

Deemed marine licence under the Marine and Coastal Access Act 2009 –  
generation assets

## PART 1

## Licensed marine activities

## 1.—(1) In this licence—

“the 2004 Act” means the Energy Act 2004(a);

“the 2008 Act” means the Planning Act 2008(b);

“the 2009 Act” means the Marine and Coastal Access Act 2009(c);

“Annex 1 Habitat” means such habitat as defined under the EU Council Directive 92/43/EEC(d) on the Conservation of Natural Habitats and of Wild Fauna and Flora;

“authorised deposits” means the substances and articles specified in paragraph 2(3) of this licence;

“authorised scheme” means the Work No. 1 described in paragraph 2 of this licence or any part of those works;

“the CAA” means the Civil Aviation Authority constituted by the Civil Aviation Act 1982(e);

“cable armouring” means measures for cable crossings to protect cables and prevent loss of seabed sediment by use of grout bags, protective aprons, mattresses, flow energy dissipation (frond) devices or rock and gravel dumping;

“Cefas” means the Centre for Environment, Fisheries and Aquaculture Science;

“commence” means the first carrying out of any part of the licensed activities save for pre-commencement environmental surveys and monitoring;

“condition” means a condition in Part 2 of this licence;

“enforcement officer” means a person authorised to carry out enforcement duties under Chapter 3 of the 2009 Act;

“environmental statement” means the document certified as the environmental statement by the Secretary of State for the purposes of this Order and submitted with the application on 22 March 2013;

“gravity base foundation” means a structure principally of concrete, steel or steel and concrete which rests on the seabed either due to its own weight with or without added ballast or skirts, including associated sea bed preparation, scour protection, J-tubes, corrosion protection systems, boat landings comprising an access ladder with vertical boat fenders fitted either side and work platforms and equipment;

“jacket foundation” means a jacket/lattice type structure constructed of concrete, steel or steel and concrete which is fixed to the seabed at three or more points with driven or pre-installed piles or suction caissons, including associated scour protection, J-tubes, corrosion protection systems, boat landings comprising an access ladder with vertical boat fenders fitted either side, access and work platforms and equipment;

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(a) 2004 c.20.

(b) 2008 c.29.

(c) 2009 c.23.

(d) OJ No. L206, 22.7.1992, p.7, last amended by Council Directive 2013/17/EU (OJ No. L158, 10.6.2013, p.193).

(e) 1982 c.16.

“Kingfisher Fortnightly Bulletin” means the bulletin published by the Humber Seafood Institute or such other alternative publication approved in writing by the MMO;

“LAT” means lowest astronomical tide;

“licensed activities” means the activities specified in Part 1 of this licence;

“maintain” includes inspect, maintain, repair, adjust and alter, and further includes remove, reconstruct and replace any of the ancillary works in Part 2 of Schedule 1 (ancillary works) and any component part of any wind turbine generator or offshore substation described in Part 1 of Schedule 1 (authorised development) (but not including the alteration removal or replacement of foundations) to the extent assessed in the environmental statement; and “maintenance” shall be construed accordingly;

“Marine Management Organisation” or “MMO” means the body created under the Marine and Coastal Access Act 2009 which is responsible for the monitoring and enforcement of this licence;

“MCA” means the Maritime and Coastguard Agency;

“mean high water springs” or “MHWS” means the highest level which spring tides reach on average over a period of time;

“Natural England” means the body established by section 1 of the Natural Environment and Rural Communities Act 2006(a);

“notice to mariners” includes any notice to mariners which may be issued by the Admiralty, Trinity House, Queen’s harbour masters, government departments and harbour and pilotage authorities;

“the Order” means the Burbo Bank Extension Offshore Wind Farm Order 2014;

“the Order limits” means the limits shown on the works plan within which the authorised scheme may be carried out, whose grid coordinates are set out in paragraph 3 of this licence;

“scour protection” means measures to prevent loss of seabed sediment around foundation bases by use of protective aprons, mattresses, flow energy dissipation (frond) devices or rock and gravel dumping;

“SPA” means a site classified as a special protection area pursuant to Article 4 of the Wild Birds Directive(b);

“steel monopile foundation” means a steel large diameter pile, typically cylindrical, driven and/or drilled into the seabed, including associated scour protection, transition piece, J-tubes, corrosion protection systems, boat landings comprising an access ladder with vertical boat fenders fitted either side, access and work platforms and equipment;

“suction caisson” means a large diameter steel cylinder which is fixed to the base of the foundation and partially penetrates the seabed and remains in place using its own weight and hydrostatic pressure differential;

“Trinity House” means The Corporation of Trinity House of Deptford Strond;

“UK Hydrographic Office” means the UK Hydrographic Office of Admiralty Way, Taunton, Somerset, TA1 2DN;

“undertaker” means DONG Energy Burbo Extension (UK) Limited;

“vessel” means every description of vessel, however propelled or moved, and includes a non-displacement craft, a personal watercraft, a seaplane on the surface of the water, a hydrofoil vessel, a hovercraft or any other amphibious vehicle and any other thing constructed or adapted for movement through, in, on or over water and which is at the time in, on or over water;

“wind turbine generator” or “WTG” means a structure comprising a tower, rotor with three horizontal axis blades connected at the hub, nacelle containing mechanical and electrical

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(a) 2006 c.16. Section 1 was amended by section 311(2) and (3) of the Marine and Coastal Access Act 2009.

(b) Council Directive 2009/147/EC on the conservation of wild birds (OJ No. L20, 26.1.2010, p.7 to 25).

equipment, ancillary equipment including access ladders and platforms, lifts, cables, corrosion protection systems, maintenance equipment, helihoist facilities and other associated equipment, fixed to a foundation;

“Work No. 1” means the offshore generating station comprising the wind turbine generators and subsea interconnecting cables as set out in paragraph 2(2) of this licence;

“Work No. 2” means the offshore substation as set out in paragraph 2(2) of Part 1 of Schedule 3 to the Order;

“the works plan” means the plan certified as the works plan by the Secretary of State for the purposes of the Order.

(2) A reference to any statute, order, regulation or similar instrument shall be construed as a reference to a statute, order, regulation or instrument as amended by any subsequent statute, order, regulation or instrument or as contained in any subsequent re-enactment.

(3) Unless otherwise indicated—

- (a) all times shall be taken to be Greenwich Mean Time (GMT);
- (b) all co-ordinates shall be taken to be latitude and longitude degrees and minutes to two decimal places.

(4) Except where otherwise notified in writing by the relevant organisation, the primary point of contact with the organisations listed below and the address for returns and correspondence shall be—

(a) Marine Management Organisation

Offshore Licensing Team

Lancaster House

Hampshire Court

Newcastle Business Park

Newcastle upon Tyne

NE4 7YH

Tel: 0300 123 1032;

(b) Marine Management Organisation Coastal Office

Neville House

Central Riverside

Bell Street

North Shields

Tyne and Wear

NE30 1LJ

Tel: (24-hour answer phone) 0191 257 4520 or 0191 257 0159

Fax: 0191 257 1595;

(c) Trinity House

Navigation Directorate

Tower Hill

London

EC3N 4DH

Tel: 020 7481 6900;

(d) The United Kingdom Hydrographic Office

Oil and Gas Section (RT1)  
Admiralty Way  
Taunton  
Somerset  
TA1 2DN  
Tel: 01823 337 900;

(e) Maritime and Coastguard Agency  
Navigation Safety Branch  
Bay 2/04  
Spring Place  
105 Commercial Road  
Southampton  
SO15 1EG  
Tel: 023 8032 9191;

(f) Centre for Environment, Fisheries and Aquaculture Science  
Pakefield Road  
Lowestoft  
Suffolk  
NR33 0HT  
Tel: 01502 562 244;

(g) Natural England  
Foundry House  
3 Millsands  
Riverside Exchange  
Sheffield  
S3 8NH  
Tel: 0300 060 4911;

(h) English Heritage  
Eastgate Court  
195-205 High Street  
Guildford  
GU1 3EH  
Tel: 01483 252 057.

#### **Details of licensed marine activities**

2.—(1) This licence authorises the undertaker (and any agent or contractor acting on their behalf) to carry out the following licensable marine activities under section 66(1) of the 2009 Act, subject to the conditions—

- (a) the deposit at sea of the substances and articles specified in sub-paragraph (3) below;
- (b) the construction of works in or over the sea and/or on or under the sea bed;

- (c) the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation; and
- (d) the disposal of up to 173,500 metres<sup>3</sup> of inert material of natural origin produced during the drilling installation of monopiles or jacket foundations for Work No. 1 at disposal site reference IS135 Burbo Bank Extension OWF.

(2) The works referred to in (1)(b) comprise—

*Work No. 1 –*

- (a) an offshore wind turbine generating station with a gross electrical output capacity of up to 259 MW comprising up to 69 wind turbine generators each fixed to the sea bed by one of three foundation types (namely steel monopile foundation, gravity base foundation or jacket foundation), fitted with rotating blades and situated within the Order limits and further comprising (b) below;
- (b) a network of cables laid underground within the Order limits between the WTGs and Work No. 2, for the transmission of electricity and electronic communications between those different structures, including one or more cable crossings;

and in connection with Work No. 1 and to the extent that they do not otherwise form part of any such work, further associated development within the meaning of 115(2) of the 2008 Act comprising such other works as may be necessary or expedient for the purposes of or in connection with the relevant part of the authorised scheme and which fall within the scope of the work assessed by the environmental statement and the provisions of this licence;

and in connection with Work No. 1, works comprising—

- (c) temporary landing places, moorings or other means of accommodating vessels in the construction and/or maintenance of the authorised scheme; and
- (d) buoys, beacons, fenders and other navigational warning or ship impact protections works.

(3) The substances or articles authorised for deposit at sea are—

- (a) iron and steel;
- (b) stone and rock;
- (c) concrete;
- (d) sand and gravel;
- (e) plastic and synthetic;
- (f) electrical apparatus including copper composites;
- (g) material extracted from within the Order limits during construction drilling; and
- (h) marine coatings, grout, other chemicals (such as water-based drilling muds) and timber.

3. The grid coordinates for the authorised scheme are specified below—

| <i>Point</i> | <i>Latitude (DD)</i> | <i>Longitude (DD)</i> | <i>Point</i> | <i>Latitude (DD)</i> | <i>Longitude (DD)</i> |
|--------------|----------------------|-----------------------|--------------|----------------------|-----------------------|
| A            | 53.502373            | -3.376542             | E            | 53.463884            | -3.196287             |
| B            | 53.502832            | -3.220001             | F            | 53.463623            | -3.305973             |
| C            | 53.494704            | -3.223993             | G            | 53.465333            | -3.309167             |
| D            | 53.470225            | -3.179047             | H            | 53.468333            | -3.314667             |

4. This licence shall remain in force until the authorised scheme has been decommissioned in accordance with a programme approved by the Secretary of State under section 106 of the 2004 Act, including any modification to the programme under section 108, and the completion of such programme has been confirmed by the Secretary of State in writing.

5. The provisions of section 72 of the 2009 Act shall apply to this licence save that the provisions of section 72(7) relating to the transfer of the licence shall only apply to a transfer not falling within article 6 (benefit of the Order).

6. Where the words ‘unless otherwise agreed’ or ‘unless otherwise stated’ appear in the conditions in Part 2, any such agreement or statement may only be given in relation to immaterial changes where it has been demonstrated to the satisfaction of the MMO that the subject matter of the approval or agreement sought is unlikely to give rise to any new or materially different environmental effects from those assessed in the environmental statement.

## PART 2

### Conditions

#### Design parameters

1.—(1) Subject to sub-paragraph (2), no wind turbine generator forming part of the authorised scheme shall—

- (a) exceed a height of 223 metres when measured from MHWS to the tip of the vertical blade;
- (b) exceed a height of 123 metres when measured from MHWS to the height of the centreline of the generator shaft forming part of the hub;
- (c) exceed a rotor diameter of 200 metres;
- (d) be less than 700 metres from the nearest WTG or be greater than 1,960 metres from the nearest wind turbine generator in either direction;
- (e) have a distance of less than 22 metres between the lowest point of the rotating blade of the wind turbine and MHWS.

(2) References to the location of a wind turbine generator are references to the centre point of the tower of that turbine.

2. The total length of the cables comprising Work No. 1(b) shall not exceed 65 kilometres.

3.—(1) Each steel monopile foundation forming part of the authorised scheme (excluding scour protection) must not have a diameter greater than 8 metres.

(2) Each gravity base foundation forming part of the authorised scheme (excluding scour protection) must not have—

- (a) a diameter at the level of the seabed which is greater than 35 metres;
- (b) a base height which is greater than 6 metres above the level of the seabed;
- (c) a column diameter of greater than 9 metres.

(3) Each jacket foundation forming part of the authorised scheme (excluding scour protection) must not have—

- (a) a width spacing between each leg at the level of the seabed which is greater than 35 metres;
- (b) a leg diameter which is greater than 3 metres;
- (c) a width spacing between each leg at MHWS which is greater than 35 metres;
- (d) a pile sleeve height which is greater than 18 metres above the level of the seabed;
- (e) a pile diameter which is more than 3 metres;
- (f) more than one pile per leg; and
- (g) more than four legs.

(4) The total amount of scour protection for the WTGs forming part of the authorised scheme must not exceed 1,552,500 metres<sup>3</sup>.

(5) To reduce potential impacts on adult salmon migration—

- (a) no more than 69 steel monopile foundations with a pile diameter of 6 metres or less (excluding scour protection) shall be installed as part of the authorised scheme;

- (b) no more than 65 steel monopile foundations with a pile diameter between 6 metres and 6.5 metres (excluding scour protection) shall be installed as part of the authorised scheme;
- (c) no more than 55 steel monopile foundations with a pile diameter between 6.5 metres and 7.5 metres (excluding scour protection) shall be installed as part of the authorised scheme;
- (d) no more than 45 steel monopile foundations with a pile diameter between 7.5 metres and 8 metres (excluding scour protection) shall be installed as part of the authorised scheme.

**Notifications and inspections**

4.—(1) The undertaker must ensure that—

- (a) a copy of this licence (issued as part of the grant of the Order) and any subsequent amendments or revisions to it is provided to—
  - (i) all agents and contractors notified to the MMO in accordance with condition 12; and
  - (ii) the masters and transport managers responsible for the vessels notified to the MMO in accordance with condition 12;
- (b) within 28 days of receipt of a copy of this licence those persons referred to in paragraph (a) above shall provide a completed confirmation form to the MMO confirming that they have read and will comply with the terms of the conditions of this licence.

(2) Only those persons and vessels notified to the MMO in accordance with condition 12 are permitted to carry out the licensed activities.

(3) Copies of this licence must also be available for inspection at the following locations—

- (a) the undertaker’s registered address;
- (b) any site office located at or adjacent to the construction site and used by the undertaker or its agents and contractors responsible for the loading, transportation or deposit of the authorised deposits; and
- (c) on board each vessel or at the office of any transport manager with responsibility for vessels from which authorised deposits or removals are to be made.

(4) The documents referred to in sub-paragraph (1)(a) must be available for inspection by an authorised enforcement officer at the locations set out in sub-paragraph (3)(b) above.

(5) The undertaker must provide access, and if necessary appropriate transportation, to the offshore construction site or any other associated works or vessels to facilitate any inspection that the MMO considers necessary to inspect the works during construction and operation of the authorised scheme.

(6) The undertaker must inform the MMO Coastal Office in writing at least five working days prior to the commencement of the licensed activities or any part of them.

(7) Prior to the commencement of the licensed activities or any part of them the undertaker must publish in the Kingfisher Fortnightly Bulletin details of the vessel routes, timings and locations relating to the construction of the authorised scheme or relevant part.

(8) The undertaker must ensure that a notice to mariners is issued at least 10 working days prior to the commencement of the licensed activities or any part of them advising of the start date of Work No. 1 and the expected vessel routes from the local construction ports to the relevant locations.

(9) The undertaker must ensure that the notices to mariners are updated and reissued at weekly intervals during construction activities and within 5 working days of any planned operations and maintenance works and supplemented with VHF radio broadcasts agreed with the MCA in accordance with the construction programme approved under condition 10(b). Copies of all notices shall be provided to the MMO.

(10) The undertaker must notify—

- (a) the United Kingdom Hydrographic Office of both the commencement (within two weeks), progress and completion (within two weeks) of the authorised scheme in order that all necessary amendments to nautical charts are made; and
- (b) the MMO, MCA and Trinity House within two weeks once the authorised scheme is completed and any required lighting or marking has been established.

### **Navigational practice, safety and emergency response**

5.—(1) The authorised scheme shall not commence until the Secretary of State, in consultation with the MCA, has confirmed in writing that the undertaker has taken into account and adequately addressed all MCA recommendations contained within MGN 371 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues” and its annexes including full details of the Emergency Co-operation Plans (ERCoP) for the construction, operation and decommissioning as appropriate to the authorised scheme.

(2) The undertaker will prepare and implement a project-specific Active Safety Management System, taking account of safety and mitigation measures as referred to in the navigation risk assessment in the environmental statement.

### **Aids to navigation**

6.—(1) The undertaker must at or near the authorised scheme during the whole period of the construction, operation, alteration, replacement or decommissioning of the authorised scheme exhibit such lights, marks, sounds, signals and other aids to navigation, and take such other steps for the prevention of danger to navigation, as Trinity House may from time to time direct.

(2) The undertaker must notify Trinity House, in writing, as soon as reasonably practicable, of the progress of construction of the authorised scheme or any part of it and any aids to navigation established from time to time during construction.

(3) The undertaker must provide reports on the availability of aids to navigation periodically as requested by Trinity House.

(4) In case of injury to, or destruction or decay of, the authorised scheme or any part thereof the undertaker must as soon as reasonably practicable notify Trinity House and must lay down such buoys, exhibit such lights and take such other steps for preventing danger to navigation as Trinity House may from time to time direct.

7.—(1) The undertaker must colour all structures yellow from at least highest astronomical tide to a height directed by Trinity House, or shall colour the structure as directed by Trinity House from time to time.

(2) Subject to sub-paragraph (1) above, unless the Secretary of State otherwise directs, the undertaker must ensure that the wind turbine generators shall be painted submarine grey (colour code RAL 7035).

### **Chemicals, drilling and debris**

8.—(1) Unless otherwise agreed in writing by the MMO all chemicals used in the construction of the authorised scheme, including any chemical agents placed within any monopile void, shall be selected from the List of Notified Chemicals approved for use by the offshore oil and gas industry under the Offshore Chemicals Regulations 2002(a).

(2) The undertaker must ensure that any coatings/treatments are suitable for use in the marine environment and are used in accordance with guidelines approved by the Health and Safety Executive or the Environment Agency Pollution Prevention Guidelines.

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(a) S.I. 2009/1355. There are amendments to that instrument not relevant to this Order.



(3) The storage, handling, transport and use of fuels, lubricants, chemicals and other substances shall be undertaken so as to prevent releases into the marine environment, including bunding of 110% of the total volume of all reservoirs and containers.

(4) Where foundation drilling works are proposed, in the event that any system other than water-based mud is proposed the MMO's written approval in relation to the proposed disposal of any arisings must be obtained before the drilling commences, which may also require a marine licence.

(5) The undertaker must ensure that any debris arising from the construction of the authorised scheme or temporary works placed below MHWS are removed on completion of the authorised scheme, unless otherwise agreed with the MMO.

(6) At least two months prior to the commencement of the licensed activities the undertaker must submit to the MMO an audit sheet covering all aspects of the construction of the licensed activities or any part of them. The audit sheet must include details of—

- (a) loading facilities;
- (b) vessels;
- (c) equipment;
- (d) shipment routes;
- (e) working schedules; and
- (f) all components and materials to be used in the construction of the authorised scheme.

(7) The audit sheet must be maintained throughout the construction of the authorised scheme (or relevant part) and any changes notified immediately in writing to the MMO which must give written approval prior to any change being implemented.

(8) In the event that the MMO becomes aware that any of the materials on the audit sheet cannot be accounted for it shall require the undertaker to carry out a side scan sonar survey to plot all obstructions across the relevant area(s) within the Order limits where construction works and related activities related to those materials have been carried out and, if the initial survey does not locate the missing materials, over such wider area as the MMO may reasonably request. Local fishermen must be invited to send a representative to be present during the survey. Any new obstructions that the MMO believes to be associated with the authorised scheme must be removed at the undertaker's expense.

(9) The undertaker must inform the MMO of the location and quantities of material disposed of each month under the Order, by submission of a disposal return by 31 January each year for the months August to January inclusive, and by 31 July each year for the months February to July inclusive.

(10) The undertaker must ensure that only inert material of natural origin, produced during the drilling installation of foundations, and drilling mud shall be disposed of within the offshore Order limits (disposal site reference IS135 Burbo Bank Extension OWF). Any other materials must be screened out before disposal at this site.

(11) The undertaker must ensure that any rock material used in the construction of the authorised scheme is from a recognised source, free from contaminants and containing minimal fines.

(12) In the event that any rock material used in the construction of the authorised scheme is misplaced or lost below MHWS, the undertaker must report the loss to the Coastal Office within 48 hours and if the MMO shall reasonably consider such material to constitute a navigation or environmental hazard (dependent on the size and nature of the material) the undertaker must endeavour to locate the material and recover it.

(13) The undertaker must ensure that no waste concrete slurry or wash water from concrete or cement works are discharged into the marine environment. Concrete and cement mixing and washing areas should be contained to prevent run off entering the water through the freeing ports.

(14) The undertaker must ensure that any oil, fuel or chemical spill within the marine environment is reported to the MMO, Marine Pollution Response Team.

## **Force majeure**

9. If, due to stress of weather or any other cause the master of a vessel determines that it is necessary to deposit the authorised deposits within or outside of the Order limits because the safety of human life and/or of the vessel is threatened, within 48 hours full details of the circumstances of the deposit must be notified to the MMO. The unauthorised deposits must be removed at the expense of the undertaker unless written approval is obtained from the MMO.

## **Pre-construction plans and documentation**

10. No part of the works at paragraph 2(2) of Part 1 (licensed marine activities) of this licence shall commence until the following (as relevant to that part) have been submitted to and approved in writing by the MMO—

- (a) a design plan at a scale of between and including 1:25,000 and 1:50,000, including detailed representation on the most suitably scaled admiralty chart, to be agreed in writing with the MMO in consultation with Trinity House and the MCA which shows—
  - (i) the indicative proposed layout and location and choice of foundation of all wind turbine generators;
  - (ii) the height to the tip of the vertical blade; height to the centreline of the generator shaft forming part of the hub; rotor diameter and spacing of all wind turbine generators;
  - (iii) the length and arrangement of all cables comprising Work No. 1(b);
  - (iv) the dimensions of all gravity base foundations;
  - (v) the dimensions of all jacket foundations;
  - (vi) the dimensions of all steel monopile foundations;
  - (vii) in plan form, the indicative programming of particular works as set out in the indicative construction programme to be provided under sub-paragraph (b)(iv);
  - (viii) any exclusion zones or micrositing requirements identified in any mitigation scheme pursuant to sub-paragraph (j);
  - (ix) any archaeological exclusion zones identified under sub-paragraph (h)(iv);to ensure conformity with the description of Work No. 1 and compliance with conditions 1 to 4 above;
- (b) a construction and monitoring programme to include details of—
  - (i) the proposed construction start date;
  - (ii) proposed timings for mobilisation of plant, delivery of materials and installation works;
  - (iii) proposed pre-construction surveys, baseline report format and content, construction monitoring, post-construction monitoring and related reporting in accordance with sub-paragraph (h), and conditions 14, 15 and 16. The pre-construction survey programme and all pre-construction survey methodologies shall be submitted to the MMO for written approval by the MMO in consultation with Natural England at least four months prior to the start of any survey works detailed within; and
  - (iv) an indicative written construction programme for all wind turbine generators and cables comprised in the works at paragraph 2(2) of Part 1 (licensed marine activities) of this licence (insofar as not shown in (b) above);
- (c) a construction method statement in accordance with the construction methods assessed in the environmental statement and including details of—
  - (i) drilling methods and disposal of drill arisings;
  - (ii) WTG location and installation, including scour protection;
  - (iii) cable installation;
  - (iv) contractors;

- (v) vessels and vessels transit corridors;
  - (vi) associated works; and
  - (vii) proposed mitigation measures;
- (d) a project environmental management and monitoring plan to include details of—
- (i) a marine pollution contingency plan to address the risks, methods and procedures to deal with any spills and collision incidents during construction and operation of the authorised scheme in relation to all activities carried out;
  - (ii) a chemical risk assessment to include information regarding how and when chemicals are to be used, stored and transported in accordance with recognised best practice guidance;
  - (iii) waste management plan and disposal arrangements; and
  - (iv) the appointment and responsibilities of a fisheries liaison officer and an environmental liaison officer;
- (e) a scour protection management and cable armouring plan providing details of the need, type, sources, quantity and installation methods for scour protection and cable armouring for cable crossings;
- (f) in the event that driven or part-driven pile foundations are proposed to be used, a marine mammal mitigation protocol to be agreed in writing with the MMO in consultation with Natural England and following current best practice as advised by the statutory nature conservation agencies, to include—
- (i) identification of a Marine Mammal Monitoring Zone (MMMZ);
  - (ii) appointment of an appropriate number of suitably qualified marine mammal observer(s);
  - (iii) methods for the detection of marine mammals within the MMMZ whether visually (by the marine mammal observer(s)) or acoustically using passive acoustic monitoring equipment or other means of detection;
  - (iv) a reporting methodology to enable efficient communication between the marine mammal observer(s) and the person responsible for approving commencement of piling;
  - (v) an appropriate soft start procedure whereby piling activities do not commence until an agreed time has elapsed and during which marine mammals have not been detected within the MMMZ;
  - (vi) where appropriate, methods for the application of acoustic deterrent devices;
- (g) a cable specification and installation plan to be agreed in writing by the MMO, and to include—
- (i) technical specification of the offshore cables including a desk-based assessment of attenuation of electro-magnetic field strengths, shielding and cable burial depth in accordance with industry good practice; and
  - (ii) a detailed cable laying plan, incorporating a burial risk assessment to ascertain suitable burial depths and cable laying techniques;
- (h) a written scheme of archaeological investigation (WSI) in relation to the Order limits in accordance with industry best practice and to be approved in writing by the MMO in consultation with English Heritage to include—
- (i) details of responsibilities of the undertaker, archaeological consultant and contractor;
  - (ii) a methodology for any further site investigation including any specifications for geophysical, geotechnical and diver or remotely operated vehicle investigations;
  - (iii) analysis and reporting of survey data, and timetable, which is to be submitted to the MMO within four months of any survey being completed;

- (iv) delivery of any mitigation including, where necessary, archaeological exclusion zones including all spatial data for the extent and location of archaeological exclusion zones;
- (v) monitoring during and post construction, including a conservation programme for finds;
- (vi) archiving of archaeological material, inclusive of any completed and agreed archaeological reports produced through the WSI which are to be deposited by the undertaker within a public archive in accordance with the OASIS (Online Access to the Index of archaeological investigations) system; and
- (vii) a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised scheme;
- (i) a vessel traffic management plan during construction and operation of the authorised scheme, to include vessel routing for any vessels operating from the Port of Barrow such that all such vessels avoid the area of the Liverpool Bay SPA plus a 2 kilometre buffer from the boundary of the SPA during the period October to March and in the area north of grid reference 53.683333 (DD, WGS 1984) in order to avoid the disturbance of wintering aggregations of common scoter at, and in the vicinity of, the Shell Flat;
- (j) a mitigation scheme for any Annex 1 features identified by the survey referred to in condition 14(2)(a).

**11.—**(1) Each programme, statement, plan, protocol or scheme required to be approved under condition 10 shall be submitted for approval at least four months prior to the intended start of construction, except where otherwise stated or unless otherwise agreed in writing by the MMO.

(2) The licensed activities shall be carried out in accordance with the approved plans, protocols, statements, schemes and details approved under condition 10, unless otherwise agreed in writing by the MMO.

### **Reporting of engaged agents, contractors and vessels**

**12.—**(1) The undertaker must provide the following information to the MMO—

- (a) the name and function of any agent or contractor appointed to engage in the licensed activities within seven days of appointment; and
- (b) each week during the construction of the authorised scheme a completed Hydrographic Note H102 listing the vessels currently and to be used in relation to the licensed activities.

(2) Any changes to the supplied details must be notified to the MMO in writing five working days prior to the agent, contractor or vessel engaging in the licensed activities.

### **Equipment and operation of vessels engaged in licensed activities**

**13.—**(1) All vessels employed to perform the licensed activities must be constructed and equipped to be capable of the proper performance of such activities in accordance with the conditions of this licence and (save in the case of remotely operated vehicles or vessels) must comply with sub-paragraphs (2) to (5) below.

(2) All motor powered vessels must be fitted with—

- (a) electronic positioning aid to provide navigational data;
- (b) radar;
- (c) echo sounder; and
- (d) multi-channel VHF.

(3) All vessels' names or identification must be clearly marked on the hull or superstructure.

(4) All communication on VHF working frequencies must be in English.

(5) No vessel shall engage in the licensed activities until all the equipment specified in sub-paragraph (2) is fully operational.

### **Pre-construction monitoring**

**14.**—(1) The undertaker must, in discharging condition 10(b), submit details for the written approval by the MMO, in consultation with Natural England, of proposed pre-construction surveys, including methodologies and timings, with archaeological advice where necessary, and a proposed format and content for a pre-construction baseline report; and

- (a) the survey proposals shall specify each survey's objectives and explain how it will assist in either informing a useful and valid comparison with the post-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement; and
- (b) the baseline report proposals shall ensure that the outcome of the agreed surveys together with existing data and reports are drawn together to present a valid statement of the pre-construction position, with any limitations, and shall make clear what post-construction comparison is intended and the justification for this being required.

(2) The pre-construction surveys referred to sub-paragraph (1) shall unless otherwise agreed with the MMO have due regard to, but not be limited to, the need to undertake—

- (a) a survey, in combination with data derived from paragraph (c) to determine the location and extent of any benthic Annex 1 Habitat in whole or in part inside the area(s) within the Order limits in which it is proposed to carry out construction works;
- (b) a survey to determine the location, extent and composition of any benthic habitats of conservation, ecological and or economic importance;
- (c) a high resolution swath-bathymetric survey and side scan sonar survey of the area(s) within the Order limits in which it is proposed to carry out construction works, including a 500 metre buffer around the site of each works and inclusive of seabed anomalies or sites of historical or archaeological interest that lie within that 500 metre buffer; and
- (d) a survey of existing ornithological activity (in accordance with the principles set out in the outline ornithological survey document) inside the area(s) within the Order limits in which it is proposed to carry out construction works, and any wider area(s) where appropriate, which is required to test predictions in the environmental statement concerning key ornithological interests of relevance to the authorised scheme.

(3) The undertaker shall carry out the surveys agreed under sub-paragraph (1) and provide the baseline report to the MMO in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing by the MMO, in consultation with Natural England.

### **Construction monitoring**

**15.**—(1) Unless otherwise agreed, the undertaker must, in discharging condition 10(b), submit details for approval by the MMO in consultation with Natural England of any proposed surveys or monitoring, including methodologies and timings, to be carried out during the construction of the authorised scheme. The survey proposals must specify each survey's objectives. In any event, such monitoring shall, where driven or part-driven pile foundations are proposed to be used, include monitored background noise measurements (during periods when piling is not being undertaken) and must include details for measurements of noise generated at a minimum of four piling locations; one pile from each of the first four structures with piled foundations.

(2) The undertaker must carry out the surveys approved under sub-paragraph (1) and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with Natural England.

(3) The results of the initial noise measurements shall be provided to the MMO within four weeks of the installation of the last of the four piles, unless otherwise agreed with the MMO. The assessment of this report by the MMO shall determine whether any further noise monitoring is required.

## **Post construction surveys**

**16.—**(1) The undertaker must, in discharging condition 10(b), submit details for written approval by the MMO in consultation with Natural England of proposed post-construction surveys, including methodologies and timings, and a proposed format, content and timings for providing reports on the results at least four months prior to the start of any survey works detailed within. The survey proposals shall specify each survey's objectives and explain how it will assist in either informing a useful and valid comparison with the pre-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement.

(2) The post construction surveys referred to in sub-paragraph (1) must unless otherwise agreed with the MMO have due regard to, but not be limited to, the need to undertake—

- (a) one high resolution swath bathymetric survey and side scan sonar survey per annum around a sample of adjacent turbines to a distance of three turbine spacings to assess any changes in seabed topography. For this purpose the undertaker will prior to the first such survey submit a desk based assessment to be approved by the MMO (which takes account of all factors which influence scour) to identify the sample of adjacent turbines with greatest potential for scour. The survey will be used to validate the desk based assessment: further surveys beyond three years post-construction specified in sub-paragraph (3) may be required if there are significant differences between the predicted scour and recorded scour;
- (b) a survey to determine the location, extent and composition of any benthic habitats of conservation, ecological and or economic importance to validate predictions made in the environmental statement; and
- (c) an ornithological survey (in accordance with the principles set out in the outline ornithological survey document) covering the area(s) within the Order limits in which construction works were carried out, and any wider area(s) where appropriate, as required to test predictions in the environmental statement concerning key ornithological interests of relevance to the authorised scheme.

(3) The undertaker must carry out the surveys agreed under sub-paragraph (1) for three years post-construction which may be non-consecutive years and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with Natural England.

## **Piling restrictions**

**17.—**(1) Unless otherwise agreed in writing with the MMO, the installation of piled foundations of 8 metres diameter with a hammer energy of 2,700 kj must not take place within the Order limits between—

- (a) 1 April and 15 May to avoid the impacts on high intensity dover sole spawning; or
- (b) 15 April to 31 May to avoid the impacts on salmon smolt and sea trout smolt migration.

(2) In the case of proposed installation of piled foundations of less than 8 metres diameter and/or a hammer energy of less than 2,700 kj a calculation of projected noise measurements and contours must be provided to the MMO and installation must not take place until the same or reduced piling restriction period or alternative mitigation has been approved by the MMO in writing in consultation with the Environment Agency, unless otherwise agreed in writing with the MMO.

(3) Unless otherwise agreed with the MMO, the installation of piled foundations must be carried out on the basis of "6 hours on – 6 hours off", so that a period of 6 hours of no piling shall follow each piling event which shall be up to 6 hours in duration (be that from single or two simultaneous piling operations) in order to allow the migration of adult salmon and sea trout.

Deemed marine licence under the Marine and Coastal Access Act 2009 –  
transmission assets

## PART 1

## Licensed marine activities

## 1.—(1) In this licence—

“the 2004 Act” means the Energy Act 2004(a);

“the 2008 Act” means the Planning Act 2008(b);

“the 2009 Act” means the Marine and Coastal Access Act 2009(c);

“Annex 1 Habitat” means such habitat as defined under the EU Council Directive 92/43/EEC(d) on the Conservation of Natural Habitats and of Wild Fauna and Flora;

“authorised deposits” means the substances and articles specified in paragraph 2(3) of this licence;

“authorised scheme” means the works described in paragraph 2 of this licence or any part of those works;

“the CAA” means the Civil Aviation Authority constituted by the Civil Aviation Act 1982(e);

“cable armouring” means measures for cable crossings to protect cables and prevent loss of seabed sediment by use of grout bags, protective aprons, mattresses, flow energy dissipation (frond) devices or rock and gravel dumping;

“Cefas” means the Centre for Environment, Fisheries and Aquaculture Science;

“commence” means the first carrying out of any part of the licensed activities save for pre-commencement environmental surveys and monitoring;

“condition” means a condition in Part 2 of this licence;

“enforcement officer” means a person authorised to carry out enforcement duties under Chapter 3 of the 2009 Act;

“environmental statement” means the document certified as the environmental statement by the Secretary of State for the purposes of this Order and submitted with the application on 22 March 2013;

“gravity base foundation” means a structure principally of concrete, steel or steel and concrete which rests on the seabed either due to its own weight with or without added ballast or skirts, including associated sea bed preparation, scour protection, J-tubes, corrosion protection systems, boat landings comprising an access ladder with vertical boat fenders fitted either side and work platforms and equipment;

“jacket foundation” means a jacket/lattice type structure constructed of concrete, steel or steel and concrete which is fixed to the seabed at three or more points with driven or pre-installed piles or suction caissons, including associated scour protection, J-tubes, corrosion protection systems, boat landings comprising an access ladder with vertical boat fenders fitted either side, access and work platforms and equipment;

“Kingfisher Fortnightly Bulletin” means the bulletin published by the Humber Seafood Institute or such other alternative publication approved in writing by the MMO;

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(a) 2004 c.20.

(b) 2008 c.29.

(c) 2009 c.23.

(d) OJ No. L206, 22.7.1992, p.7, last amended by Council Directive 2013/17/EU (OJ No. L158, 10.6.2013, p.193).

(e) 1982 c.16.

“LAT” means lowest astronomical tide;

“licensed activities” means the activities specified in Part 1 of this licence;

“maintain” includes inspect, maintain, repair, adjust and alter, and further includes remove, reconstruct and replace any of the ancillary works in Part 2 of Schedule 1 (ancillary works) and any component part of any wind turbine generator or offshore substation described in Part 1 of Schedule 1 (authorised development) (but not including the alteration removal or replacement of foundations) to the extent assessed in the environmental statement; and “maintenance” shall be construed accordingly;

“Marine Management Organisation” or “MMO” means the body created under the Marine and Coastal Access Act 2009 which is responsible for the monitoring and enforcement of this licence;

“MCA” means the Maritime and Coastguard Agency;

“mean high water springs” or “MHWS” means the highest level which spring tides reach on average over a period of time;

“Natural England” means the body established by section 1 of the Natural Environment and Rural Communities Act 2006(a);

“notice to mariners” includes any notice to mariners which may be issued by the Admiralty, Trinity House, Queen’s harbour masters, government departments and harbour and pilotage authorities;

“offshore substation” means an offshore platform constructed of steel or concrete or steel and concrete with single or multiple decks housing major electrical equipment including high voltage transformers, switchgear, control rooms, cabling and busbars, lightning protection masts, communications masts, cable management, back-up generators, fuel storage, emergency accommodation, workshops and stores, helihoist facilities, cranes and other associated electrical and ancillary equipment;

“the Order” means the Burbo Bank Extension Offshore Wind Farm Order 2014;

“the Order limits” means the limits shown on the works plan within which the authorised scheme may be carried out, whose grid coordinates are set out in paragraph 3 of this licence;

“scour protection” means measures to prevent loss of seabed sediment around foundation bases by use of protective aprons, mattresses, flow energy dissipation (frond) devices or rock and gravel dumping;

“steel monopile foundation” means a steel large diameter pile, typically cylindrical, driven and/or drilled into the seabed, including associated scour protection, transition piece, J-tubes, corrosion protection systems, boat landings comprising an access ladder with vertical boat fenders fitted either side, access and work platforms and equipment;

“suction caisson” means a large diameter steel cylinder which is fixed to the base of the foundation and partially penetrates the seabed and remains in place using its own weight and hydrostatic pressure differential;

“transmission assets” means Works No. 2 and 3, as set out in paragraph 2(2) of this licence;

“Trinity House” means The Corporation of Trinity House of Deptford Strond;

“UK Hydrographic Office” means the UK Hydrographic Office of Admiralty Way, Taunton, Somerset, TA1 2DN;

“undertaker” means DONG Energy Burbo Extension (UK) Limited;

“vessel” means every description of vessel, however propelled or moved, and includes a non-displacement craft, a personal watercraft, a seaplane on the surface of the water, a hydrofoil vessel, a hovercraft or any other amphibious vehicle and any other thing constructed or adapted for movement through, in, on or over water and which is at the time in, on or over water;

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(a) 2006 c.16. Section 1 was amended by section 311(2) and (3) of the Marine and Coastal Access Act 2009.



“the works plan” means the plan certified as the works plan by the Secretary of State for the purposes of the Order.

(2) A reference to any statute, order, regulation or similar instrument shall be construed as a reference to a statute, order, regulation or instrument as amended by any subsequent statute, order, regulation or instrument or as contained in any subsequent re-enactment.

(3) Unless otherwise indicated—

- (a) all times shall be taken to be Greenwich Mean Time (GMT);
- (b) all co-ordinates shall be taken to be latitude and longitude degrees and minutes to two decimal places.

(4) Except where otherwise notified in writing by the relevant organisation, the primary point of contact with the organisations listed below and the address for returns and correspondence shall be—

(a) Marine Management Organisation

Offshore Licensing Team

Lancaster House

Hampshire Court

Newcastle Business Park

Newcastle upon Tyne

NE4 7YH

Tel: 0300 123 1032;

(b) Marine Management Organisation Coastal Office

Neville House

Central Riverside

Bell Street

North Shields

Tyne and Wear

NE30 1LJ

Tel: (24-hour answer phone) 0191 257 4520 or 0191 257 0159

Fax: 0191 257 1595;

(c) Trinity House

Navigation Directorate

Tower Hill

London

EC3N 4DH

Tel: 020 7481 6900;

(d) The United Kingdom Hydrographic Office

Oil and Gas Section (RT1)

Admiralty Way

Taunton

Somerset

TA1 2DN

Tel: 01823 337 900;

- (e) Maritime and Coastguard Agency  
Navigation Safety Branch  
Bay 2/04  
Spring Place  
105 Commercial Road  
Southampton  
SO15 1EG  
Tel: 023 8032 9191;
  
- (f) Centre for Environment, Fisheries and Aquaculture Science  
Pakefield Road  
Lowestoft  
Suffolk  
NR33 0HT  
Tel: 01502 562 244;
  
- (g) Natural England  
Foundry House  
3 Millsands  
Riverside Exchange  
Sheffield  
S3 8NH  
Tel: 0300 060 4911;
  
- (h) English Heritage  
Eastgate Court  
195-205 High Street  
Guildford  
GU1 3EH  
Tel: 01483 252 057.

**Details of licensed marine activities**

2.—(1) This licence authorises the undertaker (and any agent or contractor acting on their behalf) to carry out the following licensable marine activities under section 66(1) of the 2009 Act, subject to the conditions—

- (a) the deposit at sea of the substances and articles specified in sub-paragraph (3) below;
- (b) the construction of works in or over the sea and/or on or under the sea bed;
- (c) the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation; and
- (d) the disposal of up to 6,800 metres<sup>3</sup> of inert material of natural origin produced during the drilling installation of monopiles or jacket foundations for Work No. 2 at disposal site reference IS135 Burbo Bank Extension OWF.

(2) The works referred to in (1)(b) comprise—

*Work No. 2* – up to one offshore substation fixed to the seabed by one of three foundation types (namely steel monopile foundation, gravity base foundation or jacket foundation) within the Order limits;

*Work No. 3* – a grid connection from *Work No. 2* consisting of up to two cables laid along routes within the Order limits, including one or more cable crossings, up to Welsh territorial waters at grid coordinates 53° 25.82' / -3° 21.97' and 53° 25.99' / -3° 22.32';

and in connection with such *Works No. 2* and *3* and to the extent that they do not otherwise form part of any such work, further associated development within the meaning of 115(2) of the 2008 Act comprising such other works as may be necessary or expedient for the purposes of or in connection with the relevant part of the authorised scheme and which fall within the scope of the work assessed by the environmental statement and the provisions of this licence;

and in connection with such *Works No. 2* and *3*, works comprising—

- (a) temporary landing places, moorings or other means of accommodating vessels in the construction and/or maintenance of the authorised scheme; and
- (b) buoys, beacons, fenders and other navigational warning or ship impact protection works.

(3) The substances or articles authorised for deposit at sea are—

- (a) iron and steel;
- (b) stone and rock;
- (c) concrete;
- (d) sand and gravel;
- (e) plastic and synthetic;
- (f) electrical apparatus including copper composites;
- (g) material extracted from within the Order limits during construction drilling; and
- (h) marine coatings, grout, other chemicals (such as water-based drilling muds) and timber.

3. The grid coordinates for the authorised scheme are specified below—

| <i>Point</i> | <i>Latitude (DD)</i> | <i>Longitude (DD)</i> | <i>Point</i> | <i>Latitude (DD)</i> | <i>Longitude (DD)</i> |
|--------------|----------------------|-----------------------|--------------|----------------------|-----------------------|
| A            | 53.502373            | -3.376542             | F            | 53.463623            | -3.305973             |
| B            | 53.502832            | -3.220001             | G            | 53.465333            | -3.309167             |
| C            | 53.494704            | -3.223993             | H            | 53.468333            | -3.314667             |
| D            | 53.470225            | -3.179047             | I            | 53.433167            | -3.372000             |
| E            | 53.463884            | -3.196287             | J            | 53.430333            | -3.366167             |

4. This licence shall remain in force until the authorised scheme has been decommissioned in accordance with a programme approved by the Secretary of State under section 106 of the 2004 Act, including any modification to the programme under section 108, and the completion of such programme has been confirmed by the Secretary of State in writing.

5. The provisions of section 72 of the 2009 Act shall apply to this licence save that the provisions of section 72(7) relating to the transfer of the licence shall only apply to a transfer not falling within article 6 (benefit of the Order).

6. Where the words ‘unless otherwise agreed’ or ‘unless otherwise stated’ appear in the conditions in Part 2, any such agreement or statement may only be given in relation to immaterial changes where it has been demonstrated to the satisfaction of the MMO that the subject matter of the approval or agreement sought is unlikely to give rise to any new or materially different environmental effects from those assessed in the environmental statement.

## PART 2

### Conditions

#### Design parameters

1.—(1) The total number of offshore substations forming part of the authorised scheme shall not exceed one.

(2) The dimensions of any offshore substation forming part of the authorised scheme (excluding helihoist facilities, towers, masts and cranes) shall not exceed 50 metres in height when measured from LAT, 40 metres in length and 30 metres in width.

(3) The offshore substation shall have no more than one supporting foundation.

2. The total length of the cables comprising Work No. 3 shall not exceed 17 kilometres.

3.—(1) Each steel monopile foundation forming part of the authorised scheme (excluding scour protection) must not have a diameter which is greater than 8 metres.

(2) Each gravity base foundation forming part of the authorised scheme (excluding scour protection) must not have—

- (a) a diameter at the level of the seabed which is greater than 35 metres; and
- (b) a base height which is greater than 16 metres above the level of the seabed and less than 1 metre below LAT.

(3) Each jacket foundation forming part of the authorised scheme (excluding scour protection) must not have—

- (a) a width spacing between each leg at the level of the seabed which is greater than 35 metres;
- (b) a leg diameter which is greater than 3 metres;
- (c) a width spacing between each leg at MHWS which is greater than 35 metres;
- (d) a pile sleeve height which is greater than 18 metres above the level of the seabed;
- (e) a pile diameter which is more than 3 metres;
- (f) more than four piles per leg;
- (g) more than four legs;
- (h) a suction caisson per leg which is greater than 15 metres in diameter.

(4) The total amount of scour protection for the offshore substation forming part of the authorised scheme shall not exceed 22,500 metres<sup>3</sup>.

#### Notifications and inspections

4.—(1) The undertaker must ensure that—

- (a) a copy of this licence (issued as part of the grant of the Order) and any subsequent amendments or revisions to it is provided to—
  - (i) all agents and contractors notified to the MMO in accordance with condition 12; and
  - (ii) the masters and transport managers responsible for the vessels notified to the MMO in accordance with condition 12;
- (b) within 28 days of receipt of a copy of this licence those persons referred to in paragraph (a) above shall provide a completed confirmation form to the MMO confirming that they have read and will comply with the terms of the conditions of this licence.

(2) Only those persons and vessels notified to the MMO in accordance with condition 12 are permitted to carry out the licensed activities.

(3) Copies of this licence shall also be available for inspection at the following locations—

- (a) the undertaker's registered address;

- (b) any site office located at or adjacent to the construction site and used by the undertaker or its agents and contractors responsible for the loading, transportation or deposit of the authorised deposits; and
- (c) on board each vessel or at the office of any transport manager with responsibility for vessels from which authorised deposits or removals are to be made.

(4) The documents referred to in sub-paragraph (1)(a) must be available for inspection by an authorised enforcement officer at the locations set out in on sub-paragraph (3)(b) above.

(5) The undertaker must provide access, and if necessary appropriate transportation, to the offshore construction site or any other associated works or vessels to facilitate any inspection that the MMO considers necessary to inspect the works during construction and operation of the authorised scheme.

(6) The undertaker must inform the MMO Coastal Office in writing at least five working days prior to the commencement of the licensed activities or any part of them.

(7) Prior to the commencement of the licensed activities or any part of them the undertaker must publish in the Kingfisher Fortnightly Bulletin details of the vessel routes, timings and locations relating to the construction of the authorised scheme or relevant part.

(8) The undertaker must ensure that—

- (a) a notice to mariners is issued at least 10 working days prior to the commencement of the licensed activities or any part of them advising of the start date of Work No. 2 and the expected vessel routes from the local construction ports to the relevant locations; and
- (b) a second notice to mariners is issued at least 10 working days prior to the commencement of Work No. 3 (subsea export cables) advising of the start date of Work No. 3 and the route of the subsea export cables.

(9) The undertaker must ensure that the notices to mariners are updated and reissued at weekly intervals during construction activities and within 5 working days of any planned operations and maintenance works and supplemented with VHF radio broadcasts agreed with the MCA in accordance with the construction programme approved under condition 10(b). Copies of all notices shall be provided to the MMO.

(10) The undertaker must notify—

- (a) the United Kingdom Hydrographic Office of both the commencement (within two weeks), progress and completion (within two weeks) of the authorised scheme in order that all necessary amendments to nautical charts are made; and
- (b) the MMO, MCA and Trinity House within two weeks once the authorised scheme is completed and any required lighting or marking has been established.

### **Navigational practice, safety and emergency response**

5.—(1) The authorised scheme shall not commence until the Secretary of State, in consultation with the MCA, has confirmed in writing that the undertaker has taken into account and adequately addressed all MCA recommendations contained within MGN 371 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues” and its annexes including full details of the Emergency Co-operation Plans (ERCOP) for the construction, operation and decommissioning as appropriate to the authorised scheme.

(2) The undertaker will prepare and implement a project-specific Active Safety Management System, taking account of safety and mitigation measures as referred to in the navigation risk assessment in the environmental statement.

### **Aids to navigation**

6.—(1) The undertaker must at or near the authorised scheme during the whole period of the construction, operation, alteration, replacement or decommissioning of the authorised scheme exhibit such lights, marks, sounds, signals and other aids to navigation, and take such other steps for the prevention of danger to navigation, as Trinity House may from time to time direct.

(2) The undertaker must notify Trinity House, in writing, as soon as reasonably practicable, of the progress of construction of the authorised scheme or any part of it and any aids to navigation established from time to time during construction.

(3) The undertaker must provide reports on the availability of aids to navigation periodically as requested by Trinity House.

(4) In case of injury to, or destruction or decay of, the authorised scheme or any part thereof the undertaker must as soon as reasonably practicable notify Trinity House and shall lay down such buoys, exhibit such lights and take such other steps for preventing danger to navigation as Trinity House may from time to time direct.

7. The undertaker must colour all structures yellow from at least highest astronomical tide to a height directed by Trinity House, or shall colour the structure as directed by Trinity House from time to time.

### **Chemicals, drilling and debris**

8.—(1) Unless otherwise agreed in writing by the MMO all chemicals used in the construction of the authorised scheme, including any chemical agents placed within any monopile void, shall be selected from the List of Notified Chemicals approved for use by the offshore oil and gas industry under the Offshore Chemicals Regulations 2002(a).

(2) The undertaker must ensure that any coatings/treatments are suitable for use in the marine environment and are used in accordance with guidelines approved by the Health and Safety Executive or the Environment Agency Pollution Prevention Guidelines.

(3) The storage, handling, transport and use of fuels, lubricants, chemicals and other substances shall be undertaken so as to prevent releases into the marine environment, including bunding of 110% of the total volume of all reservoirs and containers.

(4) Where foundation drilling works are proposed, in the event that any system other than water-based mud is proposed the MMO's written approval in relation to the proposed disposal of any arisings must be obtained before the drilling commences, which may also require a marine licence.

(5) The undertaker must ensure that any debris arising from the construction of the authorised scheme or temporary works placed below MHWS are removed on completion of the authorised scheme, unless otherwise agreed with the MMO.

(6) At least two months prior to the commencement of the licensed activities the undertaker must submit to the MMO an audit sheet covering all aspects of the construction of the licensed activities or any part of them. The audit sheet shall include details of—

- (a) loading facilities;
- (b) vessels;
- (c) equipment;
- (d) shipment routes;
- (e) working schedules; and
- (f) all components and materials to be used in the construction of the authorised scheme.

(7) The audit sheet must be maintained throughout the construction of the authorised scheme (or relevant part) and any changes notified immediately in writing to the MMO which must give written approval prior to any change being implemented.

(8) In the event that the MMO becomes aware that any of the materials on the audit sheet cannot be accounted for it must require the undertaker to carry out a side scan sonar survey to plot all obstructions across the relevant area(s) within the Order limits where construction works and related activities related to those materials have been carried out and, if the initial survey does not locate the missing materials, over such wider area as the MMO may reasonably request. Local fishermen shall be invited to send a representative to be present during the survey. Any new

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(a) S.I. 2002/1355. There are amendments to that instrument not relevant to this Order.

obstructions that the MMO believes to be associated with the authorised scheme shall be removed at the undertaker's expense.

(9) The undertaker must inform the MMO of the location and quantities of material disposed of each month under the Order, by submission of a disposal return by 31 January each year for the months August to January inclusive, and by 31 July each year for the months February to July inclusive.

(10) The undertaker must ensure that only inert material of natural origin, produced during the drilling installation of foundations, and drilling mud shall be disposed of within the offshore Order limits (disposal site reference IS135 Burbo Bank Extension OWF). Any other materials shall be screened out before disposal at this site.

(11) The undertaker must ensure that any rock material used in the construction of the authorised scheme is from a recognised source, free from contaminants and containing minimal fines.

(12) In the event that any rock material used in the construction of the authorised scheme is misplaced or lost below MHWS, the undertaker must report the loss to the Coastal Office within 48 hours and if the MMO shall reasonably consider such material to constitute a navigation or environmental hazard (dependent on the size and nature of the material) the undertaker must endeavour to locate the material and recover it.

(13) The undertaker must ensure that no waste concrete slurry or wash water from concrete or cement works are discharged into the marine environment. Concrete and cement mixing and washing areas must be contained to prevent run off entering the water through the freeing ports.

(14) The undertaker must ensure that any oil, fuel or chemical spill within the marine environment is reported to the MMO, Marine Pollution Response Team.

### **Force majeure**

9. If, due to stress of weather or any other cause the master of a vessel determines that it is necessary to deposit the authorised deposits within or outside of the Order limits because the safety of human life and/or of the vessel is threatened, within 48 hours full details of the circumstances of the deposit shall be notified to the MMO. The unauthorised deposits shall be removed at the expense of the undertaker unless written approval is obtained from the MMO.

### **Pre-construction plans and documentation**

10. No part of the works at paragraph 2(2) of Part 1 (licensed marine activities) of this licence shall commence until the following (as relevant to that part) have been submitted to and approved in writing by the MMO—

- (a) a design plan at a scale of between and including 1:25,000 and 1:50,000, including detailed representation on the most suitably scaled admiralty chart, to be agreed in writing with the MMO in consultation with Trinity House and the MCA which shows—
  - (i) the indicative proposed layout and location and choice of foundation of the offshore substation;
  - (ii) the height length and width of the offshore substation;
  - (iii) the length and arrangement of all cables comprising Work No. 3;
  - (iv) the dimensions of any gravity base foundation;
  - (v) the dimensions of any jacket foundation;
  - (vi) the dimensions of any steel monopile foundation;
  - (vii) in plan form, the indicative programming of particular works as set out in the indicative construction programme to be provided under sub-paragraph (b)(iv);
  - (viii) any exclusion zones or micrositing requirements identified in any mitigation scheme pursuant to sub-paragraph (j);
  - (ix) any archaeological exclusion zones identified under sub-paragraph (h)(iv);

- to ensure conformity with the description of Works No. 2 and 3 and compliance with conditions 1 to 4 above;
- (b) a construction and monitoring programme to include details of—
    - (i) the proposed construction start date;
    - (ii) proposed timings for mobilisation of plant, delivery of materials and installation works;
    - (iii) proposed pre-construction surveys, baseline report format and content, construction monitoring, post-construction monitoring and related reporting in accordance with sub-paragraph (h) and conditions 14, 15 and 16. The pre-construction survey programme and all pre-construction survey methodologies shall be submitted to the MMO for written approval by the MMO in consultation with Natural England at least four months prior to the commencement of any survey works detailed within; and
    - (iv) an indicative written construction programme for all offshore substations and cables comprised in the works at paragraph 2(2) of Part 1 (licensed marine activities) of this licence (insofar as not shown in (b) above);
  - (c) a construction method statement in accordance with the construction methods assessed in the environmental statement and including details of—
    - (i) drilling methods and disposal of drill arisings;
    - (ii) offshore substation location and installation, including scour protection;
    - (iii) cable installation;
    - (iv) contractors;
    - (v) vessels and vessels transit corridors;
    - (vi) associated works; and
    - (vii) proposed mitigation measures;
  - (d) a project environmental management and monitoring plan to include details of—
    - (i) a marine pollution contingency plan to address the risks, methods and procedures to deal with any spills and collision incidents during construction and operation of the authorised scheme in relation to all activities carried out;
    - (ii) a chemical risk assessment to include information regarding how and when chemicals are to be used, stored and transported in accordance with recognised best practice guidance;
    - (iii) waste management plan and disposal arrangements; and
    - (iv) the appointment and responsibilities of a fisheries liaison officer and an environmental liaison officer;
  - (e) a scour protection management and cable armouring plan providing details of the need, type, sources, quantity and installation methods for scour protection and cable armouring for cable crossings;
  - (f) in the event that driven or part-driven pile foundations are proposed to be used, a marine mammal mitigation protocol to be agreed in writing with the MMO in consultation with Natural England and following current best practice as advised by the statutory nature conservation agencies, to include—
    - (i) identification of a Marine Mammal Monitoring Zone (MMMZ);
    - (ii) appointment of an appropriate number of suitably qualified marine mammal observer(s);
    - (iii) methods for the detection of marine mammals within the MMMZ whether visually (by the marine mammal observer(s)) or acoustically using Passive Acoustic Monitoring equipment or other means of detection;



- (iv) a reporting methodology to enable efficient communication between the marine mammal observer(s) and the person responsible for approving commencement of piling;
- (v) an appropriate soft start procedure whereby piling activities do not commence until an agreed time has elapsed and during which marine mammals have not been detected within the MMMZ;
- (vi) where appropriate, methods for the application of acoustic deterrent devices;
- (g) a cable specification and installation plan, to be agreed in writing by the MMO, and to include—
  - (i) technical specification of the offshore cables including a desk-based assessment of attenuation of electro-magnetic field strengths, shielding and cable burial depth in accordance with industry good practice; and
  - (ii) a detailed cable laying plan, incorporating a burial risk assessment to ascertain suitable burial depths and cable laying techniques;
- (h) a written scheme of archaeological investigation (WSI) in relation to the Order limits in accordance with industry best practice and to be approved in writing by the MMO in consultation with English Heritage to include—
  - (i) details of responsibilities of the undertaker, archaeological consultant and contractor;
  - (ii) a methodology for any further site investigation including any specifications for geophysical, geotechnical and diver or remotely operated vehicle investigations;
  - (iii) analysis and reporting of survey data, and timetable, which is to be submitted to the MMO within four months of any survey being completed;
  - (iv) delivery of any mitigation including, where necessary, archaeological exclusion zones including all spatial data for the extent and location of archaeological exclusion zones;
  - (v) monitoring during and post construction, including a conservation programme for finds;
  - (vi) archiving of archaeological material, inclusive of any completed and agreed archaeological reports produced through the WSI which are to be deposited by the undertaker within a public archive in accordance with the OASIS (Online Access to the Index of archaeological investigationS') system; and
  - (vii) a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised scheme;
- (i) a vessel traffic management plan during construction and operation of the authorised scheme, to include vessel routing for any vessels operating from the Port of Barrow such that all such vessels avoid the area of the Liverpool Bay SPA plus a 2 kilometre buffer from the boundary of the SPA during the period October to March and in the area north of grid reference 53.683333 (DD, WGS 1984) in order to avoid the disturbance of wintering aggregations of common scoter at, and in the vicinity of, the Shell Flat;
- (j) a mitigation scheme for any Annex 1 features identified by the survey referred to in condition 14(2)(a).

**11.—**(1) Each programme, statement, plan, protocol or scheme required to be approved under condition 10 shall be submitted for approval at least four months prior to the intended start of construction, except where otherwise stated or unless otherwise agreed in writing by the MMO.

(2) The licensed activities shall be carried out in accordance with the approved plans, protocols, statements, schemes and details approved under condition 10, unless otherwise agreed in writing by the MMO.

### **Reporting of engaged agents, contractors and vessels**

12.—(1) The undertaker must provide the following information to the MMO—

- (a) the name and function of any agent or contractor appointed to engage in the licensed activities within seven days of appointment; and
- (b) each week during the construction of the authorised scheme a completed Hydrographic Note H102 listing the vessels currently and to be used in relation to the licensed activities.

(2) Any changes to the supplied details must be notified to the MMO in writing five working days prior to the agent, contractor or vessel engaging in the licensed activities.

### **Equipment and operation of vessels engaged in licensed activities**

13.—(1) All vessels employed to perform the licensed activities must be constructed and equipped to be capable of the proper performance of such activities in accordance with the conditions of this licence and (save in the case of remotely operated vehicles or vessels) shall comply with sub-paragraphs (2) to (5) below.

(2) All motor powered vessels shall be fitted with—

- (a) electronic positioning aid to provide navigational data;
- (b) radar;
- (c) echo sounder; and
- (d) multi-channel VHF.

(3) All vessels' names or identification shall be clearly marked on the hull or superstructure.

(4) All communication on VHF working frequencies shall be in English.

(5) No vessel shall engage in the licensed activities until all the equipment specified in sub-paragraph (2) is fully operational.

### **Pre-construction monitoring**

14.—(1) The undertaker must, in discharging condition 10(b), submit details for written approval by the MMO, in consultation with Natural England, of proposed pre-construction surveys, including methodologies and timings, with archaeological advice where necessary, and a proposed format and content for a pre-construction baseline report; and

- (a) the survey proposals must specify each survey's objectives and explain how it will assist in either informing a useful and valid comparison with the post-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement; and
- (b) the baseline report proposals must ensure that the outcome of the agreed surveys together with existing data and reports are drawn together to present a valid statement of the pre-construction position, with any limitations, and shall make clear what post-construction comparison is intended and the justification for this being required.

(2) The pre-construction surveys referred to in sub-paragraph (1) must unless otherwise agreed with the MMO have due regard to, but not be limited to, the need to undertake—

- (a) a survey, in combination with data derived from paragraph (b) to determine the location and extent of any benthic Annex 1 Habitat in whole or in part inside the area(s) within the Order limits in which it is proposed to carry out construction works;
- (b) a high resolution swath-bathymetric survey and side scan sonar survey of the area(s) within the Order limits in which it is proposed to carry out construction works, including a 500 metre buffer around the site of each works and inclusive of seabed anomalies or sites of historical or archaeological interest that lie within that 500 metre buffer.

(3) The undertaker must carry out the surveys agreed under sub-paragraph (1) and provide the baseline report to the MMO in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing by the MMO, in consultation with Natural England.

### **Construction monitoring**

**15.**—(1) Unless otherwise agreed, the undertaker must, in discharging condition 10(b), submit details for approval by the MMO in consultation with Natural England of any proposed surveys or monitoring, including methodologies and timings, to be carried out during the construction of the authorised scheme. The survey proposals must specify each survey's objectives.

(2) The undertaker must carry out the surveys approved under sub-paragraph (1) and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with Natural England.

### **Post construction surveys**

**16.**—(1) The undertaker must, in discharging condition 10(b), submit details for written approval by the MMO in consultation with Natural England of proposed post-construction surveys, including methodologies and timings, and a proposed format, content and timings for providing reports on the results at least four months prior to the commencement of any survey works detailed within. The survey proposals shall specify each survey's objectives and explain how it will assist in either informing a useful and valid comparison with the pre-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement.

(2) The post construction surveys referred to in sub-paragraph (1) must unless otherwise agreed with the MMO have due regard to, but not be limited to the need to undertake a survey to determine the effects of construction activity on any benthic Annex 1 Habitat in whole or in part inside the area(s) within the Order limits, dependent on the outcome of the survey undertaken in condition 14(2)(a) above.

(3) The undertaker must carry out the surveys agreed under sub-paragraph (1) for three years post-construction which may be non-consecutive years and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with Natural England.

### **Piling restrictions**

**17.**—(1) Unless otherwise agreed in writing by the MMO in accordance with paragraph (2), no more than eight pin piles for the offshore substation jacket foundation shall be installed between 1 April and 15 May.

(2) The undertaker shall submit a pin pile construction method statement to the MMO for approval showing the proposed numbers of piles to be installed and the estimated piling duration. If approved by the MMO, the installation must be carried out in accordance with the approved pin pile construction method statement.

## **EXPLANATORY NOTE**

*(This note is not part of the Order)*

This Order grants development consent for, and authorises DONG Energy Burbo Extension (UK) Limited to construct, operate and maintain a generating station in the sea approximately 7 kilometres off the north Wirral coast, 8.5 kilometres from Crosby beach and 12.2 kilometres off the coast of Point of Ayr, Wales, being an extension to the existing Burbo Bank offshore wind farm located on the bed of Liverpool Bay, together with all necessary and associated development. The Order imposes requirements in connection with the development for which it grants development consent.

The Order also grants deemed marine licences for the marine licensable activities, being the deposit and removal of substances and articles and the carrying out of works involved in the construction of the generating station and associated development. The deemed marine licences impose conditions in connection with the deposits and works for which they grant consent.

A copy of the plans referred to in this Order and certified in accordance with article 12 (certification of plans etc) of this Order may be inspected free of charge at the offices of Denbighshire County Council at 64 Brighton Road, Rhyl, LL18 3HN and Wirral Metropolitan Borough Council at Wallasey Town Hall, Brighton Street, Wallasey, CH44 8ED.