

SCHEDULE 8

Deemed Marine Licences under the Marine and Coastal Access Act 2009 – Deemed Marine Licence 1

PART 1

Licensed marine activities

Interpretation

1.—(1) In this licence—

“the 2008 Act” means the Planning Act 2008;

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

“ancillary vessel” means any vessel other than a construction vessel or a survey vessel;

“ancillary works” means the ancillary works described in paragraph 2 of this Part of this licence which are not development within the meaning of section 32 of the 2008 Act;

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

“authorised deposits” means the substances and articles specified in paragraph 2(3) of Part 1 of this licence;

“authorised development” means the development described in Part 1 of Schedule 1 of the Order, which is development within the meaning of section 32 of the 2008 Act;

“authorised project” means the authorised development and the ancillary works authorised by the Order;

“authorised scheme” means Work No. 1 described in paragraph 2 of this Part of this licence;

“commence” means the first carrying out of any part of the licensed activities, save for pre-construction surveys and monitoring, and “commencement” shall be construed accordingly;

“construction vessel” means any vessel involved in the course of or used for the construction and/or maintenance of the authorised project;

“debris” means items or equipment of a significant size left on the seabed being lost from survey or construction vessels;

“electrical circuit” means a number of electrical conductors necessary to transmit electricity between two points within the authorised project; this comprises, in the case of HVAC transmission, three conductors which may be bundled as one cable, and, in the case of HVDC transmission two conductors, which may be attached together or take the form of single cables: the circuit may include one or more auxiliary cables (normally fibre optic cables) for the purpose of control, monitoring, protection or general communications;

“enforcement officer” means a person authorised to carry out enforcement duties under Part 4, Chapter 3 of the 2009 Act;

“the Environmental Statement” means the document certified as the environmental statement by the Secretary of State for the purposes of the Order;

“gravity base foundation” means either—

- (a) a structure principally of concrete and/or steel which rests on the seabed due either to its own weight and that of added ballast or to the weight of water above it, and may include associated equipment including suction piles, J-tubes and access platforms; or

(a) O.J. No.L 206, 22.7.1992, p.7, last amended by Council Directive 2013/17/EU (OJ No L 158, 10.6.2013, p193).

(b) a structure principally of concrete and/or steel consisting of a platform supported on two pontoons to which the platform is connected by columns which may be connected by braces;

“HVAC” means high voltage alternating current;

“HVDC” means high voltage direct current;

“inter-array electrical circuits” means the circuits described in paragraph 2(2)(b) of Part 1 of this licence;

“jacket foundation” means a lattice construction comprising tubular members and joints which are fixed to the seabed with piles (either driven/drilled piles or suction piles) and which will include platforms and J-tubes and may include braced monopiles and a transition piece;

“the 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 Part 1 of this licence;

“the licence conditions” means the conditions set out in Part 2 of this licence;

“licence-holder” means Hornsea 1 Limited;

“maintain” includes, to the extent assessed in the environmental statement—

(a) inspect, repair, adjust and alter; and

(b) in respect of any of the ancillary works and any component part of any wind turbine generator, offshore accommodation platform, offshore HVAC collector substation, offshore HVDC converter station or offshore reactive compensation substation described in Part 1 of Schedule 1 (authorised development) of the Order also includes remove, reconstruct and replace,

but does not include the alteration, removal or replacement of foundations; and “maintenance” shall be construed accordingly;

“the Marine Management Organisation” or “MMO” means the body created under the 2009 Act which is responsible for the monitoring and enforcement of this licence or any successor to its statutory functions;

“the Maritime and Coastguard Agency” or “MCA” means the executive agency of the Department for Transport or any successor to its statutory functions;

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

“mean low water springs” or “MLWS” means the lowest level which spring tides reach on average over a period of time;

“monopile foundation” comprises a large diameter steel or concrete tube or pile driven vertically into the seabed, J-tubes and platforms and may include external structural devices such as bracing members or steel anchor wires and a transition piece;

“Natural England” means the body established by section 1 of the Natural Environment and Rural Communities Act 2006 or any successor to its statutory functions;

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

“offshore accommodation platform” means a platform housing or incorporating temporary accommodation, landing ports for vessels and/or helicopters, standby electricity generation equipment, marking and lighting and other equipment facilities to assist in the co-ordination of marine activities related to the authorised scheme;

“offshore HVAC collector substation” means a structure serving as a collection point for the inter-array electrical circuits and containing equipment with the purpose of transforming the electricity generated at the wind turbines to a higher voltage; it may also include a helicopter platform;

“offshore HVDC converter station” means a structure which contains equipment to convert HVAC electricity to HVDC electricity; it may also include a helicopter platform;

“the offshore works plans” means the part of the works plans described as the offshore works plans;

“the Order limits” means the limits shown on the works plans within which the authorised project may be carried out;

“the Order” means the Hornsea One Offshore Wind Farm Order 2014;

“the project description” means the document certified as the project description by the Secretary of State for the purposes of the Order and submitted with the application on 30th July 2013 (Chapter Three, Volume One of the Environmental Statement);

“suction pile” 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 weight and hydrostatic pressure differential;

“survey vessels” means the vessels licensed to carry out environmental or engineering surveys;

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

“the UK Hydrographic Office” means the Hydrographic Office of the Ministry of Defence, Taunton, Somerset TA1 2DN or any replacement body or successor to its functions;

“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 and including ancillary vessels and construction vessels;

“VHF” means very high frequency;

“Wind Farm Area 1” means the area within the limits of deviation for Work No. 1 of which the co-ordinates are specified in Part 1 of Schedule 1 of the Order and shown on the works plans;

“Wind Farm Area 2” means the area within the limits of deviation for Work No. 2 of which the co-ordinates are specified in Part 1 of Schedule 1 of the Order and shown on the works plans;

“Wind Farm Area 3” means the area within the limits of deviation for Work No. 3 of which the co-ordinates are specified in Part 1 of Schedule 1 of the Order and shown on the works plans;

“wind turbine generator” or “wind turbine” means a structure comprising any or all of a tower, rotor, blades, nacelle and ancillary electrical and other equipment or structures which may include lighting and a helicopter platform, fixed to a foundation;

“working day” means any day other than a Saturday, Sunday or public holiday in England and Wales;

“Work No. 1” means an offshore wind generating station within Wind Farm Area 1 and described as Work No. 1 in paragraph 2 of Part 1 of this licence;

“Work No. 2” means an offshore wind generating station within Wind Farm Area 2 and described as Work No. 2 in Part 1 of Schedule 1 of the Order;

“Work No. 3” means an offshore wind generating station within Wind Farm Area 3 and described as Work No. 3 in Part 1 of Schedule 1 of the Order;

“Work No. 4” means up to five offshore HVAC collector substations and, in the event that the mode of transmission is HVDC, up to two offshore HVDC converter stations together with a network of electrical circuits connecting the structures within Work No. 4;

“the works plans” means the plans certified as the works plans by the Secretary of State for the purposes of the Order divided into three parts and described as the offshore works plans, the intertidal works plans and the onshore works plans.

(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, minutes and seconds to three decimal places in WGS84 Datum.

(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

Marine Licensing Team

Lancaster House

Hampshire Court

Newcastle upon Tyne

NE4 7YH

Tel: 0300 123 1032

Email: marine.consents@marinemanagement.org.uk

- (b) Marine Management Organisation (referred to as the “MMO Coastal Office”)

Estuary House

Wharnccliffe Road

Grimsby

Lincolnshire

DN31 3QL

Tel: 01472 355 112

- (c) Trinity House

Tower Hill

London

EC3N 4DH

Tel: 020 7481 6900

- (d) The United Kingdom Hydrographic Office

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 OHT

Tel: 01502 562 244

(g) Natural England

Foundry House

3 Millsands

Riverside Exchange

Sheffield

S3 8NH

Tel: 0300 060 4911

(h) Joint Nature Conservation Committee

Inverdee House

Baxter Street

Aberdeen

AB11 9QA

Tel: 01224 266 550

(i) English Heritage

Eastgate Court

195-205 High Street

Guildford

GU1 3EH

Tel: 01483 252 057

Details of licensed activities

2.—(1) This licence authorises the licence-holder (and any agent or contractor acting on their behalf) to carry out the following licensable marine activities pursuant to section 66(1) of the 2009 Act, subject to the licence 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) dredging;
- (d) the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation;
- (e) the disposal at disposal site reference HU206 (Hornsea Project One Subzone 1) of—
 - (i) in the event that an offshore accommodation platform is constructed under this licence up to 434,004 m³ or, if no part of Work No.3 is constructed, up to 641,385 m³, of inert material of natural origin produced during construction drilling and seabed preparation for foundation works comprised in Work No. 1; or
 - (ii) in the event that no offshore accommodation platform is constructed under this licence up to 414,762 m³ or, if no part of Work No.3 is constructed, up to 622,143 m³, of inert material of natural origin produced during construction drilling and seabed preparation for foundation works comprised in Work No. 1; and
- (f) the removal of the substances and articles specified in sub-paragraph (3) below.

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

Work No. 1 — an offshore wind generating station within Wind Farm Area 1, whose coordinates constitute the limits of deviation for Work. No.1 and are specified in Table 1, comprising—

- (a) up to 80 or, if no part of Work No. 3 is constructed, up to 120 wind turbine generators fixed to the seabed;
- (b) a network of subsea inter-array electrical circuits connecting the structures comprised in Work No. 1—
 - (i) with each other;
 - (ii) with any other structure located within Wind Farm Area 1; and
 - (iii) (for the purpose of connecting any structure comprised in Work No. 1 with any structure comprised in Works Nos. 2, 3 and 4) with the network of electrical circuits comprised in Works Nos. 2, 3 and 4;
- (c) up to one offshore accommodation platform fixed to the seabed which may be connected to one of the offshore HVAC collector substations or offshore HVDC converter stations within Work No. 4 by an unsupported steel bridge, provided that the combined total of offshore accommodation platforms constructed in whole or in part within Works Nos. 1, 2 and 3 does not exceed two.

Table 1: Co-ordinates for Wind Farm Area 1 (limits of deviation for Work No. 1)

<i>Point</i>	<i>Latitude</i>	<i>Longitude</i>
1	53° 58' 42.179" N	1° 44' 31.880" E
2	53° 55' 46.445" N	1° 47' 47.796" E
3	53° 55' 53.992" N	1° 48' 39.422" E
4	53° 54' 58.313" N	1° 47' 32.926" E
5	53° 54' 17.250" N	1° 48' 17.274" E
6	53° 53' 31.505" N	1° 47' 33.690" E
7	53° 52' 09.910" N	1° 47' 42.124" E
8	53° 51' 28.123" N	1° 49' 07.614" E
9	53° 51' 13.307" N	1° 48' 03.216" E
10	53° 50' 42.649" N	1° 47' 48.974" E
11	53° 50' 02.841" N	1° 47' 41.467" E
12	53° 50' 05.118" N	1° 38' 58.430" E
13	53° 55' 09.293" N	1° 39' 52.024" E
14	53° 56' 03.228" N	1° 41' 00.143" E
15	53° 56' 29.670" N	1° 43' 45.592" E
16	53° 58' 17.828" N	1° 41' 46.795" E
17	53° 58' 42.179" N	1° 44' 31.880" E

In connection with such Work No. 1, further associated development as may be necessary or expedient in connection with the authorised scheme within the Order limits and which fall within the scope of the environmental impact assessment recorded in the Environmental Statement;

In connection with such Work No. 1, ancillary works consisting of works and operations within the Order limits comprising temporary anchorage of vessels and 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; and
 - (f) material extracted from within Wind Farm Area 1 during construction drilling and seabed preparation for foundation works.

(4) The grid co-ordinates for disposal site reference HU206 (Hornsea Project One Subzone 1) are specified in Table 2.

Table 2: Co-ordinates for disposal site HU206

<i>Point</i>	<i>Latitude</i>	<i>Longitude</i>
1	53° 58' 42.179" N	1° 44' 31.880" E
2	53° 55' 46.445" N	1° 47' 47.796" E
3	53° 56' 22.870" N	1° 51' 57.409" E
4	53° 55' 31.318" N	1° 52' 54.282" E
5	53° 55' 37.592" N	1° 53' 38.108" E
6	53° 55' 23.329" N	1° 55' 20.262" E
7	53° 55' 8.162" N	1° 56' 10.619" E
8	53° 55' 35.429" N	1° 59' 20.944" E
9	53° 55' 2.525" N	1° 59' 45.776" E
10	53° 55' 22.663" N	2° 2' 14.219" E
11	53° 56' 16.303" N	2° 1' 15.269" E
12	53° 56' 46.586" N	2° 5' 4.031" E
13	53° 57' 12.481" N	2° 4' 32.376" E
14	53° 57' 24.509" N	2° 6' 6.700" E
15	53° 50' 10.018" N	2° 13' 57.158" E
16	53° 49' 14.297" N	2° 11' 36.820" E
17	53° 49' 58.584" N	1° 59' 54.762" E
18	53° 49' 58.944" N	1° 58' 59.804" E
19	53° 50' 5.118" N	1° 38' 58.430" E
20	53° 55' 9.293" N	1° 39' 52.024" E
21	53° 56' 3.228" N	1° 41' 0.143" E
22	53° 56' 29.670" N	1° 43' 45.592" E
23	53° 58' 17.828" N	1° 41' 46.795" E

(5) The provisions of section 72 of the 2009 Act shall apply to this licence, save that the provisions of section 72(7) and 72(8) relating to the transfer of the licence shall only apply to a transfer not falling within article 34 of the Order.

Duration

3. 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 Energy Act 2004, 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.

PART 2

Licence conditions

Design parameters

- 1.—(1) All wind turbine generators forming part of Work No. 1 must not—
- (a) be less than 82 metres to the turbine hub when measured from MHWS;
 - (b) exceed a height of 200 metres from MHWS to the upper tip of the vertical blade;
 - (c) exceed a rotor diameter of 178 metres;

- (d) be less than 22 metres from MHWS to the lowest point of the rotating blade; or
- (e) be less than 924 metres from the nearest wind turbine generator in all directions.

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

2. Any offshore accommodation platform forming part of Work No. 1 must not—

- (a) exceed 60 metres in height above MHWS;
- (b) have a platform which at its greatest extent exceeds, 3,600 m² or 60 metres in width.

3. The diameter of the electrical circuits comprising the electrical circuits within Work No. 1 must not exceed 170 mm.

4. The electrical circuits comprised in Work No. 1 must be installed by use of, or a combination of, ploughing, trenching, jetting, rock-cutting, dredging, surface laying with post lay burial, and where ground conditions make burial impracticable, by surface laying.

5.—(1) The licence-holder must in fixing to the seabed any structures comprised in Work No. 1 use one of the following methods—

- (a) monopile foundations;
- (b) jacket foundations supported by piles; or
- (c) gravity base foundations.

(2) The following parameters apply in respect of the foundation methods used to fix wind turbine generators comprised in Work No. 1 to the seabed—

- (a) where monopile foundations are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 1,419 m²;
 - (ii) the diameter of each foundation must not exceed 8.5 metres;
- (b) where jacket foundations (driven/drilled piles) are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 707 m² per wind turbine;
 - (ii) the number of piles per jacket must not exceed four;
 - (iii) the diameter of each pile must not exceed three metres;
- (c) where jacket foundations (suction piles) are used—
 - (i) the area occupied by the foundations and scour protection for each individual structure must not exceed 6,362 m²;
 - (ii) the number of piles per jacket must not exceed four;
 - (iii) the diameter of each pile must not exceed 15 metres;
- (d) where gravity base foundations are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 6,362 m²;
 - (ii) the seabed levelling diameter must not exceed 70 metres;
 - (iii) the cone diameter must not exceed 50 metres at its base.

(3) The following parameters apply in respect of the foundation methods used to fix offshore accommodation platforms comprised in Work No. 1 to the seabed—

- (a) where monopile foundations are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 1,419 m²;
 - (ii) the diameter of each foundation must not exceed 8.5 metres;
- (b) where jacket foundations (driven/drilled piles) are used—

- (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 1,414 m²;
- (ii) the number of piles must not exceed eight;
- (iii) the diameter of each pile must not exceed three metres;
- (c) where jacket foundations (suction piles) are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 6,362 m²;
 - (ii) the number of piles per jacket must not exceed eight;
 - (iii) the diameter of each pile must not exceed 15 metres;
- (d) where gravity base foundations are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 6,362 m²;
 - (ii) the seabed levelling diameter must not exceed 70 metres;
 - (iii) the cone diameter must not exceed 50 metres at its base.

(4) The combined total volume of scour protection for the wind turbine generators and the offshore accommodation platform forming part of Work No. 1 must not exceed 1,079,839 m³ or, if no part of Work No.3 is constructed, must not exceed 1,613,093 m³.

(5) In the event that no offshore accommodation platform is constructed under this licence, the combined total volume of scour protection for the wind turbine generators forming part of Work No. 1 must not exceed 1,066,508 m³ or, if no part of Work No. 3 is constructed, must not exceed 1,599,762 m³.

Notifications and inspections

6.—(1) The licence-holder shall ensure that—

- (a) a copy of this licence and any subsequent amendments or revisions to it are provided to—
 - (i) all agents and contractors notified to the MMO in accordance with the conditions of this licence; and
 - (ii) the masters and transport managers responsible for the vehicles notified to the MMO in accordance with the conditions of this licence.
- (b) Within 28 days of receipt of a copy of this licence those persons referred to in subparagraph (a) shall provide a completed confirmation form to the MMO confirming their understanding of the terms and conditions of this licence.

(2) Only those persons and vessels notified to the MMO in accordance with condition 16 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 licence-holder's registered address;
- (b) any site office located at or adjacent to the construction site and used by the licence-holder or its agents and contractors responsible for the loading, transportation or deposit for 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 are to be made.

(4) The documents referred to in paragraph (1)(a) shall be available for inspection by an enforcement officer at the locations set out in paragraph (3) above at any time.

(5) The licence-holder 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 licence-holder must inform the MMO in writing at least five working days prior to the commencement of the licensed activities or any phase of them.

(7) Prior to the commencement of the licensed activities the licence-holder must publish in the Kingfisher Fortnightly Bulletin details of the vessel routes, timings and locations relating to the construction of the authorised scheme.

(8) The licence-holder shall ensure that a Notice to Mariners is issued at least ten days prior to the commencement of the licensed activities advising of the commencement of licensed activities within Wind Farm Area 1 and the expected vessel routes from the local service ports to the turbine locations.

(9) The Notices to Mariners must be updated and reissued not less frequently than weekly and supplemented with VHF radio broadcasts agreed with the MCA in accordance with the construction and monitoring programme approved under licence condition 13(2)(a). Copies of all notices shall be provided to the MMO.

(10) The licence-holder must notify—

- (a) the UK Hydrographic Office of 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 once the authorised scheme is completed and any required lighting or marking has been established.

Aids to navigation

7. The licence-holder must during the whole period from the start of construction of the authorised scheme seaward of MHWS to the completion of decommissioning—

- (a) 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;
- (b) colour all structures in the authorised scheme as directed by Trinity House;
- (c) notify Trinity House as soon as reasonably practicable of both the progress and completion of the authorised scheme (or any phase of it) and any aids to navigation established from time to time;
- (d) provide reports on the working condition of aids to navigation periodically as requested by Trinity House;
- (e) notify Trinity House and the MMO of any failure of the aids to navigation and the timescales in which such failure will be remedied, as soon as possible and no later than 24 hours following the licence-holder becoming aware of any such failure.

Provision against danger to navigation

8. In case of injury to, or destruction or decay of, the authorised scheme or any part of it seaward of MHWS the licence-holder must as soon as reasonably practicable, and no later than 24 hours following the licence-holder becoming aware of any such injury, destruction or decay, notify Trinity House and must lay down such buoys, exhibit such lights and take such other steps for the prevention of danger to navigation as Trinity House may from time to time direct.

Navigational Practice, Safety and Emergency Response

9.—(1) No part of the authorised project may commence until the MMO, in consultation with the MCA, has given written approval for an Emergency Response Co-operation Plan (ERCoP) which includes full details of the emergency response co-operation plans for the construction, operation and decommissioning phases of that part of the authorised project in accordance with the MCA recommendations contained within MGN543 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues”.

(2) The ERCoP and associated guidance and requirements must be implemented as approved, unless otherwise agreed in writing by the MMO in consultation with the MCA. The document must be reviewed at least annually or whenever changes are identified, whichever is sooner, and any proposed changes must be submitted to the MMO in writing for approval, in consultation with MCA.

(3) No authorised scheme seaward of MHWS is to commence until the Secretary of State, in consultation with the MCA, has confirmed in writing that the licence-holder has taken into account and, so far as is applicable to that stage of the development, adequately addressed all MCA recommendations as appropriate to the authorised scheme contained within MGN 371 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues” (including its annexes).

(4) *This paragraph has been deleted.*

(4) The licence-holder must during the whole period from the start of construction of the authorised scheme seaward of MHWS to the completion of decommissioning provide relevant information to the MCA to assist in the timely and efficient issuing of notices to mariners and other navigational warnings of the position and nature of the works, such information to be provided to mariners in the shipping and fishing industry as well as to recreational mariners.

Colour and lighting

10. Except as otherwise required by Trinity House under condition 7, the licence-holder must colour all structures comprised in Work No. 1 submarine grey (colour code RAL 7035).

Chemicals, drilling and debris

11.—(1) All chemicals used in the construction of the authorised scheme 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) (as amended), unless otherwise agreed in writing by the MMO.

(2) The licence-holder shall ensure that any coatings or treatments are suitable for use in the marine environment and are used in accordance with guidelines approved by 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 per cent 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 shall be obtained before the drilling commences, which disposal may also require a marine licence.

(5) The licence-holder shall 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, where practicable.

(6) All dropped objects must be reported to the MMO using the Dropped Object Procedure 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 Procedure Form, the MMO may require relevant surveys to be carried out by the undertaker (such as side scan sonar) if reasonable to do so and the MMO may require obstructions to be removed from the seabed at the undertaker’s expense if reasonable to do so. The licence-holder shall inform the MMO of the location and quantities of inert material disposed of each month under this licence, by submission of a disposal return by 31st January each year for disposals occurring during the months July to December inclusive of the preceding year, and by 31st July each year for disposals occurring during the months January to June inclusive of that year.

(a) 2002/1355, as amended by S.I. 2011/982. There are amendments to instrument not relevant to this Order.

(7) *This paragraph has been deleted.*

(8) *This paragraph has been deleted.*

(9) The licence-holder shall inform the MMO of the location and quantities of inert material disposed of each month under this licence, by submission of a disposal return by 31st January each year for disposals occurring during the months July to December inclusive of the preceding year, and by 31st July each year for disposals occurring during the months January to June inclusive of that year.

(10) The licence-holder shall ensure that only inert material of natural origin, produced during construction drilling and seabed preparation for foundation works comprised in Work No. 1, and drilling mud shall be disposed of at disposal site reference HU206 (Hornsea Project One Subzone 1).

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

(12) The licence-holder shall 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.

Force majeure

12. If, due to stress of weather or any other cause, the master of a vessel determines that it is necessary to deposit—

- (a) authorised deposits outside of Wind Farm Area 1 or disposal site reference HU206 (Hornsea Project One Subzone 1); or
- (b) unauthorised deposits within or outside of Wind Farm Area 1 or disposal site reference HU206 (Hornsea Project One Subzone 1),

because the safety of human life and/or of the vessel is threatened, full details of the circumstances of the deposit shall be notified to the MMO within 48 hours.

Pre-construction plans and documentation

13.—(1) The licensed activities shall 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—

- (a) to ensure conformity with the description of Work No. 1 and compliance with licence conditions 1 to 5 above, a plan, to be agreed in writing with the MMO in consultation with Trinity House and the MCA, which shows—
 - (i) the proposed location and choice of foundation of all wind turbine generators and offshore accommodation platforms, subject to any micro-siting required due to anthropological constraints, environmental constraints, difficult ground conditions or to give adequate spacing between other infrastructure;
 - (ii) the proposed location and height of bridge links;
 - (iii) 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;
 - (iv) whether an accommodation platform will be built as part of Work No. 1 and, if so, the height, length and width of that offshore accommodation platform;
 - (v) the length and arrangement of all electrical circuits comprising Work No. 1 subject to any micro-siting required due to anthropological constraints, environmental constraints or difficult ground conditions;
 - (vi) the proposed dimensions of all monopile foundations;
 - (vii) the proposed dimensions of all gravity base foundations;
 - (viii) the proposed dimensions of all jacket foundations; and

- (ix) the proposed layout of all wind turbine generators and any offshore accommodation platform including all exclusion zones comprised in the licensed activities and showing the indicative programming of particular works as set out in the indicative programme to be provided under paragraph (2)(a).
- (2) The licensed activities, or any phase of those activities, shall not commence until a Code of Construction Practice incorporating the following (insofar as relevant to that activity or phase of activity) has been submitted to and approved in writing by the MMO—
- (a) 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; and
 - (iii) proposed pre-construction surveys, baseline report format and content, construction monitoring, post construction monitoring, and related reporting in accordance with licence conditions 18 to 20. The pre-construction survey programme and all pre-construction survey methodologies shall be submitted to the MMO at least four months prior to the commencement of any survey works detailed within;
 - (b) a construction method statement in accordance with the project description and Environmental Statement and including details of—
 - (i) foundation installation, including any seabed preparation, drilling and disposal of arisings methods;
 - (ii) turbine installation, including any seabed preparation and scour protection;
 - (iii) installation of any offshore accommodation platform, including any seabed preparation and scour protection;
 - (iv) circuit installation, including any seabed preparation and circuit protection;
 - (v) contractors;
 - (vi) vessels; and
 - (vii) associated works;
 - (c) 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 below MHWS;
 - (ii) a chemical risk analysis 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 and disposal arrangements;
 - (iv) offshore project maintenance plans including offshore electrical circuit maintenance;
 - (v) locations of any archaeological exclusion zones agreed as part of the written scheme of archaeological investigation approved under sub-paragraph (g);
 - (vi) the appointment and responsibilities of a fisheries liaison officer and an environmental liaison officer; and
 - (vii) a disposal plan detailing the locations, methods and timings of dredging and disposal, as well as disposal site monitoring requirements;
 - (d) a scour protection management and cable armouring plan providing details of the need, type, sources, quantity, location and installation methods for scour protection and cable armouring to be within the scope of the environmental impact assessment recorded in the Environmental Statement;
 - (e) in the event that driven or part-driven pile foundations are proposed to be used, a marine mammal mitigation protocol following current best practice as advised by the statutory nature conservation agencies, to include, but not be limited to—

- (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; and
- (vi) where appropriate, methods for the application of acoustic deterrent devices;
- (f) cable specification and installation plan, to include—
 - (i) technical specification of offshore electrical circuits, 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, including geotechnical data, cable laying techniques and a cable burial risk assessment encompassing the identification of any cable protection which exceeds 5% of navigable depth referenced to Chart Datum and, in the event that any area of cable protection exceeding 5% of navigable depth is identified, details of any steps (to be determined following consultation with the MCA) to be taken to ensure existing and future safe navigation is not compromised;
- (g) a written scheme of archaeological investigation in relation to Wind Farm Area 1 in accordance with industry good practice to include—
 - (i) details of responsibilities of the licence-holder, 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 to be submitted to the MMO within four months of survey completion;
 - (iv) delivery of any mitigation including, where necessary, archaeological exclusion zones;
 - (v) monitoring during and post construction, including a conservation programme for finds;
 - (vi) archiving of archaeological material; and
 - (vii) a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised scheme;
- (h) a marine mammal monitoring plan setting out the circumstances in which marine mammal monitoring will be required and the monitoring to be carried out in such circumstances; and
- (i) an offshore project maintenance plan to be submitted to the MMO at least four months prior to commencement of the operation of the licensed activities and to include provision for the review and resubmission of the plan every three years during the operational phase.

(3) Prior to the submission of the pre-construction plans and documentation required by this condition the licence-holder must provide a copy of the plans and documentation to the other undertakers listed in Article 3 of the Order.

(4) The other undertakers must provide any comments on the plans and documentation to the undertaker within 14 days of receipt of the plans and documentation.

(5) The licence-holder shall participate in liaison meetings with other undertakers listed in Article 3 of the Order as requested from time to time by the MMO in writing in advance, which meetings shall be chaired by the MMO and shall consider such matters as are determined by the

MMO relating to the efficient operation of a deemed marine licence where it has an impact on the efficient operation of any other deemed marine licence issued under the Order (including as varied or transferred).

(6) Prior to giving its approval under paragraph (2), the MMO must—

- (a) in relation to any programme, statement, plan or protocol submitted under sub-paragraphs (a) to (e) or (h), consult with the relevant statutory nature conservation body; and
- (b) in relation to a scheme submitted under sub-paragraph (g), consult with English Heritage.

14. The licence-holder shall ensure that a copy of any agreed archaeological report is deposited with the National Record of the Historic Environment, by submitting an English Heritage OASIS form with a digital copy of the report.

15.—(1) Each programme, statement, plan, protocol or scheme required to be approved under condition 13—

- (a) shall be submitted for approval at least four months prior to the intended start of construction, except where otherwise stated or where an alternative date is agreed in writing by the MMO; and
- (b) shall be accompanied by—
 - (i) a statement confirming that the licence-holder has complied with condition 13(3) in relation to such programme, statement, plan, protocol or scheme; and
 - (ii) any comments received by the licence-holder under condition 13(4), or a statement from the licence-holder confirming that no such comments were received.

(2) The licence-holder shall comply with all documents approved under licence condition 13 in carrying out the licensed activities except to the extent agreed in writing by the MMO.

(3) Prior to agreeing an alternative date under paragraph (1)(a) or a change to approved details under paragraph (2) relating to any document in respect of which consultation is required under condition 13(6), the MMO must consult with the relevant consultation body referred to in that condition.

Reporting of engaged agents, contractors and vessels

16.—(1) The licence-holder shall provide the following information to the MMO—

- (a) the name and function of any agent or contractor appointed to engage in the licensed activities at least five working days prior to the commencement of the licensed activities or any part of them; and
- (b) each week during the construction of the authorised scheme, a completed Hydrographic Note H102 listing the construction 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 and MMO Coastal Office in writing prior to the agent, contractor or vessel engaging in the licensed activities. All agents, contractors and/or vessel operators will abide by the conditions set out in this licence.

Equipment and Operation of Vessels Engaged in Licensed Activities

17.—(1) All vessels employed to perform the licensed activities shall be constructed and equipped to be capable of the proper performance of such activities in accordance with the conditions of this licence and shall comply with paragraphs (2) to (6).

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

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

(3) No radio beacon or radar beacon operating on the marine frequency bands shall be installed or used without the prior written approval of the Secretary of State.

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

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

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

Pre-construction monitoring and surveys

18.—(1) The licence-holder must, when submitting details under condition 13(2)(a)—

- (a) in relation to proposed pre-construction surveys, include methodologies and timings, and 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) in relation to the baseline report proposals, 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) Subject to receipt from the licence-holder of specific proposals pursuant to this condition, it is expected that the pre-construction surveys will comprise, in outline—

- (a) a high resolution swath bathymetric survey to include a 100% coverage and a side scan sonar survey of the part(s) of Wind Farm Area 1 in which it is proposed to carry out construction works and disposal activities under this licence, including a 500m buffer around the site of each works;
- (b) a survey of existing ornithological activity covering the part(s) of Wind Farm Area 1 within which it is proposed to carry out construction works under this licence, 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;
- (c) a survey to determine the location, extent and composition of any benthic habitats of conservation, ecological and/or economic importance in the part(s) of Wind Farm Area 1 in which it is proposed to carry out construction works under this licence; and
- (d) any marine mammal monitoring required by the marine mammal monitoring plan submitted in accordance with condition 13(2)(h).

Construction monitoring

19.—(1) The licence-holder must, when submitting details of proposed construction monitoring under condition 13(2)(a), include methodologies and timings, and a proposed format, content and timings for providing reports on the results. 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 pre-construction position and/or will enable the validation or otherwise of key predictions in the Environmental Statement.

(2) Subject to receipt from the licence-holder of specific proposals pursuant to this condition, it is expected that the construction monitoring will comprise, in outline—

(3) except to the extent agreed in writing by the MMO, measurements of noise generated by the installation of the first four foundations of each discrete foundation type to be constructed under this licence where driven or part-driven pile foundations are used; and

(4) recording of any visual sightings or acoustic detection of marine mammals where required as part of the marine mammal mitigation protocol under condition 13(2)(e).

(5) The results of the initial noise measurements monitored in accordance with paragraph (2)(a) must be provided to the MMO within six weeks of the installation of the first four foundations

of each discrete foundation type. The assessment of this report by the MMO shall determine whether any further noise monitoring is required.

(6) Construction monitoring shall include vessel traffic monitoring by Automatic Identification System for the duration of the construction period. A report will be submitted to the MMO and the MCA at the end of each year of the construction period.

Post construction

20.—(1) The licence-holder must, when submitting details of proposed post-construction surveys under condition 13(2)(a), include methodologies and timings, and a proposed format, content and timings for providing reports on the results. 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) Subject to receipt of specific proposals, it is expected that the post-construction surveys will comprise, in outline—

- (a) an ornithological survey covering the part(s) of Wind Farm Area 1 within which construction works were carried out under this licence, 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;
- (b) a high resolution swath bathymetric survey of the following to assess any changes in bedform morphology—
 - (i) a representative sample area, to be agreed in writing with the MMO, of the part(s) of Wind Farm Area 1 within which construction works and disposal activities were carried out under this licence, and such further monitoring as may be required to ensure that the cables have been buried or protected; and
 - (ii) an area not to exceed 125 per cent of the predicted scour area around a selection of turbines, such selection to be based on the desk based assessment;
- (c) a survey to determine any change in the location, extent and composition of any benthic habitats of conservation, ecological and/or economic importance identified in the pre-construction survey in the part(s) of Wind Farm Area 1 in which construction works were carried out. The survey design will be informed by the results of the pre-construction benthic survey;
- (d) vessel traffic monitoring by Automatic Identification System, for 28 days taking account seasonal variations in traffic patterns, for a maximum duration of one year post construction. A report will be submitted to the MMO and the MCA at the end of the first year after construction is completed; and
- (e) any marine mammal monitoring required by the marine mammal monitoring plan submitted in accordance with condition 13(2)(h).

(3) Prior to carrying out the survey required under paragraph (2)(b), the licence-holder must submit to the MMO for written approval a desk based assessment (which takes account of all factors which influence scour) identifying the turbines with greatest potential for scour. The survey will be used to validate the desk based assessment and the significance of any differences between the predicted scour and recorded scour will be assessed in the survey report which will be submitted to the MMO. The need for further surveys will be agreed in writing with the MMO following submission of the first year of survey data.

Amendments to details

21.—(1) With respect to any condition of this licence which requires the licensed activities to be carried out in accordance with the plans and programmes approved by the MMO, the approved plans and programmes shall be taken to include any amendments that may subsequently be approved in writing by the MMO.

(2) Where the words ‘except to the extent agreed in writing by the MMO’ appear in these licence conditions, any such agreement or statement may only be given in relation to immaterial changes where it has been demonstrated to the satisfaction of MMO that the subject matter of the agreement sought is unlikely to give rise to any materially new or materially different environmental effects from those assessed in the Environmental Statement.

Offshore Decommissioning

22. No decommissioning activities shall commence until plans for the carrying out of such activities have been submitted to and approved in writing by the MMO.

SCHEDULE 9

Deemed Marine Licences under the Marine and Coastal Access Act 2009 – Deemed Marine Licence 2

PART 1

Licensed marine activities

Interpretation

1.—(1) In this licence—

“the 2008 Act” means the Planning Act 2008;

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

“ancillary vessel” means any vessel other than a construction vessel or a survey vessel;

“ancillary works” means the ancillary works described in paragraph 2 of this Part of this licence which are not development within the meaning of section 32 of the 2008 Act;

“Annex I Habitat” means such habitat as defined under the EU Council Directive 92/43/EEC 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 Part 1 of this licence;

“authorised development” means the development described in Part 1 of Schedule 1 of the Order, which is development within the meaning of section 32 of the 2008 Act;

“authorised project” means the authorised development and the ancillary works authorised by the Order;

“authorised scheme” means Work No. 2 described in paragraph 2 of Part 1 of this licence;

“commence” means the first carrying out of any part of the licensed activities, save for pre-construction surveys and monitoring, and “commencement” shall be construed accordingly;

“construction vessel” means any vessel involved in the course of or used for the construction and/or maintenance of the authorised project;

“debris” means items or equipment of a significant size left on the seabed being lost from survey or construction vessels;

“electrical circuit” means a number of electrical conductors necessary to transmit electricity between two points within the authorised project; this comprises, in the case of HVAC transmission, three conductors which may be bundled as one cable, and, in the case of HVDC transmission two conductors, which may be attached together or take the form of single cables: the circuit may include one or more auxiliary cables (normally fibre optic cables) for the purpose of control, monitoring, protection or general communications;

“enforcement officer” means a person authorised to carry out enforcement duties under Part 4, Chapter 3 of the 2009 Act;

“the Environmental Statement” means the document certified as the environmental statement by the Secretary of State for the purposes of the Order;

“gravity base foundation” means either—

- (a) a structure principally of concrete and/or steel which rests on the seabed due either to its own weight and that of added ballast or to the weight of water above it, and may include associated equipment including suction piles, J-tubes and access platforms; or
- (b) a structure principally of concrete and/or steel consisting of a platform supported on two pontoons to which the platform is connected by columns which may be connected by braces;

“HVAC” means high voltage alternating current;

“HVDC” means high voltage direct current;

“inter-array electrical circuits” means the circuits described in paragraph 2(2)(b) of Part 1 of this licence;

“jacket foundation” means a lattice construction comprising tubular members and joints which are fixed to the seabed with piles (either driven/drilled piles or suction piles) and which will include platforms and J-tubes and may include braced monopiles and a transition piece;

“the 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 Part 1 of this licence;

“the licence conditions” means the conditions set out in Part 2 of this licence;

“licence-holder” means Hornsea 1 Limited;

“maintain” includes, to the extent assessed in the environmental statement—

- (a) inspect, repair, adjust and alter; and
- (b) in respect of any of the ancillary works and any component part of any wind turbine generator, offshore accommodation platform, offshore HVAC collector substation, offshore HVDC converter station or offshore reactive compensation substation described in Part 1 of Schedule 1 (authorised development) of the Order also includes remove, reconstruct and replace,

but does not include the alteration, removal or replacement of foundations; and “maintenance” shall be construed accordingly;

“the Marine Management Organisation” or “MMO” means the body created under the 2009 Act which is responsible for the monitoring and enforcement of this licence or any successor to its statutory functions;

“the Maritime and Coastguard Agency” or “MCA” means the executive agency of the Department for Transport or any successor to its statutory functions;

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

“mean low water springs” or “MLWS” means the lowest level which spring tides reach on average over a period of time;

“monopile foundation” comprises a large diameter steel or concrete tube or pile driven vertically into the seabed, J-tubes and platforms and may include external structural devices such as bracing members or steel anchor wires and a transition piece;

“Natural England” means the body established by section 1 of the Natural Environment and Rural Communities Act 2006 or any successor to its statutory functions;

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

“offshore accommodation platform” means a platform housing or incorporating temporary accommodation, landing ports for vessels and/or helicopters, standby electricity generation equipment, marking and lighting and other equipment facilities to assist in the co-ordination of marine activities related to the authorised scheme;

“offshore HVAC collector substation” means a structure serving as a collection point for the inter-array electrical circuits and containing equipment with the purpose of transforming the electricity generated at the wind turbines to a higher voltage; it may also include a helicopter platform;

“offshore HVDC converter station” means a structure which contains equipment to convert HVAC electricity to HVDC electricity; it may also include a helicopter platform;

“the offshore works plans” means the part of the works plans described as the offshore works plans;

“the Order limits” means the limits shown on the works plans within which the authorised project may be carried out;

“the Order” means the Hornsea One Offshore Wind Farm Order 2014;

“the project description” means the document certified as the project description by the Secretary of State for the purposes of the Order and submitted with the application on 30th July 2013 (Chapter Three, Volume One of the Environmental Statement);

“suction pile” 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 weight and hydrostatic pressure differential;

“survey vessels” means the vessels licensed to carry out environmental or engineering surveys;

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

“the UK Hydrographic Office” means the Hydrographic Office of the Ministry of Defence, Taunton, Somerset TA1 2DN or any replacement body or successor to its functions;

“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 and including ancillary vessels and construction vessels;

“VHF” means very high frequency;

“Wind Farm Area 1” means the area within the limits of deviation for Work No. 1 of which the co-ordinates are specified in Part 1 of Schedule 1 of the Order and shown on the works plans;

“Wind Farm Area 2” means the area within the limits of deviation for Work No. 2 of which the co-ordinates are specified in Part 1 of Schedule 1 of the Order and shown on the works plans;

“Wind Farm Area 3” means the area within the limits of deviation for Work No. 3 of which the co-ordinates are specified in Part 1 of Schedule 1 of the Order and shown on the works plans;

“wind turbine generator” or “wind turbine” means a structure comprising any or all of a tower, rotor, blades, nacelle and ancillary electrical and other equipment or structures which may include lighting and a helicopter platform, fixed to a foundation;

“working day” means any day other than a Saturday, Sunday or public holiday in England and Wales;

“Work No. 1” means an offshore wind generating station within Wind Farm Area 1 and described as Work No. 1 in Part 1 of Schedule 1 of the Order;

“Work No. 2” means an offshore wind generating station within Wind Farm Area 2 and described as Work No. 2 in paragraph 2 of Part 1 of this licence;

“Work No. 3” means an offshore wind generating station within Wind Farm Area 3 and described as Work No. 3 in Part 1 of Schedule 1 of the Order;

“Work No. 4” means up to five offshore HVAC collector substations and, in the event that the mode of transmission is HVDC, up to two offshore HVDC converter stations together with a network of electrical circuits connecting the structures within Work No. 4;

“the works plans” means the plans certified as the works plans by the Secretary of State for the purposes of the Order divided into three parts and described as the offshore works plans, the intertidal works plans and the onshore works plans.

(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, minutes and seconds to three decimal places in WGS84 Datum.

(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

Marine Licensing Team

Lancaster House

Hampshire Court

Newcastle upon Tyne

NE4 7YH

Tel: 0300 123 1032

Email: marine.consents@marinemanagement.org.uk

- (b) Marine Management Organisation (referred to as the “MMO Coastal Office”)

Estuary House

Wharnccliffe Road

Grimsby

Lincolnshire

DN31 3QL

Tel: 01472 355 112

- (c) Trinity House
Tower Hill
London
EC3N 4DH
Tel: 020 7481 6900
- (d) The United Kingdom Hydrographic Office
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) Joint Nature Conservation Committee
Inverdee House
Baxter Street
Aberdeen
AB11 9QA
Tel: 01224 266 550
- (i) English Heritage
Eastgate Court
195-205 High Street
Guildford
GU1 3EH

Details of licensed activities

2.—(1) This licence authorises the licence-holder (and any agent or contractor acting on their behalf) to carry out the following licensable marine activities pursuant to section 66(1) of the 2009 Act, subject to the licence 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) dredging;
- (d) the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation;
- (e) the disposal at disposal site reference HU206 (Hornsea Project One Subzone 1) of—
 - (i) in the event that an offshore accommodation platform is constructed under this licence up to 434,004 m³ or, if no part of Work No.3 is constructed, up to 641,385 m³, of inert material of natural origin produced during construction drilling and seabed preparation for foundation works comprised in Work No. 2; or
 - (ii) in the event that no offshore accommodation platform is constructed under this licence up to 414,762 m³ or, if no part of Work No.3 is constructed, up to 622,143 m³, of inert material of natural origin produced during construction drilling and seabed preparation for foundation works comprised in Work No. 2; and
- (f) the removal of the substances and articles specified in sub-paragraph (3) below.

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

Work No. 2 — An offshore wind generating station within Wind Farm Area 2, whose coordinates constitute the limits of deviation for Work No.2 and are specified in Table 1, comprising—

- (a) up to 80 or, if no part of Work No. 3 is constructed, up to 120 wind turbine generators fixed to the seabed;
- (b) a network of subsea inter-array electrical circuits connecting the structures comprised in Work No. 2—
 - (i) with each other;
 - (ii) with any other structure located within Wind Farm Area 2; and
 - (iii) (for the purpose of connecting any structure comprised in Work No. 2 with any structure comprised in Works Nos. 1, 3 and 4) with the network of electrical circuits comprised in Works Nos. 1, 3 and 4;
- (c) up to one offshore accommodation platform fixed to the seabed which may be connected to one of the offshore HVAC collector substations or offshore HVDC converter stations within Work No. 4 by an unsupported steel bridge, provided that the combined total of offshore accommodation platforms constructed in whole or in part within Works Nos. 1, 2 and 3 does not exceed two.

Table 1: Co-ordinates for Wind Farm Area 2 (limits of deviation for Work No. 2)

<i>Point</i>	<i>Latitude</i>	<i>Longitude</i>
1	53° 49' 53.896" N	2° 01' 09.958" E
2	53° 50' 43.613" N	2° 01' 29.135" E
3	53° 52' 33.454" N	2° 00' 29.519" E
4	53° 53' 18.324" N	2° 04' 04.112" E
5	53° 55' 17.216 " N	2° 01' 34.030" E
6	53° 55' 22.663" N	2° 02' 14.219" E
7	53° 56' 16.303" N	2° 01' 15.269" E

<i>Point</i>	<i>Latitude</i>	<i>Longitude</i>
8	53° 56' 46.586" N	2° 05' 04.031" E
9	53° 57' 12.481" N	2° 04' 32.376" E
10	53° 57' 24.509" N	2° 06' 06.700" E
11	53° 50' 10.018" N	2° 13' 57.158" E
12	53° 49' 14.297" N	2° 11' 36.820" E
13	53° 49' 53.896" N	2° 01' 09.958" E

In connection with such Work No. 2, further associated development as may be necessary or expedient in connection with the authorised scheme within the Order limits and which fall within the scope of the environmental impact assessment recorded in the Environmental Statement;

In connection with such Work No. 2, ancillary works consisting of works and operations within the Order limits comprising temporary anchorage of vessels and 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; and
- (f) material extracted from within Wind Farm Area 2 during construction drilling and seabed preparation for foundation works.

(4) The grid co-ordinates for disposal site reference HU206 (Hornsea Project One Subzone 1) are specified in Table 2.

Table 2: Co-ordinates for disposal site HU206

<i>Point</i>	<i>Latitude</i>	<i>Longitude</i>
1	53° 58' 42.179" N	1° 44' 31.880" E
2	53° 55' 46.445" N	1° 47' 47.796" E
3	53° 56' 22.870" N	1° 51' 57.409" E
4	53° 55' 31.318" N	1° 52' 54.282" E
5	53° 55' 37.592" N	1° 53' 38.108" E
6	53° 55' 23.329" N	1° 55' 20.262" E
7	53° 55' 8.162" N	1° 56' 10.619" E
8	53° 55' 35.429" N	1° 59' 20.944" E
9	53° 55' 2.525" N	1° 59' 45.776" E
10	53° 55' 22.663" N	2° 2' 14.219" E
11	53° 56' 16.303" N	2° 1' 15.269" E
12	53° 56' 46.586" N	2° 5' 4.031" E
13	53° 57' 12.481" N	2° 4' 32.376" E
14	53° 57' 24.509" N	2° 6' 6.700" E
15	53° 50' 10.018" N	2° 13' 57.158" E
16	53° 49' 14.297" N	2° 11' 36.820" E
17	53° 49' 58.584" N	1° 59' 54.762" E
18	53° 49' 58.944" N	1° 58' 59.804" E
19	53° 50' 5.118" N	1° 38' 58.430" E
20	53° 55' 9.293" N	1° 39' 52.024" E
21	53° 56' 3.228" N	1° 41' 0.143" E

<i>Point</i>	<i>Latitude</i>	<i>Longitude</i>
22	53° 56' 29.670" N	1° 43' 45.592" E
23	53° 58' 17.828" N	1° 41' 46.795" E

(5) The provisions of section 72 of the 2009 Act shall apply to this licence, save that the provisions of section 72(7) and 72(8) relating to the transfer of the licence shall only apply to a transfer not falling within article 34 of the Order.

Duration

3. 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 Energy Act 2004, 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.

PART 2

Licence conditions

Design parameters

- 1.—(1) All wind turbine generators forming part of Work No. 2 must not—
 - (a) be less than 82 metres to the turbine hub when measured from MHWS;
 - (b) exceed a height of 200 metres from MHWS to the upper tip of the vertical blade;
 - (c) exceed a rotor diameter of 178 metres;
 - (d) be less than 22 metres from MHWS to the lowest point of the rotating blade; or
 - (e) be less than 924 metres from the nearest wind turbine generator in all directions.
 (2) References to the location of a wind turbine generator are references to the centre point of the turbine.
2. Any offshore accommodation platform forming part of Work No. 2 must not—
 - (a) exceed 60 metres in height above MHWS;
 - (b) have a platform which at its greatest extent exceeds, 3,600 m² or 60 metres in width.
3. The diameter of the electrical circuits comprising the electrical circuits within Work No. 2 must not exceed 170 mm.
4. The electrical circuits comprised in Work No. 2 must be installed by use of, or a combination of, ploughing, trenching, jetting, rock-cutting, dredging, surface laying with post lay burial, and where ground conditions make burial impracticable, by surface laying.
- 5.—(1) The licence-holder must in fixing to the seabed any structures comprised in Work No. 2 use one of the following methods—
 - (a) monopile foundations;
 - (b) jacket foundations supported by piles; or
 - (c) gravity base foundations.
 (2) The following parameters apply in respect of the foundation methods used to fix wind turbine generators comprised in Work No. 2 to the seabed—
 - (a) where monopile foundations are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 1,419 m²;
 - (ii) the diameter of each foundation must not exceed 8.5 metres;

- (b) where jacket foundations (driven/drilled piles) are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 707 m² per wind turbine;
 - (ii) the number of piles per jacket must not exceed four;
 - (iii) the diameter of each pile must not exceed three metres;
- (c) where jacket foundations (suction piles) are used—
 - (i) the area occupied by the foundations and scour protection for each individual structure must not exceed 6,362 m²;
 - (ii) the number of piles per jacket must not exceed four;
 - (iii) the diameter of each pile must not exceed 15 metres;
- (d) where gravity base foundations are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 6,362 m²;
 - (ii) the seabed levelling diameter must not exceed 70 metres;
 - (iii) the cone diameter must not exceed 50 metres at its base.

(3) The following parameters apply in respect of the foundation methods used to fix any offshore accommodation platform comprised in Work No. 2 to the seabed—

- (a) where monopile foundations are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 1,419 m²;
 - (ii) the diameter of each foundation must not exceed 8.5 metres;
- (b) where jacket foundations (driven/drilled piles) are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 1,414 m²;
 - (ii) the number of piles must not exceed eight;
 - (iii) the diameter of each pile must not exceed three metres;
- (c) where jacket foundations (suction piles) are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 6,362 m²;
 - (ii) the number of piles per jacket must not exceed eight;
 - (iii) the diameter of each pile must not exceed 15 metres;
- (d) where gravity base foundations are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 6,362 m²;
 - (ii) the seabed levelling diameter must not exceed 70 metres;
 - (iii) the cone diameter must not exceed 50 metres at its base.

(4) The combined total volume of scour protection for the wind turbine generators and the offshore accommodation platform forming part of Work No. 2 must not exceed 1,079,839 m³ or, if no part of Work No.3 is constructed, must not exceed 1,613,093 m³.

(5) In the event that no offshore accommodation platform is constructed under this licence, the combined total volume of scour protection for the wind turbine generators forming part of Work No. 2 must not exceed 1,066,508 m³ or, if no part of Work No.3 is constructed, must not exceed 1,599,762 m³.

Notifications and inspections

6.—(1) The licence-holder shall ensure that—

- (a) a copy of this licence and any subsequent amendments or revisions to it are provided to—
 - (i) all agents and contractors notified to the MMO in accordance with the conditions of this licence; and
 - (ii) the masters and transport managers responsible for the vehicles notified to the MMO in accordance with the conditions of this licence; and
- (b) within 28 days of receipt of a copy of this licence those persons referred to in sub-paragraph (a) shall provide a completed confirmation form to the MMO confirming their understanding of the terms and conditions of this licence.

(2) Only those persons and vessels notified to the MMO in accordance with condition 16 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 licence-holder's registered address;
- (b) any site office located at or adjacent to the construction site and used by the licence-holder or its agents and contractors responsible for the loading, transportation or deposit for 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 are to be made.

(4) The documents referred to in paragraph (1)(a) shall be available for inspection by an enforcement officer at the locations set out in paragraph (3) above at any time.

(5) The licence-holder 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 licence-holder must inform the MMO in writing at least five working days prior to the commencement of the licensed activities or any phase of them.

(7) Prior to the commencement of the licensed activities the licence-holder must publish in the Kingfisher Fortnightly Bulletin details of the vessel routes, timings and locations relating to the construction of the authorised scheme.

(8) The licence-holder shall ensure that a Notice to Mariners is issued at least ten days prior to the commencement of the licensed activities advising of the commencement of licensed activities within Wind Farm Area 2 and the expected vessel routes from the local service ports to the turbine locations.

(9) The Notices to Mariners must be updated and reissued not less frequently than weekly and supplemented with VHF radio broadcasts agreed with the MCA in accordance with the construction and monitoring programme approved under licence condition 13(2)(a). Copies of all notices shall be provided to the MMO.

(10) The licence-holder must notify—

- (a) the UK Hydrographic Office of 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 once the authorised scheme is completed and any required lighting or marking has been established.

Aids to navigation

7. The licence-holder must during the whole period from the start of construction of the authorised scheme seaward of MHWS to the completion of decommissioning—

- (a) 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;
- (b) colour all structures in the authorised scheme as directed by Trinity House;

- (c) notify Trinity House as soon as reasonably practicable of both the progress and completion of the authorised scheme (or any phase of it) and any aids to navigation established from time to time;
- (d) provide reports on the working condition of aids to navigation periodically as requested by Trinity House;
- (e) notify Trinity House and the MMO of any failure of the aids to navigation and the timescales in which such failure will be remedied, as soon as possible and no later than 24 hours following the licence-holder becoming aware of any such failure.

Provision against danger to navigation

8. In case of injury to, or destruction or decay of, the authorised scheme or any part of it seaward of MHWS the licence-holder must as soon as reasonably practicable, and no later than 24 hours following the licence-holder becoming aware of any such injury, destruction or decay, notify Trinity House and must lay down such buoys, exhibit such lights and take such other steps for the prevention of danger to navigation as Trinity House may from time to time direct.

Navigational Practice, Safety and Emergency Response

9.—(1) No part of the authorised project may commence until the MMO, in consultation with the MCA, has given written approval for an Emergency Response Co-operation Plan (ERCoP) which includes full details of the emergency response co-operation plans for the construction, operation and decommissioning phases of that part of the authorised project in accordance with the MCA recommendations contained within MGN543 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues”.

(2) The ERCoP and associated guidance and requirements must be implemented as approved, unless otherwise agreed in writing by the MMO in consultation with the MCA. The document must be reviewed at least annually or whenever changes are identified, whichever is sooner, and any proposed changes must be submitted to the MMO in writing for approval, in consultation with MCA.

(3) No authorised scheme seaward of MHWS is to commence until the Secretary of State, in consultation with the MCA, has confirmed in writing that the licence-holder has taken into account and, so far as is applicable to that stage of the development, adequately addressed all MCA recommendations as appropriate to the authorised scheme contained within MGN 371 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues” (including its annexes).

(4) *This paragraph has been deleted.*

(5) The licence-holder must during the whole period from the start of construction of the authorised scheme seaward of MHWS to the completion of decommissioning provide relevant information to the MCA to assist in the timely and efficient issuing of notices to mariners and other navigational warnings of the position and nature of the works, such information to be provided to mariners in the shipping and fishing industry as well as to recreational mariners.

Colour and lighting

10. Except as otherwise required by Trinity House under condition 7, the licence-holder must colour all structures comprised in Work No. 2 submarine grey (colour code RAL 7035).

Chemicals, drilling and debris

11.—(1) All chemicals used in the construction of the authorised scheme 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 (as amended), unless otherwise agreed in writing by the MMO.

(2) The licence-holder shall ensure that any coatings or treatments are suitable for use in the marine environment and are used in accordance with guidelines approved by 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 per cent 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 shall be obtained before the drilling commences, which disposal may also require a marine licence.

(5) The licence-holder shall 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, where practicable.

(6) All dropped objects must be reported to the MMO using the Dropped Object Procedure 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 Procedure Form, the MMO may require relevant surveys to be carried out by the undertaker (such as side scan sonar) if reasonable to do so and the MMO may require obstructions to be removed from the seabed at the undertaker's expense if reasonable to do so.

(7) *This paragraph has been deleted.*

(8) *This paragraph has been deleted.*

(9) The licence-holder shall inform the MMO of the location and quantities of inert material disposed of each month under this licence, by submission of a disposal return by 31st January each year for disposals occurring during the months July to December inclusive of the preceding year, and by 31st July each year for disposals occurring during the months January to June inclusive of that year.

(10) The licence-holder shall ensure that only inert material of natural origin, produced during construction drilling and seabed preparation for foundation works comprised in Work No. 2, and drilling mud shall be disposed of at disposal site reference HU206 (Hornsea Project One Subzone 1).

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

(12) The licence-holder shall 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.

Force majeure

12. If, due to stress of weather or any other cause, the master of a vessel determines that it is necessary to deposit—

- (a) authorised deposits outside of Wind Farm Area 2 or disposal site reference HU206 (Hornsea Project One Subzone 1); or
- (b) unauthorised deposits within or outside of Wind Farm Area 2 or disposal site reference HU206 (Hornsea Project One Subzone 1),

because the safety of human life and/or of the vessel is threatened, full details of the circumstances of the deposit shall be notified to the MMO within 48 hours.

Pre-construction plans and documentation

13.—(1) The licensed activities shall 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—

- (a) to ensure conformity with the description of Work No. 2 and compliance with licence conditions 1 to 5 above, a plan, to be agreed in writing with the MMO in consultation with Trinity House and the MCA, which shows—
 - (i) the proposed location and choice of foundation of all wind turbine generators and any offshore accommodation platform, subject to any micro-siting required due to anthropological constraints, environmental constraints, difficult ground conditions or to give adequate spacing between other infrastructure;
 - (ii) the proposed location and height of bridge links;
 - (iii) 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;
 - (iv) whether an accommodation platform will be built as part of Work No. 2 and, if so, the height, length and width of that offshore accommodation platform;
 - (v) the length and arrangement of all electrical circuits comprising Work No. 2 subject to any micro-siting required due to anthropological constraints, environmental constraints or difficult ground conditions;
 - (vi) the proposed dimensions of all monopile foundations;
 - (vii) the proposed dimensions of all gravity base foundations;
 - (viii) the proposed dimensions of all jacket foundations; and
 - (ix) the proposed layout of all wind turbine generators and any offshore accommodation platform including all exclusion zones comprised in the licensed activities and showing the indicative programming of particular works as set out in the indicative programme to be provided under paragraph (2)(a);
- (2) The licensed activities, or any phase of those activities, shall not commence until a Code of Construction Practice incorporating the following (insofar as relevant to that activity or phase of activity) have been submitted to and approved in writing by the MMO—
 - (a) 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; and
 - (iii) proposed pre-construction surveys, baseline report format and content, construction monitoring, post construction monitoring and related reporting in accordance with licence conditions 18 to 20. The preconstruction survey programme and all pre-construction survey methodologies shall be submitted to the MMO at least four months prior to the commencement of any survey works detailed within;
 - (b) a construction method statement in accordance with the project description and Environmental Statement and including details of—
 - (i) foundation installation, including any seabed preparation, drilling and disposal of arisings methods;
 - (ii) turbine installation, including any seabed preparation and scour protection;
 - (iii) installation of any offshore accommodation platform, including any seabed preparation and scour protection;
 - (iv) circuit installation, including any seabed preparation and circuit protection;
 - (v) contractors;
 - (vi) vessels; and
 - (vii) associated works;
 - (c) 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 below MHWS;

- (ii) a chemical risk analysis 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 and disposal arrangements;
 - (iv) offshore project maintenance plans including offshore electrical circuit maintenance;
 - (v) locations of any archaeological exclusion zones agreed as part of the written scheme of archaeological investigation approved under sub-paragraph (g);
 - (vi) the appointment and responsibilities of a fisheries liaison officer and an environmental liaison officer; and
 - (vii) a disposal plan detailing the locations, methods and timings of dredging and disposal, as well as disposal site monitoring requirements;
- (d) a scour protection management and cable armouring plan providing details of the need, type, sources, quantity, location and installation methods for scour protection and cable armouring to be within the scope of the environmental impact assessment recorded in the Environmental Statement;
- (e) in the event that driven or part-driven pile foundations are proposed to be used, a marine mammal mitigation protocol following current best practice as advised by the statutory nature conservation agencies, to include, but not be limited to—
- (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; and
 - (vi) where appropriate, methods for the application of acoustic deterrent devices;
- (f) cable specification and installation plan, to include—
- (i) technical specification of offshore electrical circuits, 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, including geotechnical data, cable laying techniques and a cable burial risk assessment encompassing the identification of any cable protection which exceeds 5% of navigable depth referenced to Chart Datum and, in the event that any area of cable protection exceeding 5% of navigable depth is identified, details of any steps (to be determined following consultation with the MCA) to be taken to ensure existing and future safe navigation is not compromised;
- (g) a written scheme of archaeological investigation in relation to Wind Farm Area 2 in accordance with industry good practice to include—
- (i) details of responsibilities of the licence-holder, 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 to be submitted to the MMO within four months of survey completion;
 - (iv) delivery of any mitigation including, where necessary, archaeological exclusion zones;

- (v) monitoring during and post construction, including a conservation programme for finds;
- (vi) archiving of archaeological material; and
- (vii) a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised scheme;
- (h) a marine mammal monitoring plan setting out the circumstances in which marine mammal monitoring will be required and the monitoring to be carried out in such circumstances; and
- (i) an offshore project maintenance plan to be submitted to the MMO at least four months prior to commencement of the operation of the licensed activities and to include provision for the review and resubmission of the plan every three years during the operational phase.

(3) Prior to the submission of the pre-construction plans and documentation required by this condition the licence-holder must provide a copy of the plans and documentation to the other undertakers listed in Article 3 of the Order.

(4) The other undertakers must provide any comments on the plans and documentation to the licence-holder within 14 days of receipt of the plans and documentation.

(5) The licence-holder shall participate in liaison meetings with other undertakers listed in Article 3 of the Order as requested from time to time by the MMO in writing in advance, which meetings shall be chaired by the MMO and shall consider such matters as are determined by the MMO relating to the efficient operation of a deemed marine licence where it has an impact on the efficient operation of any other deemed marine licence issued under the Order (including as varied or transferred).

(6) Prior to giving its approval under paragraph (2), the MMO must—

- (a) in relation to any programme, statement, plan or protocol submitted under sub-paragraphs (a) to (e) or (h), consult with the relevant statutory nature conservation body; and
- (b) in relation to a scheme submitted under sub-paragraph (g), consult with English Heritage.

14. The licence-holder shall ensure that a copy of any agreed archaeological report is deposited with the National Record of the Historic Environment, by submitting an English Heritage OASIS form with a digital copy of the report.

15.—(1) Each programme, statement, plan, protocol or scheme required to be approved under condition 13—

- (a) shall be submitted for approval at least four months prior to the intended start of construction, except where otherwise stated or where an alternative date is agreed in writing by the MMO; and
- (b) shall be accompanied by—
 - (i) a statement confirming that the licence-holder has complied with condition 13(3) in relation to such programme, statement, plan, protocol or scheme; and
 - (ii) any comments received by the licence-holder under condition 13(4), or a statement from the licence-holder confirming that no such comments were received

(2) The licence-holder shall comply with all documents approved under licence condition 13 in carrying out the licensed activities except to the extent agreed in writing by the MMO.

(3) Prior to agreeing an alternative date under paragraph (1)(a) or a change to approved details under paragraph (2) relating to any document in respect of which consultation is required under condition 13(6), the MMO must consult with the relevant consultation body referred to in that condition.

Reporting of engaged agents, contractors and vessels

16.—(1) The licence-holder shall provide the following information to the MMO—

- (a) the name and function of any agent or contractor appointed to engage in the licensed activities at least five working days prior to the commencement of the licensed activities or any part of them; and
- (b) each week during the construction of the authorised scheme, a completed Hydrographic Note H102 listing the construction 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 and MMO Coastal Office in writing prior to the agent, contractor or vessel engaging in the licensed activities. All agents, contractors and/or vessel operators will abide by the conditions set out in this licence.

Equipment and Operation of Vessels Engaged in Licensed Activities

17.—(1) All vessels employed to perform the licensed activities shall be constructed and equipped to be capable of the proper performance of such activities in accordance with the conditions of this licence and shall comply with paragraphs (2) to (6).

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

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

(3) No radio beacon or radar beacon operating on the marine frequency bands shall be installed or used without the prior written approval of the Secretary of State.

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

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

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

Pre-construction monitoring and surveys

18.—(1) The licence-holder must, when submitting details under condition 13(2)(a)—

- (a) in relation to the proposed pre-construction surveys, include methodologies and timings, and 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) in relation to the baseline report proposals, 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) Subject to receipt from the licence-holder of specific proposals pursuant to this condition, it is expected that the pre-construction surveys will comprise, in outline—

- (a) a high resolution swath bathymetric survey to include a 100% coverage and a side scan sonar survey of the part(s) of Wind Farm Area 2 in which it is proposed to carry out construction works and disposal activities under this licence, including a 500m buffer around the site of each works;
- (b) a survey of existing ornithological activity covering the part(s) of Wind Farm Area 2 within which it is proposed to carry out construction works under this licence, 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;
- (c) a survey to determine the location, extent and composition of any benthic habitats of conservation, ecological and/or economic importance in the part(s) of Wind Farm Area 2 in which it is proposed to carry out construction works under this licence; and

- (d) any marine mammal monitoring required by the marine mammal monitoring plan submitted in accordance with condition 13(2)(h).

Construction monitoring

19.—(1) The licence-holder must, when submitting details of proposed construction monitoring, include methodologies and timings, and a proposed format, content and timings for providing reports on the results. 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 pre-construction position and/or will enable the validation or otherwise of key predictions in the Environmental Statement.

(2) Subject to receipt from the licence-holder of specific proposals pursuant to this condition, it is expected that the construction monitoring will comprise, in outline—

- (a) except to the extent agreed in writing by the MMO, measurements of noise generated by the installation of the first four foundations of each discrete foundation type to be constructed under this licence where driven or part-driven pile foundations are used; and
- (b) recording of any visual sightings or acoustic detection of marine mammals where required as part of the marine mammal mitigation protocol under condition 13(2)(e).

(3) The results of the initial noise measurements monitored in accordance with paragraph (2)(a) must be provided to the MMO within six weeks of the installation of the first four foundations of each discrete foundation type. The assessment of this report by the MMO shall determine whether any further noise monitoring is required.

(4) Construction monitoring shall include vessel traffic monitoring by Automatic Identification System for the duration of the construction period. A report will be submitted to the MMO and the MCA at the end of each year of the construction period.

Post construction

20.—(1) The licence-holder must, when submitting details of proposed post-construction surveys under condition 13(2)(a), include methodologies and timings, and a proposed format, content and timings for providing reports on the results. 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) Subject to receipt of specific proposals, it is expected that the post-construction surveys will comprise, in outline—

- (a) an ornithological survey covering the part(s) of Wind Farm Area 2 within which construction works were carried out under this licence, 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;
- (b) a high resolution swath bathymetric survey of the following to assess any changes in bedform morphology—
 - (i) a representative sample area, to be agreed in writing with the MMO, of the part(s) of Wind Farm Area 2 within which construction works and disposal activities were carried out under this licence, and such further monitoring as may be required to ensure that the cables have been buried or protected; and
 - (ii) an area not to exceed 125 per cent of the predicted scour area around a selection of turbines, such selection to be based on the desk based assessment;
- (c) a survey to determine any change in the location, extent and composition of any benthic habitats of conservation, ecological and/or economic importance identified in the pre-construction survey in the part(s) of Wind Farm Area 2 in which construction works were carried out. The survey design will be informed by the results of the pre-construction benthic survey;

(d) vessel traffic monitoring by Automatic Identification System, for 28 days taking account seasonal variations in traffic patterns, for a maximum duration of one year post construction. A report will be submitted to the MMO and the MCA at the end of the first year after construction is completed; and

(e) any marine mammal monitoring required by the marine mammal monitoring plan submitted in accordance with condition 13(2)(h).

(3) Prior to carrying out the survey required under paragraph (2)(b), the licence-holder must submit to the MMO for written approval a desk based assessment (which takes account of all factors which influence scour) identifying the turbines with greatest potential for scour. The survey will be used to validate the desk based assessment and the significance of any differences between the predicted scour and recorded scour will be assessed in the survey report which will be submitted to the MMO. The need for further surveys will be agreed in writing with the MMO following submission of the first year of survey data.

Amendments to details

21.—(1) With respect to any condition of this licence which requires the licensed activities to be carried out in accordance with the plans and programmes approved by the MMO, the approved plans and programmes shall be taken to include any amendments that may subsequently be approved in writing by the MMO.

(2) Where the words ‘except to the extent agreed in writing by the MMO’ appear in these licence conditions, any such agreement or statement may only be given in relation to immaterial changes where it has been demonstrated to the satisfaction of MMO that the subject matter of the agreement sought is unlikely to give rise to any materially new or materially different environmental effects from those assessed in the Environmental Statement.

Offshore Decommissioning

22. No decommissioning activities shall commence until plans for the carrying out of such activities have been submitted to and approved in writing by the MMO.

SCHEDULE 10

Deemed Marine Licences under the Marine and Coastal Access Act 2009 – Deemed Marine Licence 3

PART 1

Licensed marine activities

Interpretation

1.—(1) In this licence—

“the 2008 Act” means the Planning Act 2008;

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

“ancillary vessel” means any vessel other than a construction vessel or a survey vessel;

“ancillary works” means the ancillary works described in paragraph 2 of this Part of this licence which are not development within the meaning of section 32 of the 2008 Act;

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

“authorised deposits” means the substances and articles specified in paragraph 2(4) of Part 1 of this licence;

“authorised development” means the development described in Part 1 of Schedule 1 of the Order, which is development within the meaning of section 32 of the 2008 Act;

“authorised project” means the authorised development and the ancillary works authorised by the Order;

“authorised scheme” means Work No. 3 described in paragraph 2 of Part 1 of this licence;

“commence” means the first carrying out of any part of the licensed activities, save for pre-construction surveys and monitoring, and “commencement” shall be construed accordingly;

“construction vessel” means any vessel involved in the course of or used for the construction and/or maintenance of the authorised project;

“debris” means items or equipment of a significant size left on the seabed being lost from survey or construction vessels;

“electrical circuit” means a number of electrical conductors necessary to transmit electricity between two points within the authorised project; this comprises, in the case of HVAC transmission, three conductors which may be bundled as one cable, and, in the case of HVDC transmission two conductors, which may be attached together or take the form of single cables: the circuit may include one or more auxiliary cables (normally fibre optic cables) for the purpose of control, monitoring, protection or general communications;

“enforcement officer” means a person authorised to carry out enforcement duties under Part 4, Chapter 3 of the 2009 Act;

“the Environmental Statement” means the document certified as the environmental statement by the Secretary of State for the purposes of the Order;

“gravity base foundation” means either—

- (a) a structure principally of concrete and/or steel which rests on the seabed due either to its own weight and that of added ballast or to the weight of water above it, and may include associated equipment including suction piles, J-tubes and access platforms; or
- (b) a structure principally of concrete and/or steel consisting of a platform supported on two pontoons to which the platform is connected by columns which may be connected by braces;

“HVAC” means high voltage alternating current;

“HVDC” means high voltage direct current;

“inter-array electrical circuits” means the circuits described in paragraph 2(2)(b) of Part 1 of this licence;

“jacket foundation” means a lattice construction comprising tubular members and joints which are fixed to the seabed with piles (either driven/drilled piles or suction piles) and which will include platforms and J-tubes and may include braced monopiles and a transition piece;

“the 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 Part 1 of this licence;

“the licence conditions” means the conditions set out in Part 2 of this licence;

“licence-holder” means Hornsea 1 Limited;

“maintain” includes, to the extent assessed in the environmental statement—

- (a) inspect, repair, adjust and alter; and
- (b) in respect of any of the ancillary works and any component part of any wind turbine generator, offshore accommodation platform, offshore HVAC collector substation, offshore HVDC converter station or offshore reactive compensation substation described in Part 1 of Schedule 1 (authorised development) of the Order also includes remove, reconstruct and replace,

but does not include the alteration, removal or replacement of foundations; and “maintenance” shall be construed accordingly;

“the Marine Management Organisation” or “MMO” means the body created under the 2009 Act which is responsible for the monitoring and enforcement of this licence or any successor to its statutory functions;

“the Maritime and Coastguard Agency” or “MCA” means the executive agency of the Department for Transport or any successor to its statutory functions;

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

“mean low water springs” or “MLWS” means the lowest level which spring tides reach on average over a period of time;

“monopile foundation” comprises a large diameter steel or concrete tube or pile driven vertically into the seabed, J-tubes and platforms and may include external structural devices such as bracing members or steel anchor wires and a transition piece;

“Natural England” means the body established by section 1 of the Natural Environment and Rural Communities Act 2006 or any successor to its statutory functions;

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

“offshore accommodation platform” means a platform housing or incorporating temporary accommodation, landing ports for vessels and/or helicopters, standby electricity generation equipment, marking and lighting and other equipment facilities to assist in the co-ordination of marine activities related to the authorised scheme;

“offshore HVAC collector substation” means a structure serving as a collection point for the inter-array electrical circuits and containing equipment with the purpose of transforming the electricity generated at the wind turbines to a higher voltage; it may also include a helicopter platform;

“offshore HVDC converter station” means a structure which contains equipment to convert HVAC electricity to HVDC electricity; it may also include a helicopter platform;

“the offshore works plans” means the part of the works plans described as the offshore works plans;

“the Order limits” means the limits shown on the works plans within which the authorised project may be carried out;

“the Order” means the Hornsea One Offshore Wind Farm Order 2014;

“the project description” means the document certified as the project description by the Secretary of State for the purposes of the Order and submitted with the application on 30th July 2013 (Chapter Three, Volume One of the Environmental Statement);

“suction pile” 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 weight and hydrostatic pressure differential;

“survey vessels” means the vessels licensed to carry out environmental or engineering surveys;

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

“the UK Hydrographic Office” means the Hydrographic Office of the Ministry of Defence, Taunton, Somerset TA1 2DN or any replacement body or successor to its functions;

“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 and including ancillary vessels and construction vessels;

“VHF” means very high frequency;

“Wind Farm Area 1” means the area within the limits of deviation for Work No. 1 of which the co-ordinates are specified in Part 1 of Schedule 1 of the Order and shown on the works plans;

“Wind Farm Area 2” means the area within the limits of deviation for Work No. 2 of which the co-ordinates are specified in Part 1 of Schedule 1 of the Order and shown on the works plans;

“Wind Farm Area 3” means the area within the limits of deviation for Work No. 3 of which the co-ordinates are specified in Part 1 of Schedule 1 of the Order and shown on the works plans;

“wind turbine generator” or “wind turbine” means a structure comprising any or all of a tower, rotor, blades, nacelle and ancillary electrical and other equipment or structures which may include lighting and a helicopter platform, fixed to a foundation;

“working day” means any day other than a Saturday, Sunday or public holiday in England and Wales;

“Work No. 1” means an offshore wind generating station within Wind Farm Area 1 and described as Work No. 1 in Part 1 of Schedule 1 of the Order;

“Work No. 2” means an offshore wind generating station within Wind Farm Area 2 and described as Work No. 2 in Part 1 of Schedule 1 of the Order;

“Work No. 3” means an offshore wind generating station within Wind Farm Area 3 and described as Work No. 3 in paragraph 2 of Part 1 of this licence;

“Work No. 4” means up to five offshore HVAC collector substations and, in the event that the mode of transmission is HVDC, up to two offshore HVDC converter stations together with a network of electrical circuits connecting the structures within Work No. 4;

“the works plans” means the plans certified as the works plans by the Secretary of State for the purposes of the Order divided into three parts and described as the offshore works plans, the intertidal works plans and the onshore works plans.

(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, minutes and seconds to three decimal places in WGS84 Datum.

(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

Marine Licensing Team

Lancaster House

Hampshire Court

Newcastle upon Tyne

NE4 7YH

Tel: 0300 123 1032

Email: marine.consents@marinemanagement.org.uk

- (b) Marine Management Organisation (referred to as the “MMO Coastal Office”)

Estuary House

Wharncliffe Road

Grimsby

Lincolnshire

DN31 3QL

Tel: 01472 355 112

- (c) Trinity House

- Tower Hill
London
EC3N 4DH
Tel: 020 7481 6900
- (d) The United Kingdom Hydrographic Office
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) Joint Nature Conservation Committee
Inverdee House
Baxter Street
Aberdeen
AB11 9QA
Tel: 01224 266 550
- (i) English Heritage
Eastgate Court
195-205 High Street
Guildford
GU1 3EH
Tel: 01483 252 057

Details of licensed activities

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

- (a) the deposit at sea of the substances and articles specified in sub-paragraph (4) below;
- (b) the construction of works in or over the sea and/or on or under the sea bed;
- (c) dredging;
- (d) the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation;
- (e) the disposal at disposal site reference HU206 (Hornsea Project One Subzone 1) of—
 - (i) in the event that an offshore accommodation platform is constructed under this licence up to 434,004m³ of inert material of natural origin produced during construction drilling and seabed preparation for foundation works comprised in Work No. 3; or
 - (ii) in the event that no offshore accommodation platform is constructed under this up to 414,762 m³ of inert material of natural origin produced during construction drilling and seabed preparation for foundation works comprised in Work No. 3; and
- (f) the removal of the substances and articles specified in sub-paragraph (4) below.

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

Work No. 3 — An offshore wind generating station within Wind Farm Area 3, whose coordinates constitute the limits of deviation for Work No. 3 and are specified in Table 1, comprising—

- (a) up to 80 wind turbine generators fixed to the seabed;
- (b) a network of subsea inter-array electrical circuits connecting the structures comprised in Work No. 3—
 - (i) with each other;
 - (ii) with any other structure located within Wind Farm Area 3; and
 - (iii) (for the purpose of connecting any structure comprised in Work No. 3 with any structure comprised in Works Nos. 1, 2 and 4) with the network of electrical circuits comprised in Works Nos. 1, 2 and 4;
- (c) up to one offshore accommodation platform fixed to the seabed which may be connected to one of the offshore HVAC collector substations or offshore HVDC converter stations within Work No. 4 by an unsupported steel bridge, provided that the combined total of offshore accommodation platforms constructed in whole or in part within Works Nos. 1, 2 and 3 does not exceed two.

Table 1: Co-ordinates for Wind Farm Area 3 (limits of deviation for Work No.3)

<i>Point</i>	<i>Latitude</i>	<i>Longitude</i>
1	53° 55' 17.216" N	2° 01' 34.030" E
2	53° 53' 18.324" N	2° 04' 04.112" E
3	53° 52' 33.454" N	2° 00' 29.519" E
4	53° 50' 43.613" N	2° 01' 29.135" E
5	53° 49' 53.896" N	2° 01' 09.958" E
6	53° 49' 58.584" N	1° 59' 54.762" E
7	53° 49' 58.944" N	1° 58' 59.804" E
8	53° 50' 02.841" N	1° 47' 41.467" E
9	53° 50' 42.649" N	1° 47' 48.974" E
10	53° 51' 13.307" N	1° 48' 03.216" E
11	53° 51' 28.123" N	1° 49' 07.614" E
12	53° 52' 09.910" N	1° 47' 42.124" E

<i>Point</i>	<i>Latitude</i>	<i>Longitude</i>
13	53° 53' 31.505" N	1° 47' 33.690" E
14	53° 54' 17.250" N	1° 48' 17.274" E
15	53° 54' 58.313" N	1° 47' 32.926" E
16	53° 55' 53.992" N	1° 48' 39.422" E
17	53° 56' 22.870" N	1° 51' 57.409" E
18	53° 55' 31.318" N	1° 52' 54.282" E
19	53° 55' 37.592" N	1° 53' 38.108" E
20	53° 55' 23.329" N	1° 55' 20.262" E
21	53° 55' 08.162" N	1° 56' 10.619" E
22	53° 55' 35.429" N	1° 59' 20.944" E
23	53° 55' 02.525" N	1° 59' 45.776" E
24	53° 55' 17.216" N	2° 01' 34.030" E

In connection with such Work No. 3, further associated development as may be necessary or expedient in connection with the authorised scheme within the Order limits and which fall within the scope of the environmental impact assessment recorded in the Environmental Statement;

In connection with such Work No. 3, ancillary works consisting of works and operations within the Order limits comprising temporary anchorage of vessels and buoys, beacons, fenders and other navigational warning or ship impact protection works.

(3) Work No. 3 may not be constructed, in whole or part, if either Works Nos. 1 or 2 are constructed so as to include more than 80 wind turbine generators.

(4) 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; and
- (f) material extracted from within Wind Farm Area 3 during construction drilling and seabed preparation for foundation works.

(5) The grid co-ordinates for disposal site reference HU206 (Hornsea Project One Subzone 1) are specified in Table 2.

Table 2: Co-ordinates for disposal site HU206

<i>Point</i>	<i>Latitude</i>	<i>Longitude</i>
1	53° 58' 42.179" N	1° 44' 31.880" E
2	53° 55' 46.445" N	1° 47' 47.796" E
3	53° 56' 22.870" N	1° 51' 57.409" E
4	53° 55' 31.318" N	1° 52' 54.282" E
5	53° 55' 37.592" N	1° 53' 38.108" E
6	53° 55' 23.329" N	1° 55' 20.262" E
7	53° 55' 8.162" N	1° 56' 10.619" E
8	53° 55' 35.429" N	1° 59' 20.944" E
9	53° 55' 2.525" N	1° 59' 45.776" E
10	53° 55' 22.663" N	2° 2' 14.219" E
11	53° 56' 16.303" N	2° 1' 15.269" E
12	53° 56' 46.586" N	2° 5' 4.031" E
13	53° 57' 12.481" N	2° 4' 32.376" E
14	53° 57' 24.509" N	2° 6' 6.700" E

<i>Point</i>	<i>Latitude</i>	<i>Longitude</i>
15	53° 50' 10.018" N	2° 13' 57.158" E
16	53° 49' 14.297" N	2° 11' 36.820" E
17	53° 49' 58.584" N	1° 59' 54.762" E
18	53° 49' 58.944" N	1° 58' 59.804" E
19	53° 50' 5.118" N	1° 38' 58.430" E
20	53° 55' 9.293" N	1° 39' 52.024" E
21	53° 56' 3.228" N	1° 41' 0.143" E
22	53° 56' 29.670" N	1° 43' 45.592" E
23	53° 58' 17.828" N	1° 41' 46.795" E

(6) The provisions of section 72 of the 2009 Act shall apply to this licence, save that the provisions of section 72(7) and 72(8) relating to the transfer of the licence shall only apply to a transfer not falling within article 34 of the Order.

Duration

3. 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 Energy Act 2004, 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.

PART 2

Licence conditions

Design parameters

1.—(1) All wind turbine generators forming part of Work No. 3 must not—

- (a) be less than 82 metres to the turbine hub when measured from MHWS;
- (b) exceed a height of 200 metres from MHWS to the upper tip of the vertical blade;
- (c) exceed a rotor diameter of 178 metres;
- (d) be less than 22 metres from MHWS to the lowest point of the rotating blade; or
- (e) be less than 924 metres from the nearest wind turbine generator in all directions.

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

2. Any offshore accommodation platform forming part of Work No. 3 must not—

- (a) exceed 60 metres in height above MHWS;
- (b) have a platform which at its greatest extent exceeds, 3,600 m² or 60 metres in width.

3. The diameter of the electrical circuits comprising the electrical circuits within Work No. 3 must not exceed 170 mm.

4. The electrical circuits comprised in Work No. 3 must be installed by use of, or a combination of, ploughing, trenching, jetting, rock-cutting, dredging, surface laying with post lay burial, and where ground conditions make burial impracticable, by surface laying.

5.—(1) The licence-holder must in fixing to the seabed any structures comprised in Work No. 3 use one of the following methods—

- (a) monopile foundations;
- (b) jacket foundations supported by piles; or

(c) gravity base foundations.

(2) The following parameters apply in respect of the foundation methods used to fix wind turbine generators comprised in Work No. 3 to the seabed—

- (a) where monopile foundations are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 1,419 m²;
 - (ii) the diameter of each foundation must not exceed 8.5 metres;
- (b) where jacket foundations (driven/drilled piles) are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 707 m² per wind turbine;
 - (ii) the number of piles per jacket must not exceed four;
 - (iii) the diameter of each pile must not exceed three metres;
- (c) where jacket foundations (suction piles) are used—
 - (i) the area occupied by the foundations and scour protection for each individual structure must not exceed 6,362 m²;
 - (ii) the number of piles per jacket must not exceed four;
 - (iii) the diameter of each pile must not exceed 15 metres;
- (d) where gravity base foundations are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 6,362 m²;
 - (ii) the seabed levelling diameter must not exceed 70 metres;
 - (iii) the cone diameter must not exceed 50 metres at its base.

(3) The following parameters apply in respect of the foundation methods used to fix any offshore accommodation platform comprised in Work No. 3 to the seabed—

- (a) where monopile foundations are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 1,419 m²;
 - (ii) the diameter of each foundation must not exceed 8.5 metres;
- (b) where jacket foundations (driven/drilled piles) are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 1,414 m²;
 - (ii) the number of piles must not exceed eight;
 - (iii) the diameter of each pile must not exceed three metres;
- (c) where jacket foundations (suction piles) are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 6,362 m²;
 - (ii) the number of piles per jacket must not exceed eight;
 - (iii) the diameter of each pile must not exceed 15 metres;
- (d) where gravity base foundations are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 6,362 m²;
 - (ii) the seabed levelling diameter must not exceed 70 metres;
 - (iii) the cone diameter must not exceed 50 metres at its base.

(4) The combined total volume of scour protection for the wind turbine generators and the offshore accommodation platform forming part of Work No. 3 must not exceed 1,079,839 m³.

(5) In the event that no offshore accommodation platform is constructed under this licence, the combined total volume of scour protection for the wind turbine generators forming part of Work No. 3 must not exceed 1,066,508 m³.

Notifications and inspections

- 6.—(1) The licence-holder shall ensure that—
- (a) a copy of this licence and any subsequent amendments or revisions to it are provided to—
 - (i) all agents and contractors notified to the MMO in accordance with the conditions of this licence; and
 - (ii) the masters and transport managers responsible for the vehicles notified to the MMO in accordance with the conditions of this licence.
 - (b) Within 28 days of receipt of a copy of this licence those persons referred to in subparagraph (a) shall provide a completed confirmation form to the MMO confirming their understanding of the terms and conditions of this licence.
- (2) Only those persons and vessels notified to the MMO in accordance with condition 16 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 licence-holder's registered address;
 - (b) any site office located at or adjacent to the construction site and used by the licence-holder or its agents and contractors responsible for the loading, transportation or deposit for 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 are to be made.
- (4) The documents referred to in paragraph (1)(a) shall be available for inspection by an enforcement officer at the locations set out in paragraph (3) above at any time.
- (5) The licence-holder 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 licence-holder must inform the MMO in writing at least five working days prior to the commencement of the licensed activities or any phase of them.
- (7) Prior to the commencement of the licensed activities the licence-holder must publish in the Kingfisher Fortnightly Bulletin details of the vessel routes, timings and locations relating to the construction of the authorised scheme.
- (8) The licence-holder shall ensure that a Notice to Mariners is issued at least ten days prior to the commencement of the licensed activities advising of the commencement of licensed activities within Wind Farm Area 3 and the expected vessel routes from the local service ports to the turbine locations.
- (9) The Notices to Mariners must be updated and reissued not less frequently than weekly and supplemented with VHF radio broadcasts agreed with the MCA in accordance with the construction and monitoring programme approved under licence condition 13(2)(a). Copies of all notices shall be provided to the MMO.
- (10) The licence-holder must notify—
- (a) the UK Hydrographic Office of 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 once the authorised scheme is completed and any required lighting or marking has been established.

Aids to navigation

7. The licence-holder must during the whole period from the start of construction of the authorised scheme seaward of MHWS to the completion of decommissioning—

- (a) 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;
- (b) colour all structures in the authorised scheme as directed by Trinity House;
- (c) notify Trinity House as soon as reasonably practicable of both the progress and completion of the authorised scheme (or any phase of it) and any aids to navigation established from time to time;
- (d) provide reports on the working condition of aids to navigation periodically as requested by Trinity House;
- (e) notify Trinity House and the MMO of any failure of the aids to navigation and the timescales in which such failure will be remedied, as soon as possible and no later than 24 hours following the licence-holder becoming aware of any such failure.

Provision against danger to navigation

8. In case of injury to, or destruction or decay of, the authorised scheme or any part of it seaward of MHWS the licence-holder must as soon as reasonably practicable, and no later than 24 hours following the licence-holder becoming aware of any such injury, destruction or decay, notify Trinity House and must lay down such buoys, exhibit such lights and take such other steps for the prevention of danger to navigation as Trinity House may from time to time direct.

Navigational Practice, Safety and Emergency Response

9.—(1) No part of the authorised project may commence until the MMO, in consultation with the MCA, has given written approval for an Emergency Response Co-operation Plan (ERCoP) which includes full details of the emergency response co-operation plans for the construction, operation and decommissioning phases of that part of the authorised project in accordance with the MCA recommendations contained within MGN543 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues”.

(2) The ERCoP and associated guidance and requirements must be implemented as approved, unless otherwise agreed in writing by the MMO in consultation with the MCA. The document must be reviewed at least annually or whenever changes are identified, whichever is sooner, and any proposed changes must be submitted to the MMO in writing for approval, in consultation with MCA.

(3) No authorised scheme seaward of MHWS is to commence until the Secretary of State, in consultation with the MCA, has confirmed in writing that the licence-holder has taken into account and, so far as is applicable to that stage of the development, adequately addressed all MCA recommendations as appropriate to the authorised scheme contained within MGN 371 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues” (including its annexes).

(4) *This paragraph has been deleted.*

(5) The licence-holder must during the whole period from the start of construction of the authorised scheme seaward of MHWS to the completion of decommissioning provide relevant information to the MCA to assist in the timely and efficient issuing of notices to mariners and other navigational warnings of the position and nature of the works, such information to be provided to mariners in the shipping and fishing industry as well as to recreational mariners.

Colour and lighting

10. Except as otherwise required by Trinity House under condition 7, the licence-holder must colour all structures comprised in Work No. 3 submarine grey (colour code RAL 7035).

Chemicals, drilling and debris

11.—(1) All chemicals used in the construction of the authorised scheme 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 (as amended), unless otherwise agreed in writing by the MMO.

(2) The licence-holder shall ensure that any coatings or treatments are suitable for use in the marine environment and are used in accordance with guidelines approved by 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 per cent 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 shall be obtained before the drilling commences, which disposal may also require a marine licence.

(5) The licence-holder shall 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, where practicable.

(6) All dropped objects must be reported to the MMO using the Dropped Object Procedure 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 Procedure Form, the MMO may require relevant surveys to be carried out by the undertaker (such as side scan sonar) if reasonable to do so and the MMO may require obstructions to be removed from the seabed at the undertaker's expense if reasonable to do so.

(7) *This paragraph has been deleted.*

(8) *This paragraph has been deleted.*

(9) The licence-holder shall inform the MMO of the location and quantities of inert material disposed of each month under this licence, by submission of a disposal return by 31st January each year for disposals occurring during the months July to December inclusive of the preceding year, and by 31st July each year for disposals occurring during the months January to June inclusive of that year.

(10) The licence-holder shall ensure that only inert material of natural origin, produced during construction drilling and seabed preparation for foundation works comprised in Work No. 3, and drilling mud shall be disposed of at disposal site reference HU206 (Hornsea Project One Subzone 1).

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

(12) The licence-holder shall 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.

Force majeure

12. If, due to stress of weather or any other cause, the master of a vessel determines that it is necessary to deposit—

- (a) authorised deposits outside of Wind Farm Area 3 or disposal site reference HU206 (Hornsea Project One Subzone 1); or
- (b) unauthorised deposits within or outside of Wind Farm Area 3 or disposal site reference HU206 (Hornsea Project One Subzone 1),

because the safety of human life and/or of the vessel is threatened, full details of the circumstances of the deposit shall be notified to the MMO within 48 hours.

Pre-construction plans and documentation

13.—(1) The licensed activities shall 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—

- (a) to ensure conformity with the description of Work No. 3 and compliance with licence conditions 1 to 5 above, a plan, to be agreed in writing with the MMO in consultation with Trinity House and the MCA, which shows—
 - (i) the proposed location and choice of foundation of all wind turbine generators and any offshore accommodation platform, subject to any micro-siting required due to anthropological constraints, environmental constraints, difficult ground conditions or to give adequate spacing between other infrastructure;
 - (ii) the proposed location and height of bridge links;
 - (iii) 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;
 - (iv) whether an accommodation platform will be built as part of Work No.3 and, if so, the height, length and width of that offshore accommodation platform;
 - (v) the length and arrangement of all electrical circuits comprising Work No. 3 subject to any micro-siting required due to anthropological constraints, environmental constraints or difficult ground conditions;
 - (vi) the proposed dimensions of all monopile foundations;
 - (vii) the proposed dimensions of all gravity base foundations;
 - (viii) the proposed dimensions of all jacket foundations; and
 - (ix) the proposed layout of all wind turbine generators and any offshore accommodation platform including all exclusion zones comprised in the licensed activities and showing the indicative programming of particular works as set out in the indicative programme to be provided under paragraph (2)(a).

(2) The licensed activities, or any phase of those activities, shall not commence until a Code of Construction Practice incorporating the following (insofar as relevant to that activity or phase of activity) have been submitted to and approved in writing by the MMO—

- (a) 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; and
 - (iii) proposed pre-construction surveys, baseline report format and content, construction monitoring, post construction monitoring and related reporting in accordance with licence conditions 18 to 20. The pre-construction survey programme and all pre-construction survey methodologies shall be submitted to the MMO at least four months prior to the commencement of any survey works detailed within;
- (b) a construction method statement in accordance with the project description and Environmental Statement and including details of—
 - (i) foundation installation, including any seabed preparation, drilling and disposal of arisings methods;
 - (ii) turbine installation, including any seabed preparation and scour protection;
 - (iii) installation of any offshore accommodation platform, including any seabed preparation and scour protection;
 - (iv) circuit installation, including any seabed preparation and circuit protection;
 - (v) contractors;
 - (vi) vessels; and
 - (vii) associated works;
- (c) 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 below MHWS;
 - (ii) a chemical risk analysis 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 and disposal arrangements;
 - (iv) offshore project maintenance plans including offshore electrical circuit maintenance;
 - (v) locations of any archaeological exclusion zones agreed as part of the written scheme of archaeological investigation approved under sub-paragraph (g);
 - (vi) the appointment and responsibilities of a fisheries liaison officer and an environmental liaison officer; and
 - (vii) a disposal plan detailing the locations, methods and timings of dredging and disposal, as well as disposal site monitoring requirements;
- (d) a scour protection management and cable armouring plan providing details of the need, type, sources, quantity, location and installation methods for scour protection and cable armouring to be within the scope of the environmental impact assessment recorded in the Environmental Statement;
- (e) in the event that driven or part-driven pile foundations are proposed to be used, a marine mammal mitigation protocol following current best practice as advised by the statutory nature conservation agencies, to include, but not be limited to—
- (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; and
 - (vi) where appropriate, methods for the application of acoustic deterrent devices;
- (f) cable specification and installation plan, to include—
- (i) technical specification of offshore electrical circuits, 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, including geotechnical data, cable laying techniques and a cable burial risk assessment encompassing the identification of any cable protection which exceeds 5% of navigable depth referenced to Chart Datum and, in the event that any area of cable protection exceeding 5% of navigable depth is identified, details of any steps (to be determined following consultation with the MCA) to be taken to ensure existing and future safe navigation is not compromised;
- (g) a written scheme of archaeological investigation in relation to Wind Farm Area 3 in accordance with industry good practice to include—
- (i) details of responsibilities of the licence-holder, 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 to be submitted to the MMO within four months of survey completion;
- (iv) delivery of any mitigation including, where necessary, archaeological exclusion zones;
- (v) monitoring during and post construction, including a conservation programme for finds;
- (vi) archiving of archaeological material; and
- (vii) a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised scheme;
- (h) a marine mammal monitoring plan setting out the circumstances in which marine mammal monitoring will be required and the monitoring to be carried out in such circumstances; and
- (i) an offshore project maintenance plan to be submitted to the MMO at least four months prior to commencement of the operation of the licensed activities and to include provision for the review and resubmission of the plan every three years during the operational phase.

(3) Prior to the submission of the pre-construction plans and documentation required by this condition the licence-holder must provide a copy of the plans and documentation to the other undertakers listed in Article 3 of the Order.

(4) The other undertakers must provide any comments on the plans and documentation to the licence-holder within 14 days of receipt of the plans and documentation.

(5) The licence-holder shall participate in liaison meetings with other undertakers listed in Article 3 of the Order as requested from time to time by the MMO in writing in advance, which meetings shall be chaired by the MMO and shall consider such matters as are determined by the MMO relating to the efficient operation of a deemed marine licence where it has an impact on the efficient operation of any other deemed marine licence issued under the Order (including as varied or transferred).

(6) Prior to giving its approval under paragraph (2), the MMO must—

- (a) in relation to any programme, statement, plan or protocol submitted under sub-paragraphs (a) to (e) or (h), consult with the relevant statutory nature conservation body;
- (b) in relation to a scheme submitted under sub-paragraph (g), consult with English Heritage.

14. The licence-holder shall ensure that a copy of any agreed archaeological report is deposited with the National Record of the Historic Environment, by submitting an English Heritage OASIS form with a digital copy of the report.

15.—(1) Each programme, statement, plan, protocol or scheme required to be approved under condition 13—

- (a) shall be submitted for approval at least four months prior to the intended start of construction, except where otherwise stated or where an alternative date is agreed in writing by the MMO; and
- (b) shall be accompanied by—
 - (i) a statement confirming that the licence-holder has complied with condition 13(3) in relation to such programme, statement, plan, protocol or scheme; and
 - (ii) any comments received by the licence-holder under condition 13(4), or a statement from the licence-holder confirming that no such comments were received.

(2) The licence-holder shall comply with all documents approved under licence condition 13 in carrying out the licensed activities except to the extent agreed in writing by the MMO.

(3) Prior to agreeing an alternative date under paragraph (1)(a) or a change to approved details under paragraph (2) relating to any document in respect of which consultation is required under condition 13(6), the MMO must consult with the relevant consultation body referred to in that condition.

Reporting of engaged agents, contractors and vessels

- 16.**—(1) The licence-holder shall provide the following information to the MMO—
- (a) the name and function of any agent or contractor appointed to engage in the licensed activities at least five working days prior to the commencement of the licensed activities or any part of them; and
 - (b) each week during the construction of the authorised scheme, a completed Hydrographic Note H102 listing the construction 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 and MMO Coastal Office in writing prior to the agent, contractor or vessel engaging in the licensed activities. All agents, contractors and/or vessel operators will abide by the conditions set out in this licence.

Equipment and Operation of Vessels Engaged in Licensed Activities

- 17.**—(1) All vessels employed to perform the licensed activities shall be constructed and equipped to be capable of the proper performance of such activities in accordance with the conditions of this licence and shall comply with paragraphs (2) to (6).
- (2) All motor powered vehicles must be fitted with—
- (a) electronic positioning aid to provide navigational data;
 - (b) radar;
 - (c) echo sounder; and
 - (d) multi-channel VHF.
- (3) No radio beacon or radar beacon operating on the marine frequency bands shall be installed or used without the prior written approval of the Secretary of State.
- (4) All vessels' names or identification shall be clearly marked on the hull or superstructure of the vessel.
- (5) All communication on VHF working frequencies shall be in English.
- (6) No vessel shall engage in the licensed activities until all the equipment specified in paragraph (2) is fully operational.

Pre-construction monitoring and surveys

- 18.**—(1) The licence-holder must, when submitting details under condition 13(2)(a)—
- (a) in relation to the proposed pre-construction surveys, include methodologies and timings, and 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) in relation to 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) Subject to receipt from the licence-holder of specific proposals pursuant to this condition, it is expected that the pre-construction surveys will comprise, in outline—
- (a) a high resolution swath bathymetric survey to include a 100% coverage and a side scan sonar survey of the part(s) of Wind Farm Area 3 in which it is proposed to carry out construction works and disposal activities under this licence, including a 500m buffer around the site of each works;
 - (b) a survey of existing ornithological activity covering the part(s) of Wind Farm Area 3 within which it is proposed to carry out construction works under this licence, 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;

- (c) a survey to determine the location, extent and composition of any benthic habitats of conservation, ecological and/or economic importance in the part(s) of Wind Farm Area 3 in which it is proposed to carry out construction works under this licence; and
- (d) any marine mammal monitoring required by the marine mammal monitoring plan submitted in accordance with condition 13(2)(h).

Construction monitoring

19.—(1) The licence-holder must, when submitting details of proposed construction monitoring under condition 13(2)(a), include methodologies and timings, and a proposed format, content and timings for providing reports on the results. 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 pre-construction position and/or will enable the validation or otherwise of key predictions in the Environmental Statement.

(2) Subject to receipt from the licence-holder of specific proposals pursuant to this condition, it is expected that the construction monitoring will comprise, in outline—

- (a) except to the extent agreed in writing by the MMO, measurements of noise generated by the installation of the first four foundations of each discrete foundation type to be constructed under this licence where driven or part-driven pile foundations are used; and
- (b) recording of any visual sightings or acoustic detection of marine mammals where required as part of the marine mammal mitigation protocol under condition 13(2)(e).

(3) The results of the initial noise measurements monitored in accordance with paragraph (2)(a) must be provided to the MMO within six weeks of the installation of the first four foundations of each discrete foundation type. The assessment of this report by the MMO shall determine whether any further noise monitoring is required.

(4) Construction monitoring shall include vessel traffic monitoring by Automatic Identification System for the duration of the construction period. A report will be submitted to the MMO and the MCA at the end of each year of the construction period.

Post construction

20.—(1) The licence-holder must, when submitting details of proposed post-construction surveys under condition 13(2)(a), include methodologies and timings, and a proposed format, content and timings for providing reports on the results. 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) Subject to receipt of specific proposals, it is expected that the post-construction surveys will comprise, in outline—

- (a) an ornithological survey covering the part(s) of Wind Farm Area 3 within which construction works were carried out under this licence, 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;
- (b) a high resolution swath bathymetric survey of the following to assess any changes in bedform morphology—
 - (i) a representative sample area, to be agreed in writing with the MMO, of the part(s) of Wind Farm Area 3 within which construction works and disposal activities were carried out under this licence, and such further monitoring as may be required to ensure that the cables have been buried or protected; and
 - (ii) an area not to exceed 125 per cent of the predicted scour area around a selection of turbines, such selection to be based on the desk based assessment;
- (c) a survey to determine any change in the location, extent and composition of any benthic habitats of conservation, ecological and/or economic importance identified in the pre-

construction survey in the part(s) of Wind Farm Area 3 in which construction works were carried out. The survey design will be informed by the results of the pre-construction benthic survey;

- (d) vessel traffic monitoring by Automatic Identification System, for 28 days taking account seasonal variations in traffic patterns, for a maximum duration of one year post construction. A report will be submitted to the MMO and the MCA at the end of the first year after construction is completed; and
- (e) any marine mammal monitoring required by the marine mammal monitoring plan submitted in accordance with condition 13(2)(h).

(3) Prior to carrying out the survey required under paragraph (2)(b), the licence-holder must submit to the MMO for written approval a desk based assessment (which takes account of all factors which influence scour) identifying the turbines with greatest potential for scour. The survey will be used to validate the desk based assessment and the significance of any differences between the predicted scour and recorded scour will be assessed in the survey report which will be submitted to the MMO. The need for further surveys will be agreed in writing with the MMO following submission of the first year of survey data.

Amendments to details

21.—(1) With respect to any condition of this licence which requires the licensed activities to be carried out in accordance with the plans and programmes approved by the MMO, the approved plans and programmes shall be taken to include any amendments that may subsequently be approved in writing by the MMO.

(2) Where the words ‘except to the extent agreed in writing by the MMO’ appear in these licence conditions, any such agreement or statement may only be given in relation to immaterial changes where it has been demonstrated to the satisfaction of MMO that the subject matter of the agreement sought is unlikely to give rise to any materially new or materially different environmental effects from those assessed in the Environmental Statement.

Offshore Decommissioning

22. No decommissioning activities shall commence until plans for the carrying out of such activities have been submitted to and approved in writing by the MMO.

SCHEDULE 11

Deemed Marine Licences under the Marine and Coastal Access Act 2009 – Deemed Marine Licence 4

PART 1

Licensed marine activities

Interpretation

1.—(1) In this licence—

“the 2008 Act” means the Planning Act 2008;

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

“ancillary vessel” means any vessel other than a construction vessel or a survey vessel;

“ancillary works” means the ancillary works described in paragraph 2 of this Part of this licence which are not development within the meaning of section 32 of the 2008 Act;

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

“authorised development” means the development described in Part 1 of Schedule 1 of the Order, which is development within the meaning of section 32 of the 2008 Act;

“authorised project” means the authorised development and the ancillary works authorised by the Order;

“authorised scheme” means Works Nos. 4 to 7 described in paragraph 2 of Part 1 of this licence;

“Cefas” means the Centre for Environment, Fisheries and Aquaculture Science or any replacement body;

“commence” means the first carrying out of any part of the licensed activities, save for pre-construction surveys and monitoring, and “commencement” shall be construed accordingly;

“construction vessel” means any vessel involved in the course of or used for the construction and/or maintenance of the authorised project;

“debris” means items or equipment of a significant size left on the seabed being lost from survey or construction vessels;

“electrical circuit” means a number of electrical conductors necessary to transmit electricity between two points within the authorised project; this comprises, in the case of HVAC transmission, three conductors which may be bundled as one cable, and, in the case of HVDC transmission two conductors, which may be attached together or take the form of single cables: the circuit may include one or more auxiliary cables (normally fibre optic cables) for the purpose of control, monitoring, protection or general communications;

“enforcement officer” means a person authorised to carry out enforcement duties under Part 4, Chapter 3 of the 2009 Act;

“the Environmental Statement” means the document certified as the environmental statement by the Secretary of State for the purposes of the Order;

“gravity base foundation” means either—

- (a) a structure principally of concrete and/or steel which rests on the seabed due either to its own weight and that of added ballast or to the weight of water above it, and may include associated equipment including suction piles, J-tubes and access platforms; or
- (b) a structure principally of concrete and/or steel consisting of a platform supported on two pontoons to which the platform is connected by columns which may be connected by braces;

“high tide” means the state of the tide when it reaches its highest level during a tidal cycle, as may be published from time to time on the United Kingdom Hydrograph Office Admiralty EasyTide Website, or such other publication as may be approved by the MMO;

“HVAC” means high voltage alternating current;

“HVDC” means high voltage direct current;

“the intertidal area” means the area between mean high water springs and mean low water springs;

“the intertidal works plans” means the part of the works plans described as the intertidal works plans;

“jacket foundation” means a lattice construction comprising tubular members and joints which are fixed to the seabed with piles (either driven/drilled piles or suction piles) and which will include platforms and J-tubes and may include braced monopiles and a transition piece;

“the 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 Part 1 of this licence;

“the licence conditions” means the conditions set out in Part 2 of this licence;

“licence-holder” means Hornsea 1 Limited;

“maintain” includes, to the extent assessed in the environmental statement—

- (a) inspect, repair, adjust and alter; and
- (b) in respect of any of the ancillary works and any component part of any wind turbine generator, offshore accommodation platform, offshore HVAC collector substation, offshore HVDC converter station or offshore reactive compensation substation described in Part 1 of Schedule 1 (authorised development) of the Order also includes remove, reconstruct and replace,

but does not include the alteration, removal or replacement of foundations; and “maintenance” shall be construed accordingly;

“major storm event” means a greater than one in ten year wave event within the offshore Order limits seaward of MHWS in terms of wave height, measured by reference to the height of waves recorded at the nearest wave buoy to the authorised scheme as agreed with the MMO, and the WaveNet data published by Cefas, or such other means of measurement as may be agreed with the MMO;

“the Marine Management Organisation” or “MMO” means the body created under the 2009 Act which is responsible for the monitoring and enforcement of this licence or any successor to its statutory functions;

“the Maritime and Coastguard Agency” or “MCA” means the executive agency of the Department for Transport or any successor to its statutory functions;

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

“mean low water springs” or “MLWS” means the lowest level which spring tides reach on average over a period of time;

“monopile foundation” comprises a large diameter steel or concrete tube or pile driven vertically into the seabed, J-tubes and platforms and may include external structural devices such as bracing members or steel anchor wires and a transition piece;

“Natural England” means the body established by section 1 of the Natural Environment and Rural Communities Act 2006 or any successor to its statutory functions;

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

“offshore accommodation platform” means a platform housing or incorporating temporary accommodation, landing ports for vessels and/or helicopters, standby electricity generation equipment, marking and lighting and other equipment facilities to assist in the co-ordination of marine activities related to the authorised scheme;

“offshore HVAC collector substation” means a structure serving as a collection point for the inter-array electrical circuits and containing equipment with the purpose of transforming the electricity generated at the wind turbines to a higher voltage; it may also include a helicopter platform;

“offshore HVDC converter station” means a structure which contains equipment to convert HVAC electricity to HVDC electricity; it may also include a helicopter platform;

“offshore Order limits” means the limits shown on the offshore works plans and the intertidal works plans within which the authorised scheme may be carried out, whose grid coordinates are set out in paragraph 2(2) of this licence;

“offshore reactive compensation substation” means a structure housing electrical reactors for the purpose of limiting electrical losses in the course of HVAC transmission by providing reactive compensation; it may also include a helicopter platform;

“the offshore works plans” means the part of the works plans described as the offshore works plans;

“the Order limits” means the limits shown on the works plans within which the authorised project may be carried out;

“the Order” means the Hornsea One Offshore Wind Farm Order 2014;

“the project description” means the document certified as the project description by the Secretary of State for the purposes of the Order and submitted with the application on 30th July 2013 (Chapter Three, Volume One of the Environmental Statement);

“suction pile” 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 weight and hydrostatic pressure differential;

“survey vessels” means the vessels licensed to carry out environmental or engineering surveys;

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

“the UK Hydrographic Office” means the Hydrographic Office of the Ministry of Defence, Taunton, Somerset TA1 2DN or any replacement body or successor to its functions;

“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 and including ancillary vessels and construction vessels;

“VHF” means very high frequency;

“Wind Farm Area 1” means the area within the limits of deviation for Work No. 1 of which the co-ordinates are specified in Part 1 of Schedule 1 of the Order and shown on the works plans;

“Wind Farm Area 2” means the area within the limits of deviation for Work No. 2 of which the co-ordinates are specified in Part 1 of Schedule 1 of the Order and shown on the works plans;

“Wind Farm Area 3” means the area within the limits of deviation for Work No. 3 of which the co-ordinates are specified in Part 1 of Schedule 1 of the Order and shown on the works plans;

“wind turbine generator” or “wind turbine” means a structure comprising any or all of a tower, rotor, blades, nacelle and ancillary electrical and other equipment or structures which may include lighting and a helicopter platform, fixed to a foundation;

“working day” means any day other than a Saturday, Sunday or public holiday in England and Wales;

“Work No. 1” means an offshore wind generating station within Wind Farm Area 1 and described as Work No. 1 in Part 1 of Schedule 1 of the Order;

“Work No. 2” means an offshore wind generating station within Wind Farm Area 2 and described as Work No. 2 in Part 1 of Schedule 1 of the Order;

“Work No. 3” means an offshore wind generating station within Wind Farm Area 3 and described as Work No. 3 in Part 1 of Schedule 1 of the Order;

“Work No. 8” means up to four underground electrical circuit transition joint bays in the vicinity of Horseshoe Point in the parish of North Coates in the County of Lincolnshire, housing the connections between the offshore and the onshore electrical circuits;

“the works plans” means the plans certified as the works plans by the Secretary of State for the purposes of the Order divided into three parts and described as the offshore works plans, the intertidal works plans and the onshore works plans.

(2) References to Works No.4 to 7 are to the works described in paragraph 2 of Part 1 of this licence.

(3) 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.

(4) 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, minutes and seconds to three decimal places in WGS84 Datum.

(5) 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
 - Marine Licensing Team
 - Lancaster House
 - Hampshire Court
 - Newcastle upon Tyne
 - NE4 7YH
 - Tel: 0300 123 1032
 - Email: marine.consent@marinemanagement.org.uk
- (b) Marine Management Organisation (referred to as the “MMO Coastal Office”)
 - Estuary House
 - Wharnccliffe Road
 - Grimsby
 - Lincolnshire
 - DN31 3QL
 - Tel: 01472 355 112
- (c) Trinity House
 - Tower Hill
 - London
 - EC3N 4DH
 - Tel: 020 7481 6900
- (d) The United Kingdom Hydrographic Office
 - 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) Joint Nature Conservation Committee

Inverdee House
Baxter Street
Aberdeen
AB11 9QA
Tel: 01224 266 550

(i) English Heritage

Eastgate Court
195-205 High Street
Guildford
GU1 3EH
Tel: 01483 252 057

Details of licensed activities

2.—(1) This licence authorises the licence-holder (and any agent or contractor acting on their behalf) to carry out the following licensable marine activities pursuant to section 66(1) of the 2009 Act, subject to the licence 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) dredging;
- (d) the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation;
- (e) the disposal at disposal site reference HU206 (Hornsea Project One Subzone 1) of up to 239,210 m³ of inert material of natural origin produced during construction drilling and seabed preparation for foundation works comprised in Work No. 4;
- (f) the disposal at disposal site reference HU205 (Hornsea Disposal Area 1) of up to 19,242 m³ of inert material of natural origin produced during construction drilling and seabed preparation for foundation works and comprised in Work No. 5;
- (g) the disposal at disposal site reference HU209 (Hornsea Project One Sandwave Clearance Disposal Area 1A) of up to 634,500 m³ of inert material of natural origin produced during cable sandwave preparation works comprised in Work No. 6;
- (h) the disposal at disposal site reference HU210 (Hornsea Project One Sandwave Clearance Disposal Area 1B) of up to 65,500 m³ of inert material of natural origin produced during cable sandwave preparation works comprised in Work No. 6; and
- (i) the removal of the substances and articles specified in sub-paragraph (3) below.

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

Work No. 4 — up to five offshore HVAC collector substations and, in the event that the mode of transmission is HVDC, up to two offshore HVDC converter stations together with a network of electrical circuits connecting the structures within Work No. 4. The limits of deviation for Work No. 4 are specified in Table 1.

Table 1: Limits of deviation for Work No. 4

<i>Point</i>	<i>Latitude</i>	<i>Longitude</i>
1	53° 58' 42.179" N	1° 44' 31.880" E
2	53° 55' 46.445" N	1° 47' 47.796" E
3	53° 56' 22.870" N	1° 51' 57.409" E
4	53° 55' 31.318" N	1° 52' 54.282" E
5	53° 55' 37.592" N	1° 53' 38.108" E
6	53° 55' 23.329" N	1° 55' 20.262" E
7	53° 55' 8.162" N	1° 56' 10.619" E
8	53° 55' 35.429" N	1° 59' 20.944" E
9	53° 55' 2.525" N	1° 59' 45.776" E
10	53° 55' 22.663" N	2° 2' 14.219" E
11	53° 56' 16.303" N	2° 1' 15.269" E
12	53° 56' 46.586" N	2° 5' 4.031" E
13	53° 57' 12.481" N	2° 4' 32.376" E
14	53° 57' 24.509" N	2° 6' 6.700" E
15	53° 50' 10.018" N	2° 13' 57.158" E
16	53° 49' 14.297" N	2° 11' 36.820" E
17	53° 49' 58.584" N	1° 59' 54.762" E
18	53° 49' 58.944" N	1° 58' 59.804" E
19	53° 50' 5.118" N	1° 38' 58.430" E
20	53° 55' 9.293" N	1° 39' 52.024" E
21	53° 56' 3.228" N	1° 41' 0.143" E
22	53° 56' 29.670" N	1° 43' 45.592" E
23	53° 58' 17.828" N	1° 41' 46.795" E

Work No. 5 — in the event that the mode of transmission is HVAC, an offshore reactive compensation substation fixed to the seabed at latitude point 53° 37' 39.284" N and longitude point 0° 56' 9.841" E, subject to deviation within the limits of deviation specified in Table 2.

Table 2: Limits of deviation for Work No. 5

<i>Point</i>	<i>Latitude</i>	<i>Longitude</i>
1	53° 37' 47.368" N	0° 56' 9.446" E
2	53° 37' 47.217" N	0° 56' 12.482" E
3	53° 37' 46.669" N	0° 56' 15.386" E
4	53° 37' 45.750" N	0° 56' 18.012" E
5	53° 37' 44.507" N	0° 56' 20.228" E
6	53° 37' 43.002" N	0° 56' 21.923" E
7	53° 37' 41.311" N	0° 56' 23.012" E
8	53° 37' 39.518" N	0° 56' 23.440" E
9	53° 37' 37.713" N	0° 56' 23.187" E
10	53° 37' 35.987" N	0° 56' 22.264" E
11	53° 37' 34.426" N	0° 56' 20.719" E
12	53° 37' 33.109" N	0° 56' 18.628" E
13	53° 37' 32.101" N	0° 56' 16.096" E
14	53° 37' 31.454" N	0° 56' 13.251" E
15	53° 37' 31.199" N	0° 56' 10.235" E

<i>Point</i>	<i>Latitude</i>	<i>Longitude</i>
16	53° 37' 31.349" N	0° 56' 7.199" E
17	53° 37' 31.898" N	0° 56' 4.295" E
18	53° 37' 32.816" N	0° 56' 1.670" E
19	53° 37' 34.059" N	0° 55' 59.454" E
20	53° 37' 35.564" N	0° 55' 57.759" E
21	53° 37' 37.255" N	0° 55' 56.669" E
22	53° 37' 39.048" N	0° 55' 56.240" E
23	53° 37' 40.853" N	0° 55' 56.493" E
24	53° 37' 42.579" N	0° 55' 57.416" E
25	53° 37' 44.140" N	0° 55' 58.961" E
26	53° 37' 45.458" N	0° 56' 1.052" E
27	53° 37' 46.465" N	0° 56' 3.584" E
28	53° 37' 47.113" N	0° 56' 6.429" E

Work No. 6 — a marine connection to the shore, including cable and pipeline crossing works which—

- (a) if the mode of transmission is HVAC, consists of up to four subsea electrical circuits proceeding from the offshore HVAC collector substations in Wind Farm Areas 1, 2 and 3 via and connecting with the offshore reactive compensation substation comprised in *Work No. 5*; or
- (b) if the mode of transmission is HVDC, consists of two subsea electrical circuits proceeding from the offshore HVDC converter station or stations within Wind Farm Areas 1, 2 and 3,

and in either case terminates at the commencement of *Work No. 7*. The limits of deviation for *Work No. 6* are those specified in the offshore works plans, with the principal co-ordinates for the marine export cable area identified in *Table 3*.

Table 3: Limits of deviation for the marine export cable area

<i>Point</i>	<i>Latitude</i>	<i>Longitude</i>
1	53° 58' 42.179" N	1° 44' 31.880" E
2	53° 55' 46.445" N	1° 47' 47.796" E
3	53° 56' 22.870" N	1° 51' 57.409" E
4	53° 55' 31.318" N	1° 52' 54.282" E
5	53° 55' 37.592" N	1° 53' 38.108" E
6	53° 55' 23.329" N	1° 55' 20.262" E
7	53° 55' 8.162" N	1° 56' 10.619" E
8	53° 55' 35.429" N	1° 59' 20.944" E
9	53° 55' 2.525" N	1° 59' 45.776" E
10	53° 55' 22.663" N	2° 2' 14.219" E
11	53° 56' 16.303" N	2° 1' 15.269" E
12	53° 56' 46.586" N	2° 5' 4.031" E
13	53° 57' 12.481" N	2° 4' 32.376" E
14	53° 57' 24.509" N	2° 6' 6.700" E
15	53° 50' 10.018" N	2° 13' 57.158" E
16	53° 49' 14.297" N	2° 11' 36.820" E
18	53° 48' 24.484" N	2° 10' 40.243" E
19	53° 48' 17.722" N	2° 7' 38.708" E
22	53° 48' 51.983" N	2° 0' 20.504" E

<i>Point</i>	<i>Latitude</i>	<i>Longitude</i>
24	53° 48' 48.527" N	1° 56' 7.168" E
27	53° 48' 10.932" N	1° 53' 5.208" E
30	53° 47' 39.535" N	1° 46' 16.691" E
33	53° 46' 9.387" N	1° 38' 58.729" E
37	53° 46' 4.677" N	1° 37' 22.711" E
39	53° 44' 47.813" N	1° 28' 38.495" E
44	53° 44' 47.743" N	1° 27' 26.607" E
46	53° 44' 36.477" N	1° 25' 23.743" E
153	53° 42' 30.629" N	1° 15' 58.654" E
164	53° 42' 28.182" N	1° 14' 34.895" E
276	53° 39' 35.134" N	1° 6' 29.785" E
328	53° 38' 17.582" N	1° 2' 16.928" E
459	53° 36' 54.624" N	0° 51' 31.062" E
461	53° 36' 15.738" N	0° 48' 52.425" E
525	53° 35' 21.166" N	0° 43' 44.242" E
527	53° 31' 50.425" N	0° 40' 55.898" E
528	53° 31' 38.281" N	0° 40' 8.340" E
533	53° 28' 36.676" N	0° 20' 3.846" E
544	53° 31' 43.122" N	0° 12' 21.707" E
545	53° 30' 57.432" N	0° 5' 59.890" E
546	53° 30' 35.438" N	0° 5' 23.202" E
547	53° 30' 42.212" N	0° 5' 9.948" E
549	53° 31' 36.033" N	0° 6' 10.831" E
588	53° 32' 16.976" N	0° 12' 37.072" E
771	53° 29' 11.523" N	0° 20' 5.981" E
1009	53° 31' 28.589" N	0° 35' 44.348" E
1010	53° 32' 0.855" N	0° 37' 42.781" E
1011	53° 32' 17.793" N	0° 39' 31.883" E
1012	53° 32' 35.749" N	0° 39' 45.737" E
1013	53° 33' 8.117" N	0° 39' 47.665" E
1014	53° 34' 28.861" N	0° 41' 27.396" E
1015	53° 35' 42.522" N	0° 42' 37.802" E
1018	53° 36' 25.571" N	0° 43' 54.129" E
1089	53° 37' 2.569" N	0° 47' 31.846" E
1091	53° 37' 30.986" N	0° 49' 14.023" E
1094	53° 37' 29.991" N	0° 51' 27.606" E
1095	53° 37' 36.904" N	0° 52' 22.841" E
1119	53° 38' 45.654" N	0° 57' 1.237" E
1151	53° 39' 16.652" N	1° 1' 1.016" E
1157	53° 39' 42.566" N	1° 1' 40.167" E
1163	53° 41' 20.037" N	1° 6' 45.836" E
1165	53° 42' 59.843" N	1° 14' 18.127" E
1172	53° 43' 0.151" N	1° 15' 37.960" E
1173	53° 45' 6.659" N	1° 25' 3.239" E
1174	53° 45' 19.169" N	1° 27' 18.352" E
1189	53° 45' 20.249" N	1° 28' 32.601" E
1256	53° 46' 36.946" N	1° 36' 57.722" E

<i>Point</i>	<i>Latitude</i>	<i>Longitude</i>
1270	53° 46' 40.338" N	1° 38' 22.735" E
1272	53° 50' 5.118" N	1° 38' 58.430" E
1273	53° 55' 9.293" N	1° 39' 52.024" E
1274	53° 56' 3.228" N	1° 41' 0.143" E
1275	53° 56' 29.670" N	1° 43' 45.592" E
1276	53° 58' 17.828" N	1° 41' 46.795" E

Work No. 7 — a foreshore connection consisting of an extension of the electrical circuits comprised in *Work No. 6*, including cable crossing works, crossing under the existing sea wall using the horizontal directional drilling method and terminating at the electrical circuit transition joint bays (*Work No. 8*).

And in connection with such Works Nos. 4 to 7, further associated development as may be necessary or expedient in connection with the authorised scheme within the Order limits and which fall within the scope of the environmental impact assessment recorded in the Environmental Statement.

And in connection with such Works Nos. 4 to 7, ancillary works consisting of works and operations within the Order limits comprising temporary anchorage of vessels and 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; and
- (f) material extracted from within the offshore Order limits during construction drilling and seabed preparation for foundation works and cable sandwave preparation works.

(4) The grid co-ordinates for disposal site reference HU205 (Hornsea Disposal Area 1) are specified in Table 4.

Table 4: Co-ordinates for disposal site HU205

<i>Point</i>	<i>Latitude</i>	<i>Longitude</i>
1	53° 37' 22.048" N	00° 55' 08.301" E
2	53° 37' 30.025" N	00° 55' 03.615" E
3	53° 37' 40.393" N	00° 55' 01.826" E
4	53° 37' 50.656" N	00° 55' 04.547" E
5	53° 37' 58.609" N	00° 55' 10.070" E
6	53° 38' 04.286" N	00° 55' 16.359" E
7	53° 38' 10.156" N	00° 55' 25.880" E
8	53° 38' 14.547" N	00° 55' 36.526" E
9	53° 38' 18.433" N	00° 55' 52.770" E
10	53° 38' 19.667" N	00° 56' 06.330" E
11	53° 38' 19.497" N	00° 56' 17.003" E
12	53° 38' 18.089" N	00° 56' 28.969" E
13	53° 38' 14.135" N	00° 56' 44.345" E
14	53° 38' 07.743" N	00° 56' 58.162" E
15	53° 37' 59.074" N	00° 57' 09.156" E
16	53° 37' 51.599" N	00° 57' 14.631" E
17	53° 37' 38.643" N	00° 57' 17.843" E

(5) The grid co-ordinates for disposal site reference HU206 (Hornsea Project One Subzone 1) are specified in Table 5.

Table 5: Co-ordinates for disposal site HU206

<i>Point</i>	<i>Latitude</i>	<i>Longitude</i>
1	53° 58' 42.179" N	1° 44' 31.880" E
2	53° 55' 46.445" N	1° 47' 47.796" E
3	53° 56' 22.870" N	1° 51' 57.409" E
4	53° 55' 31.318" N	1° 52' 54.282" E
5	53° 55' 37.592" N	1° 53' 38.108" E
6	53° 55' 23.329" N	1° 55' 20.262" E
7	53° 55' 8.162" N	1° 56' 10.619" E
8	53° 55' 35.429" N	1° 59' 20.944" E
9	53° 55' 2.525" N	1° 59' 45.776" E
10	53° 55' 22.663" N	2° 2' 14.219" E
11	53° 56' 16.303" N	2° 1' 15.269" E
12	53° 56' 46.586" N	2° 5' 4.031" E
13	53° 57' 12.481" N	2° 4' 32.376" E
14	53° 57' 24.509" N	2° 6' 6.700" E
15	53° 50' 10.018" N	2° 13' 57.158" E
16	53° 49' 14.297" N	2° 11' 36.820" E
17	53° 49' 58.584" N	1° 59' 54.762" E
18	53° 49' 58.944" N	1° 58' 59.804" E
19	53° 50' 5.118" N	1° 38' 58.430" E
20	53° 55' 9.293" N	1° 39' 52.024" E
21	53° 56' 3.228" N	1° 41' 0.143" E
22	53° 56' 29.670" N	1° 43' 45.592" E
23	53° 58' 17.828" N	1° 41' 46.795" E

(6) The grid co-ordinates for disposal site reference HU209 (Hornsea Project One Sandwave Clearance Disposal Area 1A) are specified in Table 6.

Table 6: Co-ordinates for disposal site HU209

<i>Point</i>	<i>Latitude</i>	<i>Longitude</i>
A	53° 36' 40.490" N	00° 50' 41.571" E
B	53° 36' 54.624" N	00° 51' 31.062" E
C	53° 37' 22.048" N	00° 55' 08.301" E
1	53° 37' 22.048" N	00° 55' 08.301" E
2	53° 37' 30.025" N	00° 55' 03.615" E
3	53° 37' 40.393" N	00° 55' 01.826" E
4	53° 37' 50.656" N	00° 55' 04.547" E
5	53° 37' 58.609" N	00° 55' 10.070" E
6	53° 38' 04.286" N	00° 55' 16.359" E
7	53° 38' 10.156" N	00° 55' 25.880" E
8	53° 38' 14.547" N	00° 55' 36.526" E
9	53° 38' 18.433" N	00° 55' 52.770" E
10	53° 38' 19.667" N	00° 56' 06.330" E

<i>Point</i>	<i>Latitude</i>	<i>Longitude</i>
11	53° 38' 19.497" N	00° 56' 17.003" E
12	53° 38' 18.089" N	00° 56' 28.969" E
13	53° 38' 14.135" N	00° 56' 44.345" E
14	53° 38' 07.743" N	00° 56' 58.162" E
15	53° 37' 59.074" N	00° 57' 09.156" E
16	53° 37' 51.599" N	00° 57' 14.631" E
17	53° 37' 38.643" N	00° 57' 17.843" E
D	53° 37' 38.643" N	00° 57' 17.843" E
E	53° 37' 56.680" N	00° 59' 39.524" E
F	53° 38' 15.917" N	01° 02' 08.601" E
G	53° 39' 35.134" N	01° 06' 29.785" E
H	53° 41' 22.549" N	01° 11' 30.804" E
I	53° 42' 14.598" N	01° 10' 44.250" E
J	53° 41' 19.717" N	01° 06' 44.682" E
K	53° 39' 41.954" N	01° 01' 38.714" E
L	53° 39' 16.652" N	01° 01' 01.016" E
M	53° 38' 45.654" N	00° 57' 01.237" E
N	53° 37' 36.904" N	00° 52' 22.841" E
O	53° 37' 29.991" N	00° 51' 27.606" E
P	53° 37' 30.124" N	00° 50' 57.716" E

(7) The grid co-ordinates for disposal site reference HU210 (Hornsea Project One Sandwave Clearance Disposal Area 1B) are specified in Table 7.

Table 7: Co-ordinates for disposal site HU210

<i>Point</i>	<i>Latitude</i>	<i>Longitude</i>
W	53° 43' 14.348" N	01° 19' 13.563" E
X	53° 43' 52.989" N	01° 22' 07.248" E
Y	53° 44' 22.957" N	01° 21' 47.484" E
Z	53° 43' 44.110" N	01° 18' 53.902" E

(8) The provisions of section 72 of the 2009 Act shall apply to this licence, save that the provisions of section 72(7) and 72(8) relating to the transfer of the licence shall only apply to a transfer not falling within article 34 of the Order.

Duration

3. 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 Energy Act 2004, 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.

PART 2

Licence conditions

Design parameters

1.—(1) Each offshore HVAC collector substation forming part of Work No. 4 must not—

- (a) exceed 60 metres in height above MHWS;
- (b) have a platform which at its greatest extent exceeds 2,400 m² or 40 metres in width.
- (2) Each offshore HVDC converter station forming part of Work No. 4 must not—
 - (a) exceed 63 metres in height above MHWS;
 - (b) have a platform which at its greatest extent exceeds 7,200 m² or 120 metres in width.
- (3) The offshore reactive compensation substation comprised in Work No. 5 must not—
 - (a) exceed 63 metres in height above MHWS;
 - (b) have a platform which at its greatest extent exceeds 2,500 m² or 50 metres in width.

2.—(1) The diameter of the electrical circuits comprising the electrical circuits must not exceed the following limitations—

- (a) within Work No. 4, 300 mm;
- (b) within Works Nos. 6 and 7, 200 mm where the mode of transmission is HVDC and 300 mm where the mode of transmission is HVAC.
- (2) The total length of the electrical circuits comprised in Work No. 4 must not exceed 80 km.
- (3) The total area of cable protection for the electrical circuits comprising Work No. 4 must not exceed 80,000 m².
- (4) The total area of cable protection for the electrical circuits comprising Work No. 6 located outwith the Humber Estuary Special Area of Conservation must not exceed 1,468,000 m².
- (5) The total area of cable protection for the electrical circuits comprising Work No. 6 located within the Humber Estuary Special Area of Conservation must not exceed 12,800 m².
- (6) The total length of the electrical circuits comprised in Works Nos. 6 and 7 seaward of MHWS must not exceed 600 km.
- (7) The total volume of cable protection for the electrical circuits comprising Work No. 4 must not exceed 100,000 m³.
- (8) The total volume of cable protection for the electrical circuits comprising Work No. 6 located outwith the Humber Estuary Special Area of Conservation must not exceed 1,835,000 m³.
- (9) The total volume of cable protection for the electrical circuits comprising Work No. 6 located within the Humber Estuary Special Area of Conservation must not exceed 16,000 m³.

3. The electrical circuits comprised in Works Nos. 4 and 6 must be installed by use of, or a combination of, ploughing, trenching, jetting, rock-cutting, dredging, surface laying with post lay burial, and where ground conditions make burial impracticable, by surface laying.

4. The electrical circuits comprised in Work No. 7 must be installed by use of, or a combination of, ploughing, trenching and jetting.

5.—(1) The licence-holder must in fixing to the seabed any structures comprised in Works Nos. 4 and 5 use one of the following methods—

- (a) monopile foundations;
- (b) jacket foundations supported by piles; or
- (c) gravity base foundations.
- (2) The licence-holder must not use the monopile foundation method or any other method which includes braced monopiles to fix to the seabed any offshore HVDC converter station.
- (3) The following parameters apply in respect of the foundation methods used to fix offshore HVAC collector substations comprised in Work No. 4 to the seabed—
 - (a) where monopile foundations are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 1,419 m²;

- (ii) the diameter of each foundation must not exceed 8.5 metres;
- (b) where jacket foundations (driven/drilled piles) are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 1,924 m²;
 - (ii) the number of piles per jacket must not exceed eight;
 - (iii) the diameter of each pile must not exceed 3.5 metres;
- (c) where jacket foundations (suction piles) are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 12,723 m²;
 - (ii) the number of piles per jacket must not exceed eight;
 - (iii) the diameter of each pile must not exceed 15 metres;
- (d) where gravity base foundations are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 6,362 m²;
 - (ii) the seabed levelling diameter must not exceed 70 metres;
 - (iii) the cone diameter must not exceed 50 metres at its base.

(4) The following parameters apply in respect of the foundation methods used to fix offshore HVDC converter stations comprised in Work No. 4 to the seabed—

- (a) where jacket foundations (driven/drilled piles) are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 4,330 m²;
 - (ii) the number of piles per jacket must not exceed 18;
 - (iii) the diameter of each pile must not exceed 3.5 metres;
- (b) where jacket foundations (suction piles) are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 12,723 m²;
 - (ii) the number of piles per jacket must not exceed eight;
 - (iii) the diameter of each pile must not exceed 15 metres;
- (c) where gravity base foundations are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 19,500 m²;
 - (ii) the number of pontoons for each individual structure must not exceed two;
 - (iii) the pontoons must not exceed 110 metres in length or 35 metres in width.

(5) The following parameters apply in respect of the foundation methods used to fix the offshore reactive compensation substation comprised in Work No. 5 to the seabed—

- (a) where monopile foundations are used—
 - (i) the area occupied by the foundations and the scour protection must not exceed 1,419 m²;
 - (ii) the diameter of each foundation must not exceed 8.5 metres;
- (b) where jacket foundations (driven/drilled piles) are used—
 - (i) the area occupied by the foundations and the scour protection must not exceed 1,414 m²;
 - (ii) the number of piles per jacket must not exceed eight;
 - (iii) the diameter of each pile must not exceed three metres;
- (c) where jacket foundations (suction piles) are used—

- (i) the area occupied by the foundations and the scour protection must not exceed 6,362 m²;
- (ii) the number of piles per jacket must not exceed eight;
- (iii) the diameter of each pile must not exceed 15 metres;
- (d) where gravity base foundations are used—
 - (i) the area occupied by the foundations and the scour protection for each individual structure must not exceed 6,362 m²;
 - (ii) the seabed levelling diameter must not exceed 70 metres;
 - (iii) the cone diameter must not exceed 50 metres at its base.

Notifications and inspections

6.—(1) The licence-holder shall ensure that—

- (a) a copy of this licence and any subsequent amendments or revisions to it are provided to—
 - (i) all agents and contractors notified to the MMO in accordance with the conditions of this licence; and
 - (ii) the masters and transport managers responsible for the vessels notified to the MMO in accordance with the conditions of this licence;
- (b) within 28 days of receipt of a copy of this licence those persons referred to in sub-paragraph (a) shall provide a completed confirmation form to the MMO confirming their understanding of the terms and conditions of this licence.

(2) Only those persons and vessels notified to the MMO in accordance with condition 16 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 licence-holder's registered address;
- (b) any site office located at or adjacent to the construction site and used by the licence-holder or its agents and contractors responsible for the loading, transportation or deposit for 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 are to be made.

(4) The documents referred to in paragraph (1)(a) shall be available for inspection by an enforcement officer at the locations set out in paragraph (3) above at any time.

(5) The licence-holder 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 licence-holder must inform the MMO in writing at least five working days prior to the commencement of the licensed activities or any phase of them.

(7) Prior to the commencement of the licensed activities the licence-holder must publish in the Kingfisher Fortnightly Bulletin details of the vessel routes, timings and locations relating to the construction of the authorised scheme.

(8) The licence-holder shall ensure that a Notice to Mariners is issued at least ten days prior to the commencement of the licensed activities advising of the commencement of licensed activities within the offshore Order limits and the expected vessel routes from the local service ports to the turbine locations.

(9) The Notices to Mariners must be updated and reissued not less frequently than weekly and supplemented with VHF radio broadcasts agreed with the MCA in accordance with the construction and monitoring programme approved under licence condition 13(2)(a). Copies of all notices shall be provided to the MMO.

(10) The licence-holder must notify—

- (a) the UK Hydrographic Office of 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 once the authorised scheme is completed and any required lighting or marking has been established.

Aids to navigation

7. The licence-holder must during the whole period from the start of construction of the authorised scheme seaward of MHWS to the completion of decommissioning—

- (a) 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;
- (b) colour all structures in the authorised scheme as directed by Trinity House;
- (c) notify Trinity House as soon as reasonably practicable of both the progress and completion of the authorised scheme (or any phase of it) and any aids to navigation established from time to time;
- (d) provide reports on the working condition of aids to navigation periodically as requested by Trinity House;
- (e) notify Trinity House and the MMO of any failure of the aids to navigation and the timescales in which such failure will be remedied, as soon as possible and no later than 24 hours following the licence-holder becoming aware of any such failure.

Provision against danger to navigation

8. In case of injury to, or destruction or decay of, the authorised scheme or any part of it seaward of MHWS the licence-holder must as soon as reasonably practicable, and no later than 24 hours following the licence-holder becoming aware of any such injury, destruction or decay, notify Trinity House and must lay down such buoys, exhibit such lights and take such other steps for the prevention of danger to navigation as Trinity House may from time to time direct.

Navigational Practice, Safety and Emergency Response

9.—(1) No part of the authorised project may commence until the MMO, in consultation with the MCA, has given written approval for an Emergency Response Co-operation Plan (ERCoP) which includes full details of the emergency response co-operation plans for the construction, operation and decommissioning phases of that part of the authorised project in accordance with the MCA recommendations contained within MGN543 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues”.

(2) The ERCoP and associated guidance and requirements must be implemented as approved, unless otherwise agreed in writing by the MMO, in consultation with the MCA. The document must be reviewed at least annually or whenever changes are identified, whichever is sooner, and any proposed changes must be submitted to the MMO in writing for approval, in consultation with MCA.

(3) No authorised scheme seaward of MHWS is to commence until the Secretary of State, in consultation with the MCA, has confirmed in writing that the licence-holder has taken into account and, so far as is applicable to that stage of the development, adequately addressed all MCA recommendations as appropriate to the authorised scheme contained within MGN 371 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues” (including its annexes).

(4) *This paragraph has been deleted.*

(5) The licence-holder must during the whole period from the start of construction of the authorised scheme seaward of MHWS to the completion of decommissioning provide relevant information to the MCA to assist in the timely and efficient issuing of notices to mariners and

other navigational warnings of the position and nature of the works, such information to be provided to mariners in the shipping and fishing industry as well as to recreational mariners.

Colour and lighting

10. Except as otherwise required by Trinity House under condition 7, the licence-holder must colour all structures comprised in Works Nos. 4 and 5 submarine grey (colour code RAL 7035).

Chemicals, drilling and debris

11.—(1) All chemicals used in the construction of the authorised scheme 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 (as amended), unless otherwise agreed in writing by the MMO.

(2) The licence-holder shall ensure that any coatings or treatments are suitable for use in the marine environment and are used in accordance with guidelines approved by 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 per cent 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 shall be obtained before the drilling commences, which disposal may also require a marine licence.

(5) The licence-holder shall 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, where practicable.

(6) All dropped objects must be reported to the MMO using the Dropped Object Procedure 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 Procedure Form, the MMO may require relevant surveys to be carried out by the undertaker (such as side scan sonar) if reasonable to do so and the MMO may require obstructions to be removed from the seabed at the undertaker's expense if reasonable to do so.

(7) This paragraph has been deleted.

(8) This paragraph has been deleted.

(9) The licence-holder shall inform the MMO of the location and quantities of inert material disposed of each month under this licence at each of disposal site reference HU206 (Hornsea Project One Subzone 1), disposal site reference HU205 (Hornsea Disposal Area 1), disposal site reference HU209 (Hornsea Project One Sandwave Clearance Disposal Area 1A) and disposal site reference HU210 (Hornsea Project One Sandwave Clearance Disposal Area 1B), by submission of a disposal return for each disposal area by 31st January each year for disposals occurring during the months July to December inclusive of the preceding year, and by 31st July each year for disposals occurring during the months January to June inclusive of that year.

(10) The licence-holder shall ensure that only inert material of natural origin and drilling mud, produced during construction drilling and seabed preparation for foundation works comprised in—

- (a) Work No. 4, shall be disposed of at disposal site reference HU206 (Hornsea Project One Subzone 1); and
- (b) Work No. 5, shall be disposed of at disposal site reference HU205 (Hornsea Disposal Area 1).

(11) The licence-holder shall ensure that only inert material of natural origin, produced during cable sandwave preparation works comprised in Work No. 6 shall be disposed of within disposal

site reference HU209 (Hornsea Project One Sandwave Clearance Disposal Area 1A) and disposal site reference HU210 (Hornsea Project One Sandwave Clearance Disposal Area 1B).

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

(13) The licence-holder shall 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

Force majeure

12. 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 outside of the offshore Order limits or to deposit unauthorised deposits within or outside of the offshore Order limits because the safety of human life and/or of the vessel is threatened, full details of the circumstances of the deposit shall be notified to the MMO within 48 hours.

Pre-construction plans and documentation

13.—(1) The licensed activities shall 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—

- (a) to ensure conformity with the description of Works Nos. 4 to 7 and compliance with licence conditions 1 to 5 above, a plan, to be agreed in writing with the MMO in consultation with Trinity House and the MCA, which shows—
 - (i) the proposed location and choice of foundation of all offshore HVAC collector stations, all HVDC converter stations and any reactive compensation substation, subject to any micro-siting required due to anthropological constraints, environmental constraints, difficult ground conditions or to give adequate spacing between other infrastructure;
 - (ii) the height, length and width of all offshore HVAC collector stations, all HVDC converter stations and any reactive compensation substation;
 - (iii) the length and arrangement of all electrical circuits comprising Works Nos. 4, 6 and 7 subject to any micro-siting required due to anthropological constraints, environmental constraints or difficult ground conditions;
 - (iv) the proposed dimensions of all monopile foundations;
 - (v) the proposed dimensions of all gravity base foundations;
 - (vi) the proposed dimensions of all jacket foundations; and
 - (vii) the proposed layout of all HVAC collector substations, all HVDC converter stations, any reactive compensation substation and all electrical circuits including all exclusion zones comprised in the licensed activities and showing the indicative programming of particular works as set out in the indicative programme to be provided under paragraph (2)(a).

(2) The licensed activities, or any phase of those activities, shall not commence until a Code of Construction Practice incorporating the following (insofar as relevant to that activity or phase of activity) have been submitted to and approved in writing by the MMO—

- (a) 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; and
 - (iii) proposed pre-construction surveys, baseline report format and content, construction monitoring, post construction monitoring and related reporting in accordance with licence conditions 18 to 20. The pre-construction survey programme and all pre-

- construction survey methodologies shall be submitted to the MMO for written approval by the MMO at least four months prior to the commencement of any survey works detailed within;
- (b) a construction method statement in accordance with the project description and Environmental Statement and including details of—
 - (i) foundation installation, including any seabed preparation, drilling and disposal of arisings methods;
 - (ii) installation of HVAC collector substations, HVDC converter stations, any reactive compensation station, including any seabed preparation and scour protection;
 - (iii) circuit installation, including any seabed preparation and circuit protection;
 - (iv) contractors;
 - (v) vessels; and
 - (vi) associated works;
 - (c) 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 below MHWS;
 - (ii) a chemical risk analysis 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 and disposal arrangements;
 - (iv) offshore project maintenance plans including offshore electrical circuit maintenance;
 - (v) locations of any archaeological exclusion zones agreed as part of the written scheme of archaeological investigation approved under sub-paragraph (g);
 - (vi) any seasonal restrictions on construction works;
 - (vii) the appointment and responsibilities of a fisheries liaison officer, an environmental liaison officer and an intertidal ecological clerk of works; and
 - (viii) a disposal plan detailing the locations, methods and timings of dredging and disposal, as well as disposal site monitoring requirements;
 - (d) a scour protection management and cable armouring plan providing details of the need, type, sources, quantity, location and installation methods for scour protection and cable armouring to be within the scope of the environmental impact assessment recorded in the Environmental Statement;
 - (e) in the event that driven or part-driven pile foundations are proposed to be used, a marine mammal mitigation protocol following current best practice as advised by the statutory nature conservation agencies, to include, but not be limited to—
 - (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; and
 - (vi) where appropriate, methods for the application of acoustic deterrent devices;

- (f) cable specification and installation plan, to include—
 - (i) technical specification of offshore electrical circuits, 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 detailed cable laying plan, including geotechnical data, cable laying techniques and a cable burial risk assessment encompassing the identification of any cable protection which exceeds 5% of navigable depth referenced to Chart Datum and, in the event that any area of cable protection exceeding 5% of navigable depth is identified, details of any steps (to be determined following consultation with the MCA) to be taken to ensure existing and future safe navigation is not compromised;
 - (iii) details of the steps to be taken, where the offshore electrical circuits across the inter tidal zone are buried using trenching or ploughing to ensure that the excavation and subsequent backfilling is carried out in such a way as to maintain the sediment profile so far as is reasonably practicable to do so; and
 - (iv) details of the steps to be taken, where the offshore electrical circuits across the inter tidal zone are installed using the horizontal directional drilling method;
- (g) a written scheme of archaeological investigation in relation to the offshore Order limits seaward of MHWS in accordance with industry good practice to include—
 - (i) details of responsibilities of the licence-holder, 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 to be submitted to the MMO within four months of survey completion;
 - (iv) delivery of any mitigation including, where necessary, archaeological exclusion zones;
 - (v) monitoring during and post construction, including a conservation programme for finds;
 - (vi) archiving of archaeological material; and
 - (vii) a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised scheme;
- (h) a proposed survey and reinstatement plan for Salicornia forming Annex I Habitat in the part(s) of the offshore Order limits within which it is proposed to carry out construction works comprised in Work No. 7, including the circumstances in which reinstatement will be required and the proposed methods of reinstatement; and
- (i) an offshore project maintenance plan to be submitted to the MMO at least four months prior to commencement of the operation of the licensed activities and to include provision for the review and resubmission of the plan every three years during the operational phase.

(3) Prior to the submission of the pre-construction plans and documentation required by this condition the licence-holder must provide a copy of the plans and documentation to the other undertakers listed in Article 3 of the Order.

(4) The other undertakers must provide any comments on the plans and documentation to the licence-holder within 14 days of receipt of the plans and documentation.

(5) The licence-holder shall participate in liaison meetings with other undertakers listed in Article 3 of the Order as requested from time to time by the MMO in writing in advance, which meetings shall be chaired by the MMO and shall consider such matters as are determined by the MMO relating to the efficient operation of a deemed marine licence where it has an impact on the efficient operation of any other deemed marine licence issued under the Order (including as varied or transferred).

(6) Prior to giving its approval under paragraph (2), the MMO must—

- (a) in relation to any programme or plan submitted under sub-paragraphs (a), (c) or (d), consult with the relevant statutory nature conservation body and the Environment Agency;

- (b) in relation to any statement or protocol submitted under sub-paragraphs (b) or (e), consult with the relevant statutory nature conservation body;
- (c) in relation to any plan submitted under sub-paragraph (f), consult with Natural England and the Environment Agency;
- (d) in relation to any scheme submitted under sub-paragraph (g), consult with English Heritage; and
- (e) in relation to any plan submitted under sub-paragraph (h) or (i), consult with the Environment Agency.

14. The licence-holder shall ensure that a copy of any agreed archaeological report is deposited with the National Record of the Historic Environment, by submitting an English Heritage OASIS form with a digital copy of the report. If the report relates to the foreshore, the licence-holder shall notify Lincolnshire County Council that the OASIS report has been submitted to the National Record of the Historic Environment.

15.—(1) Each programme, statement, plan, protocol or scheme required to be approved under condition 13—

- (a) shall be submitted for approval at least four months prior to the intended start of construction, except where otherwise stated or where an alternative date is agreed in writing by the MMO; and
- (b) shall be accompanied by—
 - (i) a statement confirming that the licence-holder has complied with condition 13(3) in relation to such programme, statement, plan, protocol or scheme; and
 - (ii) any comments received by the licence-holder under condition 13(4), or a statement from the licence-holder confirming that no such comments were received.

(2) The licence-holder shall comply with all documents approved under licence condition 13 in carrying out the licensed activities except to the extent agreed in writing by the MMO.

(3) Prior to agreeing an alternative date under paragraph (1)(a) or a change to approved details under paragraph (2) relating to any document in respect of which consultation is required under condition 13(6), the MMO must consult with the relevant consultation body or bodies referred to in that condition.

Reporting of engaged agents, contractors and vessels

16.—(1) The licence-holder shall provide the following information to the MMO—

- (a) the name and function of any agent or contractor appointed to engage in the licensed activities at least five working days prior to the commencement of the licensed activities or any part of them; and
- (b) each week during the construction of the authorised scheme, a completed Hydrographic Note H102 listing the construction 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 and MMO Coastal Office in writing prior to the agent, contractor or vessel engaging in the licensed activities. All agents, contractors and/or vessel operators will abide by the conditions set out in this licence.

Equipment and Operation of Vessels Engaged in Licensed Activities

17.—(1) All vessels employed to perform the licensed activities shall be constructed and equipped to be capable of the proper performance of such activities in accordance with the conditions of this licence and shall comply with paragraphs (2) to (6).

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

- (a) electronic positioning aid to provide navigational data;
- (b) radar;

- (c) echo sounder; and
 - (d) multi-channel VHF.
- (3) No radio beacon or radar beacon operating on the marine frequency bands shall be installed or used without the prior written approval of the Secretary of State.
- (4) All vessels' names or identification shall be clearly marked on the hull or superstructure of the vessel.
- (5) All communication on VHF working frequencies shall be in English.
- (6) No vessel shall engage in the licensed activities until all the equipment specified in paragraph (2) is fully operational.

Pre-construction monitoring and surveys

- 18.**—(1) The licence-holder must, when submitting details under condition 13(2)(a)—
- (a) in relation to proposed pre-construction surveys, include methodologies and timings, and 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) in relation to the baseline report proposals, 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) Subject to receipt from the licence-holder of specific proposals pursuant to this condition, it is expected that the pre-construction surveys will comprise, in outline—
- (a) a survey to determine the location, extent and composition of any benthic habitats of conservation, ecological and/or economic importance in the part(s) of the offshore Order limits in which it is proposed to carry out construction works under this licence;
 - (b) a Phase 1 survey of the intertidal area within which it is proposed to carry out construction works;
 - (c) a high resolution swath bathymetric survey to include a 100% coverage and a side scan sonar survey of the part(s) of the offshore Order limits within which it is proposed to carry out construction works and disposal activities under this licence, including a 500m buffer around the site of each works; and
 - (d) a grab survey and particle size analysis in the part(s) of the offshore Order limits within which it is proposed to carry out dredging and disposal activities relating to Works Nos. 5 and 6 under this licence within a period not longer than 12 months prior to the dredging and disposal activities, to determine the extent of suitable herring spawning habitat within areas HU209 and HU210.

Construction monitoring

- 19.**—(1) The licence-holder must, when submitting details of proposed construction monitoring under condition 13(2)(a), include methodologies and timings, and a proposed format, content and timings for providing reports on the results. 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 pre-construction position and/or will enable the validation or otherwise of key predictions in the Environmental Statement.
- (2) Subject to receipt from the licence-holder of specific proposals pursuant to this condition, it is expected that the construction monitoring will comprise, in outline—
- (a) except to the extent agreed in writing by the MMO, measurements of noise generated by the installation of the first four foundations of each discrete foundation type comprised in Work No. 4 to be constructed under this licence where driven or part-driven pile foundations are used; and

(b) recording of any visual sightings or acoustic detection of marine mammals where required as part of the marine mammal mitigation protocol under condition 13(2)(e).

(3) The results of the initial noise measurements monitored in accordance with paragraph (2)(a) must be provided to the MMO within six weeks of the installation of the first four foundations of each discrete foundation type. The assessment of this report by the MMO shall determine whether any further noise monitoring is required.

(4) Construction monitoring shall include vessel traffic monitoring by Automatic Identification System for the duration of the construction period. A report will be submitted to the MMO and the MCA at the end of each year of the construction period.

Post construction

20.—(1) The licence-holder must, when submitting details of proposed post-construction surveys, include methodologies and timings, and a proposed format, content and timings for providing reports on the results. 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) Subject to receipt of specific proposals, it is expected that the post-construction surveys will comprise, in outline—

(a) a survey to determine any change in the location, extent and composition of any benthic habitats of conservation, ecological and/or economic importance identified in the pre-construction survey in the part(s) of the offshore Order limits in which construction works were carried out. The survey design will be informed by the results of the pre-construction benthic survey;

(b) one high resolution swath bathymetric survey to be undertaken no sooner than six months following completion of construction works and disposal activities to include a 100% coverage of the part(s) of the offshore Order limits with a water depth no greater than 12 metres (referenced to Chart Datum) within which construction works and disposal activities were carried out under this licence to assess any changes in bedform morphology and such further monitoring as may be required to ensure that the cables have been buried or protected and sediment is able to move over any installed cable protection. The need for further surveys will be agreed in writing with the MMO following submission of the first year of survey data;

(c) a grab survey and particle size analysis in the part(s) of the offshore Order limits within which dredging and disposal activities relating to Works Nos. 5 and 6 were carried out under this licence within 12 months of the completion of the dredging and disposal activities to determine the extent of suitable herring spawning ground habitat within areas HU209 and HU210;

(d) vessel traffic monitoring by Automatic Identification System, for 28 days taking account seasonal variations in traffic patterns, for a maximum duration of one year post construction. A report will be submitted to the MMO and the MCA at the end of the first year after construction is completed; and

(e) one high resolution bathymetric survey of a representative sample area, to be agreed in writing with the MMO, of the part(s) of the offshore Order limits with a water depth no greater than 12 metres (referenced to Chart Datum) within which construction works and disposal activities were carried out under this licence following the first major storm event the timing of which shall be agreed with the MMO in consultation with Natural England and the Environment Agency.

Offshore Decommissioning

21. No decommissioning activities shall commence until plans for the carrying out of such activities have been submitted to and approved in writing by the MMO.

Restrictions in intertidal area and Humber Estuary Special Area of Conservation

22.—(1) The cable protection to be used within the Humber Estuary Special Area of Conservation must be frond matting, except to the extent agreed in writing with the MMO.

(2) No cable protection is to be used within the intertidal area of the Humber Estuary Special Area of Conservation.

(3) The licence-holder must not construct or install those licensable activities comprised in Work No. 6 or Work No. 7 in the intertidal area between 1st October and 31st March (inclusive) except to the extent agreed in writing with the MMO, in consultation with Natural England.

(4) In the event that the MMO notifies the licence-holder that other works are planned to take place in the intertidal area comprised within the offshore Order limits or within the area whose co-ordinates are set out in Table 8, the licence-holder must not construct or install those licensable activities comprised in Work Nos. 6 and 7 within one kilometre seaward of the seawall during the period of time commencing two hours before a high tide greater than 7.7 metres (as measured at Grimsby) and ending two hours after a high tide greater than 7.7 metres (as measured at Grimsby) between 1st April and 31st May (inclusive) and 1st August to 30th September (inclusive), except to the extent approved in writing by the MMO, in consultation with Natural England.

Table 8: Co-ordinates for purposes of sub-paragraph (4)

<i>Point</i>	<i>Easting</i>	<i>Northing</i>
1	537699	402686
2	537731	403353
3	538008	404035
4	538853	403352
5	538203	402660
6	538077	402847
7	537784	402534

Amendments to details

23.—(1) With respect to any condition of this licence which requires the licensed activities to be carried out in accordance with the plans and programmes approved by the MMO, the approved plans and programmes shall be taken to include any amendments that may subsequently be approved in writing by the MMO.

(2) Where the words ‘except to the extent agreed in writing by the MMO’ appear in these licence conditions, any such agreement or statement may only be given in relation to immaterial changes where it has been demonstrated to the satisfaction of MMO that the subject matter of the agreement sought is unlikely to give rise to any materially new or materially different environmental effects from those assessed in the environmental statement.