



## **Bristol Water plc**

**Addendum to the  
Code of Practice for the Self-Laying of  
Water Mains and Services  
- England and Wales  
2<sup>nd</sup> Edition May 2009**

**&**

**Addendum to the  
Self Lay Code of Practice  
(2<sup>nd</sup> Edition)  
National Addendum for the  
Safe Control of Routine Mains Connections  
Version 4.0 – November 2014**

## **Introduction**

The Code of Practice for the Self-Laying of Water Mains and Services – England and Wales, 2<sup>nd</sup> Edition May 2009 (Code of Practice) and the National Addendum for the Safe Control of Routine Mains Connection Version 1 (April 2010) were prepared by WRc for UKWIR Limited, with the support of all water companies, Ofwat and SBWWI, to provide a degree of conformity throughout England and Wales.

This addendum to the Code of Practice and National Addendum indicates where Bristol Water policies and procedures vary from the Code of Practice and National Addendum, or where the Code of Practice or National Addendum state that additional information is to be provided by each water company in their company-specific addendum. All clause references in the first section are taken from the Code of Practice, while those in the second section are taken from the National Addendum.

This addendum applies to all self-laid mains and services intended to be adopted by Bristol Water and which will form part of the water network operated as part of Bristol Water's licensed water undertaking, and supersedes any earlier addendum.

It should be read in conjunction with:

1. WRc plc publication "Self Laying of Water Mains and Services – A Code of Practice for England and Wales", 2<sup>nd</sup> Edition, which is available from WRc plc at [www.webookshop.com](http://www.webookshop.com).
2. The Self Lay Code of Practice National Addendum for the Safe Control of Routine Mains Connections, Version 1, which is available from [selflay.wrcplc.co.uk](http://selflay.wrcplc.co.uk), plus any other national addenda which may be produced.
3. The Water Industry Act 1991 as amended by the Water Act 2003; the Highways Act 1980; the New Roads & Street Works Act 1991 and all other applicable legislation, all as may be amended from time to time.
4. The current Civil Engineering Specification for the Water Industry (CESWI).
5. Bristol Water's "Policy for the self-laying of water mains and service connections", available at [www.bristolwater.co.uk](http://www.bristolwater.co.uk).

Bristol Water reserves the right to amend the addendum at any time without prior notice. If this is a printed copy you are advised to check that this version remains current by visiting Bristol Water's website or WRc's website.

Section 1 – All clause references are taken from the Code of Practice		
PART 1	GENERAL	
1.4	Responsibility for protection of street furniture	
1.4.1		<i>Delete: “is fully constructed”, insert: “has been adopted by the person(s) responsible for its on-going maintenance”.</i>
1.5	Competence of self-lay organisations	
1.5.4		<i>Delete Note 1, insert new Note 1: “Bristol Water accepts accreditation through the Water Industry Registration Scheme (WIRS) operated by Lloyd’s Register as evidence of competence for SLOs. SLOs must be accredited for the type of work they intend to undertake. Details of the WIRS scheme can be found at <a href="http://www.lloydsregister.co.uk/wirs.html">www.lloydsregister.co.uk/wirs.html</a>.”</i>
1.6	Protection of Water Quality	
1.6.1		<i>(Note) Insert after “may operate”: “or carry out works on”.</i>
1.6.5		<i>Add: “In addition all materials to be used on infrastructure that will vest in Bristol Water should either appear on Bristol Water’s Material List (which is available at <a href="http://www.bristolwater.co.uk">www.bristolwater.co.uk</a>) or have been approved for use by Bristol Water, in writing, following submission of a full technical specification for the item to Bristol Water at the application stage.”</i>
1.6.6		<i>Delete from “to the water distribution network” onwards and replace with “, or a part of the self-laid main, to the water distribution system shall be carried out by the Water Company except when it is a routine inline mains connection, as describe in the National Addendum for the Safe Control of Routine Mains Connections, or an under pressure branch connection not exceeding 63mm in diameter and, in both cases, is carried out in accordance with the procedure in the National Addendum for the Safe Control of Routine Mains Connections and Bristol Water’s addendum to that addendum.”</i>
1.6.8		<i>(Note) Delete: “due to the Water Company”, insert: “due to the negligence of the Water Company”.</i>
1.7	The Agreement	
1.7.1		The Legal Agreement will be between Bristol Water, the Developer, the SLO, the land owner (if not the developer), the adjoining land owner (if applicable) and the surety provider (if applicable).

1.8	Contestable and Non-contestable Work	
1.8	Tables 1 & 2	The equivalent tables in The Control of Routine Mains Connections addendum supersede these tables.
1.13	Interfaces with Local Fire Authority	
1.13.1		<i>Add:</i> “Note: The Fire Authority should respond to the designer, detailing their requirements, within 42 calendar days of having been provided with all necessary information. All financial transactions relating to provision of fire fighting equipment shall be between the relevant Fire Authority and the Developer/SLO. Bristol Water may refuse to connect any new main where the required fire fighting equipment has not been installed in accordance with the Fire Authority’s request, or where a Fire Authority has not been provided with adequate opportunity to detail their requirements.”
1.17	Resolution of Disputes	
1.17.2		<i>Delete:</i> “within two months” and <i>Add</i> “ within the timescales in appendix 7 of this Code of Practice.”
<b>PART 2</b>	<b>SELF-LAY PROCEDURES</b>	
2.2	Initial Enquiry	
2.2.1	Figure 4	Under “Water Company” delete “network modelling”  Under “Ofwat Levels of Service”, replace “LOS 2a” and “10 working days” with “LOS 2b” and “15 working days”. <i>Add:</i> “Where detailed investigation is required, Bristol Water will confirm, within 10 working days of receipt of a completed enquiry, when the information will be available.”
2.3	Design and Application	
2.3.1	Design by Developer/SLO	
2.3.1.2		<i>Add:</i> “Drawings or site plans shall be in pdf, DWG/DXE (2010 version or earlier) or tiff-g4 electronic format or hard copy.”
2.3.1.5		<i>Delete:</i> “However, there is no such payment when the design is changed to convert washouts to hydrants.” <i>Add:</i> “Bristol Water charges Fire Authorities 50% of our standard fee when the Fire Authority requires that a hydrant be installed in a location in which a washout needs to be installed anyway. SLOs may wish to consider a similar arrangement when working within our area of supply.”

2.3.1	Figure 5	<i>Add: "Note: For developments of greater than 500 properties, or where more detailed investigation is required, Bristol Water will confirm, within 10 days of receipt of a complete submission, when the information will be available."</i>
2.3.1	Table 4	<i>Add: "Note: Applicants should consult the company's Developers' Charter for full details of the information required. Details of the information that must be submitted with each application are also listed on the company's Self Lay Application form."</i>
2.3.2	Design by Water Company	
2.3.2	Table 5	<i>Add: "Note: Applicants should consult the company's Developers' Charter for full details of the information required. Details of the information that must be submitted with each application are also listed on the company's Self Lay Application form."</i>
2.3.2	Figure 6	<i>Add: "Note: For developments of greater than 500 properties, or where more detailed investigation is required, Bristol Water will confirm, within 10 days of receipt of a complete submission, when the information will be available."</i>
2.3.2.2		<i>Add: "Drawings or site plans shall be in pdf, DWG/DXE (2010 version or earlier) or tiff-g4 electronic formats or hard copy."</i>
2.4	Construction Stage	
Figure 7		<i>Under "Ofwat Levels of Service", "LOS 5" delete: "(5 working days or 7-15 working days)", insert: "(5 working days) or LOS 7 (15 working days)".</i>
2.4.1	Notification of Start	
2.4.1.3		<i>Add: "...by submitting a Notification of Commencement of Mainlaying Form which is available at <a href="http://www.bristolwater.co.uk">www.bristolwater.co.uk</a>. Authorisation to proceed with the mainlaying will be given once the SLO has met all requirements."</i>
2.4.2	Water Main installation	
2.4.2.1		<i>Add: "Only materials listed either on Bristol Water's Materials list or on a schedule of materials submitted and approved at the design stage should be used unless otherwise agreed with Bristol Water."</i>
2.4.2.2		<i>After "Water Company" add: "developer, land owner, surety</i>

		provider (if applicable)”
2.4.2.4		<i>Add: “The pressure test for PE mains shall be the “Type 2” test. A logger shall be fitted to the test end and data relating to the test shall be transmitted to an approved, independent verifying body, who shall determine whether the test has passed or failed. Written proof of the pass should be provided to the company ”</i>
2.4.2.5		<i>Add: “Once the mains are “live” all alterations to the main or fire hydrant will be carried out by the company and charged to the SLO. Alterations to chambers and covers may be carried out by the SLO.”</i>
2.4.2.6		<i>Add: “If the location of the fire hydrants differs from that requested by the Fire Authority the company will require the SLO to provide the company with written confirmation from the Fire Authority that states that the alternative location(s) are acceptable prior to connection of the mains on which the hydrants are located.</i>
2.4.2.8		<i>Add 2.4.2.8: “The SLO should notify the company, one week in advance, of the nature, location and date of any mainlaying work they intend to carry out to allow the company to inspect the work, if required.</i>
2.4.3	Final Connection	
2.4.3.1		<i>Delete 2.4.3.1 and insert new 2.4.3.1: “Routine Mains Connections that the company authorised the SLO to make at the design stage should be carried out in accordance with the National Addendum on the Safe Control. All other mains connections will be made by the Bristol Water.”</i>
2.4.3	Figure 8	Note that LOS 8 refers to the fitting of a meter by the Water Company, if not fitted by the SLO.
2.4.4	Service Pipe installation	
2.4.4.8		<i>Add: “The meters used shall be those listed on the current version of Bristol Water’s Materials Schedule which is available at <a href="http://www.bristolwater.co.uk">www.bristolwater.co.uk</a>.</i>
<b>PART 3</b>	<b>DESIGN AND CONSTRUCTION GUIDE</b>	
3.2	Design requirements	
3.2.2		After “If the site has” <i>insert: “, or may have,”</i> . <i>Add: “Pipe selection shall be in accordance with the “Guidance for the Selection of Water Supply Pipes to be Used in Brownfield Sites”, published by UK Water Industry Research in 2010. A Preliminary Risk Assessment shall be</i>

		carried out followed, where necessary, by analysis of the soil. A Site Assessment Report (SAR) is then compiled. Anyone undertaking the PRA and compiling the SAR shall have relevant experience in the investigation of contaminated sites and must also either be a chartered member of an appropriate professional body (eg Geological Society of London, Institution of Civil Engineers or the Royal Institute of Chartered Surveyors) or be listed on the Specialist in Land Condition (SiLC) register administered by the Construction Industry Research and Information Association (CIRIA). A process flow diagram is included in Appendix A.”
3.3	Design drawings	
3.3.1		<i>Add:</i> “Drawings or site plans shall be in pdf, DWG/DXE (2010 version or earlier) or tiff-g4 electronic formats or hard copy.”
3.4	Design guidance – General	
3.4.5		<i>Add:</i> “Bristol Water has a list of preferred materials which is available at <a href="http://www.bristolwater.co.uk">www.bristolwater.co.uk</a> . Authorisation to use materials that do not appear on this list will be given if technical specifications are provided at the application stage and the material is acceptable to the company.”
3.5	Design Guidance – Mains	
3.5.1	Mains design	
3.5.1.1		<p><i>Add:</i> “Layout design shall ensure a minimum clearance of 500 mm between the outside diameter of the water main and any boundary wall foundations, fences etc. In addition, the distance between the outside diameter of the main and the foundation of any structure (e.g. house, extension or garage) shall be at least 1.5 metres for mains up to and including 150 mm diameter, and 2 metres for mains larger than 150 mm diameter up to 250 mm diameter.</p> <p>“Note that no trees or large shrubs are to be planted over or within 3.0 metres of our apparatus unless suitable root restriction measures are taken. If root restriction is to be considered it should extend at least 1.5 metres below finished surface level, in which case the minimum clearance between the wall of our pipeline/apparatus and the root restrictor can be reduced to 0.5 metre. However, should our pipeline have to pass between two trees/large shrubs, even with root restrictors, a minimum clearance of at least 3.0 metres must be maintained between their respective</p>

		boles to facilitate vehicular access.  “We shall also require vehicular access along the length of the pipeline at all times and therefore your layout should take this into account, i.e. the design should position the main in roads or public open spaces.”
3.5.2.1		<i>Delete: 3.5.2.1, insert new 3.5.2.1:</i> “Mains shall be laid to provide a minimum of 900 mm above the crown of the pipe, and a maximum of 1250 mm. If the designer or SLO considers that these limits cannot be met, they should discuss with Bristol Water. Any variations must be agreed in writing by Bristol Water.”
3.5.3.3		<i>Delete: 3.5.3.3, insert new 3.5.3.3:</i> “Details of the pressure and flow at the boundary to the site will be provided upon request, subject to payment of the relevant charge. However, the designer should take into consideration that these values are subject to diurnal, seasonal and future variation which should be taken into account when designing the network, to ensure that minimum regulatory standards for flow and pressure are met.”
3.6	Design Guidance - Services	
3.6.1	Service Design	
3.6.1.2		<i>Delete Note 1, insert new Note 1:</i> “For commercial properties, Bristol Water requires that a double check valve be installed in the service pipe as close as is practicable to the boundary of the property. It shall remain the responsibility of the customer”
3.6.1.5		<i>Add:</i> “Note: Ducting shall be twin walled, flexible, smooth bore, minimum 100 mm internal diameter.”
3.6.1.8		<i>Insert new clause 3.6.1.8:</i> “Communication pipes should be laid in a straight line and at right angles on plan to the main to which they are connected. Continuous lengths of pipe shall be used and joints kept to a minimum.”
3.6.1.9		<i>Insert new clause 3.6.1.9:</i> “Service pipes should not be laid along footpaths (for instance to reduce the number of road crossings).”
3.6.2	Depth of cover	
3.6.2.1		<i>Add:</i> “Note: If a boundary box is to be installed on the service pipe, the pipe shall be laid with cover between 750 mm and 850 mm for a minimum of 1.0 metre on each side of the boundary box. Cover outside the above limits

		may only be allowed with prior agreement from Bristol Water.”
3.6.5	Meter Boxes	
3.6.5.1		<i>Delete 3.6.5.1, insert new 3.6.5.1:</i> “Bristol Water’s preferred method for the control and metering of water supplies is a boundary box fitted, where possible, less than one metre inside the boundary of the property it serves. However, where circumstances dictate, at the company’s discretion and with prior agreement in writing, meters may be provided at other locations.”
3.6.5.2		<i>Delete 3.6.5.2, insert new 3.6.5.2:</i> “Where a boundary meter box is installed it should be in the footway or on private land within 1 metre of the boundary of the street within which the main is laid. If possible it should be sited to avoid vehicle crossing points, drives and parking areas. It must not be sited in the carriageway or in a drive serving more than one property.”
3.6.5.5		<i>Delete Note, insert new:</i> “Note: Due to the weight of cover required, such chambers are not to be located in the footway or in drives or parking areas. They shall only be located in soft landscaping or private footways, and shall have a lightweight cover, capable of being safely and easily lifted by most customers without specialised training.”
3.7	Construction	
3.7.1	General	
3.7.1.6		<i>Add:</i> “Mains should be disinfected in accordance with the company’s procedure on The Disinfection of Mains, Services and Fittings, the relevant extracts of which are available at <a href="http://www.bristolwater.co.uk">www.bristolwater.co.uk</a> ”.
3.7.1.8		<i>Insert 3.7.1.8:</i> “PE joints should be butt fused wherever possible.”
3.7.3	Surface Boxes and Markers	
3.7.3.1		<i>Add:</i> “... and adopted by the person(s) responsible for the on-going maintenance.”
3.7.4	Service Connections to the Water Distribution System	
3.7.4.1		<i>Delete:</i> “(or a sealed and cap has been fitted)”.
3.7.4.4		<i>Add:</i> “All such fittings must also be approved by the manufacturers of the pipes.”
3.7.4.5		<i>Delete 3.7.4.5, insert new 3.7.4.5:</i> “Trace wire shall be

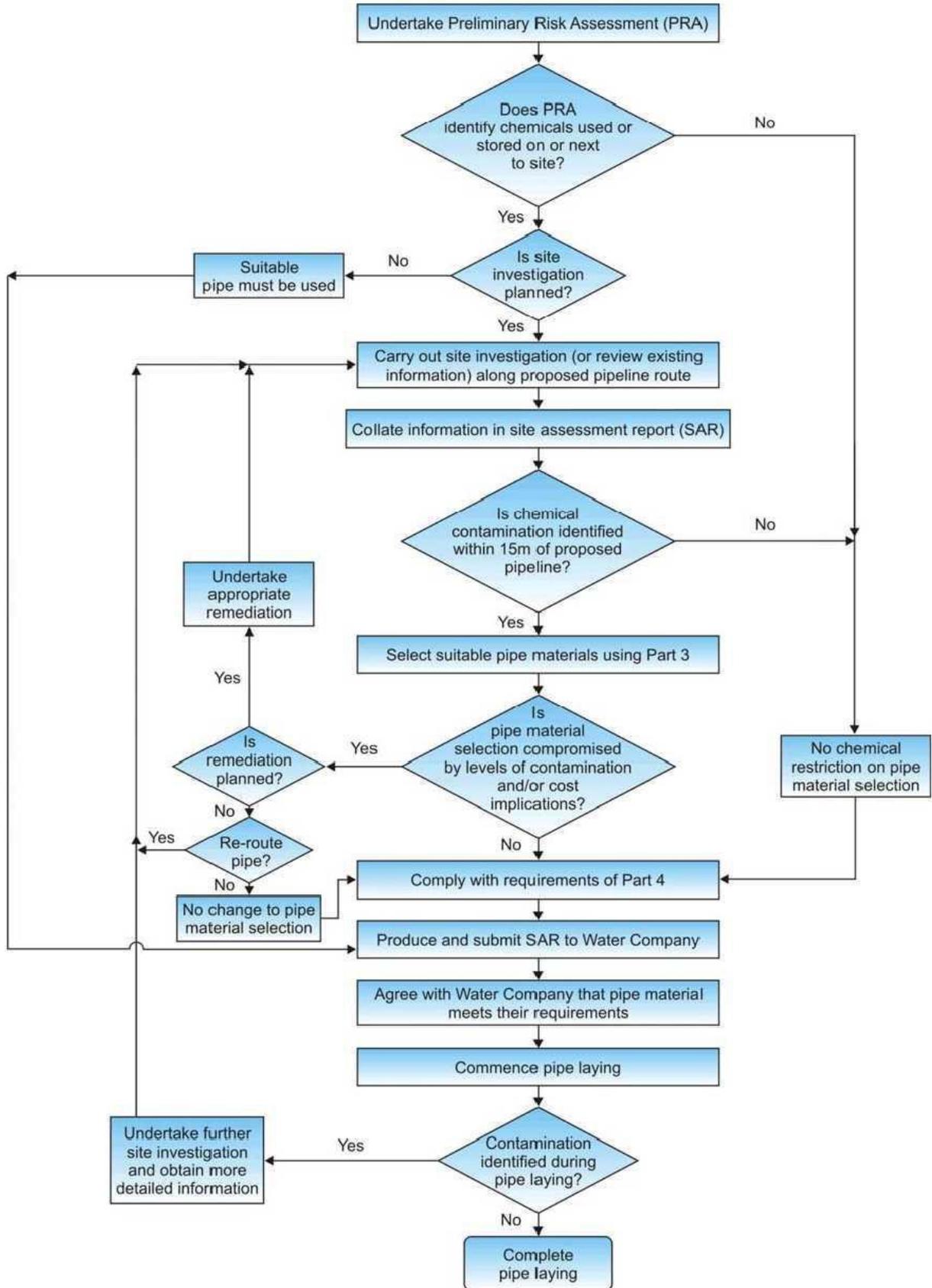
		attached to the service pipe using plastic cable ties at not more than 1 metre intervals. The wire is to be minimum 1.5 square millimetres blue plastic coated wire to BS 6491X standard. The wire shall be taken into the property and clamped to the service pipe above the stop tap, and shall terminate above the main to which the service is connected. It shall be joined to the trace wire within the marker tape laid with the main."
3.7.4.6		<i>Delete 3.7.4.6 and insert new 3.7.4.6: "When a service is connected to a PE main using an electrofusion tapping saddle, the service pipe shall be connected to the tapping saddle and both shall be pressure tested prior to tapping the main by pumping up to 10 bar water pressure and holding for two minutes whilst a visual inspection of all joints is carried out.</i>  <i>All other joints shall be visibly inspected for leaks by applying mains pressure to the service pipe.</i>  <i>All leaks shall be repaired and re-tested before excavations are reinstated."</i>
3.7.4.7		<i>"Delete 3.7.4.7 and insert new 3.7.4.7: "The disinfection of services should be as per the extracts from the company's Procedure on the Disinfection of Mains, Services and Fittings which is available at <a href="http://www.bristolwater.co.uk">www.bristolwater.co.uk</a>.</i>
3.7.5	Data Capture/'As-laid' Drawings	
3.7.5.12		<i>Delete: "on completion of the scheme", and insert: "before any section of self laid main is connected."</i>  <i>After: "date of completion of scheme", insert: "or phase".</i>
<b>Appendix 5 - SPECIFICATION FOR FIRE HYDRANT INSTALLATIONS</b>		
1.		<i>Delete 1, insert new 1: "Loose jumper fire hydrants are to be installed."</i>
3.		<i>Delete 3, insert new 3: "The outlet flange of the hydrant must not exceed 300 mm or be less than 150 mm below the finished surface level."</i>
5.		<i>Delete: "gun-metal or".</i>
<b>Appendix 6 – MINIMUM NOTIFICATION PERIODS</b>		
Stage: Request to Water Co to connect new main		<i>Under: 'Information Required', Delete: "Copy of test results".</i>

	<i>Insert: "Copy of satisfactory pressure test results." Add: "- Confirmation that water sample has passed water quality testing."</i>
Stage: Notification of service connection	<i>Under: 'Information Required', add: "Payment of fees and charges."</i>
<b>Appendix 7 – OFWAT LEVELS OF SERVICE</b>	
Service Level 7	<i>Under: 'Required Levels of Service' insert "and payment for the work" after "self-lay agreement".</i>
Service Level 7a	<i>Under: 'Working Days', delete: "2", and insert: "3".</i>
<b>Appendix 8 – STANDARD DRAWINGS</b>	
Fire hydrant	<i>Delete dimensions: "250-300 mm" and insert: "150-300 mm".  Delete "Double flanged pipe", and insert: "Pipped stub flange (cut to suit) with electrofusion reducer/coupler as required".  Delete: "Appropriate coupling".  Delete: "Flanged connection to suit pipeline" and insert: "Electrofusion tee".</i>
Sluice valve chamber	<i>Delete: "Concrete wall sections" and insert: "Plastic wall sections".  Delete: "Concrete base unit" and insert: "Plastic base unit".  Delete: "200 mm minimum" and insert: "150 mm minimum".</i>
Backfill and bedding	<i>Delete from both sections "Track" and insert: "Trench".</i>
<b>Section 2 – All references from the National Addendum</b>	
<b>2</b>	<b>Competence of Self-Lay Organisations</b>
<b>2.5</b>	<i>Delete the 3<sup>rd</sup> and 4<sup>th</sup> bullet points and replace them with: "Notify the water company that the connection has either been completed or aborted, within 24 hours by completing and submitting the Notification of Completed/Aborted Mains Connection form available at <a href="http://www.bristolwater.co.uk">www.bristolwater.co.uk</a>"</i>
<b>3</b>	<b>Self-Lay Procedures</b>
<b>3.1</b>	<b>The Procedure</b>

3.1.2		<i>Delete 3.1.2 and insert new 3.1.2: "Notification of Routine Mains Connection forms, available at <a href="http://www.bristolwater.co.uk">www.bristolwater.co.uk</a>, should be submitted to Bristol Water who will then authorise the making of routine mains connections."</i>
3.2	Design and Application	
3.2.5		<i>Delete 3.2.5 and insert new 3.2.5: "SLOs should notify the company of the start date for mainlaying by submitting the Commencement of Mainlaying form available at <a href="http://www.bristolwater.co.uk">www.bristolwater.co.uk</a>".</i>
3.2.6		<i>Delete 3.2.6, 3.2.7 and 3.2.8 and insert new 3.2.6: "SLOs should notify the company of their intention to make routine mains connections on a site at the application stage. SLOs should then submit the Notification of Routine Mains Connection form available at <a href="http://www.bristolwater.co.uk">www.bristolwater.co.uk</a> 10 working days in advance of the proposed connection date. Bristol Water will confirm that the connection can proceed, in principal, within 3 working days and then give final authorisation to proceed with a routine mains connection once satisfactory bacteriological sample test results become available."</i>
3.2.9		<i>Delete 3.2.9 and insert new 3.2.9: "SLOs should notify the water company that the connection has either been completed or aborted, within 24 hours by completing and submitting the Notification of Completed/Aborted Mains Connection form available at <a href="http://www.bristolwater.co.uk">www.bristolwater.co.uk</a></i>
Figure 1		<i>Under "Water Company" replace "2 working days" with "3 working days"</i>
<b>APPENDIX 1 – SELF LAY ROUTINE INLINE MAINS CONNECTION NOTIFICATION FORM</b>		
Entire appendix	<i>Delete</i>	
<b>APPENDIX 2 – INSTRUCTIONS FOR COMPLETING SELF LAY ROUTINE INLINE MAINS CONNECTION NOTIFICATION FORM</b>		
Entire appendix	<i>Delete</i>	

APPENDIX A

Process for Determining Pipe Material (Amended from Fig. 1.1 of the UKWIR Guidance)



Please note that Bristol Water’s requirement in relation to the required clearance for actual or prospective sources of contamination differs from the figure above. We require a radius of 30 metres, not 15 metres.