

Hillington, Cardonald and Penilee - Surface Water Management Plan

Client: Sweco / Glasgow City Council / Renfrewshire Council

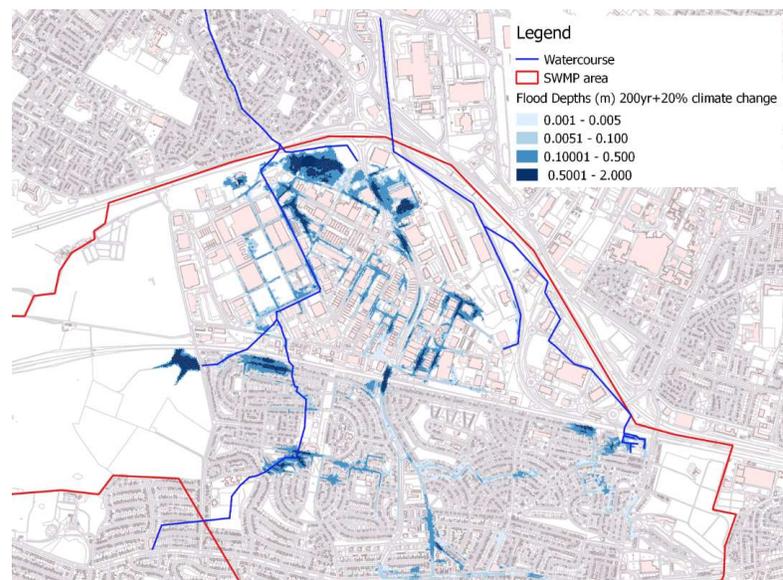


Caley Water provided InfoWorks modelling support to Sweco in delivering the Hillington, Cardonald and Penilee Surface Water Management Plan (SWMP) for Glasgow City Council and Renfrewshire Council.

The SWMP is a long-term strategy, that was developed in consultation with key organisations such as the Scottish Environmental Protection Agency and Scottish Water, to identify the most appropriate and cost-effective way of managing surface water flooding and to prepare for the impacts of climate change.

Caley Water undertook 1D/2D modelling of the minor and major drainage systems in InfoWorks ICM to understand existing and future flood risk in extreme rain events from the sewer system and overland flow.

Solutions and strategies were tested and evaluated using the hydraulic model, before being presented to stakeholders and local residents at a public consultation. Potential solutions included separation of surface water runoff from the combined sewer and the implementation of Green Infrastructure (SUDS).





Services provided

- Hydraulic model due diligence check and development to ensure model suitability for study.
- Site walkover and assessment.
- 1D / 2D modelling of separate and dual drainage systems in InfoWorks ICM.
- 1D / 2D watercourse modelling.
- 2D modelling to review overland paths and prepare flood risk maps for a range of return periods including climate change factors.
- Support preliminary design of solutions to address surface water flood risk.
- Site appraisal at option feasibility stage, including constraints assessment.
- Liaise with all relevant stakeholders throughout the project life cycle and present study findings at stakeholder meetings.
- Attend public consultation and present study findings and potential solutions.
- Economic analysis of shortlisted drainage proposals, including construction and operational costs, reduction in flood damages, traffic impact and the quantification of non-monetary benefits such as amenity value and education.
- Prepare reporting and schematic drainage plans in accordance with specification.

Solutions and added value

Caley Water understands the importance of an effective surface water strategy in the management of surface water and in preparing for the impacts of climate change. Through our extensive experience, we are skilled at identifying the most appropriate and cost-effective solutions for our clients.

We are able to provide high quality 1D/2D models in order to fully understand, and subsequently manage, all potential sources of surface water flooding.

In this case, our modelling expertise contributed to our client meeting their key objectives for the SWMP, including:

- Reduce the risk of flooding to homes, businesses and roads.
- Prepare for climate change.
- Help to protect watercourses from pollution.
- Improve local green spaces, habitats and biodiversity, contributing to enhanced placemaking.
- Enable economic development.