

# Dalmarnock Group 1 & 2 UID's

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| <b>Client:</b>   | Scottish Water      |
| <b>Location:</b> | Dalmarnock, Glasgow |
| <b>Value:</b>    | £15.3m              |
| <b>Duration:</b> | 5 Years             |

## In Brief...

Barhale were awarded a multi-million pound contract by Scottish Water to help them deliver necessary improvements to the foul water network in Glasgow in order to prevent Unsatisfactory Intermittent Discharges (UIDs). The Dalmarnock contract was part of the larger Glasgow Environmental Project which was a 5 year contract of works to improve the sewer network throughout the City.

Due to their expertise in the water industry, Barhale were employed to both; clean up the existing discharge areas, and remove and replace sections of the foul water network which were identified as susceptible to flooding.

## Technical Features...

The Dalmarnock programme was split into two groups – which covered multiple site locations across the district of Dalmarnock.

### A selection of the works delivered within group 1:

- Grampian Place: Flood alleviation within a built up residential area; involving interface with the public highway and a residential garden. The team installed new gravity pipelines complete with additional online storage and attenuation tanks. The tanks were fitted with return pumps to enable the flows to return to the gravity network for both the Ardgay and Strowan catchment areas
- Tollcross Park North: Construction of a new CSO chamber with powered screen. Installation of the associated pipework with this section of the works involved the construction of over 130m of 1000mm diameter micro tunnel and associated access shafts
- Westhorn CSO: Construction of a new CSO with 4no powered screens and a 20m long, sheet piled outfall at the river Clyde. These works took place within a recreation area next to a public walkway

### A selection of the works delivered within group 2:

- Lethamhill Road Flood alleviation project: Construction of a sewerage transfer scheme complete with on-line storm tank storage
- Fullarton Flood alleviation project: Construction of an 8m diameter, 10m deep attenuation shaft with; return pumps to the gravity line, static screened storm outlet, and an up-grade to the existing Battle burn culvert to accommodate a new EO
- Kempock Street CSO: Retrofit of an existing FRC chamber with 4 x hydrok mecmex screens and a new access road. These works took place within the main athlete's village for the Glasgow Commonwealth Games, and were completed in time for the village opening/ commissioning phase in January 2014

## Examples of Innovation...

This contract saw the development and instigation of several examples of innovation to improve the overall delivery. Some key examples included:

- Baillieston Road CSO – value engineering saw a substantial reduction in the amount of open-cut excavation required, by moving the CSO downstream from its Capex 2 position. This also meant that no costly service diversions were required, resulting in an overall saving of around £150,000





### Examples of Innovation Cont...

- Gables & Sandyhills – the team achieved a substantial reduction in the amount of trenchless pipework they had to install. This was done by challenging the original Capex 2 design, and instead taking a shorter open-cut route to the Loch Achray tank. The revised route was shorter, shallower and by-passed the main Shettleston Road area which would have required major service diversions, and a costly traffic management plan, saving around £450,000 on the final cost
- Tollcross South – The installation of a diversionary fork to the existing network, created with small diameter pipework, eradicated the need for a larger 1500mm diameter tank sewer at the eventual CSO location

### Engagement with the Community...

- Through collaboration with Scottish Water, the Barhale team were able to arrange for local residents to visit the site of the segmented storm shaft constructed at Fullarton
- Throughout the contract, the Barhale teams constantly engaged with local schools to inform the students of the works taking place, with a view to inspire young people to pursue a career in civil engineering
- The Site Team supported a local residents' group in their coffee morning fundraiser for Macmillan Cancer Research
- The teams ensured their work with the local communities were constantly approachable and sensitive to the needs of residents and members of the public. This involved; installation of information boards at all site compounds, letter drops, on-site drop-in surgeries (where members of the public were invited to voice their views on the works, to ensure the teams could better understand the needs of the locality), door to door consultations where requested by residents