

# **SELF-LAY MAINS AND SERVICES POLICY**

**7th EDITION**

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## 1. INTRODUCTION

Traditionally developers have requisitioned Water Companies to lay the water mains and service connections for their sites. The Water Industry Act 1991 as amended by the Water Act 2003 now provides a formal framework for developers to have a choice about who they select to do this work.

Competition in providing new water mains and service connections presents opportunities for both water companies and developers.

Developers may now choose between either installing the assets themselves or employing a self-lay organisation (SLO) to undertake the work on their behalf. The developer still has the option to requisition the Water Company to do the work for them.

Water quality and safeguarding the public water supply are the most important factors. The responsibility for the integrity and quality of the network remains with the Water Company. Therefore only competent persons will be permitted to carry out this work. Recognised proof of competence must be submitted to the Water Company before a developer or SLO may lay water mains or services.

Upon satisfactory completion, ownership of the water mains and services laid by a developer or the SLO transfers to the Water Company.

## 2. GENERAL POLICY

This document outlines Bournemouth Water's (BW) policy and procedures regarding the self-lay of water mains and services by developers or their SLO's. It was updated in July 2009 following publication of revised documents from OFWAT on:

- Competition in providing new water mains and service pipes: Guidance to companies – version 3.0
- Guidance on financial arrangements for self-lay and requisitioning agreements – version 2.0

It provides clear statements on the procedures to be adopted in this process. Defined within this document are the elements of work that a developer or their SLO may elect to undertake (**Contestable works**) and the elements that must be undertaken by BW (**Non-Contestable works**).

It is highly recommended that this document is read in conjunction with the **WRc/UKWIR document Self-Laying of Water Mains and Services – A Code of Practice for England and Wales 2nd Edition** which has been produced as an industry standard Code of Practice for self-lay. This Code of Practice provides comprehensive information on all aspects of the self-lay process including procedural and technical detail. A link to this document is provided below.

Other documents will be referred to including:

- **BW Water Quality Hygiene Procedure and Health Questionnaire**
- **BW Water Charges booklet**
- **BW Code of Practice - Exercise of Pipelaying Powers on Private Land**
- **BW New Connections Information Book**

The above documents are available free upon request from BW.

- **Water Supply (Water Quality) Regulations 2000.**

This can be found at: [www.opsi.gov.uk/SI/si2000/20003184.htm](http://www.opsi.gov.uk/SI/si2000/20003184.htm)

- **Water Supply (Water Fittings) Regulations 1999.**

This can be found at: [www.opsi.gov.uk/si/si1999/19991148.htm](http://www.opsi.gov.uk/si/si1999/19991148.htm)

- **Drinking Water Inspectorate (DWI) List of Approved Products for use in the public water supply.**

This can be found at: <http://dwi.defra.gov.uk/drinking-water-products/approved-products/soslistcurrent.pdf>

A charge may be made for these documents.

- **Water UK Principles of Water Supply Hygiene and Technical Guidance Notes.**

- **Water UK National guidance document on the provision of water for fire fighting 3rd Edition.**

The above documents are available from Water UK or their website. A charge may be made for these documents.

- **WRc/UKWIR Self-Laying of Water Mains and Services – A Code of Practice for England and Wales 2nd Edition**

This can be found at [www.webookshop.com](http://www.webookshop.com)

- **Civil Engineering Specification for the Water Industry (CESWI) 7<sup>th</sup> Edition.**

This can be found at [www.webookshop.com](http://www.webookshop.com)

- **A Guide To Testing Of Water Supply Pipelines And Sewer Rising Mains 1<sup>st</sup> Edition**

This can be found at [www.webookshop.com](http://www.webookshop.com)

The above documents are produced by **WRc**. A charge may be made for these documents.

### **Lloyds Register Water Industry Registration Scheme (WIRS)**

Lloyds Register operate the above scheme to help facilitate self-lay. It provides details of approved service providers and also outlines the procedures and requirements that an organisation must follow to gain approval and be placed on the register.

<http://www.lloydsregister.co.uk/schemes/WIRS/>

### 3. WHO BOURNEMOUTH WATER DEAL WITH

We will contract with either the developer or the SLO.

The developer may initially acquire quotations to undertake the work from us and a number of SLO's. Once the developer has decided which option will be used to procure water mains and services, contact must be made with us to discuss the scheme details.

Where a self-lay option is chosen, we expect the developer or SLO to undertake all of the contestable elements of work.

If the developer or SLO is unable to undertake any of the contestable elements of work then, upon request, we will discuss and advise our charges for undertaking these elements of the work.

We will charge the developer or SLO for the non-contestable work that we undertake. Additionally, we will charge for any of the contestable elements of work that we agree to undertake.

If we are initially requested to quote for the complete scheme design and installation (traditional requisition method) and subsequently the developer then elects to self-lay, we will charge for the design, quotation and administration work that we have produced.

Full details of our charges are available in **Section 14 - Our Charges**.

### 4. SELF-LAY

#### 4.1 CONTESTABLE WORKS – WORK THAT CAN BE UNDERTAKEN BY THE DEVELOPER OR SLO

- i) Design of the onsite mains and services to our specification. Onsite mains include onsite extensions and diversions that do not affect our existing customers.
- ii) Provision of the materials.
- iii) Installing onsite mains, including onsite extensions and diversions that do not affect our existing customers, to our specification.
- iv) Design of offsite mains (non-reinforcement). This means any section of new site main that needs to be laid from the site to the designated connection point on our existing network system. We will continue to design any reinforcement mains and/or any other reinforcement works necessitated by the development.
- v) Installing offsite mains (non-reinforcement) to our specification in third party land. It will be the developer or SLO's duty to obtain all necessary permissions, easements and other legal requirements.
- vi) Installing offsite mains (non-reinforcement) to our specification in the public highway. The developer or SLO must have the appropriate authorisation from the local highway authority and be responsible for issuing of notices under the **New Roads and Streetworks Act (NRSWA) 1991** and/or **Traffic Management Act 2004**. The

developer or SLO will be responsible for completing the works to the highway authority's specification and complying with their requirements.

- vii) 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.
- viii) Routine in-line mains connections, subject to relevant safeguards, accreditation to undertake this type of work and our final approval.
- ix) Swabbing, pressure testing and sterilisation of the new mains to our specification and under our supervision.
- x) Installation of service pipes on new mains to our specification.
- xi) Connecting service pipes to new mains (after we have commissioned them) providing that the appropriate standards are met and there are no risks to existing customers.
- xii) Subject to appropriate accreditation and where we are satisfied that there are no risks to existing customers, a SLO may make underpressure service connections to parts of a new development adjacent to existing offsite mains.
- xiii) Installation of water meters to our specification.

**Note:** Offsite mainlaying means the section of main laid offsite to reach the connection point. It does not refer to offsite reinforcement mains.

#### 4.2 **NON-CONTESTABLE WORKS – WORKS THAT MUST BE UNDERTAKEN BY US:**

- i) Administration of the process.
- ii) Sizing of pipes
- iii) Final approval of the self-lay mains and services design layout.
- iv) Design of offsite reinforcement mains and/or any other reinforcement works.
- v) Installation of offsite reinforcement mains and any other reinforcement works.
- vi) Supervision and inspection of the SLO's work.
- vii) Mains connections other than those specified under contestable work e.g. mains connections to the existing mains network or those that are deemed to pose a risk to customers, water quality or the integrity of the network.
- viii) Connections that involve risk to our existing customers or integrity of the network.
- ix) Water sampling and quality testing of the new self-lay installation.
- x) Decommissioning redundant mains following a diversion.

## 5. CONTESTABLE WORKS

### 5.1 DESIGN

We allow the developer or SLO to undertake the design and layout of the onsite water mains and services. Onsite mains include onsite extensions and diversions that do not affect our existing customers. We allow the developer or SLO to undertake the design of non-reinforcement offsite mains that are to be laid in third party land or the public highway. Non-reinforcement offsite mains are the section of new site main that needs to be laid from the site to the designated connection point on our existing network system. This does not include offsite reinforcement mains and/or any other reinforcement works which will continue to be designed by us. The following conditions must be complied with:

- i) The initial application will be scrutinised for completeness of information and we will respond within 3 working days to inform you of whether we have all the information we require or advise you of the additional information that we need to proceed.
- ii) We will check a SLO design and provide our quotation for non-contestable/contestable/asset payment elements within 15 working days for schemes up to 500 domestic properties.
- iii) Final approval of the design is required prior to commencement of any work. Providing there have been no significant changes that affect the charges or payments, we will respond to a final design submission within 5 working days.
- iv) A charge is made for approving self-lay designs. Please see **Section 14 - Our Charges** for details.
- v) Abortive work through an unapproved design will be at the developer or SLO's expense.
- vi) The selection of materials for the mains and services installation must be to our specification and is subject to our approval.
- vii) The minimum size to be specified for a distribution main is 80mm nominal bore.
- viii) The standard size service connection for a domestic property is 20mm internal diameter.
- ix) We will design and charge for the connections of the self-lay mains to the existing mains network.
- x) We will design and charge for any offsite reinforcement mains and/or other reinforcement works. This charge is in addition to the onsite elements. We will provide technical evidence to justify any reinforcement proposals.
- xi) All brownfield sites require a copy of the soil reports to be forwarded to us for analysis. A soil analysis must identify any ground contaminants that may be adverse to water pipelines. These ground conditions may include but, not be limited to, methane, toxins, hydrocarbons, and petroleum products. The location of the boreholes/trial pits should also be indicated to us on a plan. It is our policy that all sites where there has been former use, storage or manufacture of chemicals will be deemed contaminated for the purpose of provision of water supplies. This includes, for example, former gas works or petrol stations. This information is essential to ensure the correct materials are installed by both the developer/SLO and us. If the developer or SLO does not identify these issues and subsequent additional works are required then the developer or SLO will bear the costs of such works including all costs incurred by us.

- xii) It is the responsibility of the developer or SLO to liaise with the Fire Authority regarding their fire fighting requirements on self-lay schemes and include them in the design. The Fire Authorities pay for the installation of hydrants on new main schemes. The developer or SLO will need to agree a procedure for this with the Fire Authority concerned. We will require details of the Fire Authority's requirements for our reference.
- xiii) Guidance is available on water for fire fighting in the **National guidance document on the provision of water for fire fighting 3rd Edition**. This document is available from Water UK.
- xiv) It is the responsibility of the developer or SLO to obtain all information on the location of other utility or service providers' apparatus.
- xv) We can provide details of our existing mains network in and around the site to assist with the self-lay design. This information is chargeable at the rates indicated in **Section 14 - Our Charges**.

## 5.2 PROVISION OF MATERIALS

- i) Developers or SLO's may procure their own materials for self-lay schemes.
- ii) All materials used on a self-lay scheme must comply with our specifications or provide an acceptable alternative performance level.
- iii) We require from the developer or SLO a detailed list of all self-procured materials to be used on the self-lay installation. We will need to approve this list before any work commences.
- iv) All materials and products to be on a public water supply system where ownership is to be transferred to us must be approved under Regulation 31 of the Water Supply (Water Quality) Regulations 2000. These regulations are enforced by the Drinking Water Inspectorate (DWI). The DWI List of Approved Products is updated regularly and available from the DWI website.
- v) We may need to specify certain materials or products by a particular manufacturer to meet our operational requirements. We will inform you when this is so. In these circumstances, the developer or SLO may purchase the specified materials either from us or directly from the manufacturer.
- vi) Ground conditions may exclude the use of certain materials. As outlined above, we must be informed of any conditions that may be adverse to water pipelines so we can ensure the correct choice of materials.
- vii) Information on the general requirements and standards for the laying of water mains and services can be found in the **WRc/UKWIR Self-Laying of Water Mains and Services – Code of Practice for England & Wales 2<sup>nd</sup> Edition** and the **Civil Engineering Specification for the Water Industry (CESWI) 7<sup>th</sup> Edition**.
- viii) Working methods must follow the accepted standards of practice as outlined in the **Principles of Water Supply Hygiene and Technical Guidance Notes** available from Water UK.
- ix)

## 5.3 INSTALLATION OF ONSITE MAINS



- i) The developer or SLO may install the onsite mains in accordance with the approved design. Onsite mains include onsite extensions and diversions that do not affect existing customers.
- ii) Any deviation from the approved design must be agreed with us.
- iii) We may not accept transfer of ownership on any unapproved deviations.
- iv) We will supervise the works. A charge will be made for our supervision element.
- v) We may make onsite checks on the qualifications and authorisations of all staff involved in the works as part of our supervision.
- vi) The developer or SLO may not sub-contract any element of the work without agreement by us.

#### 5.4 **INSTALLATION OF OFFSITE MAINS**

The conditions outlined in **Section 5.3 - Installation of onsite mains** apply. Additionally, the following requirements must be considered:

- i) The developer or SLO may install the non-reinforcement offsite mains required to reach the connection point to the existing mains network as per the approved design.
- ii) This may be in third party land or the public highway.
- iii) The developer or SLO will be responsible for obtaining all necessary permissions, easements and any other legal requirements.
- iv) A copy of BW's Code of Practice - Exercise of Pipelaying Powers in Private Land is available free upon request. We are required under Section 182 of the Water Industry Act 1991 to prepare and make available this document for private landowners. It outlines approved practices and should be used by developers and SLO's in the execution of their work in third party land.
- v) The developer or SLO must have the appropriate authorisation from the highway authority to conduct works in the public highway.
- vi) The developer or SLO must comply with the New Roads and Streetworks Act (NRSWA) 1991 and/or Traffic Management Act 2004.
- vii) It will be the responsibility of the developer or SLO to issue the relevant streetworks notices to the highway authority in the required format.
- viii) The developer or SLO is responsible for all general public and statutory liaison issues regarding the offsite works.
- ix) The developer or SLO will be responsible for all backfill, temporary and permanent reinstatement of the offsite works.
- x) The developer or SLO will be responsible for any reinstatement defects that occur with their works.

**Note:** We retain responsibility for the design and installation of any reinforcement works to the network.

## 5.5 PRESSURE TESTING, SWABBING AND STERILISATION

- i) The developer or SLO may undertake the pressure testing, swabbing and sterilisation of self-lay mains.
- ii) These processes must be carried out in accordance with water industry approved procedures and specifications. The **WRc document “A Guide To Testing Of Water Supply Pipelines And Sewer Rising Mains” 1<sup>st</sup> Edition** outlines approved test procedures.
- iii) We will supervise the pressure testing, swabbing and sterilisation processes. A charge will be made for our supervision element.
- iv) Detail of the pressure test and sterilisation processes must be forwarded to us for inspection and record keeping.

## 5.6 INSTALLATION OF SERVICE PIPES

- i) The developer or SLO may install service connections under the conditions described in section 4.1 to the required specification.
- ii) Service connections can only be made once the self-lay mains are live and formally commissioned. All service connections will be made by underpressure tappings. No service connections must be made to an uncommissioned main.
- iii) Developers or SLO's may install the stopcock/meter boxes on the new service connections. The stopcock/meter boxes can be either:
  - a) Underground pre-formed chambers normally sited at the back edge of the footpath or other property boundary. We use the **Talbot Matrix Below Ground Boundary Box** as a company standard.
  - b) Wall-mounted boxes installed on an accessible building elevation. We use two types of wall-mounted box namely the **Intex** unit and the **Groundbreaker** unit. If a wall-mounted box is installed on a building elevation not easily accessible to our staff, we require a cable to be run from the box to a remote reader (for the meter) that will be installed in an accessible location.

We require the developer or SLO to use these specific products to conform with our standardisation policy for rationalising stock control and minimising maintenance costs.

Detailed information on the approved methods of installing these boxes is provided in our New Connections Information Book document. The products may be purchased either from us or directly from the manufacturer.

## 5.7 INSTALLATION OF WATER METERS

The developer or SLO may install the water meter in the stopcock/meter box provided they meet our reasonable requirements and specifications. SLO's should outline their meter fitting procedures in their quality assurance procedures. These procedures will be assessed as part of the overall approval process to self-lay in our area of supply. Before work starts, we will be pleased to meet with the SLO to discuss meter installation details and requirements further.

The meters that we install in both underground boundary boxes and wall-mounted boxes are:

- i) **Elster V210P (Polymer) 15mm concentric meter** for underground boundary boxes and accessible wall-mounted boxes.
- ii) **Elster Encoded 15mm concentric meter** for wall-mounted boxes that are not easily accessible. This type of meter has the remote read facility.

We require the developer or SLO to use these specific products to conform with our standardisation policy for rationalising stock control and minimising maintenance costs. The products may be purchased either from us or directly from the manufacturer.

The following steps must be taken during installation:

- The service pipe must be flushed prior to meter installation to remove any debris.
- Flow check service to ensure correct connectivity.

### **INTERNAL METERS**

Where internal meters are agreed, we require them to be installed in a communal area that will be easily accessible to our staff for meter reading and maintenance. Typically, these communal areas may be a service room or cupboards either on the lower floor or on each level of the building. We expect these areas to remain easily accessible for the life of the building

### **METERS - GENERAL**

It is the developer's/SLO's responsibility as part of their procedures to implement a system that ensures that the correct water meter/billing details are forwarded to us. For example, all supply pipes that are laid out for connection should be labelled with a property identifier. Then, when new connections are made by the SLO, the meter details can be assigned to the correct property by the use of the property identifier label on each supply pipe that is being connected to.

We will undertake random inspections of meter installations. We will check the standard of workmanship, compliance with our specifications, conformity with relevant regulations and, after completion, ensure that the meter/property details that we have been provided are correct. We will charge for these inspections and these costs will be outlined in our quotation for the work that we will be undertaking. If necessary, we will also make an assessed charge to claim back any lost billing revenue resulting from the supply of incorrect meter/property details.

Where problems with SLO installed meters occur, we reserve the right, if considered necessary, to inspect all installations and make an appropriate additional charge for doing so. We may also insist that the SLO rectifies any defects before the new service asset is adopted.

An individual SLO may lose approval to install meters if they do not fit them effectively.

## **6. NON-CONTESTABLE WORKS**

### **6.1 ADMINISTRATION**

We administer the self-lay process and have the final reasonable say on all elements to do with the scheme. We apply the same reasoning to developer self-lay schemes as we do to that of our own contractors.

We will willingly discuss any scheme details and will co-operate with the developer or SLO to ensure an efficient process throughout.

Although we retain the overall administration rights of the scheme, the general day-to-day issues will be the responsibility of the developer or SLO. It will be their responsibility to liaise with customers, statutory bodies etc. regarding the elements of the work that they have elected to undertake.

A charge for our administration will be included in our quotation.

## 6.2 APPROVAL OF A SELF-LAY APPLICATION AND DESIGN

We will check the initial application and respond to the developer or SLO within 3 working days to either acknowledge completeness or inform them of any shortfall of detail.

We will check the final design within 5 working days unless there are significant alterations which require revision of the scheme, charges and/or asset payments.

We will charge for the checking and approval of self-lay designs and re-submissions. Please see **Section 14 - Our Charges**.

## 6.3 DESIGN AND INSTALLATION OF REINFORCEMENT WORKS

As outlined in **Section 5.1 - Design** we will undertake the design and installation of all reinforcement works necessitated by the scheme and charge for this accordingly.

We will provide justification for any reinforcement works and provide detailed costs in our quotation.

## 6.4 SUPERVISION AND INSPECTION

- i) We will identify with the developer or SLO the supervision and inspection requirements of an individual scheme.
- ii) We retain the right to inspect the self-lay installation on a daily basis.
- iii) The frequency of site supervision/inspection will be considered, initially, in relation to the level of experience of the developer or SLO and their workforce and, subsequently, to the standard of work onsite.
- iv) An itemised charge for supervision and inspection will be included in our quotation. This charge will be calculated on an assumed number of visits. If we have to make an excessive number of additional visits due to poor standard of work we reserve the right to make additional charges.

We will undertake random inspections on the supply pipe and meter installations to properties on self-lay sites. We will check for the correct depth of the pipe, the materials used and protection of the pipe at point of entry. If the supervisor has any reasonable concerns over the installation we reserve the right to ask the developer or SLO to open up the works for inspection. We require any unsatisfactory work to be rectified before an asset is adopted. We will also inspect plumbing systems for compliance with the Water Supply (Water Fittings) Regulations 1999. Recurring problems could lead to an SLO having their approval to work in our area revoked and they may be reported to Lloyds Register if WIRS approved.

The main areas of supervision and inspection are:

- a) Checking of operatives authorisation and qualifications.

- b) The mainlaying operations.
- c) The service laying operations.
- d) The pressure test, swabbing and sterilisation processes.
- e) Water Regulation audits on supply pipe and plumbing installations to ensure compliance with the Water Supply (Water Fittings) Regulations 1999.
- f) Installation of meter and correct property details.

Please see **Section 14 - Our Charges** for the charging rates.

#### 6.5 **SELF-LAY MAINS CONNECTIONS**

In order to safeguard the public water supply and to comply with our obligations to existing customers:

- i) We will undertake the connection of the new self-lay mains to the existing mains network in all cases.
- ii) We will include our charge for making the connections to the existing mains network in our quotation. Please see **Section 14 - Our Charges** for details of how this charge is estimated.
- iii) The SLO may undertake routine in-line mains connections, subject to relevant safeguards and accreditation. Typically, these will be connect-up's to the spur connection that we have provided into the site.
- iv) Apart from new service connections, we will undertake any work on the self-lay mains once they are live. This applies whether the work is remedial or general network operations. We must be contacted if any such work is required and on no account must the developer or SLO carry out work on the mains once they are live.
- v) We will charge for any unplanned work that we undertake on a time and materials basis. Please see **Section 14 - Our Charges** for details of our standard labour rates.

#### 6.6 **CONNECTION OF NEW SERVICES TO THE EXISTING MAINS NETWORK**

- i) We will undertake any service connections that are deemed to pose a risk to existing customers, water quality or the integrity of our network.
- ii) We will include our charges for making such service connections in our quotation. Please see our **Water Charges** booklet for details of standard cost service connections.

#### 6.7 **WATER SAMPLING AND WATER QUALITY TESTING**

- i) We are responsible for water quality. Therefore, we will undertake all the water sampling and quality testing of the new self-lay mains.
- ii) This will be undertaken after satisfactory completion of the pressure test, swabbing and sterilisation.
- iii) We will include our charge for water sampling and testing in our quotation. Please see **Section 14 - Our Charges** for details of how this charge is estimated.

Final connections and commissioning of the self-lay mains will not be carried out until after we obtain a satisfactory water sample test result.

## 7. INFORMATION FOR BILLING PURPOSES

Where a developer or SLO installs the water meter, the responsibility rests with them to provide us with prompt customer and meter information to set up a customer account. The information we require is:

- i) The customer's full name(s).
- ii) The postal address of the new property.
- iii) Contact details - home and mobile telephone numbers.
- iv) Date of occupation.
- v) Meter reference number.
- vi) Meter reading.
- vii) Meter location details.

This information should be sent to us on a pro-forma type notice produced by the developer or SLO. It is essential that we receive this information immediately an occupation takes place. If an individual property is unoccupied or we are not informed of occupancy, the developer or SLO will be the customer for billing purposes.

It is the developer's/SLO's responsibility as part of their procedures to implement a system that ensures that the correct water meter/billing details are forwarded to us. For example, all supply pipes that are laid out for connection should be labelled with a property identifier. Then, when new connections are made by the SLO, the meter details can be assigned to the correct property by the use of the property identifier label on each supply pipe that is being connected to.

We will undertake random inspections of meter installations as outlined in **Section 5.7 Installation of water meters**. Part of this inspection is to ensure that the meter/property details that we have been provided are correct. We will charge for these inspections and these costs will be outlined in our quotation for the work that we will be undertaking. If necessary, we will also make an assessed charge to claim back any lost billing revenue resulting from the supply of incorrect meter/property details.

Where problems with SLO installed meters occur, we reserve the right, if considered necessary, to inspect all installations and make an appropriate additional charge for doing so. We may also insist that the SLO rectifies any defects before the new service asset is adopted.

An individual SLO may lose approval to install meters if they do not fit them effectively.

## 8. INFRASTRUCTURE CHARGES

Section 146 of the Water Industry Act 1991 introduced a right for water and sewerage companies to levy a charge for the initial connection of premises to a water supply or public sewer for domestic purposes.

The charges are seen as a fair method of allocating the cost of non-specific additional capacity required through growth in demand from new customers. Income from these charges

enables us to improve the network to accommodate the extra demand. This means that those placing the extra demand on the network pay towards the improvement costs. The charges are designed to reflect the different levels of potential demand by different kinds of development.

A new water supply is connected prior to the purchase of the property therefore infrastructure charges become liable for development less any amounts due in infrastructure credits. Please see our New Connections Information Book for details of how we apply and give credits for infrastructure charges.

We will include the infrastructure charges for the development in our quotation. These can be paid fully in advance or on an individual property basis as the service connections are made.

Please see **Section 14 - Our Charges** for details of infrastructure charges.

## 9. APPROVAL OF A SELF-LAY ORGANISATION

The SLO may apply to us for approval at any time.

We expect the SLO to meet the same criteria for approval as our own contractors.

The SLO must demonstrate competence in the activities that it proposes to undertake. The SLO must also provide evidence that the workforce involved in the main and service laying activities have been assessed for their suitability to work on potable water pipelines.

**Lloyd's Register** operate the **Water Industry Registration Scheme (WIRS)**, which is a national accreditation scheme for self-lay organisations. WIRS is a skills registration database for the workforce of companies, contractors and self-lay organisations. The scheme has the full support of the water industry and enables registered organisations to demonstrate that they are able to fulfil company specific self-lay approval requirements.

Details of the WIRS scheme can be found at:

<http://www.lloydsregister.co.uk/schemes/WIRS/>

### OUR CRITERIA FOR ASSESSING SELF-LAY ORGANISATIONS THAT ARE NOT WIRS ACCREDITED

<b>1.</b>	<b>Company details and history</b>
	<ul style="list-style-type: none"> <li>• Registered name, address and age of company</li> <li>• Number of employees</li> <li>• Details of parent company, subsidiaries, associates, joint ventures or partnerships</li> <li>• Years of experience on water mainlaying projects under current business name</li> <li>• Name of company and years of experience in water mains laying projects (if recently renamed, restructured or taken over)</li> <li>• Turnover from mains laying work in each of the previous five years</li> <li>• Bankruptcy history of parent, subsidiaries, associates, joint ventures or partnerships in previous ten years</li> <li>• Credit references</li> <li>• Public and Employer Liability Insurance</li> </ul>
<b>2.</b>	<b>Water mains laying experience (in previous five years)</b>
	<ul style="list-style-type: none"> <li>• Details of previous clients and client references</li> <li>• Scope of projects</li> </ul>



	<ul style="list-style-type: none"> <li>• Size of projects</li> <li>• Percentage of work sub-contracted in each of previous five years</li> <li>• Experience of various methods of mains laying and pipe materials</li> </ul>
<b>3.</b>	<b>Water mains laying period contract experience (in previous five years)</b>
	<ul style="list-style-type: none"> <li>• Details of previous clients and client references</li> <li>• Scope of projects</li> <li>• Size of projects</li> <li>• Success rate with re-appointment to period contracts</li> </ul>
<b>4.</b>	<b>Quality assurance</b>
	<ul style="list-style-type: none"> <li>• ISO 9000 accreditation</li> <li>• Environmental policy</li> <li>• Procedures for purchasing and controlling issue and use of materials</li> <li>• Training policy and minimum staff qualifications</li> <li>• Staff turnover rate</li> <li>• Details of any previous or pending disputes relating to quality failures as a result of workmanship or other reasons</li> </ul>
<b>5.</b>	<b>Use of sub-contractors</b>
	<ul style="list-style-type: none"> <li>• Policy of use of sub-contractors (see also notes in 9.3 - Sub-Contractors)</li> </ul>
<b>6.</b>	<b>Health and Safety performance</b>
	<ul style="list-style-type: none"> <li>• Health and Safety Policy Statement</li> <li>• Records of serious injuries and/or deaths during previous five year period</li> <li>• Details of significant insurance claims made by third parties or employees during previous five year period</li> <li>• Evidence that staff have relevant medical assessment documentation to work on water mains laying work</li> </ul>

#### 9.1 STAFF COMPETENCE

- i) Working background and CV's of their managerial and supervisory staff who will be controlling the self-lay installation.
- ii) Documentary evidence of site operatives qualifications and training including but not limited to:
  - a) Energy and Utility Skills (EU Skills) qualifications for Water Network Construction.
  - b) NVQ or City & Guilds qualifications in water mains and service laying.
  - c) Proof of their previous experience and understanding of the techniques involved.
  - d) Cable detection training.

The appropriate qualifications for operatives can be found on the Energy and Utility Skills website at:

[www.eusr.co.uk](http://www.eusr.co.uk)

#### 9.2 WATER QUALITY AND HYGIENE

We have a statutory duty to provide wholesome water as defined in the Water Supply (Water Quality) Regulations 2000. To fulfil this obligation the following steps will be taken:

- i) Operation of the water distribution system by parties other than us is not permitted.



- ii) The SLO will produce and maintain procedures to satisfy all regulatory requirements with respect to the laying of water systems.
- iii) It is a requirement that all operatives have undergone the National Water Hygiene training provided by Energy and Utility Skills and hold a current National Water Hygiene Card. All our operatives involved in work on the public water supply hold this accreditation.
- iii) The SLO and its workforce must be fully conversant with the **Principles of Water Supply Hygiene** and the associated technical guidance notes that are available from Water UK.
- iv) We will issue our **Water Quality Hygiene Procedure** to the developer or SLO. This must be circulated to and read by all operatives involved in the self-lay installation. This explains our terminology and procedures for water hygiene.
- v) For medical assessment of all operatives involved in **restricted operations or areas** (i.e. installing water mains and services, jointing, disinfecting and swabbing of mains and services) the **Health Questionnaire** attached to the above procedure must be completed and returned to us for approval to work. Signing this questionnaire also confirms that the hygiene procedure has been read and understood.
- vi) The cost of securing medical clearance to work is to be borne by the SLO.
- ix) The SLO or developer must inform us immediately of any person employed on the water installation known to have a waterborne disease or gastric disorder. Such a person shall immediately cease to be employed on the works.
- x) Where it is intended that ownership of the self-laid asset will transfer to us, all materials in contact with water meant for human consumption shall comply with the Water Supply (Water Quality) Regulations 2000 and any subsequent amendments.
- xi) Connection of the self-laid main to the water distribution network will only be carried out by us. This will not be done until satisfactory pressure test, sterilisation and water sample results have been obtained and then only if there is to be adequate turnover of water to prevent stagnation.
- xii) Service connections will only be made once the pipework on the customer's property has been confirmed to meet the Water Supply (Water Fittings) Regulations.

**The Drinking Water Inspectorate (DWI) can take enforcement or legal action against us in the event of unwholesome or unfit water being supplied, or if an unapproved product or substance is applied or introduced. Any agreements entered into with the SLO regarding a self-lay installation will contain a clause allowing us to recover from the SLO any costs incurred in any enforcement or legal action taken against us by the DWI resulting from the SLO's failure to comply with the appropriate regulations and procedures.**

**See Appendix 1 of this document for our Water Quality Hygiene Procedure and Health Questionnaire.**

**See Appendix 2 of this document for information on the regulations that apply to materials and products used in drinking water applications.**

### 9.3 SUB-CONTRACTORS

- i) We only approve and authorise the developer or SLO itself to directly undertake the work. This is a condition of the approval process.

- ii) We do not permit a developer or SLO to sub-contract any part of the self-lay mains or service laying operations to an unapproved contractor.
- iii) A developer or SLO that is found to be sub-contracting any element of the work to an unapproved contractor will have their authority to undertake the work revoked. We will then complete the installation and charge the developer accordingly.
- iv) If the developer or SLO wishes to sub-contract any elements of the self-lay installation then we require that sub-contractor to satisfy the approval process, as set out above, relative to the items of work that they propose to undertake.
- v) Where the developer or SLO sub-contracts elements of the self-lay installation to an approved sub-contractor, responsibility for the work, as far as we are concerned, remains with the developer or SLO.

## 10. **OUR LEVELS OF SERVICE**

Outlined below are the levels of service that the developer or SLO can expect from us for both traditional requisition and self-lay schemes.

### 10.1 **TRADITIONAL REQUISITION**

These levels of service for developers have been agreed between the water companies (via Water UK), Home Builders Federation (HBF), National Federation of Builders (NFB) and OFWAT.

### 10.1.1 Water Mains Requisition (under the terms of the Water Industry Act 1991)

TASK	TIMESCALE
Acknowledge full water main requisition application or request missing information	Within 3 working days
Provide design and costings for requisition <500 domestic properties and previous pre-development enquiry completed	Within 20 working days of receipt of full application
Provide design and costings for requisition > 500 domestic properties or <500 where changes in capacity / no previous pre-development enquiry; redesigns; commercial/industrial development; where off-site reinforcement required; significant engineering difficulties; specialist advice or investigation required	Within 10 working days of receipt of application mutually agree date for when design and costing will be completed
Construct and commission main	Within 3 months of 'relevant date' unless extension of timescale mutually agreed.

'Relevant date' for mains is when applicant completes necessary agreements and pays any remittance.

#### Service connections

Acknowledge receipt of full application or request missing information	Within 3 working days
Send out cost advice for on-site service connections	Within 10 working days of relevant date for water main
Send out cost advice for off-site service connections	Within 20 working days
Make service connection	Within 15 working days of service connection 'relevant date'

'Relevant date' for service connections is when payment has been received, all external inspections have been passed and when Water Regulations consent has been granted.

### 10.2 INFORMATION ON OUR EXISTING ASSETS

This provides a developer or SLO with plans showing the location, size and general depth of our existing mains network in and around the proposed site. This information is chargeable at the rates indicated in **Section 14 - Our Charges**. We will respond to a formal written enquiry within 10 working days.

### 10.3 SELF-LAY OPTION

We will respond to an initial enquiry regarding self-lay within 3 working days of such a request. We will advise as to the completeness of the information provided.

If the self-lay option is to be considered further a meeting will be required between the developer or SLO and us. We need to discuss the scheme and agree the elements of work

that will be undertaken by the two parties. As outlined earlier, some elements are non-contestable and must be undertaken by us. We will arrange a meeting date within 5 working days of such a request.

#### 10.4 **OUR CHARGES**

We will provide a detailed quotation for our elements of work on a self-lay scheme.

We will charge for all elements of work that we undertake.

The principles of our charges are detailed in **Section 14 - Our Charges**.

We will normally provide quotations for the non-contestable elements of the work and any of the contestable elements of work that we have agreed with you to undertake within 15 working days.

See **Table 1.0** on page 22 which summarises these service levels according to who is undertaking the design and the size of the development.

#### 10.5 **APPROVAL OF A SELF-LAY DESIGN**

We will check the final design and respond to the developer or SLO within 5 working days.

If subsequent re-designs are necessary, we will require an additional 5 working days to consider the re-submission.

We will inform you if the development proposals have changed significantly enough for this period to be extended. This may be necessary if the site layout has changed, if the numbers of plots have changed or if any other amendments have been made that require re-calculation of non-contestable charges or asset payments.

#### 10.6 **APPROVAL OF A SELF-LAY ORGANISATION**

After the requirements of **Section 9 - Approval Of A Self-Lay Organisation** have been met, we will assess the SLO and respond within 5 working days.

#### 10.7 **BW DESIGN FOR SELF-LAY**

If we are requested to undertake the design for a self-lay installation, we will complete the design, calculate the non-contestable charges and asset payment and return our response within:

- 20 working days of receipt of all the required information for sites of up to 500 domestic properties.
- For sites of over 500 domestic properties, or sites where significant investigation work is required, we will confirm the date for providing full information within 10 working days.

#### 10.8 APPROVAL OF MATERIALS

Where a developer or SLO is to procure their own materials, we require a detailed list of such materials to be submitted to us for approval prior to commencement of any works. We will respond to this within 5 working days of receipt.

#### 10.9 PRESSURE TESTING

We require 5 working days notice to witness the pressure test and sterilisation process,

#### 10.10 WATER SAMPLING AND WATER QUALITY TESTING

This follows after the developer or SLO has undertaken a satisfactory pressure testing, swabbing and sterilisation process.

- i) We require 3 working days notice to sample the water from the self-lay installation.
- ii) The quality testing process takes 7 working days to complete.
- iii) Upon completion of the quality testing, a formal written certificate will be issued confirming satisfactory results. Alternatively, the developer or SLO will be informed that the samples have failed the quality tests. Notification of the sample results will be made within 24 hours of their issue date.
- iv) In the event of a first time failure, we will automatically re-sample. If the second sample passes the quality tests we will issue formal certification as above.
- v) If the second sample fails the quality tests the developer or SLO will be informed of this occurrence, again within the above time period and we will await your remedial actions.

We will charge for the sampling and testing operations. We will estimate the number of samples to be taken on an individual scheme from our initial liaison meeting. Any re-sampling and testing will be charged for and be in addition to the estimated amounts.

Final mains connections, mains commissioning and new service connections on the self-lay installation will not occur until satisfactory sample results are obtained.

#### 10.11 CONNECTIONS TO THE EXISTING MAINS NETWORK

We require 10 working days notice to arrange and undertake the connections to the existing mains network. This notice is required so we can:

- i) Order the necessary materials.
- ii) Programme the work.
- iii) Arrange and carry out the necessary customer warnings for a planned interruption to their water supply.
- iv) Give the highway authority the required notice of streetworks.
- v) Arrange any other requirements such as road closures, traffic lights etc.

There may be a longer delay if we need to order materials for the connections which are of a large diameter or are special order. We will inform of this at the design stage, if necessary. There may also be a requirement for a longer notification period under the New Roads and Streetworks Act 1991 and/or Traffic Management Act 2004.

Ideally we would like to know the proposed dates for mains connections well before they are required to allow for adequate customer warning, programming etc. This is a key item that should be featured in our ongoing liaison.

#### 10.12 **ROUTINE IN-LINE MAINS CONNECTIONS BY THE SLO**

We will respond to a request for a routine in-line mains connection within 3 working days.

#### 10.13 **SPUR CONNECTION OFF EXISTING MAINS**

Where requested and agreed in the design and self-lay agreement, we will provide a spur connection off of our existing mains into the site entrance. Subject to work complexity or road and traffic management restrictions, we will provide this spur connection within 15 working days of request.

#### 10.14 **NOTIFICATION AND INSPECTION**

If the developer or SLO requires a site inspection, a meeting regarding Water Regulations or any other general onsite discussion, notification must be given to our Network Design or Water Regulations Team who will arrange the necessary site attendance. We require 3 working days notice to arrange a site visit.

#### 10.15 **TRANSFER OF THE SELF-LAY ASSET**

Upon formal written confirmation from the developer or SLO that a self-lay installation is complete, together with the scheme documentation as outlined in **Section 13 - Transfer Of The Self-Lay Installation**, we will commence the transfer of ownership process. We will issue the formal vesting agreement for transfer within 5 working days of approval of the construction information.

#### 10.16 **PAYMENT OF THE ASSET VALUE**

Upon formal adoption of the self-lay asset we will make a payment to the developer or SLO as outlined in **Section 15 - Payments To The Developer Or SLO**.

We will make this asset payment, less the maintenance deposit and the costs for non-contestable items and any contestable items that we undertook, within 20 working days of the formal transfer of ownership.

The maintenance deposit, less any deductions, will be returned to the developer or SLO at the end of the 12-month Defects Liability Period. The payment will be made within 20 working days of the end of the Defects Liability Period.

**TABLE 1.0 Summary of Bournemouth Water LoS for self-lay**

TASK	TIMESCALE
Initial response to self-lay enquiry checking completeness of the detail provided	3 working days
Arrange meeting date to discuss self-lay	5 working days
Check SLO design and provide quotation for non-contestable/contestable self-lay elements/asset payment	Up to 500 props. - 15 working days
Final Checking/re-checking a self-lay design	5 working days
BW undertake the self-lay design and provide quotation for non-contestable/contestable self-lay elements/asset payment	up to 500 props. – 20 working days over 500 props. or where significant investigation required– we will confirm the date for providing full details within 10 working days
Approval of SLO procured materials	5 working days
Approval of SLO after submission of required records	5 working days
Issue draft agreement for construction of self-lay asset	5 working days
BW connection of self-lay mains to existing network	10 working days
Provide spur connection off existing main into site entrance provided there are no work complexities or road or traffic management restrictions	15 working days
Respond to a request for a routine in-line mains connection	3 working days
Supervise, witness pressure test and sterilisation	5 working days
Water sampling and quality testing	3 working days notice to sample 7 working days to test 24 hours to issue notice of test results
Site inspection or meeting	3 working days notice
SLO request us to fit a water meter (after we have received connection details)	5 working days
Supply of water meters to SLO (where SLO is to fit water meters)	5 working days – subject to our procurement timescales
Payment of the asset value/balance of maintenance deposit	20 working days

All the above timescales are subject to the terms and conditions explained fully in **Section 10**.

## 11. WHAT WE REQUIRE FROM THE DEVELOPER OR SLO

The following information is required in order to meet our service levels (please also refer to the WRc/UKWIR Self-laying of Water Mains and Services – A Code of Practice for England & Wales 2<sup>nd</sup> Edition for details of information to be submitted by the SLO):

- i) Full scheme details including site layout plans, house types, phasing, information on ground conditions & contaminants and all other relevant details.

- ii) For developer or SLO designs we require a complete set of design information before the approval process begins. The design must show mains layout, main sizes, hydraulic calculations, material types, fire hydrants, sluice valves and service connection positions.
- iii) We need to clarify with the developer or SLO the elements of work that we will undertake and the elements that the developer or SLO will undertake. Normally on the self-lay option, we would expect the developer or SLO to undertake all the contestable elements of the work.
- iv) We require payment in advance for the design, design approval, inspection, drafting of legal agreement, sampling and any other elements of approval work that we undertake. Our quotation gives full details of these estimated charges.
- v) We require site information in accordance with the **Construction (Design and Management) Regulations 2007** relating to known and foreseeable risks to our operatives.
- vi) Any additional charges for extra supervision or sampling, for example, will be charged for as required.
- vii) We require unhindered access for supervision and inspection of the onsite self-lay works. If we have any valid concerns we reserve the right to request the developer or SLO to open up the works for inspection.
- viii) If any site operatives encounter suspected contaminants, unusual or unexpected ground conditions then we must be contacted immediately.
- x) Site operatives must always carry their blue card accreditation and produce it upon request.
- x) We must be given 5 working days notice of your requirement to commence the pressure testing, swabbing and sterilisation process. We will then arrange for the necessary supervision and assistance.
- xi) The details of the pressure test must be forwarded to us for inspection and record keeping.
- xii) We require 10 working days notice to arrange the connection to the existing mains network.
- xiii) We require 3 working days notice to undertake water quality sampling.
- xiv) We require notification when individual service connections are made. Details must be provided of plot numbers and dates laid.
- xv) The developer or SLO must pay the Infrastructure Charges for the development directly to us when the individual connections are made.
- xvi) We require the developer or SLO to provide us with customer details for billing purposes when occupation takes place. This should include full meter details.



- xvii) The developer or SLO must provide us with an as-laid plan showing full details of the self-lay mains and service installations on the site to enable us to update our Geographical Information System (GIS).

## 12. RESPONSIBILITIES DURING AND AFTER THE SELF-LAY PROCESS

### 12.1 DEVELOPER OR SLO

- i) Whilst self-lay works are in process, the developer or SLO will be responsible for all issues and complaints in connection with the elements of work that they undertake. Any enquiries made to us regarding developer or SLO elements of work will be referred to the developer or SLO.
- ii) Where the developer or SLO sub-contracts any elements of the self-lay installation to an approved sub-contractor, responsibility for the work, as far as we are concerned, remains with the developer or SLO. We will, therefore, direct any issues on sub-contracted works to the developer or SLO.
- iii) It is the responsibility of the developer or SLO to obtain any legal agreements and rights required by the self-lay scheme.
- iv) The developer or SLO is responsible for all damages or injuries incurred relating to the self-lay works.
- v) The developer or SLO must take adequate steps to locate and protect other services. The developer or SLO is responsible for any damage it causes to other services whilst undertaking self-lay works.
- vi) It is the responsibility of the developer or SLO to liaise with the appropriate highway authority regarding elements of their work in the highway. The developer or SLO must comply with the requirements of the New Roads and Streetworks Act 1991 and/or Traffic Management Act 2004.
- vii) For the avoidance of doubt, any water mains constructed under the self-lay option remain the responsibility of the developer/SLO until a vesting certificate is issued and transfer of ownership occurs.
- viii) The developer or SLO will be responsible for the interim and permanent reinstatement that it undertakes. Under the New Roads and Streetworks Act 1991 the following Guarantee Periods apply for reinstatement in the public highway:
  - a) For reinstatement up to 1.2m deep - 2 years.
  - b) For reinstatement over 1.2m deep - 3 years.

The above responsibilities rest with the developer or SLO for reinstatement that they (or their sub-contractor) have undertaken and are in addition to the general 12-month Defects Liability Period on the self-lay installation.

Any enquiries relating to reinstatement undertaken by the developer or SLO (or their sub-contractor) will be directed to the developer or SLO.

- ix) Prior to our attending site the following information will be required in accordance with Regulation 17.1 and 17.2(a) of the Construction (Design and Management)

Regulations 2007. This information will be required in all instances even if your contract is not covered by these Regulations.

- 1) Site information with special regard to all known and foreseeable risks, contaminated ground, previous uses of site etc. Please refer to the site conditions above.
- 2) Drawings/Plans of all existing site services especially exact locations of all electric cables.

In addition to the above it is expected that all our personnel (Directly employed or Contractors) will report to the main Site Office to receive a Health and Safety Induction prior to any work being started.

## 12.2 BOURNEMOUTH WATER

We will arrange any requirements relating to the elements of work that we undertake, for instance, streetworks notices for connections to the existing mains network.

We will be responsible for all elements of work that we undertake.

We can provide the following Health and Safety related documents for our activities:

- a) Health and Safety Handbook.
- b) Risk Assessment sheets for known risks.
- c) Working Procedures.

## 13. TRANSFER OF THE SELF-LAY INSTALLATION

The self-lay mains and services installation remains the responsibility of the developer or SLO until the works are satisfactorily completed to all relevant specifications and standards and the installation is live.

When this has occurred the vesting certificate can be issued and ownership of the asset will transfer to us.

To begin the transfer process we require formal written confirmation from the developer or SLO that a self-lay installation is complete and ready for adoption.

Before transfer of ownership we will undertake an inspection and expect the developer or SLO to provide us with the scheme file containing all relevant information and documentation. This will include:

- i) An as-laid plan for the scheme indicating the location of the mains and services, plus the main size, material, valve and hydrant locations etc.
- ii) Details of all easements and other legal agreements.
- iii) Pressure test records, sterilisation records and PE welding records.

### 13.1 DEFECTS LIABILITY PERIOD

A Defects Liability Period (DLP) will apply to the water mains, service connections and associated fittings. The DLP normally applies for 12 months after commissioning for mains

and 12 months after the connection date for services. We will retain an amount (known as the **maintenance deposit**) from the asset payment that we make to the developer or SLO to act as security during that period.

We calculate the maintenance deposit as 10% of our estimate of the **total** scheme cost, subject to a minimum deposit of £1000.

We will undertake any maintenance or repair work that is necessary after adoption. The developer or SLO will be advised as soon as reasonably practical of any such works and their costs. The cost of undertaking such works will be deducted from the maintenance deposit. This also includes damage to service pipes, meter boxes, street furniture and marker posts.

Prior to completion of the Defects Liability Period, we will inspect the works again. This will be done jointly with the developer or SLO. Following satisfactory inspection, completion of the Defects Liability Period and rectification of any defects, the Defects Liability Period will end and we will assume responsibility for maintenance of the water mains and services.

At the end of the Defects Liability Period the balance of the maintenance deposit will be returned to the developer or SLO. We will account for any interest accrued on the retained amount.

If the cost of remedial work in the Defects Liability Period exceeds the maintenance deposit then the developer or SLO will pay us the additional amounts.

**Note:** The responsibility for interim and permanent reinstatement undertaken by the developer or SLO (or their sub-contractor) rests with the developer or SLO. Please see **Section 12 - Responsibilities during and after the self-lay process** for details of reinstatement Guarantee Periods. These are in addition to the general maintenance period described above and remain the responsibility of the developer or SLO for the prescribed periods.

## 13.2 LIABILITY

We remain responsible for the quality of water supplied. Liability remains with us on self-lay installations.

In the event that an action is taken against us for supplying unwholesome or unfit water as a result of defective workmanship or by the use of unapproved products or materials on a self-lay installation, we reserve the right to recover the costs of any such actions from the developer or SLO.

If water quality problems occur due to ground conditions that we were not informed about, affecting the materials installed, we may have to relay the installation in the appropriate material. We would have to do this immediately and without consultation and then charge our costs to the developer or SLO.

## 14. OUR CHARGES

We will charge for all elements of work that we undertake. The basis of our charging is full cost recovery plus an amount to reflect our overheads. Full details of our charges for a scheme will be outlined in our quotation.

The main elements of non-contestable work are estimated as follows:

#### 14.1 INFORMATION ON OUR ASSETS

Upon request, we can provide you with information from our Geographic Information System (GIS) to assist with your self-lay design.

- The minimum administration charge for providing information on our assets is £53.50

#### 14.2 APPROVING A SELF-LAY DESIGN

- The minimum charge for checking and approving a submitted self-lay design is £144.

The charge may increase if network modelling is required for the scheme.

#### 14.3 CONNECTIONS OF SELF-LAY MAINS TO THE EXISTING MAINS NETWORK

We will design the connections of the self-lay mains to the existing mains network. The minimum cost of this design work is £144. The charges will be based on time and materials. Time will be charged at the rate of £48 per man-hour and we will estimate the number of hours involved.

We will undertake all connections of self-lay mains to the existing mains network. The cost of this work will be estimated on an individual scheme basis and outlined in our quotation.

#### 14.4 DESIGN OF OFFSITE REINFORCEMENT WORKS

We will design all reinforcement works necessitated by the scheme. The minimum cost of this design work is £288. The charges will be based on time and materials. Time will be charged at the rate of £48 per man-hour and we will estimate the number of hours involved.

The cost of reinforcement work design is in addition to the design work costs for the site mains.

#### 14.5 INSTALLATION OF OFFSITE REINFORCEMENT WORKS

We will install reinforcement mains or any other reinforcement works.

The cost of this work will be estimated on an individual scheme basis. We will provide justification and a detailed cost breakdown for this work in our quotation.

#### 14.6 SUPERVISION AND INSPECTION

We will include an estimated charge for supervision and inspection in our quotation. This charge is based on an estimated amount of work.

If additional supervision and inspection becomes necessary, this will be charged for over and above the estimated amounts.

- Supervision and inspection is charged at the rate of £53.50 per man-hour.

#### 14.7 WATER SAMPLING AND WATER QUALITY TESTING

We will estimate the number of samples to be taken on an individual scheme from our initial liaison meeting. Any re-sampling and testing will be charged for and be in addition to the estimated amounts.

The sampling and testing operations will be charged for as follows:

- £48 per man-hour for sampling.
- £40 per sample tested.

#### 14.8 **INFRASTRUCTURE CHARGES**

Infrastructure charge details will be included in our quotation.

- The current standard charge per unit is £312.19

Please see our **Water Charges** booklet for full details on infrastructure charges.

#### 14.9 **DEFECTS LIABILITY PERIOD COSTS**

A 12-month maintenance deposit is payable to us equating to 10% of our estimate of the **total** scheme cost, subject to a minimum deposit of £1000.

The maintenance amount is subtracted from the asset payment that we make to the developer or SLO upon adoption.

The maintenance amount is returned to the developer or SLO, less any deductions, after the Defects Liability Period has ended.

#### 14.10 **ADDITIONAL WORK**

All additional work that is either requested by the developer or SLO or reasonably imposed by us will be charged at the following rates:

- Design and estimation work - £48 per man-hour.
- Inspection and supervision work - £53.50 per man-hour

Materials will be charged at cost plus an administration overhead.

### 15. **PAYMENTS TO THE DEVELOPER OR SLO**

The developer or SLO provides us with an asset that becomes part of our water supply network once formally adopted. We are also provided with metered water charges revenue from the properties on the development. Therefore we pay the developer or SLO an amount which reflects the value of these assets to us. In assessing this value, we will take into account the revenue stream derived from the properties to be connected to the new mains.

The Asset Payment that we make is calculated on the following basis:

- i) We will estimate, in advance of any work, our costs of designing and installing the mains in the traditional manner to give a total scheme cost.
- ii) This will give the overall value of the asset including the work that the developer or SLO has undertaken.
- iii) We will use this figure to calculate the financing costs in accordance with Section 41/43 of the Water Industry Act 1991 as amended by the Water Act 2003. This calculation balances the capital cost of the scheme against revenue from the development. We will assess the likely revenue stream from the properties to be

connected using the average annual consumption for new properties in our area. We will make adjustments for other types of water usage where appropriate.

- iv) We will use the build rates provided by the developer or SLO together with our assessment of occupancy rates and when bills become payable to calculate revenue. If we disagree with the build rates we will discuss with the developer or SLO. We will compare the information provided against actual average build rates for the particular locality.
- v) We will allocate 100% of the revenue from newly connected properties to the income allowance and we will allocate this from when it becomes payable not when it is received.
- vi) The calculation also gives the amount that we will pay to the developer or SLO as an Asset Payment.
- vii) The Asset Payment will be paid to the developer or SLO, less the maintenance deposit and any other costs incurred, on transfer of ownership of the main.
- viii) The maintenance deposit will be returned to the developer or SLO, less any deductions for remedial work that we have had to undertake, after the 12-month Defects Liability Period has ended. We will account for any interest on the deposited sum.

#### **Example of the calculation of the Asset Payment**

An example is set out in the table below of the calculation of the Asset Payment. This is illustrated for a hypothetical scheme with the following details:

- Capital cost of mains if requisitioned and provided by Bournemouth Water - £20,000.
- Total of 50 properties with the build and occupancy rates as set out in the table. The occupancies are shown cumulatively.

The financing costs are set out per annum over a 12 year period as prescribed in the Water Industry Act 1991. These costs are calculated using the prevailing interest rate for borrowing (the methodology of which is prescribed by OFWAT using Bank of England statistics for yields from British Government Securities). The borrowing rate for water supply only companies, as at January 2012, is 4.25% per annum which translates into an annuity factor of 0.10810349. This factor is multiplied by the capital cost to calculate the annual financing cost.

The base charging year used to calculate water supply income from the properties is 2011/12 and the charges for measured supply for this period ending 31 March 2012 are:

- Volume charge – 115.90p per cubic metre
- Standing charge - £22.50 per meter per annum

Based on the above we are using in this calculation an average household metered bill of £141 per property for 2011/12, This amount is used in 'Year 1' of the calculation for income. For subsequent years the income is calculated using, where known, the 'K' factor ('K' is the annual % amount that we must raise/lower water charges by) plus a nominal RPI rate.

We will then summate the projected amount of water charges revenue for each of 12 years. Where it exceeds the financing cost for any year, we will take the financing cost as the value to calculate the Asset Payment amount.

The discount factor is used to calculate a present value for the Asset Payment and is equivalent to the interest rate/annuity factor for the borrowing.

#### Example of the Asset Payment calculation

Year	Annual Financing Costs £	Cumulative Occupancy of Properties	Projected Future Income £	Income Allowance (lesser of projected future income or annual financing costs)	Discount Factor	Discounted Asset Payment Value £
1	2162.07	5	352.50	352.50	0.95923	338.13
2	2162.07	25	1825.00	1825.00	0.92013	1679.23
3	2162.07	50	7450.00	2162.07	0.88262	1908.28
4	2162.07	50	7700.00	2162.07	0.84663	1830.48
5	2162.07	50	7950.00	2162.07	0.81212	1755.48
6	2162.07	50	8200.00	2162.07	0.77901	1684.28
7	2162.07	50	8450.00	2162.07	0.74725	1615.61
8	2162.07	50	8700.00	2162.07	0.71679	1549.75
9	2162.07	50	8950.00	2162.07	0.68757	1486.57
10	2162.07	50	9200.00	2162.07	0.65954	1425.97
11	2162.07	50	9450.00	2162.07	0.63265	1367.83
12	2162.07	50	9750.00	2162.07	0.60686	1312.07
<b>25944.84</b>			<b>87977.50</b>	<b>23798.20</b>		<b>17954.05</b>

Therefore, the Asset Payment is £17,954.05 less:

- The non-contestable items and any contestable items that Bournemouth Water undertook (example: non-contestable work of £5000)
- The maintenance deposit of 10% of the capital cost of the scheme for the 12-month Defects Liability Period, in this example this equates to £2000

Therefore, in this example the Asset Payment made to the SLO when ownership transfers to Bournemouth Water equates to £10,954.05

The balance of the maintenance deposit (i.e. less any costs incurred in remedying defects) is returned to the SLO after the end of the 12-month Defects Liability Period. We will account for any interest on the deposited sum.

It must be noted that the above example is illustrative. Actual costs and charges will be scheme specific and based on the prevailing interest rates and price limits. In the example, for years 1 & 2 we have assumed a staged build over the relevant year (when the properties are occupied and bills become payable). From year 3 onwards we have assumed full build, occupation and bills being payable from the start of the year. We will use the build rates provided to us by the developer to assess payable revenue, these will be compared against actual average build rates for the particular locality. We will discuss with the developer if we disagree with their build rates.

## 16. GETTING IN TOUCH

If you have any questions, or wish to make general enquiries, please contact:

**Developer Services**  
**Bournemouth Water**  
George Jessel House  
Francis Avenue  
Bournemouth  
BH11 8NX  
Phone: 01202 590059      Fax: 01202 597031

## 17. COMPLAINTS

If you have any reason to complain about our service please, in the first instance, contact us. We will review our service, explain our actions and try to resolve the differences with you, our customer. If you are still not happy with how we handled the situation, our leaflet **Code of Practice - How we handle customer complaints** can help you. It explains our formal procedures for handling and management of complaints. This Code of Practice can be downloaded from our website at:

<http://www.bournemouthwater.co.uk/complaints/>

If customers remain unsatisfied after exhausting our internal complaints procedure or the matter remains otherwise unresolved, then customers can ask the Director General of OFWAT to investigate. His decision on the matter will be final and binding on both parties.

The Director General can be contacted at:

**Water Services Regulation Authority (OFWAT)**  
Centre City Tower  
7 Hill Street  
Birmingham  
B5 4UA  
Phone: 0121 625 1300  
Fax: 0121 6251400  
Website: [www.ofwat.gov.uk](http://www.ofwat.gov.uk)  
E-mail: [mailbox@ofwat.gsi.gov.uk](mailto:mailbox@ofwat.gsi.gov.uk)

## 18. GLOSSARY OF TERMS

**Brownfield sites**



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 a mains with water so that water is available for use.

**Communication pipe**

The part of the service pipe that belongs to the water company.

**Contestable works**

Those open to competition.

**Developers**

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

**Drinking Water Inspectorate**

The drinking water quality regulator for England and Wales.

**Easement**

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

**Existing mains/existing network**

The parts of the system already in place before the SLO starts installing pipes.

**Live main**

A main connected to the water network and filled with water.

**Non-contestable works**

Those not open to competition.

**Offsite**

In the public highway or in land owned by people other than the developers.

**Onsite**

Land owned by the developers.

**Pressure testing**

A new mains installation is tested for soundness by pumping the water inside to a specified test pressure for a specified period of time. The pressure must be maintained within specified parameters over that time period to be classified as sound.

**Reinstatement**

Work carried out to restore the surface of the ground to its original condition. For example, resurfacing a road after work to lay a new water main.

### **Relevant deficit payments**

Where developers requisition new mains for domestic purposes under sections 41 to 44 of the Water Industry Act 1991, they may pay for these over 12 years (the relevant deficit payments). The payments are calculated under section 43.

### **Requisition**

Water companies must provide water mains that are sufficient for domestic purposes when required to do so by 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 point of connections are agreed.

### **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 Organisation (SLO)**

These include developers who can lay their own mains and service pipes, contractors laying

### **Service Pipes**

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

### **Sterilisation**

The process of treating water with, for example, small amounts of chlorine for sterilisation purposes, ensuring that it complies with water quality regulations.

### **Supply Pipe**

The part of the service pipe that belongs to the consumer (therefore not part of the communication pipe).

### **Swabbing**

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

### **Water Main**

Any pipe belonging to the water company which is used (or will be used) to make a general supply of water available to customers of the water company, as distinct from providing a supply to a particular customer.

### **The Water Supply (Water Quality) Regulations 2000 and subsequent amendments**

These regulations specify the standards used to define wholesomeness of drinking water and also specify, under Regulation 31, the requirements for using approved substances and products. The Drinking Water Inspectorate (DWI) enforces the Regulations.

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

These Regulations replaced the Water Byelaws in England and Wales and are enforced by the Water Companies.

### **WIRS**

Water Industry Registration Scheme, operated on behalf of the water sector by Lloyds Register.

## APPENDIX 1

### WATER QUALITY HYGIENE PROCEDURE

#### 1. INTRODUCTION

All company and contract staff are required to maintain a high personal standard of appearance and hygiene.

Any person normally expected to work in restricted operations must hold a National Water Hygiene Accreditation Scheme Card (Blue Card) confirming their competence in hygiene awareness. Persons working in restricted operations should have their Blue Card with them at all times, and offer it for inspection on request.

It is well known that water can transmit disease and it is vital that all possible precautions are taken to protect treated drinking water.

In addition all staff are required to maintain an awareness of potentially damaging circumstances and report them immediately if encountered.

**It is the Manager's responsibility to ensure that staff or contractors under their control are aware of, and comply with, the requirements of these procedures. Failure to follow the hygiene procedure is a disciplinary matter.**

#### 2. REFERENCE DOCUMENTS

- Health Screening Questionnaire
- Registration Form

#### 3. DEFINITIONS

Certain terms used in this section have specific definitions as follows:

##### 3.1 Restricted operations:

Work involving direct or potential contact with sources of underground water and partially or fully treated water i.e. a restricted area.

##### 3.2 Restricted areas:

Designated areas where water is prepared for supply or it is considered to be in supply, including boreholes, springs, pipeworks, treatment works vessels, filters, channels, reservoirs, treated water pumping stations and all pipes in the distribution system.

### 3.3 **De-restricted areas:**

Restricted areas, which have been de-restricted for specific purposes. For example, extensive maintenance work in service reservoirs may require de-restriction. These areas should be dealt with as new installations prior to returning to service. Only the Technical Director, Supply Manager or the Quality Manager may authorise de-restriction of an area and will do so in writing indicating any special requirements.

### 3.4 **Illnesses of water quality concern:**

Persistent diarrhoea (for more than 3 days)  
Prolonged unexplained fever  
Typhoid/para-Typhoid  
Dysentery  
Jaundice/Hepatitis  
Cryptosporidiosis/Giardiasis  
Gastro-enteritis (particularly due to salmonellas, shigellas or campylobacters)

## 4. **RESTRICTED AREAS AND RESTRICTED OPERATIONS**

Only Blue Card holders may enter restricted areas or carry out restricted operations. This rule applies to all persons including casual or contract labour.

It is the responsibility of departmental managers or supervisors to ensure that **any** person required to have access to a restricted area or carry out a restricted operation, has, prior to starting work:-

Completed the National Water Hygiene - Health Screening Questionnaire and is the holder of a valid National Water Hygiene Accreditation Scheme Card (Blue Card).

The **only** exception is temporary Network Maintenance staff. In very exceptional circumstances the supervisor may obtain authorisation for a person to work without a Blue Card, provided the questionnaire has been completed and is signed off by the Water Quality Manager. Before signing off the Water Quality Manager will also require evidence that this person has received a suitable hygiene induction and has been issued with the hygiene procedure. Any person allowed to work in these circumstances must be under supervision.

## 5. **UNRESTRICTED AREAS AND OPERATIONS**

Employees or contractors who have not been cleared to work on restricted operations can carry out certain operations. These include:-

i) Repair and maintenance of electronic, electrical and mechanical equipment that does not come into contact with underground sources or treated water, including plant inside pumping stations but separate from the water.

ii) Repair and maintenance of treatment plant, pumps and other associated equipment which have been removed from the waterworks, provided that the surfaces which may come into contact with underground source or treated water are disinfected before the equipment is returned to service.

iii) The installation of new pipe work, provided that it is to be disinfected internally before it is connected to a source of underground water or treated water.

- iv) Servicing vehicles and plant and stores operations.
- v) General construction work including new sources or treatment works but excluding work on existing sources of underground water.
- vi) Ground maintenance and general cleaning work or minor building maintenance.
- vii) The laying of new mains in accordance with this instruction but not the connection of new mains to existing mains.

## 6. **TRAINING**

Managers or Supervisors directly responsible for staff or contractors required to work in restricted areas **MUST** ensure these staff are suitably trained and Blue Card holders (Water Hygiene Accreditation Scheme) they must also be in possession of the company hygiene procedure.

Managers or Supervisors are to liaise with the Water Quality Department to arrange training for staff or contractors before commencement of any work within a restricted area.

Water Quality will organise training date (one to one training will be given if necessary) i.e. in the case of literacy issues.

Groups of no more than 12 will be trained using a standard PowerPoint presentation.

All attendees will be required to bring with them NI number & passport size ID photo.

On arrival attendees will be issued with a Health Screening Questionnaire & Registration Form which they have to complete before commencement of training.

Attendees will be **required** to sit a test which consist of 25 multiple choice questions at the end of the session.

Test papers are marked by the trainer and signed off before attendees leave.

On successful completion of the test, they will be issued with a 30 day temporary cover note from the trainer.

Managers will be informed of the test results for their staff via e-mail, anyone that fails will have to re sit the test as soon as possible. If they fail for the second time, they would have to re sit the training course. Anyone that fails on the third test will have to be re-assessed for their suitability for the job.

Within 30 days the Water Quality Department will receive the Blue card from Energy Utility Skills. The cards will be passed to the relevant Managers. Cards are valid for 3 years.

All cards that are issued are recorded on the EU Skills database. The Water Quality Department holds all test papers and training attendees are held on a spreadsheet.

Card holders & relevant Managers will be responsible to ensure that cards are renewed before expire date.

There is a set charge for participant for the training/test. BW & period contractors £15.00, all external contractors £40.00 & renewal cards £30.00.

Water Quality Department will send invoice to the relevant departments for a code, the Manager's name and to be signed off by the Manager. Invoice will be passed to the Finance

Department for payment.

External parties will be sent details from the Water Quality Department & an invoice will follow from our Finance Department requesting for payment.

#### 7. **ILLNESS**

Any person who contracts or is in close contact with a person who contracts an illness as defined above must report the fact to their manager or the Personnel Manager. Such illnesses can often occur after a holiday abroad. The notified manager or Personnel Manager must report the matter to the Quality Manager who will liaise with the Company's Medical Advisor and possibly the local Health Protection Authority (HPA). The illness may result in the withdrawal of the approval to work in restricted areas.

Any person required to work under the definition of "restricted" who seeks medical advice regarding any of the above illnesses, must inform their doctor that they are required to work with drinking water where further infection is possible.

The Company may correspond with the doctors of restricted staff seeking medical assurance that their work in relation to water supply will not pose a health risk.

This also applies to contractors for 4 weeks before and after any work.

#### 8. **SECURITY**

Staff visiting sites should always carry out a brief ad hoc inspection of the site for any circumstances that could lead to a potential problem, e.g. open or unlocked reservoir covers, broken ventilators, blocked overflows and washouts or evidence of vandalism. Any discovery of this nature must immediately be passed onto senior management who will trigger an investigation and respond in accordance with the Company's Emergency Procedures.

#### 9. **PROVISION OF SANITARY ARRANGEMENTS**

The Company's larger sites are generally well equipped with toilet and washing arrangements. However, if a site is not equipped with these facilities and staff or contractors require them, they must leave the site and find somewhere suitable elsewhere.

**Under NO circumstances must any person use makeshift toilet arrangements on a Company site if proper facilities are not available.**

Temporary arrangements comprising suitable portable chemical toilets will normally only be arranged for sites where extended works are to take place. It is the responsibility of the person arranging the works to organise such facilities if required. They must also ensure they are properly maintained and that the wastes are properly disposed of to a foul sewer or suitably removed from site. These requirements also apply to contractors.

#### 10. **PLANT, TOOLS, INSTRUMENTATION AND OTHER EQUIPMENT INCLUDING CLOTHING**

Care should be taken to ensure that plant, tools, instrumentation and other equipment used in restricted operations are free from contamination before use. Clothing including protective items such as boiler suits, boots, coats, gloves etc. should be clean.

All vehicles including those hired in must be clean.

#### 11. **DISINFECTION OF PLANT/PUMPS**

All equipment sent into the workshops for maintenance shall be physically clean before being accepted. Under no circumstances will the Company's staff service equipment that has knowingly come into contact with foul sewage.

All equipment, pumps and piping whether new, serviced or repaired which will come into contact with treated water must be disinfected either before being installed or before being brought into use. Disinfection should be by immersion, if possible, or washing down with water containing at least 20 mg/l of free chlorine and then rinsing with tap water.

After installation and filling with water a sample should be taken of the water contained in the item of plant for bacteriological analysis. The plant may be returned to service only after satisfactory results are obtained.

## 12. OPERATIONAL GUIDANCE NOTES

These notes are not to be followed in isolation. Other specific procedures are also to be followed, where applicable.

## 13. NEW MAINS

Pipes for new mains should be stored and laid as hygienically as practicable, all reasonable measures being taken to exclude vermin, debris and dirty water. During laying, the pipe end should be capped whenever work stops. Before a main is brought into service it should be cleaned and disinfected. Any debris and dirt should be removed by flushing and swabbing. The risk of microbiological contamination remaining at joints can be reduced if filling the main with water containing 20mg/l of free chlorine precedes this operation. When the flushing water is clear the main should be charged with water containing 20mg/l of free chlorine and left for a contact period of 24 hours before it is flushed by mains water, noting chlorine levels. After a further 24 hours samples should be taken for bacteriological examination at a number of points along the main and at the extremities.

The criteria for acceptance is that all parameters tested for must meet the regulatory standards, together with, taste, odour and appearance to be satisfactory **and** the colony counts must generally be less than 500. If the colony counts are greater than 100, an instruction to re-flush may be issued before the main may be put into service. If the colony count is greater than 500, the main must be re-flushed **and** re-sampled before putting into service. If a sample 'fails' three times the main must be re-swabbed, re-chlorinated and re-sampled.

## 14. RENOVATED MAINS

Before being returned to supply, mains subject to refurbishment, must be flushed and disinfected as for repaired mains. Repeated flushing may be necessary to reduce the pH after relining with cement mortar. When mains are relined with epoxy resin, all guidance from the Drinking Water Inspectorate should be followed to avoid unacceptable levels of contaminants entering supply.

Mains refurbishment must be carried out only by authorised restricted area personnel.

## 15. REPAIRED MAINS

Where a main can be repaired without cutting, it should be cleaned around the fracture area and together with the repair collar should be disinfected with a solution containing 1,000mg/l of chlorine. The main should be flushed and samples should be taken for bacteriological examination. The main may be returned to service immediately. Where a main has to be cut for repair, every care must be taken to prevent contamination. If possible, it should not be emptied below the level of any fracture until it has been exposed and the trench pumped dry.



Enough pumps must be used to prevent flooding while repairs are in progress. If practicable, final disinfection should follow as for new mains but the period of contact may be reduced to two hours, or 30 minutes subject to a 50mg/l concentration of free chlorine. In cases where this procedure is impracticable, all surfaces that will come into contact with the potable water should be disinfected with a solution containing 1,000mg/l of chlorine. When the repair is complete the main must be well flushed and samples must be taken for bacteriological examination. The main may be returned to service immediately unless there has been potential for contamination.

If, despite precautions, a significant amount of dirty water enters the pipes, the full cleansing procedure for new mains, entailing pre-disinfection, flushing, swabbing and final disinfection, should be followed as far as practicable and the Company's Emergency Procedures must be followed immediately.

If foul water from a fractured sewer or drain **may** have entered the pipes rigorous isolation, cleaning and disinfection procedures must be carried out. This is a dangerous pollution hazard and any such incidents must be reported in line with the Emergency Procedures. The main **must not be returned to supply** until satisfactory bacteriological results have been obtained and clearance given by the Quality Manager or other Senior Manager. Only restricted area personnel must carry out main repairs.

Customers should be warned not to draw water during the disinfection procedure.

#### 16. **ABANDONED MAINS**

Where source works, mains or services are to be abandoned they must be completely separated from the pipework remaining in use. Disused pipework or plant should not merely be isolated by means of a valve or stopcock. Where sluice valves fixed to tees cannot be removed they should be blanked off. Service pipes no longer required should be disconnected at the main. Abandoned valves and stopcocks should preferably be removed but, if left in situ, valve spindles and hand wheels or crutch heads should be removed, as should surface boxes, indicator plates and posts.

#### 17. **INSPECTION AND MAINTENANCE OF TREATED WATER TANKS/RESERVOIRS**

At approximately five-year intervals treated water reservoirs will be taken out of service, drained and inspected internally and externally for any form of defect that could give rise to contamination of the water. At that time they will be cleaned internally. The Asset Management Manager will maintain a reservoir inspection programme. Written records of the inspections will be kept on file.

Before commissioning or re-commissioning after remedial works, the inside surfaces of a reservoir should be washed with water containing not less than 20 mg/l of free chlorine. The wastewater from this operation should not be discharged to a watercourse without adequate de-chlorination or dilution.

When washing is complete the reservoir should be substantially filled with treated water and samples taken for bacteriological examination. The tank may **only** be returned to supply after satisfactory sample results have been obtained and authorisation by the Quality Manager granted. If serious structural defect or a source for possible contamination problem was found during the inspection the tank may not be returned for service unless authorised by the Technical Director.

Only restricted area personnel are permitted to enter a treated water reservoir unless de-restricted. At entry all personnel should scrub their footwear in a tray of solution containing 1000mg/l of chlorine.

Note: For 20mg/l chlorine dilute: 0.2 litres chloros in 1000 litres water

**OR**

1 No. 5ml teaspoon in 25 litres water

For 1000mg/l dilute: 250ml chloros in 25 litres water (Assuming chloros with 10% Cl<sub>2</sub> content).

### Health Screening Questionnaire

All personnel employed to work on 'restricted operations' have a responsibility to ensure they do not contaminate water supplies. This questionnaire is designed to obtain brief information regarding medical history.

This information only provides evidence of present or previous illness. It is essential that any illness in future is immediately reported to your line manager (*in particular stomach upsets and diarrhoea*). In such instances, you must not work on restricted operations until cleared to do so.

It should be noted that following the successful assessment of this questionnaire, hygiene training must be undertaken prior to the issue of a National Water Hygiene card.

*To be completed by the Applicant:*

#### Applicant Details

<b>Title</b> <i>Mr, Mrs, Ms, Miss or Other</i>		<b>Sex</b> <i>M/F</i>	
<b>Forename and Surname</b>			
<b>National Insurance No.</b>			
<b>Name &amp; Address of GP</b>			
<b>Postcode</b>			
<b>Company/Employer Name</b>			
<b>Company Address</b>			
<b>Postcode</b>			
<b>Company Telephone No.</b>			
<b>Line Manager</b>			

Fully complete all sections and sign the medical questionnaire. You must answer all questions fully and truthfully. Deliberately giving false answers could result in disciplinary actions.

**Do you or have you at present or have you ever suffered from any of the illnesses listed below?**

- Typhoid
- Paratyphoid
- Dysentery
- Persistent diarrhoea
- Jaundice or hepatitis
- Prolonged unexplained fever

*Please answer Yes or No*

I certify that the information given above is correct and complete to the best of my knowledge. I authorise my employer's medical advisor to consult with my GP and agree that my GP may reply to

any enquiry received from my employer's medical advisor concerning my health/medical history relating to the above illnesses.

*Should we require medical information from your doctor, you have certain rights under the Access to Medical Reports Act 1988. You have the right to withhold consent, although this may preclude you from working on restricted operations. If you consent, you can see your report from your doctor prior to it being sent or up to 6 months afterwards. You can ask the doctor to amend any part of the report you consider misleading or incorrect. If your doctor does not agree to make the changes you can add your own comments. The doctor does not have to show you any part of the report if he/she feels this may cause you harm.*

Signed by Applicant.....

Date.....

Approved by.....

Date.....

## APPENDIX 2

### THE USE OF MATERIALS AND PRODUCTS IN DRINKING WATER APPLICATIONS

The rules for the control, testing and approval of products in the UK are set out in:

- **Regulation 31 of the Water Supply (Water Quality) Regulations 2000 (Statutory Instrument 2000 No. 3184) for all products for use in public water supply.**

Failure to comply with Regulation 31 may lead to criminal prosecution. The Drinking Water Inspectorate (DWI) is the government agency responsible for ensuring compliance with the Regulation.

Under Regulation 31, Paragraph 4(a) provides for the use of substances and products approved by the Secretary of State. The DWI produces an annual list of DWI Approved Products. This is available on the DWI's website and in the Water Fittings and Materials Directory.

Under Regulation 31, Paragraph 4(b) provides for the Secretary of State to exercise his discretion not to require approval of a substance and product that is considered to be unlikely to adversely affect the quality of water supplied. In practice, this means that substances and products do not need to be submitted for full approval but will need to have WRAS approval or equivalent (see below) and be listed in the Water Fittings and Materials Directory.

- **The Water Supply (Water Fittings) Regulations 1999 for products on the consumer's premises**

One means of demonstrating compliance is to submit products and materials for assessment under the Water Regulations Advisory Scheme (WRAS).

For WRAS approval, audit testing must be carried out every five years. Materials complying with the requirements of BS 6920 are listed in the Water Fittings and Materials Directory.

**See over for a flow chart diagram illustrating the above processes**

Depending on the type of product and its use, one or both of the above approvals may be required.

