

SCHEDULES

SCHEDULE 11

Article 33

DEEMED MARINE LICENCE UNDER THE 2009 ACT - GENERATION ASSETS

PART 1

LICENSED MARINE ACTIVITIES

1.—(1) In this licence—

“the 2004 Act” means the Energy Act 2004(1);

“the 2008 Act” means the Planning Act 2008(2);

“the 2009 Act” means the Marine and Coastal Access Act 2009(3);

“2017 Regulations” means the Conservation of Offshore Marine Habitats and Species Regulations 2017(4);

“array area” means the area covered by Work No. 1 as shown on the offshore works plan;

“array area disposal site” means the site to be used for disposal of inert material of natural origin produced during construction drilling and seabed preparation for foundation works and cable sandwave clearance to be located within the array area;

“array cable” means the network of offshore subsea cables connecting the wind turbine generators in Work No. 1 and the offshore substations in Work No. 2;

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

“authorised development” means the development and associated development described in Part 1 of Schedule 1 (authorised development) of the Order and any other development authorised by this Order that is development within the meaning of section 32 (meaning of “development”) of the 2008 Act;

“authorised scheme” means Work No. 1 described in paragraph 3 of Part 1 of this licence or any stage of that work;

“bridge link” means a steel truss structure with provision for overhead clearance for personnel, lighting fixtures and ancillary cabling, which can be used as a link for interconnection between any combination of permanent offshore electrical installations and/or offshore accommodation platform;

“buoy” means any floating device used for navigational purposes or measurement purposes, including LIDAR and wave buoys;

(1) 2004 c. 20.
(2) 2008 c. 29.
(3) 2009 c. 23.
(4) S.I. 2017/13.

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“cable crossings” means a crossing of existing sub-sea cables or pipelines or other existing infrastructure by a cable or, where cables run together in parallel, a set of cables, authorised by this Order together with cable protection;

“cable protection” means physical measures for the protection of cables including but not limited to concrete mattresses, and/or rock placement (including material used for cable crossings);

“cable protection replenishment” means the restoration to a former level or condition of cable protection lost by natural seabed processes or human activity;

“commence” means the first carrying out of any licensed marine activities authorised by this marine licence, save for pre-construction surveys and monitoring approved under this licence and the activities set out in paragraph 2(d), and “commenced” and “commencement” must be construed accordingly;

“commissioning” means the process of assuring that all systems and components of the authorised development are tested to verify that they function and are operable in accordance with the design objectives, specifications and operational requirements of the undertaker;

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

“Defence Infrastructure Organisation Safeguarding” means Ministry of Defence Safeguarding, Defence Infrastructure Organisation – Safeguarding, St George’s House, DIO Head Office, DMS Whittington, Lichfield, Staffordshire, WS14 9PY and any successor body to its functions;

“Defra” means the Department for Environment, Food and Rural Affairs;

“dropped object procedure form” means the MMO notification proforma with reference MLDIR1 for reporting the loss or dumping of synthetic materials and other refuse at sea or any other format advised in writing by the MMO;

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

“environmental statement” means the document certified as the environmental statement by the Secretary of State for the purposes of the Order under article 38 (certification of plans and documents, etc.);

“European site” has the meaning given in regulation 27 (meaning of European site) of the 2017 Regulations;

“gravity base structures” means a structure principally of steel, concrete, or steel and concrete with a base which tapers as it rises which rests on the seabed due to its own weight with or without added ballast or additional skirts and associated equipment including J-tubes, corrosion protection systems and access platform(s) and equipment;

“habitats of principal importance” means a habitat designated as being of principal importance in accordance with section 41 (biodiversity lists and action (England)) of the Natural Environment and Rural Communities Act 2006(5);

“HAT” means highest astronomical tide;

“IHO S44ed5 Order 1a” means order 1a from the fifth edition of the International Hydrographic Organisation’s Standards for Hydrographics Surveys;

“interconnector cables” means a network of cables between the offshore substations;

“jacket foundation” means a lattice type structure constructed of steel, which may include additional equipment such as, J-tubes, corrosion protection systems and access platforms;

“JNCC” means the Joint Nature Conservation Committee;

(5) 2006 c. 16.

“JNCC Guidance” means the statutory nature conservation body ‘Guidance for assessing the significance of noise disturbance against Conservation Objectives of harbour porpoise SACs’ Joint Nature Conservation Committee Report No.654, May 2020 published in June 2020 as amended, updated or superseded from time to time;

“Kingfisher bulletin” means the bulletin published by the Humber Seafood Institute or such other alternative publication approved in writing by the MMO for the purposes of this licence;

“Kingfisher Information Service” means the information service from non-departmental government body Seafish;

“large offshore transformer substation” means the larger version of the offshore transformer substations assessed in the environment statement;

“LAT” means lowest astronomical tide;

“layout principles” means the document certified as the layout principles by the Secretary of State for the purposes of the Order under article 38 (certification of plans and documents, etc.);

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

“maintain” includes inspect, upkeep, repair, adjust, and alter and further includes remove, reconstruct and replace (including replenishment of cable protection) but does not include the removal, reconstruction or replacement of foundations associated with the authorised scheme, to the extent assessed in the environmental statement and “maintenance” must be construed accordingly;

“Marine Management Organisation” or “MMO” means the Marine Management Organisation, Lancaster House, Hampshire Court, Newcastle upon Tyne, NE4 7YH who is the body created under the 2009 Act and who is responsible for the monitoring and enforcement of this licence;

“marine noise registry” means the database developed and maintained by JNCC on behalf of Defra to record the spatial and temporal distribution of impulsive noise generating activities in UK seas;

“MCA” means the Maritime and Coastguard Agency, an executive agency for the Department for Transport;

“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” means a steel pile, typically cylindrical, driven and/or drilled into the seabed and associated equipment including J-tubes, corrosion protection systems and access platforms and equipment;

“mono suction bucket foundation” means a steel cylindrical structure which partially or fully penetrates the seabed and remains in place using its own weight and hydrostatic pressure differential, and may include additional equipment such as J-tubes;

“offshore accommodation platform” means a structure above LAT and attached to the seabed by means of a foundation, with one or more decks and a helicopter platform (including bird deterrents), containing housing accommodation, storage, workshop, auxiliary equipment, and facilities for operating, maintaining and controlling the wind turbine generators and offshore electrical installations;

“offshore HVAC booster station” means a structure above LAT and attached to the seabed by means of a foundation, with one or more decks and a helicopter platform (including bird deterrents), containing—

- (a) electrical equipment required to provide reactive power compensation; and

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(b) housing accommodation, storage, workshop, auxiliary equipment, and facilities for operating, maintaining and controlling the substation;

“the offshore Order limits and grid coordinates plan” means the plan certified as the offshore Order limits and grid coordinates plan by the Secretary of State for the purposes of the Order under article 38 (certification of plans and documents etc.);

“Offshore Renewables Protocol for Reporting Archaeological Discoveries” means the Offshore Renewables Protocol for Reporting Archaeological Discoveries, the Crown Estate (2014), *Protocol for Archaeological Discoveries: Offshore Renewables Projects*, Salisbury, Wessex Archaeology as amended, updated or superseded from time to time;

“offshore transformer substation” means a structure above LAT and attached to the seabed by means of a foundation, with one or more decks and a helicopter platform (including bird deterrents), containing—

(a) electrical equipment required to switch, transform, convert electricity generated at the wind turbine generators to a higher voltage and provide reactive power compensation; and

(b) housing accommodation, storage, workshop auxiliary equipment, radar and facilities for operating, maintaining and controlling the substation or wind turbine generators;

“offshore works plan” means the plan certified as the offshore works plan by the Secretary of State for the purposes of the Order under article 38 (certification of plans and documents etc.);

“operation” means the undertaking of the licensed activities which are not part of the construction, commissioning or decommissioning of the authorised development;

“Order” means the Hornsea Four Offshore Wind Farm Order 2023;

“the Order limits” means the limits shown on the offshore Order limits and grid coordinates plans and the onshore Order limits plan within which the authorised scheme may be carried out, whose grid coordinates seaward of MHWS are set out in paragraph 5 of Part 1 of this Schedule;

“outline ornithological monitoring plan” means the document certified as the outline ornithological monitoring plan by the Secretary of State for the purposes of this Order under article 38 (certification of plans and documents etc.);

“outline cable specification and installation plan” means the document certified as the outline cable specification and installation plan by the Secretary of State for the purposes of this Order under article 38 (certification of plans and documents etc.);

“outline marine mammal mitigation protocol” means the document certified as the outline marine mammal mitigation protocol by the Secretary of State for the purposes of this Order under article 38 (certification of plans and documents etc.);

“outline marine monitoring plan” means the document certified as the outline marine monitoring plan by the Secretary of State for the purposes of this Order under article 38 (certification of plans and documents etc.);

“outline marine written scheme of investigation” means the document certified as the outline marine written scheme of investigation by the Secretary of State for the purposes of this Order under article 38 (certification of plans and documents etc.);

“outline offshore operations and maintenance plan” means the document certified as the outline offshore operations and maintenance plan by the Secretary of State for the purposes of this Order under article 38 (certification of plans and documents etc.);

“outline southern north sea special area of conservation site integrity plan” means the document certified as the outline southern north sea special area of conservation site integrity plan by the Secretary of State for the purposes of the Order under article 38 (certification of plans and documents etc.);

“pin piles” means steel cylindrical piles driven and/or drilled into the seabed to secure jacket foundations;

“pontoon gravity base type 1 structure” means a structure principally of steel, concrete, or steel and concrete with a base made up of up to two rectangular pontoons which rests on the seabed due to its own weight with or without added ballast or additional skirts and associated equipment including J-tubes, corrosion protection systems and access platform(s) and equipment;

“pontoon gravity base type 2 structure” means a structure principally of steel, concrete, or steel and concrete with a base made up of a pontoon arranged in a rectangle around an open centre which rests on the seabed due to its own weight with or without added ballast or additional skirts and associated equipment including J-tubes, corrosion protection systems and access platform(s) and equipment;

“pro-rata annex” means the document certified as the pro-rata annex by the Secretary of State for the purposes of this Order under article 38 (certification of plans and documents etc.);

“small offshore transformer substation” means the smaller version of the offshore transformer substations assessed in the environment statement;

“statutory historic body” means Historic England or its successor in function;

“statutory nature conservation body” means the appropriate nature conservation body as defined in Regulation 5 of the Conservation of Habitats and Species Regulations 2017 or its equivalent in the 2017 Regulations;

“suction bucket” means a steel cylindrical structure attached to the legs of a jacket foundation which partially or fully penetrates the seabed and remains in place using its own weight and hydrostatic pressure differential;

“transition piece” means the metal structure attached to the top of the foundation where the base of the wind turbine generator is connected and may include additional equipment such as J-tubes, corrosion protection systems, boat access systems, access platforms, craneage, radar, electrical transmission equipment and associated equipment;

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

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

“undertaker” means Orsted Hornsea Project Four Limited (company number 08584182);

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

“wind turbine generator” means a structure comprising a tower, rotor with three blades connected at the hub, nacelle and ancillary electrical and other equipment which may include J-tube(s), transition piece, access and rest platforms, access ladders, boat access systems, corrosion protection systems, fenders and maintenance equipment, helicopter landing facilities and other associated equipment, fixed to a foundation or transition piece;

“working day” means a day which is not a weekend, bank holiday or public holiday in England; and

“Work No. 2” means—

- (a) up to six small offshore transformer substations each fixed to the seabed by one of monopile foundations, mono suction bucket foundations, gravity base structures or jacket foundations and which may be connected to each other or one of the offshore accommodation platforms within Work No. 1(b) by a bridge link;

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- (b) up to three large offshore transformer substations each fixed to the seabed by one of monopile foundations, mono suction bucket foundations, jacket foundations, box-type gravity base structures, gravity base structures, pontoon gravity base type 1 structures, or pontoon gravity base type 2 structures, and which may be connected to each other or one of the offshore accommodation platforms within Work No. 1(b) by a bridge link;
- (c) in the event that the mode of transmission is HVDC, either up to three large HVDC converter substations or up to six small HVDC converter substations fixed to the seabed within the area shown on the offshore works plan by one of monopile foundations, mono suction bucket foundations, jacket foundations, box-type gravity base structures, gravity base structures, pontoon gravity base type 1 structures, or pontoon gravity base type 2 structures;
- (d) a network of interconnector cables;
- (e) up to six cable circuits between Work No. 2 and Work No. 3, and between Work No. 3 and Work No. 5 consisting of offshore export cables along routes within the Order limits seaward of MLWS including one or more cable crossings; and
- (f) up to eight temporary horizontal directional drilling exit pits and associated cofferdams.

“Work No. 3(aA)” means, in the event that the mode of transmission is HVAC, up to three offshore HVAC booster stations fixed to the seabed within the area shown on the offshore works plan by one of monopile foundations, mono suction bucket foundations, jacket foundations, gravity base structures, pontoon gravity base type 1 structures or pontoon gravity base type 2 structures; and

“UK Standard Marking Schedule for Offshore Installations” means the Standard Marking Schedule for Offshore Installations published by the Department of Energy & Climate Change with reference DECC 04/11.

(2) A reference to any statute, order, regulation or similar instrument is 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 are taken to be Greenwich Mean Time;
- (b) all co-ordinates are taken to be latitude and longitude degrees and minutes to two decimal places.

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

- (a) Civil Aviation Authority
Aviation House
Beehive Ringroad
Crawley
West Sussex
- (b) Historic England
37 Tanner Road
York
YO1 6WP
- (c) Marine Management Organisation
Marine Licensing Team
Lancaster House Hampshire Court

Newcastle Business Park

Newcastle upon Tyne

NE4 7YH

Tel: 0300 123 1032;

(d) Marine Management Organisation (Local Office)

Room 13, Ground Floor

Crosskill House

Mill Lane

Beverley

HU17 9JB

Tel: 0208 026 0519;

(e) Maritime and Coastguard Agency

Navigation Safety Branch

Bay 2/20, Spring Place

105 Commercial Road

Southampton

SO15 1EG

Tel: 020 3817 2433;

(f) Ministry of Defence (as requested by Defence Infrastructure Organisation – Safeguarding)

St George's House

DIO Head Office

DMS Whittington

Lichfield

Staffordshire

WS14 9PY;

(g) Natural England

4th Floor

Foss House

1-2 Peasholme Green

York

YO1 7PX

Tel: 0300 060 4911;

(h) Trinity House

Tower Hill

London

EC3N 4DH

Tel: 020 7481 6900;

(i) The United Kingdom Hydrographic Office

Admiralty Way

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Taunton
Somerset
TA1 2DN
Tel: 01823 337 900.

(5) Unless otherwise advised in writing by the MMO, the address for electronic communication with the MMO for the purposes of this licence is marine.consent@marinemanagement.org.uk, or where contact to the Local Office if the MMO is required, beverley@marinemanagement.org.uk.

(6) Unless otherwise advised in writing by the MMO, the Marine Case Management System (“MCMS”) must be used for all licence returns or applications to vary this licence. The MCMS address is: <https://marinelicensing.marinemanagement.org.uk/>.

(7) Any reference in this licence or the documents certified by the Secretary of State for the purposes of the Order under article 38 (certification of plans and documents, etc.) to a dimension measured from LAT may be converted to a measurement from HAT by subtracting 4.71m from the measurement from LAT.

Details of licensed marine activities

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

- (a) the deposit at sea within the Order limits seaward of MHWS of the substances and articles specified in paragraph 4 below and within Work No. 1 when combined with the disposal authorised within the array area disposal site by the deemed marine licence granted under Schedule 12 of the Order, of up to 7,211,601 cubic metres (being a maximum, not an approximate upper figure) of inert material of natural origin produced during construction drilling or seabed preparation for foundation works and cable installation preparation works within the array area disposal site;
- (b) the construction of works in or over the sea and/or on or under the seabed;
- (c) dredging for the purposes of seabed preparation for foundation works and/or electrical circuit works;
- (d) the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation;
- (e) boulder clearance works by displacement ploughing or subsea grab technique or any other comparable method;
- (f) removal of static fishing equipment; and
- (g) site preparation works.

3. Such activities described in paragraph 2 are authorised in relation to the construction, maintenance and operation of—

Work No. 1—

- (a) (a) an offshore wind turbine generating station with a gross electrical output of over 100 megawatts comprising up to 180 wind turbine generators each fixed to the seabed by one of monopile foundations, mono suction bucket foundations or jacket foundations;
- (b) (b) one offshore accommodation platform fixed to the seabed within the area shown on the offshore works plan by one of monopile foundations, mono suction bucket foundations, a gravity base structure or jacket foundation and which may be connected to one of the offshore substations within Work No. 2 by a bridge link; and

- (c) (c) a network of cables between the wind turbine generators, and between the wind turbine generators and Work No. 2, including one or more cable crossings.

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

- (a) scour protection around the foundations of the offshore structures;
- (b) cable protection measures such as the placement of rock and/or concrete mattresses; and
- (c) temporary landing places, moorings or other means of accommodating or anchoring vessels in the construction and/or maintenance of the authorised development.

4. The substances or articles authorised for deposit at sea are—

- (a) iron and steel, copper and aluminium;
- (b) stone and rock;
- (c) concrete;
- (d) sand and gravel;
- (e) plastic and synthetic;
- (f) material extracted from within the offshore Order limits during construction drilling or seabed preparation for foundation works and cable installation preparation works;
- (g) weights used for the calibration of vessels, consisting of a hessian sack, metal shackles or chains; and
- (h) marine coatings, other chemicals and timber.

5. The grid coordinates for that part of the authorised development comprising Work No. 1 are specified below and more particularly on the offshore Order limits and grid coordinates plan—

<i>Point ID</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>	<i>Point ID</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>
1	54° 0' 23.321" N	1° 12' 48.805" E	5	54° 12' 37.143" N	0° 58' 31.095" E
2	54° 7' 24.985" N	0° 59' 54.702" E	6	54° 12' 17.413" N	1° 12' 18.263" E
3	54° 9' 13.497" N	1° 0' 43.850" E	7	54° 4' 13.012" N	1° 30' 5.270" E
4	54° 10' 49.480" N	0° 58' 21.782" E	8	53° 59' 15.598" N	1° 17' 20.651" E

General provisions

6. This licence remains in force until the authorised scheme has been decommissioned in accordance with a programme approved by the Secretary of State under section 106 (approval of decommissioning programmes) of the 2004 Act, including any modification to the programme under section 108 (reviews and revisions of decommissioning programmes) of the 2004 Act, and the completion of such programme has been confirmed by the Secretary of State in writing.

7. The provisions of section 72 (variation, suspension, revocation and transfer) of the 2009 Act apply to this licence except that the provisions of section 72(7) and (8) relating to the transfer of the licence only apply to a transfer not falling within article 5 (benefit of the Order).

8. With respect to any condition which requires the licensed activities be carried out in accordance with the plans, protocols or statements approved under this Schedule, the approved details, plan or

scheme are taken to include any amendments that may subsequently be approved in writing by the MMO.

9. Any amendments to or variations from the approved details, plan or scheme must be in accordance with the principles and assessments set out in the environmental statement. Such agreement may only be given in relation to immaterial changes where it has been demonstrated to the satisfaction of the MMO that it is unlikely to give rise to any materially new or materially greater environmental effects from those assessed in the environmental statement.

PART 2 CONDITIONS

Design parameters

1.—(1) The total number of wind turbine generators comprised in the authorised scheme must not exceed 180.

(2) Subject to sub-paragraph (3), each wind turbine generator forming part of the authorised scheme must not—

- (a) exceed a height of 370 metres when measured from LAT to the tip of the vertical blade;
- (b) exceed a rotor diameter of 305 metres;
- (c) be less than 42.43 metres from LAT to the lowest point of the rotating blade; and
- (d) be less than 810 metres from the nearest wind turbine generator in all directions.

(3) The minimum distance in sub-paragraph 1(2)(d) between each wind turbine generator is to be measured from the centre point of the wind turbine generator.

(4) Wind turbine generator foundation structures forming part of the authorised scheme must be one of the following foundation options—

- (a) monopile foundations;
- (b) mono suction bucket foundations; or
- (c) jacket foundations.

(5) No wind turbine generator—

- (a) jacket foundation employing pin piles forming part of the authorised scheme may—
 - (i) have a pin pile diameter of greater than four meters; and
 - (ii) employ more than 16 pin piles per jacket foundation; and
- (b) monopile foundation forming part of the authorised scheme may have a diameter greater than 15 metres.

(6) The total seabed footprint area for wind turbine generator foundations must not exceed—

- (a) 302,180 square metres excluding scour protection; and
- (b) 985,240 square metres including scour protection.

(7) The total volume of scour protection material for wind turbine generator foundations must not exceed 1,582,040 cubic metres.

(8) The wind turbine generators comprised in the authorised scheme must be constructed in accordance with the parameters set out in the pro-rata annex.

2.—(1) The total number of offshore accommodation platforms forming part of the authorised scheme must not exceed one.

(2) The dimensions of any offshore accommodation platform forming part of the authorised scheme must not exceed—

- (a) 64 metres in height when measured from LAT;
- (b) 60 metres in length; and
- (c) 60 metres in width.

(3) Offshore accommodation platform foundation structures forming part of the authorised scheme must be one of either monopile foundations, mono suction bucket foundations, gravity base structures, jacket foundations or box-type gravity base structures.

(4) No offshore accommodation platform—

- (a) jacket foundation employing pin piles forming part of the authorised scheme may—
 - (i) have a pin pile diameter of greater than four metres; and
 - (ii) employ more than 16 pin piles per jacket foundation; and

- (b) monopile foundation forming part of the authorised scheme may have a diameter greater than 15 metres.

(5) The total permanent seabed footprint area for offshore accommodation platform foundations must not exceed—

- (a) 5,625 square metres excluding scour protection; and
- (b) 30,625 square metres including scour protection.

(6) The offshore accommodation platform comprised in the authorised scheme must be constructed in accordance with parameters set out in the pro-rata annex.

(7) A bridge link forming part of the authorised scheme must be installed at a minimum height of 20 metres when measured from LAT.

3.—(1) The total length of the cables in Work No. 1(c) and the volume of their cable protection (including cable crossings) must not exceed the following—

<i>Work</i>	<i>Length</i>	<i>Cable protection</i>
Work No. 1(c)	600 kilometres	624,000 square metres

(2) The total number of cable crossings associated with the cables in Work No. 1(c) when combined with Work No. 2(d) as licenced under the licence in Schedule 12 of the Order must not exceed 32.

(3) The cables and cable circuits comprised in the authorised development must be constructed in accordance with the parameters set out in the pro-rata annex.

Maintenance of the authorised development

4.—(1) The undertaker may at any time maintain the authorised development, except to the extent that this licence or an agreement made under this licence provides otherwise.

(2) Maintenance works include but are not limited to—

- (a) major wind turbine component or offshore accommodation platform replacement;
- (b) painting and applying other coatings to wind turbine generators or offshore accommodation platforms;
- (c) bird waste and marine growth removal;
- (d) cable remedial burial;

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- (e) cable repairs and replacement;
- (f) cable protection replenishment for a maximum period of ten years post construction;
- (g) access ladder and boat landing replacement;
- (h) wind turbine generator and accommodation platform anode replacement; and
- (i) J-tube repair/replacement.

(3) In undertaking activities under condition 4(2)(f), the undertaker must not reduce water depth by more than 5% unless agreed with the MMO in writing.

(4) An operation and maintenance plan substantially in accordance with the outline offshore operations and maintenance plan shall be submitted to the MMO for approval in consultation with the relevant SNCB at least six months prior to the commencement of the operation of the licensed activities. All operation and maintenance activities shall be carried out in accordance with the approved plan.

Vessels under the undertaker's control

5.—(1) The undertaker must issue to operators of vessels under its control operating within the Order limits a code of conduct to prevent collision risk or injury to marine mammals.

(2) The undertaker must ensure appropriate co-ordination of vessels within its control operating within the Order limits so as to reduce collision risk to other vessels including advisory safe passing distances for vessels.

Extension of time periods

6. Any time period given in this licence given to either the undertaker or the MMO may be extended with the agreement of the other party in writing such agreement not to be unreasonably withheld or delayed.

Notifications and inspections

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

- (a) a copy of this licence (issued as part of the grant of the Order) and any subsequent amendments or revisions to it is provided to—
 - (i) all agents and contractors notified to the MMO in accordance with condition 16; and
 - (ii) the masters and offshore operations managers responsible for the vessels notified to the MMO in accordance with condition 16;
- (b) within 28 days of receipt of a copy of this licence those persons referred to in paragraph (a) above must provide a completed confirmation form to the MMO confirming receipt 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 must also be available for inspection at the following locations—

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

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

(5) The undertaker must ensure that a copy of this licence and any subsequent revisions or amendments has been read and understood by the masters of any vessel being used to carry on any licensed activity set out in condition 16(3), and that a copy of this licence is held on board any such vessel.

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

(7) The undertaker must inform the MMO Local Office in writing at least five days prior to the commencement of the licensed activities and within five days of the completion of the licensed activity.

(8) The undertaker must inform the Kingfisher Information Service of details regarding the vessel routes, timings and locations relating to the construction of the authorised scheme or relevant stage—

- (a) at least fourteen days prior to the commencement of offshore activities, for inclusion in the Kingfisher Bulletin and offshore hazard awareness data; and
- (b) as soon as reasonably practicable, and in any event no later than 24 hours after completion of construction of all offshore activities,

confirmation of notification must be provided to the MMO in writing within five days.

(9) The undertaker must ensure that a local notification to mariners is issued at least 14 days prior to the commencement of the authorised scheme or any relevant stage advising of the start date of Work No. 1 and the expected vessel routes from the construction ports to the relevant location. Copies of all notices must be provided to the MMO, MCA and UK Hydrographic Office within five days of issue.

(10) The undertaker must ensure that local notifications to mariners are updated and reissued at weekly intervals during construction activities and at least five days before any planned operations and maintenance works and the notices must be supplemented with VHF radio broadcasts agreed with the MCA in accordance with the construction and monitoring programme approved under deemed marine licence condition 13(1)(b) and monitoring plan approved under condition 13(1)(f). Copies of all local notifications must be provided to the MMO and UK Hydrographic Office within five days of issue, save for in the case of a notice relating to operations and maintenance, which must be provided within 24 hours of issue.

(11) The undertaker must notify the UK Hydrographic Office of the commencement (within fourteen days), progress and completion of construction (within fourteen days) of the licensed activities in order that all necessary amendments to nautical and aeronautical charts are made and the undertaker must send a copy of such notifications to the MMO within five days of the notification.

(12) In case of damage to, or destruction or decay of, the authorised scheme seaward of MHWS or any part thereof, excluding the exposure of cables, the undertaker must as soon as reasonably practicable and no later than 24 hours following the undertaker becoming aware of any such damage, destruction or decay, notify the MMO, the MCA, Trinity House, the Kingfisher Information Service and the UK Hydrographic Office.

(13) In case of exposure of cables on or above the seabed, the undertaker must within three days following identification of a potential cable exposure, notify mariners and inform the Kingfisher Information Service of the location and extent of exposure. Copies of all notices must be provided to the MMO, the MCA, Trinity House and the UK Hydrographic Office within five days.

(14) The undertaker must notify the MMO in writing a minimum of five days in advance of the commencement of each discrete incident of cable repair, replacement, or protection

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replenishment activity. Such a notification must include proposed timings and a description of proposed methodologies.

(15) The undertaker must ensure that the MMO, the MMO Local Office, local mariners, local fishermen's organisations and the Source Data Receipt Team at the UK Hydrographic Office, Taunton, Somerset, TA1 2DN (sdr@ukho.gov.uk) are notified within five days of completion of each instance of cable repair, replacement or protection replenishment activity.

Aids to navigation

8.—(1) The undertaker must during the whole period from commencement of the licensed activities to completion of decommissioning of the authorised scheme seaward of MHWS exhibit such lights, marks, sounds, signals and other aids to navigation, and take such other steps for the prevention of danger to navigation as Trinity House may from time to time direct.

(2) The undertaker must during the period from the start of construction of the authorised scheme to completion of decommissioning of the authorised scheme seaward of MHWS keep Trinity House and the MMO informed in writing of progress of the authorised scheme seaward of MHWS including the following—

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

(3) The undertaker must provide reports to Trinity House on the availability of aids to navigation in accordance with the frequencies set out in the aids to navigation management plan agreed pursuant to condition 13(1)(i) using the reporting system provided by Trinity House.

(4) The undertaker must during the whole period from commencement of the licensed activities to completion of decommissioning of the authorised scheme seaward of MHWS notify Trinity House and the MMO in writing of any failure of the aids to navigation and the timescales and plans for remedying such failures, as soon as possible and no later than 24 hours following the undertaker becoming aware of any such failure.

(5) In the event that the provisions of condition 7(12) are invoked, the undertaker must lay down such buoys, exhibit such lights and take such other steps for preventing danger to navigation as directed by Trinity House.

(6) Any jack up barges or vessels utilised during the licensed activities, when jacked up, must exhibit signals in accordance with the UK Standard Marking Schedule for Offshore Installations.

Colouring of structures

9.—(1) The undertaker must colour all structures yellow (colour code RAL 1023) from at least highest astronomical tide to a height directed by Trinity House, or must colour the structure as directed by Trinity House from time to time.

(2) Subject to sub-paragraph (1) above, unless the MMO otherwise directs, the undertaker must ensure that the wind turbine generators are painted light grey (colour code RAL 7035).

Aviation safety

10.—(1) The undertaker must exhibit such lights, with such shape, colour and character as are required in writing by Air Navigation Order 2016(6) and determined necessary for aviation safety in consultation with the Defence Infrastructure Organisation Safeguarding and as directed by the

(6) [S.I. 2016/765](#).

Civil Aviation Authority. Lighting installed specifically to meet Ministry of Defence aviation safety requirements must remain operational for the life of the authorised development unless otherwise agreed in writing with the Ministry of Defence.

(2) The undertaker must notify the Defence Infrastructure Organisation Safeguarding, the Civil Aviation Authority and the MMO, at least 14 days prior to the commencement of the licensed activities, in writing of the following information—

- (a) the date of the commencement of the licensed activities;
- (b) the date any wind turbine generators are to be installed;
- (c) the maximum height of any construction equipment or vessels to be used;
- (d) the maximum heights of any wind turbine generator and offshore accommodation platform to be constructed (including any antennae);
- (e) the latitude and longitude of each wind turbine generator and offshore accommodation platform to be constructed,

and the Defence Infrastructure Organisation Safeguarding and the Civil Aviation Authority must be notified of any changes to the information supplied under this paragraph of this condition and of the completion of the construction of the authorised scheme. Copies of notifications must be provided to the MMO.

Chemicals, drilling and debris

11.—(1) Unless otherwise agreed in writing by the MMO all chemicals used in the construction of the authorised scheme must be selected from the List of Notified Chemicals approved for use by the offshore oil and gas industry under the Offshore Chemicals Regulations 2002(7) (as amended) as maintained by the Centre for Environment, Fisheries and Aquaculture Science.

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

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

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

(5) The undertaker must ensure that only inert material of natural origin, produced during the drilling installation of or seabed preparation for foundations, and drilling mud is disposed of within the Order limits seaward of MHWS.

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

(7) In the event that any rock material used in the construction of the authorised scheme is misplaced or lost below MHWS, the undertaker must report the loss to the MMO Local Office in writing within 48 hours of becoming aware of it and if the MMO, in consultation with the MCA and Trinity House, reasonably considers such material to constitute a navigation or environmental hazard (dependent on the size and nature of the material) the undertaker must endeavour to locate the material and recover it at its own expense.

(7) [S.I. 2002/1355](#).

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

(9) The undertaker must ensure that any oil, fuel or chemical spill within the marine environment is reported in writing to the MMO, Marine Pollution Response Team in accordance with the marine pollution contingency plan agreed under condition 13(1)(d)(i).

(10) All dropped objects within the Order limits must be reported to the MMO using the dropped object procedure form as soon as reasonably practicable following 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.

Force majeure

12.—(1) If, due to stress of weather or any other cause the master of a vessel determines that it is necessary to deposit the authorised deposits within or outside of the Order limits because the safety of human life and/or of the vessel is threatened, within 48 hours full details of the circumstances of the deposit must be notified to the MMO in the manner provided in condition 11(10).

(2) The unauthorised deposits must be removed at the expense of the undertaker unless written approval is obtained from the MMO.

Pre-construction plans and documentation

13.—(1) The licensed activities for each stage of construction of the authorised scheme must not commence until the following (insofar as relevant to that activity or stage of activity) has been submitted to and approved in writing by the MMO, in consultation with, where relevant, Trinity House, the MCA, UK Hydrographic Office and relevant SNCB—

- (a) A design plan, prepared in accordance with the layout principles at a scale of between 1:25,000 and 1:50,000, or in such other format as may be appropriate, including detailed representation on the most suitably scaled chart, which shows for the relevant stage—
 - (i) the proposed location, including grid co-ordinates of the centre point of the proposed location for each wind turbine generator, and offshore accommodation platform within the relevant stage, subject to any micro-siting required due to anthropological constraints, environmental constraints or difficult ground conditions discovered post approval under this condition and choice of foundation types for all wind turbine generators and offshore accommodation platforms within the relevant stage;
 - (ii) the number, specifications and dimensions of the wind turbine generators to be installed within the relevant stage;
 - (iii) the length and arrangement of cable comprising Work No. 1(c) within the relevant stage;
 - (iv) the dimensions of all monopile foundations, mono suction bucket foundations, jacket foundations or gravity base structures (for the offshore accommodation platform only) within the relevant stage; and
 - (v) any exclusion zones or micro-siting requirements identified in any mitigation project pursuant to sub-paragraph 13(2)(d) or relating to any habitats of principal importance identified as part of surveys undertaken in accordance with condition 17;

to ensure conformity with the description of Work No. 1 and compliance with conditions 1, 2 and 3 above;

- (b) a construction programme to include details for the relevant stage of—
 - (i) the proposed construction start date;
 - (ii) proposed timings for mobilisation of plant delivery of materials and installation works; and
 - (iii) an indicative written construction programme for all wind turbine generators, offshore accommodation platforms and cable comprised in the works at paragraph 2 to 3(b) of Part 1 (licensed marine activities) of this Schedule (insofar as not shown in paragraph (ii) above),unless otherwise agreed in writing with the MMO;
- (c) a construction method statement in accordance with the construction methods assessed in the environmental statement and including details for the relevant stage of—
 - (i) foundation installation methodology, including drilling methods and disposal of drill arisings and material extracted during seabed preparation for foundation and cable installation works and having regard to any mitigation scheme pursuant to sub-paragraph 13(1)(g);
 - (ii) advisory safe passing distances for vessels around construction sites;
 - (iii) cable (including fibre optic cable) installation;
 - (iv) contractors;
 - (v) vessels and vessels transit corridors;
 - (vi) codes of conduct for vessel operators;
 - (vii) associated ancillary works;
 - (viii) guard vessels to be employed;
 - (ix) details of means to address impacts on European sites, habitats of principal importance and any international or nationally designated sites, where relevant; and
 - (x) measures to ensure appropriate co-ordination with the Marine Helicopter Coordination Centre;
- (d) a construction project environmental management and monitoring plan covering the period of construction for the relevant stage to include details of—
 - (i) a marine pollution contingency plan to address the risks, methods and procedures to deal with and report any spills and collision incidents of the authorised scheme in relation to all activities carried out;
 - (ii) a chemical risk review to include information regarding how and when chemicals are to be used, stored and transported in accordance with recognised best practice guidance;
 - (iii) a marine biosecurity plan detailing how the risk of introduction and spread of invasive non-native species will be minimised;
 - (iv) waste management and disposal arrangements;
 - (v) a vessel management plan, to determine vessel routing to and from construction sites and ports, to include a code of conduct for vessel operators; and
 - (vi) the appointment and responsibilities of a company fisheries liaison officer;
- (e) a scour protection management plan for the relevant stage providing details of the need, type, sources, quantity and installation methods for scour protection, which must be updated and resubmitted in writing for approval if changes to it are proposed following cable laying operations;

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- (f) details for the relevant stage of proposed pre-construction monitoring surveys, construction monitoring, post-construction monitoring and related reporting in accordance with conditions 17, 18 and 19;
 - (g) in the event that driven or part-driven pile foundations are proposed to be used for the relevant stage, a piling marine mammal mitigation protocol for that stage, in accordance with the outline marine mammal mitigation protocol, the intention of which is to prevent injury to marine mammals, including details of soft start procedures with specified duration periods following current best practice as advised by the relevant statutory nature conservation bodies;
 - (h) a cable specification and installation plan for the relevant stage which accords with the principles of the outline cable specification and installation plan, to include—
 - (i) technical specification of offshore cables (including fibre optic cable) below MHWS within that stage, including a desk-based assessment of attenuation of electromagnetic field strengths, shielding and cable burial depth in accordance with good industry practice;
 - (ii) a detailed cable laying plan for the Order limits within that stage, incorporating a burial risk assessment encompassing the identification of any cable protection that 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 and Trinity House) to be taken to ensure existing and future safe navigation is not compromised or similar such assessment to ascertain suitable burial depths and cable laying techniques, including cable protection;
 - (iii) proposals for the volume and areas of cable protection to be used for each cable crossing, and proposals for timing and methodology for reporting on actual volumes and areas post construction within that stage; and
 - (iv) proposals for monitoring offshore cables within that stage including cable protection during the operational lifetime of the authorised scheme which includes a risk based approach to the management of unburied or shallow buried cables;
 - (i) an aids to navigation management plan for that stage to be agreed in writing by the MMO following consultation with Trinity House, to include details of how the undertaker will comply with the provisions of condition 8 relating to that stage for the lifetime of the authorised scheme;
 - (j) an ornithological monitoring plan for the relevant stage which accords with the principles set out in the outline ornithological monitoring plan setting out the circumstances in which ornithological monitoring will be required and the monitoring to be carried out in such circumstances.
- (2) Subject to condition 13(3), the licensed activities or any relevant stage of those activities must not commence unless no later than six months prior to the commencement of the relevant stage a marine written scheme of archaeological investigation for the stage in construction has been submitted to and approved by the MMO in writing, in accordance with the outline marine written scheme of investigation, and in accordance with industry good practice, in consultation with the statutory historic body to include—
- (a) details of responsibilities of the undertaker, archaeological consultant and contractor;
 - (b) a method statement for further site investigation including any specifications for geophysical, geotechnical and diver or remotely operated vehicle investigations;
 - (c) archaeological analysis of survey data, and timetable for reporting, which is to be submitted to the MMO within six months of any survey being completed;

- (d) delivery of any mitigation including, where necessary, identification and modification of archaeological exclusion zones prior to construction;
- (e) monitoring of archaeological exclusion zones during and post construction, including provision of a report on such monitoring;
- (f) a requirement for the undertaker to ensure that a copy of any agreed archaeological report is deposited with the National Record of the Historic Environment, by submitting a Historic England OASIS ('online access to the index of archaeological investigations') form with a digital copy of the report within six months of completion of construction of the authorised scheme, and to notify the MMO that the OASIS form has been submitted to the National Record of the Historic Environment within two weeks of submission;
- (g) a reporting and recording protocol, designed in reference to the Offshore Renewables Protocol for Reporting Archaeological Discoveries as set out by the Crown Estate and reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised scheme; and
- (h) a timetable for all further site investigations, which must allow sufficient opportunity to establish a full understanding of the historic environment within the offshore Order limits and the approval of any necessary mitigation required as a result of the further site investigations prior to commencement of licensed activities.

(3) Pre-construction archaeological investigations and pre-commencement material operations which involve intrusive seabed works must only take place in accordance with a written scheme of investigation specific to the relevant pre-construction activities (which must accord with the details set out in the outline marine written scheme of investigation) which has been submitted to and approved by the MMO in consultation with the statutory historic body.

(4) In the event that driven or part-driven pile foundations are proposed to be used, the hammer energy used to drive or part-drive monopile foundations must not exceed 5,000kJ and the hammer energy used to drive or part-drive pin pile foundations must not exceed 3,000kJ.

(5) No more than two vessels may be engaged at any time in activities related to piling for the licenced activities. There will only be a maximum installation of two piled foundations within a 24-hour period. It is possible for installation of the two piled foundations to occur concurrently i.e. within a 24-hour period at up to two locations within the area of Work No. 3(a) or up to two locations within the array. The two piled foundation locations may also be piled simultaneously.

(6) The licensed activities or any part of those activities must not commence until a fisheries coexistence and liaison plan in accordance with the outline fisheries coexistence and liaison plan has been submitted to and approved by the MMO in writing.

(7) The undertaker must, before submitting any pre-construction plans and documentation required under this condition, provide a copy of the plans and documentation to any other undertaker to whom part of the benefit of this Order has been transferred or leased pursuant to article 5 (benefit of the order) of the Order.

(8) The undertaker to whom part of the benefit of the Order has been transferred or leased pursuant to article 5 (benefit of the order) must provide any comments on the plans and documentation to the undertaker within 14 days of receipt.

(9) The undertaker and any other undertaker must participate in liaison meetings as requested from time to time by the MMO in writing in advance and must consider such matters as are determined by the MMO relating to the efficient operation of a deemed marine licence issued under this Order (including as varied or transferred).

14.—(1) Except where otherwise stated or agreed in writing with the MMO, each programme, statement, plan, protocol or scheme required to be approved under condition 13 (save for that

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required under condition 13(1)(f) must be submitted for approval at least six months prior to the intended commencement of the relevant stage of the licensed activities.

(2) The pre-construction monitoring surveys, construction monitoring, post-construction monitoring and related reporting required under condition 13(1)(f) must be submitted in accordance with the following, unless otherwise agreed in writing with the MMO—

- (a) at least six months prior to the first survey of the relevant stage, detail of any pre-construction surveys and an outline of all proposed monitoring;
- (b) at least six months prior to construction of the relevant stage, detail on construction monitoring; and
- (c) at least six months prior to commissioning of the relevant stage, detail of post-construction (and operational) monitoring.

(3) The MMO must determine an application for approval made under condition 13 within a period of six months commencing on the date the application is received by the MMO, unless otherwise agreed in writing with the undertaker such agreement not to be unreasonably withheld or delayed.

(4) The licensed activities for the relevant stage must be carried out in accordance with the approved plans, protocols, statements, schemes and details approved under condition 13, unless otherwise agreed in writing by the MMO.

(5) The plans, protocols, statements, schemes and details submitted under condition 13 must ensure that any residual effects fall within the scope of those predicted in the environmental statement.

Offshore safety management

15. No stage of the authorised scheme may commence until the MMO, in consultation with the MCA, has confirmed in writing that the undertaker has taken into account and, so far as is applicable to that stage of the authorised scheme adequately addressed all MCA recommendations as appropriate to the authorised scheme contained within MGN654 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues” and its annexes.

Reporting of engaged agents, contractors and vessels

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

- (a) the name, company number, address and function of any agent, contractor or sub-contractor appointed to engage in the licensed activities not less than ten working days prior to such agent or contractor commencing any licensed activity; and
- (b) each week during the construction of the authorised scheme a list of the vessels currently and to be used in relation to the licensed activities, including the master’s name, vessel type, vessel IMO number and vessel owner or operating company.

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

(3) The undertaker must notify the MMO in writing not less than 24 hours prior to the commencement of major component exchanges, ladder replacements or cable related works—

- (a) any agents, contractors or subcontractors that will carry out such works; and
- (b) any vessel proposed to be used for such works, including the master’s name, vessel type, vessel IMO number and vessel owner or operating company.

Pre-construction monitoring and surveys

17.—(1) The undertaker must in discharging condition 13(1)(f) for each stage of construction submit a monitoring plan or plans for that stage in accordance with an outline marine monitoring plan for written approval by the MMO in consultation with the relevant statutory bodies, which must contain details of proposed surveys, including methodologies and timings, and a proposed format and content for a pre-construction baseline report and—

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

(2) Subject to receipt from the undertaker of specific proposals pursuant to this condition, the pre-construction survey proposals must comprise, in outline—

- (a) a full sea floor coverage swath–bathymetry survey that meets the requirements of IHO S44ed5 Order 1a, of the Order limits and a buffer outside to—
 - (i) determine the location, extent and composition of any biogenic or geogenic reef features, as set out within the outline marine monitoring plan;
 - (ii) inform future navigation risk assessments as part of the cable specification and installation plan; and
 - (iii) inform the identification of any archaeological exclusion zone and post consent monitoring of any such archaeological exclusion zone;
- (b) any ornithological monitoring required by the ornithological monitoring plans submitted in accordance with condition 13(1)(j).
- (c) a bathymetric survey that meets the requirements of IHO S44ed5 Order 1a of the area within the following coordinates—

Development area node point	WGS84 UTM Zone 31N (metres)		WGS84 (DMS)		WGS84 (decimal degrees)	
	Eastings	Northing	Latitude	Longitude	Latitude	Longitude
1	401818	5992480	54° 4' 16.157" N	1° 29' 58.386" E	54.07115	1.49955
2	411109	5984944	54° 0' 18.479" N	1° 38' 37.320" E	54.00513	1.64370
3	397695	5985627	54° 0' 31.626" N	1° 26' 19.993" E	54.00878	1.43889
4	397800	5978992	53° 56' 57.085" N	1° 26' 33.766" E	53.94919	1.44271
5	387657	5983579	53° 59' 17.868" N	1° 17' 11.556" E	53.98830	1.28654
6	401818	5992480	54° 4' 16.157" N	1° 29' 58.386" E	54.07115	1.49955

(3) The pre-construction survey(s) carried out pursuant to condition 17(2)(a)(ii) and 17(2)(c) must fulfil the requirements of MGN654 and its supporting ‘Hydrographic Guidelines for Offshore Renewable Energy Developer’ (as relevant).

(4) The undertaker must carry out the surveys specified within the monitoring plan or plans in accordance with that plan or plans, unless otherwise agreed in writing by the MMO in consultation with the relevant statutory nature conservation body.

(5) Following completion of a survey carried out pursuant to this condition and prior to construction of the relevant stage, the undertaker must provide a report and full density data of the survey outcomes to the MMO, the relevant statutory nature conservation body, the MCA and UK Hydrographic Office as relevant.

Construction monitoring

18.—(1) The undertaker must, in discharging condition 13(1)(f), for each stage of construction submit a construction monitoring plan or plans for that stage in accordance with an outline marine monitoring plan for written approval by the MMO in consultation with the relevant statutory nature conservation body, which must include details of any proposed construction monitoring, including methodologies and timings, and a proposed format, content and timings for providing reports on the results. The survey proposals must be in accordance with the principles set out in the outline marine monitoring plan and 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 undertaker of specific proposals pursuant to this condition the construction monitoring plan must include, in outline—

(a) vessel traffic monitoring by automatic identification system for the duration of the construction period, with provision for a report to be submitted to the MMO, Trinity House, and the MCA annually during the construction period for the authorised development; and

(b) where piled foundations are to be employed, unless otherwise agreed by the MMO in writing, details of proposed monitoring of the noise generated by the installation of the first four piled foundations of each piled foundation type to be constructed collectively under this licence and the licence granted under Schedule 12 of the Order.

(3) The results of the initial noise measurements monitored in accordance with sub-paragraph 18(2)(b) must be provided in writing to the MMO within six weeks of the installation (unless otherwise agreed) of the first four piled foundations of each piled foundation type. The assessment of this report by the MMO will determine whether any further noise monitoring is required. If, in the opinion of the MMO in consultation with the statutory nature conservation body, the assessment shows impacts significantly in excess to those assessed in the environmental statement and there has been a failure of the mitigations set out in the marine mammal mitigation protocol, all piling activity must cease until an update to the marine mammal mitigation protocol and further monitoring requirements have been agreed.

(4) The undertaker must carry out the surveys specified within the construction monitoring plan or plans in accordance with that plan or plans, including any further noise monitoring required in writing by the MMO under condition 18(3), unless otherwise agreed in writing by the MMO in consultation with the relevant statutory nature conservation body.

Post-construction monitoring

19.—(1) The undertaker must, in discharging condition 13(1)(f), for each stage of construction submit a post-construction monitoring plan or plans for that stage in accordance with an outline marine monitoring plan for written approval by the MMO in consultation with the relevant statutory

nature conservation body including details of proposed post-construction surveys, including methodologies (including appropriate buffers, where relevant) and timings, and a proposed format, content and timings for providing reports on the results. The survey proposals must be in accordance with the principles set out in the outline marine monitoring plan and must specify each survey's objectives and explain how it will assist in either informing a useful and valid comparison with the preconstruction position and/or will enable the validation or otherwise of key predictions in the environmental statement.

(2) Subject to receipt of specific proposals the post-construction survey plan or plans must include, in outline—

- (a) details of a survey to determine any change in the location, extent and composition of any biogenic or geogenic reef feature identified in the pre-construction survey in the parts of the offshore Order limits in which construction works were carried out. The survey design must be informed by the results of the pre-construction benthic survey;
- (b) a bathymetric survey to monitor the effectiveness of archaeological exclusion zones. The data will be analysed by an accredited archaeologist as defined in the marine written scheme of archaeological investigation required under condition 13(2);
- (c) any ornithological monitoring required by the ornithological monitoring plans submitted in accordance with condition 13(1)(j); and
- (d) vessel traffic monitoring by automatic identification system for a duration of three consecutive years following the completion of construction of the authorised scheme, unless otherwise agreed in writing by the MMO, with provision for a report to be submitted annually to the MMO, Trinity House, and the MCA.

(3) The undertaker must carry out the surveys agreed under the post-construction monitoring plan or plans in accordance with that plan or plans and provide the agreed reports in the agreed format, unless otherwise agreed in writing with the MMO in consultation with the relevant statutory nature conservation body.

(4) Within 12 weeks of completion of any cable repair or replacement works, the undertaker must undertake a post installation survey along the section of cable that has undergone repair or replacement to demonstrate the successful burial of the cable, and submit a report to the MMO in writing on its findings.

Timing of monitoring report

20. Any monitoring report compiled in accordance with the monitoring plans provided under conditions 17, 18 and 19 must be provided to the relevant body no later than four months following receipt by the undertaker of the results of monitoring to which it relates, unless otherwise agreed with the relevant body in writing.

Reporting of impact pile driving

21.—(1) Only when driven or part-driven pile foundations are proposed to be used as part of the foundation installation the undertaker must provide the following information to the Marine Noise Registry—

- (a) prior to the commencement of each stage of construction of the licensed activities, information on the expected location, start and end dates of impact pile driving to satisfy the Marine Noise Registry's Forward Look requirements;
- (b) at six month intervals following the commencement of pile driving, information on the locations and dates of impact pile driving to satisfy the Marine Noise Registry's Close Out requirements; and

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- (c) within 12 weeks of completion of impact pile driving, information on the locations and dates of impact pile driving to satisfy the Marine Noise Registry's Close Out requirements.
- (2) The undertaker must notify the MMO in writing of the successful submission of Forward Look or Close Out data pursuant to paragraph (1) above within 7 days of the submission.
- (3) For the purpose of this condition, "Forward Look" and "Close Out" mean the requirements as set out in the UK Marine Noise Registry Information Document Version 1 (July 2015) as amended, updated or superseded from time to time.

Maintenance reporting

- 22.**—(1) An annual maintenance report must be submitted to the MMO in writing within one month following the first anniversary of the date of commencement of operations, and every year thereafter until the permanent cessation of operation.
- (2) The report must provide a record of the licensed activities as set out in condition 4 during the preceding year, the timing of activities and methodologies used.
 - (3) Every fifth year, the undertaker must submit to the MMO in writing, within one month of that date, a consolidated maintenance report, which will—
 - (a) include a review of licensed activities undertaken during the preceding five years with reference to the reports submitted in accordance with condition 22(1) of this licence;
 - (b) reconfirm the applicability of the methodologies and frequencies of the licensable activities permitted by this licence for the remaining duration of this licence.

Stages of construction

- 23.**—(1) The licenced activities must not be commenced until a written scheme setting out the stages of construction of the authorised development seaward of MHWS has been submitted to and approved by the MMO in writing.
- (2) The stages of construction referred to in sub-paragraph (1) will not permit the authorised development to be constructed in more than one overall phase.
 - (3) The scheme must be implemented as approved.
 - (4) The written scheme referred to in sub-paragraph (1) must be submitted to the MMO in writing four months prior to the planned commencement of the licenced activities.

Completion of construction

- 24.**—(1) The undertaker must submit a close out report in writing to the MMO and the relevant statutory nature conservation body within three months of the date of completion of construction. The close out report must confirm the date of completion of construction and must include the following details—
 - (a) the final number of installed wind turbine generators; and
 - (b) the installed wind turbine generator parameters relevant for ornithological collision risk modelling.
- (2) Following completion of construction, no further construction activities can be undertaken under this licence.
- 25.** The undertaker must submit a close out report to the MCA and the UK Hydrographic Office within three months of the date of completion of construction. The close out report must confirm the date of completion of construction and must include the following—
 - (a) the final number of installed wind turbine generators;

- (b) a plan of the layout of installed wind turbine generators and offshore accommodation platform; and
- (c) latitude and longitude coordinates of the centre point of the location of each wind turbine generator and offshore accommodation platform, provided as Geographical Information System data referenced to WGS84 datum.

Deployment of cable protection

26. Any cable protection authorised under this licence must be deployed within 15 years from the date of the grant of the Order unless otherwise agreed by the MMO in writing.

Southern North Sea Special Area of Conservation Site Integrity Plan

27.—(1) No piling activities can take place until a Site Integrity Plan (“SIP”), which accords with the principles set out in the outline Southern North Sea Special Area of Conservation Site Integrity Plan, has been submitted to, and approved in writing, by the MMO in consultation with the relevant statutory nature conservation body.

(2) The SIP submitted for approval must contain a description of the conservation objectives for the Southern North Sea Special Area of Conservation (the “SNS SAC”) as well as any relevant management measures and it must set out the key statutory nature conservation body advice on activities within the SNS SAC relating to piling as set out within the JNCC Guidance and how this has been considered in the context of the authorised scheme.

(3) The SIP must be submitted to the MMO no later than six months prior to the commencement of the piling activities.

(4) In approving the SIP, the MMO must be satisfied that the authorised scheme at the pre-construction stage, in-combination with other plans and projects, is in line with the JNCC Guidance.

(5) The approved SIP may be amended with the prior written approval of the MMO, in consultation with the relevant statutory nature conservation body, where the MMO remains satisfied that the Project, in-combination with other plans or projects at the preconstruction stage, is in line with the JNCC guidance.