



# **Competition in providing new water mains and service pipes**

**Guidance to water companies**

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# 1. Overview

## 1.1 Purpose and background

Owners and occupiers of premises that need a new water main or sewer may ask the water or sewerage company<sup>1</sup> to install the pipework. When this is required for domestic purposes, it is known as requisitioning. Alternatively, they may choose their own contractor to do the work, which is known as self-lay. The water company will take over responsibility for (adopt) self-laid pipes that meet the terms of its agreement with the developer or self-lay organisation (SLO) who will carry out the work. All water companies should have a self-lay policy.

The Water Industry Act 1991 (WIA91)<sup>2</sup> sets out a statutory framework for the self-lay of water mains and gives us powers to determine disputes. This document sets out the principles that should underlie water companies' own procedures on self-lay and applies to self-laid water mains and service pipes for domestic purposes<sup>3</sup>. By following this guidance, water companies will minimise the potential for disputes to arise.

The technical and operational terms used in this document are explained in the glossary of terms at the end of the paper.

## 1.2 Legislation and publications

The WIA91 sets out a framework for water companies to enter into agreements with persons constructing or proposing to construct new water mains and service pipes for domestic purposes.

Broadly speaking, the legal provisions are as follows.

- If a SLO constructs certain pipes in accordance with the terms of an agreement made under section 51A, the water company has to connect them to the existing network and adopt them.
- Once the water company has adopted mains in accordance with an agreement, the company will make a payment to the party it entered into agreement with. This is an allowance for the revenue that the water company expects to receive from customers of the newly connected main.

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<sup>1</sup> Water or sewerage companies are companies who hold Instruments of Appointment as water or sewerage undertakers under the Water Industry Act 1991 (WIA91).

<sup>2</sup> All references to WIA91 in this document refer to the Act as amended by the Water Act 2003.

<sup>3</sup> This guidance does not cover the self-lay of sewers. This is covered in WRc's publication 'Sewers for Adoption', which is a guidance document published by agreement between sewerage companies and the construction industry.

- We can determine disputes about the terms and conditions of self-lay agreements and water companies' refusals to agree to adopt self-laid pipes supplying water for domestic purposes.

We (Ofwat) deal with self-lay disputes. WaterVoice operates as the independent voice for water and sewerage customers in England and Wales, but has no powers in this area.

In this guidance, we have also referred to the following publications.

- 'Guidance on financial arrangements for self-lay and requisitioning agreements', May 2004 (the financial guidance). This is summarised in section 1.3 below.
- 'Process for handling disputes and appeals: requisitioning of water mains and public sewers and/or lateral drains and adoption of self laid mains', May 2004 (the disputes process).
- United Kingdom Water Industry Research's (UKWIR) 'Self-Laying of Water Mains and Services – A Code of Practice for England and Wales', 1st edition, April 2004 (UKWIR's self-lay code of practice). This covers the design and installation of new on-site water mains and communication pipes, including a boundary stopcock and/or meter chambers, and the installation of off-site mains.

All of these documents are available on our website at [www.ofwat.gov.uk](http://www.ofwat.gov.uk).

### **1.3 Our financial guidance**

The key points of our financial guidance are set out below.

- The asset payment and charges for self-lay must be calculated in the same way that charges would have been calculated if the work had been requisitioned.
- The asset payment must be calculated in accordance with section 51C of the WIA91.
- Charges for work carried out by water companies in relation to self-lay schemes should reflect the reasonable costs of the work. Where these charges are included in an agreement under section 51A, we have the powers to investigate disputes about the levels of these charges.
- Water companies are entitled to levy infrastructure charges and recover reinforcement costs when works are self-laid. The financial guidance includes further explanations of all the costs associated with installing new infrastructure.

- In most cases, the level of security that a water company can require when works are self-laid should cover the reasonable potential cost of remedying minor defects in the SLO's work and the reasonable costs of the non-contestable work where these have not already been recovered. The financial guidance also explains when this security should be returned and the form it should be in.

## **2. Communication with the industry and future work**

In May 2002 we set up our self-lay group (SLG) to help us facilitate progress in the market. The SLG includes representatives from water companies, developers and contractors. The SLG is monitoring the development of the new regime and, where necessary, raises issues with us for consideration or decides whether to take action itself. We are working with the SLG to communicate the benefits of self-lay around the country.

In addition, we keep abreast of current practice in the self-lay market through

- researching water companies' policies;
- attending seminars and conferences;
- information brought to us through telephone enquiries and complaints; and
- contact with the Office of Gas and Electricity Markets (Ofgem).

Anecdotal evidence indicates that the number of developments utilising self-lay are increasing around the country and developers are more aware of the opportunities available.

We will continue to be proactive to ensure that people understand the new legislation and guidance papers, and to help the self-lay market to work better. Together with the SLG, we have identified the following areas of future work.

- Monitoring Lloyd's Register's progress in implementing a registration scheme for water, contributing to its development as necessary and encouraging the industry to support it.
- Supporting Water UK's work to write a model national legal agreement, contributing to its development as necessary.
- Assessing developments in the self-lay market to identify possible obstacles to competition in mains and service pipe laying and developing any policy required to overcome these.

### 3. Guidance to water companies

We encourage developers, SLOs and water companies to develop constructive working relationships to facilitate the competitive environment. We encourage water companies to embrace and further develop competition, while safeguarding water quality and the interests of customers.

Developers choosing to self-lay can plan the main-laying and connection work to suit their site programme. Developers are also interested in the option of multi-utility service laying, where one SLO installs several utility services to a site, sometimes in a single trench. The developer benefits by procuring services from one service provider, rather than from separate utilities. Costs may also be lower if water, gas and electricity services are laid in one trench. There is also a lower risk of damage to existing infrastructure by repeated excavations. UKWIR's self-lay code of practice sets out the stages of the self-lay process.

Developers and SLOs should work in partnership with water companies. They should make early contact and provide adequate information to enable water companies to prepare quotations in line with service levels. Developers should plan early and provide details about:

- site layout plans;
- house types;
- plots;
- phasing; and
- internal and external plumbing arrangements. Appendix 3 provides more information on the Water Regulations.

Water companies should allow developers to employ SLOs to carry out those works they can do and to buy in the services of the water company or an appropriate alternative for the remaining work (subject to the approval of the water company). However, water companies should not be disadvantaged by having to complete elements of work that SLOs cannot do. Water companies can avoid this by making cost-reflective charges to developers for these tasks.

This chapter sets out the principles for water companies' self-lay policies and agreements. We have numbered the principles 1 to 23 and incorporated the service levels associated with each principle. The work we consider to be contestable and non-contestable is set out in appendix 1. We cover service levels in general in section 3.13 and a complete list of service levels is in appendix 2. Although the service levels are based on a particular way of working, the targets should apply to water companies' individual processes. This reinforces the need for all parties to continue an effective dialogue from the first approach to completion of the site.

We propose to review this guidance in 2007.

### 3.1 Self-lay policies

**Principle 1. Water companies should have clear and publicly available self-lay policies that reflect the principles below.**

Water companies' own policies should be readily available to SLOs, potential SLOs and developers. Ideally, these policies should be on their websites, but we recognise that smaller water companies may not have the means to do this easily. The minimum we expect to see on a website is clear information about how these policies can be obtained and whom developers or SLOs can contact about queries. Water company staff should tell enquirers about the option to self-lay and be able to explain their company's self-lay policy, as well as providing information on requisitioning.

UKWIR's self-lay code of practice sets out the standards and processes for installing new water mains and service pipes. In addition, water companies should provide clear guidance on their individual technical specifications as well as their own dispute handling process and our powers to handle disputes.

Water companies' policies on water quality must cover the requirements of both the Water Supply (Water Quality) Regulations and the Water Supply (Water Fittings) Regulations (summarised in appendix 3) and refer to appropriate reference documents. UKWIR's self-lay code of practice also covers water quality.

The Drinking Water Inspectorate (DWI) may take enforcement action against a water company in the event of unwholesome water being supplied. The water companies are also liable for prosecution if water unfit for human consumption is supplied, subject to a due diligence defence, or if an unapproved substance or product is applied or introduced. Water companies may include clauses in their self-lay agreements to enable them to recover the reasonable costs of any such actions. Criminal liability, however, cannot be transferred.

### 3.2 Approving self-lay organisations

**Principle 2. Water companies should have clear and reasonable criteria against which SLOs and their individual employees can be assessed for appropriate skills and qualifications.**

**Principle 3. SLOs should not be expected to meet either higher or lower standards than those contractors employed directly by water companies.**

**Principle 4. Water companies should require a SLO to be competent only in those activities the SLO proposes to carry out. Water companies can require SLOs to be competent in the basic elements of self-lay work, such as main and service laying, connections, understanding material selection and basic hydraulics.**

Water companies' self-lay policies should set out their criteria for approving SLOs. In

assessing SLOs' competencies, water companies are encouraged to take account of SLOs' proven records of working within other water companies' areas.

SLOs and their employees should be experienced and qualified in the areas relevant to the work they wish to do. Water companies can require SLOs and their operatives to be competent in the basic elements of self-lay work. This includes main and service laying, connections, understanding material selection and basic hydraulics. The standards of construction and working that SLOs must work to should be no greater than the standards that water companies require of their own contractors.

Energy and Utility Skills (EU Skills) is the sector skills council for the utility industries and is funded by government and employers. EU Skills has developed a modular Water Network Construction qualification to cover the competencies to lay water infrastructure. This is the first national qualification that operatives can obtain to demonstrate their competency to water companies. The qualification consists of core and optional modules designed to ensure that SLOs meet the essential criteria while allowing the choice to specialise in certain areas. Operatives must be reassessed every five years to retain a valid qualification. The water companies fully support this initiative. We encourage developers and contractors to do likewise, to help reduce the barriers to competition that individual water companies' training requirements can present.

Before starting work, SLO employees need to be screened for water transmittable diseases and undergo hygiene training. Satisfactory assessment is needed to work on potable water mains and pipes. This is sometimes known as 'blue card' certification. Water companies must tell SLOs about the 'Principles of water supply hygiene' and the associated technical guidance notes. This applies to any staff sub-contracted to SLOs. EU Skills is also developing a scheme to register individuals who have successfully completed national hygiene training. This is expected to become available from early 2006.

In addition to this, Lloyd's Register operates the Water Industry Registration Scheme (WIRS), which is a national accreditation scheme for self-lay organisations. This initiative complements the work of EU Skills as it is a skills registration database for the workforce of companies, contractors and self-lay organisations. All water companies have signed a Memorandum of Understanding (MoU) as a statement in support of the process.

The service level that applies for this part of the work follows.

- **Service level 5. The water company verifies and accepts records or refuses consent for the employee to work, as appropriate, within five working days of receipt.**

### **3.3 Applications to self-lay**

The person constructing or proposing to construct the pipes may apply in writing to the

owner of the water network to which they wish to connect, requesting an agreement<sup>4</sup>. We encourage SLOs and developers to initiate discussions with water companies about their water requirements as early as possible. If the developer has appointed a SLO, water companies should provide information to that SLO. Applications to self-lay that should include supporting information, as specified by the water company in its self-lay policy<sup>5</sup>.

Water companies and developers need to agree at an early stage whether the supplies are for domestic or non-domestic purposes. Supplies of water for drinking, washing, cooking, central heating and sanitary purposes are supplies of water for domestic purposes even if, apart from some specific exceptions, the use of the property is commercial<sup>6</sup>.

UKWIR's self-lay code of practice includes the information that a water company may require when a SLO or developer applies to self-lay. We expect developers and SLOs to follow this guidance and for water companies to apply it when deciding their own specifications.

Water companies must, before the end of two months from a self-lay application, either refuse the application or give notice to the applicant of the terms on which it is prepared to grant the application<sup>7</sup>. A water company may delay its response to an application if it is incomplete<sup>8</sup>. Where a SLO or developer submits incomplete information, we expect water companies to highlight this to the appropriate contact within three working days.

The following timescales apply to making self-lay applications.

- **Service level 1. Water company scrutinises the application and acknowledges it as complete or notifies the applicant of any shortfall. The service standard for checking and acknowledging the completeness of the application is three working days from receipt.**
- **Service level 2a. Water company specifies the point of connection and provides system design parameters. For developments not greater than 500 properties this is within ten working days of receiving all the information.**
- **Service level 3. Water company checks the final details and application within five working days, unless there are significant changes in, for example, housing layout, number or type of houses, programme for development or point of connection, requiring significant revision of asset payment and/or non-contestable charges.**

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<sup>4</sup> Section 51A(3) of the WIA91.

<sup>5</sup> Section 51A(4) of the WIA91.

<sup>6</sup> Section 218 of the WIA91.

<sup>7</sup> Section 51B(1) of the WIA91.

<sup>8</sup> Section 51A(5) of the WIA91.

### 3.4 Specifications for self-lay work

**Principle 5. Water companies should have clear and publicly available specifications on methods of working and on the type of materials to be used.**

**Principle 6. SLOs can procure materials themselves, if they comply with water companies' reasonable specifications and national standards.**

**Principle 7. Where water companies require materials, for example meters, to be standardised, they should be able to justify this in relation to operational and/or maintenance efficiency benefits.**

The general requirements and specifications for all types of civil engineering construction work, including providing water mains and service pipes, are represented at a national level in the Civil Engineering Specification for the Water Industry (CESWI). In addition, water companies can assess the quality of mains to be adopted against UKWIR's code of practice. We may refer to these documents in determining disputes about agreements, although we will not be bound by them. See section 3.6 on agreements, and refer to our disputes guidance.

Water companies are under statutory requirements, enforced by DWI, to ensure that water supplies are not contaminated. This includes enforcement action if water is unwholesome and criminal liability for supplying water unfit for human consumption. Water companies' specifications must cover all relevant DWI requirements and list appropriate reference documents. SLOs' methods of working must follow agreed practice as stated in the water companies' water supply hygiene code of practice.

All materials coming into contact with drinking water supplies must be approved under Regulation 31 of the Water Supply (Water Quality) Regulations. Water companies' pipework, up to and including the stop tap at the boundary of the property must meet Regulation 31. DWI has a list of products and processes approved under Regulation 31 of the Water Supply (Water Quality) Regulations. The customer is responsible for the pipework from the stop tap onwards and this must meet the requirements of the Water Supply (Water Fittings) Regulations, 1999.

Water companies should have the final approval of any standards and specifications in operation in their area, which they should be able to justify in relation to operational and/or maintenance or efficiency benefits. For example, water companies can set reasonable specifications as to what meters the SLOs can install. However, these standards should be no more onerous than those for their own contractors. Where water companies believe that there are localised reasons for using certain types of materials, for example on brownfield sites where there may be a risk of contamination, they should justify this on technical, operational or maintenance efficiency grounds. They could also choose to supply the meters to SLOs.

### 3.5 Charges made by water companies

**Principle 8. Water companies' charges for non-contestable elements of self-lay work (such as inspection, design approval, sampling, etc) should reflect the reasonable costs of doing the work.**

We expect water companies to complete the cost breakdown template included in our financial guidance. This should be provided at the start of the process to enable the developer to make a reasonable assessment of the likely costs of the work. The cost breakdown template should include details of such non-contestable costs as:

- design approval;
- diversions;
- inspections and supervisions;
- connection to water company's existing network; and
- water sampling and analysis.

It should also provide details of:

- any network reinforcement charges;
- infrastructure charges; and
- the estimated asset payment.

Generally, the level of non-contestable costs should be the same as they would have been if the work had been requisitioned. In some cases, extra costs may be incurred because the works have been self-laid, for example where extra inspection is required because a SLO has limited experience or where works go wrong. Water companies can charge for this work in addition to the other non-contestable costs. This should be set out as part of the first formal quote from the water company.

Water companies should publish details of their charges or charging methodology for the tasks involved in the self-lay process in their self-lay policies. For further information on charging arrangements, please read our financial guidance.

### 3.6 Self-lay agreements

Section 51A of the WIA91 sets out how water companies may enter into agreements to adopt and connect self-laid water mains and service pipes for domestic purposes. Some water companies prefer to agree a contract with a SLO rather than the developer, while others prefer the reverse. This guidance does not prescribe contractual relationships, but water companies' self-lay policies should explain clearly the roles and responsibilities of all parties. The agreement needs to be in place before the final connection is made.

The water company will declare in the self-lay agreement that it will adopt the water main or service pipe at a date upon or after completion of the work, provided that it is constructed in accordance with the terms of the agreement. SLOs, developers and water companies must

work together to ensure that self-laid water mains meet the specifications necessary for adoption. Water companies should carry out final inspections to check that their specifications have been followed within a reasonable time after the SLO or developer has notified them that work is complete.

Currently, water companies each have their own legal agreement. UKWIR's self-lay code of practice sets out the key headings to be included in the legal agreement between the water company and the developer or SLO. Water UK is working with the industry, including SLOs, developers and regulators, to produce a model national legal agreement. It is expected that this will be available from early 2006. This standardisation will streamline the process for SLOs working in different water company areas. When this agreement is available we will expect water companies, SLOs and developers to use it.

We will consider disputes about the terms of a self-lay agreement as explained in the disputes process. This sets out how we will handle disputes. Where a dispute has implications for water quality we will seek advice from DWI, in accordance with our MoU agreed on 23 April 2004. Local authorities and highway authorities can take action against SLOs or developers for defective reinstatement as appropriate.

Water companies' self-lay agreements with developers or SLOs should cover different parties' responsibilities for complaints. Water companies will deal with customers' complaints after the pipe is adopted.

A water company can enter into an agreement about a water main or service pipe within the area of another water company<sup>9</sup>. This is where the other water company has consented in writing or where the Secretary of State has decided that this is unnecessary. This situation might occur when the pipes are to be laid in the latter water company's area but will connect to the system owned by the former. All parties should communicate effectively to ensure a smooth process.

The following service level applies to this part of the process.

- **Service level 4. The draft formal agreement is issued within five working days of approval of the construction drawings and programme.**

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<sup>9</sup> See section 51A(10) of the WIA91.

### 3.7 Providing on-site and off-site mains

**Principle 9. SLOs can install off-site mains in third party land and highways where SLOs have obtained the necessary street authority approvals and satisfied any other legal requirements.**

**Principle 10. SLOs can install extensions to the site and the new part of diversions where SLOs have the necessary permissions. Water companies can retain responsibility for these works only when they will affect existing customers and/or there are justifiable engineering reasons to do so.**

Where SLOs can obtain the necessary street authority approvals, they can install off-site water mains. These are new mains that need to be installed as part of the new development but are not within the boundaries of the developers' land. Arrangements for access must be agreed between all parties. These may be in the form of land transfers or easements, which will always be assigned to the water company. Water companies must explain in their self-lay policies what developers and SLOs must do to arrange access. Access arrangements must always be completed before the formal adoption of the pipework.

For the purposes of this document, the new part of a diversion is any part of a diversion that is on-site, in the developer's land, or any part of a diversion that includes laying new pipes but not making any connections to the water company's existing network. Water companies' policies should set out the circumstances where they will not allow SLOs to do extensions or diversions to any existing mains on development sites.

#### 3.7.1 Reinforcement of the existing network

**Principle 11. Water companies can retain the right to carry out off-site work to reinforce the existing network.**

**Principle 12. Water companies must be able to justify the need for and cost of reinforcement work and provide a timetable at the start of the project. They should generally complete reinforcement work as soon as possible.**

When self-lay works are undertaken, a water company may also need to provide other water mains and tanks, service reservoirs and pumping stations because of the provision of the new main<sup>10</sup>. This is known as network reinforcement and may impact on existing customers. When the water company carries out this work, it can recover its reasonable costs for this.

Water companies should consider requests from SLOs to carry out reinforcement work as part of the self-lay agreement where this does not have any impact on existing customers. However, water companies retain the rights to insist on carrying out this work because they

<sup>10</sup> Section 51C(3) of the WIA91.

own the assets and have a detailed knowledge of their condition and capacity.

Generally, water companies should complete reinforcement work as soon as possible. Under the WIA91 we have powers to determine disputes about charges for network reinforcement. When determining disputes, we will consider carefully whether the network reinforcement is necessary, particularly if the work is carried out more than a year after the main has been installed.

Water companies should identify off-site requirements for reinforcement work and provide timely information in response to enquiries about it. The water company should also be able to justify the need for and cost of reinforcement by providing a detailed explanation of its requirement if requested. If a dispute is referred to us, we will expect the water company to demonstrate sound technical reasons for the reinforcement and may ask for supporting flow analyses and/or pressure modelling.

There may be occasions, for example on large developments, where it is more efficient for the water company to phase off-site reinforcements in line with development progress. In these circumstances, water companies should:

- estimate the full costs at the start;
- estimate when the reinforcement is required; and
- calculate the estimated charge to the developer(s).

The charge should take account of when the work will be completed. They should tell developers the reasons for reinforcement work and provide a breakdown of their charges showing any apportionment between different parties. So, if several developers are involved, fair arrangements can be agreed at the start of the development.

The water company may also decide that other supporting infrastructure at or downstream of the point of connection is required (that is between the existing network and the new properties being built by the developers). This might include tanks, reservoirs or pumping stations. The water company can include this work in the terms and conditions of self-lay agreements<sup>11</sup>. The SLO or the water company (at the SLO's expense) can provide such infrastructure. Under the WIA91, we have powers to determine disputes about, for example, the need for such infrastructure or whether the SLO can provide it. If the infrastructure is constructed in accordance with the agreement, the water company will adopt it<sup>12</sup>.

Our financial guidance has further information on the charges payable when infrastructure is self-laid.

### **3.7.2 Upsizing**

Water companies can ask SLOs to lay a larger main than is necessary for the current development, in anticipation of meeting future demand. In this case, section 51A(7)(c)(i) of the WIA91 enables the water company to specify the material, size and depth of pipes. The

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<sup>11</sup> Section 51A(7)(a) of the WIA91.

<sup>12</sup> Section 51A(7)(b) of the WIA91.

water company must pay the SLO or developer the reasonable extra expense it incurs by meeting these additional requirements. Water companies can recover these costs from subsequent developers connecting to the same main.

### 3.8 Design

**Principle 13. SLOs can design on-site systems in accordance with water companies' specifications. Water companies must approve designs before work starts.**

**Principle 14. Water companies can retain the right to design off-site systems.**

**Principle 15. Water companies should co-operate with SLOs in providing information on water networks, to facilitate SLOs in carrying out works.**

SLOs can complete designs, provided they follow the water company's guidance and seek its approval. Water companies must approve designs as these have an impact on their supply systems. Self-lay work should not start on site until the water company approves the design. Water companies should therefore meet service level 2, as set out below. Water companies will need to determine pipe sizes due to the impact on the network. The water company and SLO or developer should discuss this during the design process.

Water companies require SLOs or developers to provide ground analyses with designs for all sites. In some circumstances, they may also require details of remedial work that is necessary before designs can be approved and work started. In addition, water companies can insist on having new designs if the ground conditions do not allow work to proceed to the original design or if the developer's site plan changes. Their specifications should cover the types of materials that can be used in contaminated land and methods of working.

Water companies must explain their reasons for rejecting designs, and disputes should be resolved through negotiation, where possible. We can consider disputes about the terms and conditions of self-lay agreements, which may include design specifications.

If a SLO wants a water company to design the main it must give the water company adequate notice.

SLOs should obtain information from other utility service providers before they start work. Water companies should co-operate with SLOs' requests for information about water networks. For security reasons, it is not appropriate for water companies to put details of their networks on the Internet.

The following service levels apply to designing the network.

- **Service level 2. The following service standards apply where the SLO asks the water company to do the design.**

**Developments up to 500 properties – within 20 working days.**

**For developments greater than 500 properties or schemes where significant off-site design is required, or where there are changes to the developer's prior notifications, or where specialist advice or investigation is required, the water company must confirm the date for providing full details of the quotations within ten working days.**

- **Service level 2b. Water company checks design, calculates asset payment and provides full details of cost of non-contestable items and services. For developments not greater than 500 properties this is within 15 working days from receipt of design and drawings from the SLO.**

### **3.9 Supervision and inspection**

**Principle 16. Water companies should clearly explain to SLOs at the start of a self-lay project the level of supervision and inspection required and the associated charges.**

Where water mains and service pipes are self-laid, water companies must supervise and inspect work to maintain quality standards and security of supply. Water companies should identify the inspection and supervisory requirements of developments before work starts on site, preferably in a meeting with the SLO. This includes outlining clearly the criteria that developers and SLOs should meet before inspections are carried out. Requirements may differ across developments. More inspection may be needed on larger sites. This includes areas that are phased, on brownfield sites or contaminated sites where special materials or different working practices apply.

Water companies may charge for additional inspections where SLOs do not meet the water company's standards, and for extra inspections and advice requested by the SLO.

Water companies can recover the reasonable costs associated with inspecting and supervising the work carried out by the SLO. This includes the costs that might be incurred if a higher level of inspection is needed if, for example, the SLO is inexperienced in a water company's area.

DWI carries out random, unannounced audits of work being carried out on the distribution system by water companies and their contractors. The same is likely to apply to SLOs. SLOs must keep water companies informed of progress and where plans change.

### 3.10 Pressure testing, swabbing, disinfection, water sampling and quality testing

**Principle 17. SLOs can swab, pressure test and disinfect new mains under water company supervision.**

**Principle 18. Water companies can retain the right to undertake water sampling and quality testing.**

Water companies should allow SLOs to swab, pressure test and disinfect new mains. Final connections will not be made until a satisfactory water sample result is obtained. As water companies are liable for water quality failures, they retain responsibility for this final quality control.

Water companies may be happy to allow SLOs to undertake water sampling, but can retain the right to do this if they prefer. Water companies should make their processes for testing and sampling clear and notify SLOs or developers as soon as possible if a test or sample has been passed and generally within 24 hours of a positive result.

Water companies must follow these service levels relating to pressure and quality testing.

- **Service level 6. The water company makes supplies available within five working days of notice of a requirement for a supply, and is available to witness the pressure test subject to the specified notice period, providing the necessary off-site works have been completed and there are no New Roads and Streetworks Act (NRSWA) or Traffic Management Act requirements.**
- **Service level 7. The water company will take a water sample for bacteriological testing within three working days of the SLO's request. Where the first water sample fails, the water company should inform the SLO as soon as possible.**

### 3.11 Connecting new mains to existing mains and adopting new mains.

**Principle 19. Water companies can retain the right to connect new mains to existing mains and to connect service pipes directly to existing mains.**

New mains are those laid by the same SLO as part of the same development. Existing mains are the parts of the system in place before a SLO starts its own installation work. These include off-site and on-site pipework, some of which is likely to supply existing customers. SLOs cannot be expected to know the condition of pipework that they have not laid and are not responsible for maintaining.

In view of their obligations to their existing customers, water companies generally prefer to complete this work themselves. For this reason, we class this as a non-contestable activity.

The self-lay agreement should specify the point or points at which the new main<sup>13</sup> or service pipe<sup>14</sup> will connect with the water company's existing supply system. A water company may agree to connect a service pipe to its existing supply system, subject to compliance with one or more of the requirements specified in section 47(2) of the WIA91. A water company must not connect a self-laid water main or service pipe to its system unless it has taken over responsibility for (adopted) the extent specified in the agreement to adopt<sup>15</sup>.

Water companies require information from SLOs before adoption. This might include audit trails for materials, details of easements, and 'as constructed' details to enable the water company to operate the system.

**Service level 8. Subject to a satisfactory bacteriological test and receipt from the SLO of 'as laid drawings', the water company will connect to the existing system within ten working days of the notice that the new main is available for testing and connection, and will issue a notice accepting the main into operation, providing there are no NRSWA or Traffic Management Act requirements.**

## **3.12 Connecting service pipes and fitting meters**

### **3.12.1 Connecting service pipes**

**Principle 20. SLOs can connect service pipes to new mains that they have laid (after the water company has commissioned the mains), provided the appropriate standards are met and there are no risks to existing customers.**

**Principle 21. Where appropriate, water companies can control the timing of service pipe connections made by SLOs to mains that they have laid themselves.**

SLOs can connect service pipes to new mains as defined above, because they will know the condition of the pipe. This work will generally relate to on-site mains. This is provided that the appropriate standards are met and there are no risks to existing customers.

The self-lay agreement should also specify the information that the SLO should provide when the connection is made.

<sup>13</sup> Section 51A(7)(d) of the WIA91.

<sup>14</sup> Section 51A(8) of the WIA91.

<sup>15</sup> Section 51D(1) of the WIA91.

Water companies can require the SLO or developer to provide a clear programme of proposed future connections to the main. This enables the water company to:

- control the timing of service connections to new mains;
- enable inspection of work; and
- to facilitate inspections to ensure compliance with water regulations.

Water companies must be reasonable in terms of how far ahead they require information on service connections to be available.

### 3.12.2 Fitting meters

**Principle 22. Water companies should consider SLOs' requests to install water meters to water company specifications.**

Before SLOs can install meters, they must demonstrate to the water company that they can do the work. Water companies should set out their requirements for competency in their self-lay policies, such as the Water Network Construction Qualification or registration on WIRS. It is reasonable for individual SLOs to lose approval to install meters if they do not fit them effectively.

Water companies' self-lay policies should explain their requirements for monitoring the SLOs' meter fitting before the work starts.

Where frequent problems occur, water companies can increase the number of inspections needed. SLOs must use specified equipment and materials, and locate meters in accordance with water companies' policies.

Water companies must explain clearly what information they need to enable them to trigger their billing processes, whether this should be provided by the developer or by the SLO and the timescale for providing it. Developers and SLOs must provide this information as required.

Water companies can enter into separate agreements for installing service connections, including the meter fitting. This would enable the water company to collect a deposit from the SLO or developer who protect against it providing inadequate meter information. However, any such deposit must be separate from the asset payment, which must be paid when the main is adopted by the water company.

Water companies could supply meters themselves to SLOs to ensure that the materials used are compatible with their processes.

Water companies should explain the safeguards that they require the SLO to operate to ensure that metering is carried out with satisfactory levels of service. The water company should agree procedures with the developers and SLOs for remedying any defects in meter fittings, including who is responsible for carrying out the work and paying for it. This will minimise any inconvenience that new customers might suffer in completing connections and

transferring customer information due to poor performance.

The following service levels to apply to this work.

- **Service level 9. Where the SLO asks the water company to fit the meter, the water company will do so within five working days of receiving details of the connection.**
- **Service level 9a. Where the water company supplies meters for SLOs to fit, they must do so within five working days of being asked by the SLO, or within reasonable water company procurement timescales.**

### 3.13 Service levels

**Principle 23. Water companies should publish clear and reasonable timescales for separate elements of main-laying work that they carry out when providing new water infrastructure. Their published timescales should follow the levels of service in appendix 2 and set out what SLOs must do in order for the water company to complete its part.**

All water companies should comply with the service levels specified in this guidance for each element of the self-lay process. The full process and timescales are in appendix 2.

If SLOs or developers are concerned about the service they are receiving from the water company, they can ask it to include service levels in the self-lay agreements for the work that they must carry out, perhaps linked to compensation should these not be met. If the water company objects to the inclusion of such terms in the agreement, the SLO or developer can refer the matter to us for determination. If the SLO or developers can show that the water company has a track record of poor service, we may determine that the levels of service should be included in the self-lay agreement, although we would take into account all relevant considerations in any individual case. If the water company subsequently fails to meet the levels of service in the agreement then the party to the agreement will be able to seek redress through the courts.

Similarly, water companies can set reasonable standards for SLOs to meet, but these should be no different from what they would set their own contractors. Where these are included in the terms and conditions of self-lay agreements, we can consider them if a dispute about terms and conditions is referred to us for determination.

# Appendix 1: Contestable and non-contestable work

## 1. Contestable work

- Designing on-site water systems in accordance with water companies' specifications (except \* below).
- Installing on-site mains.
- Installing off-site mains in third party land and highways where the developer or SLO has obtained the necessary easements, street authority approvals and satisfied any other legal requirements.
- Installing extensions and the new part of diversions to new development sites, where the developer or SLO has the necessary permissions and no existing customers will be affected, or there are no engineering reasons why this work should be non-contestable.
- Installing service pipes to new mains water company specifications.
- Connecting service pipes to new mains (after the water company has commissioned the new mains with water), provided the appropriate standards are met and there are no risks to existing customers. See also the guidance on timing of service pipe connections.
- Swabbing, pressure testing and disinfecting new mains, under supervision by the water company.
- Fitting water meters to water company specifications and subject to water company approval.

## 2. Non-contestable work

- Designing off-site water systems.
- \*Sizing pipes – water companies can retain responsibility for this part of the design work.
- Approving on-site water system designs.
- Off-site work to reinforce the existing network.
- Determining the timing of service pipe connections to new mains.
- Connections that involve risks to existing customers.

- Connecting new mains to existing mains.
- Connecting service pipes directly to existing mains.
- Water sampling and quality testing.

## **Appendix 2: Stages of the process and levels of service**

Working days exclude weekends and public holidays.

The response time should be from the date of receipt by the water company of the relevant information to the date of notifying the developer or the SLO that the task has been completed.

### **1. General/land enquiry stage**

- The water company provides indicative costs for off-site mains and reinforcements to inform the interested developers before they procure the land.
- The successful developer advises the water company that the development will proceed and confirms the approximate number of properties and entry points.
- This enables the water company to assess the connection point and need for reinforcement.

### **2. Formal enquiry**

- The developer invites one or more SLOs to tender for providing the infrastructure to the site.
- The water company issues each SLO with the schedule of information it needs to progress an application.
- The water company will accept the developer's letter of invitation to the SLO and the schedule of information as confirmation that the SLO is authorised to represent the interests of the developer.
- Water companies will expect investigation details for contaminated land screening and, where necessary, detailed site investigation to conform to UKWIR's specification for laying pipes in contaminated land.
- The developer may also request a quotation from the water company for on-site mains.
- The nominated SLOs submit their proposed service corridor layout drawings, with the template of development details, to the water company.

### **Service level 1**

The water company scrutinises the application and acknowledges it as complete or notifies the applicant of any shortfall of detail. The service standard for checking and acknowledging the completeness of the application is **three working days** from receipt.

- The water company sizes the mains for the development, laid out in the proposed service corridor.
- The water company then estimates off-site and reinforcement costs, and non-contestable charges including inspection, disinfection and sampling, connections to existing mains and building water. Also, any mains that are to be upsized for future developments are identified and the SLO is notified of the water company contribution to the upsized element. The water company calculates the asset payment that is due to developers who are installing their own pipework in accordance with the methodology set out in the Water Act 2003. This is explained further in our guidance on 'Financial arrangements for self-lay requisitioning agreements'.

### **Service level 2**

The following service standards apply for the above works, where the SLO asks the water company to do the design:

- Developments up to 500 domestic properties – **within 20 working days**.
- For developments greater than 500 properties or schemes where significant off-site design is required, or where there are changes to the developer's prior notifications or where specialist advice or investigation is required, the water company must confirm the date for providing full details of the quotations **within ten working days**.

The following alternative service standards are proposed for schemes where the SLO elects to do the design:

### **Service level 2a**

Water company specifies the point of connection and provides system design parameters. For developments not greater than 500 properties this is **within ten working days** of receiving all the information.

### **Service level 2b**

Water company checks design, calculates asset payment and provides full details of cost of non-contestable items and services. For developments not greater than 500 properties this is **within 15 working days** from receipt of design and drawings from the SLO.

- For water company designed schemes, the water company advises the fire authority of

the proposal and submits the layout for statutory approval. If SLOs have specified substantially different service corridors then fire authority approval will not be possible until the water company is advised (by the developer or successful SLO) of the service corridor to be used.

**Please note that service levels 2, 2a and 2b may be subject to the requirement to seek authority approval.**

- The SLOs submit their tenders to the developer who appoints a SLO.
- The successful SLO submits final construction drawings, a programme of work and other specified details to form the basis of the agreement for adopting the mains.

#### **Service level 3**

Water company checks the final details and application within **five working days**, unless there are significant changes in, for example housing layout, number or type of houses, programme for development or point of connection, requiring significant revision of asset payment and/or non-contestable charges.

#### **Service level 4**

The draft formal agreement is issued **within five working days** of approval of the construction drawings and programme.

- The formal agreement is completed in advance of work on site starting.

#### **Laying the mains**

- The SLO provides the employee medical and competence records as specified by the water company.

#### **Service level 5**

The water company verifies and accepts records or refuses consent for the employee to work, as appropriate, **within five working days** of receipt.

- Having laid the mains the SLO gives the water company notice of its requirement for water supplies to be made available for charging the mains and pressure testing.

#### **Service level 6**

The water company makes supplies available **within five working days** of notice of a requirement for a supply, and is available to witness the pressure test subject to the specified notice period, providing the necessary off-site works have been completed and there are no NRSWA or Traffic Management Act requirements.

- Following the successful pressure test the SLO cleans and disinfects the main and asks the water company to sample and connect the new main to the existing system.

**Service level 7**

The water company will take a water sample for bacteriological testing **within three working days** of the SLO's request. Where the first water sample fails, the water company should inform the SLO as soon as possible.

**Service level 8**

Subject to a satisfactory bacteriological test and receipt from the SLO of 'as laid drawings', the water company will connect to the existing system **within ten working days** of the notice that the new main is available for testing and connection and will issue a notice accepting the main into operation, providing there are no NRSWA or Traffic Management Act requirements.

- The water company may specify constraints on the length of time between disinfection, testing, connection to the system, and draw off of flow from new mains in order to safeguard water quality.
- The water company will inform the SLO as soon as reasonably practicable after any failure of a bacteriological test. The water company will require the SLO to take remedial measures and to re-submit the notice for sampling and connection.

**Connection of services**

- The SLO and developer will complete plumbing and lay services, giving notice as required for inspections in accordance with the Water Supply (Water Fittings) Regulations 1999. The SLO will issue a programme for connection of services to mains to enable the water company to inspect the execution of work.
- Within 48 hours of completing a service connection to the mains the SLO will advise the water company of the connection, provide full address details and request installation of the meter.

**Service level 9**

Where the SLO asks the water company to fit the meter, the water company will do so **within five working days** of receiving the details of the connection.

**Service level 9a.**

Where the water company supplies meters for SLOs to fit, they must do so **within five working days** of receiving a request, or within reasonable water company procurement timescales.

## **Appendix 3: Summary of Water Regulations and associated contractor approval scheme**

### **Water Supply (Water Quality) Regulations 2000 and any subsequent amendments, or the Water Supply (Water Quality) Regulations 2001 for water companies in Wales**

#### **Water mains and pipes approved for use in the public water supply system**

Materials for water mains and communication pipes must meet the requirements of Regulation 31. Failure to meet this requirement is an offence under Regulation 33. DWI enforces these Regulations. Mains and pipes which have been so approved are listed by DWI. The list is published annually, and updates can be obtained from DWI or from its website at [www.dwi.gov.uk](http://www.dwi.gov.uk).

The list is also in the 'Water Fittings and Materials Directory', which is published by the Water Regulations Advisory Scheme (WRAS). Telephone 01495 248454 for details, or visit the WRAS website at [www.wras.co.uk](http://www.wras.co.uk).

#### **Water Supply (Water Fittings) Regulations 1999**

The Water Supply (Water Fittings) Regulations prevent the waste, misuse, undue consumption and contamination of public water supplies in domestic and commercial plumbing installations. The water companies enforce these Regulations.

Copies of the Water Fittings Regulations and text of Statutory Instruments 1999 – Nos 1148 and 1506 are available from the Office of Public Sector Information. Their website is at [www.opsi.gov.uk](http://www.opsi.gov.uk).

Further advice should be sought from the WRAS. The WRAS, in partnership with the Department for Environment, Food and Rural Affairs, has also produced the 'Water Regulations Guide' to provide more detailed explanation of the requirements. Copies are now available from the WRAS.

#### **Approved contractor schemes**

The Regulations introduced approved contractors. Approved contractor status carries certain statutory responsibilities. Under the Regulations, water companies are entitled to run approved contractor schemes, as well as any other organisation appointed by the Secretary of State or the Welsh Assembly Government. Approved schemes are listed on the Defra website at [www.defra.gov.uk](http://www.defra.gov.uk), and can be obtained by entering 'Approved Plumbers' in the search box. Schemes are currently being run by individual water companies or through the Water Industry Approved Plumbers Scheme (WIAPS), the Institute of Plumbing and Heating Engineers, the Association of Heating and Plumbing Contractors, and the Scottish and

Northern Ireland Plumbing Employers' Federation.

The approved contractor schemes vary in their scope, so it is essential to check with the appropriate operator whether any particular scheme covers all work envisaged.

All work undertaken by an approved contractor must comply with the requirements of the Regulations, confirmed by a certificate. Approved contractors are excused some of the pre-installation notification requirements of the Regulations, since their certified competence removes the need for statutory pre-notification of work, but water companies may carry out audit inspections of work.

## Appendix 4: Glossary of terms

**Adoption:** This is the process by which water companies take over responsibility for infrastructure such as mains.

**Brownfield site:** A site that has previously been built upon (as opposed to a greenfield site that has never been built upon).

**Commissioning:** The process of filling the mains with water so that the supplies are available for customers to use. This will be after the necessary quality tests have taken place.

**Contestable:** Open to competition.

**Developers:** Those who organise the purchase of land, construction of new buildings and their sale.

**Disinfection:** The process of treating water with, for example, small amounts of chlorine to ensure that it complies with water quality regulations.

**Easement:** A legal right of way over another person's property, which may cover the laying of pipes in that land.

**Extension to the network:** A single pipe that is laid from the existing network to serve new customers.

**Existing mains/existing network:** The parts of the system already in place before a SLO starts installing pipes. These will include off-site and on-site pipework, some of which may supply existing customers.

**Live main:** A main connected to the water network and filled with water.

**Multi-utility infrastructure provision:** This is where one SLO installs more than one utility service to a site (which could include gas, electricity, water and telecommunications), sometimes in a single trench.

**New main:** A main laid by the SLO as part of a development.

**Non-contestable:** Not open to competition.

**Off-site:** In the public highway or in land owned by people other than developers.

**On-site:** Land owned by developers.

**Pressure testing:** Testing to make sure that the new mains have been constructed and joined correctly and that they will carry the working pressure required.

**Piece-ups:** Pipes connecting one phase of a development site to another phase.

**Reinstatement:** Work carried out to restore the surface of the ground to its original condition; for example, resurfacing a road after work to lay water mains.

**Requisition:** Water companies must provide water mains that are sufficient for domestic purposes when required to do so by a notice under sections 41 to 44 of the Water Industry Act 1991. This is known as a requisition. Water companies must provide the mains once the financial conditions of compliance are satisfied and the water company has agreed the places for connecting the new pipes to its existing main or network.

**Self-lay:** Where developers, or their contractors, install new water mains and service pipes instead of asking the water company to do the work.

**Self-lay organisations (SLOs):** Contractors and multi-utility infrastructure providers laying mains for the developers.

**Service pipes:** A pipe supplying water from a main to any premises (whether in the highway or in private land).

**Swabbing:** A process to clear mains of dirt and materials before they are filled with water.

**The Water Supply (Water Quality) Regulations 2000 and any subsequent amendments:** These Regulations specify the standards used to define the wholesomeness of drinking water and also specify, under Regulation 31, the requirements for using approved substances and products. The DWI enforces the Regulations.

**The Water Supply (Water Fittings) Regulations 1999:** These Regulations are requirements for the prevention of contamination of water supplied, and it is the statutory duty of the water companies to enforce them.

**Upsizing mains:** When a water company decides to lay a larger main than is needed to supply a new development. This might be because the water company considers that the demand for water will increase in the future.