

The following faults have been observed on a regular basis on drawings submitted for design approval together with recommended improvement to increase likelihood of first time approval.

Sewer located near/within/under SUDS measures

This has been noted on a number of occasions especially under Aqua Block (Form Pave), soakaways and basins.

Recommended improvement

Sewer should be located at least depth + 1m away from any SUDS measure and no sewer (foul) should run within the open space where a basin is situated.

Shallow gradients used when steeper gradients are possible

Pipework not constructed to steeper gradients (ie minimum depth to ground/road levels).

Recommended improvement

Backdrops shall not be used on the foul sewer. They may be used where all legs above the backdrop are at a gradient of 1 in 80 or steeper unless the sewer requires deep excavations or where the sewer is to be laid down a steep embankment (ie deeper than 5m). Shallow gradients upstream of steep gradients will not be accepted unless in exceptional circumstances where design constraints dictate.

Sewers in gardens

Sewers designed within garden areas/private driveways.

Recommended improvement

No sewer serving a new development shall be constructed within any plot on that development. A new sewer may only enter an existing garden/driveway in order to connect to the existing sewer located in that garden/driveway and only if there is no other option available (A draft Deed of Servitude and Notice plan to be issued to affected landowners shall be submitted with your application for approval).

Pumping stations (all aspects) especially calculations and parking facilities

Insufficient calculations and access area for maintenance vehicles submitted.

Recommended improvement

The layout plan shall show all parking facilities and access into pumping station as well as the slab, wet well, kiosk and valve chamber. The gravity foul sewer shall connect into the wet well opposite the pumps at all times. Your detail sheet shall show a plan and section at scale 1 in 25 showing all valves as noted in the 'Sewers for Scotland' document. The following calculations are required: sump, storage, flow into wet well and rising main velocity. Safe access/egress for tanker to the pumping station must also be included in the development road design.

Pumping main

Insufficient calculations and detail on the longitudinal section drawing.

Recommended improvement

All air valve chambers, de-watering chambers and break pressure chamber shall be shown on the longitudinal section. Longitudinal sections shall include from the pumping station wet well to the point of connection into our existing gravity sewer.

Manhole types

Not stated on longitudinal section drawing.

Recommended improvement

These details shall be shown on your longitudinal section.

Sewers located too close to buildings/walls

Recommended improvement

Sewer shall not be located in close proximity to building structures (ie building/wall) unless in exceptional circumstances due to location of our existing sewer. The proposed sewer shall be constructed at a minimum distance of depth + 1m away from the building structure.

Sewers constructed at shallow depth

Sewers constructed at minimum depth (ie less than 1.4m) causing the sewer and sewer tail to interfere with underground utility pipes and cables located nearby (ie within the footpath).

Recommended improvement

Sewers shall be constructed at a minimum depth of 1.5m unless design considerations dictate otherwise.

Trees not shown on layout

Existing trees and proposed tree planting areas not shown on layout plan.

Recommended improvement

All existing/proposed trees within 10m of the sewer require to be shown on the layout plan.

Insufficient wayleave width for future access

Insufficient wayleave width for future maintenance.

Recommended improvement

A minimum distance of depth + 1m is required either side of the sewer. This area must be wholly outwith any plot boundary.

No deed of servitude agreements

For sewers located within land outwith the developers ownership.

Recommended improvement

Written confirmation of agreement in principle is required from the landowner to be submitted with your application. Prior to adoption, a signed Deed of Servitude and Notice plan must be submitted.

Concrete protection

Extent and type of protection required not shown on longitudinal section.

Recommended improvement

The full extent of concrete protection and type (ie Slab or Surround) required to be shown on the longitudinal section.

Location plan

No location plan submitted.

Recommended improvement

A location plan shall be submitted with your application either separately or incorporated within your layout plan.

Liaison with SEPA/Flood Authority on new surface water discharge to watercourse

No liaison taking place with SEPA and Flood Authority on treatment/attenuation requirements.

Recommended improvement

Letter from SEPA/Flood Authority confirming their comments should be submitted with the application form.

Finished floor levels and plot numbers

Not shown on layout plan.

Recommended improvement

All plot numbers shall run consecutively and be clearly noted within each plot. Finished floor levels shall also be noted within each plot. For flatted developments, plot numbers for each self contained block should be shown and run consecutively.

Incorrect sewer tail layout

Connections shown within adjacent plot prior to connecting to sewer.

Recommended improvement

All sewer tail connections shall connect directly into the sewer preferably at 90 degrees without entering an adjacent plot.

No longitudinal section drawing

None submitted.

Recommended improvement

Longitudinal section drawing should be submitted with every application for all sewer legs and should not include road alignment information.

Insufficient length of sewer to serve all plots

Particularly at hammerheads, sewer terminated too far from plot boundaries.

Recommended improvement

The length of any sewer tail from sewer to disconnection manhole should not exceed 20m.

Sewer tail connecting directly into manholes

Excessive number of sewer tails shown connecting directly into manholes.

Recommended improvement

A maximum of 3 sewer tails may connect directly into a terminal manhole. Sewer tails connecting to all other manholes should be avoided wherever possible and should connect directly into the sewer.