Email from Stephen Treby of the Marine Licensing Team, NRW. 18th December.

Good afternoon Both,

I can confirm that the marine licence application for **SA1 Southern Rock Revetment and Outfall Repairs** has now been processed by our Permit Receipt Centre and has been passed to the Marine Licensing Team. The application has been assigned reference number: **CML2575**

Howard (HB) Response.

From my initial checks of the application form I note the following:

For clarity:

MLT text is in BLUE

Extracts from the original Application Form are in BLACK

HB Comments are presented in RED

- Please provide a detailed method statement for the works which includes all machinery required to complete licensable activities. Please refer to the text at the end of this email with regard to the Method Statement headed **METHOD STATEMENT** and the comments below.

  The proposed machinery to undertake the works has been listed in item 3e as set out in the extract below. I will refer to these machines in the Method Statement Addendum at the end of this email. The items are referred to by the terms commonly used for civil engineering plant. For example, I have stated that an A25 dumptruck or smaller 9T Dumper would be used. It is possible that an A30 dumptruck would be used but there is no discernible difference between an A25 and A30 dumptruck. They are essentially the same thing apart from one having a slightly higher carrying capacity. Both are 6x6 articulated All Wheel Drive (AWD) dumptrucks of a simple size. Also, the 'A' is often used generically and refers to the Volvo brand but similar dumptrucks are made by other plant manufactures. We will be using a Volvo A25 or possibly an A30. The 9T dumper option is an off the shelf smaller item that could be used if required and so it is included as an option which will be subject to site conditions (ramp on existing rock revetment). I anticipate that the 9T dumper would be used to bring the small amount of concrete to the outfall. Excavators are specified by mass and we will used a tracked long carriage (LC) excavator in the mass range of 20T to 25T. They are essentially the same machine in terms of capability but with a slightly different weight. If a 20T excavator is specified, then it is possible that a machine in the range of 20T to 25T would be used. A 30T would typically be considered to be in a different excavator or machine category. When

thinking of allocating a machines for a project one might think in general mass categories such as 1.5T, 2.5T, 8T, 13T, 20T, 30T, 40T etc. We will be using a nominally 20T excavator and A25/A30 AWD dumptruck with an option to use a small 9T dumper if required.

McCarthy Contractors	Tracked Excavator (LC – Long Carriage) 20T
McCarthy Contractors	Tracked Excavator (LC – Long Carriage) 20T
McCarthy Contractors	Dump Truck - A25 (25T) OR smaller 9T Dumper.

- Please provide co-ordinates as Latitude and Longitude in decimal degrees to 6 decimal places. The co-ordinates should enclose all of the area below MHWS where the proposed activity will take place. If possible, please provide a shapefile alongside the co-ordinates for upload to our GIS.

Extract from Application Form:

All to National Grid Coordinates.

PLEASE REFER TO THE FILE – **1b GRID COORDS OF AREAS REQUIRING REPAIRS**. This document includes grid coords of the three local areas of works (1,2 and 3) along with grid coords of the overall envelope of the whole defence area (4) for reference.

Note HB – Can you confirm that you no longer accept Ordnance Survey National Grid Coordinates or is there some confusion ot misundetsnding with regard to the way that AUTOCAD outputs the coordinate data? I have been submitting marine licence applications for more year than I care to remember starting before they were called marine licences and were issued from Westminster (FEPA). I have provided Ordnance Survey National Grid Coordinates and whilst I can convert to Lat Long, as it will take some time, I just wanted to get clarification and confirmation if there has been a change in your requirements. The four areas were sent in a Word document as I thought that this would be straight forward to extract the data for your system. The Coordinates are presented in the standard AUTOCAD format with X = Easting and Y = Northing. I can give them to you as comer separated if it helps CSV VERSION ATTACHED as WORD FILE. This is possibly where some confusion may have arisen. I will have a look at the ACAD survey file to see if I can separate them out into a layer for you. If I am successful, then I will send the file over.

- Please complete a WNMP Signposting Document which can be found attached to this email and on our website here. Completed and attached.

METHOD STATEMENT

The text provided on the original form is presented in the following extract for reference:

The works comprise the repair of the damaged revetment and outfall (apron and wingwalls) by reconstructing the failed elements with more robust materials. See Drawings & Photo Sheet.

The damaged rock armour toe and apron will be reconstructed with larger edge armour founded on a new apron that will replace/upgrade the original damaged apron. There are localised areas of damaged revetement further up the slope that will be filled and strengthened with larger rock to reduce the risk of future storm damage.

The outfall apron and wing walls have failed and need to be replaced with structurally robust rock and concrete elements. The geometry/footprint will not change. The existing steel grating will also be renewed with a hinged arrangement to allow access to the pipe for cleaning.

Access to undertake these works will be located within the footprint of the existing works. The reinforcement of the existing scour apron will facilitate a firm accessway for plant to carry out the repairs. The currently displaced armour will be cast to the land ward side on top of the existing revetment to allow access on the upgraded bedstone apron that will support the more robust toe. Excavation will be restricted to the area of the existing apron and possible localised overburden of sand. Although there is no evidence of any silt within the existing footprint, it should be noted that there will be no excavation in silt or sand with any silt component. The robust toe and tie into the lower portion of the existing revetment will be formed as we make our way back towards the main access point.

The works will be most vulnerable to further deterioration during this Winter storm period, and regular inspections are currently being carried out. It is envisaged that the marine licence will be issued around April 2026 and we will assess the condition going into the calmer summer period and decide on the urgency in light of the condition and season.

The works objective is to repair existing elements with similar but more robust materials. The main elements comprise the existing toe and apron, the wing walls and apron to the existing outfall and the repair and strengthening of areas of the existing revetment that have been damaged by storm action. Reference should be made to the Drawings and Photo Sheet.

Access – An access across the existing promenade will be established adjacent to the materials stockpile area on the hinterland. A section of the existing rock revetment will be used as a ramp from the promenade directly into the works area within the footprint of the coastal existing defence. The repair and upgrading of the existing rock armour toe and apron will commence at the end of the access ramp on the structure and the upgraded apron will provide the access for all the remaining planned works.

REPAIR OF DAMAGED TOE and Apron – As indicated in the Access statement above the existing damaged apron will be upgraded and utilised as the access for the planned works. Works will be confined to the footprint of the existing coastal defence. The existing toe of dislodged and scattered rock amour will be placed on top of the existing revetment to make room for the repair and upgrade of the apron using bedstone material. This operation will continue in small sections around the perimeter of the existing rock armour toe to the outfall structure. Materials include Bedstone (D50 = 250mm) and Rock Armour (0.5T to 3.5T) The outfall apron and wingwalls will be reconstructed using rock amour and concrete (UW C35) . The existing gate is in poor condition and will be replaced with a new hinged gate.
Repair of Damage Up the Revetment Slope - Areas of the existing rock slope are damaged and these will be filled and reinforced with larger rock armour (1 to 2T). Access will be directly up the existing rock armour slope from the apron referred to above as the main accessway.

The damaged toe will be reinstated from the outfall structure as we retreat towards the main ramped access from the promenade. It should also be noted that the works are located in a non-navigable area of the Tawe and there are therefore no relevant navigation matters.

It was hoped that the works would be undertaken as an extension to works currently underway however the contractor will be demobilised but should be ready to remobilise when the marine licence is issued. The existing promenade closures will remain in place excluding the public from these promenade areas until the licence has been issued and the works are completed.

Method Statement Detail

It may be helpful if I provide a bullet point summary of the work elements or tasks in relation to the method we intend adopting to carry out the works. It should be noted that work is relatively straight forward and utilises the existing footprint of the revetment, the revetment apron and outfall apron and wing walls.

- Install promenade protection using three layers comprising HPS 5 non-woven geofabric, 19mm plywood and 10mm resin coated steel road plates.
- Remove stainless steel railing and store in secure container.
- Form shoulder and ramp perpendicularly down the existing rock revetment slope using bedstone between the promenade and the toe of the revetment. Ther will be an option to use a light duty geofabric on the ramp. Use 20T excavator with material supplied by A25/A30.
- Expose any existing and surviving scour apron and supplement / reinforce / reestablish (subject to condition) the bedstone apron between the end of the access ramp and the start of the most severely damaged rock armour toe. Use 20T excavator with material supplied by A25/A30 dumptruck reversing down the ramp to feed the excavator.
- Cast the dislodged and scattered rock armour currently present on the foreshore / area of original apron up and onto the lower portion of the existing rock revetment. Expose any existing and surviving scour apron and supplement / reinforce / reestablish (subject to condition) the bedstone apron through the most damaged area of the revetment

working towards the outfall structure. Use 20T excavator with material supplied by A25/A30 dumptruck reversing down the ramp and along the reestablished bedstone apron being used as a haul road / accessway to feed the excavator as it progresses towards the outfall whilst remaining within the original footprint of the costal defence.

- When the accessway in the form of the reestablished and upgraded bestone scour apron has reached the outfall, then work will commence in replacing the missing apron and collapsed wing walls. The apron will comprise concrete and rock armour and the wingwalls will be formed with large blocks of edge armour to hold back the existing rock revetment and to reestablish the geometry of the original wing walls with the more robust and sustainable edge armour. The materials (concrete and rock) will be delivered to the outfall area by the A25/A30 or a 9T dumper via the established bedstone accessway.
- The bedstone accessway will be used to gain access to the mid area of the damaged revetment using the 20T excavator. The excavator will cast up rock armour to these mid sections and incorporate rock into the damaged areas of the revetment to reestablish the original profile whilst increasing the mean mass of the rock armour revetment. Rock armour will be delivered to the toe of the existing rock revetment by the A25/A30 dumptruck.
- When the remedial work has been completed along the midline sections of the existing coastal defence, the excavator will install edge armour along the original line of the toe supported by the refurbished and reinforced bedstone apron. The rock previously placed up onto of the existing rock revetment will be reincorporated into the defence behind the new edge armour rock toe with new rock supplementation as required to reestablish the original revetment profile but with a more robust and resilient rock toe and scour apron.
- The works along the toe will be completed as the we work back towards the access ramp with the ramp being removed as we withdraw back to the promenade.
- The railings will be refixed and the promenade crossing removed.