Cyfoeth Naturiol Cymru
Natural Resources Wales

1. Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended), Regulation 22 - EIA Consent Decision

1.1 **Title:** Fishguard Harbour Marina Development

1.2 **Regulatory Approval**: Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended)

1.3 **Operators**: Conygar Stena Line Ltd.

1.4 **Marine Licence:** CML1604

1.5 **Location**: Fishguard Harbour, Goodwick, Fishguard Bay, Pembrokeshire

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3. Introduction

3.1 This document constitutes an EIA consent decision under Regulation 22 of the Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended) (MWR), in respect of a Marine Licence application (ref: CML1604) submitted by Conygar Stena Line Ltd. The application was supported by an Environmental Statement. NRW Permitting Service (NRW PS), acting as Appropriate Authority, has considered the application and information provided in support of the application and is now in a position to make an EIA consent decision to Conygar Stena Line Ltd.

3.2 In accordance with Regulation 22 of the MWR, the NRW PS, as Appropriate Authority have considered the application, environmental statement (ES), representations of consultation bodies and members of the public and have had regard to the relevant legislation. Following the conclusion of a Transboundary Screening Assessment it was determined that consultation with other EEA states was not necessary.

3.3 In making the EIA consent decision, the NRW PS has considered all relevant environmental information, in particular, the marine licence application CML1604 the ES and submissions made by Consultation Bodies, the applicant and members of the public.

4. Project Description and Regulating regimes

4.1 Conygar Stena Line Ltd is applying for a Marine Licence to dredge an area of Fishguard Harbour and to construct a marina development at Fishguard Harbour, Goodwick, Pembrokeshire.

4.2 The Project overlaps between two consenting main regimes:

4.3 A marine licence is required under the Marine and Coastal Access Act 2009, determined by Natural Resources Wales acting on behalf of the Licensing Authority, Welsh Ministers. Aspects applied for via a Marine Licence are identified by * in the list below.

4.4 Planning permission under the Town and Country Planning Act 1990 is also required for additional aspects of the project. Outline planning permission was granted on 6th October 2014 (LPA Ref. 11/0793/PA) and a Section 73 application was approved on 23rd May 2016 (LPA Ref.15/1283/PA).

4.5 The proposed marina development is located immediately to the south of the Stena Quay area of Fishguard Harbour. Fishguard Harbour is protected to the north by the 'North Breakwater' extending from the headland on the north-west of Fishguard Bay, whilst the 'East Breakwater' runs northward from the beach on the southern side of Fishguard Bay. The proposed development area is bounded by the two breakwaters and the Stena Quay. Currently, the development area is intertidal sand flat.

4.6 The details of the project are listed below. Aspects applied for via a Marine Licence are identified by *:

- **Two breakwaters to protect the marina from wave action*** : quarry run stone-fill built on sea bed following dredging. Stone core protected by 2 layers of rock armour in a sloping revetment. Rock armour to be granite, or similar rock between 700mm and 1000mm in each dimension at a 1 in 2 slope. Facing into the marina the slope will be 1 in 1.5. Both breakwaters will be constructed to a maximum height of +8.2metres Chart Datum. Navigation lights will be sited at the seaward end of each breakwater to facilitate night time navigation.
- **A dredged entry channel between the two breakwaters*:** to accommodate fixed keel boats with a draught of up to 2.5m, dredge depth will be up to -3.5m

ChartDatum. Material from the dredge will be used entirely to form the reclaimed platform. Dredged sides will be trimmed to 1 in 8.

- **A dredged marina basin*:** To accommodate boats at all states of the tide, the marina will be dredged to -3.0m Chart Datum. Material from the dredge will be used entirely to form the reclaimed platform. Dredged sides will be trimmed to 1 in 4.
- **A reclaimed area of land from the existing harbour edge created from dredged material***: Approximately 16 hectares across the south of the harbour. The platform will be used for future expansion area, residential area, onshore marine, and parking. The platform will be across varying levels, with the operation area of the port at +8.2m Chart Datum (same as the existing Stena quay).
- **A set aside area for future development***: 8 hectare strip adjacent to existing Stena area.
- **Residential development: 253 apartments and café/public house** – 5 hectaresdevelopment at south east of platform. Small commercial units within ground floor.
- **Marina facility constructed using floating pontoons, 450 berth capacity*:** also additional space for fishing and commercial vessels. Walkway pontoons, plus finger pontoons to accommodate boats up to 25m.
- **Pontoon for fishing vessels***
- **Pontoon for commercial vessels (e.g. diving boats)***
- **Boat yard including service yard and boat hoist*:** Area of approximately 30000m^2 with capacity for 300 boats between 6 and 15m.
- **Boatyard workshops and fishing stores**: Large 3-4 boat workshop.
- **Marina office building incorporating specialist retail outlets (e.g. chandlery, boat sales, launderette)**
- **Car parking for marina and residential areas:** total spaces 526. In peak season this would include much of boatyard, as the boats would be anticipated to be in the water. Therefore an additional 250 parking spaces could be achieved.
- **New access road:** two way road to provide access to marina and residential areas. Minimum width of 7.3m of tarmac surface. No additional lighting due to existing lighting from Stena Quay. Low level lighting provided at junctions. Requires modification of existing roundabout and highway. Also realignment of the coastal path.
- **New surface water and foul drainage infrastructure:** foul draining from residential area discharge to existing rising main adjacent to residential area. Burial of 3 outfall pipes. Two will be extended to emerge in outer harbour. Third is redundant sewerage which will be plugged.
- **External hard and soft landscaping features**

Construction phases of development:

- **Breakwater construction** : placed directly on seabed. Armour stone delivered by sea. Local stone delivered by lorry. Secondary placement by crane or hydraulic back-actor. 6 month period anticipated. The rock quantities are

estimated to consist of 55000 tonnes rock armour, 30000 tonnes filter stone, 150000 quarry run stone.

- **Dredging** : Cutter-section dredger to excavate main channel and marina basin, pumped directly to reclamation area. To commence once construction of breakwater is sufficient to protect area. Estimated construction of 6 months, commencing approximately 2 months after start of breakwater construction. Dredging will involve the use of a cutter section suction dredger, which will pump the dredging arisings directly ashore via pipe into the reclamation areas. Settlement basins and overflow weirs will be constructed to allow excess water to be drained from the hydraulic fill after settlement of solids.
- **Construction of reclamation platform:** 25% solids to settle out, draining water back in the sea. Reclamation to start in southwest corner, moving north then east. Outer face trimmed and lined with geo-textile filter. Delivered in tandem with dredging activity.
- **Piling:** Pontoon piling driven from floating barge using vibrating hammer where possible. Sheet piling for service quay, boat hoist dock and residential areas would be driven from top of reclamation platform. Approximately 3 months duration, starting after substantial completion of reclamation and revetment works.
- **Pontoons and bridges:** Delivered by road and assembled and installed by supplier. A 25m finger jetty will be incorporated into the service quay to accommodate a 50 tonne boat hoist. A new concrete launch ramp will be constructed to replace an existing ramp, which will be infilled during the reclamation work.
- **Roads and paving:** constructed and surfaced once reclamation is at final design level.
- **Buildings:** constructed using traditional construction methods. Maximum predicted construction phase of 18 months, from final settlement of reclamation platform.

Operational phase:

- **Maintenance:** regular maintenance dredging not required. Maintenance of breakwater restricted to routine inspection and occasional replacement of armour stone.
- **Traffic movement:** including residents, berth holders, visitors' vehicles, staff vehicles, and limited HGV movements.
- **Boat servicing:** boat-wash down, repainting, anti-fouling.
- **Waste:** storage and disposal of domestic and trade waste.

4.7 The Environmental Statement (ES) submitted with the marine licence application covers the full Project extent both offshore and onshore.

5. The Environmental Statement (ES) – MWR 12 (1)(d)

5.1 The Environmental Statement outlined the possible impacts of the proposed project organised under the following topic headings:

5.2 Technical chapters:

- *Hydrodynamics and geomorphology*
- *Sediment contamination and materials management*
- *Air quality*
- *Traffic and transportation*
- *Landscape and visual effects*
- *Ecology and nature conservation*
- *Water quality, surface waters and flood risk*
- *Noise and vibration*
- *Archaeology and cultural heritage*
- *Socio-economic effects*
- *Construction impacts*
- *Climate change and environmental sustainability*
- *Summary of effects*

5.3. The ES is considered to satisfy the requirements of Regulation12 (1)(d) and Schedule 3 of the MWR. Specific comments pertinent to each ES chapter can be found in section 14.

6. Any further information provided by the applicant pursuant to a notficiation under regulation 14(1)

6.1 Further information regarding archaeological works to be undertaken to preserve the wooden shipwreck and modifications to a number of documents and plans were submitted on 13th February 2017.

6.2 The information included the worst case scenario for works required to preserve the wooden shipwreck.

6.3 The proposed works to preserve the wooden shipwreck involve the construction of a cofferdam followed by complete removal of the shipwreck.

7. Outcome of the process set out in Schedule 5 in relation to any representations received pursuant to the statement referred to in regulation 16(2)(g)

7.1 Public Notices were placed to notify interested parties of the proposed works and give any interested parties or members of the public an opportunity to make representation on the application as necessary.

7.2 The application documents were made available as follows;

- A translated public notice was placed in the County Echo on 27/5/2016 & 3/6/16
- The application documents were made available to the public at Fishguard Library, for 49 days following the publication of the first public notice.
- Representations were received from 1 member of the public.

7.3 Further information regarding archaeological works to be undertaken to preserve the wooden shipwreck and modifications to a number of documents and plans were submitted on 13th February 2017 (see section 6).

7.4 Public Notices were advertised to notify interested parties of the proposed works and give any interested parties or members of the public an opportunity to make representation on the application as necessary.

7.5 The Further Information was made available to the public at Fishguard Library, for 49 days following the publication of the first public notice. A translated public notice was placed in the County Echo on 24/3/17 and 31/3/17.

7.6 Representations following the advertisement of the Further Information were received from 2 members of the public.

7.7 All representations received from members of the public were dealt with according the Schedule 5 of the MWR. Representations which were not capable of being dealt with under Schedule 5 are not considered further in this consent decision.

7.8 Representations which were not relevant to the EIA consent decision, but may be relevant to another regulator or authority were forwarded to that regulator or authority in accordance with Schedule 5 paragraph 2 of the MWR.

7.9 Representations capable of being dealt with according to Schedule 5 of the MWR are further described in section 14 of this decision.

8. Representations in response to consultation made by Consultation Bodies - MWR Regulations 17(1)(a)(iv) and were relevant consideration of Public Responses.

8.1 The Marine Licence application and associated supporting documents was consulted upon on 16/5/16 for a period of 42 days. It was sent to the following consultation bodies:

8.2 Natural Resources Wales Technical Experts (NRW) , The Centre for Environment, Fisheries and Aquaculture Science (Cefas), Ministry of Defence (MoD), Maritime and Coastguard Agency (MCA), The Crown Estate (TCE), Local Planning Authority (LPA) for Pembrokeshire (PCC), Local Planning Authority for Pembrokeshire Coast National Park, Local Harbour Authorities, Associated British Ports, Stena Line Harbour, Local Biodiversity Officer (LBO) for Pembrokeshire, Royal Yachting

Association (RYA), Royal Society for the Protection of Birds (RSPB), Trinity House (TH), Welsh Government Fisheries Branch, Marine Enforcement Officers (MEO), and Welsh Archaeological Trust.

8.3 The following organisations submitted comments: Natural Resources Wales Technical Experts (NRW), The Centre for Environment, Fisheries and Aquaculture (Cefas), Dyfed Archaeological Trust, The Crown Estate, Ministry of Defence, Trinity House, Maritime and Coastguard Agency Pembrokeshire County Council Planning Department, Pembrokeshire Coast National Park Authority, and the Royal Yachting Association.

8.4 Consultees who did not provide a response were assumed to have no comment

8.5 Further information regarding archaeological works to be undertaken to preserve the wooden shipwreck were submitted on 13th February 2017. The Further Information was consulted upon for a period of 42 days. It was sent to the following consultation bodies:

8.6 Natural Resources Wales Technical Experts (NRW) , The Centre for Environment, Fisheries and Aquaculture Science (Cefas), Ministry of Defence (MoD), Maritime and Coastguard Agency (MCA), The Crown Estate (TCE), Local Planning Authority for Pembrokeshire (PCC), Local Planning Authority for Pembrokeshire Coast National Park, Local Harbour Authorities, Associated British Ports, Stena Line Harbour, Local Biodiversity Officer (LBO) for Pembrokeshire, Royal Yachting Association (RYA), Royal Society for the Protection of Birds (RSPB), Trinity House (TH), Welsh Government Fisheries Branch, Marine Enforcement Officers (MEO), and Welsh Archaeological Trust.

8.7 The following organisations submitted comments: Natural Resources Wales (NRW), Dyfed Archaeological Trust, Maritime and Coastguard Agency, Pembrokeshire Coast National Park Authority, and the Royal Yachting Association.

8.8 Consultees who did not provide a response were assumed to have no comment.

8.9 Details of the issues raised by the Consultation Bodies and how they have been addressed is set out in section 14.

9. Consultation of EEA States – MWR Regulation 20

9.1 A Transboundary Screening Assessment identified the potential impact pathway on marine mammal species due to marine noise during the construction phase. The migratory nature of these species results in the potential for impact on another EEA state (Ireland), when considered in combination with other sources of marine noise. However, due to the proposed mitigation measures this is not anticipated to extend

significant distance. Therefore the assessment concluded there would be no significant effect to member states**.**

9.2 Consequently, no material was provided to other EEA member States in relation to the application.

10. European Protected Sites

10.1 In taking an EIA consent decision, the NRW PS have considered the potential impact of the proposals on European sites.

10.2 The NRW PS have considered the requirement of the Conservation of Habitats and Species Regulations (as amended) Habitats Directive (the Habitats Regulations) which transpose Council Directive 92/43/EC into UK law, Council Directive 2009/147/EC on the conservation of wild birds (the Birds Directive) and the Convention on Wetlands of International Importance, 1972, the Ramsar convention (UK policy is to afford RAMSAR sites in the UK the same level of protection as European sites).

10.3 The proposed Fishguard Harbour Marina Development location is not within a European Protected Site.

10.4 However, the effects of proposal on the following European Sites, their features and conservation objectives have been considered by NRW during the licence determination:

- St David's SAC (4.5km)
- Cleaddau River SAC (3.3km)
- Cardigan Bay SAC
- Pembrokeshire Marine SAC
- West Wales Marine cSAC

10.5 A test of likely significant effect (TLSE) was undertaken and potential significant effects on features of the European Sites listed above could be ruled out. It was concluded that the proposal, when considered alone and in-combination, will not adversely affect the integrity of the European site(s) concerned.

10.6 Further details are described within the Habitats Regulations Assessment, completed by the NRW PS and consulted with Natural Resources Wales Technical Experts.

11. Water Framework Directive Water Bodies

11.1 The Potential effect of the Project was also screened against the Water Framework Directive objectives for the following Water Bodies

11.2 Cardigan Bay South, Gwaun (Transitional), Gwaun headwaters to tidal limit, Goodwick Brook – headwaters, Cleddau to Pembrokeshire Groundwater.

11.3 A Waterframework Directive Compliance Assessment concluded that the proposal, when considered alone and in-combination, will not pose a risk to deterioration of the above listed waterbodies.

11.4 Further details are described within the Waterframework Directive Compliance Assessment, completed by the NRW PS.

12. Issues arising for consideration of the Environmental Statement, Marine Licence Application and representatives received

12.1 In taking a Regulation 22 EIA consent decision, we have considered the issues that have been identified following consideration of the ES, representations from consultation bodies, and members of the public and any resultant supplementary information provided in response by the applicant.

12.2 The material issues that were highlighted by the ES and consultation process and the extent to which they have been addressed are detailed in this section

12.3 The proposed works are also subject to additional planning consent from the local planning authority (see section 4).

12.3.1 The response from Pembrokeshire County Council (PCC) included information relating to the outline planning permission approved for the proposed project on 6/10/14. It was noted that this application was supported by the same documentation and ES as the application for Marine Licence, with some exceptions. PCC noted that the plans submitted in support of Phase 1 Reserved Matters application included the amended drawings 00001 P05, 00008 P03, 000111 P03, 00015 P03.

12.3.2 PCC commented that a Section 73 application was approved on 23/6/16, which represents the outline planning permission at the present date. This consent includes planning conditions applied by PCC.

12.3.3 Representations were made by a member of the public regarding issues relating to the planning permission and planning conditions applied by PCC on 25/5/16, 27/5/16 and 1/6/16. These representations were forwarded to the planning authority, but have not been considered further with regard to the application for a Marine Licence as these comments refer to a permission already issued by another authority.

12.3.4 A representation was made by a member of the public on 25/5/16 noting that there were errors in the application form regarding a discrepancy between the company name and company number. The NRW PS contacted the applicant on 25/5/16 regarding this issue and the applicant confirmed the correct company name (Conygar Stena Line) and company number (06329820) on 10/6/16. The NRW PS consider this issue resolved.

12.4. Hydrodynamics and geomorphology

12.4.1. Public consultation responses were received on 25/5/16, 5/6/16 and 1/6/16 regarding maintenance dredging. The correspondent stated that the marina will require regular maintenance dredging during the operational phase. Concern was raised by this correspondent regarding the dredging activity, cost of dredging and location of deposit of dredged material.

12.4.2. The NRW PS consider the cost of maintenance dredging to be an operational business issue, and so will not consider this aspect of the response further.

12.4.3. With regard to the requirement for maintenance dredging in the future, section 5.6 of the ES states that surveys in the area have been conducted annually over a 20 year period, demonstrating no significant change in channel depth. Section 5.6.3 of the ES states that propeller wash has scoured material in the quay vicinity leading to deposit close to the North Breakwater, but that no remedial action has been taken to dredge the area since the late 1980s.

12.4.4. The NRW PS therefore consider that the need for maintenance dredging in the future is unlikely. However, if maintenance dredging is required in future, a further licence would likely be required dispose of this material at sea. The NRW PS consider it appropriate to provide an advisory note to the applicant that if the area requires subsequent maintenance dredging, a further marine licence may be required for dredging and/or disposal of the arisings at sea.

12.4.5. The applicant acknowledged on 21/9/16 that should future dredging be required, an additional application would be required.

12.4.6. The NRW PS consider that it is appropriate to consider that dredging should not be required in the immediate future and that the requirement to dredge is not an integral feature of the application (and the project under consideration) , and thus consider the issue resolved. Any subsequent requirement for maintenance dredging of the channel will be considered licensable, and will be considered independently.

12.5 Sediment contamination and materials management

12.5.1 Pembrokeshire County Council (PCC) commented on the use of dredged material being used to build the reclamation platform. It was noted that previous reports indicate that the material is suitable for land reclamation as the majority will be under hard-standing. PCC noted that the planning permission contained a condition requiring gas monitoring of the reclaimed land. PCC suggested the developer should

consider the document *Requirements for the Chemical Testing of Imported Materials* whilst depositing the dredged materials.

12.5.1 The NRW PS consider that additional conditions in the marine licence are not required to address gas monitoring as the conditions in the planning permissions will be sufficient and this route is sufficient and appropriate. Therefore no further consideration of this point has been made.

12.5.2 Cefas responded to the consultation with a number of observations and queries. Cefas noted that sediments samples to inform the dredging works aspect of the application were collected at 8 sites at depths of 0m, 1m, 2m, 3m and 4m and were analysed for trace metals, organotins, total hydrocarbon and particle size by the Cefas laboratory. Cefas noted slightly elevated levels of arsenic at one site, but commented that this slight elevation was not cause for concern. Organotins in the samples were below the limit of detection, whilst total hydrocarbons are also low, and not a cause for concern.

12.5.3 Cefas commented that particle size analysis shows the samples are predominantly sand with some gravel and some silt/clay in some samples.

12.5.4 Cefas noted that the dredged material is not intended to be deposited at sea, and will be used for the reclamation platform. Therefore no consideration for disposal site a sea has been made. Cefas have commented that 407,500m^3 of capital dredged material per annum from the proposed dredge area would be suitable for disposal at sea, subject to additional assessment once a disposal site has been identified, if required. However, the NRW PS note that at this stage, the entirely of the dredged material is intended to be utilised in the reclamation platform.

12.5.5 The NRW PS considers that no further action is required on this point. Cefas have stated that the sediment samples taken are suitable for deposit at sea, and PCC are of the opinion that the material is suitable for deposit as land reclamation. As the applicant intends to use the material for land reclamation, no further consideration needs to be made unless dredging arsings are higher than the capacity of the reclamation area. The area to be dredged has been appropriately sampled for consideration of disposal at sea, should a need for this to be included in a subsequent Marine Licence application.

12.5.6 NRW noted that although the dredge arisings are intended to be utilised in their entirely in the land reclamation activity, the predicted dredge volumes are currently estimate volumes. NRW sought clarity on the disparity between the total dredge volume stated in the application (487,000m^3) and the total predicted volume of dredge material allocated to various areas of land reclamation (470,000m^3). Further, NRW suggested that the applicant should consider the potential for disposal of excess dredge arisings at sea, noting that an additional licence application would be required for disposal of material at sea.

12.5.7 The NRW PS asked the applicant to clarify the intended destination of the dredging arisings on 28/6/16.

12.5.8 The applicant clarified on 26/9/16 that the intended methodology was to use a 3D model in conjunction with regular process surveys to allow small adjustments to be made to the width of the approach channel to ensure a balance of cut and fill material. The applicant confirmed that no material will be disposed of at sea, as the entirety of the dredge material will be used for reclamation.

12.5.9 The NRW PS asked NRW to confirm that this response was acceptable on 29/9/16. NRW confirmed that there were no further queries regarding the dredge volume on 3/10/16. NRW PS consider that the applicant has sufficiently addressed this query, and that all dredge arisings will be utilised in the reclamation platform. Therefore NRW PS consider this issue resolved, but consider that a condition in any marine licence issued to exclude disposal of material to sea would be appropriate.

12.5.10 Cefas commented that the materials suggested for use in construction are acceptable for construction in the marine environment, but request consideration of a number of licence conditions.

12.5.11 Cefas suggest the addition of licence conditions to ensure that coatings and treatments of materials utilised are suitable for use in the marine environment and bunding or storage facilities are appropriate to ensure that hazardous chemicals are not released in the marine environment.

12.5.12 The MCA noted that the applicant should consult with the harbour authority and local council to discuss the impact that the proposed work will have on oil spill risk and pollution mitigation measures.

12.5.13 The MCA also recommended the addition of licence conditions to ensure suitable bunding and storage facilities to prevent environmental pollution.

12.5.14 Cefas recommended that licence conditions are added to ensure that concrete wash is not discharged into the environment, and that chemical spills are reported to the appropriate authority.

12.5.15 The NRW PS considers it appropriate to add conditions in the licence to address the issues of potential environmental pollution listed in 12.5.10-12.5.14. The NRW PS consider that the inclusion of these conditions will appropriately mitigate the environmental pollution risk.

12.5.16 Cefas recommended that licence conditions are added to ensure that a minimum amount of materials and structures are left below the level of MHWS such that these materials do not pose a hazard to other users of the sea or sea bed. This is to include piles, equipment, temporary structures, waste and debris associated with the works. Cefas have commented that these materials could cause potential environmental damage, and safety and navigational issues.

12.5.17 The NRW PS considers it appropriate to add conditions in the licence to address this issue.

12.5.18 Cefas commented on the use of imported rock material in construction of the breakwater. Cefas have recommended the use of licence conditions to prevent pollution caused by change in chemical balance or pH of the environment as a result the placement of non-inert material or contaminated material.

12.5.19 NRW PS consider it appropriate to deal with this issue through conditions to the licence.

12.5.20 NRW highlighted the potential risk of introducing non-native species into the environment by the introduction of rock material delivered by sea. NRW recommend that appropriate measures are taken to prevent the spread of non-native species with reference to the *Marine Biosecurity Planning Guidance for Wales and England (Natural England and Natural Resources Wales 2015)*. NRW recommend that the Construction Environmental Management Plan (CEMP) produced prior to commencement of the works should evaluate the risk of introduction and spread of marine non-native species during construction and put in place appropriate mitigation measures.

12.5.21 The NRW PS considers it appropriate to deal with this issue through conditions to the licence requiring the inclusion of the mitigation of the risk of introducing non-native species in a CEMP, which must be submitted and agreed prior to commencement of works.

12.5.22 NRW also highlighted the potential risk of introducing non-native species into the environment during the operation of the marina. During the operational phase, recreational and commercial craft have the potential to introduce non-native marine species. NRW recommend that an Environmental Management Plan (EMP) is produced to address biosecurity planning, monitoring and mitigation. NRW recommend that consideration should be given to the identification of high risk vessels in the EMP, including parameters such as vessel type, port of origin, and likely movements.

12.5.23 The NRW PS considers it appropriate to include conditions in the marine licence to deal with the risk of introduction of non-native species during the operational phase.

12.5.24 NRW have highlighted that the application for construction works states a preferred dredging window of June-December 2016, whilst the dredging licence application states a preferred window of June-December 2017. NRW sought clarification of the preferred window for dredging activity.

12.5.25 NRW PS requested clarification on this matter from the applicant on 28/6/16. The applicant responded to this request on 26/9/16 to confirm that the preferred dredging window is June-December 2017, or June-December 2018. NRW have noted this clarification and have no further comment. Therefore the NRW PS consider this issue resolved without need for further action.

12.5.26 A public consultation response was received on 21/6/15 highlighting concerns that after dredging of the basin, the top-core of the reclamation platform would be deposited into the marina basin by sea prior to use.

12.5.27 The method statement provided in the application and the ES do not support this concern; the material to be transported by sea and deposited from barges is for use in the construction of the breakwater only. The NRW PS asked for clarification that this is the case on 18/7/16.

12.5.28 The applicant responded on 26/9/16 to confirm that although the methodology has not yet been finalised, the anticipated methodology is as follows. The arisings will be pumped ashore via a floating pipeline directly into the reclamation area. Geotubes filled using dredged sand will be used as containment bunding at the edge of the platform, incorporating overflow weirs. The applicant confirmed that the works will be a continuous operation, requiring no double handling. The original ES described any other material for the reclamation platform was to be delivered by land.

12.5.29 The applicant response was forwarded to the representee on 3/10/16. The representee responded on 3/10/16 to clarify that the representation was regarding the stone cap for the reclaimed material. The NRW PS consider, based on the ES and subsequent correspondence, that there will be no large stone material to cap the reclamation platform. The reclamation platform will be capped using stone gravel-sized material, as confirmed by the applicant on 9/11/16. Any licence issued will refer directly to the submitted method statements with regard to the constitution of the reclamation platform.

12.5.30 The NRW PS consider this query to be resolved as any licence issued will only give permission for works listed within the application.

12.6 Air quality

12.6.1 No representations were made on the subject of impacts to air quality. Therefore the NRW PS concluded that the potential impacts to air quality due to the project has been adequately addressed in the ES.

12.7 Traffic and Transportation

12.7.1 Trinity House responded with no objection to the works and stated that the proposed lighting is acceptable, provided the aids to navigation are all lighted marks. In addition, Trinity House require the addition of a port hand light on the outer corner of the breakwater/structure (Area C on Masterplan for Marina Development). Trinity House requires the applicant to liaise with them regarding the lighting characteristics of the aids to navigation.

12.7.2 The NRW PS consider it appropriate to include conditions in the licence to ensure that lighted marks are appropriate.

12.7.3 The Maritime and Coastguard Agency (MCA) commented that there is limited

information provided on the impact of the proposed works in the safety of navigation, both during construction and operational phases, and limited supporting mitigation measures. The MCA recommended that the developers will need to liaise and consult with the local Harbour Authority, in this case Fishguard Port, to develop a robust Safety Management System (SMS) for the project under the *Port Marine Safety Code* and its *Guide to Good Practice*. Specifically the MCA feel that the applicant should consider section 6, including *6.7 Regulating Harbour Works*, which notes that some harbour authorities have the power to licence works below the high water mark, and that harbour authorities may be statutory consultees for planning applications due to being the adjacent landowner. This information has been forwarded to the applicant for information.

12.7.4 The MCA also noted that the applicant should gain approval of the responsible local navigation authority/harbour authority to issue alerts to those navigating in the vicinity.

12.7.5 The MCA has recommended that any licence granted is conditioned to ensure all relevant navigational parties are aware of the works, through notice to mariners, and notification of HM Coastguard and UK Hydrographic Office.

12.7.6 The MCA recommended that any licence granted is conditioned to ensure the works do not encroach on any recognised anchorage within the proposed consent area.

12.7.7 The NRW PS consider it appropriate to add conditions to any licence granted to address the concerns and recommendations highlighted by the MCA in sections 12.7.5-12.7.8. The NRW PS notes that the Outline Planning Permission granted by PCC includes the requirement to produce a Marine Management Plan (MMP) and Marine Code (MC) for submission to the local planning authority prior to the first operation of the marina. However, the NRW PS consider it appropriate to include conditions in any marine licence granted to address this issue directly.

12.7.8 The MCA recommended that consented pipeline protection works must ensure existing and safe navigation is not compromised, recommending a maximum of 5% reduction in surrounding depth, reference to Chart Datum.

12.7.9 The NRW PS requested clarification regarding pipework on 7/7/16. The applicant responded on 26/9/16 to confirm that there are no pipeline or pipeline protection works associated with the project. Therefore the NRW PS consider no further action is required on this point.

12.7.10 The MCA has advised that no radio beacon or radar beacon operating in the Marine frequency bands shall be installed or used on the works without prior written approval by OFCOM.

12.7.11 The NRW PS acknowledges this point as valid, and will forward to the applicant as an advisory note to any marine licence issued. However, the NRW PS consider that this is an additional legal approval required which is not within the remit of the NRW PS to administer.

12.7.12 The MCA has advised that the site is within port limits and the applicant should gain the approval/agreement of the responsible local navigation authority or the Harbour Authority/Commissioners/Council. They may wish to issue local warnings to alert those navigating in the vicinity to the presence of the works, as deemed necessary.

12.7.13 The NRW PS acknowledges the validity of this concern, and have forwarded this information to the applicant on 7/7/16. The applicant responded on 29/9/16 to confirm that the local navigation authority had been contacted and relevant local warnings would be issued, should the licence be determined favourably. The NRW PS will also forward this information as an advisory note to any marine licence issued. The NRW PS consider than in light of section 12.7.3 of this document no further action is required to address this point.

12.7.14 The MCA noted that all structures and vessels utilised during the works should exhibit signals in accordance with the UK Standard Marking Schedule for Offshore Installations.

12.7.15 The NRW PS acknowledge this point as valid, and will forward the comment to the applicant as an advisory note to any marine licence issued, as per section 12.7.13.

12.7.16 The MCA commented that the following information should be given to the applicant as advisory information: if in the opinion of the Secretary of State the assistance of a Government Department, including the broadcast of navigational warnings, is required in connection with the works or to deal with any emergency arising from the failure to mark and light the works as required by the consent or to maintain the works in good order or from the drifting or wreck of the works, the owner of the works shall be liable for any expense incurred in securing such assistance.

12.7.17 This comment was listed as an advisory note, and as such the NRW PS consider it appropriate to include this in advice to the applicant at determination. The NRW PS considers no further action is required on this point.

12.8 Landscape and visual effects

12.8.1 The Public Protection Officer of Pembrokeshire County Council (PCC) noted that the contractor has provided information regarding the lighting regime on the jack-up rigs and floating plant such that the amenity of local residents should not be adversely affected. The Public Protection Officer of Pembrokeshire County Council (PCC) requested that conditions to any licence granted would include the use of directional lighting on floating plant, and the use of low intensity luminaries to minimise light pollution to local residents.

12.8.2 The NRW PS agrees that it would be appropriate to include conditions in any marine licence granted to mitigate light pollution effects. NRW PS considers it appropriate to require the submission of a lighting and marking plan to be agreed with Pembrokeshire County Coucil and Trinity House to fully address the issue.

12.9 Ecology and nature conservation

12.9.1 Pembrokeshire Coast National Park Authority (PCNPA) responded to the consultation highlighting a number of issues. Firstly, the Environmental Statement was produced in 2011. In this time, there has been some legislative changes that are not documented, and PCNPA are concerned that there may be changes to baseline data and in-combination dynamics, such that the ES may require review.

12.9.2 Pembrokeshire Country Council (PCC) also noted that the NRW PS may wish to review any legislative changed since the production of the ES and original planning permission application to ensure that all assessments are up to date and relevant. PCC commented that this point may also be relevant to surveys submitted to ensure baseline findings are still valid.

12.9.3 The NRW PS asked the applicant to comment on this consultation point on 28/6/16. The applicant responded on 26/9/16 to state that they consider the Environmental Statement is up-to-date in all aspects. In addition, a hydrodynamic modelling report and sub-tidal ecology report, dated late 2015, were submitted to support the original application. The NRW PS considers that where specific issues have been highlighted concerning data, that these issues have been addressed elsewhere in this consent decision. Whilst the NRW PS consider that some aspects of the ES have not been updated from 2011, these aspects do not affect the material content and updated information regarding legislative changes has been considered by the NRW PS in this consent decision and is considered during the licence determination.

12.9.4 PCC commented that screening was undertaken under Regulation 61 of the Conservation of Habitats and Species Regulations 2010 at the time of the original planning permission. Subsequently conditions were placed on the planning permission to address the conservation issues raised at the time.

12.9.5 PCC note that since the granting of the original planning permission, NRW has outlined the potential designation of the West Wales Marine pSAC for the harbour porpoise feature. PCC feel that bottlenose dolphin feature considered in the original planning permission is sufficiently similar in receptor features to consider the impacts to remain the same. PCC noted that the NRW PS and NRW acting as SNCB will need to consider the possible SAC alongside existing designations in the area.

12.9.6 PCNPA also highlighted that there has been recent consultation on a potential West Wales Marine Special Area of Conservation (pSAC) based on the harbour porpoise feature. This would include the Fishguard Bay area, requiring a Habitat Regulation Assessment (HRA).

12.9.7 During the course of the EIA consideration, the West Wales Marine Special Area of Conservation has been designated as a candidate Special Area of Conservation (cSAC).

12.9.8 The NRW PS is aware of the cSAC, and has included the cSAC in an HRA, the conclusions of which have been agreed by the Natural Resources Wales Technical

Experts (acting as SNCB). This HRA has also included the Cardigan Bay SAC and Pembrokeshire Marine SAC with respect to mobile marine mammal (including bottlenosed dolphins and seals) and fish species. Any impacts on the cSAC, and any other European Protected Site, identified in the HRA have been duly considered by the NRW PS in reaching this Consent Decision, and are considered relevant to the licensing decision. The HRA conducted by the NRW PS has highlighted that there is a potential impact pathway on the harbour porpoise, but that significant effects can be ruled out, both in consideration of the project alone, and in combination with other projects or plans (see section 10). Therefore NRW PS concludes that this issue has been resolved.

12.9.9 A public consultation response was received on 5/6/16 highlighting concerns regarding the impact on dolphins, seals and feeding birds in Fishguard Bay.

12.9.10 This concern was forwarded to the applicant on 7/7/16. The applicant responded on 21/9/16 to state that appropriate mitigation for Cardigan Bay SAC and Pembrokeshire Marine SAC have been considered within the submitted assessments. The applicant has proposed a requirement for a visual observation to be undertaken prior to the commencement of dredging and piling operations and the general JNCC protocol adopted with the subsequent soft start to piling. The applicant considers that there will be no direct impacts on the SACs due to their distance from the works

12.9.11 The applicant further noted that the ES concluded that by employing a range of proposed mitigation measures, during construction and operation, the impacts upon these species would be negligible.

12.9.12 The NRW PS have considered the advice of the NRW given during this consultation, whose advice has covered the issued raised during public consultation. The NRW PS has conducted an HRA as described in section 10, which indicates no significant impact on any protected site. NRW has indicated that the use of percussive piling has the potential to impact on marine mammals in the vicinity, and that in the event of the need for percussive piling, more information on the hammer energy/predicted noise should be provided in a Construction Environmental Management Plan (CEMP) to fully consider the appropriate mitigation necessary for marine mammals. The NRW PS considers it appropriate to include conditions in any licence issued to address this issue, requiring a CEMP including measures to reduce marine mammal impacts to be submitted and authorised prior to commencement of any works, and to ensure all noisy activities are conducted according to the JNCC protocol for piling activities.

12.9.13 A public consultation response was received on 25/5/16 stating that there was a mussel bed located at Strumble Head which could be impacted by the works.

12.9.14 In their consultation response, Cefas noted that there are no molluscan shellfisheries within 5km of the proposed works. Cefas consider it unlikely that the construction works will have an adverse impact on commercial molluscan fisheries.

12.9.15 In light of the advice from Cefas, the NRW PS considers that this issue has been resolved.

12.9.16 Cefas noted that the information regarding ecology and designations within the development area was acquired via desk-based survey, in addition to a specifically conducted Phase 1 habitat survey. Cefas commented on the paucity of the data regarding the subtidal area, and that a diver survey and drop down video is yet to be conducted. Cefas note that impacts to the subtidal area have not been included with the impact assessment made in 2011.

12.9.17 A drop down survey was conducted in 2015, and is included in the application documents. However, the NRW PS notes that this survey is not clearly referenced within the ES (dated 2011), but was included in the application that was sent to full EIA consultation. The drop down survey data has been review by NRW and is considered to be sufficient. NRW PS asked the applicant to comment further on 7/7/16. The applicant responded on 26/9/16 to state that chapter 11 of the ES provides evidence of the consideration of benthic species, in addition to the information provided in the drop-down video survey.

12.9.18 The NRW PS consider this issue resolved.

12.9.19 Cefas commented that there is no baseline description of the fish species found in the proposed development site, and the associated fisheries that they may support. However, Cefas note that no adverse effects on these fish resources are anticipated as a result of the works and the fish species most likely to be impacted (migratory species) are correctly identified, as is the source of impact (piling associated noise).

12.9.20 NRW PS consider that the additional information in the drop-down survey adequately addresses the concern and consider the issue resolved.

12.9.21 Cefas noted that the desk-based review concluded that there were no statutory designated sites (SAC, SPA, SSSI) with a functional ecological relationship with the development site. However, Cefas believe that this may have changed in the timeframe since the assessment in 2011.

12.9.22 The NRW PS is aware of changes to statutory designated sites between 2001 and 2016. These sites have been included in the HRA (as outlined in section 10, and discussed further in 12.9.6) undertaken by the NRW PS. Therefore the NRW PS consider this point to have been addressed.

12.9.23 Cefas noted that a sufficient methodology and spatial coverage has been used when undertaking the intertidal Phase 1 survey, which has resulted in a useful biotope map on which to base the impact assessment of the intertidal ecology. However, Cefas noted that the invertebrate assessment has been based on 5 replicates at only 2 stations, which provides much more limited data than a wider spread of the total of 10 cores.

12.9.24 Cefas noted that the intertidal survey concluded that there were no species or habitats of designatory importance found in the area. However, Cefas note that two intertidal habitats could be regarded as of ecological interest features of local importance, despite not qualifying as priority habitats. The ES has concluded that the impacts to both of these habitats are of minor significance. Cefas agrees that this is an appropriate conclusion as the area is not within a designated site at this date.

12.9.25 The NRW PS has confirmed that these habitats do not fall within any designated site, therefore the NRW PS considers that the assessment of this habitat in the ES is appropriate, and consider this issue resolved.

12.10 Water quality, surface waters and flood risk

12.10.1 NRW note that the WFD assessment frequently refers to the "RBMP", which is not specifically defined in the document. NRW have presumed that this refers to the River Basin Management Plan, but have asked for clarification on this matter.

12.10.2 NRW expressed concern that the analysis of certain chemical elements has not been undertaken as it is presumed that they are not significant. NRW asked for a list of elements for which no analysis has been undertaken and the rationale for screening out these elements from further assessment.

12.10.3 The NRW PS sent this concern to the applicant for comment on 28/6/16. The applicant responded on 26/9/16 to update the WFD compliance assessment to clearly identify the River Basin Management Plan. The applicant clarified that samples were collected at 8 sites at depths of 0m, 1m, 2m, 3m, and 4m. A full list of elements and rationale for screening out has been provided in a clarifying WFD compliance assessment.

12.10.4 NRW confirmed that this information is sufficient to resolve the query on 3/10/16. The NRW PS completed a WFD Compliance Asessment, as detailed in Section 11. Therefore NRW PS consider this matter resolved and requires no further action.

12.10.5 NRW have highlighted that the process to use the dredged material as infill for the reclamation platform will generate a large volume of water that needs to be separated from the solids used as infill. NRW queried whether this activity will require an additional permit for the discharge of seawater. The NRW PS requested information from the Water Quality permitting team within NRW, which confirmed that a permit for this activity is not required as a result of capital dredging. The NRW PS note that this activity will now fall within the marine licence, requiring consideration of the consequence of this activity (see 9.11.6).

12.10.6 NRW recommended that the Construction Environmental Management Plan (CEMP) should include a detailed overview of the dredge and fill process with specific reference to how the sediment will be dewatered without leading to a significant increase in suspended sediment.

12.10.7 The NRW PS considers it appropriate to include conditions in any licence granted to address this issue, requiring a CEMP including this information to be submitted and authorised prior to commencement of any works.

12.10.8 NRW commented that the applicant must confirm with Dŵr Cymru Welsh Water that the existing foul sewer and treatment plant can accept the additional foul flow without pollution being caused and without the permit conditions for the sewage treatment plant being exceeded.

12.10.9 The NRW PS sent this concern to the applicant for comment on 28/6/16. The applicant responded on 26/9/16 to confirm that discussions with Dŵr Cymru Welsh Water had taken place, and provided an extract from Dŵr Cymru Welsh Water's Hydraulic Modelling Assessment to confirm that the public sewerage system has sufficient capacity to accommodate the proposed development. The applicant informed the NRW PS that additional survey work has been commissioned to define the cost of delivering a solution to removing the existing surface water runoff. The applicant is liaising with Dŵr Cymru Welsh Water to deliver this solution.

12.10.10 NRW confirmed on 3/10/16 that this resolves the comment. NRW PS consider this issue resolved.

12.10.11 A public consultation response was received on 5/6/16 stating concerns that the pollution and discard of human waste into Fishguard Bay during the operational phase would be an 'ecological disaster'.

12.10.12 The NRW PS forwarded this concern to the applicant for comment on 18/7/16. The applicant responded to this comment on 21/9/16 to reiterate the information listed in 12.10.9, that the local sewerage system was able to cope with the specific requirements of the development.

12.10.13 In light of sections 12.10.9 and 12.10.10 The NRW PS consider this issue resolved.

12.11. Noise and vibration

12.11.1 The Public Protection Officer of Pembrokeshire County Council (PCC) commented that the noise prediction and analysis included in the ES indicated a significant noise impact would only occur if works continued during night time periods at locations close to the landside marine boundary. The consultant has listed best practice techniques which the contractor has agreed to adopt and has confirmed with PCC that no works at boreholes 2, 3 and 12 would be carried out between 2300 and 0700. The Public Protection Officer commented that these measures should minimise the noise levels and ensure there are no significant impacts on sensitive receptors. However, the Public Protection Officer requested that these controls are included in the conditions of the marine licence.

12.11.2 The NRW PS consider that it is appropriate to deal with the potential noise disturbance highlighted by PCC through conditions to the marine licence to restrict the hours during which licensed works can take place.

12.11.3 The Public Protection Officer of Pembrokeshire County Council (PCC) noted that the vibration levels predicted in the ES would be highly unlikely to be perceptible (on land) due to the separation distances involved.

12.11.4 The NRW PS therefore concludes that no further consideration will be given to this point.

12.11.5 A public response was received to express concern regarding the impact of noise and vibration on local residents, specifically those living on New Hill Road. This concern was forwarded to the applicant on 18/7/16.

12.11.6 On 21/9/16, the applicant submitted a statement to outline that a noise and vibration impact assessment was contained within the ES, which considered the potential impact of the development upon the nearest noise sensitive receptors, which were identified and agreed with the local planning authority, prior to undertaking the assessment. Quay Road, just below New Hill (but closer to the proposed development) was one of those receptors identified. The assessment concluded that there would be minor adverse effect at all receptors and occasionally a minor to moderate adverse effect at the closest receptors [including Quay Road].

12.11.7 The applicant stated that as New Hill is more distant than Quay Road from the proposed development, predicted noise impacts would be reduced. The applicant also commented that the assessment recommended best practical means should be employed to control the noise generation and that the measures recommended as part of the mitigation package would be contained in a Construction Environmental Management Plan (CEMP).

12.11.8 The applicant's response was forwarded to the public consultee for consideration on 3/10/16. A response was given on 3/10/16 to the effect that they did not feel that the issue was resolved as the applicant intended to conduct 24 hour operations, which would constitute significant disturbance to nearby occupants.

12.11.9 The NRW PS consider that although this issue could not be directly resolved, in light of the comments previously made by PCC Public Protection Officer (see 12.11.1), that it is appropriate to deal with the potential noise disturbance highlighted by the representee through conditions to the marine licence to restrict hours of operations for those activities (dredging, reclaimation and piling) closer to residential housing (see 12.11.1 – 12.11.4)

12.11.10 Cefas have noted that the ES has attempted to the quantify underwater noise levels and source, and possible attenuation. Cefas agree with the conclusion of the ES that piling associated noise is unlikely to impact migrating salmon. Cefas commented that noise disturbance to these species will be further mitigated through the use of periods of quiet during the piling programme. Cefas commented that further detail should be provided with regard to the expected overall duration of the

piling works, in addition to expected weekly timings and duration, to include the number of hours in a 24-hour period when piling will occur, and the number of days in a week over which piling activities will occur.

12.11.11 NRW, as the Statutory Nature Conservation Body (SNCB), commented that no specific timings of piling activity have been provided to date. NRW advised that this should be included in a Construction Environmental Management Plan (CEMP), to be provided to NRW for approval upon appointment of a contract, and prior to commencement of works. NRW recommended that the cumulative impacts from multiple piling activities should be considered as this could increase the disturbance to sensitive receptors.

12.11.12 The NRW PS considers it appropriate to deal with this point through the inclusion of a condition on any licence granted to include the requirement to produce a CEMP for approval prior to commencement of the works. Further, the NRW PS consider it appropriate to include licence conditions consistent with JNCC guidance on noisy activities in the marine environment.

12.11.13 Cefas commented that the ES should describe key periods of sensitivity for migratory species for completeness of the ES. This should specifically address the peak periods when fish will be transiting in or out of the harbour to fully assess the noise impact.

12.11.14 The NRW PS requested information from the applicant to ensure the applicant has fully considered this issue in the EIA and ES. The applicant responded on 26/9/16 to state that a precautionary approach was taken to assess potential impacts on migratory fish. The applicant stated, "The assessment predicted that piling operations would be very unlikely to affect Atlantic salmon entering the Afon Gwaun, because of distance from the noise source. Nevertheless, in order to protect marine mammals, as well as fish, mitigation measures including the use of a bubble curtain were proposed. There was also a preference for the use of vibro-piling, with impact piling only used where necessary in engineering terms. For these reasons it was not necessary to consider the seasonality of fish migration".

12.11.15 NRW confirmed that there are no specific issues regarding migratory fish to date, but that details of mitigation measures should be addressed in the CEMP. The NRW PS considers it appropriate to use conditions in the marine licence to ensure the CEMP includes mitigation measures to reduce impact on migratory fish.

12.11.16 Cefas note that bubble nets are proposed as a method to mitigate underwater noise, but that the ES acknowledges that this mitigation method is most effective for marine mammals rather than fish species. Cefas propose that adherence to 'soft-start' piling procedures should be used as this is considered to be the standard mitigation to reduce underwater noise impacts on marine species. Cefas suggest this technique should be assimilated into the construction plan, particularly in the instance of percussive piling being used.

12.11.17 NRW, as the Statutory Nature Conservation Body (SNCB), noted that bubble curtains were listed as a mitigation measure against the impact of marine noise on

marine mammals, but is not listed in the marine licence application. NRW sought clarification on whether this measure is intended to be used and recommended that more detailed information on the type and location of bubble curtain to be used should be included in the CEMP.

12.11.18 The NRW PS sought clarification from the applicant on the use of bubble nets on 28/6/16. The applicant responded to this query on 21/9/16 with the following comment: 'Bubble curtains are usually deployed to contain contaminated fine sediment. The Cefas testing confirms that the material to be dredged is uncontaminated sand, which will fall to the sea bed close to the dredging area. It is not anticipated that bubble curtains will be used, however, this will be discussed in more detail once a Contractor has been appointed, with all mitigation measures included in the CEMP.'

12.11.19 NRW highlighted on 3/10/16 that the ES stated that bubble curtains will be used as a mitigation for reducing underwater noise impacts to marine mammals and fish. NRW consider that the use of bubble curtains for this purpose should be included in the CEMP.

12.11.20 The NRW PS consider it appropriate to include the use of bubble nets in the CEMP considered in section 9.12.7 of this document. In addition, the NRW PS consider it appropriate to include a condition in any marine licence granted regarding the use of soft-start piling procedures, which is consistent with JNCC guidance on noisy activities in the marine environment.

12.11.21 Cefas also responded that a complete method statement should be submitted prior to the commencement of the works to ensure appropriate mitigation methods are in place.

12.11.22 The NRW PS acknowledges this point and considers that it will be addressed through the CEMP considered in section 12 of this document.

12.12 Archaeology and cultural heritage

12.12.1 Dyfed Archaeological Trust highlighted the findings of the desk-based study conducted by Archaeology Wales in 2011/2012 on behalf of Conygar Stena Line Ltd. (included as appendix 13-1 of the ES). This study identified two sites of archaeological significance, a fish trap and wooden boat remains, in addition to a further two sites of possible archaeological interest, being a linear spread of stone and a crescent-shaped spread of stone. Additionally, the report considered further wrecks (up to 10) may lie within the proposed construction area. To mitigate against damage to these sites, Dyfed Archaeological Trust propose a series of mitigation strategies, which were also highlighted in the desk-based study. Dyfed Archaeological Trust suggested that the shipwreck should be dated (dendrochronological or ^{14}C dating), with subsequent excavation using a coffer dam plus reporting if the wreck is found to be from the 19th century or earlier. Dyfed Archaeological Trust propose that the fish trap should be recorded by laser scanning and photography and preserved *in situ*, and that a written scheme of investigation (WSI) is prepared and agreed prior to the commencement of works to demonstrate

that the fish trap can be preserved *in situ*, and that subsequent relevant works are monitored and recorded by an archaeologist at all times. Dyfed Archaeological Trust propose that the two stone features should be preserved through record and a side scan survey is conducted to identify and document potential archaeological sites.

12.12.2 A public consultation response was also received on 5/6/16 stating concerns that the archaeological feature of the fish trap would be destroyed by the works.

12.12.3 The NRW PS forwarded this information to the applicant on 28/6/16 for comment. The applicant responded on 21/9/16 to state that the applicant is undergoing discussions with Dyfed Archaeological Trust to resolve a mitigation strategy. Dyfed Archaeological Trust confirmed on 29/9/16 that discussions were taking place. Dyfed Archaeological Trust also confirmed that the exact mitigation could be resolved using conditions to the marine licence.

12.12.4 The applicant supplied further information regarding archaeological works required to survey, and possibly excavate the wooden shipwreck, on 13/2/17. The works required to perform the excavation are licensable under the Marine and Coastal Access Act 2009. In addition, the information provided constitutes Further Information under Regulation 14 of the Marine Works (EIA) Regulations 2007 (see section 6).

12.12.5 This information was consulted upon with all of the consultation bodies listed in section 8 and advertised to the public as specified in section 7.

12.12.6 Dyfed Archaeological Trust confirmed that the Archaeological Specification for works included in the submission was sufficient to address the archaeological concerns regarding the wooden shipwreck.

12.12.7 The NRW PS considers that the archaeological concerns regarding the shipwreck can be resolved using conditions in the marine licence to specify that this Archaeological Specification is followed.

12.12.8 NRW raised concerns regarding the potential excavation works required under the Archaeological Specification on 13/4/17. NRW requested that if any excavation works are undertaken prior to the commencement of dredging activity, any sand removed in the excavation should be returned to the beach, and the beach profile returned to the original profile.

12.12.9 The NRW PS recognise the concerns raised by NRW, in that should a phased approach be utilised, NRW indicate that some biological recolonization of the sand may occur if the material is returned to the beach. However, the NRW PS acknowledge that the area in question will be the subject of a capital dredge as described in the application documents and ES.

12.12.10 The applicant has indicated that the works to remove the shipwreck will be in a separate phase from the dredging works. Therefore the NRW PS therefore consider it appropriate to resolve the concern through the use of conditions regarding returning sand material to the original site.

12.12.11 The NRW PS considers that the remaining archaeological issues (fish trap and stone features) can be resolved using conditions in the marine licence to require an agreed Written Scheme of Investigatino (WSI) prior to the commencement of works. However, the NRW PS has given due consideration regarding the practicality of any such mitigation plan prior to determination of the marine licence.

12.12.12 Dyfed Archaeological Trust suggested further mitigation procedures during dredging and construction phase. Dyfed Archaeological Trust proposed that an archaeologist be on site during dredging periods to monitor archaeological disturbance, with the cessation of dredging activity if remains are discovered until the remains are dealt with appropriately in consultation with an approved body.

12.12.13 The NRW PS considers that this issue can be resolved using conditions in the marine licence to require an agreed WSI prior to the commencement of works

12.13 Socio-economic effects

12.13.1 No representations were made on the subject of socio-economic effects. Therefore the NRW PS concluded that the potential impacts to socio-economic effects due to the project has been adequately addressed in the ES.

12.14 Construction impacts

12.14.1 The NRW PS considers that construction effects have been addressed adequately throughout the specific points addressed in other sections of this document.

12.15 Climate change and environmental sustainability

12.15.1 No representations were made on the subject of impacts to climate change effects. Therefore the NRW PS concluded that the potential impacts to climate change and environmental sustainability due to the project has been adequately addressed in the ES.

13. Regulatory Evaluation and EIA consent decision

In considering the application to dredge an area of Fishguard Harbour and to construct a marina development at Fishguard Harbour, Goodwick, Pembrokeshire, as fully detailed in 4.2.1, the following has been considered:

- the application;
- the environmental statement;
- any further information provided by the applicant pursuant to a notification under regulation 14(1);

- the outcome of the process set out in Schedule 5 in relation to any representations received pursuant to the statement referred to in regulation 16(2)(g);
- any representations in response to consultation made by the consultation bodies pursuant to the letter referred to in regulation 17(1)(a)(iv); and
- the outcome of any consultations of the authorities of other EEA States carried out in accordance with regulation 20;
- have regard to the relevant legislation; and
- take into account the direct and indirect effects of the project on—
    - human beings, fauna and flora;
    - soil, water, air, climate and the landscape;
    - material assets and the cultural heritage; and
    - the interaction between any two or more of the things mentioned in the preceding sub-paragraphs.

Accordingly, we conclude that the environmental impacts of the project have been adequately identified, described and assessed and that appropriate mitigation can be secured.

As such we grant EIA consent for the project to Conygar Stena Line Ltd.

Sign off

Produced by :

Dr. Jasmine Sharp – Senior Permitting Officer

Date: 9 June 2017

Approved by:

Adam Cooper, **Senior Permitting Officer, Acting under Non-Financial Scheme of Delegation**

Signed: 

Date: 12 June 2017