

Project Fact Sheet

Client – McLaughlin & Harvey Contractors

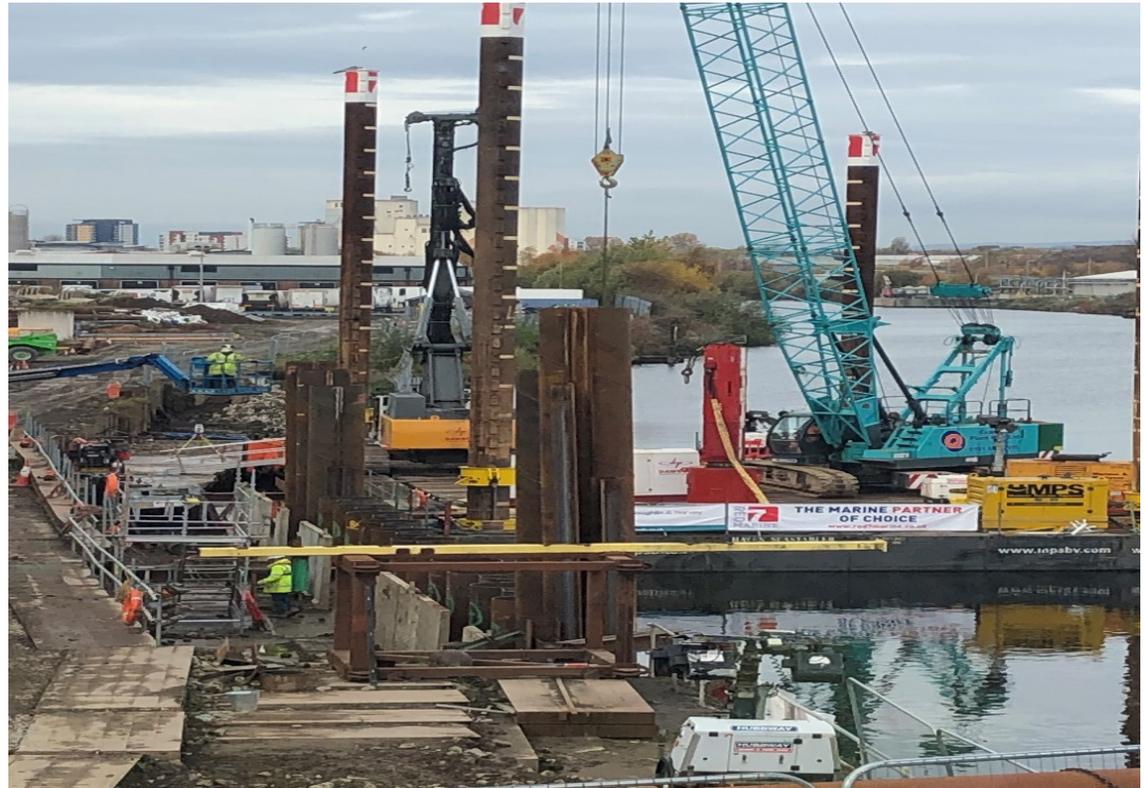
Project – Mode Wheel Flood Defence Works

Location – Manchester, England, UK

Start Date – 15th October 2018

Completion of Piling – 30th November 2018

Contract Value – Approx. £9m



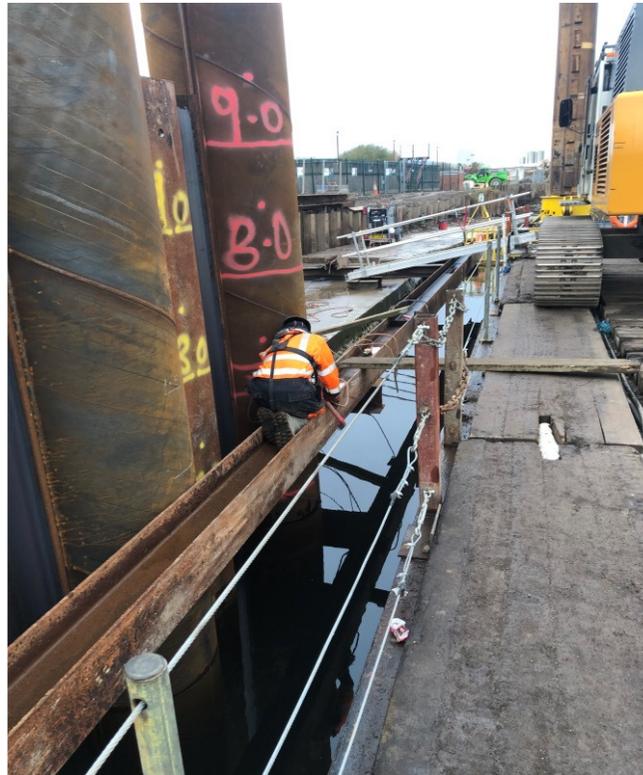
Project Brief – McLaughlin & Harvey won this contract with clients Peel for Manchester District Council to install ground stabilization works along the canal side in Manchester's Mode Wheel. Adjoining land owned by Valero has large petrochemical tanks that had been monitored for movement due to the underscoring of the river bank when water levels are high and the flood water are let through the old Mode-Wheel locks. TCL were appointed specialist piling sub-contractor to install new combi wall running parallel to the existing river bank and assist in the stabilization of the existing bank.

Project Parameters – With respect to the flammable nature of the adjoining land, spark arrestors were fitting to all plant and vibration monitoring was undertaken by MCLH to ensure no further movement to tanks were imposed by works being carried out. All installation works was therefore required to be done from a jack up barge on the river with a support barge bringing over tubes and sheets from the other side of the river daily. The combi wall consisted of 47No 965mm diameter steel tubes and 79No PU-sheet piles driven 1 tube to 2 sheets consecutively.

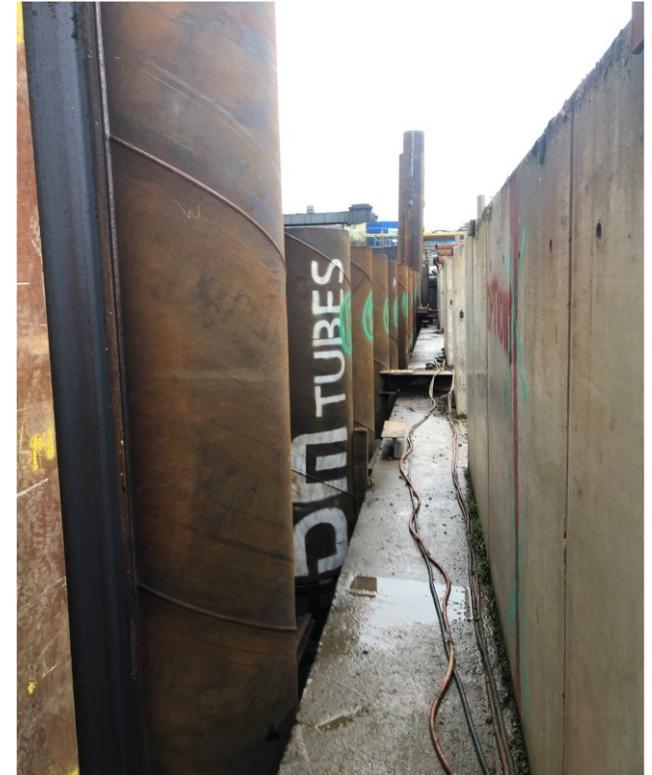
Sheets and tubes were to vibro driven to set on rock then impacted to refusal through a temporary ground gate fixed to an existing dead-man wall on landside.



Existing Dead-Man Wall Fixing



Waler of gate fitted front and back of piles



Gate removed when combi wall impacted to refusal



Piling Rig Installing Through Gate



Phase 1 – Existing Dead Man Wall



Jack up & support barge

Piling Gate – MCLH fabricated the ground and TCL produced stability calculations and temporary works design/certification for clients approval. The gates provide a stable guide to pitch the sheets and tubes accurately into place so they can vibrated into set and impacted to refusal.

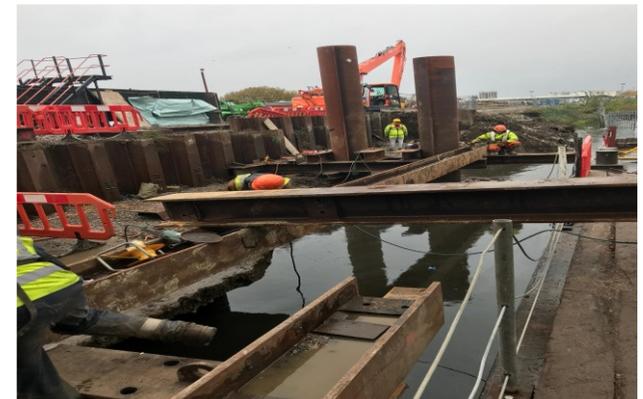
A second Jack-up barge was then brought into position so that the tube can be rotary cored into the rock, socketed and backfilled with concrete. (by Others)



Second Jack-Up barge



Rotary drilling rig



Setting up spud piles and last gate

Completion – TCL completed phase 1 (47No tubes & 79No sheet piles) within the 7 week programme which allowed drilling & coring to start after 4 weeks of installation. Piles were within tolerance and vertical alignment specified and sufficiently impacted into the rock below the water level to be deemed as refusal before coring was started.



Completed Combi Wall

