

## Addendum to Sewers for Adoption 8<sup>th</sup> Edition

This document provides additional information for all Developers relating to the adoption of sewers.

### Sustainable Drainage Systems (SuDs)

Severn Trent Connect will consider the adoption of SuDs as long as the systems are designed and constructed in accordance with the Ciria SuDs manual (C753).

The table below sets out which SuDs techniques are adoptable by Severn Trent Connect:

Asset	What is adoptable?
<b>Sewers and Manholes</b>	In accordance with s102 or s104 of the Water Industry Act 1991, all sewers and manholes that are in line with Sewers for Adoption 8 <sup>th</sup> Edition will be adoptable.
<b>Underground Storage</b>	Underground storage including tanks and large diameter pipes are generally adoptable. However, certain types of underground storage are not approved for adoption by Severn Trent Connect, please contact us for further guidance. We will adopt geocellular storage products that allow for regular maintenance such as jetting.
<b>Above Ground Storage</b>	Above ground storage assets such as balancing ponds, swales and detention ponds are adoptable
	Sewers reliant on this storage option are also adoptable.
<b>Infiltration Systems</b>	Infiltration systems, such as soakaways and infiltration trenches are adoptable if the soakaways serve houses and adequate information is provided about local ground conditions/percolation rates.
	Sewers reliant on this storage option are also adoptable if Severn Trent Connect has a perpetual right to discharge.
<b>Private Storage</b>	Private storage assets are not adoptable.
	Sewers reliant on this storage option are adoptable if a maintenance regime is in place in line with the CIRIA SUDS manual report C753 and Severn Trent Connect has in place a perpetual right to discharge.

### **Manholes – Backdrops:**

In cases where the pipework cannot connect by gravity, Severn Trent Connect will consider the use of Backdrops into manholes. You will need to contact us to discuss your requirements further.

### **Manholes - Ladders and Step Rungs**

Severn Trent Connect permit the use of ladders and step rungs in manholes. Installation must be in accordance with the requirements of "Sewers for Adoption" 8<sup>th</sup> Edition – section B 6.2 Access.

### **Manholes – Shallow Manholes (Type E/4)**

The use of shallow manholes is permitted subject to our design approval. Plastic manholes may be used in grass areas and in driveways but should not be used in roads. If a shallow manhole is constructed in the driveway, Severn Trent Connect will require it to be cemented with a concrete bedding to give it additional strength.

### **Flow control chambers**

Please provide hydraulic curves and maintenance details for the hydrobrakes.

Please ensure the hydrobrake design is according to the following guidance:

- Flow control chamber is to be minimum 2700mm diameter to allow enough space each side of the weir wall to work in.
- The incoming side of the flow control chamber where the flow control device is situated requires a double opening in order to provide access for removing & replacing. An opening of 1240 x 600 would suffice.
- Further to the pivoting by pass door a separate 100mmx100mm penstock surface box with non-rising spindle which is capable form operating from the surface is also required.
- A weir wall should be installed in the middle of the chamber, this should be to the height of the 1:100yr plus 30% climate water level.
- There should be a 100mm gap between the top of the weir wall and the bottom of the cover slab to create a nappe should there be an extreme rainfall event.
- The flow control device should be mounted on the weir wall.
- There should be a neoprene gasket installed between the flow control device and the weir wall.
- A penstock bypass of minimum 150mm dia. provided. This should be operated via a non-rising spindle which terminates at its own cover at ground level.
- A sump before the flow control device in required in order to accommodate the flow chamber. Size of the sump should be according to flow control device manufacturer details.
- There should be a minimum of 1.2m clearance to either side of the weir wall to the chamber walls.
- The chamber construction should be of precast concrete rings or brickwork.
- The base of the chamber, up to pipe soffit levels, may have to be of brickwork or concrete to ensure that concrete rings are not cut around any pipes to the chamber.
- Please show levels of the weir wall, ground level and pipe levels as a minimum.
- Please provide details on how the weir wall is to be constructed, reinforced concrete or English bond brickwork. Please detail wall width.
- Please provide the followings warning signs:
  - The warning signs are to be 40mm high red lettering on a white plastic base. The plastic base dimensions are to be 300mm x 300mm x 6mm
  - The base is to be resistant to attack by sewage environment
  - The warning sign is to be mounted on a removable safety grid available from cover manufacturer
  - The sign in flow control chamber is to read `CAUTION - HYDROBRAKE LOCATED HERE`
  - A sign must be fitted in the upstream MH reading `CAUTION - HYDROBRAKE DOWNSTREAM`
  - A sign must be fitted in the downstream MH reading `CAUTION - HYDROBRAKE UPSTREAM`

- Invert of the penstock & flow control device to be the same level.
- Penstock to be disc type (Ham Baker or similar approved)
- A channel is required from the penstock