

Method Statement – Buckhaven Shoreline Works

The following Method Statement describes how the Buckhaven Shoreline Works will be carried out. The works involve building a new gabion basket wall to protect the existing public facilities and landfill area from coastal erosion, with backfilling behind the new gabion wall to reinstate the eroded area and re-use of the existing rock armour to provide added protection along the face of the new gabion baskets. The works are required to prevent the public facilities (car park, picnic areas, and historical signage) from being damaged by coastal erosion and to prevent any loss of landfill material onto the foreshore. The extent and detail of the works are shown on the “Buckhaven Shoreline Works” drawing.

The works include the supply and installation of approximately 245m³ of gabion baskets extending from the existing stone pier structure to tie into the existing coastal banking (a distance of approximately 70m). The existing rock armour will then be repurposed to a position in front of the new gabion baskets to provide an added level of protection. **It is noted that both the gabion baskets and repurposed rock armour are all to be sited above the surveyed line of MHWS (refer to 2021 survey provided to Marine Scotland under email dated 20/12/21 and response from Thomas Inglis via email dated 01/02/22), and do not therefore fall under the auspices of the Marine Licensing process and are not therefore part of this Marine Licence Application.**

However, construction plant will need to enter the zone below MHWS and deposit the existing rock armour temporarily in the intertidal zone during the works to allow space for the formation of the gabion baskets. To enable construction a temporary working area will be required, and this will extend up to a maximum of 15m out from the east end of the works. **It is this temporary deposit of rock armour and the use of construction plant below MHWS that therefore forms this Marine Licence Application.**

The Contractor will access the foreshore with an excavator with hydraulic grab and will lift the existing rock armour protection away from the foot of the eroding slope and temporarily place to one side on the foreshore. The excavator will then swap to a bucket attachment and excavate a foundation trench approximately 1m deep and 1.5m wide approximately 1 - 2m out from the existing eroding slope for founding the proposed gabion baskets. The beach material from the excavations will be temporarily placed adjacent to the excavations. A geotextile filter layer shall then be placed along the full width of the foundation trench (i.e. will be under the first row of baskets), with sufficient length to allow it to reach up the back of the gabion wall to the top of the finished gabion wall.

A dumper or excavator will then move the gabion baskets from the compound to the excavated trench where they will be set up and tied together to form the bottom row of the new gabion basket wall (1m high * 1.5m wide units). A dumper will then deliver gabion stone (100 – 150mm size) from the compound to the empty gabion baskets for filling them. Once the first row of gabions is built the as dug beach material will be used to backfill the trench on both sides.

Once this first level is complete the second level of new gabions (1m high * 1m wide units) shall be formed on top in the same manner. Once this second level is complete the third level of new gabions (1m high * 1m wide units) shall be formed on top in the same manner. During the second and third levels, the Contractor shall place any remaining as dug beach material in behind the gabion baskets to infill the gap between the eroded coast and the back of the gabion wall. The Contractor shall also import, place, and compact additional fill material sequentially behind the new gabion wall to fill the remaining void between the eroded coast and the gabion wall. The fill material shall be a granular material compacted in 0.3m deep layers and an approximate volume of 280m³ is required.

The Contractor shall then import and place a 200mm thick layer of screened peat free topsoil over the area behind the new gabion wall (estimate to be approx. 140m²) and shall then supply and place a grass seed mix.

The original rock armour will then be lifted from the temporary stockpile on the foreshore and placed along the front of the finished gabion wall to offer a further layer of protection.

As noted above, all permanent works (i.e. gabion baskets, geotextile, fill material, and the reused rock armour in its final position) will be above the surveyed line of Mean High Water Springs and therefore are just out with the natural heritage designations in this area, but the temporary access and working area will extend up to around 10m below the surveyed MHWS line.

The working area will be fenced / barriered / taped off to the public, and deliveries from the compound to the working area shall be controlled by the Contractor using a Banksman.

It is anticipated that the works will involve an excavator (to dig the foundation trench), a dumper truck/s (to deliver the gabion stone and backfill material to the repair location), and a 6 or 8 wheel tipper lorry (to deliver the gabion stone and backfill to the site). It is anticipated that the gabion stone required will be delivered over approximately 25 - 30 lorry loads (assuming the use of a 6 wheel tipper), and the backfill likewise will be delivered over 25 – 30 lorry loads. It is anticipated that there will be a squad of 4 operatives on site. The excavator / dumper/s will access the beach via the existing coastal banking by using a small amount of local beach sand to create a temporary ramp in the works location.

The works will take place between 7:30am – 6:00pm over an estimated 20 - 25 days and are not expected to be significantly tidally affected due to their position relative to Mean High Water Springs. The estimated cost is around £86,000 and the works will be supervised by a Fife Council Clerk of Works.

The works are provisionally programmed for the period from mid May to Mid August 2022 (subject to priority works elsewhere), as they are considered urgent to prevent further erosion damage but need to await consenting before proceeding.

A selection of photos of the existing area showing the current erosion are included below.



General View of the Eroding Section of Coast Looking in an Westerly Direction



General View of the Eroding Section of Coast Looking in an Easterly Direction



General View of the Eroding Section of Coast Looking from the Foreshore



General View of the Eroding Section of Coast Looking in an Westerly Direction Showing the Proximity to the Historical Information Sign and Picnic Area (January 2021)



General View of the Eroding Section of Coast Looking in an Westerly Direction Showing the Proximity to the Historical Information Sign and Picnic Area (January 2022)