

SCHEDULE 8

Articles 2 and 39

Marine Licence 1: Project A Offshore Generation – Work Nos. 1A and 2T

PART 1

Licensed activities

Interpretation

1.—(1) In this licence—

“2009 Act” means the Marine and Coastal Access Act 2009;

“Annex 1 habitat” means a habitat set out in Annex 1 to Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora;

“array location and layout plan” means the array location and layout plan referred to in Condition 16(a);

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

“authorised scheme” means Work Nos. 1A and 2T described in paragraph 2 or any part or phase of those works;

“cable crossing” means the crossing of existing subsea cables and pipelines by the inter-array, inter-platform or export cables authorised by the Order together with physical protection measures including cable protection;

“cable protection” means measures to protect cables from physical damage and exposure due to loss of seabed sediment including, but not limited to, the use of bagged solutions filled with grout or other materials, protective aprons or coverings, mattresses, flow energy dissipation devices or rock and gravel burial;

“chemical risk assessment” means the chemical risk assessment referred to in Condition 16(d)(ii);

“combined platform” means a single offshore platform combining 2 or more of the following—

- (a) an offshore collector platform;
- (b) an offshore converter platform;
- (c) an offshore accommodation or helicopter platform;

“commence” means begin to carry out any part of the licensed activities except for the pre-construction surveys and monitoring; and “commencement” must be construed accordingly;

“commercial operation”, in relation to the authorised scheme, means the exporting, on a commercial basis, of electricity from the wind turbine generators comprised in the scheme;

“Condition” means a condition in Part 2;

“disposal scenario statement” means the document certified as the disposal scenario statement by the Secretary of State under article 42 of the Order (certification of plans and documents, etc.);

“draft fisheries liaison plan” means the document certified as the draft fisheries liaison plan by the Secretary of State under article 42 of the Order;

“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 under article 42 of the Order together with any supplementary or further environmental information submitted in support of the application for the Order;

“gravity base foundation” means a foundation type that rests on the seabed and supports a wind turbine generator, meteorological station or offshore platform primarily due to its own weight and that of added ballast, with or without skirts or other additional fixings, which may include associated equipment including J-tubes and access platforms and separate topside connection structures or an integrated transition piece. (Sub-types for wind turbine generators and meteorological stations include conical gravity base and flat-based gravity base foundations. Sub-types for platforms include offshore platform conical or flat-base gravity base foundations and offshore platform semi-submersible gravity base foundations);

“HAT” (highest astronomical tide) means the highest tide that can be predicted to occur under average meteorological conditions;

“HVAC” means high voltage alternating current; “HVDC” means high voltage direct current;

“Kingfisher Fortnightly Bulletin” means the bulletin published by the Humber Seafood Institute or such other alternative publication approved in writing by the MMO; “licensed activities” means the activities specified in paragraph 2;

“maintain” includes inspect, repair, adjust and alter, and further includes remove, reconstruct and replace any of the ancillary works in Part 2 of Schedule 1 (ancillary works) to the Order and any component part of any wind turbine generator, offshore platform, meteorological station, electricity or communication cable described in Part 1 of that Schedule (authorised development) (but not including the removal or replacement of foundations) to the extent set out in the offshore maintenance plan referred to in Condition 24; and “maintenance” must be construed accordingly;

“marine pollution contingency plan” means the marine pollution contingency plan referred to in Condition 16(d)(i);

“MCA” means the Maritime and Coastguard Agency;

“meteorological mast” or “meteorological station” means a fixed or floating structure housing or incorporating equipment to measure wind speed and other meteorological and oceanographic characteristics, including a topside which may house electrical switchgear and communication equipment and associated equipment, and marking and lighting;

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

“MMO” means the Marine Management Organisation;

“monopole foundation” means a foundation option based around a single vertical pillar structure driven, drilled, or embedded into the seabed by means such as suction or gravity. This main support structure may change in diameter via tapers or abrupt steps. (Sub-types for wind turbine generators and meteorological stations include monopole with steel monopile footing, monopole with concrete monopile footing and monopole with a single suction- installed bucket footing);

“multi-leg foundation” means a foundation option based around structures with several legs or footings. This includes jackets, tripods and other structures which include multiple large tubulars, cross-bracing or lattices. Multi-leg foundations may be fixed to the seabed by footings which are driven, drilled, screwed, jacked-up or embedded into the seabed by means such as suction or gravity. (Sub-types for wind turbine generators and meteorological stations include multi-legs with driven piles, drilled piles, screw piles, suction buckets and jack-up foundations. Sub-types for platforms include offshore platform jacket foundations (potentially using driven piles, suction buckets or screw piles) and offshore platform jack-up foundations);

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

“offshore accommodation or helicopter platform” means a platform (either singly or as part of a combined platform) housing or incorporating some or all of the following: accommodation for staff during the construction, operation and decommissioning of the authorised scheme, landing facilities for vessels and helicopters, re-fuelling facilities, communication and control systems, electrical systems such as metering and control systems, small- and large-scale electrical power systems, J-tubes, auxiliary and uninterruptible power supplies, large-scale energy storage

systems, standby electricity generation equipment, cranes, storage for waste and consumables including fuel, marking and lighting and other associated equipment and facilities;

“offshore collector platform” means a platform (either singly or as part of a combined platform) housing or incorporating electrical switchgear or electrical transformers, electrical systems such as metering and control systems, J-tubes, landing facilities for vessels and helicopters, re-fuelling facilities, accommodation for staff during the construction, operation and decommissioning of the authorised scheme, communication and control systems, auxiliary and uninterruptible power supplies, large-scale energy storage systems, standby electricity generation equipment, cranes, storage for waste and consumables including fuel, marking and lighting and other associated equipment and facilities;

“offshore converter platform” means a platform (either singly or as part of a combined platform) housing or incorporating HVDC electrical switchgear or electrical transformer and other equipment to enable HVDC transmission to be used to convey the power output of the multiple wind turbine generators to shore including electrical systems such as metering and control systems, J-tubes, landing facilities for vessels and helicopters, re-fuelling facilities, accommodation for staff during the construction, operation and decommissioning of the authorised scheme, communication and control systems, auxiliary and uninterruptible power supplies, large-scale energy storage systems, standby electricity generation equipment, cranes, storage for waste and consumables including fuel, marking and lighting and other associated equipment and facilities;

“offshore in principle monitoring plan” means the document certified as the offshore in principle monitoring plan by the Secretary of State under article 42 of the Order;

“offshore order limits and grid co-ordinates plan” means the plans certified as the offshore order limits and grid co-ordinates plan by the Secretary of State under article 42 of the Order;

“offshore platform” means any of the following—

- (a) an offshore accommodation or helicopter platform;
- (b) an offshore collector platform;
- (c) an offshore converter platform;
- (d) a combined platform;

“onshore order limits and grid co-ordinates plan” means the plans certified as the onshore order limits and grid co-ordinates plan by the Secretary of State under article 42 of the Order;

“Order” means the Dogger Bank Teesside A and B Offshore Wind Farm Order 2015;

“Order limits” means the limits shown on the offshore order limits and grid co-ordinates plan and the onshore order limits and grid co-ordinates plan;

“outline offshore archaeological written scheme of investigation” means the document certified as the outline offshore archaeological written scheme of investigation by the Secretary of State under article 42 of the Order;

“outline offshore maintenance plan” means the document certified as the outline offshore maintenance plan by the Secretary of State under article 42 of the Order;

“scour protection” means measures to prevent loss of seabed sediment around foundation bases by the use of bagged solutions filled with grout or other material, protective aprons, mattresses, flow energy dissipation devices and rock and gravel burial;

“undertaker” means Doggerbank Project 2 Bizco Limited (company number 07791977) whose registered office is 55 Vastern Road, Reading, Berkshire RG1 8BU;

“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 tiring 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” means a structure comprising a tower, a rotor with 3 blades connected at the hub, a nacelle and ancillary electrical and other equipment which may include J-tubes, transition piece, access and rest platforms, access ladders, boat access systems, corrosion protection systems, fenders and maintenance equipment, helicopter landing facilities and other associated equipment, fixed to a foundation.

- (2) In this licence, a reference to any statute, order, regulation or similar instrument is 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) In this licence, unless otherwise indicated,—
- (a) all times are Greenwich Mean Time (GMT);
 - (b) all co-ordinates are latitude and longitude decimal degrees to 6 decimal places. The datum system used is World Geodetic System 1984 datum (WGS84).
- (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, is—
- (a) Marine Management Organisation
Marine Licensing Team
Lancaster House
Hampshire Court
Newcastle-upon-Tyne NE4 7YH
Email: marine.consentst@marinemanagement.org.uk
Tel: 0300 123 1032;
 - (b) Trinity House
Tower Hill
London EC3N 4DH
Tel: 020 7481 6900;
 - (c) United Kingdom Hydrographic Office
Admiralty Way
Taunton
Somerset TA1 2DN
Tel: 01823 337 900;
 - (d) Maritime and Coastguard Agency
Navigation Safety Branch
Bay 2/04
Spring Place
105 Commercial Road
Southampton SO15 1EG
Tel: 023 8032 9191;
 - (e) Natural England
Foundry House
3 Millsands
Riverside Exchange
Sheffield S3 8NH
Tel: 0300 060 4911;
 - (f) English Heritage
Eastgate Court
195-205 High Street
Guildford GU1 3EH
Tel: 01483 252 057.

(5) For information only, the details of the local MMO office to the authorised scheme is—

Marine Management Organisation – Northern Marine Area
 MMO Coastal Office
 Neville House
 Central Riverside
 Bell Street
 North Shields
 Tyne and Wear NE30 1LJ
 Email: northshields@marinemanagement.org.uk
 Tel: 0191 257 4520.

Details of licensed activities

2.—(1) This licence authorises the undertaker (and any agent or contractor acting on its behalf) to carry out the following licensable marine activities under Part 4 of the 2009 Act, subject to the Conditions—

- (a) the deposit at sea of the substances and articles specified in sub-paragraph (3);
- (b) subject to sub-paragraph (7), the construction of the works specified in sub-paragraph (2) in or over the sea or on or under the sea bed including the removal, reconstruction or alteration of the position of subsea cables and pipelines;
- (c) the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation.

(2) The licensed activities are authorised in relation to the construction, maintenance and operation of—

Work No. 1A —

- (a) an offshore wind turbine generating station with a gross electrical output capacity of more than 100 megawatts comprising up to 200 wind turbine generators each fixed to the seabed by monopole, multi-leg or gravity base type foundations situated within the area enclosed by the points whose co-ordinates are set out in Table 1A (the “array area”);

Table 1A - Array area

<i>Point</i>	<i>Latitude (decimal degrees)</i>	<i>Longitude (decimal degrees)</i>
31	55.11790	2.57524
32	55.11860	3.09890
33	55.10690	3.09409
34	55.09071	3.08744
35	55.07452	3.08080
36	55.05832	3.07416
37	55.04213	3.06752
38	55.02594	3.06090
39	55.00974	3.05427
40	54.99487	3.04820
41	54.97803	3.04132
42	54.97735	3.04104
43	54.96115	3.03444
44	54.95485	3.03187
45	54.95510	3.01393
46	54.95556	2.97851
47	54.95562	2.97450

50	54.96011	2.57690
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- (b) up to 7 offshore platforms comprising the following—
- (i) up to 4 offshore collector platforms situated within the array area and fixed to the seabed by multi-leg or gravity base type foundations^
 - (ii) 1 offshore converter platform situated within the array area and fixed to the seabed by multi-leg or gravity base type foundations;
 - (iii) up to 2 offshore accommodation or helicopter platforms situated within the array area and fixed to the seabed by multi-leg or gravity base type foundations, provided that any of the platforms comprised in Work No. 1A(b)(i) to (iii) may be co-joined to create a combined platform fixed to the seabed by multi-leg or gravity base type foundations;
- (c) up to 5 meteorological stations situated within the array area either fixed to the seabed by monopole, multi-leg or gravity base type foundations or utilising a floating support structure anchored to the seabed;
- (d) a network of cables for the transmission of electricity and electronic communications laid on or beneath the seabed (including cable crossings) between—
- (i) any of the wind turbine generators comprised in Work No. 1A(a);
 - (ii) any of the wind turbine generators comprised in Work No. 1A(a) and any of the works comprised in Work No. 1A(c);
 - (iii) any of the works comprised in Work No. 1A(b) and any of the works comprised in Work No. 1A(c); and
 - (iv) the offshore converter platform referred to in Work No. 1A(b)(ii) or a combined platform referred to in Work No. 1A(b) and the export cable route in Work No. 2A (as defined in the Order); and
- (e) up to 10 vessel moorings situated within the array area consisting of a single floating buoy secured by chain and anchor anchored to the seabed;

Work No. 2T – a temporary work area for vessels to carry out intrusive activities during construction, including vessels requiring anchor spreads, alongside the cable corridors; and

Ancillary works in connection with the above-mentioned works comprising—

- (a) temporary landing places, moorings or other means of accommodating vessels in the construction or maintenance of the authorised scheme;
- (b) temporary or permanent buoys, beacons, fenders and other navigational warning on ship impact protection works;
- (c) temporary works for the protection of land or structures affected by the authorised scheme;
- (d) cable protection, scour protection or dredging; and
- (e) cable route preparation works including boulder removal and obstruction clearance, dredging and pre-sweeping,

provided that the ancillary works are limited to works within the scope assessed by the environmental statement.

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

- (a) iron, steel, aluminium and titanium;
- (b) stone and rock;
- (c) concrete and grout;
- (d) sand and gravel;
- (e) plastic and synthetic;

- (f) material extracted from within the offshore areas within the Order limits during construction drilling and seabed preparation for foundation works and cable sandwave preparation works; and
 - (g) marine coatings, other chemicals and timber.
- (4) Subject to the Conditions, this licence authorises the disposal of up to 968,789 cubic metres of material of natural origin within Work No. 1A produced during construction drilling and seabed preparation for foundation works and cable sandwave preparation works (disposal site reference number DG030).
- (5) 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 31st January each year for the months August to January inclusive, and by 31st July each year for the months February to July inclusive.
- (6) The licence does not permit the decommissioning of the authorised scheme. No decommissioning activity may commence until a decommissioning programme has been approved by the Secretary of State under section 106 of the Energy Act 2004. Furthermore, at least 4 months before carrying out any decommissioning activity, the undertaker must notify the MMO of the proposed activity to establish whether a marine licence is required for the activity.
- (7) This licence and Marine Licence 3 (as defined in the Order), when taken together, do not authorised the construction of more than 1 Work No. 1A or the construction of Work No. 1A in excess of the maximum parameters for that work set out in Schedule 1 to the Order.

PART 2

Conditions

Detailed offshore design parameters 3.—

- (1) No wind turbine generator may—
- (a) exceed a height of 315 metres when measured from HAT to the tip of the vertical blade;
 - (b) have a rotor diameter exceeding 280 metres;
 - (c) be less than a multiple of 6 times the rotor diameter from the nearest wind turbine generator in any direction being not less than 750 metres measured between wind turbine generators;
 - (d) have a distance of less than 26 metres between the lowest point of the rotating blade of the wind turbine generator and HAT.
- (2) The total rotor-swept area within Work No. 1A must not exceed 4.35 square kilometres.
- (3) References to the location of a wind turbine generator are references to the centroid point at the base of the wind turbine generator.
- 4.—**(1) No meteorological station lattice tower may exceed a height of 315 metres above HAT.
- (2) Meteorological mast foundation structures must be of 1 or more of the following foundation options: monopole, multi-leg, gravity base or floating structure secured by chain and anchor.
- (3) No meteorological mast foundation structure employing a footing of driven piles may—
- (a) have more than 4 driven piles;
 - (b) in the case of single-pile structures, have a pile diameter exceeding 10 metres or employ a hammer energy during installation exceeding 2,300 kilojoules;
 - (c) in the case of structures with 2 or piles, have a pile diameter exceeding 3.5 metres or employ a hammer energy during installation exceeding 1,900 kilojoules.

(4) No meteorological mast foundation may have—

- (a) a seabed footprint (excluding subsea scour protection) exceeding 1,735 square metres;
- (b) a seabed footprint (including subsea scour protection) exceeding 4,657 square metres;
- (c) a main supporting structure exceeding 51.5 metres in width.

5.—(1) The total number of offshore platforms within Work No. 1A must not exceed 7, comprising—

- (a) up to 4 offshore collector platforms;
- (b) 1 offshore converter platform; and
- (c) up to 2 offshore accommodation or helicopter platforms,

provided that any of the platforms referred to in paragraphs (a) to (c) may be co-joined to create a combined platform fixed to the seabed by multi-leg or gravity base type foundations.

(2) The dimensions of any offshore collector platform (excluding towers, helicopter landing pads, masts and cranes) must not exceed—

- (a) 75 metres in length;
- (b) 75 metres in width;
- (c) 85 metres in height above HAT.

(3) The dimensions of any offshore converter platform (excluding towers, helicopter landing pads, masts and cranes) must not exceed—

- (a) 125 metres in length;
- (b) 100 metres in width;
- (c) 105 metres in height above HAT.

(4) The dimensions of any offshore accommodation or helicopter platform (excluding towers, helicopter landing pads, masts and cranes) must not exceed—

- (a) 125 metres in length;
- (b) 100 metres in width;
- (c) 105 metres in height above HAT.

(5) The dimensions of any combined platform (excluding towers, helicopter landing pads, masts and cranes) must not exceed the total seabed footprint of the individual platforms incorporated within it.

(6) Offshore platform foundation structures must be of 1 or more of the following foundation options: gravity base or multi-leg.

(7) No offshore platform foundation structure employing a footing of driven piles may—

- (a) have more than 24 driven piles;
- (b) have a pile diameter exceeding 2.75 metres or employ a hammer energy during installation exceeding 1,900 kilojoules.

(8) Within Work No. 1A, the seabed footprint per offshore foundation (excluding subsea scour protection) must not exceed—

- (a) in the case of an offshore collector platform, 5,625 square metres;
- (b) in the case of an offshore converter platform, 12,500 square metres;
- (c) in the case of an accommodation or helicopter platform, 12,500 square metres.

(9) No offshore collector platform foundation may have a seabed footprint (including subsea scour protection) exceeding 9,025 square metres.

(10) No offshore converter platform foundation may have a seabed footprint (including subsea scour protection) exceeding 17,400 square metres.

(11) No offshore accommodation or helicopter platform foundation may have a seabed footprint (including subsea scour protection) exceeding 17,400 square metres.

(12) The number of vessels actively carrying out impact piling as part of the installation of driven pile foundations must at no time exceed 2 within Work No. 1A.

6.—(1) Wind turbine generator foundation structures must be of 1 or more of the following foundation options: monopole, multi-leg or gravity base.

(2) No wind turbine generator foundation structure employing a footing of driven piles may—

- (a) have more than 6 driven piles;
- (b) in the case of single-pile structures, have a pile diameter exceeding 12 metres or employ a hammer energy during installation exceeding 3,000 kilojoules;
- (c) in the case of structures with 2 or more piles, have a pile diameter exceeding 3.5 metres or employ a hammer energy during installation exceeding 2,300 kilojoules.

(3) No wind turbine generator foundation may have—

- (a) a main supporting structure exceeding 61 metres in width;
- (b) a seabed footprint (excluding subsea scour protection) exceeding 2,376 square metres;
- (c) a seabed footprint (including subsea scour protection) exceeding 5,675 square metres.

(4) The foundations for wind turbine generators must be in accordance with the wave reflection coefficient values set out in Table 3.6 in Chapter 5, Appendix B (foundation characterisation study) of the environmental statement.

7. Within Work No. 1 A, the wind turbine generator foundations must not have—

- (a) a total seabed footprint exceeding 1,005,300 square metres;
- (b) subsea scour protection exceeding 1,084,850 cubic metres in total volume of material;
- (c) subsea scour protection exceeding 755,400 square metres in total seabed footprint.

8.—(1) The total seabed footprint of foundation structures (excluding mooring buoys) within Work No. 1A (including subsea scour protection and drill arising deposits) must not exceed 1,116,850 square metres.

(2) The total seabed footprint of offshore platform foundation structures within Work No. 1A (including seabed scour protection and drill arising deposits) must not exceed 88,300 square metres.

9. Within Work No. 1 A, the HVAC cables must not, in total,—

- (a) exceed 1,270 kilometres in length;
- (b) have cable protection (excluding cable crossings) exceeding 660,000 square metres in area;
- (c) have cable protection (excluding cable crossings) exceeding 413,000 cubic metres in volume.

10. Within Work No. 1 A, the HVAC cable crossings must not, in total, exceed—

- (a) 24 in number;
- (b) 132,700 cubic metres in volume of cable crossing material;
- (c) 147,100 square metres in seabed footprint.

11. Within Work Nos. 1A and 2A, the HVDC cable crossings must not, in total, exceed—

- (a) 16 in number;
- (b) 88,450 cubic metres in volume of cable crossing material;
- (c) 98,100 square metres in seabed footprint.

Layout rules

12.—(1) The positions of wind turbine generators and offshore platforms must be arrayed in accordance

with the parameters applicable to Work No. 1A specified in the Conditions and the principles in section 5.2 of Chapter 5 of the environmental statement.

- (2) The construction of wind turbine generators or offshore platforms must not commence until the array location and layout plan has been agreed.
- (3) The construction of wind turbine generators and offshore platforms must be carried out in accordance with the array location and layout plan.

Notifications and inspections

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

- (a) before any licensed activities or any phase of those activities (insofar as relevant to that activity or phase) are carried out under this licence, the undertaker informs the MMO of—
 - (i) the organisation undertaking the licensed activities and its primary point of contact;
 - (ii) the works being undertaken pursuant to this licence comprising those works necessary up to the point of connection with the transmission assets including (without limiting paragraph 2)—
 - (aa) up to 4 offshore collector platforms;
 - (bb) no more than 1 offshore converter platform;
 - (cc) up to 200 wind turbine generators;
 - (dd) up to 2 offshore accommodation or helicopter platforms;
 - (ee) up to 5 meteorological stations; and
 - (ff) a network of cables for the transmission of electricity and electronic communications;
 - (iii) the maximum total area and volume for any cable protection HVAC inter-array cables and HVAC inter-platform cables to be constructed within the array area; and
 - (iv) the maximum total area and volume for any cable protection to be constructed within the array area;
 - (b) all works notified under this Condition when combined with any works notified under Condition 13 of Marine Licence 2 (as defined in the Order) and Condition 10 of Marine Licences 3 and 4 (as defined in the Order) do not exceed the maximum parameters set out in Schedule 1 to the Order;
 - (c) a copy of this licence and any subsequent amendments or revisions to it is provided to—
 - (i) all agents and contractors notified to the MMO in accordance with Condition 19; and
 - (ii) the masters and transport managers responsible for the vessels notified to the MMO in accordance with that Condition; and
 - (d) within 28 days of receipt of a copy of this licence, the organisations and primary points of contact referred to in paragraph (a) provide a completed confirmation form to the MMO confirming that they have read and will comply with the terms of this licence.
- (2) Only the persons and vessels notified to the MMO in accordance with Condition 19 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;
 - (c) on board each vessel or at the office of any transport manager with responsibility for vessels from which authorised deposits are to be made.
 - (4) The documents referred to in sub-paragraph (1)(c) must be available for inspection by an enforcement officer at all reasonable times at the locations set out in sub-paragraph (3)(b).
 - (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 the construction and operation of the authorised scheme.

- (6) The undertaker must inform the MMO Marine Licensing Team and the MMO Coastal Office in writing at least 5 working days before commencement of the licensed activities or any phase of them.
- (7) At least 7 days before commencement of the licensed activities or any phase 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 phase.
- (8) The undertaker must ensure that a notice to mariners is issued at least 10 working days before commencement of the licensed activities or any phase of them advising of the commencement date of Work No. 1A 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 days of any planned operations and maintenance works and supplemented with VHF radio broadcasts agreed by the MCA in accordance with the detailed construction and monitoring programme referred to in Condition 16(b). Copies of all notices must be provided to the MMO.
- (10) The undertaker must notify—
 - (a) the United Kingdom Hydrographic Office at least 2 weeks before commencement, and no later than 2 weeks following completion, of the authorised scheme in order that all necessary amendments to nautical charts are made; and
 - (b) the MMO, MCA and Trinity House once the authorised scheme is completed and any required lighting or marking has been established.

Chemicals, drilling and debris

14.—(1) All chemicals used in the construction of the authorised scheme, including any chemical agents placed within any monopile or other foundation structure void, must 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) and managed in accordance with the chemical risk assessment and the marine pollution contingency plan.

- (2) The undertaker must ensure that any coatings and 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. Any spillages must be reported to the MMO Marine Pollution Response Team within the timeframes specified in the marine pollution contingency plan.
- (3) The undertaker must ensure that no waste concrete slurry or wash water from concrete or cement works is discharged into the marine environment and that concrete and cement mixing and washing areas are contained to prevent run-off entering the water through the freeing ports.
- (4) 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.
- (5) The undertaker must ensure that any oil, fuel or chemical spill within the marine environment is reported to the MMO Marine Pollution Response Team within the timeframes specified in the marine pollution contingency plan.
- (6) The storage, handling, transport and use of fuels, lubricants, chemicals and other substances must be undertaken so as to prevent releases into the marine environment, including bunding of 110% of the total volume of all reservoirs and containers.
- (7) 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 drill arisings must be obtained before the drilling commences, which may also require a marine licence.
- (8) The undertaker must ensure that any debris arising from the construction of the authorised scheme or temporary works placed seaward of MHWS are removed on completion of the authorised scheme.
- (9) The management of chemicals, drilling and control of debris referred to in sub-paragraphs (2) to (8) must be carried out in accordance with the chemical risk assessment and the marine pollution

contingency plan.

- (10) All dropped objects must be reported to the MMO using the dropped object form as soon as reasonably practicable and in any event within 24 hours of the undertaker becoming aware of an incident. On receipt of the dropped object form, the MMO may require relevant surveys to be carried out by the undertaker (such as side-scan sonar), and the MMO may require obstructions to be removed from the seabed at the undertaker's expense.

Force majeure

15. 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 otherwise than in accordance with Condition 17(2) because the safety of human life or of the vessel is threatened—

- (a) full details of the circumstances of the deposit must be notified to the MMO within 48 hours; and
- (b) at the reasonable request of the MMO, the unauthorised deposits must be removed at the undertaker's expense.

Pre-construction plans and documentation

16. The licensed activities or any phase of those activities must not commence until the following (insofar as relevant to that activity or phase of activity) have been submitted to and approved in writing by the MMO—

Array location and layout plan

- (a) an array location and layout plan to be agreed in writing by the MMO following consultation with Trinity House and the MCA that details—
 - (i) the number, specifications, dimensions, foundation types and depth of all wind turbine generators, substations, platforms and meteorological masts;
 - (ii) the proposed location, including grid co-ordinates of the centre point of the proposed location, for all wind turbine generators, substations, platforms and meteorological masts;
 - (iii) the proposed layout of HVAC cables; and
 - (iv) the location and specification of vessel moorings and other permanent ancillary works as agreed by the MMO,

to ensure compliance with the parameters applicable to Work No. 1A specified in the Conditions and the principles in section 5.2 of the environmental statement;

Detailed construction and monitoring programme

- (b) a detailed construction and monitoring programme, including details of—
 - (i) the proposed construction commencement date;
 - (ii) proposed timings for mobilisation of plant, delivery of materials and installation works; and
 - (iii) proposed pre-construction surveys, a proposed format and content for a baseline report, construction monitoring, post-construction monitoring and related reporting in consultation with the relevant statutory nature conservation body. The pre-construction survey programme and all pre-construction survey methodologies must be submitted to the MMO for written approval at least 4 months before commencement of any survey works detailed within;

Construction method statement

- (c) a construction method statement in accordance with the construction methods assessed in the environmental statement, including details of—
 - (i) drilling methods and arrangements for disposal of drill arisings, in accordance with the disposal scenario statement;

- (ii) platform location and installation, including scour protection and foundations which must be those that are able to be completely and safely removed, or reduced to a level below the seabed, at the time of decommissioning;
- (iii) cable installation;
- (iv) impact piling soft start procedures;
- (v) the source of rock material used in construction and method to minimise contaminants and fines;
- (vi) contractors;
- (vii) vessels;
- (viii) associated works;
- (ix) foundation scour protection requirements in a plan produced following pre- construction surveys identifying where scour protection is most likely to be required (an “intelligent scour protection management plan”); and
- (x) details of notification of the closure of the disposal site (reference number DG030) on completion of disposal activities;

Project environmental management and monitoring plan

- (d) a project environmental management and monitoring plan that details minimum environmental management requirements expected of all contractors and subcontractors with regards to marine pollution contingency, waste management and disposal, chemical risk assessment and relevant fisheries liaison matters, including 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, including information regarding how and when chemicals are to be used, stored and transported in accordance with recognised best practice guidance;
 - (iii) waste management and disposal arrangements;
 - (iv) the fisheries liaison officer, being a person appointed by the undertaker and charged with communication and liaison with the fishing industry as appropriate through the lifetime of the authorised scheme, to be notified to the marine officer for the MMO’s Northern Marine Area and the MMO Marine Licensing Team. Evidence of liaison must be collated so that signatures of attendance at meetings, agenda and minutes of meetings with the fishing industry can be provided to the MMO if requested; and
 - (v) a fisheries liaison plan in accordance with the draft fisheries liaison plan, including information on liaison with the fishing industry (including by the fisheries liaison officer referred to in subparagraph (iv)) and a co-existence plan that details how the project will be constructed and operated taking account of the fisheries industry;

Marine mammal mitigation protocol

- (e) a marine mammal mitigation protocol with appropriate monitoring surveys in accordance with the offshore in principle monitoring plan, to be agreed in writing by the MMO in consultation with the relevant statutory nature conservation body and the Royal Society of Wildlife Trusts(a), the intention of which is to prevent, amongst other things,—
 - (i) injury to marine mammals, primarily auditory injury in the vicinity of any piling;
 - (ii) disturbance to marine mammals;
 - (iii) adversely affecting the integrity, within the meaning of the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007(a), of a European offshore marine site or a European site (defined in regulations 15 and 24 of those Regulations respectively), to the extent that marine mammals are a protected feature of that site;

Cable specification and installation plan

- (f) a cable specification and installation plan, following consultation with the relevant statutory nature conservation body, including—

- (i) technical specification of 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;
- (ii) a staged cable-laying plan for the Order limits, incorporating a burial risk assessment to ascertain suitable burial depths and cable-laying techniques;
- (iii) a plan produced following pre-construction surveys identifying where scour protection is most likely to be required and providing details of the need, type, sources, quality and installation methods for scour protection and cable protection (an “intelligent scour protection management plan”); and
- (iv) details of the methodology and extent of a post-lay survey to confirm burial depths;

Offshore archaeological written scheme of investigation

- (g) an offshore archaeological written scheme of investigation in relation to the offshore areas within the Order limits in accordance with the outline offshore archaeological written scheme of investigation, industry good practice and in consultation with English Heritage, including—
 - (i) details of responsibilities of the undertaker, archaeological consultant and contractor inclusive of an agreed programme for the publication of results;
 - (ii) a methodology for any further site investigation including any specifications for geophysical, geotechnical and diver- or remotely-operated vehicle investigations;
 - (iii) within 3 months of any survey being completed, a timetable to be submitted to the
 - (iv) MMO setting out the timeframe for the analysis and reporting of survey data;
 - (v) delivery of any mitigation including, where necessary, archaeological exclusion zones;
 - (vi) monitoring during and post-construction, including a conservation programme for finds;
 - (vii) archiving of archaeological material, including ensuring that a copy of any agreed archaeological report is deposited with the English Heritage archive by submitting an English Heritage OASIS form with a digital copy of the report; and
 - (viii) a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised scheme;

Aids to navigation management plan

- (h) an aids to navigation management plan to be agreed in writing by the MMO following consultation with Trinity House and the MCA specifying—
 - (i) the aids to navigation to be established from the commencement of the authorised scheme to the completion of decommissioning;
 - (ii) the monitoring and reporting of the availability of aids to navigation; and
 - (iii) notifications and procedures for ensuring navigational safety following failures to aids to navigation.

17.—(1) Each programme, statement, plan, protocol, scheme or details required to be approved under Condition 16 must be submitted for approval at least 4 months before the intended commencement of construction, except where otherwise stated or unless otherwise agreed in writing by the MMO.

(2) The licensed activities must be carried out in accordance with the programmes, statements, plans, protocols, schemes and details approved under Condition 16.

Offshore safety management

18.—(1) Offshore works must not commence until the MMO, in consultation with the MCA,—

- (a) has given written approval for an emergency response and co-operation plan (“ERCoP”) for the authorised scheme in accordance with the MCA recommendations contained in the OREI guidance; and
- (b) has confirmed in writing that the undertaker has taken into account and adequately

addressed all MCA recommendations contained in the OREI guidance that are appropriate to the authorised scheme.

- (2) The ERCoP must be implemented as approved.
- (3) In this Condition, “OREI guidance” means MCA document MGN371 “Offshore Renewable Energy Installations (OREIs) - Guidance on UK Navigational Practice, Safety and Emergency Response Issues” and its annexes.

Reporting of engaged agents, contractors and vessels

- 19.**—(1) The undertaker must provide the name and function of any agent or contractor appointed to engage in the licensed activities or any phase of them to the MMO at least 2 weeks before agents, contractors and vessels carry out licensed activities of that phase.
- (2) Each week during the construction of the authorised scheme a completed Hydrographic Note H102 must be provided to the MMO listing the vessels currently and to be used in relation to the licensed activities.
- (3) Any changes to the supplied details must be notified to the MMO in writing before the agent, contractor or vessel engages in the licensed activities.

Equipment and operation of vessels engaged in licensed activities

- 20.**—(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 and (except in the case of remotely-operated vehicles or vessels) must comply with sub-paragraphs (2) to (5).
- (2) All motor-powered vessels must be fitted with—
- (a) an electronic positioning aid to provide navigational data;
 - (b) radar;
 - (c) an 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 may engage in the licensed activities until all the equipment specified in sub-paragraph (2) is fully operational.

Pre-construction monitoring

- 21.**—(1) The undertaker must, in discharging Condition 16(b) and the requirement to prepare a detailed construction and monitoring programme, include details for written approval by the MMO of proposed pre-construction surveys, including methodologies and timings, and a proposed format and content for a pre-construction baseline report. The survey proposals must be in accordance with the principles set out in the offshore in principle monitoring plan and must specify each survey's objectives and explain how it assists in either informing a useful and valid comparison with the post-construction position or enables the validation or otherwise of key predictions in the environmental statement. 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 must make clear what post-construction comparison is intended and the justification for this being required.
- (2) Subject to receipt from the undertaker of specific proposals pursuant to this Condition, where appropriate and necessary it is expected that the pre-construction surveys will comprise—
- (a) an appropriate survey to determine the location and reasonable extent of any benthic habitats of conservation, ecological or economic importance (including Annex 1 habitats) in whole or in part inside the areas within the Order limits in which it is proposed to carry out construction works;
 - (b) appropriate high-resolution bathymetric surveys undertaken to International Hydrographic Organisation Order IA standard and side-scan surveys of the areas within the Order limits in which it is proposed to carry out construction works, including a 500-metre buffer area around the site of each work. This must include the identification of sites of historic or archaeological interest (A1 and A3 receptors) and any unidentified anomalies larger than 5 metres in diameter (A2 receptors), which may require the refinement, removal or introduction of archaeological exclusion zones and to confirm

project- specific micro-siting requirements (for A2 receptors); and

- (c) appropriate ornithological surveys to validate predictions in the environmental statement concerning key ornithological interests of relevance to the authorised scheme as agreed by the MMO in consultation with the relevant statutory nature conservation body.

(3) The undertaker must carry out and complete the surveys to be undertaken under sub-paragraph (1) in a timescale agreed by the MMO.

Construction monitoring

22.—(1) The undertaker must, in discharging Condition 16(b), submit details for approval by the MMO of any proposed surveys or monitoring, including methodologies and timings, to be carried out during the construction of the authorised scheme.

(2) The detailed construction and monitoring programme referred to in Condition 16(b) must be submitted at least 4 months before the commencement of any survey works and provide the agreed reports in the agreed format in accordance with the agreed timetable. The survey proposals must be in accordance with the principles set out in the offshore in principle monitoring plan and must specify each survey's objectives. The construction surveys must comprise—

- (a) where driven or part-driven pile foundations (for each specific foundation type) are proposed to be used, measurements of noise generated by the installation of 1 pile from each of the first 4 structures with piled foundations, following which the MMO must determine whether further noise monitoring is required. The results of the initial noise measurements must be provided to the MMO within 6 weeks of the installation of the first relevant foundation piece. The assessment of this report by the MMO must determine whether any further noise monitoring is required;
- (b) vessel traffic monitoring by automatic identification system, including the provision of reports on the results of that monitoring periodically as requested by the MMO; and
- (c) appropriate ornithological surveys, dependent on the outcomes of the pre-construction surveys, as agreed by the MMO in consultation with the relevant statutory nature conservation body.

(3) The undertaker must carry out and complete the surveys to be undertaken under sub-paragraph (1) in a timescale agreed by the MMO.

Post-construction surveys

23.—(1) The undertaker must, in discharging Condition 16(b), submit details for written approval by the MMO of the 5 post-construction surveys proposed in sub-paragraph (2), including methodologies and timings, and a proposed format, content and timings for providing reports on the results at least 4 months before commencement of any survey works detailed within. The survey proposals must be in accordance with the principles set out in the offshore in principle monitoring plan and specify each survey's objectives and explain how it assists in either informing a useful and valid comparison with the pre-construction position or enables the validation or otherwise of key predictions in the environmental statement.

(2) Subject to receipt of specific proposals, it is expected that the post-construction surveys will comprise—

- (a) appropriate ornithological surveys to validate predictions in the environmental statement concerning key ornithological interests of relevance to the authorised scheme as agreed by the MMO in consultation with the relevant statutory nature conservation body;
- (b) appropriate high-resolution bathymetric surveys undertaken to International Hydrographic Organisation Order IA standard and side-scan sonar surveys, around the areas within the Order limits in which construction works were carried out, including a 500- metre buffer area around the site of each work. For this purpose, the undertaker must before the first survey submit a desk-based assessment (that takes into account all factors that influence scour) to identify the sample of infrastructure locations that are

considered appropriate with greatest potential for scour. The survey must be used to validate the desk-based assessment. Further surveys may be required if there are significant differences between the modelled scour and recorded scour;

- (c) dependent on the outcome of the surveys undertaken under Condition 21(2)(a), appropriate surveys to determine the effects of construction activity on any benthic habitats of conservation, ecological or economic importance (including Annex 1 habitats) in whole or in part inside the areas within the Order limits to validate predictions made in the environmental statement and to identify the presence of any non-native species and wider community type structure;
 - (d) vessel traffic monitoring by automatic identification system totalling a maximum of 28 days taking account of seasonal variations in traffic patterns over 1 year, following the commencement of commercial operation. A report must be submitted to the MMO and the MCA following the end of the monitoring; and
 - (e) appropriate surveys to determine the change in size and form of the drill disposal mounds over the lifetime of the authorised scheme.
- (3) The undertaker must carry out the surveys under sub-paragraph (1) and provide the reports in the agreed format in accordance with the timetable agreed in writing by the MMO following consultation with the relevant statutory nature conservation body.

Offshore maintenance plan

- 24.—(1) The undertaker must, at least 4 months before commissioning the licenced activities, submit for written approval by the MMO an offshore maintenance plan based on the maintenance assessed in accordance with the environmental statement in the outline offshore maintenance plan.
- (2) An update to the offshore maintenance plan must be submitted for approval every 3 years, or sooner in the event of any proposed major revision to planned maintenance activities or the adoption of any new technologies or techniques applicable to programmed maintenance.
- (3) Maintenance must be carried out in accordance with the approved offshore maintenance plan.

Aids to navigation

25. The undertaker must 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 directed by Trinity House.

26. The undertaker must submit reports quarterly to Trinity House detailing the working condition of aids to navigation. Reports may be requested more frequently by Trinity House, and must be submitted by the undertaker as requested.

27. The undertaker must notify Trinity House and the MMO of any failure of aids to navigation as soon as possible and no later than 24 hours following the detection of the failure.

28. Following notification of a failure of aids to navigation, the undertaker must as soon as practicable notify Trinity House and the MMO of a timescale and plan for remedying the failure.

29. The undertaker must paint all structures that are part of the authorised scheme yellow (colour code RAT 1023) from at least HAT to a height as directed by Trinity House.

30. In case of damage to, or destruction or decay of, the authorised scheme or any part of it, the undertaker must as soon as possible and no later than 24 hours following the identification of damage, destruction or decay, notify Trinity House and the MMO.

31. The undertaker must lay down such buoys, exhibit such lights and take such other steps for preventing danger to navigation as directed by Trinity House.

Progress of authorised scheme

32. The undertaker must keep Trinity House, the MCA and the MMO informed of progress of the

authorised scheme including—

- (a) notice of commencement of construction of the authorised scheme within 24 hours of commencement having occurred;
- (b) notice within 24 hours of any aids to navigation being established by the undertaker;
and
- (c) notice within 5 working days of completion of construction of the authorised scheme.

Amendments to plans, etc.

33.Where any Condition requires licensed activities to be carried out in accordance with any programme, statement, plan, protocol, scheme, details or arrangements approved by the MMO, the approved programme, statement, plan, protocol, scheme, details or arrangements must be taken to include any amendments that may subsequently be approved in writing by the MMO (after consulting any person that the MMO is required to consult under the relevant Condition).