De-watering of hydrocarbon contaminated waters from a tidal influenced excavation, Torry Quay, Aberdeen

The Client: Civils Contractor

The Challenge: Following identification of hydrocarbon impacted water during de-watering works, Soilutions were contacted to provide a solution. Impacted waters comprised significant free phase oil on the surface, significant dissolved phase oils, and unknown sediment loading. Requested flow rates were 60m³/hr. Supervision was requested to be at a minimum.

The Solution: Within 1 week of instruction to proceed, Soilutions mobilised one of their own groundwater treatment kits comprising a 40m³ settlement tank, 40m³ oil water separator, 2 sand filters and 2 carbon filters. To increase the flow rate Soilutions cross hired in 2 extra kits to help cope with the required flow rates. All systems were powered by a site generator with a bowser. All 3 systems were set up within a bunded area, restricted to small area on the docks around which major civils works were being carried out.

Works were carried out under Soilutions SEPA Mobile Plant License. Impacted waters were pumped through all 3 systems simultaneously, removing sediments and organic contaminants, before being discharged to the dock.

During pumping at full capacity, the system uplifted very fine silty sediments in to the systems. Adaptations to the systems were made to accommodate the increased sediments. This included increased frequency of sand filter backwash, and changing of sand filter grain size. Sediment removal using chemical flocculants was investigated and ready for mobilisation had the problem persisted.

All works were carried out to strict schedules dictated by the contractor.

The project was delivered on-time and at the agreed budget.

Duration: 2 Months on-site