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| Project title | Penrhyn Bay Coastal Defence and Public Realm Improvements | Job number | 282129 |
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| Prepared by | Jorge Vaz | Date | 5 November 2021 |
| Subject | Appendix Q - Consideration for Welsh National Marine Plan | | |

1 Introduction

The present note demonstrates how the proposed works at Penrhyn Bay considers the Welsh National Marine Plan produced by Welsh Government in 2019, further to what has already been included in the Marine Licence application form.

2 Consideration for the Welsh National Marine Plan

The following reports and documents have been produced to support the Marine Licence application:

- Appendix A- Site Location Plans
- Appendix B- Design Plans
- Appendix C- Indicative Construction Method Statement
- Appendix D- Non-Statutory Environmental Report
- Appendix E- EIA Screening Opinion and Request
- Appendix F- Water Framework Directive (WFD) Assessment
- Appendix G- Outline CEMP
- Appendix H- Site Waste Management Plan (SWMP)
- Appendix I- Ecological Impact Assessment (EcIA)
- Appendix J- Heritage Desk Based Assessment
- Appendix K- Habitat Regulations Assessment (HRA)
- Appendix L- Intertidal Biotope Survey Report
- Appendix M- Coastal Processes Impact Assessment
- Appendix N- Environmental Constraints Plans

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- Appendix O- Working Area Coordinates
- Appendix P- NRW Correspondence

Not included as part of the Marine Licence application package was the Outline Business Case, which can be provided on request. It is also important to note that the project includes enhancements to public realm on the promenade which contribute to the Well-being of Future Generations Act 2015, Environment Wales Act 2016 and Wales Active Travel Act 2013, however details were not included in the Marine Licence application since works are above mean high water springs level (circa +3.42mAOD).

The following table identifies the policies from the Welsh National Marine Plan relevant to the current application and how they have been considered in a proportionate way to the project's scale, potential impacts and risk.

| Welsh National Marine Plan Policy | Consideration |
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| <p>ECON_01: Sustainable economic growth Proposals for economically sustainable activities are encouraged, particularly where they contribute to:</p> <ul style="list-style-type: none"> • the sustainable management of natural resources thereby supporting ecosystem resilience; • a more resilient economy; • employment opportunities particularly for coastal communities; • protecting and creating employment at all skill levels; • maintaining communities with a high-density of Welsh speakers; and/or • tackling poverty by supporting deprived coastal communities. | <p>The nature of the scheme is to protect local communities from storm events, coastal erosion and damage from sea flooding. The scheme contributes to creating resilient communities and therefore economy in protecting infrastructure and services and local businesses.</p> <p>Coastal works of the magnitude of Penrhyn Bay Coastal Scheme tend to be awarded to small/medium size Contractors, many of them from Wales, which often rely on a local supply chain.</p> <p>Multiple coastal projects over time can improve the skillset of people, boost direct and indirect employment opportunities and create a more resilient economy.</p> |
| <p>SOC_01: Access to the marine environment Proposals that maintain or enhance access to the marine environment are encouraged.</p> <hr/> <p>SOC_02: Well-being of coastal communities Proposals that contribute to the well-being of coastal communities are encouraged.</p> | <p>The proposed works contribute towards sustainable development and the achievement of the Well-being of Future Generations Act goals by helping to support the health and well-being of coastal communities and safeguarding access to the recreational and well-being benefits associated with the marine environment:</p> <ul style="list-style-type: none"> - Rock groyne and beach nourishment to reduce coastal erosion and flood risk and create new amenity whilst at the same time reducing the large costs to the Council from beach maintenance required for coastal erosion risk management - New DDA (Disability Discrimination Act) compliant beach access (above MHWS) to an |

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| | <p>elevated platform at the eastern end of the site will provide 180deg views of the bay</p> <ul style="list-style-type: none"> - Public beach shower to cater to open water swimmers and beach goers (above MHWS) - Public realm improvements to the promenade (above MHWS) |
| <p>SOC_03: Marine pollution incidents Proposals should demonstrate how they minimise their risk of causing or contributing to marine pollution incidents.</p> | <p>Addressed in Appendix G - Outline CEMP</p> |
| <p>SOC_04: Welsh language and culture Proposals that contribute to the promotion and facilitation of the use of the Welsh language and culture are encouraged.</p> | <p>The main public facing documents such as plans and visualisations of the proposed works created for the Pre-Application Consultation are bi-lingual. Proposed interpretation panels on the promenade with heritage and ecology topics will also be bi-lingual (above MHWS)</p> |
| <p>SOC_05: Historic assets Proposals should demonstrate how potential impacts on historic assets and their settings have been taken into consideration and should, in order of preference:</p> <ul style="list-style-type: none"> a. avoid adverse impacts on historic assets and their settings; and/or b. minimise impacts where they cannot be avoided; and/or c. mitigate impacts where they cannot be minimised. <p>If significant adverse impacts cannot be avoided, minimised or mitigated, proposals must present a clear and convincing case for proceeding.</p> <p>Opportunities to enhance historic assets are encouraged.</p> | <p>Potential impacts on historic assets are addressed in Appendix J- Heritage Desk Based Assessment.</p> <p>The proposed development will have a negligible impact on any designated heritage assets and there is overall low potential for significant archaeological evidence to be present on the site.</p> <p>On the promenade (above MHWS), interpretation panels are proposed which will include heritage topics related to the history of Penrhyn Bay.</p> |
| <p>SOC_07: Seascapes Proposals should demonstrate how potential impacts on seascapes have been taken into consideration and should, in order of preference:</p> <ul style="list-style-type: none"> a. avoid adverse impacts on seascapes; and/or b. minimise impacts where they cannot be avoided; and/or c. mitigate impacts where they cannot be minimised. <p>If significant adverse impacts cannot be avoided, minimised or mitigated, proposals must present a clear and convincing case for proceeding.</p> <p>Opportunities to enhance seascapes are encouraged.</p> | <p>The geometry of the T-shape rock groyne and its crest level have been determined from a balance between the visual impact and the improved protection that it provides against wave action and sediment transport i.e. coastal flooding and coastal erosion, which is the primary objective from the Outline Business Case. The crest level is not higher than the crest of the existing eastern groyne located close by and a rock groyne is in-keeping with other structures along this part of the Welsh coast.</p> <p>Further details are provided in Appendix D- Non-Statutory Environmental Report, Appendix M- Coastal Processes Impact Assessment and Appendix I- Ecological Impact Assessment.</p> <p>On the promenade (above MHWS), the car parking will be re-located from the high point of Glan-Y-</p> |

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| | <p>Mor Road, improving the promenade space and seascape views from properties and Beach Café.</p> <p>New DDA compliant beach access (above MHWS) to an elevated platform at the eastern end of the site will provide 180deg views of the bay.</p> |
| <p>SOC_08: Resilience to coastal change and flooding Proposals should demonstrate how they are resilient to coastal change and flooding over their lifetime.</p> <p>SOC_09: Effects on coastal change and flooding Proposals should demonstrate how they:</p> <ul style="list-style-type: none"> • avoid significant adverse impacts upon coastal processes; and • minimise the risk of coastal change and flooding; <p>Proposals that align with the relevant Shoreline Management Plan(s) and its policies are encouraged.</p> <hr/> <p>SOC_11: Resilience to climate change Proposals should demonstrate that they have considered the impacts of climate change and have incorporated appropriate adaptation measures, taking into account Climate Change Risk Assessments for Wales.</p> <p>Proposals that contribute to climate change adaptation and/or mitigation are encouraged.</p> <hr/> | <p>The proposed works are designed considering a 100-year design life, including sea level rise associated with climate change and storm events with return period up to 1000 years. Sea level rise allowance is in accordance with Welsh Government Technical Advice Note 15 Development, flooding and coastal erosion (2021).</p> <p>The proposed works are aligned with the Shoreline Management Plan to ‘Hold the Line’, this is one of the objectives from the OBC, alongside maintaining and widening the beach.</p> <p>Impacts on coastal processes are detailed in Appendix M - Coastal Processes Impact Assessment, which includes all the numerical modelling reports used to support the design. It is noted that the new rock groyne and beach nourishment will reduce the current adverse coastal processes which cause significant sediment transport and lead to coastal erosion.</p> <p>A Flood Consequences Assessment and a Wave Overtopping Assessment have also been produced but since their main objective is to assess the impact on the promenade above MHWS are not included in the Marine Licence package. However, they can be provided on request.</p> |
| <p>SOC_10: Minimising climate change Proposals should demonstrate how they, in order of preference:</p> <ol style="list-style-type: none"> avoid the emission of greenhouse gases; and/or minimise them where they cannot be avoided; and/or mitigate them where they cannot be minimised. <p>Where significant emission of greenhouse gases cannot be avoided, minimised or mitigated, proposals for regulated activities must present a clear and convincing case for proceeding.</p> | <p>A Contractor has not been appointed yet (expected by March 2022), therefore Appendix C- Indicative Construction Method Statement considers four alternatives for delivery of materials to site, which is currently not defined and is a significant contributor to CO2 emissions, after the sourcing of materials. The decision on delivery of materials to site will depend on Contractor’s preference, resources and programme.</p> <p>A Carbon Footprint assessment has been carried out based on the ICE database to compare the footprint of the proposed works against the footprint from the current beach maintenance regime. Under certain assumptions, required due to the lack of data from previous re-nourishment campaigns by Conwy</p> |

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| | <p>Council, the calculation shows that by 2120 the carbon footprint from the proposed capital works and maintenance over time will be of the same order of magnitude as the carbon footprint from the existing beach maintenance regime (or more widely labelled coastal erosion management). On the landside of the flood defence (above MHWS), the carbon footprint from the public realm improvements including an assumed percentage for maintenance over the next 100 years is partially offset by the carbon sink from the new landscape planting. The Carbon Footprint Assessment can be provided on request.</p> |
| <p>ENV_01: Resilient marine ecosystems Proposals should demonstrate how potential impacts on marine ecosystems have been taken into consideration and should, in order of preference:</p> <ul style="list-style-type: none"> a. avoid adverse impacts; and/or b. minimise impacts where they cannot be avoided; and/or c. mitigate impacts where they cannot be minimised. <p>If significant adverse impacts cannot be avoided, minimised or mitigated, proposals must present a clear and convincing case for proceeding.</p> <p>Proposals that contribute to the protection, restoration and/or enhancement of marine ecosystems are encouraged.</p> <hr/> <p>ENV_02: Marine Protected Areas Proposals should demonstrate how they:</p> <ul style="list-style-type: none"> • avoid adverse impacts on individual Marine Protected Areas (MPAs) and the coherence of the network as a whole; • have regard to the measures to manage MPAs; and • avoid adverse impacts on designated sites that are not part of the MPA network. | <p>A number of assessments have been undertaken to consider the impacts of the proposed scheme on protected habitats and species within the surrounding area. Key species that have been considered within the assessments and design of mitigation measures include the Ringed Plover and <i>Sabellaria alveolata</i> present within the site area.</p> <p>These and other potential impacts on marine ecosystems and protected areas are addressed in Appendix D- Non-Statutory Environmental Report Appendix F- Water Framework Directive Assessment Appendix G- Outline CEMP Appendix I- Ecological Impact Assessment, Appendix K- Habitat Regulations Assessment, Appendix L- Intertidal Biotope Survey Report Appendix M- Coastal Processes Impact Assessment Appendix N- Environmental Constraints Plans</p> <p>The nature of the rock groyne structure as discussed within Appendix I will create a similar habitat substrate for colonisation of <i>Sabellaria alveolata</i>. In addition, tidal pools are proposed at the toe of the groyne at varying levels. These tidal pools will retain water at low tide and will improve the local biodiversity through an increase in habitat heterogeneity. The results can inform future and more widespread use of this environmental enhancement measure.</p> |

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| <p>ENV_04: Marine litter</p> <p>Proposals should demonstrate how they:</p> <ul style="list-style-type: none"> • avoid the deliberate introduction of litter into the marine plan area; and • minimise the risk of accidental release of litter. | <p>Marine litter is addressed in Appendix G- Outline CEMP and Appendix H- Site Waste Management Plan</p> |
| <p>ENV_06: Air and water quality</p> <p>Proposals should demonstrate that they have considered their potential air and water quality impacts and should, in order of preference:</p> <ol style="list-style-type: none"> a. avoid adverse impacts; and/or b. minimise adverse impacts where they cannot be avoided; and/or c. mitigate adverse impacts where they cannot be minimised. <p>If significant adverse impacts cannot be avoided, minimised or mitigated, proposals must present a clear and convincing case for proceeding.</p> | <p>Impact on water quality is addressed in Appendix F - Water Framework Directive Assessment Appendix G- Outline CEMP Appendix I- Ecological Impact Assessment</p> <p>Impact on air quality is considered within Appendix D- Non-Statutory Environmental Report and the Carbon Footprint assessment of the Scheme through the consideration of different alternatives for delivery of materials to site, by road, sea and/or a mix of both. The assessment is based on assumptions of vehicle and vessel movements detailed in Appendix C- Indicative Construction Method Statement.</p> <p>A framework Construction Traffic Management Plan (CTMP) has been prepared, however a full CTMP will be prepared by the Contractor upon appointment. The framework CTMP can be provided on request. Mitigation measures are provided in Appendix G- Outline CEMP.</p> |
| <p>GOV_01: Cumulative effects</p> <p>Proposals should demonstrate that they have assessed potential cumulative effects and should, in order of preference:</p> <ol style="list-style-type: none"> a. avoid adverse effects; and/or b. minimise effects where they cannot be avoided; and/or c. mitigate effects where they cannot be minimised. <p>If significant adverse effects cannot be avoided, minimised or mitigated, proposals must present a clear and convincing case for proceeding.</p> <p>Proposals that contribute to positive cumulative effects are encouraged.</p> | <p>CCBC details several coastal defence projects in the Borough, namely: Colwyn Bay – Coastal Defences, Coastal Defence Improvements at Llanfairfechan, Llandudno Coastal Defence Improvements, Old Colwyn Promenade, Coastal Defence Improvements at Llanddulas to Kinnel Bay, Rhos on Sea Coastal Defence Improvements.</p> <p>Following a review of the information available, all of the above projects are either completed or are at the funding or planning stage or sufficiently spatially separated therefore unlikely to incur any significant cumulative effects. This is considered in Appendix D- Non-Statutory Environmental Report.</p> |

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| <p>SCI_01: Risk-based decision making</p> <p>Relevant public authorities should make decisions using sound evidence and a risk-based, proportionate approach. Where appropriate they should apply the precautionary principle and consider opportunities to apply adaptive management.</p> <hr/> | <p>The Wave Overtopping Assessment estimated that if sea level rise follows the high emissions scenario RCP8.5 70%ile, beyond 2070 the threshold defined in EurOtop 2018 for safety of vehicles behind the seawall (in this case on Glan-Y-Mor Rd) may not be met in a 200 year storm event. Due to current uncertainty in sea level rise forecasts, a risk-based, proportionate approach is recommended and that the Council follows an adaptive approach. An adaptive approach means that from day 0 there will not be a raising of the seawall which hinders seascape views as well as increases capital costs. In due course, depending on actual sea level rise, reduction of uncertainty in projections and improvement of wave overtopping estimation methods, an evidence-based approach can be implemented.</p> |
| <p>T&R_01: Tourism and recreation (supporting)</p> <p>T&R_01 a: Proposals that demonstrate a positive contribution to tourism and recreation opportunities and policy objectives (for the sector) around the Welsh coast will be supported where they contribute to the objectives of this plan. Proposals should comply with the relevant general policies and sector safeguarding policies of this plan and any other relevant considerations.</p> <p>T&R_01 b: Relevant public authorities and the sector are encouraged, in liaison with other interested parties, to collaborate to understand opportunities for sustainable tourism and recreation around the Welsh coast, including:</p> <ul style="list-style-type: none">a. developing a strategic evidence base to improve understanding of current and potential tourism and recreation activities, including eco-tourism and other low impact activities; andb. opportunities to define areas of future opportunity for tourism and recreation; <p>in order to support the sustainable development of the tourism and recreation sector through marine planning.</p> <hr/> | <p>The new rock groyne and beach nourishment will reduce sediment transport in Penrhyn Bay which Conwy Council currently manage by undertaking regular interventions to reprofile and renourish beach material, at a significant cost.</p> <p>The proposed works, together with repairs to the damaged seawall, will create a new amenity for locals and tourists and improve beach access. A new DDA compliant beach access (above MHWS), will allow access the elevated platform at the eastern end of the site with 180deg views of the bay.</p> <p>The proposed works will improve recreation opportunities such as open water swimming, boosted by a new public shower on the promenade (above MHWS). On the promenade (above MHWS), the car parking will be re-located from the high point of Glan-Y-Mor Road, improving the promenade space and seascape views from properties and Beach Café, new interpretation panels with heritage and ecology will improve the connection between people, the sea and the history of the site.</p> |

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