



## INNOVATION EDGE™: KELLY TANKS & MUDTECH SYSTEM

**Main Image:** Kelly Tanks & Mudtech groundwater treatment system

The system developed by Murphy in close collaboration with Kelly Tanks and Mudtech, provides an economic and environmentally responsible means of dealing with groundwater from excavations.

### Description

The Kelly Tanks & Mudtech System is a treatment system dealing with surplus groundwater pumped from dewatering excavations. The system has been developed by Murphy in close collaboration with Kelly Tanks and Mudtech.

The system consists of a large 12m<sup>3</sup> settlement tank which feeds into two smaller Pump Safe Ultra 100 tanks. These tanks are modular units and can be stacked together in order to increase capacity and facilitate add-ons such as pH control.

The settlement tank comprises a primary chamber to allow rapidly settling solids to drop to a collection point at its base. The effluent water then rises through combined lamella and coalescing filter media in the Pump Safe Ultra 100 tanks, increasing the effective settling area to just over 100m<sup>2</sup>.

Floating solids are captured with an additional run-down screen, while other solids are removed from the tank by opening a valve at the bottom. The treated water is discharged through a filter cradle and can then be either recycled through the system for further treatment or discharged to the ground.

## The Benefits

- Saves up to 95% of costs compared to other alternative water treatment systems.
- Easy to install and operate.
- Reduces maintenance compared to similar products due to the fact that it does not require power and has no moving parts.
- Enables dosing in proportion to the flow rate and controls the environmental impact by eliminating the overdosing disadvantage observed with similar automated systems.

## Application

The Laggan and Tormore Fields Pipeline Project in the Shetlands involved the installation of 610m of 200mm internal diameter stainless steel pipe. The project worth approximately £4.5m was carried out by Murphy on behalf of client Total E&P UK in 2013.

As the high organic content of the peat on the island required careful watercourse management, the Murphy environmental team consulted industry experts to devise a system that was robust, easy to transport, install and operate.

The Kelly Tanks & Mudtech System proved to be a cost-effective solution saving £120,000 over similar established treatment systems.

## End User Feedback

The system can be deployed on any project requiring water treatment. The chemical dosing levels need to be adjusted to suit the topographical and geological requirements of each individual project.

“Planning is key to effective water management on projects. The Kelly Tanks & Mudtech System has proved invaluable in dealing with silt contaminated water. The result shows how Murphy’s effective planning and collaboration with suppliers can provide innovative solutions which reduce both cost and environmental impact.” – **Brian O’Connell, Murphy Environmental Manager**



Water quality – stage one through to discharge (from left to right)

## Learn More

For more information, please contact Murphy Marketing & Communications Department at [communications@murphygroup.co.uk](mailto:communications@murphygroup.co.uk)



This is a brief description of the solution as we have applied it and should not be taken as exact. Its application must take into account the local environment and specific project requirements.

