

Brooklands Road, United Utilities Ltd

# Making a watertight case for flood defence

**£3.2m**

/ Project value

**October 2013**

/ The build commenced

**December 2014**

/ The build was completed

Credited for “going the extra mile”, our work on flood alleviation at Brooklands Road was acknowledged with a prestigious Customer Care Award by the client - United Utilities. Notable for our community engagement over the 60-week programme, which included a dedicated website, featuring live updates, the £3.2m project removed 40 properties from the DG5 Register - identified as at risk of flooding. A 20m diameter storm water detention tank, an 80m tunnel, a 3.66m isolation chamber and a 500m concrete storm sewer combined to provide extra capacity to safeguard against future extreme storm weather and, importantly, allay the genuine concerns of residents.

## The Brief

United Utilities, one of the largest water companies in the UK, aimed to eradicate the potential flooding risk to 40 properties in Brooklands Road through the delivery of a two-phased construction programme to strengthen its sewers network and related infrastructure. Work also included isolation and valve chambers, a control kiosk, pressure relief column and an access road.





“It is the teams who show great determination and effort in the face of difficult circumstances on our projects that we put forward for these nominations and the GRAHAM team reacted with a positive can-do attitude and worked extremely hard with our customer care team to improve the face of the construction and public interface on this project”

John McNeil  
General Manager for United Utilities

### The challenges

From the outset, the St Helens Planning Authority placed certain constraints on the site pre-construction, which necessitated design revision and collaboration with the Authority. Upon work commencement we identified that a PE water main ran along the route of our intended sewer. Proactively, we negotiated this challenge through the implementation of a technique change – from open dig to trenchless guided auger bore. Throughout the programme our team also had to comply with local protection orders that were enforced to preserve the surrounding trees in the area.

### GRAHAM's solution

The Brooklands Road project was carried out in two phases to minimise disruption to local residents. They remained at the forefront of our construction operations and were kept up to date with developments through a bespoke, live website, which included the platform for residents to give feedback. Importantly, we facilitated the connection of the main detention tank to the network ahead of schedule, which was subsequently used to avert two potential flooding events during the fourth quarter of 2015. The 20m tank, with a storage capacity of 2445m<sup>3</sup>, was constructed above an existing aquifer and required a dewatering system to control ground water levels during construction. To ensure water quality was maintained throughout the project, routine quality inspections were completed. Exceeding expectations, we surpassed United Utilities' environmental targets and achieved over 85% of waste diverted from landfill and over 50% of recycled aggregate.

### Outputs & Benefits

- / **Client Recognition:** Winner of the United Utilities Customer Care Awards
- / **Environmental Award:** Achieved a Green Apple Silver Award in recognition of the positive environmental practices established
- / **Public Engagement:** A bespoke project website was created and regularly updated. It allowed residents to provide feedback
- / **Health and Safety Focus:** 97,000 RIDDOR free “man-hours”
- / **Exceeding Expectations:** Surpassed United Utilities' waste and recycle targets and standard thresholds
- / **Prefabrication for On-Site Savings:** The main detention tank was constructed with pre-cast concrete units, which significantly reduced the pollution at the site and incorporated savings



For more information on how we're delivering lasting impact:

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**GRAHAM**