

Technical guidance

To support you in making a Section 104 application

This document provides technical guidance which will help when making an application to have new sewers adopted under Section 104 of the Water Industry Act 1991.

All submissions for new sewers being offered for adoption should be made in accordance with the Sewerage Sector Guidance appendix C Design and Construction Guidance (DCG). Pumping stations should be designed in accordance with DCG and the latest United Utilities Pumping Station Addendum document. Any design with sustainable drainage systems (SuDS) should be designed in accordance with CIRIA C753 'The SuDS Manual'.

1. S104 Pre-development enquiries

1.1 Pre development enquiry - Determining the drainage strategy

If you plan on draining surface water to a sewer you must complete a pre development enquiry first. The pre development service will also provide advice if you need to move an asset or need our help making a connection through a sewer requisition.

1.2 Pre design application - complex developments.

If the development is large or complex you should also complete a S104 pre design application, this will allow us to give early advice on adoptability without the need for you to provide full details associated with a full application. The following are areas that would benefit from these discussions; SuDS, complex storage components or pumping stations and developments effected by multiple phases/landowners or connections.

2. Early Design considerations

2.1 Existing services

The need to cross existing services (both chartered and unchartered) is considered to be a foreseeable challenge in making a sewer connection and the presence of existing services should be considered early within the design process to ensure the connection can be made. For this reason, it is unlikely that the presence of existing services alone will provide justification to allow agreement of an alternative mode of connection.

2.2 Location of sewers

The location of any public sewer should not impede our ability to safely carry out basic maintenance duties, typically sewers should be located in public highway or in public open space.

2.3 Ground Conditions

A ground report should be provided as part of the application that considers all aspects of the developments soil properties, geology and hydrology. The development should be assessed for variations in soil conditions, areas of filled land, preferential underground seepage routes, and variations in the level of ground water. The final design should show how any issues have been mitigated (including but not limited to water quality, contamination, ground failure and the effects of adjacent developments).

As ground conditions across the development can vary, we would recommend that if the proposal includes SuDS that you complete a targeted geological assessment to support the proposed location for any SuDS component.

2.4 Proposals with reduced levels

It is common for sewers to surcharge in periods of heavy rain, this should be carefully considered when planning a development. Where existing site levels are to be reduced introducing cover levels that are lower than the existing sewer network could increase flood risk and should be avoided. If this is not possible it may take additional time to undertake network modelling work to understand the impact, which could delay the design acceptance.

3. Surface water requirements

3.1 General

The discharge of surface water to the public sewer should only be considered where alternatives have been discounted; evidence to confirm that infiltration or discharge to watercourse is not possible will be required.

We will not allow land drainage to enter sewers offered for adoption.

Any new adoptable system should be designed to achieve no surcharging in a design storm (1 in 2 year event), and no flooding from any part of the drainage system in a 1 in 30 year event. The design of the storage should be on a basis of the worst duration for a 1 in 30 year return period, the capacity may need to be increased further depending on the flood risk outlined by LLFA and planning conditions.

Combined storage facilities will not be adopted. The developer will need to provide a system whereby surface water flows are stored before combining with any foul flows.

3.2 Sustainable Drainage Systems

SuDS meeting the legal definition of a sewer (see the DCG for detail) which form part of a continuous network, must be included within the application. SuDS components will be assessed against the standards within the Sewerage Sector Guidance. DCG & CIRIA.

We will not adopt property level SuDS, off-line exceedance SuDS or sewers that discharge to privately owned SuDS components.

3.3 Discharge to watercourse

Any proposed discharge to waterbody needs to operate effectively over many years. The impact of potential downstream constraints and water levels must be considered within the design process and the designer will need to provide evidence to demonstrate how the outfall level will ensure the site can be effectively drained, typically this will include surveys and existing water level information for the 2, 10 and 30 year events.

When assessing flood protection criteria, unless it can be confirmed that the outfall is set above the 30year event level we would expect a suitable surcharge to be applied to any hydraulic calculations. We will also usually request a low maintenance non return valve to be installed.

For discharges to culverted watercourses, the outfall should be set to achieve a soffit level connection. We will require hydraulic simulations for a 1 in 30 year storm taken against a surcharged outfall level of 1 meter above the soffit level of the receiving culvert, unless accurate modelling information can be supplied.

3.4 Discharge rights

Any adoptable sewers discharging to a watercourse or SuDS will require a protected strip including our rights to discharge and must be attached to the deeds of the land/property. This deed will also protect our rights of access to the public sewer. The protected strip or 'easement' is normally a minimum of 3 meters either side of the sewer but can differ according to size and depth of the sewer (see our easement local practice). The easement will need to be entered into and completed on or before completion of the S104 Agreement and should be at no additional cost to us.

The developer is responsible for obtaining appropriate approval to construct the outfall structure along with any necessary discharge consents. We will require visibility of this to support your application.

3.5 Dealing with exceedance

Exceptional weather events are becoming more common, National Planning Policy Framework explains that no flooding of properties should occur as a result of a one in 100 year storm event (including an appropriate allowance for climate change). We do not usually adopt storage to cater for exceedance events in excess of 30 years, but you can make an application for us to consider the adoption of the additional storage and we will look at these requests on a site by site basis.

3.6 Connection to a sewer

If a connection to the public sewer is permitted, we will usually ask for the discharge to be limited and therefore surface water flows may need to be stored on site, the connection should be at soffits level.

During a 1 in 30 year storm, the existing public sewerage network will rarely accept free discharge from a new development. Therefore we will require hydraulic simulations for this event taken against a surcharged outfall level of 1 metre above the soffit level of the receiving sewer.

For information on how to connect to the public sewer, please see our 'Sewer connections guide' on the website.

If you are offering new sewers for adoption, you do not need to complete a 'Part 1 - Application to connect to the public sewer'; however your contractor must still apply for permission to make the connection via the form 'Part 2 - Request for permission to work on the public sewer'. Please note this will not be processed until the scheme has been 'technically accepted' and full payment received.

No work can be carried out on the public sewer without written approval from United Utilities prior to the start of the work.

About us

United Utilities is the North West's water company. We keep the taps flowing and toilets flushing for seven million customers every day. From Crewe to Carlisle, we work hard behind the scenes to help your life flow smoothly.