

MAINTENANCE REFURBISHMENT NEW BUILD

PROJECT MARINE OUTFALL REPAIRS



Stonbury was contracted to design and deliver repairs to four outfalls which form part of a wastewater treatment works in the northeast of Scotland. All outfalls consist of a 600mm-diameter steel pipe encased in concrete pre-cast sections and each outfall varied in length and scope of works. The project is split into two halves, the first half was completed in the winter and the second is ongoing.

The simplest outfall repair involved carrying out concrete repairs to six existing concrete joint sections and undermining the outfall by excavating to form a new 2-metre-squared concrete foundation pad below the joints for the outfall to be tied into. At another outfall, the team completed 20 joint sections and foundation pads.

The team also carried out repairs to two of the 5-metre outfall sections themselves after they were found to be badly corroded. These were repaired using a specialist mix of concrete to meet XS3 specification for tidal wave and splash zones and an accelerator that was added on site to speed up the set time to avoid damage to the repairs when the tide returned.

Finally, the team installed over 500 tonnes of rock armour to protect the outfall structures from future wave erosion during storms and high tides. A similar scope of works is due to be repeated on the two remaining outfalls once the Marine Scotland license has been extended.

The team faced several challenges delivering the first half of the project during Scottish winter weather and high tides, and despite tides dictating working starts of 2am with short working windows, they embraced the challenge with smiles. The second half of the project will be delivered this summer.