



# Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects

## Outline Fisheries Liaison and Coexistence Plan (Revision B) (Clean)

**Revision B**

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## Glossary of Acronyms

COLREGS	International Regulations for Preventing Collisions at Sea
DCO	Development Consent Order
DEP	Dudgeon Extension Project
DOW	Dudgeon Offshore Wind Farm
EEZ	Exclusive Economic Zone
EIFCA	Eastern Association of Inshore Fisheries and Conservation Authority
ES	Environmental Statement
FIR	Fishing Industry Representative
FLCP	Fisheries Liaison and Co-existence Plan
FLO	Fisheries Liaison Officer
FLOWW	Fishing Liaison with Offshore Wind and Wet Renewables Group
ICES	Council for the Exploration of the Sea
km	Kilometre
km <sup>2</sup>	Square Kilometre
MCA	Maritime and Coastguard Agency
MMO	Marine Management Organisation
MW	Megawatts
NFFO	National Federation of Fishermen's Organisations
NM	Nautical Miles
OFLR	Offshore Fisheries Liaison Representatives
OSP	Offshore Substation Platform
O&M	Operations and Maintenance
SEP	Sheringham Extension Project
SOW	Sheringham Shoal Offshore Wind Farm
UK	United Kingdom



## Glossary of Terms

Dudgeon Offshore Wind Farm Extension Project (DEP)	The Dudgeon Offshore Wind Farm Extension onshore and offshore sites including all onshore and offshore infrastructure.
DEP North array area	The wind farm site area of the DEP offshore site located to the north of the existing Dudgeon Offshore Wind Farm.
DEP South array area	The wind farm site area of the DEP offshore site located to the south of the existing Dudgeon Offshore Wind Farm.
Environmental Impact Assessment Regulations	The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended).
Fishing Industry Representative (FIR)	An individual(s) who acts as a central point of contact within the fishing community and represents an unbiased view of fishing industry activity in the region within which the Hornsea Four array area and offshore cable corridor are located.
Fisheries Liaison Officer (FLO)	An individual(s) appointed by Hornsea Four to act as primary point of contact for the fishing industry when direct communication with the developer is required.
Infield cables	Cables which link the wind turbine generators to the offshore substation platform(s).
Interlink cables	<p>Cables linking two separate project areas. This can be cables linking:</p> <ol style="list-style-type: none"> <li>1) DEP South array area and DEP North array area</li> <li>2) DEP South array area and SEP</li> <li>3) DEP North array area and SEP</li> </ol> <p>1 is relevant if DEP is constructed in isolation or first in a phased development.</p> <p>2 and 3 are relevant where both SEP and DEP are built.</p>
Landfall	The point at the coastline at which the offshore export cables are brought onshore, connecting to



	the onshore cables at the transition joint bay above mean high water
Marine Management Organisation	A United Kingdom (UK) government department that license, regulate and plan commercial fisheries activities in the seas around England, with jurisdiction from 0 to 12 nm.
National Federation of Fishermen's Organisations	A UK organisation comprised of members from Producers' Organisations, fishermen's groups and individuals, representing fishermen in England, Wales, Northern Ireland and the Channel Islands.
Offshore export cable corridor	This is the area which will contain the offshore export cables between offshore substation platform/s and landfall, including the adjacent Offshore Temporary Works Area.
Offshore export cables	The cables which would bring electricity from the offshore substation platform(s) to the landfall. 220 – 230kV.
Offshore substation platform (OSP)	A fixed structure located within the wind farm site/s, containing electrical equipment to aggregate the power from the wind turbine generators and convert it into a more suitable form for export to shore.
Onshore export cables	The cables which would bring electricity from the landfall to the onshore substation. 220 – 230kV.
Onshore Substation	Compound containing electrical equipment to enable connection to the National Grid.
Sheringham Shoal Offshore Wind Farm Extension Project (SEP)	The Sheringham Shoal Offshore Wind Farm Extension onshore and offshore sites including all onshore and offshore infrastructure.
The Applicant	Equinor New Energy Limited.



## 1 Revision B Updates at Deadline 7

1. This document has been updated at Deadline 7 to include a requirement to consult with local Weybourne fishermen when the precise landfall location for the export cable is defined, to arrange and agree access for beach-launching and landing of fishing boats with the aim to minimise disruption (see [Section 3.2.1](#)).

## 2 Introduction

2. This outline fisheries liaison and co-existence plan (FLCP) provides the proposed approach for Equinor New Energy Limited (hereafter the Applicant) for liaising and coexisting with the fishing industry for the Sheringham Shoal Offshore Wind Farm Extension Project (SEP) and Dudgeon Offshore Wind Farm Extension Project (SEP). This FLCP takes into account the existing FLCPs for the operational Sheringham Shoal Offshore Wind Farm (SOW) and Dudgeon Offshore Wind Farm (DOW). The document will continue to be updated and evolve in consultation with the fishing industry as the project(s) move through various stages of development.

### 2.1 Project Background

3. The Applicant is seeking a Development Consent Order (DCO) for the Sheringham Shoal Offshore Wind Farm Extension Project (SEP) and Dudgeon Offshore Wind Farm Extension Project (DEP) which are extensions to the existing SOW and DOW, located in the southern North Sea off the north Norfolk Coast.
4. SOW and DOW are owned by different partners, with the Applicant being the only partner with ownership in both projects.
5. On behalf of both these partnerships, the Applicant is bringing SEP and DEP together as part of one application for development consent. Although these are two separate offshore wind farm extension projects, the Applicant has adopted a strategic approach to developing the projects jointly to minimise both offshore and onshore impacts. The Applicant has applied for a common Development Consent Order (DCO) for SEP and DEP and has consulted on both projects together. Notwithstanding, there is a possibility of the projects being built at different stages in time.

### 2.2 Key Components of SEP and DEP

#### 2.2.1 Offshore

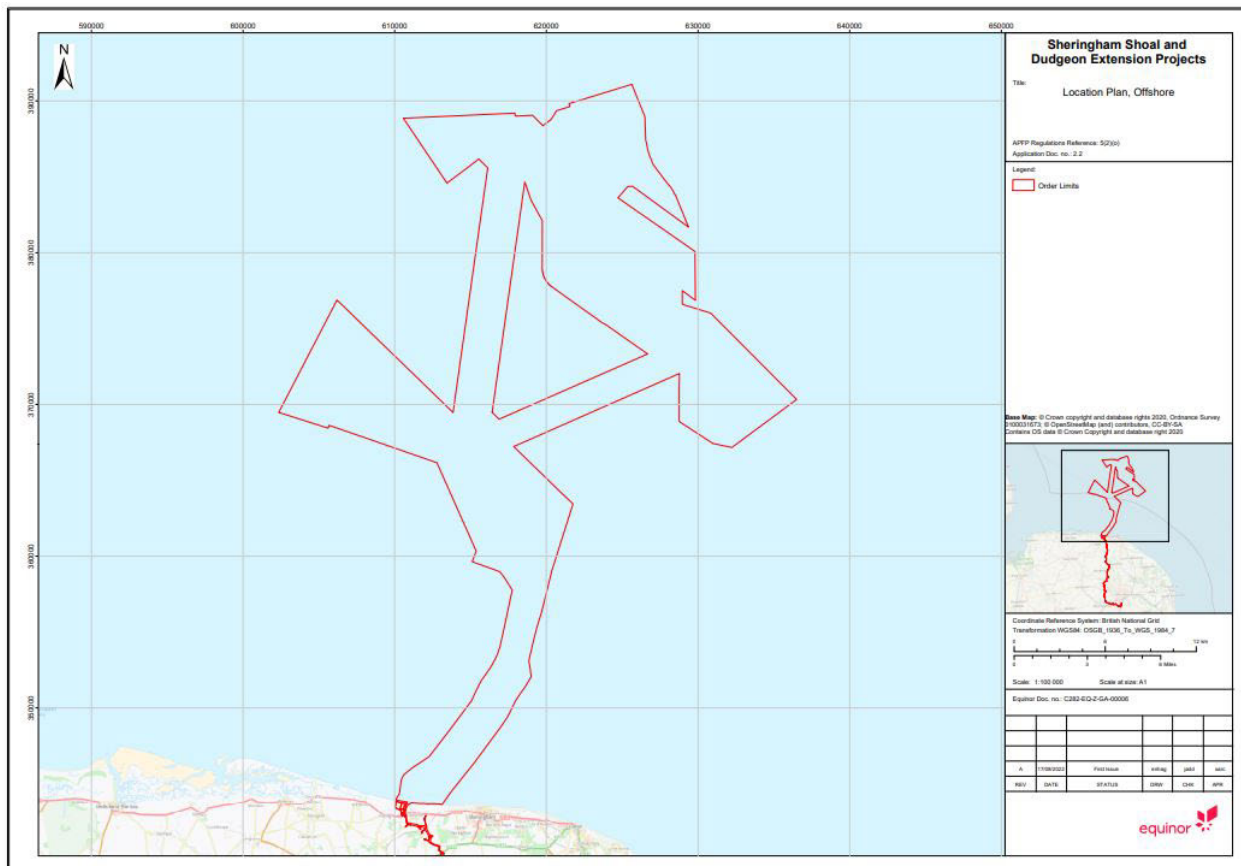
6. SEP and DEP would comprise the following main offshore components:
  - Wind turbines and their associated foundations;
  - Offshore substation platform/s (OSP/s) and associated foundation/s; and
  - Subsea cables and cable protection – offshore export cables, infield cables and interlink cables.



7. Electricity would flow from the wind turbines via infield (array) cables to OSP/s. There will be up to two offshore substations with one in SEP and one in DEP, located to optimise the length of the offshore cables. Interlink cables will link the SEP and DEP offshore sites. At the offshore substation/s, the generated power will be transformed to a higher alternating current voltage. The power will be exported through two export cables, in two separate trenches, to a landfall east of Weybourne on the north Norfolk coast. At the landfall the offshore export cables will meet and be joined up with the onshore export cables in a transition joint bay.
8. Further details of the key components of offshore and onshore infrastructure can be found in **Chapter 4 Project Description** of the Environmental Statement (ES) (document reference 6.1.4).

### 2.3 Project Boundaries

Figure 1-1 Project Boundaries of SEP and DEP



9. SEP and DEP will be located adjacent to SOW and DOW (**Figure 1-1**). SEP lies to the northeast of SOW, 17.5 km at its closest point to shore. The expected capacity is around 338 MW from up to 23 wind turbines. DEP is located to the north (DEP North array area) and southeast (DEP South array area) of DOW and is 31 km at its closest point to shore. The expected capacity is around 448 MW from of up to 30 wind turbines.





10. SEP and DEP are both within the International Council for the Exploration of the Sea (ICES) Division IVc (4c) within the UK Exclusive Economic Zone (EEZ). Both SEP and DEP lie within ICES statistical rectangle 35F1, with the overlap being 2.61% and 3.09% respectively. Fisheries landings are reported within these rectangles.
11. SEP lies partially outside the 12 nautical miles (NM) territorial limit and partially within the 6 to 12 NM boundaries in water depths ranging between 14m and 25m. The wind farm site area (array) is 97 km<sup>2</sup>.
12. The two DEP areas both lie outside the 12 NM territorial waters limit in depths of between 11 m and 23 m. Combined, DEP North and DEP South cover an array of 114.75 km<sup>2</sup>.
13. The proposed offshore export cable corridors for SEP and DEP will pass through both ICES rectangles 35F1 and 34F1 on approach to landfall and the overlap is calculated to be 1.12% for both rectangles.

### 3 Fisheries Liaison and Co-existence

#### 3.1 Co-existence Strategy

14. The Applicant believes that the fishing industry and offshore wind farm developments can co-exist and, as such, sets out with the objective to co-exist with the fishing industry in and around SEP and DEP. The Applicant has no intentions to restrict or apply for restrictions on fishing activities within the operational SEP and DEP offshore sites, or electrical export cable area(s) post construction. Restrictions, if applicable, will be limited to the application for standard safety zones during the construction phase, and operational safety zones around manned or sensitive offshore platforms during operation and maintenance or in some cases around access points to turbines.
15. Co-existence can be achieved through the objective of avoiding impacts where feasible and, where this is not feasible, reducing impacts through mitigation. A successful co-existence strategy will require open and regular communication between the Applicant and the fishing industry, starting with the development and survey phase leading up to and during construction, operation, and decommissioning of the SEP and DEP offshore sites. As such this draft FLCP has been prepared and will mature over time. A common FLCP may be developed at the appropriate time during operations to cover SEP, DEP, SOW and DOW in consultation with the fishing industry.
16. The FLCP will include, but will not be limited to:
  - A commitment to continuing consultation and liaison with the aim of assisting the fishing industry to safely resume their fishing activities within the operational sites and along the export cable corridor;
  - The sharing of wind turbine and cable locations in a format appropriate to the fishing industry to use in chart plotters and/or the provision of charts with key facility locations appropriately marked out;



- A distribution system for ongoing liaison plans and dissemination of information, including survey schedules, construction schedules and planned operations and maintenance activities using a variety of media;
  - Proposed or agreed mitigation measures to minimize potential impacts on the fishing industry;
  - Details of the main project contacts, including the Fisheries Liaison Officer as the primary point of contact;
  - Codes of conduct for vessels undertaking project related activities within the SEP and DEP offshore sites and ports;
  - Fishing gear snagging and loss procedures and any required claim procedures thereafter;
  - Details of the operations and maintenance (O&M) plan, key contacts, vessels, special requirements for operating the Service Operations Vessel;
  - Compensation evaluation methodologies; and
  - Fishing gear interaction response procedures
17. Liaison activities will be based primarily on the following industry best practice guidance and experience:
- Best Practice Guidance for Offshore Renewable Developments, Fishing Liaison with offshore Wind and Wet Renewables Group (FLOWW)
  - Development of Mitigation Measures to Address Potential Use Conflicts between Commercial Wind Energy Lessees/Grantees and Commercial Fishermen on the Atlantic Outer Continental Shelf, BOEM 2014-654;
18. In addition, all fishermen operating at the SEP and DEP offshore sites will be given access to the Applicant's Marine Operations Handbook (Captains Handbook) WR9087. The Marine Operations Handbook outlines all requisite information essential for conducting safe and joint operations, specifically;
- Introduction to the SEP and DEP projects and O&M operating strategy;
  - Layout of field complete with latitude/longitude for plotting;
  - Wind turbine coordinates;
  - Cable corridor plans;
  - Unexploded ordnance survey findings;
  - Aids to Navigation markings;
  - Procedure for entering field array;
  - Marine operational requirements;
  - Communications plan;
  - Joint operations in proximity;
  - Details of safety zones and restrictions; and
  - Emergency procedures and communications.



## 3.2 Fisheries Liaison Strategy

### 3.2.1 Fishing Industry Contacts & Affected Parties

19. Effective dialogue and consultation will be facilitated with the establishment of a comprehensive contact database for local and regional fisheries associations, societies, groups, individual fishermen and the different industry organizations. This database will be maintained and regularly updated by the Fisheries Liaison Officer(s) (FLO) in conjunction with the Applicant's project team members. It should be noted that the fishing industry 'database' will be used solely for the purposes of fisheries liaison activities related to SEP and DEP and will not be made available to any individual or group, outside of these specific requirements. It is acknowledged and appreciated that some fisheries information, such as fishing sites, can be commercially sensitive. In these circumstances the Applicant will work with the individual fishing organization / fisherman to establish confidentiality agreements for the purpose of sharing information with the objective of using it to work towards the objective of coexistence.
20. When the precise landfall location for the export cable is defined, including landward compounds and access, consultation with the local Weybourne fishermen will be undertaken to arrange and agree access for beach-launching and landing of fishing boats with the aim to minimise disruption.

### 3.2.2 Fisheries Liaison Roles

21. The Applicant has contracted a FLO with the appropriate level of knowledge and first-hand experience in the fishing industry of the region to aid in communication with, and the dissemination and gathering of information between, the Applicant and the fishing industry. The FLO will also support in the identification of potential impacts, potential mitigation measures, and support with data gathering to inform the environmental and social impact assessments related to commercial and recreational fishing. The FLO will be acting on the Applicant's behalf throughout all development stages, including during surveys, construction and the operation and decommissioning phases. The primary roles and responsibilities of the FLO are:
  - To serve as the primary point of contact between the project and the fleets;
  - To log all interactions between the project team and fisheries representatives accurately and in a way that can be shared by the project team;
  - To maintain a fisheries stakeholder database and contacts list for all identified fisheries operating within the vicinity of SEP and DEP offshore sites and export cable throughout all stages the project, covering the following details:
    - Vessel names, owners, registrations and base ports;
    - Vessel radio call sign;
    - Dominant method(s) of fishing and any new technology developing within the fisheries;
    - Static gear surface marker details where applicable;
    - Target species as well as key by-catch species;



- Fishing grounds relevant to the project;
- Fishing periods and operating practices of each key fishery; and
- Feedback, comments and concerns voiced within consultations.
- To arrange meetings with the fishing industry throughout all stages of project development, with frequency, timings and method of communication appropriate to the level of activity at the time.
- To consult the relevant Fishing Industry Representatives (FIR) (see [Section 3.2.4](#) below).
- To maintain regular liaison with relevant fishermen's associations, individual skippers and vessel owners, the National Federation of Fishermen's Organisations (NFFO), the Eastern Association of Inshore Fisheries and Conservation Authority (EIFCA), and any relevant fisheries regulatory bodies as appropriate.
- To disseminate project related activities which could potentially interact with fisheries stakeholders. This will include:
  - A description of the survey activity or other works to be undertaken;
  - The location and timing of survey activities;
  - The coordinates of partially and/or fully installed infrastructure;
  - A look ahead of the schedule of works where available;
  - Details of the vessels involved in the works including the vessels contact details;
  - Survey and installation vessels transit routes to and from site;
  - The locations and timings of safety exclusion zones that may be required during installation or maintenance activities;
  - Health & Safety standards and International Regulations for Preventing Collisions (COLREGS) obligations;
  - Contractor obligations towards fisheries stakeholders; and
  - Conflict avoidance response procedures and reporting procedures.
- Be available to receive and relay back to the Applicant all relevant concerns from the fisheries stakeholders in respect of the various activities associated with the project;
- To keep fisheries stakeholders updated of any changes in project design, or scheduling;
- To assess and advise the Applicant on the need for, and subsequently support the Applicant in organizing, guard vessels and Offshore Fisheries Liaison Representatives (OFLRs) (see [Section 3.2.4](#) below);

- Monitor fishing activity within the SEP and DEP offshore sites and export cable corridor during all phases of the project, including during survey activities to minimize disruption to both development and fishing activities; and
- Support the Applicant in making wind farm survey, installation and operations and maintenance contractors aware of relevant fishing activities, including any relevant fishermen’s sensitivities, and procedures for communicating with fishing vessels at sea;

### 3.2.3 SEP and DEP Fisheries Liaison Officer(s)

22. Key contact details for the FLO representing the Applicant for SEP and DEP are:

Nigel Proctor BSc. (Hons) MIBiol CBiol

Managing Director

Precision Marine Survey Limited

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Thorngumbald

East Yorkshire

United Kingdom

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E-mail: [n.proctor@precisionmarine.co.uk](mailto:n.proctor@precisionmarine.co.uk)

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Web: <http://www.precisionmarine.co.uk>

### 3.2.4 Offshore Fisheries Liaison Representatives (OFLRs)

23. Where required and appropriate, OFLRs will be present on vessels that are working on behalf of the Applicant in the SEP and DEP related activities, for example survey vessels and installation vessels. The main purpose is to ensure good communications with fishing vessels encountered on site. This may be for the purpose of disseminating information, responding to queries from fishing vessels and acting as a conduit for information offshore between the FLO, FIR and fisheries stakeholders within or near the site. The primary responsibilities of the OFLR are:

- To maintain daily contact with, and keep records of, fishing vessels observed to be within the vicinity of the work areas of wind farm related vessels;
- To keep the masters and watch officers of wind farm related vessels informed of fishing vessels in the vicinity of their working area and the gears and modes of operation of such fishing vessels;
- To keep fishing vessels advised of the wind farm vessels locations, operations, schedules, safety zones and Health & Safety restrictions; and



- To provide on-site adhoc assistance and advice to wind farm related vessel officers with the objective of minimizing hindrance to fishing activities, avoid conflicts and ensuring the commitments in the co-existence plan are adhered to.

### 3.2.5 Information Distribution and Liaison Channels

24. Notices and Information for fishermen (including survey and construction schedules, notification of any major maintenance activity, notices and activity specific information) will be distributed via the following channels:

- Individual fishermen on the FLO database
- Local fishermen’s associations
- Local harbour masters
- EIFCA
- Marine Management Organisation (MMO) District Fisheries office
- Maritime and Coastguard Agency (MCA)
- Notice to Mariners (NTMs)
- NFFO

## 4 Mitigation and Compensation

### 4.1 Smart Marine Operations

25. In general, the Applicant seeks to anticipate potential conflicts of interest and work out amenable solutions to avoid or reduce temporary displacement during surveys and construction, with financial compensation being a last option to offset remaining significant impacts. Best practice approaches include:

- Coordination with fisheries to establish and implement ‘rolling survey areas’ and ‘rolling construction zones’ to limit the spatial extent and duration of ‘closed areas’;
- OFLRs onboard survey/construction vessels to identify fishing gear, communicate with fishers offshore and provide advice to vessel Masters;
- Scout Boats where appropriate to identify and map fishing gear in survey areas for active avoidance of, or temporary removal of fishing gear by approved contractors;
- Real-time adaptive management of planned daily survey areas to avoid mobile fishing activities;
- Timing of activities where feasible to avoid seasonal fishing hotspots;
- Provision of regular survey and/or construction updates through FLO, websites, social media, mail shots; and
- Fishing gear entanglement procedures (safe recovery, reporting, claims process).



## 4.2 Compensation

26. As stated above, the Applicant seeks to anticipate potential disruption and seek solutions to avoid or reduce temporary displacement during surveys and construction, with financial compensation being a last option to offset remaining significant impacts. Where financial compensation is required, evidence-based agreements will be established for those individual fishermen that have a demonstrable economic dependency upon the area proposed for closure.
27. Regarding consideration of impacts on fishing processors the Applicant considers that the best way to reduce impacts on the downstream businesses is for a reduction in required compensation through application of FLOWW best practice and any compensation payments to be proportional and targeted.
28. The Applicants compensation strategy is in line with the FLOWW Best Practice Guidance for Offshore Renewables Developments: Recommendations for Fisheries Liaison.



## References

FLOWW (2014) Best Practice Guidance for Offshore Renewable Developments: Recommendations for Fisheries Liaison. Fisheries Liaison with Offshore Wind and Wet Renewables Group (FLOWW). Available online:

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