SCHEDULE 1 Article 3

Authorised development, ancillary and necessary works and Requirements

PART 1A

Authorised development

A nationally significant infrastructure project being an offshore generating station as defined in sections 14(1)(a) and 15(3) of the 2008 Act comprising—

In Swansea Bay and the City and County of Swansea and the County Borough of Neath Port Talbot

Work No. 1a — A western seawall crested by a road and footway commencing at 266417E; 189134N as shown on works plans 1, 4, 7 and 9 approximately 2700m in length and incorporating—

- (a) a low voltage substation;
- (b) provision of and for lighting;
- (c) one or more slipways, jetties, access points and associated hardstanding for boats used in connection with the operation and maintenance of the generating station;
- (d) a landscaped area where the seawall makes landfall; and
- (e) operation and maintenance facilities within the seawall together with sufficient foundation areas and pilings to enable construction of an offshore building centred on grid reference 266218E; 189338N containing an administration and engineering suite.

Work No. 1b — An eastern seawall crested by a road and footway commencing at 266420E; 189131N approximately 6800m in length and incorporating provision of and for lighting.

Work No. 2a — A turbine and sluice gate housing structure located between 266417E; 189134N and 266410E; 189131N as shown on works plans 2, 6, 8 and 9, measuring approximately 410m in length and 67.5m in width containing up to 16 variable speed hydro-turbines with a gross combined installed generating capacity of up to or equal to 320MW, and up to 10 sluice gates and incorporating—

- (a) a switch room;
- (b) scour protection;
- (c) associated electrical equipment and transformers;
- (d) dividing structures and wingwalls; and
- (e) a maximum of 4 external gantry cranes and such infrastructure works or plant as may be necessary for the purposes of operating and maintaining the sluices and turbines.

The Works No. 1a, 1b and 2a are also to incorporate localised widening of the seawall to provide—

- (a) viewing areas; and
- (b) siting locations for works of public art.

Work No. 5a — A 275kV grid connection laid underground consisting of 3 single phase cables and other electric cables connecting Work No. 2a (266120E; 189499N) to 266970E; 191821N.

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Work No. 6a — A work consisting of the construction of a jetty or mole and floating pontoons and piles or dolphins, located from 267494E; 191898N to 266998E; 191498N.

Work No. 6b — A work consisting of construction of onshore operation and maintenance facilities comprising—

- (a) an onshore building centred on 267129E; 191741N comprising—
 - (i) a hatcheries and laboratories;
 - (ii) maintenance workshops and spares stores;
 - (iii) garaging for operation and maintenance vehicles;
 - (iv) storage for boats associated with the operation and maintenance of the generating station;
 - (v) a control room;
 - (vi) staff office accommodation; and
 - (vii) staff welfare facilities; and
- (b) provision to allow construction within the area of Work No. 6b of—
 - (i) outdoor parking spaces for operation and maintenance vehicles and essential visitors to the generating station;
 - (ii) outdoor emergency access facilities to enable rapid access to the authorised works.

Work No. 7a — A new internal access road comprising 2 carriageways together with a fence in between running in a north-easterly direction from 267048E; 191928N to 269035E; 192887N.

Work No. 7g — A work for a new access track at the eastern seawall landfall running in an easterly direction from 269016E; 192826N to 270275E; 192496N.

And in connection with such works and to the extent that they do not otherwise form part of any such work, further development including mitigation, being part of the nationally significant infrastructure project comprising—

- (a) temporary construction works, including workshops and stores, storage areas for rock armour, working areas, laydown areas, construction sites, internal site roads and vehicle parking facilities;
- (b) to the extent required for mitigation, the landscaping elements of the Broad Seaward Park, Narrow Seaward Park, and Landward Ecological Park as described in the design and access statement, including works to existing wave protection walls;
- (c) habitat creation (including mariculture);
- (d) navigational aids;
- (e) bunds, embankments, swales, landscaping and boundary treatments and fencing;
- (f) to the extent shown on the demolition plan, the alteration, removal, clearance, refurbishment, reconstruction, decommissioning and demolition of any buildings and structures within the Order limits;
- (g) the provision of footpaths;
- (h) lighting columns and lighting; and
- (i) safety/emergency points.

PART 1B

Ancillary and necessary works

Works within the Order limits to the extent necessary and ancillary to the construction, operation and maintenance of a nationally significant infrastructure project and forming part of that project being an offshore generating station as defined in sections 14(1)(a) and 15(3) of the 2008 Act comprising—

Work No. 2b — A temporary offshore work consisting of a sediment berm cofferdam for the purposes of constructing Work No. 2a as shown on works plan 2.2.8B and having wall heights not exceeding 16.5m above Chart Datum.

Work No. 2c — An offshore work comprising up to 15 dolphin piles with lights, cable booms or floating buoys in between located up to 500m seaward from the outer edge of Work No. 2a (266113E; 189484N) for the purposes of demarcating a safety zone as shown on works plan 2.2 8B and works section 2.2.16A.

Work No. 2d — An offshore work comprising buoys (with or without lights) with or without floating booms located up to 500m landward from the outer edge of Work No. 2a (266123E; 189494N) for the purposes of demarcating a safety zone as shown on works plan 2.2.8B and works section 2.2.16A.

Work No. 3 — An offshore work consisting of a buried pipeline the uppermost surface of which shall be below the level of the surrounding sea bed for the extension of the existing long sea sewage outfall from 268408E; 189407N to 268030E; 187224N and replacement of diffuser apparatus.

Work No. 4 — An offshore work consisting of a new eastern channel training wall in the River Neath providing for the relocation of Monkstone lights from 270138E; 190336N to 271033E; 191419N which work must not exceed the heights shown on works section 2.2.15A.

Work No. 9 — Reclamation of land to establish a saltmarsh habitat area of up to 5ha and coastal grassland habitat area of up to 3ha including pedestrian and cycle routes and structures as shown on works plans 2.2.2B and 2.2.3B.

Work No. 10 — Reclamation of land to establish a new coastal grassland and dune area of up to 11 ha. close to the landfall of Work No. 1b as shown on works plan 2.2.3B incorporating—

- (a) a beach area;
- (b) a visitor/information point to serve Crymlyn Burrows SSSI as shown on planning drawing 2.4.58; and
- (c) extension of the existing surface drainage outfalls serving Fabian Way.

and to the extent that they do not otherwise form part of any numbered work, further ancillary works comprising—

- (d) oyster spatting ponds;
- (e) installation of services along eastern and western seawalls, including electricity and telecommunications:
- (f) buoys, beacons, fenders and other navigational aids, warning or ship impact protection works;
- (g) temporary land places, moorings and other means of accommodating vessels in the construction of the works set out in Part 1A and this Part; and
- (h) works to alter the position of apparatus on, over or under tidal waters or tidal lands within the Order limits.

PART 2 Dimensions of structures

<i>(1)</i>	(2)	(3)
Structure	Maximum height (metres) above ordinance datum	Maximum width/length
Seawall	9 (14m above chart datum)	N/A
Turbine and sluice gate housing structure	11.5 (16.5m above chart datum)	128m/410m
Operation and maintenance facilities within seawall and foundations and pilings for the offshore building centred on grid reference 266218E; 189338N	(14m above chart datum)	
Onshore building	13.5m	18m/120m
Crymlyn Burrows SSSI visitor information point	12m	Refer to drawing 2.4.58
Gantry cranes	22.5 (27.5m above chart datum)	N/A

PART 3

Requirements

Interpretation

1. In this Part—

"AEMP" means the Adaptive Environmental Management Plan to be submitted and approved pursuant to Requirement 6;

"authorised development" means the works set out in Parts 1A, 1B and 2 of this Schedule (authorised development, and ancillary and necessary works);

"CEMP" means the Construction Environmental Management Plan to be submitted and approved pursuant to Requirement 5;

"CPTMP" means the construction phase traffic management plan to be submitted and approved pursuant to Requirement 21;

"DCWW" means Dŵr Cymru Cyfyngedig (Company Reference Number: 2366777) whose registered office is at Pentwynn Road, Nelson, Treharris CF46 6LY;

"major event" means an event likely to generate vehicular traffic capable of occupying more than the aggregate number of visitor parking spaces within the authorised development;

"OEMP" means the Operational Environmental Management Plan to be submitted and approved pursuant to Requirement 5;

"operate" means operate the authorised development for generation of electricity for transmission to the national electricity grid following completion of wet commissioning and "operation" and "operating" is to be construed accordingly;

"OPTMP" means the Operational Phase Travel Management Plan to be submitted and approved pursuant to Requirement 22;

"outline Adaptive Environmental Management Plan" means the outline Adaptive Environmental Management Plan dated 25th November 2014 certified as such by the Secretary of State for the purposes of this Order;

"outline Construction Environmental Management Plan" means the outline Construction Environmental Management Plan dated 25th November 2014 certified as such by the Secretary of State for the purposes of this Order;

"outline construction phase traffic management plan" means the outline construction phase traffic management plan annexed to the outline Construction Environmental Management Plan;

"outline Operational Environmental Management Plan" means the outline Operational Environmental Management Plan dated 4th November 2014 certified as such by the Secretary of State for the purposes of this Order;

"outline operational phase traffic management plan" means the outline operational phase traffic management plan submitted with the application certified as such by the Secretary of State for the purposes of this Order.

Time limits, etc.

- 2. The authorised development must commence no later than the expiration of 5 years beginning with the date that this Order comes into effect.
- **3.**—(1) The authorised development must not commence until a construction phasing scheme for the authorised development has been submitted to and approved in writing by the relevant planning authorities. The phasing scheme must set out the sequence of construction of the authorised development and under which requirements approvals are to be sought in whole or in part depending on the contents of the construction phasing scheme.
- (2) Where a construction phasing scheme has been submitted to and approved by the relevant planning authorities, the details to be submitted to the relevant planning authorities to discharge any requirement may relate to a particular construction phase only, in order that the construction or operation of that phase may commence in accordance with the approved details for that phase alone. Where details have not been submitted in relation to any particular construction phase, then construction of that phase must not commence until the relevant part of any requirement has been discharged in relation to that phase. Construction must then be carried out in accordance with any relevant approval.

Detailed design

- **4.**—(1) The authorised development comprised in Works No. 2b, 2c, 2d, 3, 4, 5a, 7a and 7g, must be carried out in accordance with the relevant works plans and planning drawings in Schedule 7.
- (2) The authorised development seaward of mean low water springs comprised in Work No. 1a must be carried out in accordance with the relevant works plans and planning drawings in Schedule 7 so far as those drawings refer to works that are within the description of Work No. 1a in Part 1 of Schedule 1
- (3) The authorised development seaward of mean low water springs comprised in Work No. 1b must be carried out in accordance with the relevant works plans and planning drawings in Schedule 7 so far as those drawings refer to works that are within the description of Work No. 1b in Part 1 of Schedule 1.

- (4) The authorised development comprised in Work No. 2a must be carried out in accordance with the relevant works plans and planning drawings in Schedule 7 so far as those drawings refer to works that are within the description of Work No. 2a in Part 1 of Schedule 1.
- (5) No authorised development is to commence until the reserved details of the landward parts above mean low water springs of Works No. 1a and 1b and of all other works referred to in Parts 1A and 1B of Schedule 1 have been submitted to and approved by the relevant planning authorities.
- (6) Where reserved details have been approved by the relevant planning authorities, the authorised development must be carried out in accordance with those details.
- (7) In this Requirement "reserved details" means details of layout, scale, siting, design, dimensions and external appearance.

Construction Environmental Management Plans

- **5.**—(1) No authorised development are to commence until a CEMP substantially in accordance with the outline Construction Environmental Management Plan, has been submitted to and approved by the relevant planning authorities in consultation with Natural Resources Wales.
- (2) All construction work must be carried out in accordance with the CEMP approved under sub-paragraph (1).
- (3) No operation of the authorised development is to commence until an OEMP, substantially in accordance with the outline Operational Environmental Management Plan, has been submitted to and approved by the relevant planning authorities.
 - (4) Operation of the authorised development must be in accordance with the approved OEMP.
- (5) The CEMP and OEMP must include, but not be limited to, mechanisms for the provision and implementation of the following mitigation matters—
 - (a) lagoon wardens during the operational phase, whose responsibilities include (but are not limited to) securing the delivery of the OEMP and managing public access;
 - (b) a Reptile Strategy which provides for their habitat retention and management, and where necessary, their translocation to suitable receptor sites;
 - (c) access for otters, which is to be maintained at all times between the docks, River Tawe and the coastline;
 - (d) providing that reversing alarms which are not audible beyond the development site boundaries must be fitted on any Heavy Goods Vehicles (HGVs) and mobile plant that are active during the construction phase during hours of darkness, weekends (Saturdays and Sundays) and bank holidays.

Adaptive Environmental Management Plan

- **6.**—(1) No authorised development are to commence until an AEMP, substantially in accordance with the outline Adaptive Environmental Management Plan, has been submitted to and approved by the relevant planning authorities in consultation with Natural Resources Wales.
- (2) The approved AEMP must contain provision for the revision from time to time of the monitoring and management measures that it contains in order to achieve the objectives set out in the outline Adaptive Environmental Management Plan.
- (3) Construction and operation of the authorised development must be carried out in accordance with the approved AEMP as it subsists from time to time.
- (4) The undertaker is to be responsible for the implementation of measures contained in or determined pursuant to the AEMP.

- (5) The AEMP must include mechanisms for the delivery of mitigation to manage restoratively any adverse impacts resulting from the development, to habitats, species and sediment distributions on the Swansea Bay seafront arising from—
 - (a) increases in mud deposition within the lagoon;
 - (b) increases in windblown sand hazards; and
 - (c) increases in saltmarsh vegetation.
- (6) The AEMP must include a scheme for the monitoring and management of siltation in the Monkstone Marina.
- (7) The AEMP must provide for the appointment of a Core Review Group to include representatives of the undertaker, Natural Resources Wales and the 2 relevant planning authorities and to be chaired by an independent person selected by the Core Review Group.

Provision of landscaping

- 7.—(1) The authorised development is not to be commenced until a detailed landscaping scheme and associated working programme for the authorised development reflecting the principles of the design and access statement has been submitted to and approved by the relevant planning authorities.
 - (2) The landscaping scheme must include details of—
 - (a) works to existing wave protection walls;
 - (b) the location, number, species, size and planting density of proposed planting;
 - (c) a planting design on and in the vicinity of Works No. 6a and 6b within the Order land;
 - (d) any importation of materials and other operations to ensure plant establishment;
 - (e) proposed finished ground levels;
 - (f) planting and hard landscaping within the operational areas of the authorised development and the vehicular and pedestrian access, parking and circulation areas;
 - (g) the new beaches, saltmarshes and dunescapes to be constructed as part of the authorised development, including the method of construction, plant types, sizing and spacing, and the measures proposed for maintenance of areas;
 - (h) minor structures such as signage, refuse or other units and furniture;
 - (i) signage and cycle parking facilities on the access roads proposed as part of the authorised development;
 - (j) proposed and existing functional services above and below ground, including power and communications cables and pipelines, manholes and supports;
 - (k) the specified standard to which the works will be undertaken maintained and managed;
 - (l) the proposed term for which long term management is to be undertaken pursuant to Requirement 8(4); and
 - (m) a timetable for the implementation of all hard and soft landscaping works.
 - (3) All planting undertaken pursuant to the landscaping scheme is to comprise—
 - (a) species that would also enhance biodiversity and connect habitats; and
 - (b) stock of local provenance, where available.
- (4) The details to be submitted under sub-paragraph (2) must not include any development or works that are not within the descriptions of the authorised development contained in this Schedule.

Implementation and maintenance of landscaping

- **8.**—(1) All landscaping works must be carried out in their entirety, maintained and managed in accordance with the detailed written landscaping scheme approved under Requirement 7 and to the specified standard.
- (2) Any tree or shrub planted as part of the approved detailed landscaping scheme that is removed, dies or becomes, in the opinion of the relevant planning authority, seriously damaged or diseased, must be replaced in accordance with the specified standard of maintenance and management in the first available planting season with a specimen of the same species and size as that originally planted, unless otherwise approved by the relevant planning authority.
- (3) If any boundary shrub or vegetation is the subject of localised clearance for the purpose of construction of the authorised development, replacement planting must be undertaken to replace the extent of vegetation lost using locally occurring species to retain the existing vegetation pattern, unless otherwise approved by the relevant planning authority.
- (4) Within 2 years from the commencement of operation of the authorised development a long term management plan for the period of operation of the development for the area of the authorised development within the jurisdiction of the City and County of Swansea Council prepared in accordance with the principles set out in the landscaping scheme shall be submitted for the approval of that Council, and all planting and landscaping must then be managed in accordance with the approved plan.
- (5) Within 2 years from the commencement of operation of the authorised development a long term management plan for the period of operation of the development for the area of the authorised development within the jurisdiction of the Neath Port Talbot Borough Council prepared in accordance with the principles set out in the landscaping scheme shall be submitted for the approval of that Council, and all planting and landscaping must then be managed in accordance with the approved plan.

Highway works

- **9.**—(1) No phase of the authorised development affecting an existing public highway is to commence until details of the siting, design and layout of the highway works have after consultation and highway authority for the works in question been submitted to and approved by the relevant planning authority.
 - (2) The highway works must be carried out in accordance with the approved details.
 - (3) The submitted details are to provide for—
 - (a) reinstatement of temporary works upon their completion;
 - (b) a site survey to identify pre-existing defects;
 - (c) remedy of defects caused during and resulting from the works upon completion; and
 - (d) construction of permanent works to adoptable standards.
- (4) In this Requirement "the highway works" means the highway works comprised in Works No. 7a.

Fencing and other means of site perimeter enclosure

- 10.—(1) Prior to commencement of each phase of the authorised development, written details of all proposed permanent or temporary fences, walls or other means of enclosure within that phase of the authorised development must be submitted to and approved by the relevant planning authorities.
- (2) All construction sites must remain securely fenced at all times during construction of the authorised development in accordance with the approved scheme or schemes.

- (3) All temporary fencing must be removed on completion of construction of the authorised development.
- (4) All perimeter fences, walls or other means of site perimeter enclosure for the authorised development approved in accordance with sub-paragraph (1) must be completed prior to commencement of operation in accordance with the approved details.
 - (5) Such fencing must make provision for—
 - (a) the secure fencing of the Port of Swansea;
 - (b) fencing and means of access as is required to secure the proper management of access to Crymlyn Burrows SSSI from the authorised development; and
 - (c) alternative access routes for otters.

Operational surface and foul water drainage

- 11.—(1) No part of the authorised development shall commence until a written scheme to deal with the details of the surface water drainage system and the sewage system (together, the "operational drainage scheme") incorporating a sustainable urban drainage system so far as appropriate has been submitted to and approved by the relevant planning authority in consultation with the relevant drainage authority.
 - (2) The operational drainage scheme shall provide for—
 - (a) prior to commencement of development, a survey to be undertaken to identify existing site drainage within the Order limits including old surface water boreholes, disused draining networks from earlier developments and part-demolished sections of existing drainage and the decommissioning of any surface water drainage network or exposed boreholes so identified to the satisfaction of Natural Resources Wales;
 - (b) a rainwater harvesting system to be included in the authorised development;
 - (c) surface water that has the potential for oil contamination to be passed through oil interceptors;
 - (d) measures to avoid risk of spillage of contaminating material;
 - (e) the discharge of all aqueous effluents via the drainage system comprised in the authorised development;
 - (f) a system to collect and treat run off from stock piles prior to discharge to the surface water drainage system; and
 - (g) the avoidance of any tie-in to drains serving the A483 Fabian Way.
- (3) The scheme must be implemented in accordance with the approved details prior to operation of the authorised development and maintained during the operation of the authorised development.

Contamination and groundwater

- 12.—(1) Prior to the commencement of each phase of the authorised development a scheme to assess the nature and extent of any contamination on the Order land, and confirmation of whether or not it originates on the Order land must be submitted to and approved by the relevant planning authority in consultation with Natural Resources Wales. The investigation and risk assessment must be undertaken by competent persons in accordance with Land Contamination: A Guide for Developers and the EA/DeFRA Report CLR11 Model Procedures for Management of Land Contamination and must be submitted as a written report. The written report is to include—
 - (a) a desktop study to identify all previous uses on the Order land and potential contaminants on land and controlled waters. The desktop study must establish a "conceptual site mode" (CSM) identifying all plausible pollutant linkages to be assessed;

- (b) a survey of the extent, scale and nature of contamination;
- (c) an assessment of the potential risks to—
 - (i) human health;
 - (ii) ground waters and surface waters;
 - (iii) adjoining land;
 - (iv) property (existing or proposed) including buildings, crops, livestock, pets, woodland and service lines and pipes;
 - (v) ecological systems; and
 - (vi) archaeological sites and ancient monuments;
- (d) an appraisal of remedial options, and proposal of the preferred remedial options; and
- (e) so far as relevant to land which is the subject of the written report in question, details of how the scheme has taken account of remediation works secured by an agreement under section 106 of the 1990 Act dated 20th November 2009 and made between Neath Port Talbot County Borough Council (1), St Modwen Developments Limited (2), St Modwen Properties PLC (3), BP Chemicals Limited (4) and BP Oil Llandarcy Refinery Limited (5) as well as consultation carried out with Baglan Bay Company Limited (company number 638328).
- (2) Prior to the commencement of each phase of the authorised development a remediation scheme to bring the Order land to a condition suitable for the intended use by removing any unacceptable risks to human health, buildings, other property and the natural and historical environment must be submitted to and approved by the relevant planning authority. The remediation scheme must include all relevant works to be undertaken, proposed remediation objectives, remediation criteria and site management procedures. The measures proposed within the remediation scheme must be implemented in accordance with an approved programme of works contained in that scheme
- (3) Prior to operation of the relevant phase of authorised development commencing, a verification report which demonstrates the effectiveness of the agreed remediation works carried out in accordance with this Requirement must be submitted to and approved by the relevant planning authority.
- (4) In the event that contamination is found at any time when carrying out the authorised development that was not previously identified, work on the affected area must cease immediately and shall be reported in writing to the relevant planning authority. A Desk Study, Site Investigation, Risk Assessment and where necessary a Remediation Strategy must be undertaken in accordance with Land Contamination: A Guide for Developers. The Desk Study, Site Investigation, Risk Assessment and any Remediation Strategy must be submitted to and approved by the relevant planning authority. Prior to operation of the development, a verification report which demonstrates the effectiveness of the approved remediation must be submitted to and approved by the relevant planning authority.
- (5) In this Requirement "Land Contamination A Guide for Developers" means the document entitled Land Contamination: A Guide for Developers (WLGA, WAG & EAW, 2012) certified as such by the Secretary of State for the purposes of this Order.

Storage of materials on site

- 13.—(1) No part of the authorised development is to be brought into use until a written scheme to deal with handling and onsite storage of process chemicals, cleaning substances, fuels, oils and lubricants on site has been submitted to and approved by the relevant planning authorities.
 - (2) All such materials must be stored in accordance with the approved scheme.

Construction water supply

14. No part of the authorised development is to be commenced until a building water supply licence has been granted by DCWW for construction of the authorised development.

Electrical grid connection works

- 15.—(1) No part of Work No. 5a is to be commenced until—
 - (a) details of the buried depths of the cable comprised in those works according with the recommendations contained in the ERA report; and
 - (b) a scheme and programme for the works, including necessary construction details and locations of laydown areas, with details of specific ecological mitigation; and
 - (c) a scheme for the restoration monitoring and aftercare of areas of land disturbed by the construction of those works upon their completion including providing for the areas to be suitable for access by the public,

has been submitted to and approved by the relevant planning authority in consultation with Natural Resources Wales.

- (2) Work No. 5a must be carried out in accordance with the approved details and scheme.
- (3) In this Requirement, the "ERA report" means ERA report 2015 0265 certified as such by the Secretary of State for the purposes of this Order.

Archaeology

- **16.**—(1) No part of the authorised development in any phase is to commence until a programme of archaeological work including a written scheme of investigation has been submitted to and approved by the relevant planning authorities following consultation with Cadw. The written scheme of investigation is to include an assessment of significance and research questions appropriate for investigation and—
 - (a) a programme and methodology of site investigation and recording having regard to the on- and offshore nature of the authorised development;
 - (b) a programme for post-investigation assessment;
 - (c) provision for analysis of the site investigation and recording, as well as retention of historic assets *in situ* where reasonably practicable;
 - (d) provision for publication and dissemination of the analysis and records of the site investigation;
 - (e) provision to be made for archive deposition of the analysis and records of the site investigation; and
 - (f) nomination of a competent person or persons to undertake the works set out within the written scheme of investigation.
- (2) No part of the authorised development is to take place other than in accordance with the written scheme of investigation approved under sub-paragraph (1) of this Requirement.
- (3) The site investigation and post-investigation assessment are to be completed in accordance with the programme set out in the written scheme of investigation approved under sub-paragraph (1) and provision is to be made in the written scheme of investigation for analysis, publication and dissemination of results and archive deposition.

Retention of historic assets

- 17.—(1) No part of the authorised development is to commence until a written scope of work required for the retention (where reasonably practicable), or (as the case may be in relation to paragraph (b)) relocation, and enhancement of historic assets identified in the written scope of work, including in particular—
 - (a) the standing pill boxes, gun emplacement and tank traps situated seaward of Queen's Dock Swansea, with a buffer zone of 5m, together with suitable landscape treatment; and
- (b) the navigation light situated on the existing Swansea Harbour East Pier, has been submitted to and approved by the relevant planning authority in consultation with Cadw and the Glamorgan-Gwent Archaeological Trust Ltd.
 - (2) The authorised development is to be carried out in accordance with the approved details.

Monitoring of noise during construction

- **18.**—(1) No part of the authorised development is to commence until a written scheme providing for the monitoring of noise generated during the construction of the authorised development has been submitted to and approved by the relevant planning authorities.
- (2) The scheme must specify the locations at which noise will be monitored, the method of noise measurement (which shall accord with BS 5228 or, an equivalent successor standard or other agreed noise measurement methodology appropriate to the circumstances) and the frequency of submission of data to the relevant planning authorities.
 - (3) The authorised development must be carried out in accordance with the approved scheme.

Piling

- 19.—(1) No piling activities relating to those works shown on drawing TLP SWANSEA BAY 141003 VO.2 as certified by the Secretary of State are to commence until a piling method statement according with the annotations of that drawing has been submitted to and approved by the relevant planning authorities in consultation with Natural Resources Wales.
 - (2) Piling must be carried out in accordance with the approved method statement.

Site waste management plan

- **20.**—(1) No part of the authorised development is to be constructed until a plan for the management and disposal of waste produced as a result of the construction of the authorised development has been submitted to and approved by the relevant planning authorities.
- (2) The construction of the authorised development must be carried out in accordance with the approved details.

Construction traffic

- **21.**—(1) No part of the authorised development is to commence until a construction phase traffic management plan (CPTMP) substantially in accordance with the outline construction phase traffic management plan has been submitted to and approved in writing by the relevant planning authorities.
 - (2) The CPTMP must include provision for—
 - (a) importation of rock armour and sediment for the authorised works only by sea;
 - (b) the public dissemination of contact details for any co-ordinator appointed in respect of the CPTMP:
 - (c) avoidance of access via junctions A9 or A10; and

- (d) avoidance of Heavy Goods Vehicles entering and leaving the development site between the hours of 0800-0900 and 1600-1730.
- (3) All construction work must be carried out in accordance with the approved CPTMP.

Operational traffic

- **22.**—(1) The authorised development must not be operated until a OPTMP, substantially in accordance with the outline operational phase traffic management plan, including identification of a travel plan co-ordinator, has been submitted to and approved by the relevant planning authorities.
- (2) The approved OPTMP must make provision for the installation of and collection of data from a suitably located automatic traffic counter provided by the undertaker.
 - (3) The authorised development must be operated in accordance with the approved OPTMP.

Major events

- **23.**—(1) No major event is to be held at the authorised development unless an overarching Major Event Strategy ("MES") including identification of a strategy co-ordinator has been submitted to and approved by the relevant planning authorities.
 - (2) The MES must also make provision for—
 - (a) prior consultation with the relevant planning authority, highway authority, Welsh Ministers and Police as well as the Maritime and Coastguard Agency and RNLI, so far as appropriate;
 - (b) submission of subsidiary event-specific Major Event Plans;
 - (c) management of pressures on Swansea Beaches and Crymlyn Burrows SSSI (to the extent appropriate);
 - (d) any co-ordination of other licensing requirements;
 - (e) management of travel and traffic; and
 - (f) responsibility for provision of off-site parking and transport between any off-site parking and the authorised development.
 - (3) Any event-specific Major Event Plan must include—
 - (a) an explanation of why the event constitutes a major event;
 - (b) expected number of attendees, participants, competitors, exhibitors and spectators and their expected modes of travel;
 - (c) proposed arrangements for the management of vehicular and pedestrian access, including details of off-site parking, any proposed temporary provision of park and ride facilities, drop off and pick up arrangements together with amenity facilities at such locations;
 - (d) details of any proposed temporary road closures or other traffic management required;
 - (e) proposed car and coach parking arrangements;
 - (f) details of liaison proposed to be or held with the police and other relevant first responder services;
 - (g) details of measures to control visitor movement and other activity with respect to Crymlyn Burrows SSSI and any designated quiet bird area; and
 - (h) the proposed access signage and advertising strategy for each event.
- (4) All major events held at the authorised development must be held in accordance with the approved MES and any event-specific Major Event Plan.

Construction and security lighting scheme

- **24.**—(1) No phase of the authorised development is to commence until a detailed written construction and security lighting scheme in accordance with the design and access statement has been submitted to and approved by the relevant planning authorities.
 - (2) The construction and security lighting scheme must provide for—
 - (a) appropriate lighting of any safety zone in place or dredging activity taking place during construction;
 - (b) the avoidance of direct light spill onto open water within the authorised development including the use of fencing to minimise light spill and avoidance of the use of white mercury lamps;
 - (c) the minimisation of light spill, including the use of directional lighting and positioning of lights, baffles, cowls and hoods; and
 - (d) measures to ensure that any such lighting will be directional and sensitive to relevant ecological receptors.
- (3) Construction of the authorised development must be carried out in accordance with the approved scheme.

Permanent lighting

- **25.**—(1) No permanent lighting forming part of the authorised development is to be installed in any phase until a detailed written and illustrated permanent lighting scheme substantially in accordance with the principles contained in the design and access statement has been submitted to and approved by the relevant planning authorities.
 - (2) The permanent lighting scheme must provide for—
 - (a) details of how the lighting design will minimise trespass, glare and spillage;
 - (b) development of appropriate lighting to render the authorised development appropriate to Swansea Bay and its setting; and
 - (c) details of how, where possible, operational lighting will be designed to minimise impacts on relevant ecological receptors as described in the environmental statement.
 - (3) The approved scheme must be implemented as part of the authorised development.

Flood risk mitigation

- **26.**—(1) No tidal works comprised in the authorised development are to commence until a scheme of mitigation works for the flood risk area at Mumbles has been submitted to and approved in writing by the relevant local planning authority following consultation with Natural Resources Wales.
- (2) Construction of Works No. 1a, 2a, and 2b must not commence until the approved scheme of mitigation works for the flood risk area at Mumbles, as referred to in sub-paragraph (1), has been completed.
 - (3) The approved scheme must be implemented as part of the authorised development.

Fish and shellfish mitigation strategy

27.—(1) No part of the authorised development is to commence until a written strategy for the mitigation of the impacts of the authorised development on fish and shellfish has been submitted to and approved by the relevant local planning authority in consultation with Natural Resources Wales and the relevant port Harbour Authority.

- (2) The fish and shellfish mitigation strategy must provide for—
 - (a) fish spawning enhancements by introduction of spawning media at locations including the western face of Work No. 1a; and
 - (b) targeted oyster dredge trawls to be undertaken of the proposed dredging areas prior to commencement of construction and the translocation of native oysters.
- (3) In relation to herring, the approved scheme shall provide—
 - (a) for the placing of spawning media under sub-paragraph (2)(a) in the first year of construction of the authorised development; and
 - (b) for the monitoring of the areas where spawning media are placed in the second and third year of construction and thereafter in accordance with frequencies determined under the AEMP.
- (4) In relation to the acoustic, sonar imaging and collision recording devices to be installed in association with the turbines. The scheme shall include—
 - (a) monitoring of turbine impacts upon fish species, including migratory fish and clupeids;
 - (b) calibration of acoustic fish deterrent devices ("AFDs") prior to commencement of operation to be effective on fish species that are hearing generalists, including sea trout and herring;
 - (c) monitoring to test the effectiveness of AFDs;
 - (d) agreement of acceptable thresholds of impact and further action to be taken if those thresholds are exceeded.
 - (e) measures to be taken when AFDs are non-operational; and
 - (f) provision for review and adaptation of AFDs during the life of the authorised development.
- (5) The provisions of this Requirement are to take precedence over the provisions of the AEMP except where an iteration of the AEMP in accordance with the terms of this Order permits.
- (6) The approved fish and shellfish mitigation strategy and any measures under it are to be implemented and maintained during construction of the authorised development, and operation of the authorised development.

Avian enhancement strategy

- **28.**—(1) No part of the authorised development is to commence until a written strategy of enhancement measures for avian species has been submitted to and approved by the relevant planning authorities in consultation with Natural Resources Wales.
 - (2) The avian enhancement strategy shall provide for—
 - (a) provision of an artificial roost within a less disturbed area of the authorised development; and
 - (b) provision of kittiwake ledges on north-eastern front of the new turbine and sluice gate housing structure.
- (3) The approved strategy and any measures under it are to be implemented and maintained during construction and operation of the authorised development.

Habitats creation strategy

- **29.**—(1) No phase of the authorised development is to commence until a written strategy for the creation, monitoring and management of onshore habitats in that phase has been submitted and approved by the relevant planning authorities in consultation with Natural Resources Wales.
 - (2) The habitats creation scheme is to provide for—

- (a) creation of artificial dunescape at the base of existing coastal defences and management to reduce impact through public access;
- (b) creation of an artificial sandy beach at eastern landfall of the authorised development;
- (c) beach landscaping and design on the western side of the eastern landfall of the authorised development to reduce wind effect;
- (d) vegetation management to create areas of bare sand and physical intervention to create blow-outs;
- (e) retention of habitat strips of at least 3m in width associated with the grassland in the lee of existing seawalls south-east of Queen's Dock;
- (f) creation of grassland along the landward side of the new saltmarsh area comprised in the authorised development following removal of the existing seawall;
- (g) encouraging colonisation of existing rock armoured sea defences through infilling of large gaps with aggregate and localised topping with sandy spoil/topsoil;
- (h) creation of a dedicated coastal grassland plot to the seaward side at the south-eastern end of the docks estate with a transition to saltmarsh habitat as well as connectivity to dune habitat towards the east;
- (i) creation of grassland at the periphery of parking bays at the western end of the authorised development;
- (j) translocation of grassland turves and reuse of topsoil from areas of species-rich sward to
 encourage the establishment of coastal grassland habitat in the newly created areas with
 plants of local provenance;
- (k) translocation of robust plants or substrates containing target species seeds to holding areas where they can be relocated to newly created habitats on new seawalls; and
- (1) creation of purpose-designed artificial rocky shore habitat on new seawalls.
- (3) The approved habitats creation strategy and any measures under it are to be implemented in their entirety and maintained during the entirety operation of the authorised development.

Honeycomb worm translocation strategy

- **30.**—(1) No part of the authorised development shall be commenced until a written strategy for the translocation of the honeycomb worm (*Sabellaria alveolata*) has been submitted to and approved by the relevant planning authority in consultation with Natural Resources Wales.
 - (2) The honeycomb worm translocation strategy is to provide for—
 - (a) a method statement for the translocation effort;
 - (b) identification of temporary or permanent receptor sites;
 - (c) translocation of casts to encourage future settlement to locations around the new seawalls;
 - (d) provision of rockpools and features similar to bio-blocks to provide biodiversity offset; and
 - (e) further remedial action to be implemented in the event of an unsuccessful translocation programme or a detrimental effect upon the adjacent undisturbed honeycomb worm reef.
- (3) The approved honeycomb worm translocation strategy and any measures under it are to be implemented and maintained during construction and operation of the authorised development.

Other ecological matters

31.—(1) No part of the authorised development is to be commenced until a written strategy to secure the removal or management of Japanese Knotweed and other invasive non-native species

within areas affected by the authorised development has been submitted to and approved by the relevant planning authorities.

(2) The approved measures are to be implemented during construction and operation of any part of the authorised development.

Passive provision for western link

- **32.**—(1) No authorised development is to commence in respect of Work No. 6b until a scheme for safeguarding a future access to the Order land via the eastern bank of the River Tawe has been submitted to and approved by the relevant local planning authority.
 - (2) The authorised development is to be carried out in accordance with the approved scheme.

Turbines

- **33.**—(1) No authorised development is to commence in respect of Work No. 2a until a scheme of works showing—
 - (a) details of the turbine and sluice gate housing structure, including associated gantry cranes;
 - (b) details of the variable speed hydro-turbines to be installed in the turbine housing and the depth relative to chart datum and ordinance datum at which the turbines are to operate;
 - (c) details for installation with the turbines of acoustic fish deterrents and of high resolution sonar imaging and collision recording devices,

has been submitted to and approved by the relevant local planning authority in consultation with Natural Resources Wales.

(2) The authorised development is to be carried out in accordance with the approved scheme.

Disposal of dredged arisings and protection of Kenfig SAC

- **34.**—(1) Operation of the authorised development is not to commence until a scheme for the disposal of dredged arisings relating to maintenance of depths within the lagoon formed by the authorised works ("maintenance arisings") has been submitted to the relevant planning authorities, in consultation with Natural Resources Wales, and approved in writing.
- (2) Following commencement of the dredging referred to in sub-paragraph (1) of this Requirement, disposal of maintenance arisings must not take place except in accordance with a scheme approved under sub-paragraph (1) or a marine licence for such disposal granted by Natural Resources Wales.
 - (3) Any scheme approved under this Requirement may provide for—
 - (a) disposal of maintenance arisings at Swansea Outer disposal ground (LU130); or
 - (b) disposal of maintenance arisings at another disposal ground.
- (4) Where the scheme approved under this Requirement relates to disposal of maintenance arisings at Swansea Outer disposal ground, the approved scheme is to make provision for—
 - (a) the collection or augmentation of baseline data for a period of 2 years prior to the commencement of disposal of maintenance arisings in relation to the presence of sand, mud and muddy sand adjacent to the Kenfig shoreline between the northern edge of Margam Moors and Sker Point ("Kenfig Shoreline");
 - (b) a programme of monitoring designed to predict or to identify departure from predicted change to the Kenfig Shoreline as a result of the deposit of maintenance arisings;
 - (c) mitigation by the undertaker to prevent or remedy adverse change to the Kenfig Shoreline (which could lead to adverse effects on the Kenfig Special Area of Conservation) as a result

- of the deposit of maintenance arisings by the undertaker, which may include but need not be limited to the use of an alternate disposal ground in parallel with or in substitution for the use of Swansea Outer disposal ground particularly where other mitigation measures are not available or appropriate for preventing such effects;
- (d) triggers in response to which mitigation will be secured by the undertaker in the event of change to the Kenfig Shoreline in relation to—
 - (i) erosion rate of the sand dune toe;
 - (ii) the profiles of the sand body in frontal dunes (between the seaward toe and a fixed line 20m inland) at intervals identified in the scheme as well as sedimentary characteristics; and
 - (iii) volumes of sand in the area from mean low water to the dune toe, and position of tidal contours on the beach; and
- (e) the review of the scheme and the triggers described above in light of the results of monitoring and other events in accordance with the AEMP referred to in Requirement 6.
- (5) Nothing in sub-paragraph (3) of this Requirement is to prevent the undertaker from using or relying upon any scheme of that nature promoted by others relating in whole or in part to the protection or monitoring of the Kenfig SAC.

Beach mitigation management

- **35.**—(1) Operation of the authorised development is not to commence until a beach mitigation management strategy for North West Swansea Bay has been submitted to and approved by the relevant planning authority following consultation with Natural Resources Wales.
 - (2) The approved strategy, which may comprise part of the AEMP is to include provision for—
 - (a) continued regular monitoring of beaches in North West Swansea Bay throughout the operational, decommissioning and post-decommissioning of the authorised development;
 - (b) identification of thresholds for the application of mitigation measures; and
 - (c) flexibility to select the most appropriate mitigation measures from identified options which may include sediment nourishment, sand or mud removal, vegetation removal or spraying, and construction of sand fencing or other form of physical barrier to control wind-blown sand
- (3) The approved scheme is to be implemented by the undertaker during the operation, decommissioning and post-decommissioning phases of the authorised development.

Requirement for written approval

- **36.** Where under any of the Requirements the approval or agreement of the Secretary of State, the local planning authority or another person or body is required, that approval or agreement must be given in writing.
- **37.** Where approval or agreement is sought in relation to Requirements 26, 27, 34 and 35 approval must only be given by the relevant planning authority following consultation with Natural Resources Wales.

Amendments to approved details

38.—(1) With respect to any Requirement which requires the authorised development to be carried out in accordance with the details of a plan, scheme or code approved by the local planning authority or any other person or body, the approved details, or plan, scheme or code are to be taken

to include any amendments that may subsequently be approved in writing by the local planning authority or that other person or body.

- (2) Where such details, plan, scheme or code are required to be approved in consultation with another body, any amendments of that document must also be approved in consultation with that body.
- (3) Any amendments to or variations from the approved details 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 relevant planning authority or that other person 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.

Marine mammal mitigation strategy

- **39.**—(1) No part of the authorised development is to commence until a written strategy for the monitoring and mitigation of the impacts of the authorized development on marine mammals has been submitted to the relevant planning authorities, and in consultation with Natural Resources Wales, approved in writing.
 - (2) The marine mammal mitigation strategy must provide for—
 - (a) monitoring and mitigation to minimise the potential for disturbance to marine mammals during construction and operation;
 - (b) monitoring and mitigation measures to minimise the potential for marine mammal collision with the turbines during operation; and
 - (c) agreement of thresholds of mortality of marine mammals (potential biological removal), and action to be taken if those thresholds are exceeded, for any given year during the operation of the project.
- (3) The approved strategy must be implemented throughout the construction and operation of the authorised development.
- (4) The strategy must be reviewed annually unless otherwise agreed in writing by the relevant planning authorities.
- (5) No changes to the strategy are be implemented unless they have been approved in writing by the relevant planning authorities.

Section 106 agreement

- **40.**—(1) No part of the authorised development is to commence until an agreement pursuant to section 106 of the Town and Country Planning Act 1990 (a "section 106 agreement") has been secured between The City and Country of Swansea Council, Neath Port Talbot County Borough Council, AB Ports and the undertaker.
- (2) The section 106 agreement mentioned in sub-paragraph (1) may be altered or varied only with the consent of all of The City and Country of Swansea Council, Neath Port Talbot County Borough Council, AB Ports and the undertaker.
- (3) The section 106 agreement should reflect that of 8th December 2014, as certified by the Secretary of State.

Employment and skills plan

41.—(1) The authorised development shall not commence until an employment and skills plan detailing arrangements to promote employment and skills development opportunities has been

submitted to and approved in writing by both The City and Country of Swansea Council and Neath Port Talbot County Borough Council.

(2) The plan must include proposals for promoting such opportunities for local residents and the approved employment and skills plan must be implemented and maintained during the construction of the authorised development, and operation of the authorised development.

Water Framework Directive

- **42.**—(1) The authorised development must not commence until a monitoring and management strategy document has been submitted to and approved by Natural Resources Wales, the purpose of such strategy document being to ensure that the authorised development is carried out in compliance with the Water Framework Directive, including any necessary derogation from that Directive.
- (2) The "Water Framework Directive" means Directive 2000/60/EC of the European Parliament and of the Council of 23rd October 2010 establishing a framework for Community action in the field of water policy.