reduced to negligible and therefore **not significant.** As there is no overlap with Project Alpha, there will be no impact with regard to this project.

Potential impacts upon marine disposal sites

20.70. Export cables will not be located within marine disposal sites therefore there will be no pathways for impact and therefore no impact is predicted.

Potential impact on other non-wind farm marine activities

20.71. This assessment includes potential impacts during the operation phase upon:

- oil and gas operations;
- subsea pipelines and subsea cables;
- aggregate extraction;
- dredging activities; and
- other relevant marine activities.

20.72. As there are no oil and gas operations, subsea pipelines and subsea cables, aggregate extraction, or dredging activities currently within the ISA or close proximity to it there are no pathways for impacts upon these other marine users and activities during operation and therefore there will be no impact. The Applicants will monitor the situation with regard to any future developments to assess potential impacts in the future.

IMPACT ASSESSMENT – DECOMMISSIONING PHASE

Potential impact on other OWFs

20.73. Activity associated with the decommissioning of the Seagreen Project will be significantly reduced when compared to the construction phase and it is likely that cables will be left in situ further reducing the potential for impacts. There is potential for disturbance or disruption to Inch Cape and Neart na Gaoithe vessel movements. Given the number of required vessel movements it is considered that ongoing liaison between operators of the OWFs will be needed throughout this phase of the Seagreen Project. Overall a negligible and **not significant** impact is anticipated on other OWFs during this phase.

Potential impacts upon marine disposal sites

20.74. If export cables are not located within marine disposal sites there will be no pathways for impact and therefore no impact. If cables are located within marine disposal sites it is likely that these will be left in situ and therefore there will be no impact. If cables are removed then there will be a requirement for consultation and resultant logistical management; however the overall impact is expected to be negligible and **not significant**.

Potential impacts upon military PEXAs

20.75. Activity associated with the decommissioning of the Seagreen Project will be significantly reduced when compared to the construction phase and it is likely that cables will be left in situ further reducing the potential for impacts. Any impacts will be temporary and works only carried out after consultation with the MOD to resolve any issues, as a result the overall impact is expected to be negligible and **not significant.**

Potential impact on other non-wind farm marine activities

20.76. This assessment includes potential impacts during the decommissioning phase upon:

- oil and gas operations;
- subsea pipelines and subsea cables;
- aggregate extraction;
- dredging activities; and
- other relevant marine activities.

20.77. As there are no oil and gas operations, subsea pipelines and subsea cables, aggregate extraction, and dredging activities currently within the ISA or close proximity to it there are currently no pathways for impacts upon these other marine users and activities during decommissioning. The Applicants will monitor the situation with regard to any future developments to assess potential impacts in the future.

IMPACT ASSESSMENT – CUMULATIVE AND IN-COMBINATION

20.78. The Seagreen Project is not expected to act in a cumulative or in combination manor with any other project to impact upon the receptors assessed in this chapter. This is due to the fact that all impacts of the Seagreen Project on other existing users have been assessed as non-significant (in EIA terms) and the large distances between the Seagreen Projects and many of the other projects.

ENVIRONMENTAL STATEMENT LINKAGES

20.79. This chapter of the ES should be cross-referenced with Chapter 15: Shipping and Navigation and Chapter 18 Military and Civil Aviation, specifically with respect to vessel movements, navigation and aviation (Table 20.6).

OUTLINE MONITORING

20.80. As noted several times throughout this impact assessment there will be a requirement for ongoing consultation with other marine users during the lifetime of the Seagreen Project to ensure that any potential logistical conflicts are avoided. In addition, the Applicants will continue to monitor the situation with regard to the potential development of other industries in the WSA which could interact with the Seagreen Project.

SUMMARY

20.81. Tables 20.6 to 20.8 summarise the predicted significance of each impact assessed within the EIA, provide the suggested mitigation and the residual impact.

Table 20.6 Summary of Impacts – Project Alpha

Description of Impact	Impact	Potential Mitigation Measures	Residual Impact
Construction Phase			
Impacts on other OWFs	Negligible to minor adverse	Consultation	**Not significant**
Impacts upon military PEXAs	No impact	N/ A	**Not significant**
Impacts on marine disposal sites	No impact	N/ A	**Not significant**
Impact on other non-wind farm marine activities	No impact	N/ A	**Not significant**
Operation Phase			
Impacts on other offshore wind farm projects	Negligible	Consultation	**Not significant**
Impacts on PEXAs	No impact	N/ A	**Not significant**
Impacts on marine disposal sites	No impact	N/ A	**Not significant**
Impact on other non-wind farm marine activities	No impact	N/ A	**Not significant**
Decommissioning Phase			
As per construction	Minor Adverse (dependant on activity levels at time of decommissioning)	Consultation	**Not significant**

Table 20.7 Summary of Impacts – Project Bravo

Description of Impact	Impact	Potential Mitigation Measures	Residual Impact
Construction Phase			
Impacts on other offshore wind farm projects	Negligible to minor adverse	Consultation	**Not significant**
Impacts on PEXAs	Minor adverse	Consultation	**Not significant**
Impacts on marine disposal sites	No impact	N/ A	**Not significant**
Impact on other non-wind farm marine activities	No impact	N/ A	**Not significant**
Operation Phase			
Impacts on other offshore wind farm projects	Negligible	Consultation	**Not significant**
Impacts on PEXAs	Minor adverse	Consultation	**Not significant**
Impacts on marine disposal sites	No impact	Consultation	**Not significant**
Impact on other non-wind farm marine activities	No impact	N/ A	**Not significant**
Decommissioning Phase			
As per construction	Minor Adverse (dependant on activity levels at time of decommissioning)	Consultation	**Not significant**

Table 20.8 Summary of Impacts – Transmission Asset Project

Description of Impact	Impact	Potential Mitigation Measures	Residual Impact
Construction Phase			
Impacts on other offshore wind farm projects	Negligible to minor adverse significance	Consultation	**Not significant**
Impacts on PEXAs	Minor adverse	Consultation	**Not significant**
Impacts on marine disposal sites	Minor adverse	Consultation	**Not significant**
Impact on other non-wind farm marine activities	No impact	N/ A	**Not significant**
Operation Phase			
Impacts on other offshore wind farm projects	Negligible	Consultation	**Not significant**
Impacts on PEXAs	Minor adverse	Consultation	**Not significant**
Impacts on marine disposal sites	Minor adverse	Consultation	**Not significant**
Impact on other non-wind farm marine activities	No impact	N/ A	**Not significant**
Decommissioning Phase			
As per construction	Minor Adverse (dependant on activity levels at time of decommissioning)	Consultation	**Not significant**

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