

CHAPTER 17: SUMMARY OF IMPACTS

- 17.1. This chapter of the EIA Report summarises the impact assessment conclusions within each of the technical chapters (Chapters 8 to 15), together with the relevant impact assessment conclusions from the 2012 Offshore ES. In each case residual impact significance is presented for all impacts. This ensures that the conclusions of the impact assessment for the optimised Seagreen Project, for which consent is being sought, is presented in full, including those topics/impacts scoped out of the 2018 EIA Report, in line with the 2017 Scoping Opinion. Impact summaries from topics addressed in this EIA report are presented in Tables 17.1 to 17.8.
- 17.2. A Habitats Regulation Appraisal has also been completed and forms Chapter 16 of this EIA Report. A summary of impacts for the Habitat Regulations Appraisal (HRA) is presented separately within Chapter 16 and is not repeated here.
- 17.3. For those parameters for which no change was proposed and for those topics and receptors where no change in impact significance was anticipated, then no further assessment has been undertaken as part of this EIA (in line with the 2017 Scoping Opinion). Impacts from topics scoped out of the 2018 EIA Report are presented in Tables 17.9 to 17.13. These impacts are as presented in the 2012 Offshore ES and the conclusions remain valid. In order to provide a comparison of those impacts reassessed, where there is no difference in conclusions of impact significance between the 2012 and the 2018 EIA Report, this is noted as 'No change' and where a difference is identified, a rationale is provided. In instances where impact assessment conclusions are the same for Project Alpha and Project Bravo, these are presented combined, to avoid repetition.
- 17.4. It should be noted that in some instances, the impact assessment may differ in scope between the 2012 Offshore ES and the 2018 EIA Report. For example, for certain topics the 2012 assessment focused on Project Alpha and Project Bravo in isolation rather than the projects combined, in other instances some impacts may not have been identified in 2012 but have been identified through scoping and consultation in 2018. In instances where impacts are not assessed this is stated as 'not assessed' and justification is provided.
- 17.5. For the purposes of this EIA Report, potential impacts identified as major or moderate are generally considered to be significant in EIA terms, while impacts identified as minor or negligible are generally considered to be not significant in EIA terms. Where there are exceptions this is highlighted. It should be noted that the 2012 Offshore ES, uses different terminology for a number of technical chapters. For example, Chapter 14 (Commercial Fisheries), Chapter 15 (Shipping and Navigation) and Chapter 18 (Military and Civil Aviation) of the 2012 Offshore ES have assessed impacts as either 'not significant' or 'significant' and impacts are reported as such. In addition, for some topics the terms 'Low, medium, effect' etc. have been adopted, rather than impact significance. The different terms used are considered interchangeable i.e. low (=minor), medium (=moderate) high (=major) impact and terms used were in accordance with the relevant guidance at the time, however, for consistency impacts are reported in line with other topics as negligible, minor, moderate or major.
- 17.6. As set out within Chapter 6 (EIA Process) of this EIA Report, impacts reported can be adverse, beneficial or neutral and within this EIA Report, all impacts reported are adverse unless identified otherwise.



- 17.7. The summary of impact assessments is provided in the following tables;
 - Table 17.1 Ornithology;
 - Table 17.2 Natural Fish and Shellfish Resource;
 - Table 17.3 Marine Mammals;
 - Table 17.4 Commercial Fisheries
 - Table 17.5 Shipping and Navigation;
 - Table 17.6 Seascape, Landscape and Visual Amenity (SLVIA);
 - Table 17.7 Military and Civil Aviation; and
 - Table 17.8 Socio-economics.
- 17.8. Topics scoped out of this EIA Report (with impacts as presented in the 2012 Offshore ES):
 - Table 17.9 Physical Environment;
 - Table 17.10 Water and Sediment Quality
 - Table 17.11 Benthic Ecology and Intertidal Ecology;
 - Table 17.12 Archaeology and Cultural Heritage; and
 - Table 17.13 Other Marine Users and Activities.
- 17.9. Cumulative impacts can occur when the impacts from one project on an identified receptor combine (through either spatial or temporal overlap) with similar impacts from other projects on the same receptor. Projects and plans that have the potential to give rise to cumulative impacts are identified and considered within the cumulate assessment. Where no impact pathway is identified, projects are screened out of further assessment.
- 17.10. Cumulative impact assessment conclusions from the 2018 EIA report are presented together with assessment conclusions from the 2012 Offshore ES and these are set out in tables 17.1 to 17.13. It should be noted that the cumulative assessment between 2012 and 2018 may differ in projects assessed, as they are based on the list of cumulative projects agreed with Marine Scotland and other stakeholders at the time of assessment.
- 17.11. As set out within Chapter 6 (EIA Process), the cumulative impact assessment for the 2018 EIA Report considers the offshore Transmission Asset as a separate project as this was licensed in 2014 and remains unchanged.
- 17.12. The impact assessment conclusions for the offshore Transmission Asset from the 2012 Offshore ES are also presented in the topic tables below, to ensure the impact assessment for all offshore components of the Seagreen Project are summarised, including the optimised Project Alpha and Project Bravo Offshore Wind Farms (OWFs) and the previously licensed offshore Transmission Asset.

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SUMMARY OF IMPACTS

- 17.13. In developing the optimised Seagreen Project, Seagreen's aim has been to ensure that, wherever possible, the revised design delivers wind farm projects that have impacts which are no greater than those identified in the original project design, which received development consent in October 2014. With the application of appropriate mitigation, the significance of impacts are assessed to be no greater than those of the already consented projects, and a reduction in impact significance is concluded for many receptors. Of particular note are the following conclusions:
 - No significant adverse impacts are predicted for ornithological receptors, either for Project Alpha or Project Bravo in isolation, combined or cumulatively with other plans and projects;
 - No significant adverse impacts are predicted for marine mammal receptors, either for Project Alpha, or Project Bravo in isolation, combined, or cumulatively with other plans and projects;
 - Significant adverse impacts are only concluded for the SLVIA in this EIA Report with regard to impact on visual amenity from two viewpoints for Project Alpha and the same two viewpoints for Project Alpha and Bravo combined. However, these conclusions are in line with the originally consented project and therefore no change in impact significance is predicted.

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---------------|---|--|--------------------------------------|--------------------------------------|--|
| Project Alpha | | | | | |
| Guillemot | Disturbance and displacement | C, O, D | Minor | Negligible to Minor | Fewer WTGs, occupying reduced area, updated displacement risk assessment methods and assumptions. |
| Guillemot | Indirect effects of construction on prey | C D | Moderate Negligible | Not assessed | Scoped out |
| Guillemot | Barrier effects | 0 | Minor | Not assessed | Scoped out |
| Razorbill | Disturbance and displacement | C, O, D | Minor | Negligible to Minor | Fewer WTGs, occupying reduced area, updated displacement risk assessment methods and assumptions. |
| Razorbill | Indirect effects of construction on prey | C D | Moderate Negligible | Not assessed | Scoped out |
| Razorbill | Barrier effects | 0 | Minor | Not assessed | Scoped out |
| Puffin | Disturbance and displacement | C, O, D | Minor | Minor | No change |
| Puffin | Indirect effects of construction on prey | C D | Moderate Negligible | Not assessed | Scoped out |
| Puffin | Barrier effects | 0 | Minor | Not assessed | Scoped out |
| Kittiwake | Disturbance | C, O, D | Minor | Not assessed | Scoped out |
| Kittiwake | Displacement | C, D, O | Minor Minor | Not assessed Minor | Scoped out No change |
| Kittiwake | Indirect effects of construction on prey | C D | Minor Negligible | Not assessed | Scoped out |

Table 17.1 Ornithology Summary of Impacts

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|--------------------------|--|--|---|--------------------------------------|---|
| Kittiwake | Collision mortality | 0 | Minor (National) Moderate (Regional) | Minor (National/Regional) | Higher blade clearance and reduced blade swept area in collision risk zone. Fewer WTGs. Use of updated CRM methods and assumptions. |
| Kittiwake | Barrier effects | 0 | Minor | Not assessed | Scoped out |
| Gannet | Disturbance and displacement | C, D | Minor | Not assessed | Scoped out |
| Gannet | Indirect effects of construction on prey | D | Negligible | Not assessed | Scoped out |
| Gannet | Collision mortality | 0 | Moderate (National/Regional) | Minor to Moderate | Higher blade clearance and reduced blade swept area in collision risk zone. Fewer WTGs. Use of updated CRM methods and assumptions. |
| Gannet | Barrier effects | 0 | Minor | Not assessed | Scoped out |
| Lesser Black-backed Gull | Disturbance and displacement | C, D | Minor | Not assessed | Scoped out |
| Lesser Black-backed Gull | Collision mortality | 0 | Minor (National/Regional) | Not assessed | Scoped out |
| Great Black-backed Gull | Disturbance and displacement | C, D | Negligible | Not assessed | Scoped out |
| Great Black-backed Gull | Collision mortality | 0 | Minor (National) Major (Regional) | Not assessed | Scoped out |
| Herring Gull | Disturbance and displacement | C, D | Minor | Not assessed | Scoped out |
| Herring Gull | Collision mortality | 0 | Minor (National) Moderate (Regional) | Minor (National/ Regional) | Higher blade clearance and reduced blade swept area in collision risk zone. Fewer WTGs. Use of updated CRM methods and assumptions. |

| Receptor | Potential Impact | Phase | 2012 Residual | 2018 Residual | Rationale for difference in |
|---------------|---|---|-------------------------------|---------------------|--|
| | | Construction (C), Operation (O) or Decommissioning (D) | Impact Significance | Impact Significance | Impact Significance (as relevant) |
| Arctic Tern | Disturbance and displacement | C D | Negligible | Not assessed | Scoped out |
| Arctic Tern | Indirect effects of construction on prey | C, D | Minor Negligible | Not assessed | Scoped out |
| Project Bravo | | | | | |
| Guillemot | Disturbance and displacement | C, O, D | Minor | Negligible to Minor | Fewer WTGs, occupying reduced area, updated displacement risk assessment methods and assumptions. |
| Guillemot | Indirect effects of construction on prey | C D | Moderate Negligible | Not assessed | Scoped out |
| Guillemot | Barrier effects | 0 | Minor | Not assessed | Scoped out |
| Razorbill | Disturbance and displacement | C, O, D | Minor | Negligible to Minor | Fewer WTGs, occupying reduced area, updated displacement risk assessment methods and assumptions. |
| Razorbill | Indirect effects of construction on prey | C D, | Moderate Negligible | Not assessed | Scoped out |
| Razorbill | Barrier effects | 0 | Minor | Not assessed | Scoped out |
| Puffin | Disturbance and displacement | C, O, D | Minor | Minor | No change |
| Puffin | Indirect effects of construction on prey | C, D | Moderate Negligible | Not assessed | Scoped out |
| Puffin | Barrier effects | 0 | Minor | Not assessed | Scoped out |
| Kittiwake | Disturbance | C, O, D | Minor | Not assessed | Scoped out |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|--------------------------|---|--|--|--|---|
| Kittiwake | Displacement | C, D O | Minor Minor | Not assessed Minor | Scoped out No change |
| Kittiwake | Indirect effects of construction on prey | C D | Minor Negligible | Not assessed | Scoped out |
| Kittiwake | Collision mortality | 0 | Minor (National) Moderate (Regional) | Minor (National/Regional) | Higher blade clearance and reduced blade swept area in collision risk zone. Fewer WTGs. Use of updated CRM methods and assumptions. Further analysis of population level effects using PVA. |
| Kittiwake | Barrier effects | 0 | Minor | Not assessed | Scoped out |
| Gannet | Disturbance and displacement | C, D | Minor | Not assessed | Scoped out |
| Gannet | Indirect effects of construction on prey | D | Negligible | Not assessed | Scoped out |
| Gannet | Collision mortality | 0 | Moderate (National/Regional) | Moderate (National/Regional) (Not Significant) | Higher blade clearance and reduced blade swept area in collision risk zone. Fewer WTGs. Use of updated CRM methods and assumptions. Further analysis of population level effects using PVA. |
| Gannet | Barrier effects | 0 | Minor | Not assessed | Scoped out |
| Lesser Black-backed Gull | Disturbance and displacement | C, D | Minor | Not assessed | Scoped out |
| Lesser Black-backed Gull | Collision mortality | 0 | Minor (National/Regional) | Not assessed | Scoped out |
| Great Black-backed Gull | Disturbance and displacement | C, D | Negligible | Not assessed | Scoped out |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---------------------------|---|--|---|--------------------------------------|--|
| Great Black-backed Gull | Collision mortality | 0 | Minor (National) Major (Regional) | Not assessed | Scoped out |
| Herring Gull | Disturbance and displacement | C, D | Minor | Not assessed | Scoped out |
| Herring Gull | Collision mortality | 0 | Minor (National/Regional) | Minor | No change |
| Arctic Tern | Disturbance and displacement | C, D | Negligible | Not assessed | Scoped out |
| Arctic Tern | Indirect effects of construction on prey | C D | Minor Negligible | Not assessed | Scoped out |
| Project Alpha and Project | t Bravo Combined | | | | |
| Guillemot | Disturbance and displacement | C, O, D | Minor | Negligible to Minor | Fewer WTGs, occupying reduced area, updated displacement risk assessment methods and assumptions. |
| Guillemot | Indirect effects of construction on prey | C D | Moderate Minor | Not assessed | Scoped out |
| Guillemot | Barrier effects | 0 | Minor | Not assessed | Scoped out |
| Razorbill | Disturbance and displacement | C, O, D | Minor | Negligible to Minor | Fewer WTGs, occupying reduced area, updated displacement risk assessment methods and assumptions. |
| Razorbill | Indirect effects of construction on prey | C D | Moderate Minor | Not assessed | Scoped out |
| Razorbill | Barrier effects | 0 | Minor | Not assessed | Scoped out |
| Puffin | Disturbance and displacement | C, O, D | Minor | Minor | No change |
| Puffin | Indirect effects of construction on prey | C D | Moderate Minor | Not assessed | Scoped out |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|--------------------------|---|--|---|--|---|
| Puffin | Barrier effects | 0 | Minor | Not assessed | Scoped out |
| Kittiwake | Disturbance | C, O, D | Minor | Not assessed | Scoped out |
| Kittiwake | Displacement | C, D O | Minor Minor | Not assessed Minor | Scoped out No change |
| Kittiwake | Indirect effects of construction on prey | C D | Minor Minor | Not assessed | Scoped out |
| Kittiwake | Collision mortality | 0 | Moderate (National) Major (Regional) | Minor (National/Regional) | Higher blade clearance and reduced blade swept area in collision risk zone. Fewer WTGs. Use of updated CRM methods and assumptions. Further analysis of population level effects using PVA. |
| Kittiwake | Barrier effects | 0 | Moderate | Not assessed | Scoped out |
| Gannet | Disturbance and displacement | C, D | Minor | Not assessed | Scoped out |
| Gannet | Indirect effects of construction on prey | D | Negligible | Not assessed | Scoped out |
| Gannet | Collision mortality | 0 | Moderate (National) Major (Regional) | Moderate (National/Regional) (Not Significant) | Higher blade clearance and reduced blade swept area in collision risk zone. Fewer WTGs. Use of updated CRM methods and assumptions. Further analysis of population level effects using PVA. |
| Gannet | Barrier effects | 0 | Minor | Not assessed | Scoped out |
| Lesser Black-backed Gull | Disturbance and displacement | C, D | Minor | Not assessed | Scoped out |
| Lesser Black-backed Gull | Collision mortality | 0 | Minor (National) Moderate (Regional) | Not assessed | Scoped out |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|-------------------------|---|--|--|--------------------------------------|---|
| Great Black-backed Gull | Disturbance and displacement | C, D | Negligible | Not assessed | Scoped out |
| Great Black-backed Gull | Collision mortality | 0 | Major (National/Regional) | Not assessed | Scoped out |
| Herring Gull | Disturbance and displacement | C, D | Minor | Not assessed | Scoped out |
| Herring Gull | Collision mortality | 0 | Minor (National) Moderate (Regional) | Minor (National/Regional) | Higher blade clearance and reduced blade swept area in collision risk zone. Fewer WTGs. Use of updated CRM methods and assumptions. |
| Arctic Tern | Disturbance and displacement | C, D | Negligible | Not assessed | Scoped out |
| Arctic Tern | Indirect effects of construction on prey | C D | Minor Negligible | Not assessed | Scoped out |
| Cumulative Impact Asses | ssment | | | | |
| Guillemot | Disturbance and displacement | C, O, D | Moderate | Minor | Fewer WTGs, occupying reduced area, updated displacement risk assessment methods and assumptions. |
| Guillemot | Indirect effects of construction on prey | C D | Major Minor | Not assessed | Scoped out |
| Guillemot | Barrier effects | 0 | Not assessed | Not assessed | Scoped out |
| Razorbill | Disturbance and displacement | C, D O | Moderate Major | Minor | Fewer WTGs, occupying reduced area, updated displacement risk assessment methods and assumptions. |
| Razorbill | Indirect effects of construction on prey | C D | Major Minor | Not assessed | Scoped out |
| Razorbill | Barrier effects | 0 | Not assessed | Not assessed | Scoped out |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|-----------|---|--|--------------------------------------|--------------------------------------|---|
| Puffin | Disturbance and displacement | C, O, D | Moderate | Minor | Fewer WTGs, occupying reduced area, updated displacement risk assessment methods and assumptions. |
| Puffin | Indirect effects of construction on prey | C D | Major Minor | Not assessed | Scoped out |
| Puffin | Barrier effects | 0 | Not assessed | Not assessed | Scoped out |
| Kittiwake | Disturbance | C, O, D | Moderate | Not assessed | Scoped out |
| Kittiwake | Displacement | C, D O | Moderate Major | Not assessed Minor | Scoped out Fewer WTGs occupying reduced area. Updated displacement risk assessment methods and assumptions. Further analysis of population level effects using PVA. |
| Kittiwake | Indirect effects of construction on prey | C D | Moderate Minor | Not assessed | Scoped out |
| Kittiwake | Collision mortality | 0 | Major | Minor | Higher blade clearance and reduced blade swept area in collision risk zone. Fewer WTGs. Use of updated CRM methods and assumptions. Further analysis of population level effects using PVA. |
| Kittiwake | Barrier effects | 0 | Minor | Not assessed | Scoped out |
| Gannet | Disturbance and displacement | C, D | Moderate | Not assessed | Scoped out |
| Gannet | Indirect effects of construction on prey | D | Minor | Not assessed | Scoped out |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|--------------------------|--|--|--------------------------------------|--------------------------------------|---|
| Gannet | Collision mortality | 0 | Major | Moderate (Not Significant) | Higher blade clearance and reduced blade swept area in collision risk zone. Fewer WTGs. Use of updated CRM methods and assumptions. Further analysis of population level effects using PVA. |
| Gannet | Barrier effects | 0 | Minor | Not assessed | Scoped out |
| Lesser Black-backed Gull | Disturbance and displacement | C, D | Moderate | Not assessed | Scoped out |
| Lesser Black-backed Gull | Collision mortality | 0 | Moderate | Not assessed | Scoped out |
| Great Black-backed Gull | Disturbance and displacement | C, D | Minor | Not assessed | Scoped out |
| Great Black-backed Gull | Collision mortality | 0 | Major | Not assessed | Scoped out |
| Herring Gull | Disturbance and displacement | C, D | Moderate | Not assessed | Scoped out |
| Herring Gull | Collision mortality | 0 | Major/Moderate | Minor | Higher blade clearance and reduced blade swept area in collision risk zone. Fewer WTGs. Use of updated CRM methods and assumptions. |
| Arctic Tern | Disturbance and displacement | C, D | Minor | Not assessed | Scoped out |
| Arctic Tern | Indirect effects of construction on prey | C D | Moderate Minor | Not assessed | Scoped out |
| Transmission Asset Proje | ct | • | | | |
| Gannet | Disturbance effects of OSP construction | C, D | Minor | Not assessed | The potential impacts of the Transmission Asset have not |
| Gannet | Indirect effects of OSP construction | C, D | Minor | Not assessed | been assessed separately in the 2018 EIA. This project |
| Gannet | Disturbance effects of export cable installation | C, D | Minor | Not assessed | was licenced in 2014 and remains unchanged, it is |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|-------------------------|--|--|--------------------------------------|--------------------------------------|--|
| Gannet | Indirect effects of export cable installation | C, D | Minor | Not assessed | therefore considered a separate project. Potential |
| Gannet | Operation of Transmission Asset Project | 0 | Minor | Not assessed | impacts associated with the Transmission Asset are given consideration as part |
| Kittiwake | Disturbance effects of OSP construction | C, D | Minor | Not assessed | of the cumulative assessment within the 2018 EIA. |
| Kittiwake | Indirect effects of OSP construction | C, D | Minor | Not assessed | |
| Kittiwake | Disturbance effects of export cable installation | C, D | Negligible | Not assessed | |
| Kittiwake | Indirect effects of export cable installation | C, D | Minor | Not assessed | |
| Kittiwake | Operation of Transmission Asset Project | 0 | Minor | Not assessed | |
| Great Black-backed Gull | Disturbance effects of OSP construction | C, D | Negligible | Not assessed | |
| Great Black-backed Gull | Indirect effects of OSP construction | C, D | Negligible | Not assessed | |
| Great Black-backed Gull | Disturbance effects of export cable installation | C, D | Negligible | Not assessed | |
| Great Black-backed Gull | Indirect effects of export cable installation | C, D | Negligible | Not assessed | |
| Great Black-backed Gull | Operation of Transmission Asset Project | 0 | Negligible | Not assessed | |
| Guillemot | Disturbance effects of OSP construction | C, D | Minor | Not assessed | |
| Guillemot | Indirect effects of OSP construction | C, D | Minor | Not assessed | |
| Guillemot | Disturbance effects of export cable installation | C, D | Minor | Not assessed | |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|-----------|--|--|--------------------------------------|--------------------------------------|---|
| Guillemot | Indirect effects of export cable installation | C, D | Minor | Not assessed | |
| Guillemot | Operation of Transmission Asset Project | 0 | Minor | Not assessed | |
| Razorbill | Disturbance effects of OSP construction | C, D | Negligible | Not assessed | |
| Razorbill | Indirect effects of OSP construction | C, D | Negligible | Not assessed | |
| Razorbill | Disturbance effects of export cable installation | C, D | Negligible | Not assessed | |
| Razorbill | Indirect effects of export cable installation | C, D | Negligible | Not assessed | |
| Razorbill | Operation of Transmission Asset Project | 0 | Negligible | Not assessed | |
| Puffin | Disturbance effects of OSP construction | C, D | Minor | Not assessed | |
| Puffin | Indirect effects of OSP construction | C, D | Minor | Not assessed | |
| Puffin | Disturbance effects of export cable installation | C, D | Minor | Not assessed | |
| Puffin | Indirect effects of export cable installation | C, D | Minor | Not assessed | |
| Puffin | Operation of Transmission Asset Project | 0 | Minor | Not assessed | |

Table 17.2 Natural Fish and Shellfish Resource Summary of Impacts

| Receptor | Potential impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|----------------------------|---|--|--------------------------------------|--------------------------------------|---|
| Project Alpha | | | | | |
| All species except herring | Noise – mortality and injury | С | Negligible | Negligible | No change |
| Herring | Noise – mortality and injury | C | Minor | Negligible | Differences relate to developments made in underwater noise modelling, the use of updated best practice guidance for assessment and a reduction in the number of WTGs |
| Sandeel | Noise – behaviour (disturbance) | С | Minor | Negligible | Differences relate to developments made in underwater noise modelling, the use of updated best practice guidance for assessment and a reduction in the number of WTGs |
| Herring | Noise – behaviour (disturbance) | С | Moderate | Minor | Differences relate to developments made in underwater noise modelling, the use of updated best practice guidance for assessment and a reduction in the number of WTGs |
| All species except herring | Noise - mortality and injury | С | Negligible | Negligible | No change |
| Sandeel | Seabed habitat disturbance | С | Minor | Not assessed | Scoped out |
| All species except sandeel | Seabed habitat disturbance | С | Negligible | Not assessed | Scoped out |
| All species | Permanent loss of habitat | С | Negligible | Not assessed | Scoped out |
| All species | Increased levels of suspended solids and remobilisation of contaminants | C O | Negligible Minor | Not assessed | Scoped out |

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| Receptor | Potential impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---|--|--|--------------------------------------|--------------------------------------|---|
| Sensitive species (e.g. eel, salmon, sea trout, European plaice, river lamprey, sea lamprey and all demersal elasmobranchs) | Disturbance effects of Electromagnetic Fields (EMF) | 0 | Minor | Not assessed | Scoped out |
| Species not stated to be sensitive to EMF | Disturbance effects of Electromagnetic Fields (EMF) | 0 | Negligible | Not assessed | Scoped out |
| All species | Operational noise | 0 | Negligible | Not assessed | Scoped out |
| All species | Disturbance of seabed habitats | 0 | Negligible | Not assessed | Scoped out |
| All species | Creation of new habitats – fish aggregation | 0 | Negligible | Not assessed | Scoped out |
| All species | Seabed Habitat Disturbance and loss | D | Negligible | Not assessed | Scoped out |
| Project Bravo | | | | | |
| All species except herring | Noise - mortality and injury | С | Negligible | Negligible | No change |
| Herring | Noise - mortality and injury | С | Minor | Negligible | Differences relate to developments made in underwater noise modelling, the use of updated best practice guidance for assessment and a reduction in the number of WTGs |
| Herring | Noise – behaviour (disturbance) | С | Moderate | Minor | Differences relate to developments made in underwater noise modelling, the use of updated best practice guidance for assessment and a reduction in the number of WTGs |

| Receptor | Potential impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---|---|--|--------------------------------------|--|---|
| All species except herring | Noise – behaviour (disturbance) | С | Negligible | Negligible-Minor Other Group 3 (high hearing sensitivity) species such as cod and sprat Minor, other Groups Negligible | Differences relate to developments made in underwater noise modelling, the use of updated best practice guidance for assessment and a reduction in the number of WTGs |
| Sandeel | Seabed habitat disturbance | С | Minor | Not assessed | Scoped out |
| All species except sandeel | Seabed habitat disturbance | С | Negligible | Not assessed | Scoped out |
| All species | Permanent loss of habitat | С | Negligible | Not assessed | Scoped out |
| All species | Increased levels of suspended solids and remobilisation of contaminants | С, О | Negligible | Not assessed | Scoped out |
| Sensitive species (e.g. eel, salmon, sea trout, European plaice, river lamprey, sea lamprey and all demersal elasmobranchs) | Disturbance effects of Electromagnetic Fields (EMF) | 0 | Minor | Not assessed | Scoped out |
| Species not stated to be sensitive to EMF | Disturbance effects of Electromagnetic Fields (EMF) | 0 | Negligible | Not assessed | Scoped out |
| All species | Operational noise | 0 | Negligible | Not assessed | Scoped out |
| All species | Disturbance of seabed habitats | 0 | Negligible | Not assessed | Scoped out |
| All species | Creation of new habitats – fish aggregation | 0 | Negligible | Not assessed | Scoped out |
| All species | Seabed habitat disturbance and loss | D | Negligible | Not assessed | Scoped out |

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| Receptor | Potential impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|--|--|--|--------------------------------------|--------------------------------------|---|
| Project Alpha and Project B | Bravo Combined | | | | |
| Herring | Noise – mortality and injury | C | Minor | Negligible | Differences relate to developments made in underwater noise modelling, the use of updated best practice guidance for assessment and a reduction in the number of WTGs |
| All species except herring | Noise - mortality and injury | С | Negligible | Negligible | No change |
| Herring | Noise – behaviour (disturbance) | C | Major | Minor | Differences relate to developments made in underwater noise modelling, the use of updated best practice guidance for assessment and a reduction in the number of WTGs |
| Sandeel | Noise – behaviour (disturbance) | C | Minor | Negligible | Differences relate to developments made in underwater noise modelling, the use of updated best practice guidance for assessment and a reduction in the number of WTGs |
| All species except herring and sandeel | Noise – behaviour (disturbance) | С | Negligible | Negligible | No change |
| Sandeel | Seabed habitat disturbance | С | Minor | Not assessed | Scoped out |
| All species except sandeel | Seabed habitat disturbance | 0 | Negligible | Not assessed | Scoped out |
| All species | Seabed habitat disturbance | 0 | Negligible | Not assessed | Scoped out |
| All species | Seabed habitat loss | С, О | Negligible | Not assessed | Scoped out |
| All species | Creation of new habitats – fish aggregation | 0 | Negligible | Not assessed | Scoped out |
| Demersal species and migratory species in shallow waters | Disturbance effects of Electromagnetic Fields (EMF) | 0 | Minor | Not assessed | Scoped out |
| All species | Seabed habitat disturbance | D | Negligible | Not assessed | Scoped out |

| Receptor | Potential impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---|--|--|--------------------------------------|--------------------------------------|---|
| Optimised Seagreen Project | Cumulative Impacts | | | | |
| Herring | Noise – mortality and injury | C | Minor | Negligible | Differences relate to developments made in underwater noise modelling, the use of updated best practice guidance for assessment and a reduction in the number of WTGs |
| All species except herring | Noise – mortality and injury | С | Negligible | Negligible | No change |
| Herring | Noise – behaviour (disturbance) | c | Major | Minor | Differences relate to developments made in underwater noise modelling, the use of updated best practice guidance for assessment and a reduction in the number of WTGs |
| Sandeel and salmon | Noise – behaviour (disturbance) | С | Minor | Negligible | Differences relate to the developments made in underwater noise modelling and guidelines used to inform the assessment and updates to baseline information |
| All species except salmon, herring and sandeel | Noise – behaviour (disturbance) | С | Negligible | Negligible | No change |
| All species | Seabed habitat disturbance and loss | C, O,D | Negligible | Not assessed | Scoped out |
| Sensitive species (e.g. eel, salmon, sea trout, European plaice, river lamprey, sea lamprey and all demersal elasmobranchs) | Disturbance effects of Electromagnetic Fields (EMF) | 0 | Minor | Not assessed | Scoped out |
| Species not stated to be sensitive to EMF | Seabed habitat disturbance | 0 | Negligible | Not assessed | Scoped out |
| All species | Creation of new habitats – fish aggregation | 0 | Negligible | Not assessed | Scoped out |

CHAPTER 17: SUMMARY OF IMPACTS

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| Receptor | Potential impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---|---|--|--------------------------------------|--------------------------------------|---|
| Transmission Asset | | | | | |
| All species | Underwater noise | С | Negligible | Not assessed | The potential impacts of the |
| All species | Seabed habitat disturbance | С | Negligible | Not assessed | Transmission Asset have not been assessed separately in |
| All species | Permanent loss of habitat | С | Negligible | Not assessed | the 2018 EIA. This project |
| All species | Increased suspended sediment and remobilisation of contaminants | С | Negligible | Not assessed | was licenced in 2014 and remains unchanged, it is therefore considered a separate project. Potential impacts associated with the Transmission Asset are given consideration as part of the cumulative assessment within the 2018 EIA. |
| Sensitive species (e.g. eel, salmon, sea trout, European plaice, river lamprey, sea lamprey and all demersal elasmobranchs) | Effect of electromagnetic fields (EMF) (export cables) | 0 | Minor | Not assessed | |
| Species not stated to be sensitive to EMF | Effect of electromagnetic fields (EMF) (export cables) | 0 | Negligible | Not assessed | |
| All species | Creation of new habitats – fish aggregation | 0 | Negligible | Not assessed | |
| All species | Increased suspended sediments and mobilisation of contaminants | 0 | Negligible | Not assessed | |
| All species | Seabed habitat disturbance due to OSP and cable removal | D | Negligible | Not assessed | |

Table 17.3 Marine Mammals Summary of Impacts

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|----------------------|-----------------------------|--|--------------------------------------|--------------------------------------|---|
| Project Alpha | | | | | |
| Harbour seal | Injury (PTS) – pile driving | С | Moderate | Negligible | Reduced population level and at-sea densities of harbour seal, fewer WTGs and updated approach to assessment including noise modelling and frequency weighting |
| Grey seal | Injury (PTS) – pile driving | С | Minor | Negligible | Updated approach to assessment including noise modelling, frequency weighting and fewer WTGs |
| Bottlenose dolphin | Injury (PTS) – pile driving | С | Minor | Negligible | Updated approach to assessment including noise modelling, frequency weighting and fewer WTGs |
| Harbour porpoise | Injury (PTS) – pile driving | С | Minor | Negligible | Updated approach to assessment including noise modelling and fewer WTGs |
| Minke whale | Injury (PTS) – pile driving | С | Minor | Negligible | Updated approach to assessment including noise modelling and fewer WTGs |
| White-beaked dolphin | Injury (PTS) – pile driving | С | Negligible | Negligible | No change |
| Harbour seal | Disturbance - pile driving | С | Moderate | Negligible | Reduced population level and at-sea densities of harbour seal, fewer WTGs and updated approach to assessment including noise modelling and dose- response curve |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|-------------------------|---|--|--------------------------------------|--------------------------------------|---|
| Grey seal | Disturbance - pile driving | С | Minor | Negligible | Updated approach to assessment including noise modelling, dose- response curve and fewer WTGs |
| Bottlenose dolphin | Disturbance – pile driving | С | Minor | Minor | No change |
| Harbour porpoise | Disturbance – pile driving | С | Minor | Minor | No change |
| Minke whale | Disturbance – pile driving | С | Minor | Minor | No change |
| White-beaked dolphin | Disturbance – pile driving | С | Negligible | Minor | Updated baseline and updated approach to assessment including noise modelling |
| All species | Underwater noise, injury or disturbance – vessels | С | Negligible | Not assessed | Scoped out |
| All species | Collision risk, injury of death – vessels | С | Negligible | Not assessed | Scoped out |
| All species | Changes to water quality (accidental release of contaminants) | С | Negligible | Not assessed | Scoped out |
| Grey and harbour seal | Changes to water quality (suspended sediment) | С | Negligible | Not assessed | Scoped out |
| Cetaceans | Changes to water quality (suspended sediment) | С | Minor | Not assessed | Scoped out |
| Harbour seal | Changes to prey resource | С | Minor | Not assessed | Scoped out |
| Grey seal and cetaceans | Changes to prey resource | С | Negligible | Not assessed | Scoped out |
| All species | Underwater noise, injury or disturbance - WTGs | 0 | Negligible | Not assessed | Scoped out |
| All species | Underwater noise, injury or disturbance – vessels | 0 | Negligible | Not assessed | Scoped out |
| All species | Barrier effects | 0 | Negligible | Not assessed | Scoped out |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|-------------------------|---|--|--------------------------------------|--------------------------------------|---|
| All species | Collision risk, injury of death - vessels | 0 | Negligible | Not assessed | Scoped out |
| All species | Changes to water quality (accidental release of contaminants) | 0 | Negligible | Not assessed | Scoped out |
| All species | EMF, behavioural change | 0 | Negligible | Not assessed | Scoped out |
| All species | Underwater noise, injury or disturbance – cutting | D | Minor | Not assessed | Scoped out |
| All species | Underwater noise, injury or disturbance – vessels | D | Negligible | Not assessed | Scoped out |
| All species | Collision risk, injury of death - vessels | D | Negligible | Not assessed | Scoped out |
| All species | Changes to water quality (accidental release of contaminants) | D | Negligible | Not assessed | Scoped out |
| Grey and harbour seal | Changes to water quality (suspended sediment) | D | Minor | Not assessed | Scoped out |
| Cetaceans | Changes to water quality (suspended sediment) | D | Negligible | Not assessed | Scoped out |
| Harbour seal | Changes to prey resource | D | Minor | Not assessed | Scoped out |
| Grey seal and cetaceans | Changes to prey resource | D | Negligible | Not assessed | Scoped out |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|----------------------|-----------------------------|--|--------------------------------------|--------------------------------------|--|
| Project Bravo | | | | | |
| Harbour seal | Injury (PTS) – pile driving | C | Moderate | Negligible | Reduced population level and at-sea densities of harbour seal, fewer WTGs and updated approach to assessment including noise modelling and frequency weighting |
| Grey seal | Injury (PTS) – pile driving | С | Minor | Negligible | Updated approach to assessment including noise modelling, frequency weighting and fewer WTGs |
| Bottlenose dolphin | Injury (PTS) – pile driving | С | Minor | Negligible | Updated approach to assessment including noise modelling, frequency weighting and fewer WTGs |
| Harbour porpoise | Injury (PTS) – pile driving | С | Minor | Negligible | Updated approach to assessment including noise modelling and fewer WTGs |
| Minke whale | Injury (PTS) – pile driving | С | Minor | Negligible | Updated approach to assessment including noise modelling and fewer WTGs |
| White-beaked dolphin | Injury (PTS) – pile driving | С | Negligible | Negligible | No change |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|-----------------------|---|--|--------------------------------------|--------------------------------------|---|
| Harbour seal | Disturbance – pile driving | C | Moderate | Negligible | Reduced population level and at-sea densities of harbour seal, fewer WTGs and updated approach to assessment including noise modelling and dose- response curve |
| Grey seal | Disturbance – pile driving | С | Minor | Negligible | Updated approach to assessment including noise modelling, dose- response curve and fewer WTGs |
| Bottlenose dolphin | Disturbance – pile driving | С | Minor | Minor | No change |
| Harbour porpoise | Disturbance – pile driving | С | Minor | Minor | No change |
| Minke whale | Disturbance – pile driving | С | Minor | Minor | No change |
| White-beaked dolphin | Disturbance – pile driving | С | Negligible | Minor | Updated baseline and updated approach to assessment including noise modelling and fewer WTGs |
| All species | Underwater noise, injury or disturbance – vessels | С | Negligible | Not assessed | Scoped out |
| All species | Collision risk, injury of death – vessels | С | Negligible | Not assessed | Scoped out |
| All species | Changes to water quality (accidental release of contaminants) | С | Negligible | Not assessed | Scoped out |
| Grey and harbour seal | Changes to water quality (suspended sediment) | С | Negligible | Not assessed | Scoped out |
| Cetaceans | Changes to water quality (suspended sediment) | С | Minor | Not assessed | Scoped out |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|-------------------------|---|--|--------------------------------------|--------------------------------------|---|
| Harbour seal | Changes to prey resource | С | Minor | Not assessed | Scoped out |
| Grey seal and cetaceans | Changes to prey resource | С | Negligible | Not assessed | Scoped out |
| All species | Underwater noise, injury or disturbance - WTGs | 0 | Negligible | Not assessed | Scoped out |
| All species | Underwater noise, injury or disturbance- vessels | 0 | Negligible | Not assessed | Scoped out |
| All species | Barrier effects | 0 | Negligible | Not assessed | Scoped out |
| All species | Collision risk, injury of death – vessels | 0 | Negligible | Not assessed | Scoped out |
| All species | Changes to water quality (accidental release of contaminants) | 0 | Negligible | Not assessed | Scoped out |
| All species | EMF, behavioural change | 0 | Negligible | Not assessed | Scoped out |
| All species | Underwater noise, injury or disturbance – cutting | D | Minor | Not assessed | Scoped out |
| All species | Underwater noise, injury or disturbance – vessels | D | Negligible | Not assessed | Scoped out |
| All species | Collision risk, injury of death – vessels | D | Negligible | Not assessed | Scoped out |
| All species | Changes to water quality (accidental release of contaminants) | D | Negligible | Not assessed | Scoped out |
| Grey and harbour seal | Changes to water quality (suspended sediment) | D | Minor | Not assessed | Scoped out |
| Cetaceans | Changes to water quality (suspended sediment) | D | Negligible | Not assessed | Scoped out |
| All species | Changes to prey resource | D | Negligible | Not assessed | Scoped out |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---------------------------|-----------------------------|--|--------------------------------------|--------------------------------------|--|
| Project Alpha and Project | Bravo Combined | | | | |
| Harbour seal | Injury (PTS) – pile driving | C | Major | Negligible | Reduced population level and at-sea densities of harbour seal, fewer WTGs and updated approach to assessment including noise modelling and frequency weighting |
| Grey seal | Injury (PTS) – pile driving | С | Minor | Negligible | Updated approach to assessment including noise modelling, frequency weighting and fewer WTGs |
| Bottlenose dolphin | Injury (PTS) – pile driving | С | Minor | Negligible | Updated approach to assessment including noise modelling, frequency weighting and fewer WTGs |
| Harbour porpoise | Injury (PTS) – pile driving | C | Minor | Negligible | Updated approach to assessment including noise modelling and fewer WTGs |
| Minke whale | Injury (PTS) - pile driving | С | Minor | Negligible | Updated approach to assessment including noise modelling and fewer WTGs |
| White-beaked dolphin | Injury (PTS) – pile driving | С | Minor | Negligible | Updated approach to assessment including noise modelling and fewer WTGs |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|-----------------------|--|--|--------------------------------------|--------------------------------------|---|
| Harbour seal | Disturbance – pile driving | C | Major | Negligible | Reduced population level and at-sea densities of harbour seal, fewer WTGs and updated approach to assessment including noise modelling and dose- response curve |
| Grey seal | Disturbance – pile driving | С | Minor | Negligible | Updated approach to assessment including noise modelling, dose- response curve and fewer WTGs |
| Bottlenose dolphin | Disturbance – pile driving | С | Minor | Minor | No change |
| Harbour porpoise | Disturbance – pile driving | С | Minor | Minor | No change |
| Minke whale | Disturbance - pile driving | С | Minor | Minor | No change |
| White-beaked dolphin | Disturbance – pile driving | С | Minor | Minor | No change |
| All species | Underwater noise, injury or disturbance- vessels | С | Minor | Not assessed | Scoped out |
| All species | Collision risk, injury of death – vessels | С | Minor | Not assessed | Scoped out |
| Grey and harbour seal | Changes to water quality | С | Minor | Not assessed | Scoped out |
| Cetaceans | Changes to water quality | С | Negligible | Not assessed | Scoped out |
| All species | Changes to prey resource | С | Negligible | Not assessed | Scoped out |
| All species | Underwater noise, injury or disturbance - WTGs | 0 | Minor | Not assessed | Scoped out |
| All species | Underwater noise, injury or disturbance – vessels | 0 | Minor | Not assessed | Scoped out |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|----------------------------|---|--|--------------------------------------|--|---|
| All species | Barrier effects | 0 | Minor | Not assessed | Scoped out |
| All species | Collision risk, injury of death – vessels | 0 | Minor | Not assessed | Scoped out |
| All species | Changes to water quality | 0 | Minor | Not assessed | Scoped out |
| All species | EMF, behavioural change | 0 | Negligible | Not assessed | Scoped out |
| All species | Underwater noise, injury or disturbance – cutting | D | Minor | Not assessed | Scoped out |
| All species | Underwater noise, injury or disturbance- vessels | D | Minor | Not assessed | Scoped out |
| All species | Collision risk, injury of death – vessels | D | Minor | Not assessed | Scoped out |
| All species | Changes to water quality (accidental release of contaminants) | D | Minor | Not assessed | Scoped out |
| All species | Changes to water quality (suspended sediment) | D | Minor | Not assessed | Scoped out |
| All species | Changes to prey resource | D | Minor | Not assessed | Scoped out |
| Optimised Seagreen Project | Cumulative Impacts | | | | |
| Harbour seal | Injury (PTS) – pile driving | С | Major | Not assessed (Scoped out through assessment) | Scoped out |
| Grey seal | Injury (PTS) – pile driving | С | Moderate | Not assessed (Scoped out through assessment) | Scoped out |
| Bottlenose dolphin | Injury (PTS) – pile driving | С | Minor | Not assessed (Scoped out through assessment) | Scoped out |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|----------------------|--|--|--------------------------------------|--|---|
| Harbour porpoise | Injury (PTS) – pile driving | С | Moderate | Not assessed (Scoped out through assessment) | Scoped out |
| Minke whale | Injury (PTS) – pile driving | С | Minor | Not assessed (Scoped out through assessment) | Scoped out |
| White-beaked dolphin | Injury (PTS) – pile driving | С | Minor | Not assessed (Scoped out through assessment) | Scoped out |
| Harbour seal | Disturbance - pile driving | С | Major | Not assessed (scoped out through assessment) | Scoped out |
| Grey seal | Disturbance – pile driving | С | Moderate | Negligible | Updated approach to assessment including noise modelling, dose-response curve and fewer WTGs |
| Bottlenose dolphin | Disturbance – pile driving | С | Moderate | Minor | Updated approach to assessment including noise modelling and fewer WTGs |
| Harbour porpoise | Disturbance – pile driving | С | Negligible | Minor | Updated approach to assessment including noise modelling and fewer WTGs |
| Minke whale | Disturbance - pile driving | С | Minor | Minor | No change |
| White-beaked dolphin | Disturbance - pile driving | С | Minor | Minor | No change |
| All species | Underwater noise, injury or disturbance – vessels | С | Minor | Not assessed | Scoped out |
| All species | Collision risk, injury of death – vessels | С | Minor | Not assessed | Scoped out |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|--|---|--|--------------------------------------|--------------------------------------|---|
| Grey and harbour seal | Changes to water quality (suspended sediment) | С | Minor | Not assessed | Scoped out |
| Cetaceans | Changes to water quality (suspended sediment) | С | Negligible | Not assessed | Scoped out |
| Harbour seal, grey seal and bottlenose dolphin | Changes to prey resource | С | Moderate | Not assessed | Scoped out |
| Other cetacean species | Changes to prey resource | С | Minor | Not assessed | Scoped out |
| All species | Underwater noise, injury or disturbance - WTGs | 0 | Minor | Not assessed | Scoped out |
| All species | Underwater noise, injury or disturbance- vessels | 0 | Minor | Not assessed | Scoped out |
| All species | Barrier effects | 0 | Minor | Not assessed | Scoped out |
| All species | Collision risk, injury of death - vessels | 0 | Minor | Not assessed | Scoped out |
| All species | Changes to water quality | 0 | Minor | Not assessed | Scoped out |
| All species | EMF, behavioural change | 0 | Minor | Not assessed | Scoped out |
| All species | Underwater noise, injury or disturbance – cutting | D | Moderate | Not assessed | Scoped out |
| All species | Underwater noise, injury or disturbance – vessels | D | Minor | Not assessed | Scoped out |
| All species | Collision risk, injury of death – vessels | D | Minor | Not assessed | Scoped out |
| All species | Changes to water quality (accidental release of contaminants) | D | Minor | Not assessed | Scoped out |
| All species | Changes to water quality (suspended sediment) | D | Minor | Not assessed | Scoped out |
| All species | Changes to prey resource | D | Minor | Not assessed | Scoped out |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|--------------------|--|--|--------------------------------------|--------------------------------------|--|
| Transmission Asset | | | | | |
| All species | Intertidal or terrestrial habitat exclusion | С | Negligible | Not assessed | The potential impacts of the Transmission Asset have not |
| All species | Underwater noise, injury or disturbance- all activities Collision risk, injury of death – vessels | С | Negligible | Not assessed | been assessed separately in the 2018 EIA. This project was licenced in 2014 and |
| All species | | С | Negligible | Not assessed | remains unchanged, it is therefore considered a |
| All species | Underwater noise, injury or disturbance – vessels | 0 | Negligible | Not assessed | separate project. Potential impacts associated with the Transmission Asset are given |
| All species | EMF – behavioural change | 0 | Negligible | Not assessed | consideration as part of the |
| All species | Underwater noise, injury or disturbance – vessels | D | Negligible | Not assessed | cumulative assessment within the 2018 EIA. |
| All species | Collision risk, injury of death – vessels | D | Negligible | Not assessed | |

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Table 17.4 Commercial Fisheries Summary of Impacts

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|----------------------------------|---|---|--|--|--|
| Project Alpha and | Project Bravo in Isolation | | | | |
| All fisheries | Mortality or injury Behaviour | C, D | Minor for herring, negligible all other species Moderate (for herring), negligible for all other species. | Negligible for all species Minor for herring and other Group 3 species and negligible for all other species. | The predictions of significant adverse impacts were arrived at in the 2012 Offshore ES because of predicted spatial overlap between modelled levels of underwater noise assumed to be disturbing and mapped herring spawning and nursery grounds. This EIA Report uses the same information on herring spawning and nursery areas and so differences relate to the underwater noise modelling and guidelines used to inform the assessment. |
| All fisheries | Potential impacts on commercially exploited fish and shellfish populations | 0 | Negligible to Minor | Not assessed | All potential impacts on natural fish and shellfish resources were scoped out for assessment in the 2018 EIA report with the exception of the impact of underwater noise during pile driving. |
| Scallop fishery Squid fishery | Temporary loss or restricted access to fishing grounds | C, D | Minor | Minor | No change |
| Scallop fishery Squid fishery | Complete loss or restricted access to fishing grounds | 0 | Minor | Minor | No change |
| Lobster and crab fishery | Temporary loss or restricted access to fishing grounds | C, D | Not assessed | Minor | There was no creeling activity within Project Alpha and Project Bravo at the time the 2012 Offshore ES was produced. Therefore, an assessment specific to the lobster and crab fishery was not undertaken in the 2012 EIA. |
| Lobster and crab fishery | Complete loss or restricted access to fishing grounds | 0 | Not assessed | Minor | There was no creeling activity within Project Alpha and Project Bravo at the time the 2012 Offshore ES was produced. Therefore, an assessment specific to the lobster and crab fishery was not undertaken in the 2012 EIA. |
| All fisheries | Safety issues for fishing vessels | C, O, D | Within acceptable limits | Within acceptable limits | No change |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) | |
|-------------------|---|---|--|--|--|--|
| All fisheries | Increased steaming times to fishing grounds | C, O, D | Minor | Minor | No change | |
| All fisheries | Displacement of fishing activity into other areas | C, D | As above for temporary loss or restricted access to traditional fishing grounds | | | |
| All fisheries | Displacement of fishing activity into other areas | 0 | As above for complete loss or restricted access to fishing grounds | | | |
| All fisheries | Interference with fishing activities (navigational conflict) | C, O, D | Minor | Minor | No change | |
| Project Alpha and | l Project Bravo Combined | | | | | |
| All fisheries | Mortality or injury Behaviour | C, D | Minor for herring, negligible all other species Major (for herring), negligible for all other species. | Negligible for all species Minor for herring and other Group 3 species and negligible for all other species. | The predictions of significant adverse impacts were arrived at in the 2012 Offshore ES because of predicted spatial overlap between modelled levels of underwater noise assumed to be disturbing and mapped herring spawning and nursery grounds. This EIA Report uses the same information on herring spawning and nursery areas and so differences relate to the underwater noise modelling and guidelines used to inform the assessment. | |
| All fisheries | Potential impacts on commercially exploited fish and shellfish populations | 0 | Negligible to Minor | Not assessed | All potential impacts on natural fish and shellfish resources were scoped out for assessment in the 2018 EIA report with the exception of the impact of underwater noise during pile driving. | |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---|--|---|--|--|--|
| Scallop fishery Local vessels Nomadic vessels | Temporary loss or restricted access to fishing grounds | C, D | Moderate (All scallop fisheries) | Minor (Local vessels) Minor (Nomadic vessels) | The assessment in the 2012 Offshore ES was carried out for the scallop fishery as a whole. The assessment in the 2018 EIA has been carried out separately for local smaller scallop vessels and larger nomadic vessels with mitigation proposed for local smaller scallop vessels to reduce impact significance to minor during the construction phase. For nomadic vessels the significance of the impact is considered minor in the 2018 EIA, taking account of the extent of grounds available to these vessels and therefore no further mitigation has been proposed. |
| Scallop fishery Local vessels Nomadic vessels | Complete loss or restricted access to fishing grounds | 0 | Moderate (All scallop fisheries) | Minor (Local vessels) Minor (Nomadic vessels) | The assessment in the 2012 Offshore ES was carried out for the scallop fishery as a whole. The assessment in the 2018 EIA has been carried out separately for local smaller scallop vessels and larger nomadic vessels. Impact significance is considered minor, as local smaller scallop vessels will be able to regain access to Project Alpha and Project Bravo during operation. In the case of larger nomadic vessels, whilst the assessment assumes they will choose not to fish within Project Alpha and Project Bravo, given the extent of fishing grounds available to these vessels, the impact is also considered to be minor. |
| Squid fishery | Temporary loss or restricted access to fishing grounds | C, D | Minor | Minor | No change |
| Squid fishery | Complete loss or restricted access to fishing grounds | 0 | Minor | Minor | No change |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|-----------------------------|--|---|---|--------------------------------------|--|
| Lobster and crab fishery | Temporary loss or restricted access to fishing grounds | C, D | Not assessed | Minor | There was no creeling activity within Project Alpha and Project Bravo at the time the 2012 Offshore ES was produced. Therefore, an assessment specific to the lobster and crab fishery was not undertaken in the 2012 EIA. |
| Lobster and crab fishery | Complete loss or restricted access to fishing grounds | 0 | Not assessed | Minor | There was no creeling activity within Project Alpha and Project Bravo at the time the 2012 Offshore ES was produced. Therefore, an assessment specific to the lobster and crab fishery was not undertaken in the 2012 EIA. |
| All fisheries | Safety issues for fishing vessels | C, O, D | Within acceptable limits | Within acceptable limits | No change |
| All fisheries | Increased steaming times to fishing grounds | C, O, D | Minor | Minor | No change |
| All fisheries | Displacement of fishing activity into other areas | C, D | As above for temporary loss or restricted access to traditional fishing grounds | | |
| All fisheries | Displacement of fishing activity into other areas | 0 | As above for complete loss or restricted access to fishing grounds | | |
| All fisheries | Interference with fishing activities (navigational conflict) | C, O, D | Minor | Minor | No change |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---|---|---|--|--|--|
| Optimised Seagreen | n Project Cumulative Imp | pacts | | | |
| All fisheries | Mortality or injury Behaviour | C, D | Minor for herring, negligible all other species Major (for herring), negligible for all other species. | Negligible for all species Minor for herring and other Group 3 species and negligible for all other species. | The predictions of significant adverse impacts were arrived at in the 2012 Offshore ES because of predicted spatial overlap between modelled levels of underwater noise assumed to be disturbing and mapped herring spawning and nursery grounds. This EIA Report uses the same information on herring spawning and nursery areas and so differences relate to the underwater noise modelling and guidelines used to inform the assessment. |
| All fisheries | Potential impacts on commercially exploited fish and shellfish populations | 0 | Negligible to Minor | Not assessed | All potential impacts on natural fish and shellfish resources were scoped out for assessment in the 2018 EIA report with the exception of the impact of underwater noise during pile driving. |
| Scallop fishery Squid fishery Lobster and crab fishery | Temporary loss or restricted access to fishing grounds | C, D | Moderate (All fisheries) | Minor (Scallop fishery) Minor (Squid fishery) Minor (Lobster and crab fishery) | A further detailed cumulative assessment has been carried out in the 2018 EIA, including consideration of the distribution of fishing activity by each relevant fishery in respect of the location of projects included in the cumulative assessment. In the case of the scallop fishery, a separate assessment for local smaller scallop vessels and larger nomadic vessels has been undertaken in the 2018 EIA with mitigation proposed for local smaller scallop vessels to reduce impact significance to minor during the construction phase. In the case of the lobster and crab fishery, in line with the approach taken for Project Alpha and Project Bravo, the assessment assumes adherence to FLOWW guidance in respect of evidence based mitigation is implemented by other projects included in the cumulative impact assessment where relevant. |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|----------------------------------|--|---|---|---|---|
| Nephrops fishery | Temporary loss or restricted access to fishing grounds | C, D | Minor | No assessed | The Nephrops fishery was not assessed in the 2018 in respect of loss of fishing grounds as no activity by this fishery occurs in Project Alpha and Project Bravo and therefore there is no potential pathway for cumulative impacts in respect of the Optimised Seagreen Project. |
| Scallop fishery Squid fishery | Complete loss or restricted access to fishing grounds | 0 | Moderate (Scallop and Squid fishery) | Minor (Scallop fishery Local dredgers and Nomadic vessels) Minor (Squid fishery) | A further detailed cumulative assessment has been carried out in the 2018 EIA, including consideration of the distribution of fishing activity by each relevant fishery in respect of the location of projects included in the cumulative assessment. In the case of the scallop fishery, a separate assessment for local smaller scallop vessels and larger nomadic vessels has been undertaken in the 2018 EIA. |
| Lobster and crab fishery | Complete loss or restricted access to fishing grounds | 0 | Not assessed | Minor | There was no creeling activity within Project Alpha and Project Bravo at the time the 2012 Offshore ES was produced. Activity by this fishery was then only occurring in areas relevant to export cables. Therefore, a cumulative assessment specific to the lobster and crab fishery during operation was not undertaken in the 2012 Offshore ES as cables would be buried and fishing would resume over them. |
| All fisheries | Safety issues for fishing vessels | C, D | Outside of acceptable limits | Within acceptable limits | In the 2012 Offshore ES the cumulative impact of safety issues was considered to be outside of acceptable limits until appropriate post installation surveys were completed. In the 2018 EIA it has been considered that the same obligations noted for assessment of Project Alpha, Project Bravo and Project Alpha and Bravo combined, will apply to other developments to ensure that safety issues are within acceptable limits. |
| All fisheries | Safety issues for fishing vessels | 0 | Within acceptable limits | Within acceptable limits | No change |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) | |
|---------------|--|---|---|--|--|--|
| All fisheries | Increased steaming times to fishing grounds | C, O, D | Minor | Minor | No change | |
| All fisheries | Displacement of fishing activity into other areas | C, D | As above for temporar | ry loss or restricted acces | ss to traditional fishing grounds | |
| All fisheries | Displacement of fishing activity into other areas | 0 | As above for complete | As above for complete loss or restricted access to fishing grounds | | |
| All fisheries | Interference with fishing activities (navigation conflict) | C, D | Moderate (lobster and crab fishery) Minor (mobile gear fisheries) | Minor (all fisheries) | The assessment carried out in the 2012 Offshore ES considered that until mitigation similar to that then proposed for Project Alpha and Project Bravo (i.e. establishment of protocols to agree transit lanes) was agreed by other projects the significance of the impact would be moderate for the lobster and crab fishery. In the 2018 EIA Report a number of mitigation measures have been incorporated into the project, including the implementation of a Vessel Management Plan for Project Alpha and Project Bravo which would include provisions for appropriate liaison, enabling awareness of construction vessels crews of the locations of static gears and fishermen's awareness of construction vessel transit routes. The cumulative assessment presented in the 2018 EIA, considers that in line with current standard practice, similar measures to those proposed for Project Alpha and Project Bravo would be applied to the installation of other projects included in the cumulative assessment. As such, in the 2018 EIA Report the significance of the impact on the lobster and crab fishery is considered to be minor. | |
| All fisheries | Interference with fishing activities (navigation conflict) | 0 | Minor | Minor | No change | |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) | | | | |
|--|---|---|---|--------------------------------------|---|--|--|--|--|
| Transmission Asse | | | | | | | | | |
| All fisheries | Potential impacts on commercially exploited fish and shellfish populations | C, O, D | Negligible to Minor | Not assessed | The potential impacts of the Transmission Asset have not been assessed separately in the 2018 EIA. This project was licenced in 2014 and remains unchanged, it is therefore considered a separate project. Potential impacts | | | | |
| Scallop fishery Squid fishery Nephrops fishery | Temporary loss or restricted access to fishing grounds | C, D | Minor | Not assessed | associated with the Transmission Asset are given consideration as part of the cumulative assessment within the 2018 EIA. | | | | |
| Crab and lobster fishery | Temporary loss or restricted access to fishing grounds | C, D | Moderate | Not assessed | Within the 2018 EIA. | | | | |
| All fisheries | Complete loss or restricted access to fishing grounds | 0 | Negligible | Not assessed | | | | | |
| All fisheries | Safety issues for fishing vessels | C, O, D | Within acceptable limits | Not assessed | | | | | |
| All fisheries | Increased steaming times to fishing grounds | C, D | Minor | Not assessed | | | | | |
| All fisheries | Increased steaming times to fishing grounds | 0 | Negligible | Not assessed | | | | | |
| All fisheries | Displacement of fishing activity into other areas | C, D | As above for temporary loss or restricted access to traditional fishing grounds | Not assessed | | | | | |
| All fisheries | Displacement of fishing activity into other areas | 0 | As above for complete loss or restricted access to fishing grounds | Not assessed | | | | | |
| All fisheries | Interference with fishing activities | C, D | Minor | Not assessed | | | | | |
| All fisheries | Interference with fishing activities | 0 | Negligible | Not assessed | | | | | |

Table 17.5 Shipping and Navigation Summary of Impacts

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|------------------------|---|---|--------------------------------------|--------------------------------------|---|
| Project Alpha and Proj | ject Bravo in Isolation | | | | |
| Commercial Vessels | Displacement | C, O, D | Not Significant | Broadly Acceptable | No change |
| | Encounters and Collision with Project Construction/ Decommissioning Vessels | C, D | | (Not Significant) | |
| | Encounters and Collision with Other Vessels | C, O, D | | | |
| | Allision Risk | | Not assessed | | |
| Commercial Fishing | Displacement | C, O, D | Not Significant | Broadly Acceptable | No change |
| Vessels | Encounters and Collision with Project Construction/ Decommissioning Vessels | C, D | | (Not Significant) | |
| | Encounters and Collision with Other Vessels | C, O, D | | | |
| | Allision Risk | | Not assessed | 1 | |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|-------------------------|---|---|--------------------------------------|---|--|
| Recreational Vessels | Displacement | C, O, D | Not Significant | Broadly Acceptable (Not Significant) | No change |
| | Encounters and Collision with Project Construction/ Decommissioning Vessels | C, D | | | |
| | Encounters and Collision with Other Vessels | C, O, D | | | |
| | Allision Risk | | Not assessed | | |
| SAR Operations | Diminishment of Emergency Response Resources | 0 | Not Significant | Broadly Acceptable (Not Significant) | No change |
| Marine Radar Systems | Radar interference within 1.5nm range of WTGs | 0 | Not Significant | No Impact Identified | Knowledge and understanding of marine radar systems has improved since 2012. Given lessons learned from other projects, this impact is considered to be negligible. |
| Project Alpha and Proje | ct Bravo Combined | | · | | |
| Commercial Vessels | Displacement | C, O, D | Not assessed | Tolerable with | The method agreed at the time of production of the 2012 Offshore ES did not include assessment of Project Alpha and Project Bravo combined. This methodology has been updated for the 2018 assessment. |
| | Encounters and Collision with Optimised Seagreen Project Construction/Decomm issioning Vessels | C, D | | Mitigation (Not Significant) | |
| | Encounters and Collision with Other Vessels | C, O, D | | | |
| | Allision Risk | | | | |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|-------------------------------|--|---|--------------------------------------|---|--|
| Commercial Fishing Vessels | Displacement, Encounters and Collision Risk Allision Risk | C, O, D | Not assessed | Broadly Acceptable (Not Significant) | |
| Recreational Vessels | Displacement, Encounters and Collision Risk Allision Risk | C, O, D | Not assessed | Broadly Acceptable (Not Significant) | |
| SAR Operations | Diminishment of Emergency Response Resources | 0 | Not assessed | Broadly Acceptable (Not Significant) | |

Optimised Seagreen Project Cumulative Impacts - Construction and Decommissioning

Given the low data confidence it is not possible to undertake a detailed cumulative assessment of a realistic worst case scenario during the construction and decommissioning for shipping and navigation. However, if simultaneous construction is considered worst case then it is assumed that post consent environmental measures deployed by maritime regulators would ensure that any impacts on commercial vessels or commercial fishing vessels would be effectively mitigated and the 2018 residual impacts would be 'Tolerable with Mitigation' (Not Significant). Construction, operation and decommissioning impacts were not individually assessed in the 2012 Offshore ES therefore the worst case scenario has been assumed (operational phase).

| Optimised Seagreen Pr | Optimised Seagreen Project Cumulative Impacts - Operation | | | | | | |
|-------------------------------|---|---|-----------------|---|-----------|--|--|
| Commercial Vessels | Displacement, Encounters and Collision Risk | 0 | Not Significant | Tolerable with Mitigation (Not Significant) | No change | | |
| | Allision Risk | | Not assessed | | | | |
| Commercial Fishing Vessels | Displacement, Encounters and Collision Risk | 0 | Not Significant | Broadly Acceptable (Not Significant) | No change | | |
| | Allision Risk | | Not assessed | | | | |
| | Gear Snagging | | Not Significant | Assessed within Chapter 11 (Commercial Fisheries) | | | |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---|---|---|--------------------------------------|--------------------------------------|--|
| Recreational Vessels | Potential increase in collision risk with displaced recreational vessels and structures | 0 | Not Significant | No Impact Identified | Understanding of recreational vessels and their transits has improved since 2012. Given the low levels of recreational activity with the Optimised Seagreen Project no cumulative impacts were identified. |
| Transmission Asset | | | · | | |
| Commercial Vessels Fishing Vessels Recreational Vessels | Impact of export cable installation: Route deviations and potential increase in vessel-to-vessel encounters and collision risk for vessels | С | Not Significant | Not assessed | The potential impacts of the Transmission Asset have not been assessed separately in the 2018 EIA. This project was licenced in 2014 and remains unchanged, it is therefore considered a separate project. Potential impacts associated with the Transmission Asset are given consideration as part of the |
| Commercial Vessels Fishing Vessels Recreational Vessels | Impact of Transmission Asset Project infrastructure installation: Route deviations and potential increase in vessel-to-vessel encounters and collision risk for vessels | С | Not Significant | Not assessed | cumulative assessment within the 2018 EIA. |
| Commercial Vessels | Impact of export cable: Risk to vessels required to anchor in an emergency situation. | 0 | Not Significant | Not assessed | |
| Fishing Vessels | Impact of export cable on fishing gear snagging on export cable resulting in loss of gear or vessel capsizing. | 0 | Not Significant | Not assessed | |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|----------------------|---|---|--------------------------------------|--------------------------------------|--|
| Recreational Vessels | Impact of export cable: Risk to recreational vessels anchoring in close proximity to export cable. | 0 | Not Significant | Not assessed | |
| All vessels | Impact of export cable on Vessel Navigation Electromagnetic interference on ship- borne equipment including compasses. | 0 | Not Significant | Not assessed | |
| Commercial Vessels | Impact of Transmission Asset Project Infrastructure: Vessel displacement, route deviations and potential increase in vessel-to-vessel and vessel-to-structure collisions. | 0 | Not Significant | Not assessed | |
| Fishing Vessels | Impact of Transmission Asset Project Infrastructure: Potential increase in encounters and collision risk for fishing vessels. | 0 | Not Significant | Not assessed | |
| Recreational Vessels | Impact of Transmission Asset Project Infrastructure: Potential increase in encounters and collision risk for recreational vessels. | С | Not Significant | Not assessed | |

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Table 17.6 SLVIA Summary of Impacts

It should be noted that, in line with relevant guidance, the impact assessment for this SLIVA reports significance of impact on a sliding scale in line with the relative importance of effect. Major effects are judged to be the most important with Negligible effects of least concern. Within the 2018 EIA Report, impacts identified as Major or Major/Moderate impacts are judged to be Significant whilst impacts identified as Moderate or less are considered to be Not Significant (see Chapter 13 [SLVIA Methodology]). Where residual impacts are provided in brackets (from the 2012 Offshore ES) this is the final conclusion on significance related to the assessment method used at the time.

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|-----------------------------------|--|---|--|--|--|
| Project Alpha ¹ | | | | · | · |
| Effects on Landscape character | Upon landscape character | C, D | Minor (reversible and temporary effect during the day and night-time works) | Not assessed | Scoped out as no prospect of Significant effects arising |
| Effects on landscape designations | Upon character of designated landscapes | C, D | Negligible | Not assessed | Scoped out as no prospect of Significant effects arising |
| Effects on Seascape Character | Upon seascape character | C, D | Minor (reversible and temporary effect during the day and night-time works) | Minor (reversible and temporary effect during the day and night-time works) | No change |
| Effects on Landscape character | Upon landscape character | 0 | Minor | Not assessed | Scoped out as no prospect of Significant effects arising |
| Effects on landscape designations | Upon character of designated landscapes | 0 | Negligible | Not assessed | Scoped out as no prospect of Significant effects arising |
| NSU 1: Berwick-Upon- Tweed | Upon character of the national seascape unit | 0 | Not Assessed | Not assessed | Scoped out as no prospect of Significant effects arising |

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¹ Viewpoints 9 – 14 are different between the two assessments. The viewpoints listed identify those used in the 2018 SLVIA. The Isle of May viewpoint is VP14 in the 2012 SLVIA but VP13 in the 2018 SLVIA

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|--------------------------------------|--|---|--------------------------------------|--------------------------------------|---|
| NSU 2: Firth of Forth | Upon character of the national seascape unit | 0 | Minor | Not assessed | Scoped out as no prospect of Significant effects arising |
| NSU 3: East Fife/Firth of Tay | Upon character of the national seascape unit | 0 | Minor | Not assessed | Scoped out as no prospect of Significant effects arising |
| NSU 4: North East Coast | Upon character of the national seascape unit | 0 | Minor | Not assessed | Scoped out as no prospect of Significant effects arising |
| SA2: Greg Ness top Cove Bay | Upon seascape character type | 0 | Minor | Not assessed | Scoped out as no prospect of Significant effects arising |
| SA3: Cove Bay to Milton Ness | Upon seascape character type | 0 | Moderate | Moderate – Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| SA4: Montrose Bay | Upon seascape character type | 0 | Moderate | Moderate | No change |
| SA5: Long Craig | Upon seascape character type | 0 | Minor/Moderate (Minor) | Moderate – Minor | No change |
| SA6: Lunan Bay | Upon seascape character type | 0 | Moderate/Minor (Minor) | Moderate | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| SA7: Lang Craig to The Deil'sHeid | Upon seascape character type | 0 | Moderate/Minor (Minor) | Moderate – Minor | No change |
| SA8: Arbroath to Monifieth | Upon seascape character type | 0 | Minor | Not assessed | Scoped out as no prospect of Significant effects arising |
| SA12: St Andrews to Fife Ness | Upon seascape character type | 0 | Minor | Not assessed | Scoped out as no prospect of Significant effects arising |
| SA13: East Neuk of Fife | Upon seascape character type | 0 | Minor | Not assessed | Scoped out as no prospect of Significant effects arising |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|--|---|---|--|--|---|
| Effects on visual amenity | Upon visual amenity of visual receptors | C, D | Minor (reversible and temporary effect during the day and night-time works) | Minor (reversible and temporary effect during the day and night-time works) | No change |
| VP1 – Garron Point (Stonehaven Golf Club) | Upon visual amenity of visual receptor | 0 | Minor/Moderate (Minor) | Moderate - Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP2 – Beach Road, Kirkton, St Cyrus | Upon visual amenity of visual receptor | 0 | Major /Moderate (Moderate) | Major-Moderate | No Change |
| VP3 – White Caterthun Hill Fort | Upon visual amenity of visual receptor | 0 | Moderate/Minor (Minor) | Moderate - Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP4 – Montrose | Upon visual amenity of visual receptor | 0 | Moderate/Minor (Minor) | Moderate | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP5 – Braehead of Lunan | Upon visual amenity of visual receptor | 0 | Major/Moderate (Moderate) | Major – Moderate | No change |
| VP6 – Arbroath Signal Tower | Upon visual amenity of visual receptor | 0 | Moderate/Minor (Minor) | Moderate – Minor | No change |
| VP7 – Carnoustie | Upon visual amenity of visual receptor | 0 | Minor/Moderate (Negligible) | Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP8 – Fife Ness, Lochaber Rock | Upon visual amenity of visual receptor | 0 | Minor/Moderate (Negligible) | Minor – Negligible | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP9 - North Berwick Law | Upon visual amenity of visual receptor | 0 | Not assessed | Minor – Negligible | Viewpoint not assessed in the 2012 Offshore ES for Project Alpha |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---|--|---|--------------------------------------|--------------------------------------|---|
| VP10 – Dunbar Cliffs | Upon visual amenity of visual receptor | 0 | Not assessed | Negligible | Viewpoint not assessed in the 2012 Offshore ES for Project Alpha |
| VP11 – Pinderachy | Upon visual amenity of visual receptor | 0 | Not assessed | Moderate - Minor | Viewpoint not assessed in the 2012 Offshore ES for Project Alpha |
| VP12 – The Geot/Ben Tirran (a corbett) | Upon visual amenity of visual receptor | 0 | Not assessed | Moderate- Minor | Viewpoint not assessed in the 2012 Offshore ES for Project Alpha |
| VP13 – Isle of May | Upon visual amenity of visual receptor | 0 | Not assessed | Minor-Negligible | Viewpoint not assessed in the 2012 Offshore ES for Project Alpha |
| VP14 – Bell Rock Lighthouse | Upon visual amenity of visual receptor | 0 | Not assessed | Moderate – Minor | Viewpoint not assessed in the 2012 Offshore ES for Project Alpha |
| Residential receptors (and settlements) | Upon visual amenity of receptor group | 0 | Moderate - Negligible | Moderate - Negligible | No change |
| Recreational walking and cycling receptors | Upon visual amenity of receptor group | 0 | Moderate - Negligible | Moderate - Negligible | No change |
| Roads and railways | Upon visual amenity of receptor group Upon visual amenity of receptor group | 0 | Minor | Minor - Negligible | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| Vantage points and tourist attractions | Upon visual amenity of receptor group | 0 | Moderate - Minor | Moderate - Minor | No change |
| Other land-based receptors | Upon visual amenity of receptor group | 0 | Negligible | Negligible | No change |
| Marine receptors | Upon visual amenity of receptor group | 0 | Moderate – Minor/Moderate | Moderate – Moderate/Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| Aircraft passengers | Upon visual amenity of receptor group | 0 | Negligible | Not assessed | No impact pathway identified |
| Night-time visual impacts | Upon visual amenity of receptor group | 0 | Minor/Moderate | Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|-----------------------------------|--|---|--|--|--|
| Project Bravo ² | · | · | | · | |
| Effects on Landscape character | Upon landscape character | C, D | Minor (reversible and temporary effect during the day and night-time works) | Not assessed | Scoped out as no prospect of Significant effects arising |
| Effects on landscape designations | Upon character of designated landscapes | C, D | Negligible | Not assessed | Scoped out as no prospect of Significant effects arising |
| Effects on Seascape Character | Upon seascape character | C, D | Minor (reversible and temporary effect during the day and night-time works) | Minor (reversible and temporary effect during the day and night-time works) | No change |
| Effects on Landscape character | Upon landscape character | 0 | Minor | Not assessed | Scoped out as no prospect of Significant effects arising |
| Effects on landscape designations | Upon character of designated landscapes | 0 | Negligible | Not assessed | Scoped out as no prospect of Significant effects arising |
| NSU 1: Berwick-Upon- Tweed | Upon character of the national seascape unit | 0 | Not assessed | Not assessed | Scoped out as no prospect of Significant effects arising |
| NSU 2: Firth of Forth | Upon character of the national seascape unit | 0 | Not assessed | Not assessed | Scoped out as no prospect of Significant effects arising |
| NSU 3: East Fife/Firth of Tay | Upon character of the national seascape unit | 0 | Minor | Not assessed | Scoped out as no prospect of Significant effects arising |
| NSU 4: North East Coast | Upon character of the national seascape unit | 0 | Minor | Not assessed | Scoped out as no prospect of Significant effects arising |

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² Viewpoints 9 – 14 are different between the two assessments. The viewpoints listed identify those used in the 2018 SLVIA. The Isle of May viewpoint is VP14 in the 2012 SLVIA but VP13 in the 2018 SLVIA

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|--|---|---|--|--|---|
| SA2: Greg Ness to Cove Bay | Upon seascape character type | 0 | Not Assessed | Not assessed | Scoped out as no prospect of Significant effects arising |
| SA3: Cove Bay to Milton Ness | Upon seascape character type | 0 | Minor | Minor | No change |
| SA4: Montrose Bay | Upon seascape character type | 0 | Moderate/Minor (Minor) | Moderate | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| SA5: Long Craig | Upon seascape character type | 0 | Minor/Moderate (Minor) | Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| SA6: Lunan Bay | Upon seascape character type | 0 | Moderate/Minor (Minor) | Moderate | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| SA7: Lang Craig to The Deil's Heid | Upon seascape character type | 0 | Moderate/Minor (Minor) | Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| SA8: Arbroath to Monifieth | Upon seascape character type | 0 | Minor | Not assessed | Scoped out as no prospect of Significant effects arising |
| SA12: St Andrews to Fife Ness | Upon seascape character type | 0 | Not assessed | Not assessed | Scoped out as no prospect of Significant effects arising |
| SA13: East Neuk of Fife | Upon seascape character type | 0 | Not assessed | Not assessed | Scoped out as no prospect of Significant effects arising |
| Effects on visual amenity | Upon visual amenity of visual receptors | C, D | Minor (reversible and temporary effect during the day and night-time works) | Minor (reversible and temporary effect during the day and night-time works) | No change |
| VP1 – Garron Point (Stonehaven Golf Club) | Upon visual amenity of visual receptor | 0 | Minor | Minor | No change |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---|--|---|--------------------------------------|--------------------------------------|---|
| VP2 – Beach Road, Kirkton, St Cyrus | Upon visual amenity of visual receptor | 0 | Moderate/Minor (Minor) | Moderate | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP3 – W =hite Caterthun Hill Fort | Upon visual amenity of visual receptor | 0 | Not assessed | Minor | Viewpoint not assessed in the 2012 Offshore ES for Project Bravo |
| VP4 – M =ontrose | Upon visual amenity of visual receptor | 0 | Minor/Moderate (Negligible) | Moderate- Minor | No change |
| VP5 – Braehead of Lunan | Upon visual amenity of visual receptor | 0 | Moderate/Minor (Minor) | Moderate | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP6 – Arbroath Signal Tower | Upon visual amenity of visual receptor | 0 | Moderate/Minor (Minor) | Moderate- Minor | No change |
| VP7 – Carnoustie | Upon visual amenity of visual receptor | 0 | Minor/Moderate (Negligible) | Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP8 – Fife Ness, Lochaber Rock | Upon visual amenity of visual receptor | 0 | Minor/Moderate (Negligible) | Minor-Negligible | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP9 – North Berwick Law | Upon visual amenity of visual receptor | 0 | Not assessed | Minor-Negligible | Viewpoint not assessed in the 2012 Offshore ES for Project Bravo |
| VP10 - Dunbar Cliffs | Upon visual amenity of visual receptor | 0 | Not assessed | Negligible | Viewpoint not assessed in the 2012 Offshore ES for Project Bravo |
| VP11 – Pinderachy | Upon visual amenity of visual receptor | 0 | Not assessed | Minor | Viewpoint not assessed in the 2012 Offshore ES for Project Bravo |
| VP12 - The Geot/Ben Tirran (a corbett) | Upon visual amenity of visual receptor | 0 | Not assessed | Moderate – Minor | Viewpoint not assessed in the 2012 Offshore ES for Project Bravo |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---|--|---|--------------------------------------|--------------------------------------|---|
| VP13 – Isle of May | Upon visual amenity of visual receptor | 0 | Not assessed | Minor – Negligible | Viewpoint not assessed in the 2012 Offshore ES for Project Bravo |
| VP14 – Bell Rock Lighthouse | Upon visual amenity of visual receptor | 0 | Not assessed | Moderate – Minor | Viewpoint not assessed in the 2012 Offshore ES for Project Bravo |
| Residential receptors (and settlements) | Upon visual amenity of receptor group | 0 | Minor - Negligible | Minor - Negligible | No change |
| Recreational walking and cycling receptors | Upon visual amenity of receptor group | 0 | Minor - Negligible | Minor - Negligible | No change |
| Roads and railways | Upon visual amenity of receptor group Upon visual amenity of receptor group | 0 | Minor | Minor – Negligible | No change |
| Vantage points and tourist attractions | Upon visual amenity of receptor group | 0 | Minor | Minor | No change |
| Other land-based receptors | Upon visual amenity of receptor group | 0 | Negligible | Negligible | No change |
| Marine receptors | Upon visual amenity of receptor group | 0 | Moderate – Minor/Moderate | Moderate – Moderate/Minor | No change |
| Aircraft passengers | Upon visual amenity of receptor group | 0 | Negligible | Not assessed | No impact pathway identified |
| Night-time visual impacts | Upon visual amenity of receptor group | 0 | Minor/Moderate | Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |

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CHAPTER 17: SUMMARY OF IMPACTS

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) | | | | |
|-----------------------------------|---|---|--------------------------------------|--|--|--|--|--|--|
| Project Alpha and Proje | Project Alpha and Project Bravo Combined, ³⁴ | | | | | | | | |
| Effects on Landscape character | Upon landscape character | C, D | Not assessed | Not assessed | Scoped out as no prospect of Significant effects arising | | | | |
| Effects on landscape designations | Upon character of designated landscapes | C, D | Not assessed | Not assessed | Scoped out as no prospect of Significant effects arising | | | | |
| Effects on Seascape Character | Upon seascape character | C, D | Not assessed | Minor (reversible and temporary effect during the day and night-time works) | Not assessed for the combined projects within the 2012 Offshore ES | | | | |
| Effects on Landscape character | Upon landscape character | 0 | Minor | Not assessed | Scoped out as no prospect of Significant effects arising | | | | |
| Effects on landscape designations | Upon character of designated landscapes | 0 | Negligible | Not assessed | Scoped out as no prospect of Significant effects arising | | | | |
| NSU 1: Berwick-Upon- Tweed | Upon character of the national seascape unit | 0 | Not assessed | Not assessed | Scoped out as no prospect of Significant effects arising | | | | |
| NSU 2: Firth of Forth | Upon character of the national seascape unit | 0 | Minor | Not assessed | Scoped out as no prospect of Significant effects arising | | | | |
| NSU 3: East Fife/Firth of Tay | Upon character of the national seascape unit | 0 | Minor | Not assessed | Scoped out as no prospect of Significant effects arising | | | | |
| NSU 4: North East Coast | Upon character of the national seascape unit | 0 | Moderate | Not assessed | Scoped out as no prospect of Significant effects arising | | | | |

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³ Viewpoints 9 – 14 are different between the two assessments. The viewpoints shown identify those used in the 2018 SLVIA. The Isle of May viewpoint is VP14 in the 2012 SLVIA but VP13 in the 2018 SLVIA

⁴ For the 2018 SLVIA the 2 OSPs have been included within the respective Project Alpha and Project Bravo sites. The interconnecting cables and cables to landfall are scoped out of the 2018 SLVIA

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|--------------------------------------|---|---|--------------------------------------|--|---|
| SA2: Greg Ness top Cove Bay | Upon seascape character type | 0 | Minor | Not assessed | Scoped out as no prospect of Significant effects arising |
| SA3: Cove Bay to Milton Ness | Upon seascape character type | 0 | Moderate | Moderate-Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| SA4: Montrose Bay | Upon seascape character type | 0 | Moderate | Moderate | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| SA5: Long Craig | Upon seascape character type | 0 | Minor | Moderate - Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| SA6: Lunan Bay | Upon seascape character type | 0 | Minor | Moderate | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| SA7: Lang Craig to The Deil'sHeid | Upon seascape character type | 0 | Minor | Moderate - Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| SA8: Arbroath to Monifieth | Upon seascape character type | 0 | Minor | Not assessed | Scoped out as no prospect of Significant effects arising |
| SA12: St Andrews to Fife Ness | Upon seascape character type | 0 | Not assessed | Not assessed | Scoped out as no prospect of Significant effects arising |
| SA13: East Neuk of Fife | Upon seascape character type | 0 | Not assessed | Not assessed | Scoped out as no prospect of Significant effects arising |
| Effects on visual amenity | Upon visual amenity of visual receptors | C, D | Not assessed | Minor (reversible and temporary effect during the day and night-time works) | Not assessed for the combined projects within the 2012 Offshore ES |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|--|--|---|--------------------------------------|--------------------------------------|---|
| VP1 – Garron Point (Stonehaven Golf Club) | Upon visual amenity of visual receptor | 0 | Minor | Moderate – Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP2 – Beach Road, Kirkton, St Cyrus | Upon visual amenity of visual receptor | 0 | Moderate | Major – Moderate | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP3 – White Caterthun Hill Fort | Upon visual amenity of visual receptor | 0 | Minor | Moderate – Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP4 – Montrose | Upon visual amenity of visual receptor | 0 | Minor | Moderate | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP5 – Braehead of Lunan | Upon visual amenity of visual receptor | 0 | Moderate | Major – Moderate | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP6 – Arbroath Signal Tower | Upon visual amenity of visual receptor | 0 | Minor | Moderate – Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP7 – Carnoustie | Upon visual amenity of visual receptor | 0 | No Effect or Negligible | Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP8 – Fife Ness, Lochaber Rock | Upon visual amenity of visual receptor | 0 | No Effect or Negligible | Minor – Negligible | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP9 – North Berwick Law | Upon visual amenity of visual receptor | 0 | Not assessed | Minor – Negligible | Viewpoint not assessed in the 2012 Offshore ES |
| VP10 – Dunbar Cliffs | Upon visual amenity of visual receptor | 0 | Not assessed | Negligible | Viewpoint not assessed in the 2012 Offshore ES |
| VP11 – Pinderachy | Upon visual amenity of visual receptor | 0 | Not assessed | Moderate – Minor | Viewpoint not assessed in the 2012 Offshore ES for Project Bravo |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---|--|---|--------------------------------------|--------------------------------------|---|
| VP12 – The Geot/Ben Tirran (a corbett) | Upon visual amenity of visual receptor | 0 | Not assessed | Moderate – Minor | Viewpoint not assessed in the 2012 Offshore ES for Project Bravo |
| VP13 – Isle of May | Upon visual amenity of visual receptor | 0 | Minor | Minor – Negligible | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP14 – Bell Rock Lighthouse | Upon visual amenity of visual receptor | 0 | Not Assessed | Moderate – Minor | Viewpoint not assessed in the 2012 Offshore ES for Project Bravo |
| Residential receptors (and settlements) | Upon visual amenity of receptor group | 0 | Moderate - Negligible | Moderate - Negligible | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| Recreational walking and cycling receptors | Upon visual amenity of receptor group | 0 | Moderate - Negligible | Moderate – Negligible | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| Roads and railways | Upon visual amenity of receptor group Upon visual amenity of receptor group | 0 | Minor | Minor – Negligible | No change |
| Vantage points and tourist attractions | Upon visual amenity of receptor group | 0 | Moderate - Minor | Moderate – Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| Other land-based receptors | Upon visual amenity of receptor group | 0 | Negligible | Negligible | No change |
| Marine receptors | Upon visual amenity of receptor group | 0 | Moderate – Minor/Moderate | Moderate – Moderate/Minor | No change |
| Aircraft passengers | Upon visual amenity of receptor group | 0 | Negligible | Not Assessed | No impact pathway identified |
| Night-time visual impacts | Upon visual amenity of receptor group | 0 | Minor/Moderate | Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) | | | |
|--|--|---|---------------------------------------|--|--|--|--|--|
| Optimised Seagreen Pro | Optimised Seagreen Project Cumulative Impacts ⁵ | | | | | | | |
| Cumulative effects on Landscape character | Upon landscape character | C, D | Negligible | Not assessed | Scoped out as no prospect of Significant effects arising | | | |
| Cumulative effects on landscape designations | Upon character of designated landscapes | C, D | Negligible | Not assessed | Scoped out as no prospect of Significant effects arising | | | |
| Cumulative effects on Seascape Character | Upon seascape character | C, D | Not assessed | Minor (reversible and temporary effect during the day and night-time works) | Not assessed cumulatively within the 2012 Offshore ES | | | |
| Cumulative effects on Landscape character | Upon landscape character | 0 | Negligible | Not assessed | Scoped out as no prospect of Significant effects arising | | | |
| Cumulative effects on landscape designations | Upon character of designated landscapes | 0 | Negligible | Not assessed | Scoped out as no prospect of Significant effects arising | | | |
| NSU 1: Berwick-Upon- Tweed | Upon character of the national seascape unit | 0 | Not assessed | Not assessed | Scoped out as no prospect of Significant effects arising | | | |
| NSU 2: Firth of Forth | Upon character of the national seascape unit | 0 | Minor | Not assessed | Scoped out as no prospect of Significant effects arising | | | |
| NSU 3: East Fife/Firth of Tay | Upon character of the national seascape unit | 0 | Minor | Not assessed | Scoped out as no prospect of Significant effects arising | | | |
| NSU 4: North East Coast | Upon character of the national seascape unit | 0 | Minor | Not assessed | Scoped out as no prospect of Significant effects arising | | | |
| SA2: Greg Ness top Cove Bay | Upon seascape character type | 0 | Minor (No effect or Negligible) | Not assessed | Scoped out as no prospect of Significant effects arising | | | |

⁵ Viewpoints 9 – 14 are different between the two assessments. The viewpoints listed identify those used in the 2018 SLVIA. The Isle of May viewpoint is VP14 in the 2012 SLVIA but VP13 in the 2018 SLVIA

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|--------------------------------------|---------------------------------|---|--------------------------------------|---|---|
| SA3: Cove Bay to Milton Ness | Upon seascape character type | 0 | Moderate | Moderate - Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| SA4: Montrose Bay | Upon seascape character type | 0 | Major/Moderate (Moderate) | Moderate | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| SA5: Long Craig | Upon seascape character type | 0 | Moderate | Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| SA6: Lunan Bay | Upon seascape character type | 0 | Moderate | Moderate - Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| SA7: Lang Craig to The Deil'sHeid | Upon seascape character type | 0 | Moderate/Minor (Minor) | Moderate - Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| SA8: Arbroath to Monifieth | Upon seascape character type | 0 | Minor/Moderate (Minor) | Combination of updated methodology, professional judgement, updated baseline and different scheme | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| SA12: St Andrews to Fife Ness | Upon seascape character type | 0 | Minor/Moderate (Negligible) | Combination of updated methodology, professional judgement, updated baseline and different scheme | Combination of updated methodology, professional judgement, updated baseline and different scheme |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|--|---|---|--------------------------------------|---|---|
| SA13: East Neuk of Fife | Upon seascape character type | 0 | Minor/Moderate (Negligible) | Combination of updated methodology, professional judgement, updated baseline and different scheme | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| Effects on visual amenity | Upon visual amenity of visual receptors | C, D | Not assessed | Minor (reversible and temporary effect during the day and night-time works) | Not assessed within the 2012 Offshore ES |
| VP1 – Garron Point (Stonehaven Golf Club) | Upon visual amenity of visual receptor | 0 | Minor/Moderate (Minor) | Minor | No change |
| VP2 – Beach Road, Kirkton, St Cyrus | Upon visual amenity of visual receptor | 0 | Major/Moderate (Moderate) | Moderate | No change |
| VP3 – White Caterthun Hill Fort | Upon visual amenity of visual receptor | 0 | Moderate/Minor (Minor) | Minor | No change |
| VP4 – Montrose | Upon visual amenity of visual receptor | 0 | Moderate/Minor (Minor) | Moderate – Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP5 – Braehead of Lunan | Upon visual amenity of visual receptor | 0 | Major/Moderate (Moderate) | Moderate | No change |
| VP6 – Arbroath Signal Tower | Upon visual amenity of visual receptor | 0 | Moderate/Minor (Minor) | Moderate – Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP7 – Carnoustie | Upon visual amenity of visual receptor | 0 | Minor/Moderate (Negligible) | Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP8 – Fife Ness, Lochaber Rock | Upon visual amenity of visual receptor | 0 | Minor/Moderate (Negligible) | Minor – Negligible | Combination of updated methodology, professional judgement, updated baseline and different scheme |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---|--|---|--|--------------------------------------|---|
| VP9 – North Berwick Law | Upon visual amenity of visual receptor | 0 | Not assessed | Minor – Negligible | Different viewpoint assessed in the 2012 Offshore ES |
| VP10 - Dunbar Cliffs | Upon visual amenity of visual receptor | 0 | Not assessed | Negligible | Different viewpoint assessed in the 2012 Offshore ES |
| VP11 - Pinderachy | Upon visual amenity of visual receptor | 0 | Not assessed | Moderate – Minor | Different viewpoint assessed in the 2012 Offshore ES |
| VP12 - The Geot/Ben Tirran (a corbett) | Upon visual amenity of visual receptor | 0 | Not assessed | Moderate – Minor | Different viewpoint assessed in the 2012 Offshore ES |
| VP13 - Isle of May | Upon visual amenity of visual receptor | 0 | Minor/Moderate (Negligible) (Note this is VP14 in the 2012 SLVIA) | Minor – Negligible | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| VP14 - Bell Rock Lighthouse | Upon visual amenity of visual receptor | 0 | Not Assessed | Moderate – Minor | Different viewpoint assessed in the 2012 Offshore ES |
| Residential receptors (and settlements) | Upon visual amenity of receptor group | 0 | Moderate – Negligible | Moderate - Negligible | No change |
| Recreational walking and cycling receptors | Upon visual amenity of receptor group | 0 | Minor - Negligible | Moderate - Negligible | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| Roads and railways | Upon visual amenity of receptor group Upon visual amenity of receptor group | 0 | Minor | Minor – Negligible | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| Vantage points and tourist attractions | Upon visual amenity of receptor group | 0 | Moderate - Negligible | Moderate – Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| Other land-based receptors | Upon visual amenity of receptor group | 0 | Negligible | Negligible | No change |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---|--|---|--------------------------------------|--------------------------------------|--|
| Marine receptors | Upon visual amenity of receptor group | 0 | Moderate – Minor | Moderate – Moderate/Minor | Combination of updated methodology, professional judgement, updated baseline and different scheme |
| Aircraft passengers | Upon visual amenity of receptor group | 0 | Negligible | Not assessed | No impact pathway identified |
| Night-time visual impacts | Upon visual amenity of receptor group | 0 | Minor | Minor | No change |
| Transmission Asset | | | | | · |
| Effects on seascape, landscape and visual amenity | Impact on seascape, landscape and visual amenity | С | Moderate/Minor | Not assessed | The potential impacts of the Transmission Asset have not been assessed separately in the 2018 EIA. The Transmission Asset |
| Effects on seascape, landscape and visual amenity | Impact on seascape, landscape and visual amenity | O, D | Negligible | Not assessed | the 2018 EIA. The Transmission Asset project was licenced in 2014 and remains unchanged. The OSPs have been included within the respective assessments for Projects Alpha and Bravo and the combined optimised Seagreen Project |

Table 17.7 Military and Civil Aviation Summary of Impacts

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---|--|---|--------------------------------------|--------------------------------------|--|
| Project Alpha and Projec | ct Bravo in Isolation | | | | |
| Low flying aircraft | Presence of cranes and stationary turbines | C, D | Not Significant | Not Significant | No change |
| Civil radar (airport) | Radar Impacts | 0 | Not Significant | Not Significant | No change |
| Military radar (air traffic control) | Radar Impacts | 0 | Not Significant | Not Significant | No change |
| En-Route radar | Radar Impacts | 0 | Not Significant | Not Significant | No change |
| MOD air defence radar | Radar Impacts | 0 | Not Significant | Not Significant | No change |
| Low flying aircraft | Presence of wind turbines | 0 | Not Significant | Not Significant | No change |
| Helicopter Main Routes (HMR) | Potential obstruction | 0 | Not Significant | Scoped out | Not in proximity to any HMR or offshore platforms |
| Project Alpha and Projec | ct Bravo Combined | | · | | |
| Low flying aircraft | Presence of cranes and stationary turbines | C, D | Not assessed | Not Significant | n/a |
| Civil radar (airport) Military | Radar impacts | 0 | Not assessed | Not Significant | n/a |
| Radar (air traffic control) | Radar impacts | 0 | Not assessed | Not Significant | n/a |
| En-Route radar | Radar impacts | 0 | Not assessed | Not Significant | n/a |
| MOD air defence radar | Radar impacts | 0 | Not assessed | Not Significant | n/a |
| Low flying aircraft | Presence of wind turbines | 0 | Not assessed | Not Significant | n/a |
| HMR | Potential obstruction | 0 | Not assessed | Not Significant | n/a |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---|-------------------------------|---|---|---|--|
| Optimised Seagreen Pro | ject Cumulative Impacts | | | | |
| Cumulative (all radar) (Alpha and Bravo) | Radar Impact | 0 | Cumulative impacts were still to be established with the MOD and RAF but would have to be mitigated. | Not Significant with the application of suitable mitigation | No change |
| Transmission Asset | · | · | | · | |
| Radars and Aviation | Radar and aviation impacts | C, O, D | The Transmission Asset Project will not generate any radar or aviation impacts | Not assessed | The potential impacts of the Transmission Asset have not been assessed separately in the 2018 EIA. This project was licenced in 2014 and remains unchanged, it is therefore considered a separate project. Potential impacts associated with the Transmission Asset are given consideration as part of the cumulative assessment within the 2018 EIA. |

Table 17.8 Socio Economics Summary of Impacts

It should be noted that the 2012 Offshore ES used the heading 'Scotland: Capital Expenditure (CAPEX)' to describe the impacts on GVA in Scotland during the CAPEX stage of the development. This, and similar descriptions have been updated in Table 17.8 in order to more accurately reflect the descriptions given in this assessment. Similarly, the 2012 Offshore ES used the heading 'Direct Employment' to describe the impacts on employment during the operational phase of the Optimised Seagreen Project. This has also been updated in the table.

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---|--------------------------------|---|--|--------------------------------------|---|
| Project Alpha in Isolation | | | | | |
| Scotland: Capital Expenditures (CAPEX) GVA | Beneficial, short term, direct | С | Minor - Moderate Beneficial | Moderate Beneficial | Use of updated baseline information and developments in assessment methods |
| Rest of Great Britain: CAPEX GVA | Beneficial, short term, direct | С | Minor Beneficial | Minor Beneficial | Use of updated baseline information and developments in assessment methods |
| Scotland: Operational Expenditure (OPEX) GVA | Beneficial, long term, direct | 0 | Minor - Moderate Beneficial | Minor Beneficial | Use of updated baseline information and developments in assessment methods |
| Rest of Great Britain: OPEX GVA | Beneficial, long term, direct | 0 | Negligible | Minor Beneficial | Use of updated baseline information and developments in assessment methods |
| Scotland: CAPEX Employment | Beneficial, short term, direct | С | Moderate – Moderate/ Major Beneficial | Moderate Beneficial | Use of updated baseline information and developments in assessment methods |
| Rest of Great Britain: CAPEX Employment | Beneficial, short term, direct | С | Minor Beneficial | Minor Beneficial | Use of updated baseline information and developments in assessment methods |
| Operational employment | Beneficial, long term, direct | 0 | Moderate Beneficial | Minor Beneficial | Use of updated baseline information and developments in assessment methods |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---|--------------------------------|---|--|--------------------------------------|---|
| Project Bravo in Isolation | | | | | |
| Scotland: Capital Expenditures (CAPEX) GVA | Beneficial, short term, direct | С | Moderate – Major Beneficial | Moderate Beneficial | Use of updated baseline information and developments in assessment methods |
| Rest of Great Britain: CAPEX GVA | Beneficial, short term, direct | С | Minor Beneficial | Minor Beneficial | Use of updated baseline information and developments in assessment methods |
| Scotland: Operational Expenditure (OPEX) GVA | Beneficial, long term, direct | 0 | Minor -Moderate Beneficial | Minor Beneficial | Use of updated baseline information and developments in assessment methods |
| Rest of Great Britain: OPEX GVA | Beneficial, long term, direct | 0 | Negligible | Minor Beneficial | Use of updated baseline information and developments in assessment methods |
| Scotland: CAPEX Employment | Beneficial, short term, direct | С | Moderate – Moderate/ Major Beneficial | Moderate Beneficial | Use of updated baseline information and developments in assessment methods |
| Rest of Great Britain: CAPEX Employment | Beneficial, short term, direct | С | No change – Minor Beneficial | Minor Beneficial | Use of updated baseline information and developments in assessment methods |
| Operational employment | Beneficial, long term, direct | 0 | Moderate Beneficial | Minor Beneficial | Use of updated baseline information and developments in assessment methods |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---|--|---|--------------------------------------|--------------------------------------|---|
| Project Alpha and Project Bra | vo Combined | | | | |
| Scotland: Capital Expenditures (CAPEX) GVA | Beneficial, short term, direct | С | Minor – Moderate Beneficial | Moderate Beneficial | Use of updated baseline information and developments in assessment methods |
| Rest of Great Britain: CAPEX GVA | Beneficial, short term, direct | С | Minor Beneficial | Minor Beneficial | Use of updated baseline information and developments in assessment methods |
| Scotland: Operational Expenditure (OPEX) GVA | Beneficial, long term, direct | 0 | Moderate Beneficial | Minor Beneficial | Use of updated baseline information and developments in assessment methods |
| Rest of Great Britain: OPEX GVA | Beneficial, long term, direct | 0 | Negligible | Minor Beneficial | Use of updated baseline information and developments in assessment methods |
| Scotland: CAPEX Employment | Beneficial, short term, direct | С | Moderate/Major – Major Beneficial | Moderate Beneficial | Use of updated baseline information and developments in assessment methods |
| Rest of Great Britain: CAPEX Employment | Beneficial, short term, direct | С | Minor Beneficial | Minor Beneficial | Use of updated baseline information and developments in assessment methods |
| Operational employment | Beneficial, long term, direct | 0 | Moderate Beneficial | Minor Beneficial | Use of updated baseline information and developments in assessment methods |
| Tourism and Recreation | Adverse, short term, direct, temporary | C | Negligible | Not assessed | Scoped out of 2018 assessment |
| Tourism and Recreation | Adverse, long term, direct, permanent | 0 | Negligible – Minor Adverse | Not assessed | Scoped out of 2018 assessment |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|------------------------------------|---|---|--|--------------------------------------|---|
| Optimised Seagreen Project C | Cumulative Impacts | | · | | |
| CAPEX Supply Chain opportunities | Beneficial, short term, direct | С | Not assessed | Minor Beneficial | Not assessed in 2012 |
| OPEX Supply Chain opportunities | Beneficial, long term, direct | С | Not assessed | Minor Beneficial | Not assessed in 2012 |
| Transmission Asset | | | | | |
| provide a mechanism for asses | economic assessment in the 2012 Offs ssing the wind farm elements and tra oject Bravo' are used above, this refe assion Asset. | Not assessed | The potential impacts of the Transmission Asset have not been assessed separately in the 2018 EIA. The Transmission Asset project was licenced in 2014 and remains unchanged. The OSPs have been included within the respective assessments for Projects Alpha and Bravo and the combined optimised Seagreen Project | | |

Table 17.9 Physical Environment Summary of Impacts

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|--|--|---|---|--------------------------------------|--|
| Project Alpha and Proje | ct Bravo in Isolation | | | | |
| Hydrodynamic regime | Impact on hydrodynamic regime | С | Negligible | Not assessed | Scoped out |
| Sediments and | Installation plant | С | Negligible | Not assessed | Scoped out |
| sedimentary structures | Seabed preparation | С | Minor in areas of mobile bedforms Negligible (for other GBS) Minor (for jackets with piles or suction piles) | Not assessed | Scoped out |
| Suspended sediment concentration and transport | Installation of Substructures/ Foundations | С | Negligible | Not assessed | Scoped out |
| | Installation of Array cables | С | Negligible (for ploughing or cutting) | Not assessed | Scoped out |
| Hydrodynamic regime | Impact on waves Impact on tides | 0 | Waves: n/a Tides: Minor (for GBS Negligible (for jackets with piles or suction piles) | Not assessed | Scoped out |
| Sediments and sediment structures | Installation of Substructures/ Foundations | 0 | Minor/Negligible (GBS) Negligible (jackets) | Not assessed | Scoped out |
| | Installation of Array cables | 0 | No change if all cable is buried to target depth | Not assessed | Scoped out |
| Suspended sediment concentration and | Installation of Substructures/ | 0 | Minor (GBS) Negligible (jackets) | Not assessed | Scoped out |
| transport | Foundations | D | Negligible | Not assessed | Scoped out |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) | | | |
|--|--|--|---|--------------------------------------|--|--|--|--|
| Project Alpha and Project Bravo Combined | | | | | | | | |
| be of high or medium eff | | missioning effects from eac al and, in many cases of sho ted. | | | Scoped out | | | |
| The Seagreen Project Cu | umulative Impacts | | | | | | | |
| other known potential de | | nvironment arising from the due to the localised and sho een projects. | | | Scoped out | | | |
| Transmission Asset | | | | | | | | |
| Hydrodynamic regime | Impact on hydrodynamic regime | C, D | Negligible | Not assessed | The potential impacts of the Transmission Asset have not been assessed separately in | | | |
| Sediments and | Installation plant | C, D | Negligible | Not assessed | the 2018 EIA. This project was licenced in 2014 and remains unchanged, it is therefore | | | |
| sedimentary structures | Installation of Substructures/ Foundations: | | Negligible | Not assessed | considered a separate project. Potential impacts associated with the Transmission Asset are given consideration as part of the | | | |
| | Installation of Export cable (offshore) | | Negligible in areas of mobile bedforms No impact elsewhere. | Not assessed | cumulative assessment within the 2018 EIA. | | | |
| | Installation of Export cable (landfall) | | No change if all cable is buried to target depth | Not assessed | | | | |
| Suspended sediment concentration and transport | Installation of Substructures/ Foundations | C, D | Negligible | Not assessed | | | | |
| | Installation of Export cable (offshore & landfall) | | Negligible (for ploughing or cutting or HDD) | Not assessed | | | | |
| Hydrodynamic regime | Waves/tides | 0 | Negligible/Minor | Not assessed | | | | |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|--|---|---|---|--------------------------------------|--|
| Sediments and sediment structures | Installation of Substructures/ Foundations | 0 | Negligible | Not assessed | |
| | Installation of Export cables: Water depths > 7m chart datum: Water depths < 7m chart datum: | | No change if all cable is buried to target depth | Not assessed | |
| Suspended sediment concentration and transport | Installation of Substructures/ Foundations | 0 | Negligible | Not assessed | |

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 Table 17.10 Water and Sediment Quality Summary of Impacts

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) | | | |
|---------------------------|--|---|--------------------------------------|--------------------------------------|--|--|--|--|
| Project Alpha and Pro | roject Alpha and Project Bravo in Isolation | | | | | | | |
| Water quality | Deterioration due to re- suspension of sediments | C, D | Negligible | Not assessed | Scoped out | | | |
| | Deterioration due to re- suspension of contaminants | C, D | Negligible | Not assessed | Scoped out | | | |
| Water/sediment quality | Deterioration due to accidental spillages | С, О | Negligible | Not assessed | Scoped out | | | |
| Water/sediment | Introduction of marine non- native / alien species | C, O, D | Negligible | Not assessed | Scoped out | | | |
| Water/sediment quality | Deterioration as a result of scour impacts at WTG structures | 0 | Negligible | Not assessed | Scoped out | | | |
| Project Alpha and Pro | oject Bravo Combined | | | | | | | |
| Water quality | Deterioration due to re- suspension of sediments | C, D | Negligible | Not assessed | Scoped out | | | |
| Water quality | Deterioration due to re- suspension of contaminants | C, D | Negligible | Not assessed | Scoped out | | | |
| Water/sediment quality | Deterioration due to accidental spillages | С, О | Negligible | Not assessed | Scoped out | | | |
| Water/sediment | Introduction of marine non- native /alien species | C, O, D | Negligible | Not assessed | Scoped out | | | |
| Water/sediment quality | Deterioration as a result of scour impacts at WTG structures | 0 | Negligible | Not assessed | Scoped out | | | |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---|--|---|--|--------------------------------------|---|
| The Seagreen Project | t Cumulative Impacts | | | | |
| days to weeks) sugger impacts on water and | ring the construction of the Seagree sting that cumulative impacts are li sediment quality arising from the c ith other OWFs or other marine or c | kely to be spatially and tem construction and operation | porally restricted. It is cor of the Seagreen project wil | sidered unlikely that | Scoped out |
| Transmission Asset | | | | | |
| Water quality | Deterioration due to re- suspension of sediments | C, D | Negligible | Not assessed | The potential impacts of the Transmission Asset have not been |
| | Deterioration due to re- suspension of contaminants | C, D | Negligible | Not assessed | assessed separately in the 2018 EIA. This project was licenced in 2014 and remains unchanged, it is therefore |
| Water/sediment quality | Deterioration due to accidental spillages | С, О | Negligible | Not assessed | considered a separate project. Potential impacts associated with the |
| Water/sediment quality | Introduction of marine non- native / alien species | C, O, D | Negligible | Not assessed | Transmission Asset are given consideration as part of the cumulative assessment within the 2018 EIA. |
| Water quality | Effects on suspended sediment concentrations and transport resulting from scour due to the presence of foundation structures and rock protection measures | 0 | Negligible | Not assessed | |
| Water/sediment quality | Deterioration as a result of scour impacts associated with ECR and cable protections measures | 0 | Negligible | Not assessed | |

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Table 17.11 Benthic and Intertidal Ecology Summary of Impacts

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) | | | |
|----------------------|--|---|--------------------------------------|--------------------------------------|---|--|--|--|
| Project Alpha and Pr | Project Alpha and Project Bravo in Isolation | | | | | | | |
| Benthos | Direct impact due to physical disturbance | С | Negligible | Not assessed | Scoped out | | | |
| Benthos | Direct impact due to the loss of habitat | С | Negligible | Not assessed | Scoped out | | | |
| Benthos | Indirect impacts due to increased suspended sediments | С | Negligible | Not assessed | Scoped out | | | |
| Benthos | Indirect impacts through re- mobilisation of contaminated sediments | С | Negligible | Not assessed | Scoped out | | | |
| Benthos | Direct impact due to physical disturbance caused by maintenance activities | 0 | Negligible | Not assessed | Scoped out | | | |
| Subtidal benthos | Direct impacts due to creation of new habitat | 0 | Negligible | Not assessed | Scoped out | | | |
| Benthos | Indirect impacts due to changes in current regime and coastal processes | 0 | Negligible | Not assessed | Scoped out | | | |
| Subtidal benthos | Indirect impacts due to alteration to existing human activity | 0 | Negligible | Not assessed | Scoped out | | | |
| Benthos | Impacts on benthos | D | Negligible | Not assessed | Scoped out | | | |
| Project Alpha and Pr | Project Alpha and Project Bravo Combined | | | | | | | |
| Benthos | Disturbance of habitat | C, D | Negligible | Not assessed | Scoped out | | | |
| Benthos | Loss of habitat | С | Minor Adverse | Not assessed | Scoped out | | | |
| Benthos | Habitat creation | 0 | Negligible | Not assessed | Scoped out | | | |

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|-------------------------------------|--|---|--------------------------------------|--------------------------------------|---|
| The Seagreen Project C | Cumulative Impacts | | | | |
| addition, impacts upon | ndustries in the region, there are few activit the benthos will be highly localised and the lentified. The cumulative impact of permane | re is little likelihood of inter | raction of impact, particular | ly during construction and | Scoped out |
| Transmission Asset | | | | | · |
| Benthos | Direct physical disturbance of subtidal benthic species and habitats | С, О | Negligible | Not assessed | The potential impacts of the Transmission Asset have not |
| Benthos | Direct impact due to the loss of habitat | С, О | Negligible | Not assessed | been assessed separately in the 2018 EIA. This project |
| Benthos | Indirect impacts due to increased suspended sediments | С | Negligible | Not assessed | was licenced in 2014 and remains unchanged, it is therefore considered a separate project. Potential impacts associated with the Transmission Asset are given consideration as part of the cumulative assessment within the 2018 EIA. |
| Intertidal ecology | Direct impact due to physical disturbance | С | Negligible | Not assessed | |
| Nature Conservation Designations | Impact on Nature Conservation designations (The Export Cable Route corridor overlaps with the Firth of Tay and Eden Estuary SAC (0.56% of the 15,412ha designation). | С | Negligible | Not assessed | |
| Benthos | Increased suspended sediments and mobilisation of contaminants leading to smothering of benthic ecology | 0 | Negligible | Not assessed | |
| Benthos | Impact due to habitat creation | 0 | Negligible | Not assessed | - |
| Benthos | Indirect impacts from alteration to human activities | 0 | Negligible | Not assessed | |
| Intertidal ecology | Direct impacts due to maintenance activities | 0 | Negligible | Not assessed | |
| Benthos | Potential Impacts on benthos | D | Negligible | Not assessed | |
| Intertidal ecology | Potential impacts on intertidal ecology | D | Negligible | Not assessed | |

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Table 17.12 Archaeology and Cultural Heritage Summary of Impacts

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|--|--|---|--------------------------------------|--------------------------------------|---|
| Project Alpha and Bra | avo in Isolation | | | | |
| Archaeology and cultural heritage | Direct impact to archaeology and heritage assets due to installation of infrastructure | С | Negligible | Not assessed | Scoped out |
| Archaeology and cultural heritage | Indirect impact on archaeology and heritage assets due to physical processes | С | Negligible | Not assessed | Scoped out |
| Archaeology and cultural heritage | Indirect impact on archaeology and heritage assets due to physical processes | 0 | Negligible | Not assessed | Scoped out |
| Archaeology and cultural heritage | Direct impacts on archaeology and heritage assets due to removal of infrastructure | D | Negligible | Not assessed | Scoped out |
| Project Alpha and Pro | oject Bravo Combined including the Transp | nission Asset | | | |
| The potential impacts potential cumulative i concludes predicted ir to be negligible and no | Scoped out | | | | |
| The Seagreen Project | Cumulative Impacts | | | | |
| Given the limited num impact upon archaeolo developments and the negligible and not sign | Scoped out | | | | |

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| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|-----------------------------------|--|---|--------------------------------------|--------------------------------------|---|
| Transmission Asset | | | | | |
| Archaeology and cultural heritage | Direct impact to archaeology and heritage assets due to installation of infrastructure | С | Negligible | Not assessed | The potential impacts of the Transmission Asset have not been assessed separately in |
| Archaeology and cultural heritage | Indirect impact on archaeology and cultural heritage due to physical processes | С | Negligible | Not assessed | the 2018 EIA. This project was licenced in 2014 and remains unchanged, it is therefore considered a separate project. Potential impacts associated with the Transmission Asset are given consideration as part of the cumulative assessment within the 2018 EIA. |
| Archaeology and cultural heritage | Indirect impact on archaeology and heritage assets due to physical processes | 0 | Negligible | Not assessed | |
| Archaeology and cultural heritage | Direct impacts on archaeology and heritage assets due to removal of infrastructure | D | Negligible | Not assessed | |

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Table 17.13 Other Marine Users Summary of Impacts

| Receptor | Potential Impact | Phase Construction (C), Operation (O) or Decommissioning (D) | 2012 Residual Impact Significance | 2018 Residual Impact Significance | Rationale for difference in Impact Significance (as relevant) |
|---|---|---|--------------------------------------|--------------------------------------|---|
| Project Alpha and Proje | ect Bravo in Isolation | | | | |
| Other OWFs | General impacts: relates to conflicts between vessel movements, arising from spatial and temporal overlaps relating to movement of vessels and plant and to location of temporary infrastructure and works. | C, O, D | Not Significant | Not assessed | Scoped out |
| Military PEXAs | General impacts | C, O, D | Not Significant | Not assessed | Scoped out |
| Marine disposal sites | General impacts | C, O, D | Not Significant | Not assessed | Scoped out |
| Other non-wind farm marine activities | General impacts | C, O, D | Not Significant | Not assessed | Scoped out |
| Project Alpha and Proje | ect Bravo Combined | | | | |
| The methodology applie assessment of other mar | ed for the 2012 Offshore ES did not consider the po ine users | tential impacts of Project A | lpha and Project Bravo c | combined for the | Scoped out |
| The Seagreen Project C | umulative Impacts | | | | |
| This is due to the fact the | not expected to act in a cumulative or in combination at all impacts of the Seagreen Project on other exist the Seagreen Projects and many of the other project | ing users have been assess | | | Scoped out |
| Transmission Asset | | | | | |
| Other OWFs | General impacts: relates to conflicts between vessel movements, arising from spatial and temporal overlaps relating to movement of vessels and plant and to location of temporary infrastructure and works. | C, O, D | Not Significant | Not assessed | Scoped out |
| Military PEXAs | General impacts | C, O, D | Not Significant | Not assessed | Scoped out |
| Marine disposal sites | General impacts | C, O, D | Not Significant | Not assessed | Scoped out |
| Other non-wind farm marine activities | General impacts | C, O, D | Not Significant | Not assessed | Scoped out |