

7. Activity Details

h) Method statement including schedule of work:

Construction works are expected to take approximately 13 weeks, subject to weather and tidal conditions. The proposed works comprise the installation of an approximately 70 m long DN300 HDPE marine outfall pipeline extending from the shoreline into the intertidal / shallow subtidal zone at Houton, Orkney.

Works will be undertaken primarily within the intertidal zone during suitable low tide working windows in order to minimise disturbance to the marine environment.

The indicative sequence of works is as follows:

1. Establish temporary site compound and secure the working area where required to restrict public access.
2. Materials and plant will be delivered to site and stored in designated areas above the high water mark.
3. Set out the pipeline alignment from the shoreline to the outfall location in accordance with the approved drawings. Access to the shore shall be via the pipe track route, excavating a temporary slope down and reinstating back to original on completion.
4. Undertake localised rock trimming / trench formation along the pipeline alignment where required to accommodate the pipe and concrete encasement. Excavation will be limited to the minimum required to install the pipe. The rock type, Stromness Flagstone, at levels close to the surface can be readily split along the sedimentary layer. Depending upon the location and frequency of vertical seams, the track will need some breaking with a hydraulic breaker. The maximum breaker size proposed will be suitable for a 14t excavator. With this, the rock type, and depth of trench, it is anticipated that the rock shall easily fracture and prolonged breaking will not be required. The general methodology proposed for the outfall is working between tides, whilst it is dry, to -0.8mOD below a working platform, constructed with approximately 80t clean 6G imported hardcore rock, placed to the east side of the track to form the access to place the gabion baskets. The excavated rock, subject to project timings, will be removed to the main onshore housing site for processing for backfill.
5. Weld HDPE pipe sections onshore and position the pipeline within the prepared trench.
6. Install a marine-grade grout bedding beneath the pipe to achieve full support and maintain the required line and level.
7. The pipeline will then be encased in concrete within the rock trench, with the finished surface formed flush with the surrounding rock.
8. Complete the connection to the onshore manhole and install the outfall termination and gabion scour protection.
9. Reinstatement of disturbed foreshore areas and removal of plant, materials and temporary fencing on completion.

All works will be undertaken in accordance with good practice marine construction procedures, including the Marine Construction Online Guidance, with appropriate environmental protection measures implemented. These will include minimising disturbance of the seabed, preventing the release of sediment, controlling the placement of grout and concrete, and ensuring plant and equipment are maintained to prevent fuel or oil leaks. Fuel and chemicals will be stored in suitable

containers with secondary containment, refuelling will take place away from the shoreline where practicable, and spill kits will be available on site. Any waste materials arising from the works will be removed from site and disposed of at appropriately licensed facilities.