

“At Robert Nicholas, we are committed to designing and delivering the best temporary dam solutions, to the highest standard, in the safest possible way and with the lowest environmental impact.”



## ◆ Solution Driven

Robert Nicholas supply Temporary Works for construction and inspection in water. There is never a one size, or one system fits all and we are a company determined to provide the right solution for you. If there isn't currently a solution then we will design and build one.

## ◆ Applications

- ◆ Viaducts, bridges & culverts
- ◆ Revetments, river banks & canal walls
- ◆ Weirs, locks & water control structures
- ◆ Outfalls and intakes
- ◆ Reservoirs, harbours & dock walls

## ◆ Water depth and access

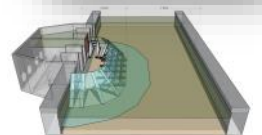
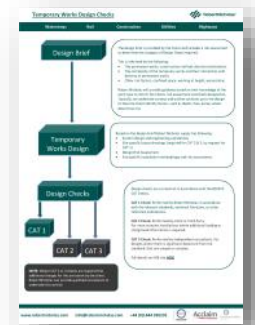
- ◆ The two main factors affecting installation
- ◆ We supply, man portable, standard frame dams to 3m in height....
- ◆ And custom design frames to 4.2m
- ◆ Limpet dams for any deep water harbour/marina/dock wall installations.

## ◆ A Complete Package

- ◆ Installation and hire of the temporary dam
- ◆ Dewatering and seepage pumps
- ◆ Flow management (over-pumping/fluming)
- ◆ Civils capabilities

## Working with you

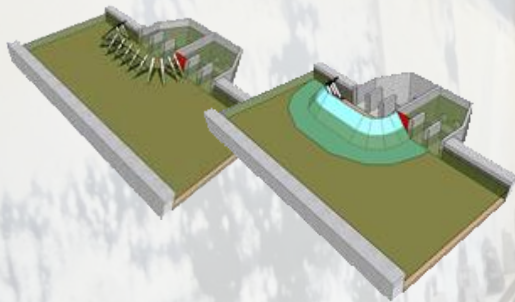
- ◆ Project designers and consultants—We can assist through early contractor involvement on either a formal or informal basis.
- ◆ Contractors—we are happy to visit site and advise on the best solution for your project.
- ◆ Installing the dam is just part of the process, we also provide:
  - ◆ design guidance and consultancy
  - ◆ Design check requirements
  - ◆ System design and engineering calculations
  - ◆ Site specific layout drawings (required for CAT 2 & 3, by request for CAT 1)
  - ◆ Design Risk Assessment
  - ◆ Site specific installation methodology and risk assessments



Robert Nicholas supports successful projects by adhering to industry temporary works procedures under BS5975; SIM 02/2010/04 and conforming with regulatory bodies standards such as The Eels (England and Wales) Regulations 2009 Statutory Instrument No. 3344'.

## The Geodesign Temporary Works Barrier

Robert Nicholas Ltd is the National hire partner for the Geodesign Barrier system. The Geodesign Temporary Works Barriers is a propriety temporary dam system designed specifically for holding back water. With design and loading calculations for dam sizes up to 4.2m this puts Robert Nicholas at the forefront of deep-water barrier development.



- ◆ The Geodesign Barrier is a proprietary temporary flood barrier system and is the only PAS/Kitemark carrying system on the market.
- ◆ With standard barrier heights from 0.45m to 3m
- ◆ Certified designs to 4.2m
- ◆ Robert Nicholas Ltd has been working with Geodesign Barrier for the last seven years to develop and refine its application as temporary cofferdam.
- ◆ The system is designed to over top should water levels exceed the performance limit
- ◆ There is a stability safety margin of 1.5
- ◆ The barrier is used by Network Rail contractors, Environment Agency principal contractors and the Canal & Rivers Trust.
- ◆ The barrier is a modular design and is lightweight, portable and adaptable to site constraints.
- ◆ The design is scalable meaning we can increase to any manageable size.
- ◆ Installation teams are experienced, fully trained and carry all the required qualifications and permits for operating in confined spaces, construction sites and rail



# Temporary Works Solutions

## High Capacity Flow Bypass

### Flume Pipes

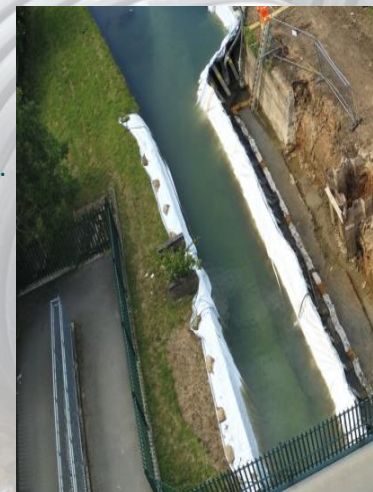
- ◆ A cheaper alternative to over-pumping.
- ◆ No pump or generator noise causing inconvenience in developed areas
- ◆ Pumps used in isolation prevent fish passage. (if required, baffles can be fixed into flume pipes to increase turbidity and aid fish passage)
- ◆ We have delivered countless schemes, including full river re-alignments, where this has provided a quick and easy solution.



### Open Flumes

When solid flume pipes don't provide sufficient flow capacity our open flumes can be an excellent alternative. We have two types of open flume.

1. Standard Geodesign temporary works barriers to create an open channel,
2. Our purpose designed open flume system. Ideal where a smaller footprint is required.



### High Capacity Over Pumping

When fluming can not be used or will not carry sufficient volume then we can arrange and manage the over-pumping delivery and set-up as part of a complete flow management package.

Multiple pumps can be set with float switches so that they come into operation only when required.



## Specialist design and build service

### Limpet Dams

- ◆ Underwater survey, design & build.
- ◆ The Limpet is built in sections, transported to and completed on site



### Mini-limpet dams

- ◆ Custom made dams to seal culverts.
- ◆ Working in tight and confined spaces can make it impossible or very difficult to use conventional damming systems

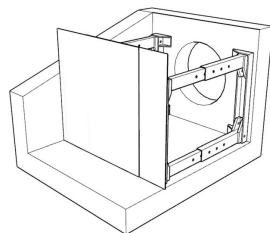
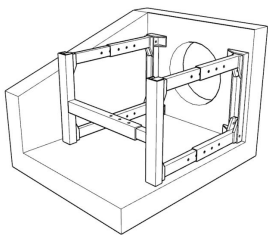
### Canal Dams

- ◆ Designed for silty bottomed canals and rivers.
- ◆ A narrower frame designed to sit in the silt providing quicker and easier installation and removal
- ◆ Designed with a wider footprint and lower facing angle to increase friction and downward hydraulic pressure.



### Headwall Dams

- ◆ Custom made dams to seal against headwalls.
- ◆ Ideal for inspections and maintenance works on outfalls and intakes.
- ◆ Fast and reliable installation



### Specialist site specific design

- ◆ Dams designed for specific sites with unique requirements
- ◆ Whatever the project, speak to us first.

