

Guidance notes for Developers – adoption of sewers.

Section 104 of the Water Industry Act 1991

SEVERN

TRENT

WATER

Foreword

Office use only
GNAS

These guidelines are designed to be used in conjunction with the current version of “Sewers for Adoption – a design and construction guide for Developers” and will assist Developers in submitting applications that will be suitable for adoption.

This guide has been produced to offer practical assistance and whilst every attempt has been made to take on board the full range of legal and technical issues involved there may always be particular circumstances which are not accommodated in these guidelines.

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Section 1: Introduction

There are two distinct stages in the assessment of sewers that are to be adopted by an agreement under Section 104 (S104) of the Water Industry Act 1991 (WIA 1991).

The first stage is the Developers enquiry. This will determine the principles of how a site can be drained and any infrastructure improvements to accommodate the flows. This is dealt with by the Asset Protection Waste Water Sewerage Team. This is explained in more detail in Section 2.

The second stage is the submission of a completed application form for the adoption of a sewer under section 104 of the Water Industry Act 1991. This should be based on the principles established by the Developer’s enquiry and the detailed requirements of Sewers for Adoption (SfA) (for further details refer to Section 3 of these guidance notes). This stage will involve both the Asset Protection Waste Water Team and the New Connections Self Lay Team.

The application needs to be submitted to the New Connections Self Lay Team. This team will assess the application to ensure that it complies with the requirements of SfA and if appropriate the Severn Trent Water SPS addendum. The Asset Protection Waster Water Team will check that the principles established by the Developer’s enquiry have been complied with.

The New Connections Self Lay Team will prepare the S104 agreement and will arrange inspection of the works and eventually arrange for the vesting as public sewers.

This is explained in more detail in Section 3.

The Water Act 2003 enacted 28 May 2004 brought in the adoption of public lateral drains. Since this relates to the drainage of a single property it is explained in the Sewer Connections section.

Asset Protection Waste Water Sewerage Teams

These teams are based at Leicester and Tettenhall. See Appendix A for details of addresses and telephone contact numbers.

Section 2: Developer enquiries

We now have an integrated application process, with a single form, for handling Developer enquiries about our ability to supply water, and drain, the sites they wish to develop. So you now simply need to send us this single form, together with a location plan for the site and payment, whenever you wish us to respond to a development enquiry.

A copy of our new form, together with a set of guidance notes, can be obtained from our website www.stwater.co.uk/newconnections or by contacting STW on the telephone number below. Please ensure that your staff, both direct employees and consultants, know about this form and use it for all new enquiries as we will only accept enquiries submitted on this form.

Our response for drainage enquiries will now include:

- a copy of our sewer records for the area
- confirmation of any apparatus we have that will be affected by the proposals
- information about our ability to drain the site
- where appropriate details of any offsite work needed to connect the site
- details of any further work we need to provide an optimal solution to connect the site to our networks.

Appraising development enquiries is work performed in addition to progressing an application to supply and drain a site. Therefore this is a chargeable service. The actual charge payable, depends on the type/size of the development and whether a single, or dual function response is required. Details of our charges are available on our website www.stwater.co.uk/newconnections

These charges cover the work we need to respond to a normal enquiry. If planning permission has not been granted and if the flow requirements are such that more extensive modelling/evaluation of the impact of the development on our network is required for an optimal solution to be determined an additional payment will be required. Where this situation arises we will, in our enquiry response, notify you. You will then be appointed a contact in our Sewer Modelling Team with whom you can discuss this and who will give you a quotation for the modelling work.

Please note that we seek to control peak flows to our network. This means that flow restrictions may be requested on drainage connections and we may limit our evaluation to the flow rate we determine.

Should you only require a copy of our mains, or sewer records, you should contact our Records Section at:

Severn Trent Water
Asset Data Management
GIS mapping team
PO Box 5344
Coventry CV3 9FT
Telephone: 0345 601 6616

They will advise on the access arrangements for our records and the charges for mailing copies of our record plans.

If you require further information about our Developer enquiry service please contact our New Connections office at:

Severn Trent Water Limited
Severn Trent Centre
PO Box 5311
Coventry CV3 9FL

Telephone: for application forms 0800 707 6600
for general enquiries 0800 707 6600

Alternatively, you may like to visit our web site www.stwater.co.uk/newconnections where further information and copies of our forms can be obtained.

After the work in evaluating the impact of flows from your site on the sewer network has been carried out, you will be informed of the outcome. This outcome will incorporate any planning conditions that are relevant to drainage matters and identify where Requisitions or Sewer Diversions will be required.

This response will enable you to undertake the detailed design for the Sewerage System serving your site and submit a formal S104.

Section 3: The Section 104 application

3.1: Industry standards

The S104 application will comply with the current version of the WRc publication “Sewers for Adoption” (SFA) which is the Water Industry’s standard design guide for adoptable sewerage systems, supplemented by STW Pumping Station Addendum.

Copies of SFA can be obtained from the publishers,
WRc plc, Frankland Road, Blagrove, Swindon, Wilts, SN5 8YF.
Copies of the addendum can be found on the WRc website www.wrcplc.co.uk/sfa

For further information please refer to Appendix B of these guidance notes.

3.2: Pumping stations

When preparing an S104 application, you should avoid the use of pumping stations. Prior to accepting the use of a pumping station you will need to demonstrate that there are no reasonable alternatives to pumping.

The design and subsequent adoption of surface water pumping stations is outside the scope of SFA national guidelines. Design guidance on STW requirements relating to adoptable surface water pumping stations is obtainable from the New Connections Self Lay Team based at Severn Trent Centre.

The company's guidelines covering pumping station layouts and location, boundary fencing and access arrangements can also be obtained from the New Connections Self Lay Team.

Special consideration should be given to the design of terminal pumping stations delivering directly to a treatment works or where the discharge point is close enough to the works for there to be no attenuation in the gravity sewer upstream of the works. Developers are advised to open discussions with our Asset Protection Waste Water Team as early as possible.

3.3: New products and technology

If the use of new products or technology is proposed, the Developer should first discuss this with the New Connections Self Lay Team at Severn Trent Centre to determine if it has been approved by the Company.

3.4: Permissions

Where appropriate, the following permissions must be obtained and documentary evidence provided;

Planning permission – usually obtained from the Local Authority.

Surface water discharge to watercourses – usually obtained from the Environment Agency (EA) where the discharge will be direct to watercourse or river.

British Waterways – where proposed discharges are to a canal, permission should be obtained from the British Waterways Board (BWB) in discussion with STW. Where terms are agreed with BWB, a tripartite agreement needs to be completed alongside with the S104 agreement subject to the payment of a commuted sum to STW in respect of payments to BWB on adoption.

Sustainable Urban Drainage Systems (SUDS) Facilities – confirmation that a third party approved by STW such as a Local Authority will take ownership and accept the future maintenance liability for surface water balancing ponds, and will grant rights in perpetuity to discharge across and flood the area. See Section 5: SUDS.

In the case of surface water sewers, an easement for sewers constructed in private land owned by a third party, with the right to discharge to the watercourse may be required.

3.5: Section 106 (S106) connections to public sewers

For every new connection to either the public sewerage system or sewers included in a S104 agreement the Developer is required to apply under S106 of the Water Industry Act 1991.

Application notices are available online at www.stwater.co.uk/newconnections or from New Connections at Severn Trent Centre. The application should be completed and returned along with payment to Miscellaneous Income Team at Severn Trent Centre. Charges for processing S106 applications are in accordance with the scale of charges set out in our Charges Booklet which is available from our website www.stwater.co.uk/newconnections.

You must allow a time-scale of 21 days between submission of a complete application and approval.

Once the New Connections Evaluation Team has approved the S106 application the connection will be inspected by the appropriate local inspector. You must give a minimum of 48 hours notice for these inspections.

STW encourages the adoption of private sewers and public lateral drains. Hence it is a condition of the approval of connection that any new sewer or new lateral drain located within the highway will be vested in the company. Pipes located within the site will remain in private ownership.

Sewers in the highway must be designed and constructed to our Sewer Adoption standards whilst lateral drains in the highway must be designed and constructed to our Lateral Drains to Sewer Standards. See Appendix B.

3.6: Submitting the Section 104 (S104) application

1. Application

The application form for the adaption of a sewer under section 104 of the Water Industry Act 1991 will be submitted to the New Connections Self Lay team. They will progress your application in accordance with the procedures set out in SFA.

2. Technical assessment of S104 application

A New Connections Self Lay Technician will use the checksheet to determine whether the application contains all the mandatory information for a technical assessment to be carried out.

3. Incomplete applications

If the application is incomplete it will be returned to you with the missing information identified. You will then have to resubmit to the New Connections Self Lay Team at Severn Trent Centre.

4. Complete applications

Complete applications will be checked to assess compliance with Industry Standards, if it is not technically compliant you will be requested to make revisions or amendments.

5. Second design submission

If the application was not complete or technically compliant and you do not provide any requested revisions or amendments within four weeks, or a requested revision or amendment does not meet the requirements, the application will be considered a second design submission.

If you amend a submission that has already been checked and was technically compliant the application will be considered a second submission.

You will be charged for checking second submissions in accordance with the scale of charges set out in Section 6 Fees and Bonds.

NB. These fees are payable in advance of the checking of the re-application.

3.7: The agreement

The Company has a standard Section 104 agreement based on the model in SFA.

No alterations to this standard document apart from factual corrections will be permitted.

Completion of the S104 agreement will signify the company's formal acceptance of the proposed sewerage system and arrangements will be made to carry out the site inspections.

3.8: Commencement of works

Site inspections will not commence until:

- technical compliance has been given
- the appropriate inspection fees have been paid
- section 104 Agreement is completed
- Construction Design and Management (CDM) requirements are met
- programme of works received and
- a pre start meeting has taken place.

3.9: Inspection of the works

When construction work is to commence the Developer must inform the New Connection Self Lay Technician of the intended commencement date and arrangements will be made to hold a pre start meeting and inspect the works.

Inspections will generally be carried out in accordance with 'CIRIA Report 118 – Supervision of Sewers for Adoption' ISBN 0-86017-308-9. If a more frequent level of inspection is required then the cost will be charged in accordance with the company's scale of charges at rates agreed on a site by site basis.

3.10: Variations

Construction variations may not be agreed with the inspector on site and all changes i.e. change of line, level, materials and manhole type etc. must be approved in writing and amended drawings issued where appropriate by the New Connections Self Lay Team.

3.11: Start of maintenance

The maintenance period will commence after completion of the works and as soon as the development is at a stage where the premises are 51% constructed and occupied and all the conditions of Clause 8 of the First Schedule in the Agreement have been satisfied.

"As Constructed Drawings" have to be submitted at this stage, together with a CDM Health and Safety file. Please contact the New Connections Self Lay Team for further information.

In order that instructions can be given to our Legal Team with regard to pumping stations we require eight copies of an “As Constructed drawing” showing the land to be transferred along with any rights of access from an adjacent public highway.

With regard to any SUDS facility where we are satisfied as to its long term ownership and maintenance we require 8 copies of an “As Constructed drawing” in order that instructions can be given to our Legal Team to complete the required Deed of Grant of Easement.

Please contact the New Connections Self Lay Team for further information about the format for the above drawings.

NB: If there is a pumping station, the telemetry system must be installed and operational in accordance with our monitoring system for maintenance to start. The Company will provide a service for the provision and installation of a telemetry system. The current cost of this service is set out in Section 6: Fees and Bonds. Please contact the New Connections Self Lay Team for details of this service.

A visual (includes a CCTV survey) inspection of the sewers, manholes and any pumping station will be completed at this time to ascertain defects which may have arisen since construction. A written list of any defects will be issued identifying those which must be put right before the maintenance period can begin. On confirmation of this a provisional certificate and list of any minor defects to be resolved during the maintenance period will be issued at the start of the maintenance period.

In order to ensure pumping stations do not hold up adoption you will at this stage be sent a pumping station action list setting out all the items that need to be completed ahead of adoption.

3.12: Final Inspections two months before end of maintenance

Final inspection of the sewers and pumping station will be carried out two months before the end of the maintenance period, and will comprise of the following;

- inspection of manholes and outfall structures
- inspection of pumping stations structures
- if deemed necessary a further CCTV inspection carried out by the company’s nominated CCTV contractor and paid for by the Developer.

Note: It is the Developers responsibility to:

- provide all necessary labour and safety equipment to enable the company’s representative to carry out the inspections
- to ensure that the all the sewers have been thoroughly cleansed prior to the CCTV being carried out, you will therefore be informed of the approximate date of the survey in advance.

If defects are revealed during the final inspection the Developer will be issued with a written defects list and will be required to undertake the necessary remedial works to the company’s satisfaction and within an agreed time period.

Any repaired sewers or manholes will require further inspection and the cost of this work will be at the Developers expense and in accordance with the company’s scale of charges set out in Section 6: Fees and Bonds.

3.13: Sewer Adoption

1. Prior to adoption

Adoption of the works will proceed once all the provisions of the agreement have been met. For reference, prior to formal adoption of the sewers, the following is required:

- final inspections completed with no defects outstanding
- legal matters referring to land transfers for pumping stations, rights in relation to SUDS facilities and or any deed of grants have been completed
- all items on the pumping station action list provided at start of maintenance period
- 'As constructed' drawings to allow us to update the public sewer records
- CDM Health and Safety File – file prepared in accordance with the CDM regulations containing any information which will assist the company when carrying out future construction or maintenance work on the sewers
- sewers downstream of your site are public.

2. Adoption

At the end of the maintenance period and provided that there are no outstanding matters, the completed works will be adopted by a declaration pursuant to S104 of the Water Industry Act 1991.

The Developer will be issued with a copy of the vesting certificate, together with a schedule and plan indicating the sewers adopted.

3.14: Release of bond

If there are no land issues, in line with SFA 6th edition the bond will be released on the issue of the provisional certificate except where there is a pumping station. In this case the bond will reduce to 15% of the cost of the pumping station. Early release or reduction of the bond will not be permitted.

STW will not issue an instruction to the surety to release the bond, since it is incumbent on the Developer to make an application direct to the bondsman to cancel the bond.

Section 4: Requisitions diversions and Section 102 applications

4.1: Sewer/lateral drain requisitions

1. Sewer/lateral drain availability

If a public sewer/lateral drain is not available, then STW may have a duty under Section 98 (S98) of the Water Industry Act 1991 as amended by the Water Act 2003 to provide one to be used for domestic purposes in response to a sewer/lateral drain requisition enquiry. Full details are given in Guide for Developers – Providing a Public Sewer/Lateral Drain, available from our website www.stwater.co.uk/newconnections.

The following brief notes provide some guidance;

2. What can I requisition a public sewer/lateral drain for?

A public sewer/lateral drain may only be requisitioned for domestic purposes. In relation to any premises, this means the removal of flows from the contents of lavatories, water used for cooking and washing and for the removal of surface water from those premises.

Domestic purposes does not include the removal of water used for commercial purposes such as a laundry business or for a business preparing food or drink for consumption otherwise than on the premises.

You may not requisition a public sewer/lateral drain to serve solely trade effluent or highway drainage flows. However, additional capacity can be provided in a public sewer/lateral drain, requisitioned for domestic purposes, for trade effluent or highway drainage flows provided that you pay the full cost of providing that additional capacity, with costs being calculated based upon a proportion of flow basis.

3. Who can requisition a public sewer/lateral drain?

You may serve notice on us to requisition a public sewer/lateral drain for domestic purposes if you are:

- the owner of land or premises or
- the occupier of land or premises or
- a Local Authority, New Town Development Corporation or Urban Development Corporation.

and if the premises comprise:

- land on which there are already buildings, or
- land on which there are proposals for buildings.

Your development proposals must have sufficient certainty to enable a project to be designed to take the proposed flows. The possession of a valid planning permission is generally taken as confirmation of “proposals for buildings”.

If you decide that a sewer requisition/lateral drain is appropriate for your particular development site, then please contact the appropriate Asset Protection Waste Water Team (see Appendix A for contact details) for further information and an application form.

4.2: Sewer diversions

1. Diversion details

The Developer’s enquiry will identify any public sewer crossing your site which may need diverting to comply with our protected strip widths or to facilitate development on the site.

If a sewer diversion is appropriate for your particular development site contact the appropriate Asset Protection Waste Water Team for further information and an application form.

Sewer diversions in STW may be achieved in two ways:

- complex diversions by Section 185 (S185) of the Water Industry Act 1991
- simple diversions by private arrangement using an agreement under S185 of the Water Industry Act 1991.

Upon receipt of your completed application for the diversion of a STW water asset (SD1) and its accompanying initial deposit, your application will be evaluated by the appropriate Asset Protection Waste Water Team who will decide if a diversion is reasonable and whether it is complex or simple. If as part of the evaluation it is necessary for us to carry out hydraulic modelling we will advise you of the cost involved. You will have to consent to pay this cost for your application to proceed.

2. Complex diversions

If after this evaluation, the diversion is deemed to be valid and complex you will be informed that the works will be designed and constructed by STW in line with Section 185 (S185) of the Water Industry Act 1991.

Once a valid application has been submitted and the initial payment made, we will undertake a preliminary design utilising our engineering teams. As part of this process, we will consider the various options, we will discuss these options with you if appropriate and we will make a formal offer based upon the preferred option. Once the offer has been accepted and any additional payment made, we will commence detailed feasibility and design leading up to return of tenders. Following receipt of tenders and a further payment, we will arrange for the works to be constructed.

3. Simple diversions

If after the evaluation the diversion is deemed to be valid and simple your application will be passed to the New Connections Self Lay Team. Subject to technical requirements you will be allowed to self construct the works under a formal Self Construct Sewer Diversion agreement in accordance with S185 of the Water Industry Act 1991.

The charges, fees and cash deposits for this are set out in Section 6.

Simple diversions carried out under this arrangement have the following key stages:

- initial feasibility
- agreement signed, method statement approved and all monies deposited
- pre-start meeting held
- construction of “off line” diversion by the Developer
- application in writing by Developer for permission to turn flows into the “off line” diversion
- As constructed plans and CDM files and CCTV supplied by the Developer
- return of cash deposit (subject to NRSWA 5% retention).

4.3: Sewer adoptions Section 102 (S102)

All newly built sewers constructed as part of developments may be dealt with by an agreement under S104 of the Water Industry Act 1991. However we recognise that in some situations the most appropriate drainage solution may include some existing private sewers that are to be considered for adoption under S102 of the WIA 1991.

It is essential that you contact the New Connections Self Lay Team at feasibility stage where this is being considered so they can advise you of the requirements to be fulfilled.

Section 5: Sustainable Urban Drainage Systems (SUDS)

5.1: Company SUDS position statement:

STW, as an environmental leader, fully supports the concept of SUDS. We believe that, subject to proper design and maintenance provisions, appropriate SUDS techniques in conjunction with traditional approaches to urban drainage offer real opportunities to reduce the impact of urban drainage on the environment.

We recognise, though, that the different techniques involved can vary in their effectiveness, depending in part on local conditions. On occasions complex issues relating to ownership and future liability have to be resolved.

The successful implementation of SUDS can only be realised if all stakeholders approach the issue with real commitment. It will also need further guidance and legislation from Government and regulators on some of the practical, legal and financial issues involved. We will play an active role in facilitating this process and developing practical guidelines for the future.

5.2: Flow balancing

Flow balancing is a method of attenuating peak discharge rate from the new sewer to that which can be accommodated in the receiving public sewer or watercourse. For surface water sewerage it is considered increasingly as an alternative to major watercourse or sewerage improvements.

- The company accepts the use of covered tanks as an ancillary within the sewerage system, however, the company will take into account the increased maintenance liability when considering such proposals
- The company's specification and design criteria covering surface water balancing tanks can be obtained from the New Connections Self Lay Team at Severn Trent Centre.

Section 6: Fees and bonds

Charges for Developers services are set out in our charges booklet available from our website www.stwater.co.uk/newconnections.

Appendix A: Contact information

Asset Protection Waste Water and New Connections Contacts

West Midlands

Counties: Staffordshire, Shropshire, Powys, West Midlands [excluding Coventry], Worcestershire, Gloucestershire and Herefordshire

Asset Protection Waste Water Sewerage – West

Severn Trent Water Ltd

Regis Road

Tettenhall

Wolverhampton

WV6 8RU

Telephone: 01902 793871

Fax No: 01902 793971

Email: net.dev.west@severntrent.co.uk

East Midlands

Counties: Warwickshire, Leicestershire, Derbyshire, Nottinghamshire, South Yorkshire, Lincolnshire and Coventry

Asset Protection Waste Water Sewerage – East

Severn Trent Water Ltd

Leicester Water Centre

Gorse Hill

Anstey

LE7 7GU

Telephone: 0116 234 3834

Fax No: 0116 234 3035

E mail: net.dev.east@severntrent.co.uk

Sewer connections and sewer adoptions (for all counties)

New Connections Self Lay Team

Severn Trent Water Ltd

Severn Trent Centre

PO Box 5311

Coventry CV3 9FL

Telephone: for application forms 0800 707 6600

for general enquiries 0800 707 6600

Appendix B: Lateral drains to sewer standards

Lateral drain and sewer connections to sewer standards

Under the provisions of the Water Act 2003, STW has the power to take ownership of new drains and sewers. Our policy is to take ownership of all new drains and sewers located within public highway. If we did not do this, pipes would remain in private ownership and the joint responsibility of all properties draining through them. Please note that a drain is a pipe which serves only one property. A sewer is a pipe which serves more than one property.

It is necessary for new pipes which are normally located in the highway and which are to be vested in STW to be constructed to a minimum standard specification. This standard is the current edition of "Sewers for Adoption" published by Water Research Centre. These notes identify the basic requirements common to both a drain and a sewer unless noted otherwise.

Minimum pipe size:

Foul water

- **Minimum size 100 mm diameter if less than 10 houses (or equivalent) connected.**

Surface water

- **Minimum size 150 mm diameter.**

Hydraulic design:

Foul

- **Min gradient = 1/80 for 100 mm pipe**
- **Min gradient = 1/150 for 150 mm pipe with more than 10 houses (or equivalent) connected.**

Surface water

- **Min gradient = 1/pipe diameter (e.g. for a 150 mm pipe = 1/150).**

Depth of pipes:

Minimum cover between top of pipes and ground level

- **Gardens/Open spaces and agricultural = 0.9 m**
- **Highways (including footways) = 1.2 m.**

Permitted pipe materials

- **Clayware pipes as per Sewers for Adoption Guidelines**
- **Concrete pipes as per Sewers for Adoption Guidelines**
- **Structured Wall Plastic as per Sewers for Adoption Guidelines and Severn Trent Water Standards.**

NOTE: Details regarding approved pipes can be provided on request from STW Self Lay Team at:

Severn Trent Water Ltd
New Connections
Self Lay Team
PO Box 5311
Coventry
CV3 9FL
Telephone: 0800 707 6600
Email: newconnections.selflay@severntrent.co.uk

Structured wall plastic pipes approved for use in STW are as the table below. For limitations on their use please consult the New Connections Self Lay Team at Severn Trent Centre. Prior to adoption, the Developer shall be required to demonstrate by an acceptable physical test that the pipe work satisfies the long-term deformation criteria.

Polysewer – Polypipe Building Products	Size 150 mm, 225 mm and 300 mm
Quantum – Marley	Size 150 mm, 225 mm and 300 mm
Ultrarib – Uponor	Size 150 mm, 225 mm and 300 mm
Ultrarib – Wavin	Size 150 mm, 225 mm and 300 mm
Ridgisewer – Polypipe Civils Ltd	Size 400 mm, 450 mm, 500 mm, 600 mm, 750 mm and 900 mm
Weholite – Asset International	Size 450 mm to 3000 mm

Demarcation chamber:

A demarcation chamber is required at the point where the private drain or sewer becomes vested in STW.

It is to be located:

- **inside the property boundary**
- **preferably in the driveway**
- **not more than 1 m from boundary**
- **located outside of probable vehicle wheel tracks.**

Lateral drain demarcation chamber:

Construction details

Size and material

- **chamber diameter to be a minimum of 450 mm for 100/150mm pipes**
- **chamber access to be restricted to 350 mm opening if chamber is more than 1.2m deep**
- **chambers may be of plastic construction to BS 7158 with integral seals**
- **backdrops are generally not permitted and all incoming pipes are to be ramped.**

Sewer demarcation chamber:

Construction details

Size and material

- for depth less than 1 m from top of pipe to ground, the chamber's internal dimensions shall be 900 mm long and 675 mm wide. The chamber can be constructed using rectangular concrete sections or in Class B engineering brick
- for depth between 1.0 – 1.5 m from top of pipe to ground, the chamber's internal dimensions shall be 1040 mm long and 675 mm wide. The chamber can be constructed using rectangular concrete sections or in Class B engineering brick
- for depth greater than 1.5 m from top of pipe to ground, the chamber's internal dimension shall be a minimum of 1200 mm diameter. The chamber shall be constructed using precast concrete rings
- drawings showing typical construction will be sent out with connection approval letters.

Covers and frames – lateral drain:

Cover loadings

Surface	Class (loading in KN)	Loading
Road	D400	Vehicle impact
Footway + drive way	B125	Occasional vehicle loading
Gardens	A15	Pedestrian + cyclist (no vehicle traffic)

Cover type

- Not readily dislodged
- B125 and A15 type covers must be lockable or screwed down for security
- In fill type covers should not be used.

Covers and frames – sewers:

Cover loadings

- Class D400 non ventilated and closed keyway covers should be used in all locations

Connections via pumping stations – lateral drain

If it is necessary to pump flows in order to connect to the public sewer, the pumping main should discharge into the boundary demarcation chamber. The lateral drain/sewer between demarcation chamber and public sewer should be a gravity pipe. Where this is not possible then a hatch box is to be provided as demarcation chamber.

Layout plan showing (six copies required):

Surface water sewers to be adopted – coloured blue;

Drawing No.

Foul sewers to be adopted – coloured brown;

Drawing No.

Combined sewers to be adopted – coloured red;

Drawing No.

Site boundary – coloured green;

Drawing No.

Easements dimensioned – coloured yellow

Drawing No.

Longitudinal sections (two copies required):

Drawing No.

Other detail drawings (two copies required):

Drawing No.

Your comments:

Does the site include a pumping station and/or balancing facility?

Yes

No

If yes, please provide evidence that your legal representation has been instructed to progress legal matters.

Please provide in writing confirmation that you will pay STW costs in relation to progressing legal matters on this site.