

PROJECT REPORT

CONWY QUAY

CLIENT: CONWY COUNTY COUNCIL

CONTRACTOR: MOWLEM CIVIL ENGINEERING

PRODUCT: ROCWALL

QUANTITY: 600M²



DETAILS: -

CONWY COUNCIL WANTED TO EXTEND THE EXISTING HARBOUR FACILITIES AND IMPROVE THE SCOUR PROTECTION TO THE ABUTMENTS OF THE ROAD BRIDGE BY INCREASING THE LENGTH OF THE QUAY WALL. IN ORDER TO OVERCOME THE VERY POOR GROUND CONDITIONS AND SATISFY THE NEED TO WORK IN TIDAL CONDITIONS, THEY ELECTED TO USE A DRIVEN SHEET PILE, WHICH THEY WOULD THEN CLAD. RPC CONTRACTS DESIGNED A PRE-CAST CONCRETE PANEL, FACED WITH NATURAL PITCH FACED, DRESSED LIMESTONE. THE PANELS WERE DESIGNED WITH HOOK FIXINGS, WHICH WERE HUNG ON TO A SERIES OF REINFORCING BARS, WHICH HAD BEEN WELDED TO THE SHEET PILE AFTER INSTALLATION. THE RESULTANT VOID WAS THEN FILLED BY AN IN-SITU GROUT TO FORM A COMPOSITE WALL. THE PANELS WERE DETAILED WITH T & G JOINTING HORIZONTALLY FOR LOCATION PURPOSES, AND SPLAYED ENDS TO ALLOW THEM TO BE INSTALLED TO A RADIUS. THE MAIN CONTRACTOR INSTALLED WATERPROOF JOINTING AS WORK PROCEEDED, INCLUDING STOP-ENDS AT THE END OF EACH SHIFT TO ALLOW THEM TO CARRY OUT THE IN-SITU POUR FOR EACH SECTION BEFORE THE NEXT TIDE. SPECIAL PANELS WERE CAST TO ACCOMMODATE THE STEPS, FLOATING PLATFORM AND THE SLIPWAY.

SPECIAL REQUIREMENTS / DETAILS: -

THE ENVIRONMENT IS AN AGGRESSIVE TIDAL FLOW IN A MARINE ENVIRONMENT. THE PANELS WERE DIMENSIONED TO COORDINATE WITH THE SIZE OF THE DRESSED STONE REQUIRED TO EMPATHISE WITH THE EXISTING ENVIRONMENT AND DESIGNED TO WITHSTAND THE PULL-OUT FORCES OF NOT ONLY THE PANEL TO PILE FIXING BUT ALSO THE SIMILAR ACTION ON THE CAST-IN DRESSED STONE.

