

Aesthetic Studies

Client: Scottish Water



Scottish Water provide sewer network licenses restricting the amount of discharge into a receiving waterbody from a Combined Sewer Overflow (CSO) or Emergency Overflow (EO). In order to ensure that these licenses are adequately addressing any unsatisfactory criteria, Aesthetic Studies are undertaken in catchments with the relevant EC01G, EC01F and EC01C drivers. These studies focus on the environmental impacts from sewer overflows, and act as the primary step in providing suitable screening for 1 in 5 year events at CSOs.

Aesthetic studies comprise of several stages, including scoping, site visits, modelling assessment, solution development and reporting. Assets discharging to a waterbody of interest as specified by Scottish Waters Technical Expression document are scoped for a catchment aesthetics study. A preliminary desktop review is undertaken in order to assess accessibility to the CSO sites, before the first of three site visits is undertaken. All three site visits investigate the condition of the watercourse upstream, downstream and in the immediate area of the CSO outfall. Sewage Related Debris (SRD) is recorded using data collection software, which is later used to score each asset as satisfactory, unsatisfactory or very unsatisfactory. Public complaints in relation to CSOs are also considered during the classification process, alongside any historical or observed dry weather operation.

Hydraulic models are used to determine predicted spills from sewer overflows during a 1 in 5 year storm event. Where unscreened spills are predicted, a screening solution scenario is implemented to the model and assessed. Assets requiring screening or upgrades are prioritized based on evidence obtained during the site visits, aesthetic classification of the receiving watercourse and predicted annual spill volumes. Project costs are estimated by Scottish Water, and integrated into the report.



Services provided

- Scope CSOs within the relevant catchment using SW GIS and SW TE
- Plan and manage three site visits to the outfall, meeting requirements for weather conditions
- Plan and manage a lift and look survey of each asset, including those assets requiring ATCs
- Undertake desktop risk assessments prior to site visits alongside dynamic risk assessments during visits in order to meet best HSE practise
- Determine classifications for each of the assets studied using the latest aesthetics methodology guidance
- Classify watercourses to have high, moderate, low and non-amenity values following the guidance in RAT-RM-07
- Use the latest catchment model to assess 1 in 5 year predicted unscreened spills from the assets
- Provide high level screening solutions for those assets which are predicted to spill unscreened in a 1 in 5 year storm event, including those scored as unsatisfactory from site visits
- Develop costing sheets and drawings in order for cost estimates to be prepared by SW

Solutions and added value

Caley Water has knowledge and experience in determining appropriate screening solutions for unsatisfactory assets. Using the appropriate guidance, Caley Water ensure that the proposed options meet the criteria set by SW and SEPA as well as being environmentally conscious and cause minimum disruption to the existing network.

Caley Water are confident in assessing risks during site visits, and negotiating access between stakeholders. Our approach provides Scottish Water and SEPA a tailored assessment of the performance of existing CSOs, identifies aesthetic needs and offers suitable screening solutions.