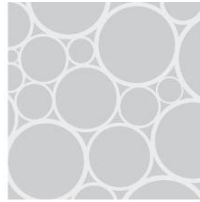




ENVIRONMENTAL



FLOOD RISK



DRAINAGE



ECOLOGY

# UU Model Maintenance Programme

## United Utilities, 2007-09

### Project aims

To build and verify hydraulic sewer models for a number of catchments. These models were to be used as strategic planning tools across the whole catchment, but also required more detail at CSO and known flooding locations for use in solution design.

The flow surveys were planned to provide a strategic level of verification, but then also additional data at pumping stations, CSOs and known flooding locations. In addition, telemetry data from PSs and STWs has been obtained.



### Project summary

Hydraulic models have been built and verified to the UU AMP4 modelling specification for the catchments of:

Bury & Ramsbottom	74,000 pop
Heywood	38,000 pop
Whitefields	33,000 pop
Holmes Chapel	13,000 pop
Lawton Gate	8,000 pop
Helsby	24,000 pop
Oldham Phase 3 (ongoing)	81,000 pop
Castleton (ongoing)	7,000 pop
Dearham (ongoing)	3,000 pop
Levens (ongoing)	1,200 pop

As part of these model build and verification studies, considerable emphasis was placed on analysing the quality of already available models to assess if these could be used in full or in part in the construction of the new model.



Flow survey verification has been undertaken against individual verification events and then continuous flow data from the whole flow survey period.

As part of this programme, Clear staff have also been seconded into UU to assist with the verification review and sign off process of other models constructed within the region by other parties.

All model maintenance projects have been delivered within budget and within the required timescales.

