

DRAFT FOR COMMENT

THE SWANSEA BAY TIDAL GENERATING STATION PROJECT

MEMORANDUM OF UNDERSTANDING

BETWEEN

TIDAL LAGOON (SWANSEA BAY) PLC

AND

WELSH MINISTERS

WITHOUT PREJUDICE

1. PARTIES

- 1.1 Tidal Lagoon (Swansea Bay) plc (“TLSB”) and the Welsh Ministers (together, the “Parties”) have entered into this memorandum of understanding (“MOU”) to address matters of planning that have been omitted from The Swansea Bay Tidal Generating Station Order 2015¹ (the “Order”).
- 1.2 This MOU does not comprise a legally binding contract, but sets out the Parties’ understanding of the matters that it contains.

2. BACKGROUND

- 2.1 TLSB is promoting the Swansea Bay Tidal Generating Station project (the “Project”), which is a nationally significant infrastructure project within the meaning of sections 14(1) and 15 of the Planning Act 2008 (the “2008 Act”), and is authorised by the Order. The Project will be constructed primarily upon land within Swansea Bay below mean low water and adjacent to land within the City and County of Swansea and the County Borough of Neath Port Talbot. The local planning authority for the City and County of Swansea is the City and County of Swansea Council (“CCSC”). The local planning authority for the County Borough of Neath Port Talbot is Neath Port Talbot County Borough Council (“NPTCBC”).
- 2.2 Neither CCSC nor NPTCBC (together the “Local Authorities”) has jurisdiction as local planning authority over land that lies seaward of mean low water in Swansea Bay.
- 2.3 The Order was granted subject to certain requirements imposed under section 115(4) of the 2008 Act.
- 2.4 Before commencing the development approved by the Order, certain requirements, which relate (wholly or in part) to works or matters seaward of mean low water that are envisaged by the Order, require the prior approval of matters by a local planning authority. These matters are:
- (a) requirement 3 - construction phasing scheme;
 - (b) requirement 4 - detailed design;
 - (c) requirement 5 - Construction Environmental Management Plan and

¹ S.I. 2015/1386.

Operational Environmental Management Plan;

- (d) requirement 6 - Adaptive Environmental Management Plan;
- (e) requirement 7 - landscaping scheme;
- (f) requirement 10 - details of fencing;
- (g) requirement 11 - details of the surface water drainage system and sewage system;
- (h) requirement 12 - contaminations assessment and scheme;
- (i) requirement 16 - written scheme of investigation (archaeology);
- (j) requirement 18 - noise monitoring scheme;
- (k) requirement 19 - piling method statement;
- (l) requirement 20 - site waste management plan;
- (m) requirement 24 - construction and security lighting scheme;
- (n) requirement 26 - flood risk mitigation;
- (o) requirement 27 - fish and shellfish mitigation strategy;
- (p) requirement 28 - avian enhancement strategy;
- (q) requirement 33 - turbine and sluice gate scheme;
- (r) requirement 34 - disposal of dredged arisings and protection of Kenfig Special Area of Conservation; and
- (s) requirement 39 - marine mammal mitigation strategy.

2.5 The content of these requirements is set-out in full in **Annexure 1** to this MOU.

2.6 Each of the above requirements (at paragraph 2.4 of this MOU) must be discharged prior to commencement of the development. Certain of these requirements (particularly requirements 19 and 33) cannot properly be discharged until the material required to satisfy the discharge of each requirement is submitted to the relevant local planning authority for approval. Where no local planning authority has jurisdiction

over the relevant part of the Project or other matters that are the subject of requirements (either in whole or in part), either the requirement cannot properly be discharged or the matters that it secures, or the terms of an approval or the requirement itself may not be capable of enforcement (or enforcement may be compromised).

2.7 Natural Resources Wales (“NRW”) must also be consulted with by the local planning authority about the material required to satisfy requirements 5, 6, 11, 12, 19, 26, 27, 28, 33, 34 and 39 before these specific requirements can be discharged.

2.8 In the final iteration of the draft DCO submitted to the Examining Authority, on 25 November 2014, TLSB sought to address these jurisdictional issues through the inclusion of provisions adjusting the jurisdiction of the harbour authorities for Swansea Bay and extending the jurisdiction of the Local Authorities.

2.9 However, in granting development consent the Secretary of State for Energy and Climate Change concluded that she did not have the power under the 2008 Act either to:

2.9.1 adjust the jurisdiction of the existing harbour authorities over the area of Swansea Bay in which the Project will be situated; and

2.9.2 extend the planning jurisdiction of the Local Authorities beyond the mean low water mark in Swansea Bay.

2.10 The Secretary of State in her decision letter, dated 9 June 2015, explained:

2.10.1 at paragraph 14, that the boundaries of the Local Authorities’ jurisdiction would need to be extended through the process provided for in the Local Government (Democracy) Wales Act 2013 (the “2013 Act”); and

2.10.2 at paragraph 28, that the boundaries of the existing harbour authorities’ jurisdiction would need to be amended through a harbour revision order (“HRO”) made under the Harbours Act 1964 (the “1964 Act”).

2.11 To ensure that the Project is properly commenced within the timescale provided for in the Planning Performance Agreement which TLSB has entered into with the Local Authorities, dated 1 August 2015 (“PPA”), and the arrangements in place under the Planning Performance Agreement TLSB has entered into with NRW, dated 2 July 2015, TLSB has agreed to undertake the actions identified below at paragraphs 4.1

this MOU.

3. AIMS AND OBJECTIVES

3.1 The aims and objectives of the arrangements set out in this MOU are as follows:

Harbour Revision Order

3.2 TLSB (as joint applicant with Associated British Ports and Neath Port Authority) will propose to submit an application for a HRO under section 14 of the 1964 Act to the Marine Management Organisation (“MMO”).

3.3 The purpose of the HRO would be to:

- (a) exclude the Project area (comprising the “Order limits” under the Order) from the harbour limits of Swansea Bay; and
- (b) extend the planning jurisdiction of the Local Authorities to that area beyond mean low water to the outer limits of the Project area, which is considered to be a more appropriate mechanism than the 2013 Act.

3.4 It is proposed that the jurisdiction of the Local Authorities as local planning authorities will be as shown on the plan annexed to this MOU at **Annexure 2**.

3.5 Once the HRO was made, the extension of the Local Authorities’ respective planning jurisdictions will allow each one to perform the usual functions of a local planning authority with regard to the Project in respect of land seaward of mean low water. This will enable each to discharge relevant requirements where necessary subject to prior consultation with NRW.

3.6 The Parties consider that the changes to harbour limits and extension of the jurisdiction of the Local Authorities can be achieved under section 14 of the 1964 Act.

3.7 The Welsh Ministers consider that an application for a HRO is the most effective mechanism for ensuring that the Project is properly controlled under the terms of the Order.

3.8 Both the Welsh Ministers and the Boundary Commission for Wales consider that an

application under the 2013 Act is unlikely to meet these objectives.

Discharge of Requirements - Informal submission

- 3.9 It is proposed that during the period of the MMO determining the HRO application, TLSB will prepare the necessary information for discharge of the relevant requirements by the intended Local Authorities. This documentation (including but not limited to written schemes, programmes, method statements and management plans (the “Discharge Materials”)) will relate to each pre-commencement requirement under the Order and is proposed to be submitted to the Local Authorities for comments on an informal and “without prejudice” basis.
- 3.10 TLSB and/or the Local Authorities will consult with NRW on the Discharge Materials in respect of requirements 5, 6, 11, 12, 19, 26, 27, 28, 33, 34 and 39. Any response by NRW in respect of such materials pending the making of the HRO will be without prejudice to its position where any change in circumstances occurs between its response to such consultation and the making of the HRO.
- 3.11 The Local Authorities will review all of the Discharge Materials that are submitted to them. The Local Authorities will indicate their approval (or otherwise) of the Discharge Materials but, where they do not have jurisdiction to determine any matter such approach will be without prejudice to their decision upon an application to discharge any such requirement following the making of the HRO.

Discharge of Requirements - Formal submission

- 3.12 Once the HRO has been made, TLSB will formally submit Discharge Materials to the Local Authorities for approval pursuant to the requirements.
- 3.13 This process will be achieved in accordance with the PPA which TLSB has entered into with the Local Authorities, dated 1 August 2015, and the Planning Performance Agreement which TLSB has entered into with NRW, dated 2 July 2015.

4. AREAS OF RESPONSIBILITY

- 4.1 In order to achieve the aims and objectives of this MOU TLSB will:
- (a) prepare an application for the HRO and submit it to the MMO for determination;
 - (b) use reasonable endeavours to comply with the Project Programme contained

at Schedule 1 to the PPA which TLSB has entered into with the Local Authorities, dated 1 August 2015;

- (c) prior to the making of the HRO, prepare and provide Discharge Materials to the relevant Local Authority (whether CCSC or NPTCBC);
- (d) prior to the making of the HRO, liaise or if necessary meet with NRW to discuss Discharge Materials; and
- (e) after the granting of the HRO, formally submit Discharge Materials to the relevant planning authority for determination of the requirements.

5. CONFIDENTIALITY UNDERTAKING

- 5.1 Each of the Parties agree to regard as confidential any information disclosed by either Party which is declared as confidential unless either party is obliged by law to make the information publically available.

Executed by **TIDAL LAGOON**)

(**SWANSEA BAY**) PLC acting by:)

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Director

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Director/Secretary

[Insert correct execution block for Welsh Ministers]

WITHOUT PREJUDICE

ANNEXURE 1

Time limits, etc.

2.

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 subparagraph (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 **Error! Reference source not found.**; 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.
8. ...
9.

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 **Error! Reference source not found.** 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.

13. ...

14. ...

15. ...

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.

17. ...

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.

21. ...

22. ...

23. ...

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 of 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.

25. ...

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.

29.

30. ...

31. ...

32. ...

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 ordnance 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.

35. ...

36. ...

37. ...

38. ...

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 to be implemented unless they have been approved in writing by the relevant planning authorities.

ANNEXURE 2

WITHOUT PREJUDICE