

## Ness Water Treatment Scheme

Invermoriston, Scotland

This is part of a £22M scheme for Scottish Water to improve water quality to the villages of Fort Augustus & Invermoriston, South of Inverness. This project was being carried out by a joint venture ESD (Efficient Service Delivery) formed by Stantec Treatment Ltd., Black & Veitch Ltd. and Galliford Try Ltd.



### The project

The first phase of the Andacrib concrete crib wall was to enable the construction of a level area behind the wall. This was to allow access to the rear of the wall to enable construction plant/cranes to install the tanks above. The second phase carried out a few months later was so that the area around the tanks could be levelled off to enable the construction of the building.

Phi Group were engaged early on in the scheme and several options were considered before the most cost effective solution was decided on. The Andacrib wall is almost 6.0m in height and therefore required “double models” to be used.

## The challenge

Due the topography of the site there needed to be a balance of cut and fill quantities. Also trying to keep these down to the minimum in such a rural location. Moving the wall further into the hillside created more excavations and the access road further from the entrance to the site. Deliveries of materials to the site up a small access road were also taken into consideration. Programming of the retaining wall works in conjunction with the tank installation and building works were also crucial.

## The solution

The Andacrib concrete crib system in the final location was considered as the most effective solution. The finished Andacrib wall is almost 80 lin m long with a face area over 350m<sup>2</sup> with a maximum height of almost 6.0m. All designed, supplied and installed by Phi Group.

## Project facts

### Owner(s)

Scottish Water

### Keller business unit(s)

Phi Group

### Main contractor(s)

ESD

### Engineer(s)

ESD

### Solutions

Retaining structures

### Markets

Infrastructure

### Techniques

Andacrib concrete crib

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