

Making a new
connection to
public sewer
Guidance
Notes to Assist
your
Application

Taking care of your waste water:
It's part of our Blueprint for Yorkshire



1. Application

Yorkshire Water does not offer a contractor service to undertake new sewer connections. The developer should arrange for a contractor to do the work, and for a Yorkshire Water Inspector to certify the connection on completion. Yorkshire Water recommends that a suitably qualified and experienced contractor be used.

Connections to Public Sewers shall preferably be made using in-line junctions or saddles (see Methods of Connection below). The integrity of the public sewer must be maintained at all times.

Anyone intending to make a connection to a public sewer is required by law to give the Statutory Undertaker (Yorkshire Water) 21 days notice. An application form should be completed and submitted along with the appropriate fee to:

Yorkshire Water
Developer Services
PO Box 52
Bradford
BD3 7AY

Tel 0345 1 20 84 82

E-mail: technical.sewerage@yorkshirewater.co.uk

On receipt of a correctly completed application form and appropriate fee, Yorkshire Water will post out your “permission to make sewer connection approval” which includes your “unique connection reference number” (see Inspection by Yorkshire Water Inspector below). Within the 21 day notice period Yorkshire Water may object (in writing) to the connection or make comment on how it should be undertaken. We therefore advise that you plan your work to allow adequate time for the 21 day notice period to elapse before proceeding with the work and arranging inspection.

When planning highway excavations, you may pass a copy of your “permission to make sewer connection approval” to the Local Highway Authority as proof that you have given notice to us of making the connection (see Permissions to be sought by Developer below).

2. Methods of Connection

a) Connection to Public Sewer Pipe by Oblique (Y-Piece) Junction

Oblique junctions shall be 'flexible'. Rigid joints will not be permitted. Flexible couplings must comply with the requirements of the Water Industry Specification 4-41-01 'Specification for flexible couplings for gravity sewer and drainage pipes'.

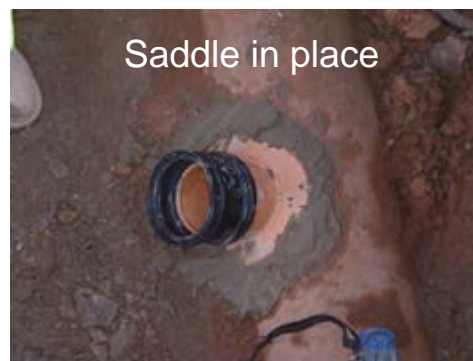
Oblique junctions shall be the same material as the existing public sewer and be placed in the direction of flow at a 2/10 o'clock position on the existing public sewer. The connection must be at least 225mm from a collar or spigot.

Connections to the public sewer should generally be made using oblique junctions. A junction is inserted into the line of the public sewer after a section of the existing pipework has been cut out and removed. Jointing is by means of a repair coupling at each side of the junction pipe.

b) Connection to Public Sewer Pipe by Saddle

The use of saddles to clay or concrete sewers is acceptable where the public sewer diameter is three increments larger than the connection diameter, e.g. a 300mm dia. public sewer can only be connected to by a 100mm dia. Saddle (see table below). Saddle connections must be positioned at 10 o'clock or 2 o'clock and at an angle of 45 degrees to the direction of flow. A single hole in the Public Sewer must be made by diamond core drilling.

Saddles shall be the same material as the existing public sewer and positioned at 2/10 o'clock position on the existing sewer section clock face.



Junction or Saddle?

Yorkshire Water only allows the use of a saddle connection when the public sewer is at least 3 pipes sizes larger than the lateral (connection) to be connected. In all other circumstances a junction should be used. The table below shows if a junction or saddle may be used for various public sewer and lateral combinations:

		Public Sewer (dia in mm)									
		100	150	225	300	375	450	525	600	675	750
Lateral (dia in mm)	100	JN	JN	JN	SA	SA	SA	SA	SA	SA	SA
	150		JN	JN	JN	SA	SA	SA	SA	SA	SA
	225			JN	JN	JN	SA	SA	SA	SA	SA
	300				JN	JN	JN	SA	SA	SA	SA
	375					JN	JN	JN	SA	SA	SA
	450						JN	JN	JN	SA	SA

c) Connection to Public Brick Sewers (Including Flat Slab Tops)

The orifice for the new connection should be made by carefully core drilling or removing bricks from the side of the sewer, preferably within the top third.

Where applicable, the top slab may be temporarily taken off to aid this process.

The connection should not be made by attempting to core drill the top slab.

d) Connection to Existing Public Manholes

This is not the preferred method of connection. The existing manhole may not be able to accommodate the new connection. If the existing manhole is found to be unsuitable for connection then the connection proposals will have to be revised.

If the manhole is suitable, the new pipe shall be connected in such a manner that the soffit levels of the existing and new pipes are the same. Where the existing manhole has a preformed invert, then the invert of the connection should be formed and made good in granolithic concrete as required. Pipes in manholes should not be plastic.

If it is impractical (due to corresponding pipe levels) to connect into the existing manhole at the same soffit level as the existing public sewer, then a backdrop arrangement may be constructed outside the manhole chamber to 'Sewers for Adoption' 6th Edition Specification.

Internal back drops are rarely accepted and may only be considered upon application, in which case they should be ductile iron. Detailed drawings and method statements must be submitted for express written approval.

e) Connection to Public Sewer by New Inspection Chamber

This is only permitted up to a depth of 2m and not in public highway.

Polypropylene inspection chambers (PPIC) or rectangular pre-cast concrete inspection chambers in accordance with attached approved list of manufacturers may be used where not in highway. Concrete surround shall be provided to inspection chamber where subject to vehicle loading (e.g. driveways). For

depths in excess of 1.2m a restricted access opening of 350mm diameter (or 300x300mm square) shall be used.

Inspection chamber covers shall be ductile iron and the appropriate strength for the area situated (minimum classification B125).

f) Connection to Public Sewer by New Manhole

This is primarily for larger drainage schemes.

Manholes shall be Pre-cast concrete ring Type to 'Sewers for Adoption' 6th Edition Specification.

Manhole covers shall be ductile iron and appropriate strength for the area situated (D400 when in public highway, shared drives or car parks, otherwise B125 where in soft areas).

Back drop connections (if applicable) shall be external and to 'Sewers for Adoption' 6th Edition Specification.

3. Sewer Works Authorisation

Where Sewer Works Authorisation is required (for other methods of connection on the application form), the following information is required:

- a) a plan drawing indicating the proposed works and location
- b) a section detail drawing indicating the proposed works
- c) the start and end date of the proposed works including working hours
- d) the person to contact in relation to the proposed works including landline and mobile telephone numbers
- e) the out of hours contact in relation to the proposed works including landline and mobile telephone numbers
- f) a method statement and risk assessment for the proposed work. Please state the obvious hazards (e.g., to health safety and environment) and how these will be mitigated against. Please also include how flow is to be managed, if applicable (e.g. details of pump types, flow rate, bagging type and lengths.) Please include details of escape set breathing apparatus and lifting and gas monitoring equipment.
- g) Copies of valid confined spaces training certificate for all staff that will be undertaking the work.

The above details will be required in electronic format, preferably in a zip file. Please allow 14 days before expecting a response.

4. Health and Safety

Sewers including manholes and trenches into which a sewer can vent are hazardous places and need special safety precautions. Your attention is drawn to the 'Confined Space Regulations 1997' and the document 'Safe Working in Sewers and at Sewerage Works' published by the National Joint Health and Safety Committee for Water Services.

Agreement to the Works by Yorkshire Water should not be taken as confirmation that your proposed method of working complies with these documents or represents a safe system of work.

No person should enter a manhole on the public sewerage system without having had the appropriate Confined Space entry training. They must have all necessary safety equipment and ensure that they comply with all relevant health and safety requirements.

5. Permissions to be Sought by Developer

Where the connection crosses any land not in the ownership of the developer, prior permission must be sought to undertake the works from the landowner or the connection will be unlawful.

If the work involves excavations in the public highway (including footways and grass verges) consent from the Local Highway Authority will be required. The Local Highway Authority will require you to use a certified contractor in accordance with the New Road and Street Works Act 1991.

6. Discharges to Public Sewer

Drainage shall not be discharged recklessly. The necessary checks must be undertaken. Refer to statutory public sewer record map (see Locating Existing Sewers and Services below)

To avoid pollution and potential penalties, foul water shall only be disposed of to foul or combined water sewers.

Surface water shall not be disposed of to foul sewer. Disposal of surface water can have a significant impact on sewer flooding. Please refer to your Planning and Building Regulations conditions of approval (if any) and to the Hierarchy for surface water disposal as described in Building Regulations Approved Document H3 Section 2.

7. Administration and Inspection Fees

Yorkshire Water charge a fee for administration and inspection of new connections to public sewer. This is payable in advance to “Yorkshire Water Services Limited” and is not refundable. Please therefore ensure that you are actually connecting to a public sewer and not a private sewer by checking the statutory public sewer record map beforehand (see Locating Existing Sewers and Services below). Your fees cannot be refunded if it is later discovered that your connection is actually to a private sewer.

Note:

A property also becomes liable for sewerage charges when it first becomes connected to a public sewer. A sewerage infrastructure connection charge is payable at that time. This is not dealt with as part of the sewer connection application process. It is collected along with charges for new water supply. We advise that the

property owner should, on receipt of their Yorkshire Water Utility Bill, check that sewerage charges are levied for the property along with water charges and, if not, to contact Yorkshire Water Billing.

8. Locating Existing Sewers and Services

It is the responsibility of the developer to confirm feasibility and identify existing sewer and services positions on site. This work should be undertaken by a competent contractor.

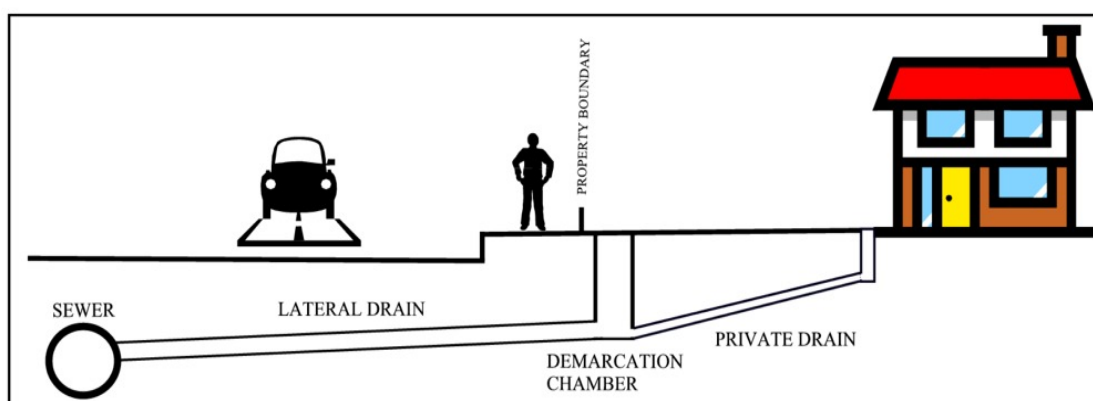
Yorkshire Water keeps a Statutory Public Sewer Record Map. This shows the recorded position of public sewers and disposal mains together with private sewers under a Section 104 Sewer Adoption Agreement.

During normal office hours it may be inspected, free of charge, at our Safe Move office at Western House, Halifax Road, Bradford BD6 2LZ. A printed extract from the Statutory Public Sewer Record Map may be purchased from Mapping Services, who can be contacted on 0300 1 385 385.

Each Local Authority (Council) within our area also has a copy of the Statutory Sewer Map for their district. This is available for viewing only at an office of the Local Authority.

9. Adoptable Connections (Laterals)

An adoptable “lateral” is an accessible single length of drain (serves 1 property) or sewer (serves more than 1 property) not greater than 150mm diameter from a property to a public sewer on adjacent land or highway. A “demarcation” chamber should be positioned at the head of the lateral at a position 1m inside the property boundary.



Rising (pumping) mains are not acceptable as adoptable laterals. Hatch boxes are not acceptable as demarcation chambers.

Adoptable Connections (Laterals) – Pipes

Vitrified Clay Pipes to BS EN 295 kitemarked.

Unplasticised PVC pipes to BS 4660:2000
& BS EN 1401-1 kitemarked.

Structured Wall Unplasticised PVC pipes to WIS 4-35-01 kitemarked.

Product Name	Diameter (mm)	Manufacturer	Material
SuperSleve	100 & 150 (I.D.)	Hepworth	Vitrified Clay
Superseal	150 (I.D.)	Hepworth	Vitrified Clay
Densleeve	100,150 (I.D.)	Naylor	Vitrified Clay
Denseal	100, 150 (I.D.)	Naylor	Vitrified Clay
Ultra Fortis	150 to 300	Uponor	uPVC
Ultra-Drain	110 & 160 (O.D.)	Uponor	uPVC
Plastidrain	110 & 160 (O.D.)	Hepworth	uPVC
OsmaDrain	110 & 160 (O.D.)	Wavin	uPVC
Osma UltraRib	150 (I.D.)	Wavin	uPVC
Solid Wall	110 & 160 (O.D.)	Marley	uPVC
Quantum	150 (I.D.)	Marley	uPVC
Underground Drain	110 & 160 (O.D.)	Polypipe	uPVC
Polysewer	150 to 300 (I.D.)	Polypipe	uPVC

Adoptable Connections (Laterals) – Pipe Bedding

Pipes shall be provided with single size full granular bed and surround (class S). Pipes in highway with less than 1.2 metres cover shall not be plastic and shall be protected by reinforced concrete slab placed above.

Adoptable Connections (Laterals) – Size and Gradients

Foul:	100mm less than 10 properties min gradient 1:80
	150mm greater than 10 properties min gradient 1:150
Combined:	150mm less than 10 properties min gradient 1:100
	150mm greater than 10 properties min gradient 1:150
Surface Water:	Minimum diameter is 150mm at min gradient 1:150.

For combined and surface water the minimum acceptable diameter is 150mm.

Maximum gradient should be 1:10.

Adoptable Connections (Laterals) – Demarcation Chambers

Precast Concrete to BS 5911:Part 2 and BS8301 kitemarked, up to 1.0 metre deep

Polypropylene Inspection chambers to BS 7158:2001 kitemarked, min. 450mm diameter, up to 2.0 metres deep.

Manufacturer	Product Name	Material	Max. Depth	Cover Type
Naylor	Plastic Inspection Chamber	Polypropylene	Up to 1200mm	Class B125
Hepworth	PPIC	Polypropylene	Up to 1200mm	Class B125
Uponor	Inspection Chamber (450mm Ø)	Polypropylene	Up to 1200mm	Class B125
Marshalls	Inspection Chamber To BS5911 pt 2	Precast concrete	Up to 1000mm	Class B125
Wavin	Osma UltraRib Inspection Chamber	Polypropylene	Up to 1200mm	Class B125
Wavin	OsmaDrain Universal Inspection Chamber	Polypropylene	Up to 1200mm	Class B125
Wavin	Non Entry Inspection Chamber	Polypropylene	Up to 2000mm	Class B125
Marley	Inspection Chamber (450mm Ø)	Polypropylene	Up to 1200mm	Class B125
Polypipe	110mm Inspection Chamber (460mm Ø)	Polypropylene	Up to 1200mm	Class B125
Polypipe	Non Man Entry Deep Inspection Chamber System	Polypropylene	Up to 2000mm	Class B125

Concrete surround shall be provided to demarcation chamber where subject to vehicle loading (e.g. driveways). For depths in excess of 1.2m a restricted access opening 350mm diameter (or 300x300mm) shall be used.

Alternatively, pre-cast concrete ring manholes to the latest revision of ‘Sewers for Adoption’ specification may be used as demarcation chamber. Chamber covers shall be ductile iron and appropriate strength for area situated (minimum classification B125).

Inspection by Yorkshire Water Inspector

All completed connections must be inspected by a Yorkshire Water Inspector. To arrange an inspection, please call [0345 1 20 84 82](tel:03451208482) quoting your “unique connection reference number” at least 5 working days before completion. The completed connection should be laid open for inspection. If the completed connection is backfilled without inspection by a Yorkshire Water Inspector the developer may later be invoiced for our CCTV costs and any costs for corrective work.

The inspection is to check workmanship only. The location and sizes of all pipes and services should be established by the developer on site prior to commencing the works. Yorkshire Water’s statutory sewer record map is indicative and may be used as a guide only. No warranty is given with regard to its correctness.

The developer may have to correct any work that has been carried out before receipt of Yorkshire Water comments if the 21 day notice period has not elapsed. Additional fees may be payable for return visits to inspect corrective work.