

Cyngor Gwynedd

Barmouth North Promenade FAS

ES Non-Technical Summary

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Llywodraeth Cymru
Welsh Government



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1. Non-Technical Summary

1.1 Introduction

Overview

- 1.1.1 Cyngor Gwynedd, supported by Ymgynghoriaeth Gwynedd Consultancy (YGC), has designed new and improved sea defences at Barmouth North Promenade to reduce risk to life and flood risk to properties within Barmouth. The sea defences at Barmouth North Promenade are currently in poor condition, especially in the north, where beach levels are lowering and flooding already occurs during normal tides. Emergency repairs were made in 2020–2021, but a long-term solution is needed.
- 1.1.2 A Planning application for the Proposed Development has been submitted to Cyngor Gwynedd, as the local planning authority for the area. Implementation of the scheme will also require a Marine Licence from Natural Resources Wales (NRW). In support of these planning applications, an Environmental Impact Assessment (EIA) has been conducted to evaluate the likely significant impacts on the environment of the Barmouth North Promenade Flood Alleviation Scheme (referred to as the “Proposed Development”) and this Environmental Statement (ES) reports the finding of the EIA.
- 1.1.3 This document presents a Non-Technical Summary (NTS) of the ES for the Proposed Development. It includes a summary of the location, the Proposed Development, the alternatives considered, the potential significant effects of the Proposed Development on the environment and local community, and mitigation measures proposed.
- 1.1.4 This NTS provides an accessible overview of the ES, which has been prepared in non-technical language and is intended to help members of the public, statutory consultees, and other stakeholders understand the likely significant environmental effects of the Proposed Development.

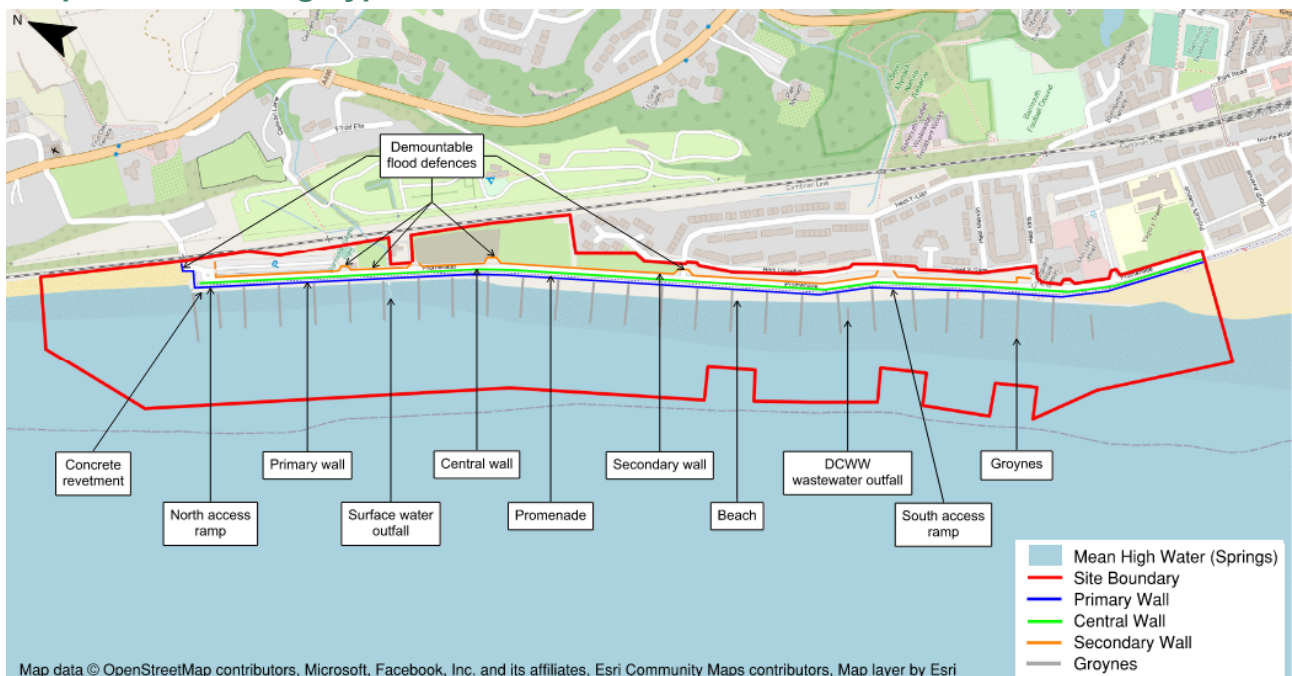
1.2 Proposed Development Overview

Project Location

- 1.2.1 The Proposed Development is located along a 1.2km length of the North Promenade in Barmouth, North Wales. The current sea defences run parallel with the promenade and next to Marine Parade. These defences include sheet piles at beach level, with concrete platforms in some areas, and a primary (recurve) sea wall at promenade level. Between the promenade and Marine Parade, there is a low central wall, and further inland there is a secondary sea wall. Demountable defences are also used to fill gaps in the secondary sea wall when flooding is expected. The beach itself has timber groynes (structures intended to trap sand), but they are in poor condition.
- 1.2.2 A cross section of the existing arrangement is provided below in Graphic 1-1. A site plan showing the existing assets and arrangements is also provided below in Graphic 1-2.



Graphic 1-1 Existing Typical Cross Section



Graphic 1-2 Site Plan

Proposed Development

1.2.3 The Proposed Development would provide new and improved sea defences at Barmouth North Promenade to reduce the risk to life and flood risk to residential properties. The Proposed Development comprises the following elements:

- New rock revetment on the beach;
- Groynes to be removed;
- Refurbishment of concrete revetment;
- Repairs to the primary wall;
- Replacement of the central wall with a kerb and balustrade;

- Replacement of the secondary wall;
- Demountable flood defences;
- Access ramp rebuilding and extension;
- Highway upgrades;
- Enhancements to surface water outfall; and
- Enhanced landscape and public realm features.

1.3 Design development and alternatives

1.3.1 Since flooding in 2014, efforts have been underway to improve coastal defences at Barmouth North Promenade. The Proposed Development has emerged as the preferred option for consideration arising from a range of alternatives (these being set out below).

Alternative Options Considered

1.3.2 Options considered have included the following:

- Do-Nothing.
- Do-Minimum, through ad hoc repairs to specific features based on degradation and damage.
- Improvement of existing defences.
- Beach management through groynes and recharging with additional material
- The use of offshore structures such as breakwaters.
- Adoption of a new line of defence set back at the railway (i.e. managed realignment), consisting of a defence line set back along the full length of promenade.
- Adoption of a new line of defence set back at the railway, consisting of a defence line set back along northern end of promenade only to protect residential properties, with beach management protecting properties to the south.

1.3.3 Following a process of options appraisal and refinement, the preferred option has emerged and has been selected as the Proposed Development. This involves providing improvements to existing defences for protection.

1.3.4 Further details on key design decisions is provided within ES Volume 2, Chapter 3 Needs and Alternatives.

1.4 Features of the Proposed Development

1.4.1 A summary of the improvements to be completed as part of the Proposed Development is provided below. ES Volume 2, Chapter 2 Project Description provides a detailed description of the Proposed Development.

Provision of new rock revetment on the beach

- 1.4.2 The beach is primarily made up of sand with a shingle berm north of the promenade and dunes to the south. Beach levels have been slowly reducing over time in front of the promenade and increasing at the dunes. A new rock revetment, comprised of rock and boulders extending approximately 18m from the top of the beach, and extending approximately 950m in length, would be constructed at the top of the beach.

Removal of groynes

- 1.4.3 Timber groynes currently extend from the northern promenade at roughly 45m intervals. These are known to provide no coastal defence purpose, limit access and movement along the beach and have damaged and/or missing boards. The groynes will be removed.

Refurbishment of concrete apron

- 1.4.4 A concrete apron with a sheet pile toe buried into the sand runs along the top of the beach. Sheet piles along the length of the rock revetment would be replaced, including installation of a reinforced concrete capping beam for sheet piles to be dowelled into the existing capping beam. This capping beam would be accessible to the public.

Repairs to primary wall

- 1.4.5 The primary sea defence wall is comprised of precast concrete wave recurve units. While these are generally in adequate condition, localised patch repairs to joints and sealant would be conducted where required.

Replacement of central wall

- 1.4.6 A central unreinforced stone wall separates the promenade from the highway. The wall includes benches built into the wall and several access points enabling access between the beach and highway via the promenade. There are several large sections of missing stones and many drainage holes. The central wall would be replaced with a kerb and metal balustrade to provide separation between the road and promenade.

Replacement of secondary wall

- 1.4.7 The existing secondary wall comprises an unreinforced stone wall running parallel to the central wall on the opposite side of the Marine Parade highway, with demountable flood defences (stoplogs) at multiple locations. The secondary wall running from Heol Idris to and around the North Promenade Car Park would be replaced with a new reinforced concrete wall, up to 1.55 m high, and generally aligned with the existing secondary wall. The wall would include a concave recurve shape (facing the promenade) and textured concrete on the rear face (facing the town).

Provision of demountable flood defences

- 1.4.8 Current demountable flood defences comprise of wooden boards slotted into stoplogs, bridging gaps in the secondary wall at access points. Existing stoplogs

would be replaced with either a continuation of the secondary wall, or flood gates.

Installation of beach access ramp

- 1.4.9 The existing access ramps at the north of the promenade poses an accessibility challenge. The existing ramp would be rebuilt at an accessible gradient facilitating unrestricted beach access.

Highway upgrades

- 1.4.10 The single carriageway Marine Parade runs the entire length of the promenade between the central and secondary walls. The carriageway would be resurfaced, car parking would be realigned, and pedestrian crossing points would be added to improve access.

Enhancements to surface water outfall

- 1.4.11 A surface water outfall currently extends under the current sea defence, discharging to the beach. Two Dŵr Cymru Welsh Water (DCWW) outfalls also extend under the promenade to discharge at the beach. The surface water outfall is to be extended under the proposed rock revetment and refurbished to include a non-return valve to prevent back flow of storm water.

Enhanced Landscape and Public Realm Features

- 1.4.12 The existing promenade is limited in terms of amenity provision both for soft and hard landscape. Measures would be introduced as part of the public spaces design both in terms soft and hard landscape, including the following:
- Improved and increased seating areas.
 - Raised planters with vegetation.
 - Improved road crossing points for pedestrians.
 - Improved seating provision
 - Delineated areas for commercial activities (e.g. designated locations for food and beverage trucks).
 - Cycle parking areas.
 - Improved signage/wayfinding.
 - Improved access to beach through the rock revetment via stairs.
 - Improved lighting provision.

Operation of the Proposed Development

- 1.4.13 Cyngor Gwynedd and NRW will work together to monitor the flood risk to Barmouth. If a warning is issued, the flood gates will be closed and the promenade cleared of people and vehicles well before the flooding is expected. A vehicle gate will prevent access to the promenade from the South.
- 1.4.14 Access to the properties landward of the promenade will still be available.

- 1.4.15 Once the flood event is over, the flood gates will be reopened and access to the promenade will resume for people and vehicles.

1.5 Construction activities

- 1.5.1 Implementation of the Preferred Scheme would require a range of construction activities dependant on the features being improved.

New rock revetment on the beach

- 1.5.2 Large rocks would be placed along the beach to protect the coast. These may arrive by road or sea. If delivered by road, rocks would come from a Welsh quarry, with lorries delivering them to a storage area prior to placement. If delivered by sea, rocks would be transferred from a delivery vessel to a smaller barge and then placed on the beach at low tide. The rock revetment would be constructed with one working front, starting in the north and moving south.

Removal of groynes

- 1.5.3 Timber groynes would be carefully removed using hand tools and machinery. Concrete steps at the ends would also be taken out.

Refurbishment of concrete revetment

- 1.5.4 New steel sheet piles would be installed using large machinery, including a piling rig and crane.

Repairs to primary wall

- 1.5.5 Small concrete repairs would be done using hand tools. Some areas of the promenade would be temporarily closed off during this work.

Replacement of central wall

- 1.5.6 The old central wall would be removed and replaced with a kerb and new metal balustrade. Some street furniture would be removed and replaced after construction. Precast concrete kerbs would be delivered and lifted into place. The area around the kerb would be refilled. Traffic management would also be in place to minimise disruption.

Replacement of secondary wall

- 1.5.7 The existing wall would be demolished, with waste transported offsite for disposal. Sheet piles would be lifted using a crane and driven using a piling rig to provide the wall's foundations. The concrete recurve wall would be constructed on top and connected to the sheet piles. This is likely to be constructed with pre-cast concrete units brought onto site and 'stitched' together with in-situ concrete.
- 1.5.8 The wall would be built in small sections to reduce disruption and manage traffic. Street furniture such as signage would be removed and stored to be replaced following construction of the secondary wall.

Demountable flood defences

- 1.5.9 Temporary demountable flood defences would be installed where existing flood defence features are temporarily removed as part of construction, prior to the construction of the permanent works.

Rebuilding of beach access ramp

- 1.5.10 The new ramp would be built over the existing one using steel sheets and layers of rock and concrete. Concrete slabs would be added to form the ramp. Safety railings would be installed, and rocks placed around the ramp to keep everything secure and stable.

Rebuilding of beach access steps

- 1.5.11 Steel sheets would be installed on either side of the new steps using a piling rig. Sand and shingle would be removed by an excavator and stored nearby. A steel frame would be built between the sheets, and precast concrete steps would be placed on top using a crane. The sheet piles would then be cut down to follow the line of the steps, and concrete would be poured to finish the top edge.

Highway upgrades

- 1.5.12 Resurfacing of Marine Parade would take place at the end of the construction phase, following completion of other elements of the Proposed Development.

Enhancements to surface water outfall

- 1.5.13 The existing surface water outfall will be extended through the rock armour to provide a new outfall. The outfall is likely to be extended in the same pipe material, with concrete surround for protection. The pipes will be lifted into position with an excavator, and shutters placed around the pipes prior to pouring concrete using a mobile concrete pump. A proprietary flap valve will be fixed to the end of the encased pipe.

1.6 Construction of the Proposed Development

Programme

- 1.6.1 Work is planned to start in spring 2027 and finish by spring 2029, lasting around two years. To reduce disruption to the community and tourism, construction activities would avoid the summer holiday season (mid-July to end of August).
- 1.6.2 Work would follow safety rules, avoid blocking the harbour, and only happen during daylight and low tide for beach works. Emergency plans will be in place if needed.

Working Hours

- 1.6.3 Typical hours would be 7:00 to 19:00, although construction work subject to beach access would require variations around tidal patterns. No work would take place during major holidays (Christmas, New Year, Easter, Bank Holidays), and none during school summer holidays. Around 50 staff would be on site including 15 in offices and 35 on construction. Work would be carried out in

daylight hours where possible. Winter work would likely start and finish in the dark due to shorter daylight hours, lighting would be used to facilitate this.

Construction Lighting

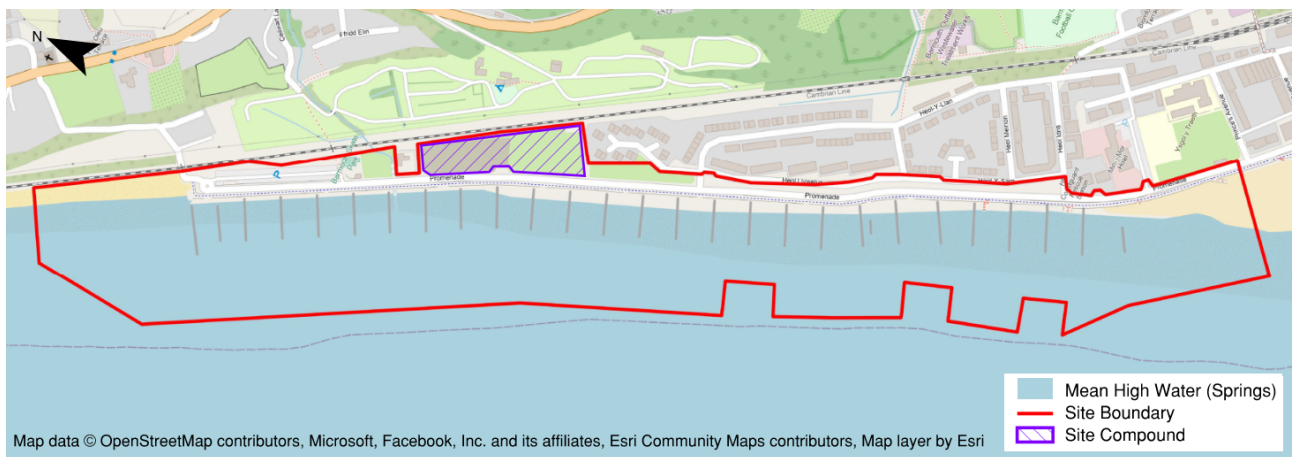
1.6.4 Lighting would be used during winter months to allow work outside daylight hours. This includes:

- Work lighting: Fixed lights in key areas like cabins, stockpiles, ramps, and working areas (e.g. on the beach or on top of the promenade).
- Task lighting: Mobile tower lights, handheld lighting, head torches, and vehicle and plant lighting.

1.6.5 All lighting would be positioned to avoid disturbing wildlife and nearby homes.

Site Compound and Access

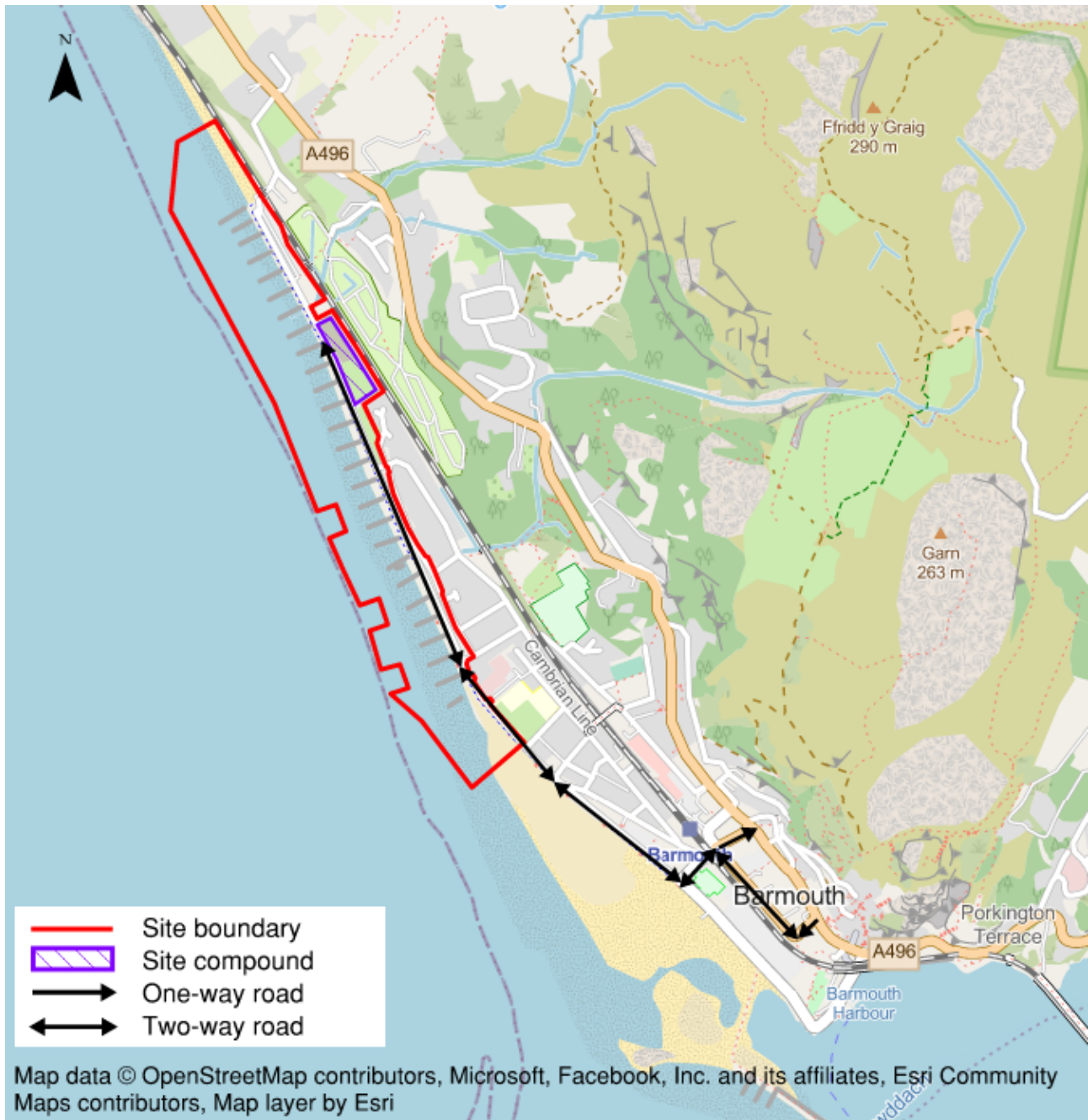
1.6.6 As shown on Graphic 1-3, the site compound would be set up on private land east of Marine Parade, with the landowner's permission. It would include office space, welfare facilities, and parking for the construction team.



Graphic 1-3 Site Compound Location

Construction Traffic Management

1.6.7 Construction vehicles would enter the site from the south, passing through the town centre following the route shown in Graphic 1-4. Due to low bridges elsewhere, this is the only route suitable for heavy goods vehicles.



Graphic 1-4 Planned Vehicle Route to Site

- 1.6.8 Access from the construction compound to the beach would be via existing ramps or a purpose-built ramp. To keep traffic flowing and maintain access to all properties, a combination of two-way traffic signals and priority systems would be used along Marine Parade during the works.

1.7 Environmental Impact Assessment Findings

- 1.7.1 The Environmental Impact Assessment (EIA) has been undertaken to assess, avoid or reduce negative or adverse environmental effects and promote positive effects as a result of the Proposed Development. This has included altering or adapting the design of the Proposed Development where necessary. However, where adverse impacts are still predicted, further measures (mitigation measures) have been identified to reduce their impact. The significance of the

impact that remains after these mitigation measures are successfully implemented has then been determined (i.e. the residual effect significance).

1.7.2 The EIA has been supported by the collection of existing environmental data, and where necessary, the gathering of new data to inform the accurate assessment of impacts.

1.7.3 The assessment has considered the following aspects of the environment:

- ES Chapter 5 Air Quality .
- ES Chapter 6 Biodiversity and Protected Sites.
- ES Chapter 7 Climate Change.
- ES Chapter 8 Community Considerations.
- ES Chapter 9 Cultural Heritage.
- ES Chapter 10 Flooding and Water Quality.
- ES Chapter 11 Noise and Vibration.
- ES Chapter 12 Marine and Coastal Physical Process.
- ES Chapter 13 Seascape and Landscape and Visual.

1.7.4 A summary of the findings for each topic is provided below. A summary of the residual environmental impacts of the Proposed Development is provided below, with an indication given as to whether the impact occurs during the construction or operation phase.

Air Quality

1.7.5 Construction of the Proposed Development has the potential to generate dust through demolition, earthworks, construction and vehicle movement. Dust control measures have been included within the Construction Environmental Management Plan (CEMP) which would be implemented to prevent and reduce the generation and movement of dust emissions affecting nearby sensitive receptors.

1.7.6 Construction would demand additional construction vehicle journeys for the transport of personnel and materials. Whilst most of these would be conducted via the highway network, resulting in vehicle generated emissions, rock armour material intended for the beach may alternately be transported by sea. Traffic volumes associated with construction have been considered to fall below those required for detailed assessment regarding their impact to air quality, and construction traffic is not expected to contribute to any significant effects on local air quality.

Biodiversity and Protected Sites

1.7.7 Construction activities have the potential to generate direct and indirect impacts to ecological receptors. Assessment of impacts to ecological resources has identified potential effects on statutory designated sites through possible damage to sensitive benthic habitats, and disturbance to marine species, all of which are listed as qualifying features of the Pen Llŷn a'r Sarnau Special Area of Conservation (SAC) and the West Wales Marine SAC. In addition, the

Proposed Development may impact Priority Habitats such as blue mussel beds and marine mammals present outside of the statutory protected areas, such as at areas known for seal pupping and haul-out sites. Where embedded design measures cannot eliminate construction impacts, measures are proposed to reduce the effects on ecological receptors to a negligible level. These include the production of a Marine Vessel Management Plan (MVMP) which would consider avoidance measures relating to vessel mooring locations, vessel speeds, and engine management.

1.7.8 Biodiversity enhancement measures have also been proposed to ensure the Proposed Development achieves a Net Benefit for Biodiversity (NBB). Planning Policy Wales (PPW) defines NBB as ‘the concept that development should leave biodiversity and the resilience of ecosystems in a significantly better state than before, through securing immediate and long-term, measurable and demonstrable benefit, primarily on or immediately adjacent to the site’.

1.7.9 Enhancement measures will be considered include:

- Removal of Japanese knotweed (an Invasive Non-Native Species, (INNS)) to improve underlying habitat conditions
- Sand dune enhancement (off-site)
- Expansion of the *Sabellaria alveolata* reef (off-site) by providing suitable substrate
- Installation of rock armour lower in the intertidal zone to increase habitat availability for blue mussels and other species

Climate Change

1.7.10 Construction and operation of the Proposed Development have the potential to contribute to generation of greenhouse gas (GHG) emissions, and design features have been implemented to reduce GHG generation. In particular, the Proposed Development eliminates the need for currently ongoing beach nourishment activities, which eliminates GHG emissions from sourcing the beach nourishment material, and also the GHG emissions associated with 13,500 lorry movements throughout construction. The design has also incorporated existing infrastructure, where possible, to reduce materials used further.

1.7.11 Construction activities would emit GHG emissions through material use, construction practices, waste generation and management and transport movements for personnel and materials. GHG emissions have been calculated, and with the embedded measures outlined above, are considered not significant.

Community Considerations

1.7.12 An assessment of effects on health, wellbeing and community assets has been undertaken for the local study area of Gwynedd Lower Super Output Area (LSOA) and wider study area of the local authority of Gwynedd.

1.7.13 The construction of the Proposed Development would have a temporary adverse effect on open space, leisure and play for local and wider study area community. This is due to impacts on the quality and accessibility of the northern area of Barmouth Beach, the Promenade and Barmouth Skate Park,

resulting in a temporary reduction in the health and wellbeing benefits associated with these resources.

- 1.7.14 While no significant impacts from temporary suspension of car parking spaces have been identified, there is a potential for impacts if the town experiences a greater influx of visitors than is usually anticipated (for example in warm and dry weather). Impacts on parking could affect local tourism and therefore additional mitigation measures are proposed to reduce impacts on Pen-y-Gogledd car park during construction where possible. This may include measures such as restricting closure of the car park to the quieter, winter months and/or maintaining partial access to the car park throughout the works.
- 1.7.15 Once complete, the Proposed Development would have beneficial effects on the health and wellbeing of the community including:
- Reduced flood risk and associated risks to health and safety for the local community in north Barmouth and its visitors.
 - Improvements to the Promenade and beach access points, increasing the health benefits provided by these resources, in terms of access to open space, leisure and play, and active travel.
 - Safer access to the northern part of the beach would particularly benefit people with impaired mobility.
 - Improvements would benefit tourism and business around the north Promenade and beach, supporting the growth of the tourism economy in Barmouth and providing health benefits associated with improved incomes.

Cultural Heritage

- 1.7.16 An assessment of the historic environment has been undertaken for the Proposed Development and all known historic assets within a 500m study area, with designated historic assets investigated out to 1km from the Site boundary.
- 1.7.17 There are no designated historic assets within the Site. Within the study area there are 50 listed buildings, one conservation area (Abermaw) and two registered historic landscapes. The majority (43 of 50) of the listed buildings in the study area are within the Abermaw Conservation Area.
- 1.7.18 There are also non-designated historic assets in the study area, including 20th century rail tracks eroding out of the sand on the beach, with two early 19th century wrecks also recorded in close proximity. Unrecorded archaeological remains may also be present within the Site, particularly within the intertidal peat deposits beneath the beach sands.
- 1.7.19 There would be limited potential for harm resulting from construction or operation of the Proposed Development. There would be limited visibility of the Proposed Development from designated historic assets in the study area and, where it is visible, it would appear relatively similar to current facilities. There is the potential for permanent construction effects impacting previously unrecorded archaeological remains on the beach, however, this would be limited by the construction methods proposed. Further mitigation in the form of low tide intertidal walkover survey and archaeological monitoring and recording during construction should ensure that there are no residual significant adverse effects.

Flooding and Water Quality

- 1.7.20 Impacts to flooding and water quality related to the Proposed Development has been considered. The assessment is supported by a Flood Consequences Assessment and a Water Framework Directive compliance assessment.
- 1.7.21 The Proposed Development will significantly reduce flood risk to Barmouth, as detailed in the Flood Consequences Assessment. Over 900 properties will be better protected from flooding.
- 1.7.22 There are various existing flood risk management assets within the Site, along with two small watercourses which flow into the sea. There is a designated Bathing Water within the site, and the coastal area is also designated as a Special Area of Conservation. Flooding has occurred in the recent past. Coastal flooding is the main risk to the town, with more localised surface water flood risk also present. Sea level rise is anticipated to increase the risk of coastal flooding in the future.
- 1.7.23 During construction, the potential for effects upon flood risk are very limited and would be managed as part of the construction methodology. Once the Proposed Development is operational, there is anticipated to be a beneficial effect upon flood risk, which is the main objective of the project.
- 1.7.24 No significant effects to water quality are anticipated during construction or operation of the Proposed Development. During construction, risk to water quality would be managed by the good practice construction methods outlined in the Construction Environmental Management Plan (CEMP).

Noise and Vibration

- 1.7.25 Noise from construction works have the potential to generate temporary noise and vibration effects at nearby noise sensitive receptors. General construction road traffic vibration is not expected to be significant as there are no buildings within two metres of the construction traffic routes. Deliveries of materials for the beach rock revetment may occur by road or by sea. Should rock deliveries come by road, then construction traffic has the potential to temporarily increase noise levels at nearby noise sensitive receptors. These traffic noise effects are not expected to be significant given implementation of noise management measures included within the Construction Environmental Management Plan (CEMP).
- 1.7.26 Certain construction activities, such as piling ground compaction and concrete breaking, have the potential to cause temporary vibration issues. Similar management measures included within the CEMP would ensure that short-term vibration impacts are not significant.
- 1.7.27 Noise management measures included within the CEMP would be implemented to control noise, and where significant noise generation is likely, liaison with residents would be carried out to inform them of noisy activities and timescales. Construction noise monitoring would be conducted as required at nearby noise sensitive receptors.

Marine and Coastal Physical Processes

- 1.7.28 Construction activities such as stockpiling of rock armour and excavation of sand and shingle are expected to cause a temporary adverse impacts, for instance, through temporary increased turbidity and sediment. The main effects

expected during the operational phase would be the benefits derived from the reduction of the risk of wave overtopping and flooding behind the breakwater. Increased absorption of wave energy from the new structures will also reduce scour from the toe of the wall, mitigating against the risk of undermining in this area and the reduction of the risk of failure of the structure.

- 1.7.29 The rock revetment will influence cross-shore transport. Therefore, higher variability of beach levels (accreted or eroded material) in front of the revetment and localised medium to long-term scour of the adjacent seabed may be expected, although is not expected to interfere with the transport of sediment alongshore or on/offshore given the absence of natural longshore drift in the nearshore. Similarly, with groynes being in very poor condition, and providing limited function to maintaining beach levels, the effect of removal is considered negligible.
- 1.7.30 The rock revetment is not expected to have an effect to the sand dune systems at the south, as the main physical process driving dune formation is the river Mawddach deposition, which will be unaffected.

Seascape and Landscape and Visual

- 1.7.31 Construction activities have the potential to temporarily affect the seascape through introduction of visible transport, machinery and site features. In the event of delivery of rock by road, seascape and landscape would be temporarily affected by the increased traffic demand, tall lifting machinery, and site compounds, which would reduce openness and contrast with the natural shoreline. These seascape and landscape effects would, however, be short-term and reversible.
- 1.7.32 In the event of delivery of rock by sea, onshore landscape disruption would be reduced, but offshore vessels would alter and impact the seascape's character.
- 1.7.33 For both construction scenarios (road or sea), works could result in visual effects due to the presence of sensitive local receptors. To reduce the impact of works, construction management restrictions would consider the timing of construction, use and orientation of lighting, use of screening, and community engagement to reduce visual disruption.
- 1.7.34 Once constructed, the scheme would become largely integrated into the coastal setting. New features such as the rock revetment and sea wall would be visible to a range of receptors, but with careful design, would reduce contrast and intrusion, and limit effects to both seascape and landscape. In the longer term, the development would become fully integrated into the landscape and seascape. Mature planting and established infrastructure would reinforce the coastal character, helping maintain an accessible and natural shoreline landscape.

Effects in Combination with other projects

- 1.7.35 Consideration has been made to other projects expected to be developed in the vicinity of the Proposed Development, and at a similar time, to evaluate the importance of any combined impacts. The only development likely to overlap in terms of time and footprint, and which might therefore have the potential for cumulative impact is the programme of ongoing beach management works permitted for Barmouth Beach.

- 1.7.36 Although beach replenishment works are anticipated to overlap the location of the Proposed Development, it is not expected to generate cumulative impacts with the Proposed Development owing to the limited scale of individual project effects foreseen.

1.8 Find Out More

- 1.8.1 The planning documentation can be found at the following link:

- 1.8.2 <https://bermo.ygc.cymru/>

Abbreviations List

AGC	Alun Griffiths Contractors
CEMP	Construction Environmental Management Plan
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