

Cyngor Gwynedd

Barmouth North Promenade FAS

Welsh National Marine Plan Compliance Note for GI

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Llywodraeth Cymru
Welsh Government



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1. The Project

1.1 Scheme Overview

- 1.1.1 Cyngor Gwynedd, supported by YGC, propose to carry out coastal flood and erosion risk management works on a 1.2km length of frontage at the North Promenade region in Barmouth, Gwynedd. The 1.2km scheme area comprises of a mix of hard coastal defences (sheet piled wall, concrete revetment, and wave recurve wall, with masonry setback walls). The defences run parallel with the promenade and adjacent to Marine Parade.
- 1.1.2 The preferred option will reduce the long-term flood risk to both people and properties along the Barmouth seafront, bringing the area in line with its SMP2 policy of 'hold the line', with the longer-term considerations towards 'managed realignment'. The project will contribute towards managing flood risk, coastal erosion, and structural failure of the primary coastal defences, adapting to the increasing pressures associated with coastal erosion and climate change.
- 1.1.3 An Outline Business Case (OBC) was submitted by Cyngor Gwynedd in 2021 to seek approval and funding from Welsh Government for the design development and consenting of the project (Stage 1). YGC appointed Alun Griffiths (Contractors) Ltd, with Arup (the 'AGC Team') to progress Stage 1 of the project, which includes developing the outline design, undertake an Environmental Impact Assessment (EIA), Consenting, Detailed Design and Full Business Case.
- 1.1.4 The preferred option outlined in the OBC comprised of the elements listed below, which are to be refined and developed through Stage 1. These elements are collectively referred to in this report as 'the Scheme'.
- Alternative primary wall to be rebuilt structurally and increased by +600mm (from 5.65mOD to 6.25mOD) over a length of approximately 1.2km.
 - Tertiary flood wall to be re-built structurally and increased by +450mm (from 6.4mOD to 6.85mOD) over a length of approximately 1.1km.
 - Existing sheet piles to be refurbished over approximately 515m length.
 - Additional 300m of rock toe armour to be provided to protect the primary sea wall and revetment.
 - 560m of shingle beach profile to be built out to protect the primary sea wall and revetment. Extents to be defined during detailed design. Dependant on stability of shingle material as a result of coastal processes.
 - Refurbishment of culverted outfall and reinstatement of flap valve.
 - Demountable flood defences to be installed with the arrangement to be confirmed during the detailed design.

1.2 Scheme Objectives

- 1.2.1 Cyngor Gwynedd seek a solution to reduce coastal flood and erosion risk to Barmouth North Promenade, whilst improving the amenity and environmental value of this section of coastline. Placemaking opportunities such as beach access, dwell spaces and facilities, and improved connectivity and wayfinding

have the potential to leverage the less-used asset, broadening the appeal of Barmouth and reducing pressure on the popular South Promenade area.

1.2.2 The following Investment Objectives have been identified in the OBC:

- To reduce the threat of coastal flood and erosion risk to people and property with due consideration of SMP2 policy to ensure the long-term resilience and vitality of the community;
- To support, and where possible enhance, recreation and amenity value of the local area;
- To maintain, and where possible enhance, natural and historic environments;
- To ensure marine amenity activities can continue to grow; and
- Ensure an affordable and deliverable whole life option through a partnership approach and contributions.

1.3 Proposed Geotechnical Investigation

1.3.1 Geotechnical investigation (GI) is proposed to be undertaken along the beach by Barmouth North Promenade. The Proposed investigation comprises two key elements; a geophysical investigation and an intrusive ground investigation.

1.3.2 The purpose of the geophysical investigations is to provide a continuous section of the stratigraphy along the front of the promenade in particular, if access constraints prevent or limit the scope of intrusive investigation. The geophysical investigation aims to investigate the following key aspects (to a depth of at least 20m below existing ground level) to inform design and construction works for the proposed development:

- Thickness of Blown Sands and presence, thickness, soil stiffness characterisation and acoustic parameters of any directly underlying soft layer which may be present.
- Bedrock: top level, thickness, weathering profile (gravel/rock), soil stiffness characterisation and acoustic parameters.

1.3.3 The scope of the intrusive GI works include:

- 4no. window samples or cable percussive boreholes, to approximately 6m below ground level (bgl), located along the beach to confirm the stratigraphy. Standard penetration tests (SPT) proposed in boreholes. Laboratory testing of selected soil samples for geotechnical purposes.
- 8no. cone penetration tests with pore water determinations (CPTUs), to approximately 15mbgl, located along the beach to inform the deeper geology along the beach.
- 8no. trial pits to approximately 4mbgl, located adjacent to the existing sheet piles to expose the sheet piles and confirm superficial geology. Laboratory testing of selected soil samples for geotechnical and geo-environmental purpose.
- 2no. surface water samples taken from the culvert outfalls along the promenade front.

- 1.3.4 The Proposed GI locations and site boundary are displayed in Appendix A of the marine licence application.

1.4 Purpose of this Report

- 1.4.1 The purpose of this report to review the proposed GI against the Welsh National Marine Plan to support the marine licence application.

- 1.4.2 This document forms part of a suite of documents to inform the Marine Licence application for the proposed Geotechnical Investigation (GI) works below Mean High Water Springs. The Marine Licence application includes the following documents:

- Plans showing extent of works below MHWS (Appendix A of the application)
- Intertidal Biotope Survey Report (Appendix B)
- Preliminary Ecological Appraisal Report (Appendix C)
- Heritage Desked Based Assessment (Appendix D)
- Water Framework Directive Screening (Appendix E)
- Habitats Regulations Assessment Screening (Appendix F)
- Welsh National Marine Plan Compliance Note – this document (Appendix G)
- Risk assessment and method statement (Appendix H)

2. Consideration for the Welsh National Marine Plan

2.1.1 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.

Table 2-1 Policy Review

Welsh National Marine Plan Policy	Does the project have the potential to impact the policy?	Consideration
GEN_01 Planning policy There is a presumption in favour of the sustainable development of the plan area in order to contribute to Wales' well-being goals	Yes	The nature of the GI works is temporary to be undertaken over the course of several weeks. Consideration to sensitive features such as protected species, and pollution risks & mitigation have been incorporated into the Contractor's Method Statement to avoid impacts in the marine environment to ensure sustainable practice is implemented. See Appendix H of the marine licence application.
GEN_02 Planning policy Relevant public authorities should take a proportionate, risk-based approach to application of relevant marine planning policies in decision making.	Yes	As part of the marine licence application, a consultation period will be undertaken to include the Local Authority.
ECON_01: Sustainable economic growth Proposals for economically sustainable activities are encouraged, particularly where they contribute to: • 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	Yes	The GI works are contributing to support the design for the wider scheme which aims to protect local communities from storm events, coastal erosion and damage from sea flooding. GI works at the Barmouth Promenade will be awarded to small/medium size contractors from Wales, relying primarily on a local supply chain. A Habitats Regulation Assessment (HRA), Water Framework Directive (WFD) assessment, and a preliminary ecological appraisal has been undertaken to identify sensitive receptors, and mitigation measures to be integrated as part of the GI method, to avoid impacts on natural resources and ecosystems. These are set out in the methodology and supporting documents (Appendix B to H of the marine licence application).

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ECON_02 Coexistence Proposals should demonstrate how they have considered opportunities for coexistence with other compatible sectors in order to optimise the value and use of the marine area and marine natural resources.	No impacts are considered, this policy is not relevant to the temporary nature of the GI works	
SOC-01 Access to the marine environment Proposals that maintain or enhance access to the marine environment are encouraged.	Yes	Vehicles and plant will access the beach via existing slipways. Some removal of groyne panels maybe removed to facilitate equipment to access the beach. However, this will be temporary removal and put back on completion of the GI. Works will be undertaken in low-tide and undertaken over a couple of weeks. Equipment will be cleared at the end of each shift, and holes backfilled in to reduce impacts for public access to the beach. (See Appendix H). Appropriate signage will be provided of work in progress and pedestrian management will be put in place with clear signage
SOC_02: Well-being of coastal communities Proposals that contribute to the well-being of coastal communities are encouraged	Yes	The GI will require temporary site access using existing access points. Existing beach material will be moved in front of the access points if necessary to allow vehicles to move safely on the beach. Material for grading out the ramp would comprise gravels and cobbles reclaimed from the beach. Public safety will be prioritised through safe access routes and fencing around trial pits and boreholes during the work. Before the end of each shift, trial pits will be backfilled, completed boreholes will be backfilled and incomplete boreholes will be securely covered to reduce risk to the public (See Appendix H of the marine licence application).
SOC_03: Marine pollution incidents Proposals should demonstrate how they minimise their risk of causing or contributing to marine pollution incidents	Yes	A HRA and WFD (Appendix E and Appendix F of the marine licence application) has been undertaken and identified mitigation measures for GI works to avoid sensitive receptors and pollution prevention measures. These have also been integrated into the Contractor's method statement and can be viewed in the method statement (Appendix H of the marine licence application).
SOC_04: Welsh language and culture	Yes	Contractor to provide any notices and publications in Welsh if deemed appropriate.

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Proposals that contribute to the promotion and facilitation of the use of the Welsh language and culture are encouraged.		
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: 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. If significant adverse impacts cannot be avoided, minimised or mitigated, proposals must present a clear and convincing case for proceeding. Opportunities to enhance historic assets are encouraged	Yes	Potential impacts on historic assets have been assessed and are presented in the Heritage Desk Based Assessment (Appendix D of the marine licence application). Monitoring of the GI works will be undertaken by a qualified archaeologist to review samples from the GI works on site and also a watching brief.
SOC_06: Designated landscapes Proposals should demonstrate how potential impacts on the purposes and special qualities for which National Parks or Areas of Outstanding Natural Beauty have been designated have been taken into consideration and should, in order of preference: a) avoid adverse impacts on designated landscapes; and/or b) minimise impacts where they cannot be avoided; and/or c) mitigate impacts where they cannot be minimised. If significant adverse impacts cannot be avoided, minimised or mitigated, proposals must present a clear and convincing case for proceeding. Opportunities to enhance designated landscapes are encouraged.	No impacts are considered to the nearby National Park (outside of the site boundary); due to the temporary nature of the GI works which will backfill all holes and all equipment removed after the works.	
SOC_07: Seascapes Proposals should demonstrate how potential impacts on seascapes have been taken into consideration and should, in order of preference: a. avoid adverse impacts on seascapes; and/or	No impacts are considered to seascape due to the temporary nature of the GI works. GI holes will be backfilled and temporary	

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b. minimise impacts where they cannot be avoided; and/or c. mitigate impacts where they cannot be minimised. If significant adverse impacts cannot be avoided, minimised or mitigated, proposals must present a clear and convincing case for proceeding. Opportunities to enhance seascapes are encouraged.	materials for site access removed	
SOC_08: Resilience to coastal change and flooding Proposals should demonstrate how they are resilient to coastal change and flooding over their lifetime.	Yes	The GI works will occur within the beach to identify ground conditions to support the design of the rock armour and sheet piling of the flood wall. Works will be of temporary nature and undertaken during low tide. Holes will be backfilled with beach sands. It is not considered that the proposed works will increase risk to flooding and coastal resilience.
SOC_09: Effects on coastal change and flooding Proposal should demonstrate how they: - avoid significant adverse impacts upon coastal processes; and - minimise the risk of coastal change and flooding	Yes	The GI works will be undertaken during low tide, and all equipment moved off the beach at the end of each shift before high tide. Where short sections of groynes are required to be removed close to the flood defence wall, for GI access along the beach these will be replaced on completion of works, although following a review of the coastal processes to inform the main works design, undertaken in December 2024 by AMPmer, the study concluded that the groynes are in very poor condition and are no longer functioning in holding coarse sediment.
SOC_10: Minimising climate change Proposals should demonstrate how they, in order of preference: a. avoid the emission of greenhouse gases; and/or b. minimise them where they cannot be avoided; and /or c. mitigate them where they cannot be minimised. 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.	Yes	There could be potential emission of greenhouse gases from the CPT and transport vehicles, the excavator and window sample/ cable percussive rig used for the GI works that may be powered by fossil fuels. However the number of vehicles required are of small scale and not considered to significantly contribute to greenhouse gases (See Appendix H for vehicles and plant in the marine licence application).
SOC_11: Resilience to climate change Proposals should demonstrate that they have considered the impacts of climate change and have incorporated appropriate adaptation measures,	No impacts are considered. This policy is not relevant to the temporary/small	

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taking into account Climate Change Risk Assessments for Wales. Proposals that contribute to climate change adaptation and/or mitigation are encouraged.	scale nature of the GI works	
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: a. avoid adverse impacts; and/or b. minimise impacts where they cannot be avoided; and/or c. mitigate impacts where they cannot be minimised. If significant adverse impacts cannot be avoided, minimised or mitigated, proposals must present a clear and convincing case for proceeding. Proposals that contribute to the protection, restoration and/or enhancement of marine ecosystems are encouraged. ENV_02: Marine Protected Areas Proposals should demonstrate how they: • 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	Yes	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 present in the site area that are identified in the assessments include Blue mussels (<i>Mytilus edulis</i>) growing on approximately two thirds of the existing timber groynes which are a Priority Habitat under Section 7 of the Environment (Wales) Act 2016. Where access across the beach requires some temporary removal of sections of groyne, this will be within the uppermost sections of the groynes where blue mussels were not present. No part of the groynes with blue mussels present will be removed. These and other potential impacts on marine ecosystems and protected areas are addressed in the marine licence application appendices: • Intertidal Biotope Survey Report (Appendix B) • Preliminary Ecological Appraisal Report (Appendix C) • Water Framework Directive Screening (Appendix E) • Habitats Regulations Assessment Screening (Appendix F) • Risk assessment and method statement (Appendix H)
ENV_03: Invasive non-native species Proposals should demonstrate how they avoid or minimise the risk of introducing and spreading invasive non-native species. Where appropriate, proposals should include biosecurity measures to reduce the risk of introducing and spreading of invasive non-native species.	Yes	Invasive non-native species were noted on site including Japanese Knotweed <i>montbretia</i> and the marine invasive <i>Austrominius modestus</i> (a invasive barnacle) including presence on the groynes. Terrestrial and aquatic INNS could be spread via construction machinery, or on construction workers' footwear, especially when working in and around the tidal area. These risks will be avoided or reduced through the application of standard best-

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		practice pollution prevention techniques and methods outlined in the project Risk Assessment Method Statement (RAMS) in Appendix H of the marine licence application.
ENV_04: Marine litter Proposals should demonstrate how they: • avoid the deliberate introduction of litter into the marine plan area; and • minimise the risk of accidental release of litter.	Yes	Pollution prevention measures are outlined in the method statement (Appendix H of the marine licence application). Daily checks will be carried out to check for any pollution spills or litter accidentally released. The area will be maintained to ensure all debris is removed off site and at the end of each shift.
ENV_05: Underwater noise Proposals should demonstrate that they have considered man-made noise impacts on the marine environment and, in order of preference: a) avoid adverse impacts; and/or b) minimise impacts where they cannot be avoided; and/or c) mitigate impacts where they cannot be minimised. If significant adverse impacts cannot be avoided, minimised or mitigated, proposals must present a clear and convincing case for proceeding.	No impacts are considered. This policy is not relevant to the temporary/small scale nature of the GI works as works will not occur within the beach at low tide.	
ENV_06: Air and water quality Proposals should demonstrate that they have considered their potential air and water quality impacts and should, in order of preference: - avoid adverse impacts; and/or - minimise adverse impacts where they cannot be avoided; and/or - mitigate adverse impacts where they cannot be minimised. If significant adverse impacts cannot be avoided, minimised or mitigated, proposals must present a clear and convincing case for proceeding.	Yes	Impacts to water quality is considered in the Water Framework Directive assessment (See Appendix E of the marine licence application). Pollution prevention measures have been identified and incorporated into the method statement (Appendix H). Appropriate measures will be in place (as outlined in the method statement) should there be a accidental spill incident. No refuelling will occur on the beach and bio-oils will be used in the plant.
ENV_07: Fish species and habitats Proposals potentially affecting important feeding, breeding (including spawning & nursery) and migration areas or habitats for key fish and shellfish species of commercial or ecological importance should demonstrate how they, in order of preference: a) avoid adverse impacts on those areas; and/or b) minimise	No impacts are considered. This policy is not relevant to the temporary/small scale nature of the GI works as works will not occur within the	

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adverse impacts where they cannot be avoided; and/or c) mitigate adverse impacts where they cannot be minimised; If significant adverse impacts cannot be avoided, minimised or mitigated, proposals must present a clear and convincing case for proceeding.	beach at low tide.	

Abbreviations List

AGC	Alun Griffiths Contractors
D&B	Design and Build
ECI	Early Contractor Involvement
EIA	Environmental Impact Assessment
ES	Environmental Statement
FAS	Flood Alleviation Scheme
OBC	Outline Business Case
YGC	Ymgynghoriaeth Gwynedd Consultancy