



Building over
or close to a
public sewer

thameswater.co.uk/developerservices

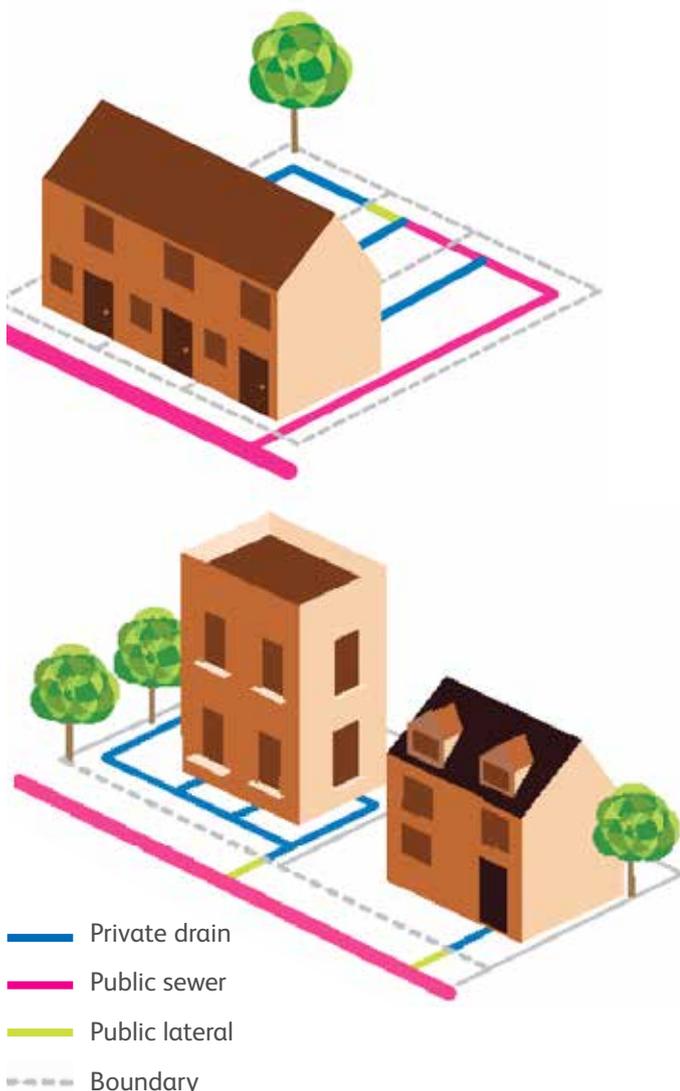


Questions and answers

Did you know Thames Water is legally responsible for more than 100,000 kilometres of public sewers? If you are building a new dwelling or extending an existing building, it is very likely you will be building within 3 metres of a public sewer. * Any work involving new foundations, underpinning, piling or basements requires our approval prior to works commencing on site.

What is a public sewer?

A sewer is a pipe that serves more than one property. All sewer pipes (that connect to our network and were constructed before 1 July 2011) are now public sewers except where only one property is served by the existing pipe, which is known as a drain. A drain is privately owned and maintained to the property boundary by the home owner. Once it crosses the property boundary this pipe becomes our responsibility and is known as a public lateral drain.



What is a build over agreement?

A build over agreement is a Thames Water seal of approval for the building work you plan to have carried out over or near a public sewer owned by us. It gives assurance that you have given the sewer the correct clearance from your new foundations. It also ensures that sufficient access to the sewer is maintained so we can clean or repair it if necessary. It also gives certainty of these facts to anyone looking to buy your property, should you come to sell.

Why do I need the agreement of Thames Water to build near a sewer?

Thames Water own all public sewers in our region, under the Water Industry Act 1991, we are responsible for their maintenance. We need to make sure that no building work restricts our ability to do this or causes damage to the sewer. Our way of doing this is to ensure everyone building within 3m of a public sewer has their proposals renewed and approved by us prior to the work commencing.

The extra weight of a new building near a sewer could cause the sewer to collapse, resulting in structural damage to the new building, interrupted drainage from other properties and wastewater flooding. In these instances the sewer will need to be repaired quickly and this may involve taking down the building.

The consultation of the sewerage company is in Building Regulations 2010 Part H4. Building inspectors may ask to see a copy of your agreement before they will sign off your Completion Certificate.

Building over or close to a public sewer

Build Over options on a new detached development

If you find your plans could affect a public sewer, you should first consider one of the following options:

- Avoiding the sewer through modifications to your plans so the buildings are at least three metres away from the sewer. This is often the easiest and cheapest option.
- Diverting the sewer. If your plans cannot be modified, we will usually require the sewer to be diverted. In most cases we may permit your contractor to carry out the work. Please contact us on 0800 009 3921, if you wish to discuss this option.

We will not permit building over on a new detached development – a sewer diversion will be required and must be funded by the developer.

How is ownership of drains and sewers determined?

The property starting the drain run is called the 'head of the run'. This pipe is private. As soon as the pipe crosses the boundary into third party land it becomes a 'lateral drain'. Once the second property connects into the lateral drain, the pipe becomes a 'public sewer'. All sewers and lateral drains constructed before 1 July 2011 and which connect to our network are all part of the public sewerage network owned and maintained by Thames Water.

There are different applications for different sizes of sewer.

Class 1 160mm diameter or smaller (domestic/commercial)

Class 2 160 - 375mm diameter

Class 3 over 375mm diameter

For all classes, except class 1 domestic, we will need to carry out a Closed Circuit Television (CCTV) survey before you begin work to ascertain whether any repair work is required. Another survey is required when your building is completed, to check the sewer has not been damaged. If you have not obtained our agreement, in certain circumstances, we may seek that you discontinue your works and the buildings erected over the public sewer may need to be taken down. We would encourage you to get in touch with us early on in the design process to avoid any delays or other problems.

*An agreement is also required if building within 1 metre of a lateral drain

How do I apply?

Applications can be made via post or online. Please visit www.thameswater.co.uk/developer/buildover

What happens if I do not apply?

You may not be able to obtain the required Building Regulations Completion Certificate that signs off your building as complete from the Local Authority.

The absence of a Completion Certificate could cause problems when trying to sell your property in the future if a purchaser's solicitor advises a prospective purchaser that a building was extended over or near a sewer without the sewerage undertaker's permission.

I am not building over a public sewer, but I am still within three metres, do I still need to apply?

Yes, in accordance with Building Regulations Part H4. Even though you are not building over the sewer, your works will still have an impact on the sewer.

I am not sure if I am building within three metres, what do I need to do?

Please send us a ground floor plan with the location of the sewer clearly plotted. This needs to include any manholes/inspection chambers and the direction of the flow. Please email this to developer.services@thameswater.co.uk.

When will building over or close to a public sewer not be allowed?

We will not agree to the following being built directly over:

- Pumping/Rising Mains
- Manholes
- Strategic Sewers

We will also not permit public sewers to be built over by newly constructed detached properties/buildings. In this instance a sewer diversion would be required.

Can I build over a manhole?

No, we do not allow internal manholes due to the increased risk of internal flooding and odour issues, even if double sealed covers are used. Manholes must be completely removed and piped through manholes should be reconstructed outside of your extension, either on the line of the sewer or offset and connected by a Y junction. If your application shows an internal manhole it will be refused. Please see our typical drawing layout examples on page 6.

Can I start work before consent is received?

No, Thames Water will assess your plans at the time of the application, if we need to agree amendments to your design then it is very difficult to do so if your work has already started and could cause delays on site.

For sewers over 160mm in diameter a pre-construction survey must be carried out to identify the condition of the sewers.

Can I divert the sewer?

Yes, this may be possible under Section 185 of the Water Industry Act. In the case of minor sewers (Class I), we may allow your own contractor to carry out the works, subject to Thames Water inspecting the completed works.

Will I need to have an inspection?

This depends on the size of the sewer. Class II and III sewers require a CCTV survey and inspection. Class I applications are inspected by the Building Control officer as part of their overall building control function.

How can I request an engineer to visit the site?

Please liaise with our technical team to confirm if a site visit is needed as most issues can be resolved via email or over the phone. If a site visit is still required, then we will send a Field Engineer out to you within 5 working days. Our technical team can be contacted by calling the Helpdesk on 0800 009 3921.

The sewer on my property drains waste from my property only. Do I still need a build over agreement?

It depends how close to the boundary you are intending to build.

If you are within 1m of the boundary then you will need an agreement. This is because where the sewer leaves your property and enters third party land it becomes a lateral drain. These are public and owned by Thames Water.

If you are building more than 1m away from the boundary and all the sewers on your property drain your property only, you will not require an agreement.

When would an agreement be refused?

In some instances it may not be feasible to build over the sewer and we may require a diversion to be carried out. We may also refuse proposals if works are located in close proximity to a pressurised sewer (rising main) or if works do not comply with our specifications shown on page 10 or our website.

How much does the application cost?

This depends on the size of the sewer and whether your property is residential or commercial.

Diameter	Property type	Cost
Class 1 Up to 160mm (6")	Residential	£343
Up to 160mm (6")	Commercial	£687
Class 2 160mm (6") to 375mm (15") inclusive	Any	£687
Class 3 Over 375mm (15") inclusive	Any	£1,300*

*There is also a legal fee involved in entering an agreement for very large sewers which is usually in the region of £500.

If you apply online you can pay using your credit or debit card.

If you apply by post you can send us a cheque payable to Thames Water Utilities Ltd with your application form. Please ensure the site address is written on the back of the cheque. You can also opt to pay by credit or debit card. We will then contact you to make payment over the phone.

What does the fee cover?

For small sewers (160mm and smaller)

The fee covers:

- Processing your application
- Technical reviews of your plans
- Discussing and agreeing any design changes proposals
- Working with your Local Authority within Building Regulations
- Issuing your agreement
- Registering the agreement to build over or close to the public sewer on our records

For mid sized sewers (160 – 375mm) and commercial properties.

As above but with 2 CCTV surveys of the length of affected sewer. One before and one after your build.

For large sewers (375mm and larger)

As above but with a lot more time required from our engineers and 2 surveys. This survey may be by CCTV or man entry which will be at significant extra cost. We won't know what is required until you make an application and we have seen your plans and the sewers involved.

What rights does Thames Water have to stop my works?

Building without consent from Thames Water may impose a risk on the public sewerage network.

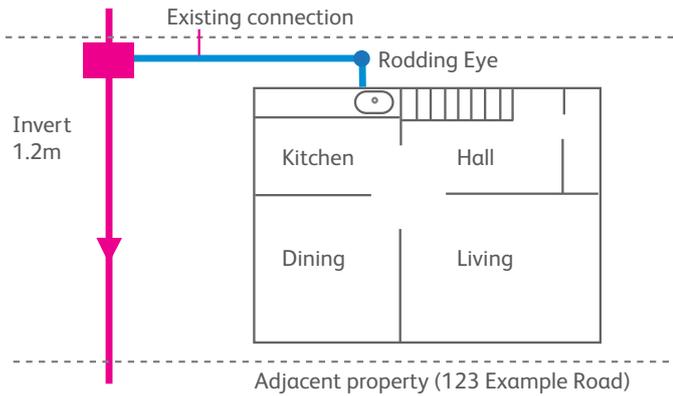
Thames Water has statutory powers, which gives us the right to maintain, repair, replace and renew public sewers on private land under Section 159-171 of the Water Industry Act 1991.

If any work restricts or removes the ability for Thames Water to perform its statutory duties we could seek an injunction for the removal of the building and we may look to recover any associated damages.

Drawings to include with the application

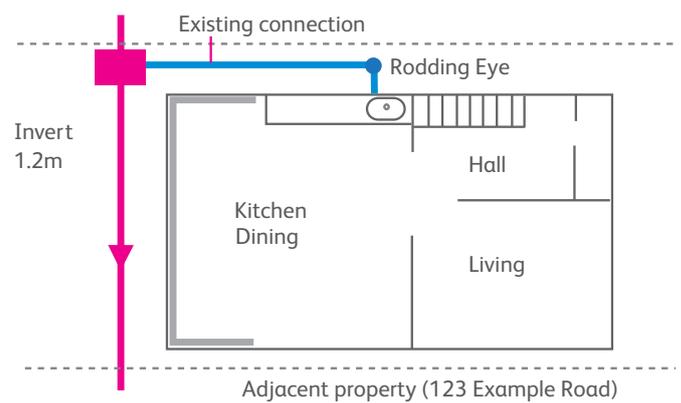
Building near a sewer

1 Existing building and drainage layout



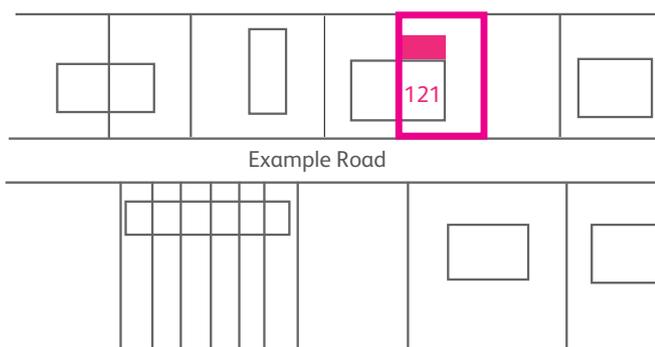
This must show the sewer, manholes and flow direction in relation to the existing structure.

2 Proposed extension and drainage layout

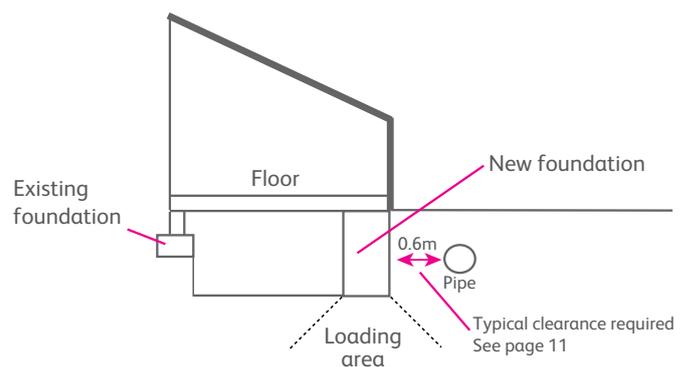


This must show the sewer, any manholes and flow direction in relation to the proposed structure.

3 Site location plan



4 Cross section

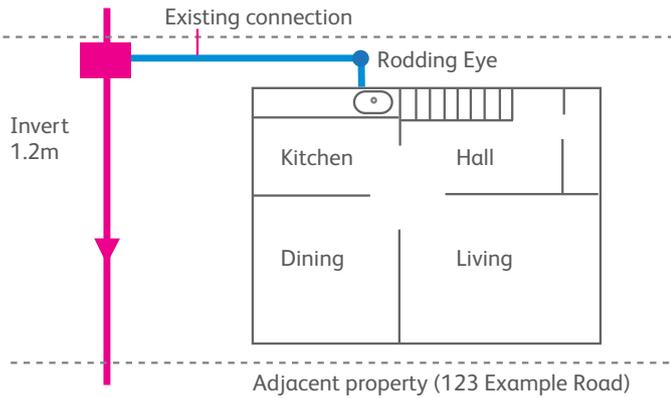


If building within 1.5 metres of the sewer, section drawing showing foundation design in relation to the pipe is only required.

Once we receive the application we will review the plans to ensure that the proposed works fully comply with our specifications and that the works will not damage our sewer.

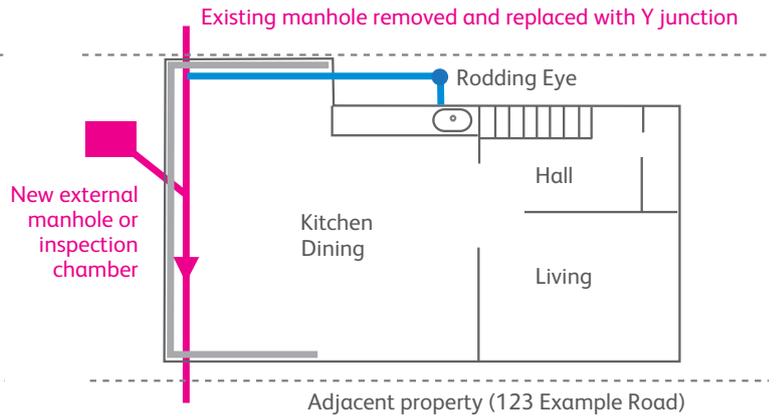
Building over a sewer

1 Existing building and drainage layout



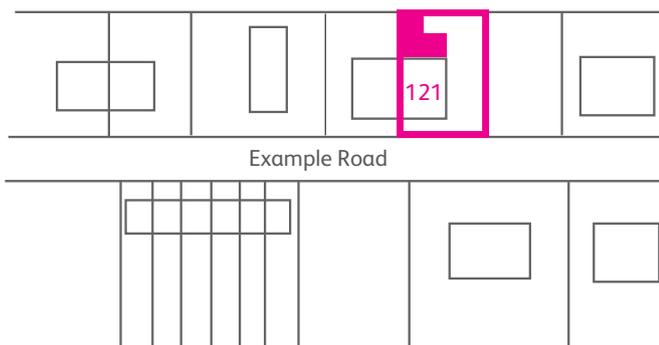
This must show the sewer, manholes and flow direction in relation to the existing structure.

2 Proposed extension and drainage layout

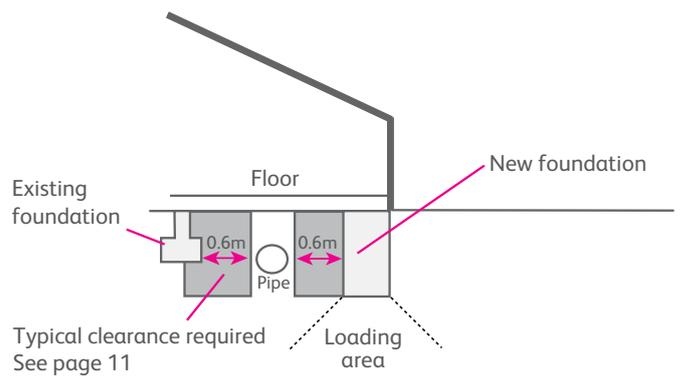


This must show the sewer, any manholes and flow direction in relation to the proposed structure. Suitable external access to the sewer must be maintained.

3 Site location plan



4 Cross section



If building within 1.5 metres of the sewer, a cross section drawing showing foundation design in relation to the pipe is required.

Locating a public sewer

You can find out whether there is a mapped public sewer on your land by visiting the relevant Local Authority offices to inspect a copy of the sewer maps, or you can contact our Property Searches Team on 0845 070 9148 or online at www.thameswater-propertysearches.co.uk.

Note: Almost 50% of public sewers in the Thames area are not mapped as a result of a government transfer in 2011.

Carrying out your own preliminary investigations well in advance of works commencing on-site can avoid any damage occurring to the sewer.

It will also help you determine whether you need to apply for formal approval to build within three metres of a Thames Water public sewer or within one metre of a Thames Water lateral drain.

What are the common methods used to locate sewers and drains?

1. Lift the manhole cover and visually inspect the connections using a mirror and torch. Manhole covers are heavy and should not be lifted without the correct equipment or without assistance.



3. Rod the sewer or drain from the manhole or inspection chamber.



2. Use dye to determine the flow of effluent.



4. Carefully dig a trial hole or trench to locate the pipe.

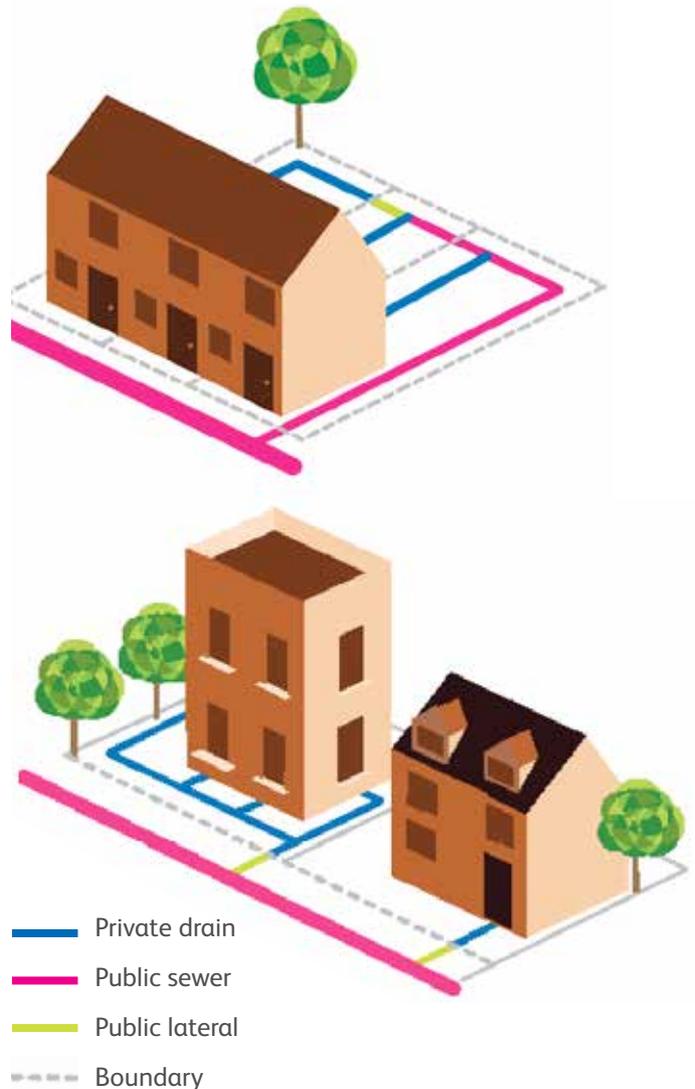


If further advice is required, drawings or photographs of the drainage on-site can be e-mailed to us at developer.services@thameswater.co.uk

You may also ask your builder to lift the nearest manhole, as you can often see which direction a sewer runs by looking at the invert channel. If the sewer is unmapped, then you can employ a local architect or engineer who can use a variety of methods to trace and locate sewers.

Common reasons for refusal

- No plans submitted with application
- Plans submitted, but do not show the line of the sewer. We must see the position of the sewer and flow direction in relation to the existing buildings and the proposed building work.
- Plans show an internal manhole. Internal manholes are not permitted on the public sewer.
- No cross section drawing submitted. We require this drawing if building over or within 1.5m of the sewer as we need to see how the foundations will be constructed. Cross section must show the foundation in relation to the sewer, with clearance marked and any bridging over detail specified.
- Application fee not included with the application. Fees are listed on our website and application forms.
- Clay pipes being replaced with plastic. Pipes must be replaced 'like for like' e.g. clay must be replaced with clay.
- Minimum clearance not achieved between the foundations and the pipe. See page 11 for specifications.
- Foundations not taken below the invert level of the sewer.
- The sewer being surrounded in concrete. Pipes must be surrounded in pea shingle unless agreed otherwise.
- New dwelling constructed over the public sewer. Sewers must be diverted around new builds. This process depends on the pipe size. Please contact the Helpdesk for more information.
- Removal of a critical change of direction manhole.
- Augured piles being used within 1.5m of the sewer or driven piles being used within 15m.



Glossary of terms

Foul water drain/ sewer

A pipe that carries waste water from the property e.g toilet, bath, shower, dishwasher etc. Surface rain water should not be discharged into this pipe as it can cause foul water flooding.

Manhole

A large chamber which allows physical access by authorised personnel to the drain or sewer.

Inspection chamber

A small chamber to allow access to the sewer for jetting/ rodding purposes.

Surface water drain/ sewer

A pipe that carries rainwater from the property e.g. from the roof, driveway, patio etc. Foul water must not be discharged into this pipe.

'Y' Junction

A pre-formed clay junction pipe used for new connections or when replacing manholes.

Property drain

Also known as a 'private drain'. A pipe which only serves one property within one property boundary.

Lateral drain

A pipe which only serves one property but is located in third party land. It is owned and maintained by Thames Water.

Rising main

A pressurised sewer which pumps foul or surface water. We will not permit building over a rising main.

Rodding eye

An alternative access point to the sewer which permits rodding in case of blockages.

Invert level

The level of the sewer or drain, measured from the inside of the bottom of the pipe.

Cover level

The measurement taken from the highest point of the manhole cover.

Soffits level

The highest point of the inside of the pipe.

Specifications

Thames Water Utilities specifications (Appendix) for building residential extensions within 3 metres of minor public sewers 100mm-160mm diameter. The following specification items must be fully complied with:

- 1 All works shall comply with the requirements of 'Sewers for Adoption', 7th edition in conjunction with 'Protocol on Design and Construction of Adoption of Sewers in England and Wales', unless otherwise agreed.
- 2 No additional loads are to be transmitted to the sewer by the proposed works.
- 3 This consent is subject to any conditions that may be imposed through the Building Regulation process.
- 4 It is your responsibility to check and verify the invert levels and position of the public sewer prior to works on site.
- 5 Any sewers that are equal or shallower than 1.1 metres to invert from finished ground level can have new foundations minimum of 100mm from the side of the public sewer, as shown on pages 10 & 11 of Sewers for Adoption 7.

Public Sewers that are deeper than 1.1 metres but no deeper than 2.0 metres shall have new foundations no closer than 600mm, for public sewers deeper than 2.0 metres, new foundations shall be no closer than 1.0 metre.
 - 5.1 When using piled foundations, the proposed foundations are to be a minimum of 1.5 metres from the public sewer. Only continuous Flight Augered piles are acceptable. The use of driven piles will not be permitted within 15 metres.
 - 5.2 Proposed foundations to be constructed within 1.5 metres of the public sewer shall be taken to a depth equal or greater than the sewer invert.
- 6 Manholes on the public sewer shall not be built over or located inside proposed structures even with new double sealed bolt down covers.
- 7 Where public sewer is less than or equal to 1.1metre deep, no structure shall be built in contact with the public sewer manhole, and must be a minimum of 100mm from the outside of the chamber wall.
 - 7.1 Where the depth of the public sewer is greater than 1.1 metres, no structure shall be built within 600mm of the public manhole structure.
- 8 All connections to the public sewer to be at a manhole or via a pre-formed junction. Saddle connections are not permitted on to sewers less than 375mm in diameter.
 - 8.1 Connections into manholes must be made with soffits level and must enter 'with the flow'.
- 9 More than four building over agreements in a row will not be permitted on a length of public sewer without an external manhole being available for suitable operation access.
- 10 New manholes to be in accordance with Sewers for Adoption 6th Edition, in certain circumstances inspection chambers can be built in accordance with Sewers for Adoption 7 with strict approval.
- 11 If the householder or Building Control requests that a survey be carried out, Thames Water would not object. All such surveys shall be carried out at the householder's expense.
- 12 It should be noted that public sewers of this type are occasionally found to have minor defects such as misaligned joints (often since new) or cracking. Pipes in this condition would be accepted by Thames Water as being in a serviceable condition.
- 13 Plastic pipes and fittings are generally not accepted on the public sewers. We may permit the use of plastic pipes where the existing public sewer is already constructed from plastic; however the pipe must have a jetting resistance of 4000 psi, unless the new sewer is jetted and then surveyed by cctv to prove no damage has occurred.

These specifications only apply to sewers 160mm in diameter or less.

For larger sewers please consult the website for the appropriate specification.

Getting in touch with us

For enquiries regarding this application or any other questions relating to your building or development work please contact us on:



thameswater.co.uk/developerservices



developer.services@thameswater.co.uk



0800 009 3921
Monday - Friday 8.00am-5.00pm



**Thames Water, Developer Services, Clearwater Court,
Vastern Road, Reading, Berkshire RG1 8DB**