CML2407 Morlais, Nefyn

Water Framework Directive: Impact Assessment

Refer to the scoping template for full list of considered potential receptors. The following receptors have been identified as potential risks and as such are to be assessed for impact.

Section 2: Biology

Potential Impacts

It was identified that the proposed site could be within 500m of intertidal sea grass (subtidal kelp beds) which is considered to be a high sensitivity habitat. This sea grass is understood to be located around the headland on Porthdinllaen. It was unclear where the sea grass is located, however it is probable that the distance the around the headland would exceed 500m.

Mitigation

The contractor is to implement best practices for working near water in order to reduce the risk of potential contaminations. Spill kits are to be provided on site at all times in the event of a spillage or similar contamination.

The map below has been taken from the Shoreline Management Plan and suggests that the net wave energy travels east beyond Nefyn headland, and potential impact from the site would move away from the possible sea grass with the drift.

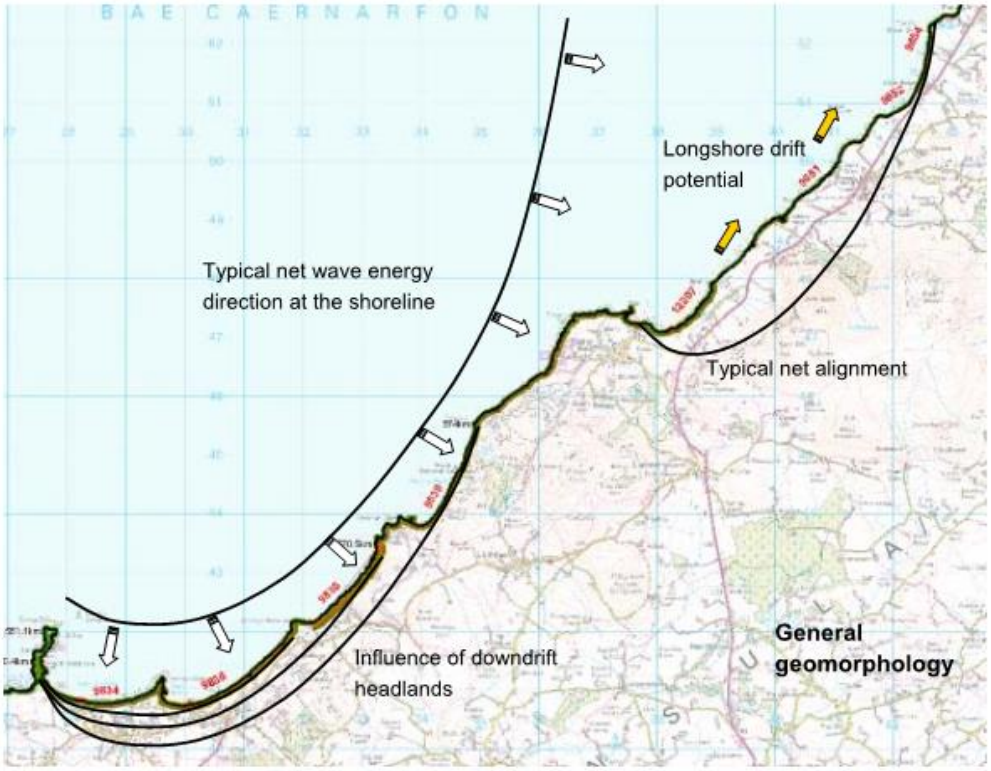


Figure 1: Typical net wave energy (SMP)

Assessment Outcome

We consider this risk to be controlled by ensuring contractor implements best practice. In the event of potential contamination, the nature of the local geography will direct the contaminant away from the sensitive habitat.

As such, the activity poses a minimal risk to the local biology, and the project will not result in a decline in any WFD quality elements or prevent them from attaining Good status or potential in the future. No additional mitigation are considered necessary during any phase of the project.

Section 3: Water Quality

Potential Impacts

The nature of the works will mean that water clarity will be affected due to disturbance of the soft soils and/or material introduced to site. This could be as a result of any of the following:

- Vehicles transporting and working on the beach
- Removing of the existing sloped sea wall and disturbance of the underlying ground and removal of the defective slipway surface.
- Regrading of the ground below the existing sloped sea wall prior to installation of the new sea wall.
- The concrete introduced to site to form the base for the sloped sea wall, cast in-situ steps or surfacing of the slipway.
- Cliff stabilisation activities at the rear of the proposed building.
- General excavation and construction works above on site.

Mitigation

Contractor to keep a clean site and regularly remove and cart waste material from site. Consideration given to the installation and maintenance protected drainage channels to divert clean water from entering construction areas, and suitably designed haul roads with silt fences for containment of sediments.

Where sediment disturbance is unavoidable contractor to ensure that silt mats, lagoons and silt fences are installed to contain the sediment. The sediment is to be captured, carted off site and disposed responsibly.

Water from pumped excavations is to be treated prior to discharge from site.

Best practices are to be implemented and spill kits to be located on site at all times.

Typically the proposed new concrete elements are to be precast, which is to be supplied by FP McCann. Where cast in-situ concrete is to be used, it will be proposed to use marine grade concrete to increase the longevity.

PVC piles have been proposed in order to contain the cast in-situ concrete forming the sea wall.

Assessment Outcome

Traffic is permitted along Nefyn beach, and as such the additional disturbance to transporting and working on the beach and disturbing the beach itself is not considered to have any great impact. Spill kits are to be located on site in order to clean up potential accidents.

The contractor will be responsible for the mitigation of runoff of sediment from the site. Measures are to be in place in order to divert clean water from the site, contain unavoidable sediments disturbed during the construction period and to treat and responsibly dispose of the captured sediments.

Typically the concrete elements are to be precast, which is to be supplied by FP McCann. The precast units should be clean and free of potentially contaminants. Where cast in-situ concrete is to be used, it will be proposed to use marine grade concrete to increase the longevity. PVC piles have been proposed in order to contain the cast in-situ concrete forming the sea wall.

The nature of the works will mean that the works will be carried out in quick stages. I.e the ground works will be carried out first (to remove existing sea wall), PVC piles installed prior to forming the cast in-situ elements. This part of the works may take a week, before works are likely to come to a stop during the concrete curing. Following this stage, the precast concrete elements will need to be installed. Given that the sloped wall is precast concrete, this phase of the works may only last a couple of days.

As such, the activity poses a minimal risk to the local water quality, and the project will not result in a decline in any WFD quality elements or prevent them from attaining Good status or potential in the future. No additional mitigation are considered necessary during any phase of the project.

Section 4: Protected Areas

Potential Impacts

The work is located near to the Special Area of Conservation (SAC) - Lleyn Peninsula and the Sarnau. The SAC runs adjacent to the beach and proposed site works (shown red clouded below) and extends down to the sea some 250m north of the site.

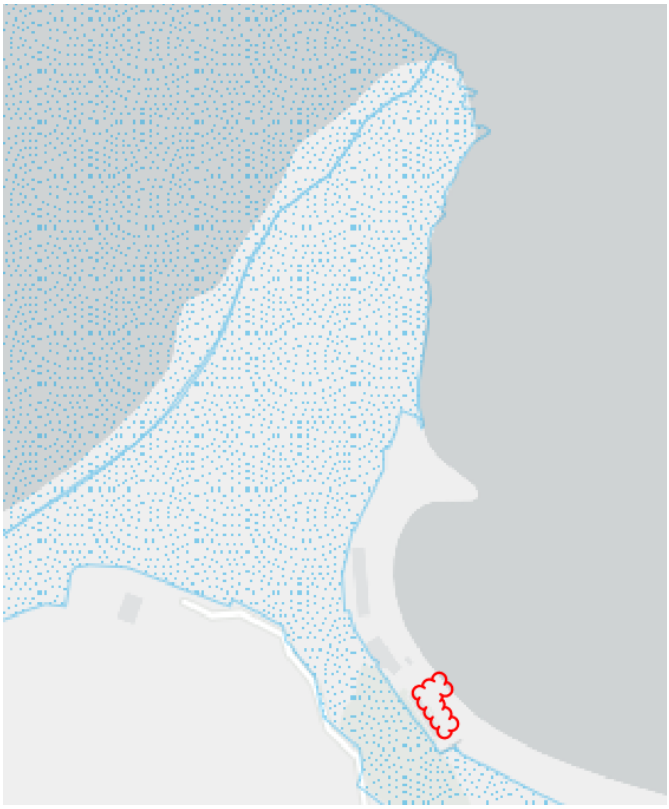


Figure 2: Map of Nefyn headland (blue dot) and site location (red cloud)

Morfa Nefyn beach is a Bathing Water site.

Mitigation

Figure 1 suggests that the net wave energy travels east, and potential impact from the site would move away from the SAC with the drift.

The construction method is designed for quick installation which will lead to less disturbance to sediment and water quality.

Given that traffic is permitted along Nefyn beach, additional disturbance to transporting and working on the beach and disturbing the beach itself is not considered to have any great impact. Spill kits are to be located on site in order to clean up potential accidents.

Assessment Outcome

As highlighted when assessing for Section 2, the activity poses a minimal risk to the local protected areas, and the project will not result in a decline in any WFD quality elements or prevent them from attaining Good status or potential in the future. No additional mitigation are considered necessary during any phase of the project.