

Drainage Area Studies

Client: Scottish Water

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Water**
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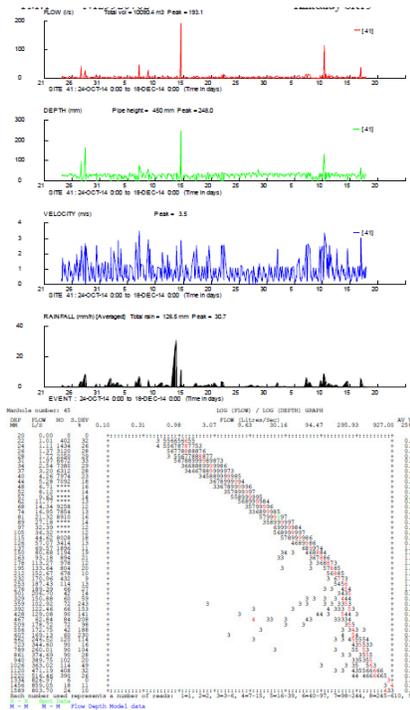
Drainage area studies (DAS) support the strategic planning for catchments and allow essential understanding of sewerage systems and their performance against social, environmental and operational targets. Practical engineering experience is essential to support hydraulic modelling and desktop studies to ensure that capital investment is sustainable and present best value.

Caley Water, in conjunction with CH2M, has supported Scottish Water (SW) in their early start programme for SR15 investment period, aiming to deliver high quality DASs for catchments across Scotland. We have developed the models and DAS for Kirkcaldy and Turriff.

The work has involved reviewing previous modelling studies and targeting areas within the models which require further assessment or maintenance. These areas were scoped for survey and the results interpreted to update the hydraulic models. The DASs also included a short term flow survey to re-verify the models. After model verification, a Needs assessment is carried out and Options are developed on the basis of the Needs assessment conclusions.

These projects are extensive and it is imperative we maintain a high level of quality throughout, which is achieved through a rigorous internal QA process.





Services provided

- Review existing data and undertake due diligence check on hydraulic models provided to determine suitability and critical areas within the model.
- Review historical records and create a ‘model timeline’ to help identify model maintenance requirements.
- Scope and manage manhole, ancillary and CCTV surveys.
- Scope and manage short term flow surveys.
- Carry out a targeted Model Build and Verification as per SW DAS specifications. This also involves analysing and collating survey data as well as updating the hydraulic model with this data.
- Undertake a full Needs Assessment and present to key Stakeholders.
- Develop Options to solve any issues derived from the Needs Assessment
- Liaise with all relevant stakeholders throughout the project life cycle.
- Prepare reporting in accordance with specification.

Solutions and added value

Model maintenance is essential if drainage area plans are to remain useful and current. Caley Water has extensive knowledge and experience in Drainage Area Studies, and we have used this knowledge to develop models targeted at specific catchment drivers such as flooding, unsatisfactory intermittent discharges and future growth. We are able to provide high quality models which allow our clients to use these as increasingly accurate tools with which to predict future performance of the sewerage network and identify critical areas of this network.

Our approach provided SW with a tailored product, delivered on time and within budget. This provided our client with

- a greater understanding of the drainage systems
- improved knowledge regarding the current condition and operational performance of the network
- identified rehabilitation needs of infrastructure and allow prioritisation for investment
- range of solutions to address catchment needs to allow comparison against business requirements.