

Company specific addendum

Self-laying of Water Mains and Services

**– A Code of Practice for England and Wales
(Edition 3.1 – May 2017)**

July 2017

Version 1.1



Foreword

This addendum is provided for the self-laying of water mains and services in the two regions supplied by South Staffs Water (the Company).

It supplements and should be read in conjunction with the WaterUK's Self-Laying of Water Mains and Services, A Code of Practice for England & Wales, Edition 3.1 May 2017, available to download from the WaterUK website <https://www.water.org.uk/developer-services/self-lay-code-practice>

The Code of Practice (CoP) recognises situations where local practice exists that cannot be rationalised into a single requirement for England and Wales.

This addendum sets out South Staffs Water's preferred option in all such cases and includes the technical requirements, standards and practices required to achieve compliance with the Company's policies and procedures.

This ensures consistency between the activities of third party contractors and the Company's own contractors operating in the South Staffs and Cambridge regions.

The Company will from time to time need to amend this addendum following reviews of its procedures and natural advances in processes.

To ensure compliance you should always make sure you are working with the current version of this document which is available to download from www.south-staffs-water.co.uk or www.cambridge-water.co.uk

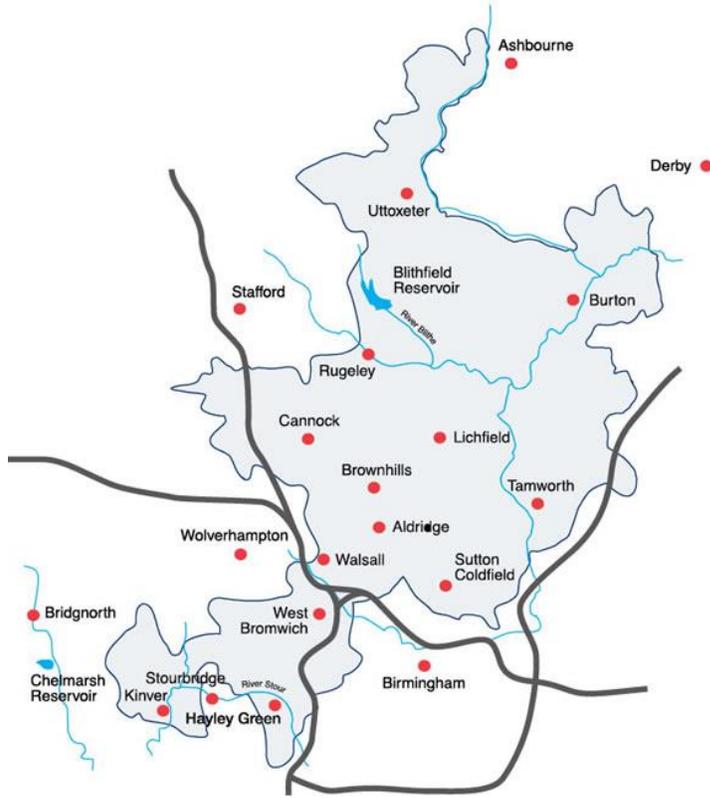
This addendum came into effect on 1 July 2017 and supersedes any earlier self-lay addendum.

The Company reserves the right to change this addendum at any time by posting updated versions on the Company's websites.

Developers and SLPs are responsible for reviewing information posted on our websites to obtain timely notice of such changes.

South Staffs Water area of supply

South Staffs region



Cambridge region



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Introduction

When laying water mains to new developments in the South Staffs or Cambridge regions, developers have two choices:

- Ask the company to install the main(s), process known as requisitioning or
- Appoint an agent, often referred to a SLP (self-lay organisation) to carry out the work on their behalf in accordance with the self-lay Code of Practice (CoP) and this addendum.

SLP's intending to operate within the Company's regions are required to be accredited under the Water Industry Registration Scheme (WIRS). The scheme is operated by Lloyd's Register and is supported by the water industry to enable SLP's a consistent route of accreditation. Details of the WIRS scheme and the relevant application forms are available on the Lloyd's Register website:

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

The Company will enter into an agreement with the developer or a SLP. Where a SLP is acting on behalf of a developer, the Company requires a letter of authorisation. The letter must outline the agreement and be jointly signed by the SLP and the developer for the works required.

The Company is committed to providing a cost-effective service for the self-lay of mains and services to developers and SLPs, while ensuring that standards of installation work and water quality are not compromised.

Responsibility for the integrity and quality of the water supply network remains with the water company; therefore, only upon satisfactory completion of works will the Company adopt the water mains and communication pipes (including meter installation) laid by the developer or SLP.

Developer Services
South Staffs Water
Green Lane
Walsall
WS2 7PD

Telephone: 0845 345 1399
developerservices@south-staffs-water.co.uk

Developer Services
Cambridge Water
90 Fulbourn Road
Cambridge
CB1 9JN

Telephone: 01223 403115
networkdevelopment@cambridge-water.co.uk

PART 1 – GENERAL

Clause in the WaterUK Code of Practice	Subject	Additional Company Specification
1.6	Protection of water quality	<p>In addition to 1.6 (1-9) the Company determines all water mains and service laying as restricted operations. As such all employees undertaking such works for a developer/SLP must:</p> <ul style="list-style-type: none"> a) Be medically screened through the National Water Hygiene Scheme; shall be registered with Energy & Utility Skills, and shall carry a valid Hygiene Card. A photocopy of both sides of the Hygiene Card should be sent in advance to the Company for all employees engaged on the works. b) For audit purposes Hygiene Cards shall be carried at all times by employees undertaking such works and shall be presented to South Staffs Water or Drinking Water Inspectorate (DWI) representatives on demand. Failure to do so will result in an operative being suspended from working on restricted works until a valid card is available for inspection. <p>The developer/SLP should, when ready, request an inspection for each new service connection.</p> <p>The Company will only grant consent for the service connection once it is satisfied the installation meets the requirements of the Water Fittings Regulations. This will normally involve a Company representative carrying out a physical trench inspection on site. The developer/SLP must request an inspection via Developer Services on the number provided above. In Cambridge region via the underground regulation request slip included with scheme paperwork pack. The Company will undertake the inspection within five working days of request.</p> <p>The Company will notify the Developer/SLP of the result of the inspection.</p> <p>Following a compliant inspection in the Cambridge region, a job card (See standard form SLP5 Appendix 6) will be issued to the developer/SLP.</p> <p>When the connection has been carried out the developer/SLP must inform Developer Services within 48 hours of the connection. In Cambridge region this is via the completed job card (SLP5).</p>

Clause in the WaterUK Code of Practice	Subject	Additional Company Specification
1.11	Finances	<p>For details of the Company's charges for non-contestable work as defined in the see appendix 2.</p> <p>The asset valuation together with the self-lay offer will be provided upon completion of the relevant application form and supporting information.</p> <p>At vesting the Company will pay the developer/SLP the appropriate asset value upon receipt of an invoice.</p> <p>The asset payment amount will be the asset value total less the non-contestable costs as detailed on the non-contestable costs template.</p>

PART 2 – SELF-LAY PROCEDURES

Clause in the WaterUK Code of Practice	Subject	Additional Company Specification
2.4	Design and Application	<p>Additional Information required to that stated in the CoP if the Company is to carry out the design:</p> <ul style="list-style-type: none"> • A site location plan of 1:500 or 1:1250 scale • A geo-referenced AutoCAD (2007) Site Layout Plan • South Staffs region: Postal addresses for plots to be connected when the service connections are made. • Written authorisation that the SLP is acting as an agent on behalf of the Developer. • Confirmation of to whom the asset value payment is to be made, SLP or Developer.
2.6	Notification of Start	<p>19. A SLP working in South Staffs region should provide daily whereabouts/programme of works to enable the asset information unit (AIU) to visit site at the appropriate time to capture as built information (see also 3.7.5(13)) below.</p> <p>20. The contact details of site manager/agent</p>

Clause in the WaterUK Code of Practice	Subject	Additional Company Specification
2.6	Final Connection - Commissioning	<p>6. The following is the commissioning procedure to be followed prior to any new mainlaying asset being connected to the Undertakers network.</p> <p>Introduction</p> <p>The Company has a duty, under the Water Industry Act 1991, to provide its customers with wholesome water. Drinking water quality in England and Wales is regulated by the Drinking Water Inspectorate, which checks that water companies supply water that is safe to drink and meets the standards of the Water Quality Regulations.</p> <p>The quality of water supplied by the Company is among the highest in the country and the following commissioning procedure is based on the fundamental principle that no customer, new or existing, should be put at risk of receiving water of doubtful quality as a result of the actions of a developer/SLP:</p> <ol style="list-style-type: none"> 1 After installation of the new main the developer/SLP will need to undertake a pressure test, informing the Company five working days in advance of the test. The Company may witness the pressure test, and will require copies of the results. 2 At no time should the next stage of the commissioning process proceed until written confirmation of a satisfactory pressure test result has been confirmed in writing. 3 Swabbing of the new main should be carried out in accordance with the provisions of this document. A Company representative will witness the operation and a written acceptance will be issued following satisfactory completion. You may be required to carry out the swabbing operation more than once if, for example, the main is considered by the Company representative to be excessively dirty. 4 After the swabbing operation has been satisfactorily completed the main shall be disinfected in accordance with the provisions of this document. 5 The developer/SLP's attention is drawn particularly to the precautions that should be taken to neutralise any chlorinated water prior to its discharge into watercourses, or onto farmland. 6 Water sampling and quality testing of newly installed mains is non-contestable work, and shall be undertaken by the Company (although the developer/SLP has the right to take check samples and have them analysed independently). 7 All Company water samples are analysed by an independent laboratory, where they are tested for bacteriological purity and for taste, odour, appearance and turbidity. As the bacteriological test relies on observing the growth of colonies of micro-organisms on a culture medium, a conclusive result cannot be obtained in less than 72 hours from delivery of the sample to the laboratory. 8 As the organisms recognised as being most likely to cause waterborne diseases are difficult to isolate water samples will be tested for the presence of "indicator" organisms, namely Escherichia coli (commonly referred to as E. coli), together with other coliforms. These organisms in themselves do not cause disease, but their presence in a water sample denotes that harmful pathogens may be present, and that the water is therefore potentially hazardous to health.

		<p>9 If it is found the sample has failed to meet the required standards in any respect then the developer/SLP may need to repeat the whole disinfection and sampling process (depending on the nature of the failure) until a satisfactory sample result is obtained.</p>
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Clause in the WaterUK Code of Practice	Subject	Additional Company Specification
		<p>10 At the end of the test the laboratory will report the results to the Company's water quality manager. The Company will confirm that each parameter (i.e. bacteriological purity, taste, odour, appearance and turbidity) not only complies with the standards laid down in the Water Quality Regulations but is also consistent with the quality of water normally supplied to that particular Water Quality Zone by the Company.</p> <p>11 Subject to receiving satisfactory sample results from the laboratory, the Company will connect the new main into its existing network within 14 calendar days. This action completes the commissioning process, and enables the service connections to proceed, subject to water fittings regulation compliance.</p>
2.8	Service Pipe Installation	<p>The Company's preferred option is for meters to be installed externally at or near to the property boundary.</p> <p>Meters (including those in flats and apartments) can also be installed with prior agreement, at the following locations:</p> <ul style="list-style-type: none"> • Wall mounted meter boxes • A bulk meter (boosted supplies) • Individual internal meters in communal riser cupboards <p>When requested, the Company will inspect the service pipe installation; if satisfactory it will inform the developer/SLP the service connection has passed inspection. The developer/SLP can then complete the connection and inform the Company within 48 hours.</p> <p>If the supply pipe inspection fails, the developer/SLP must undertake the required measures before requesting a re-inspection. The Company reserves the right to charge for this re-inspection in line with its current Miscellaneous Charging Scheme. Connections cannot be completed until a satisfactory re-inspection has been confirmed.</p> <p>Meter boxes</p> <p>The Company's policy for metering new properties is via an underground combined meter/stop tap boundary box located at the property boundary.</p> <p>Boundary boxes should comply with the Company specification (see Appendix 5).</p> <p>Boxes must be suitable for the installation of the Company's water meter and should be installed in accordance with the manufacturer's instructions and no deeper than 750mm to finished ground level.</p> <p>In the Cambridge region when the meters are to be installed by the Company all meter boxes must be fitted with a trickle flow plug.</p>

Clause in the WaterUK Code of Practice	Subject	Additional Company Specification
		<p>Connection to water distribution system and meters</p> <p>The Company's reserves the right to undertake inspections on site to confirm compliance with all agreed aspects of the self-lay project.</p> <p>The Company will charge for the meter and may elect to install the meter. Meter installation responsibility shall be confirmed at application stage.</p> <p>Where the developer/SLP installs the meter the company will issue the meter and meter installation notification form at the time of the supply pipe inspection is passed or the self-certification certificate has been received.</p> <p>The developer/SLP must provide the Company with all meter details including the occupier address(es), the meter location and initial meter readings within 48 hours of installation.</p>

PART 3 – DESIGN AND CONSTRUCTION GUIDE

Clause in the WaterUK Code of Practice	Subject	Additional Company Specification
3.5.1	Mains design	<p>(1) The Company wherever possible requires 3m clearance between the line of mains and structures</p> <p>(4) Unless ground conditions dictate otherwise, or the Company specifically instructs, its policy is to install an all welded plastic MDPE/HPPE system for mainlaying and servicelaying works.</p> <p>(7) Notify the Company immediately if the original design layout cannot be constructed, discuss and agree an acceptable variation to the design</p>
3.5.2	Depth of Cover	Water mains should be laid with a minimum of 900mm of cover from final reinstated level to the crown of the pipe for mains up to and including 200mm diameter. Pipes of larger diameter will be laid with 1000mm of cover from final reinstated level to crown of pipe.
3.6.1 - 3	Service Design -	For non-household connections the Company requires that a double check valve is installed in the service pipe as close as is practical to the boundary of the site or at the point of entry.
3.7.1	General	<p>(11) Written approval to deviate from the approved design will be required.</p> <p>(12) The positioning of mains with respect to other services should be in accordance with the latest version of the NJUG guidance. Any deviation from that guidance should be agreed with the Company.</p>
3.7.2	Ground Contamination during construction	3. Any costs associated with the removal of excess or contaminated ground from the development if appropriate should be borne by the Developer/SLP and not the company.
3.7.4	Service Connections to the Water Distribution System	The Company will permit the service connection to be made once the underground regulation inspection has been carried out and passed.
3.7.5	Data Capture/"As-laid" Drawings	<p>(13) In the South Staffs region, the Company's Asset Information Unit (AIU) should be contacted prior to backfilling to enable them to capture the as laid information to enable accurate as-laid records to be prepared. Details shall be agreed at the pre-commencement meeting.</p> <p>(14) In the Cambridge region details of how as-laid records will be captured will be agreed at the pre-commencement meeting.</p>

CIVIL ENGINEERING SPECIFICATION

The Company's specification clauses in addition to or instead of CESWI 7th Edition clauses

CESWI Clause	Subject	Additional Company Specification
2.1	Materials in Contact with Potable Water	<p>As soon as possible after the Agreement exists, the developer/SLP shall submit to the Company's representative for approval a list of proposed supplies and sources of materials required for the execution of the mainlaying and servicelaying works.</p> <p>When requested by the Company's representative, samples shall be provided for approval. Such samples shall be taken in accordance with the appropriate British Standard where applicable.</p> <p>The materials subsequently supplied shall conform to the quality of samples, which have been approved by the Company's representative.</p> <p>The developer/SLP may submit the names of additional and/or alternative sources during the execution of the Agreement, but no source of supply shall be changed without the Company's approval.</p> <p>In addition to the CESWI and CoP materials specification the Company's preferred materials specification is detailed below. The developer/SLP must submit a schedule of all products and substances that it proposes to use for the works, for the Company to approve. Where these items are as listed below, this should be clearly indicated on the schedule. For all other items, the developer/SLP shall provide associated supporting documentation to confirm approval by the Secretary of State under Regulation 31 of the Water Supply (Water Quality) Regulations 1999, or listed in WRAS-WFMD as appropriate. This shall include certificates of compliance for substances or products specified to British or European standards.</p> <p>Pipes for potable water use (Ductile Iron, MDPE/HPPE) shall be delivered to site and stored on timber or an appropriate alternative, with end caps to prevent contamination of the pipes by debris or vermin. Pipes and fittings shall be adequately protected from contamination at all times. Large fittings shall be stored on pallets. Pipes and fittings shall be stored in a secure, clean area away from the working area, until they are required for installation.</p>

CESWI Clause	Subject	Additional Company Specification
2.36	Ductile iron pipes and fittings	<p>The installation of ductile iron pipes shall be laid according to 'Induct Plus' incorporating pipeline installation instructions developed by Biwater Pipes in conjunction with the WRc.</p> <p>Flanged pipes and fittings shall be drilled to NP 16.</p> <p>Potable water pipes shall have a cement mortar lining with a sealing coat as required to ensure full compliance with DWI Regulation 31 (1a). Fittings shall have a lining to ensure compliance with DWI Regulation 31 (1b).</p> <p>Joint (including bolted gland and flanged) protection system and materials shall be agreed with the Company prior to commencing on site.</p> <p>The ONLY lubricant approved for use on spigot and socket joints is Medlube. NO OTHER lubricant shall be allowed.</p>
2.49	Gaskets for flanged joints	(1) Gaskets for flanged pipe joints shall be full face type.
2.61	Hydrants and surface boxes for hydrants	<p>The order information for fire hydrants as required by BS 750 shall be as follows:</p> <ul style="list-style-type: none"> i) Unless stated otherwise by the Company's representative hydrants shall be the screw-down type (Type 2). ii) Spindle seal shall be double toroidal sealing ring (O-ring) type. Seals shall be capable of being replaced with the valve under pressure. iii) Screwed outlet to be of copper alloy. iv) A blank drain plug shall be provided on the outlet side. v) Hydrants shall be fitted with loose valves unless specified otherwise. vi) Direction of closure shall be clockwise. vii) Bolting, other than valve to piping, shall be as clause 2.78. All non-stainless steel components shall be coated to WIS 4-52-03.
2.76	Marker Posts And Marker Tape	<p>(1) In Cambridge region all mains shall have a marker/tracing tape, of the "Plyage HR20D" type, or similar approved, installed at a depth of 300mm above the crown of the pipe. Joints between successive rolls of tape should be made by removing the insulation from the tracing wires and using a mechanical connector, not twisted. The ends of the marker tape shall terminate to be visible and accessible within any sluice valve, hydrant, or air valve chamber built along the line of the main.</p> <p>(4) Marker posts must conform to the Company specification for each region. Confirmation of requirements must be obtained from the Company's representative.</p>
2.78	Mechanical Couplings for Pipelines and Fittings	(6) Mechanical couplings and fittings in the range up to 63mm for pipelines must comply with the Water Fittings Regulations 1999.

CESWI Clause	Subject	Additional Company Specification
2.97	Polyethylene Pipes And Fittings	<p>The installation of PE pipework shall be by Butt Fusion or Electro-fusion welding in accordance with IGN 4-32-08 (formerly WIS 4-32-08), using fully automatic controller equipment. The installer shall provide evidence that the equipment has been serviced and calibrated within the previous 12 months before work is carried out.</p> <p>PE-Aluminum-PE (Barrier) pipe for use in contaminated ground is available the proposed system subject to approval by the Company. Fittings and jointing methods shall be agreed for each specific site. It is VITAL that fittings used are compatible with the barrier pipe system proposed.</p> <p>Polyethylene pressure pipe systems shall comply with the relevant provisions of the UK Water Industry WIS 4-32-17. Pipes shall be blue for cold water below ground, PE80 SDR 11 and PE100 rated SDR 17. Where composite pipes are used they shall be blue coloured with four continuous brown co-extruded stripes at quarter points.</p> <p>Mechanical jointing for polyethylene pipes shall comply with WIS 4-24-01 Type 1 end load performance, or WIS 4-32-11.</p> <p>Electro-fusion fittings shall comply with WIS 4-32-14.</p>
2.124	Surface boxes for valves	<p>11. Sectional detail drawings for typical sluice valve, air valve chambers and washouts are contained in Appendix 5 to this addendum.</p>

CESWI Clause	Subject	Additional Company Specification																		
2.130	Valves and Penstocks	<p>5. Wedge gate (sluice) valves shall comply with BS 5163 unless otherwise stated in the Agreement.</p> <p>i) Valves shall be Type B.</p> <p>ii) The pressure rating shall be PN16 unless stated otherwise in the Agreement</p> <p>iii) For potable water applications, gates shall be resilient faced up to 300mm diameter and metal seated above 300mm diameter. Gates shall be cast iron to BS EN 1561 EN-GJL-250 min or ductile iron to BS EN 1563 EN-GJS-450-10 min.</p> <p>For resilient faced gate valves, the gate shall be entirely encapsulated with rubber to BS 681 Part 1: Type WA. Nitrile/EPDM with a minimum 3mm of rubber in the seating area. For metal-seated gates both the body and the gate rings shall be gunmetal to BS 1400 LG2 and components shall be designed to provide adequate seating performance before and after wear of the seating surfaces.</p> <p>iv) The body and bonnet shall be cast iron to BS EN 1561 EN-GJL-250 min or ductile iron to BS EN 1563 EN-GJS-450-10 min.</p> <p>v) Valve stems shall be threaded sufficiently to allow the gate to be raised clear of the nominal bore of the valve. Stem sealing shall be as detailed within the following table:</p> <table border="1" data-bbox="407 653 1451 768"> <thead> <tr> <th>Diameter (mm)</th> <th>Actuator or Gearbox Fitted</th> <th>No Actuator or Gearbox</th> </tr> </thead> <tbody> <tr> <td>50 – 150 inc</td> <td>0 – seal</td> <td>0 – seal</td> </tr> <tr> <td>200 – 300 inc</td> <td>Packed Gland</td> <td>0 – seal</td> </tr> <tr> <td>350 and above</td> <td>Packed Gland</td> <td>Packed Gland</td> </tr> </tbody> </table> <p>[0 – seal = Double toroidal sealing ring to BS 2494 Type W]</p> <p>Means shall be provided for resealing the stem under working conditions.</p> <p>vi) Valves shall be designed to pass potable water.</p> <p>vii) Valve caps shall be of ductile iron secured by a hexagon headed bolt or cap screw passing vertically through the cap onto the end of the spindle.</p> <p>Unless stated otherwise in the Agreement bypasses or gearboxes are not required.</p> <p>viii) Direction of closure shall be clockwise in South Staffs Water region and anticlockwise in the Cambridge region.</p> <p>ix) An arrow cast on the upper face of the gland or stem seal housing shall indicate the direction of closing.</p> <p>x) Unless indicated otherwise on the contract drawings valves will be used in the closed end application.</p> <p>xi) For valves fitted with a gearbox, the assembly shall incorporate a visual indicator of valve position.</p> <p>6. Non-return valves shall comply with BS 5153 unless otherwise stated in the Agreement and shall be as follows:</p> <p>i) Nominal pressure shall be 16 bar (PN16).</p> <p>ii) Valve to be swing type resilient seated.</p> <p>iii) Body ends to be flanged to BS 4504 PN16.</p> <p>7. Butterfly valves shall comply with BS EN 593 and shall be as follows unless otherwise stated in the Agreement:</p> <p>i) The valve shall be designed for a low leakage rate.</p> <p>ii) The nominal pressure rating of the valve shall be 16 bar (PN16)</p> <p>iii) Valves shall be flanged to BS 4504 PN16.</p> <p>iv) The body ends of wafer valves shall be designed to fit between flanges to BS 4504 PN16.</p> <p>v) The valve shall be designed to accept flow in either direction.</p> <p>vi) Valves shall be fitted with replaceable resilient seats to BS 681 Part 1: Type WA.</p> <p>vii) The valve body shall be ductile iron to BS EN 1563 EN-GJS-500-7 min. The disk shall be the offset type ductile iron to BS EN 1563 EN-GJS-450-10 min. Valve shafts; taper pins, clamping rings and all internal fittings shall be stainless steel.</p> <p>viii) Direction of closure shall be anticlockwise. An arrow cast on the upper face of the gland or stem seal housing shall indicate the direction of closing.</p> <p>8. Valves shall be coated in accordance with WIS No 4-52-01 -Class A internally and Class B externally. However, for the valves listed in the following table, a liquid applied, two-pack epoxy system is an acceptable alternative:</p> <table border="1" data-bbox="407 1818 1190 1902"> <thead> <tr> <th>Valve Type</th> <th>Diameter (mm)</th> </tr> </thead> <tbody> <tr> <td>Gate</td> <td>>300</td> </tr> <tr> <td>Non-Return</td> <td>>250</td> </tr> </tbody> </table>	Diameter (mm)	Actuator or Gearbox Fitted	No Actuator or Gearbox	50 – 150 inc	0 – seal	0 – seal	200 – 300 inc	Packed Gland	0 – seal	350 and above	Packed Gland	Packed Gland	Valve Type	Diameter (mm)	Gate	>300	Non-Return	>250
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CESWI Clause	Subject	Additional Company Specification
2.130	Air Valves	<p>1. Air valves shall be:</p> <ul style="list-style-type: none"> i) NP16 pressure rated ii) Suitable for use with potable water iii) Coated in accordance with WIS No. 4-52-01 <p>2. Single air valves shall have:</p> <ul style="list-style-type: none"> i) Inlet diameter of 25mm ii) Ball size of 100mm iii) Isolation stop tap iv) 80mm flange <p>3. Double air valves for the release from or admission of air to pipelines shall have:</p> <ul style="list-style-type: none"> i) 80mm nominal inlet diameter ii) Isolating butterfly or bevel-gear valve, anticlockwise closing.
2.130	Wash outs	Where a main ends and is not connected to another main, a washout hydrant to Specification BS750 must be installed to allow flushing of the mains system (see 2.61 above for full Specification)
2.134	Water	Where potable mains water is not available the developer/SLP should contact the Company to discuss alternative methods of providing water during construction. This will vary depending on the circumstances.
5.8	Welded joints in PE pipes	<p>4. External bead should be removed from Butt Fusion joints, labeled and identified with the specific joint record and kept for inspection by the Company.</p> <p>5. Scraping of pipe ends in preparation for Electro-fusion shall be carried out using specially designed mechanical scrapers.</p> <p>6. A shelter must be used in all circumstances for Butt or Electro-fusion jointing.</p>
7	Testing (general)	<p>Testing shall not be permitted against closed valves or air valves.</p> <p>A temporary duck foot bend shall be fixed at the inlet side of any main to be tested, together with a blank plate drilled and tapped an appropriate size with a controlling gate valve or stop tap and a non-return valve.</p> <p>In the South Staffs region mains shall be tested and chlorinated in accordance with the Company Policy and Procedure document 904 (introduction of new mains)</p>
7.2	Precautions Prior to Pressure Testing Pipelines	<p>Delete sub-clause 1 and substitute:</p> <p>4. All pipelines shall be laid, tested, swabbed, and disinfected in isolation from the existing commissioned mains.</p> <p>5. The official pressure tests will be carried out in the presence of the Company's representative. Before the Company's representative is requested to attend, the developer/SLP shall carry out its own test to ascertain as far as is possible that the main will pass the test.</p> <p>6. Notwithstanding the results of the leakage test, any visible leaks shall be subject to repair.</p> <p>7. Note: Swab passes used to expel air will NOT be classed as part of the cleansing operation.</p> <p>8. Pressure gauges shall be 300mm diameter calibrated in meters head of water. Before any gauge is used the developer/SLP shall arrange for it to be checked independently and a dated certificate of its current accuracy shall be delivered to the Company representative.</p> <p>9. An additional 1" BSP tapping with isolating stop tap shall be provided for the Company to connect its data logger.</p>

CESWI Clause	Subject	Additional Company Specification
7.3	Testing method Programme and Notification	<p>Delete sub-clause 2 and substitute:</p> <p>2. At least five working days before any testing of the main, the developer/SLP shall submit to the Company representative in writing its proposed program of testing and swabbing.</p>
7.9	Testing of Ductile Iron Pressure Pipelines	<p>6. Pipelines in ductile iron:</p> <p>a) The developer/SLP will be permitted to choose the lengths of main it wishes to test up to a maximum of 500m unless otherwise agreed, subject to the approval the Company's representative. The SLP/Developer shall provide all temporary materials required for carrying out strength and leakage tests in accordance with this specification.</p> <p>7. The tests detailed below shall be applied:</p> <p>a) Strength test: Each section of the main shall be filled SLPwly with potable water and left to stabilise for a period of time (minimum two hours, but preferably overnight) under normal working pressures. The pressure in the section shall then be increased at a steady and gradual rate until a strength test pressure is achieved, equal to 1.5 x working pressure, at the lowest part of the section. The section shall then be subjected to the strength test pressure quoted that shall be maintained by pumping, if necessary, for a period of two hours. Should any movement of the main or its support occur, or if any appreciable leakage takes place, the test shall be immediately abandoned and repeated after the defects have been made good.</p> <p>b) Pressure test: After successful completion of the strength test the pump shall be disconnected. No further water shall then be permitted to enter the main for a period of one hour. The pressure will be recorded on a pressure recorder (data logger) provided by the Company and the developer/SLP shall provide assistance and fittings as necessary to connect the recorder. A 1" BSP valved connection will be required. If, at the expiration of the one hour period the pressure in the section has dropped, the original pressure shall be restored by pumping and the loss measured by drawing off water from the main until the end of test pressure is again reached. This "make-up" water shall be accurately measured by drawing it off into a calibrated container, until the pressure gauge reads the same value as at the end of the test.</p> <p>The test will be considered satisfactory if:</p> <p>(i) There has been no drop in pressure, or</p> <p>(ii) The measured quantity of "make-up" water (Q) does not exceed two litres per meter of nominal bore per kilometer length of pipe per metre head of pressure per 24 hours.</p>

CESWI Clause	Subject	Additional Company Specification
7.9	Testing of Ductile Iron Pressure Pipelines (contd.)	<p>Maximum allowable Q (l) = 2 x diam (m) x length (km) x head (m) per 24 hours.</p> <p>The quantity of “make-up” water is intended to compensate for expansion and movement of the pipes and joints under pressure and for the entrapment of small quantities of air: It should not be considered as an allowance for leakage. If at any stage during the pressure test an unacceptable leak is revealed the developer/SLP shall make good the defect and carry out a further test or tests.</p> <p>During the pressure test, any visible leaks whatsoever on the permanent pipework will render the test void.</p>
7.10	Testing of Polyethylene Pressure Pipelines	<p>3. Polyethylene mains shall be tested to a minimum of 10 bar with a minimum pump up time of 10 minutes</p> <p>4. Service connections onto Polyethylene mains shall be tested to up to 18 bar for two minutes, applied to the ferrule tee in order to test the saddle and service pipe up to the boundary box/stop tap. This shall be done prior to cutting the ferrule into the main.</p> <p>Care must be taken to ensure that test pressures shall not be applied to existing service pipes.</p>
7.11	Disinfection of Water Mains	<p>Delete sub-clause 1 & 2 and substitute:</p> <p>1. The developer/SLP shall supply swabs of nominal diameter 50mm greater than that of the pipeline. In the South Staffs region two swabs, one coarse (hard) and one fine (soft) textured shall be passed simultaneously through each section of main to be swabbed.</p> <p>In the Cambridge region two swab runs will be required with the same grade swab.</p> <p>2. All swabbing works shall be carried out in the presence of a Company representative. If the Company’s representative considers that further passes are necessary owing to the main having been left excessively dirty then the developer/SLP shall, at their expense, arrange for further cleansing to be carried out. The developer/SLP shall also pay the costs of the Company’s supervisory employees and for the additional quantity of water required.</p>

CESWI Clause	Subject	Additional Company Specification
7.11	Disinfection of Water Mains	<p>5. After swabbing, the developer/SLP shall disinfect the main in accordance with the publication Principles of Water Supply Hygiene Document – and associated Technical Guidance Notes issued by Water UK, by charging it with water containing 20mg/l of free chlorine for a period of 24 hours before being displaced by mains water. After a further 24 hours, the Company will take samples and send them to its laboratory for testing for bacteriological purity and for taste and odour. The developer/SLP will be required to provide hoses to tie over from the existing main and the new main at the time of the sample. This process will require a minimum 72 hour gestation period. Should any result prove unsatisfactory the whole procedure shall be repeated as often as is necessary until satisfactory samples are obtained, all at the expense of the developer/SLP.</p> <p>6. The Company will make connections onto existing mains as soon as practicable after the satisfactory completion of the disinfection process.</p>
7.16	Water for Testing, Swabbing and Disinfection	<p>Delete sub-clause 1 and substitute:</p> <ol style="list-style-type: none"> 1. Water for testing the main will be supplied free by the Company for the initial test of each length of main, but should this fail, the cost of water for any subsequent test and loss through leakage will be charged to the developer/SLP at the standard charge rate prevailing at the time. 2. Water will be supplied from existing mains only. The developer/SLP shall allow for temporary pipework bringing water to the works. 3. Control valves on existing water supply mains shall only be operated by the Company's representative after a minimum period of 48 hours' notice to the Company of the requirement for a water supply. 4. Water shall be obtained from the Company's water mains through temporary hoses specifically used for the purpose. The hoses, which shall be provided by the developer/SLP, shall be kept clean and flushed through with a 50mg/l chlorine solution before each use. All such temporary arrangements shall incorporate twin in-line check valves positioned as near as possible to the commissioned mains. Hoses shall be kept to the minimum practical length for the work in question. 5. The ends of discharge hoses shall always discharge above the level of any possible contamination and into the air. Termination points shall be fitted with straining socks.

CESWI Clause	Subject	Additional Company Specification
7.17	Disposal of Water from Cleansing, Testing or Disinfection	<p>Delete sub clause 1 and substitute:</p> <ol style="list-style-type: none"> 1. When discharging flushed water the developer/SLP shall obtain and meet the exact local requirements of the Environment Agency or sewage treatment manager as appropriate, in terms of quantity, quality and point(s) of discharge. The developer/SLP shall avoid discharging chlorinated or high pH water into surface water drains or watercourses or onto arable or pastureland. Care should be taken when using existing drainage to ensure the requirements of the receiving watercourse are considered. If discharge is via a foul water sewer, precautions shall be taken to avoid any risk of back syphonage. 5. The developer/SLP shall provide all necessary facilities for the removal and disposal of water used for disinfection, swabbing and testing. The means of disposal of the water will comply with all statutory regulations.

Appendix 1

Medical Screening and Basic Hygiene Precautions

Medical Screening

The developer/SLP shall ensure all employees that work, or may work, on the construction of water mains and services (Network Construction Operations) shall be medically screened through the National Water Hygiene Scheme; shall be registered with Energy & Utility Skills, and shall carry a valid Hygiene Card. Hygiene Cards shall be carried at all times and shall be presented to the Company representative on demand.

Basic Hygiene Precautions to be observed by Developer/SLP's Employees

1. The site is a water supply site and a number of basic precautions are necessary to avoid the risk of contaminating drinking water supplies.
 - 1.1 Defecation and urination on site are strictly forbidden except at properly provided sanitary facilities. After use of any toilet facilities hands should be washed thoroughly.
 - 1.2 Pollution of the site or nearby watercourse by spillage of fuel, oils, chemicals or disinfectants must not be allowed to occur. If, accidentally any spillage does occur you should immediately notify your supervisor and the water company's Emergency Control Room:

South Staffs Water: 01922 638282	Mon – Fri: 8.30am – 5pm
01922 624979	Out of hours
Cambridge Water: 01223 403115	Mon – Fri: 8.30am – 5pm
01223 403011	Out of hours

In this respect, reference shall be made to Water UK Technical Paper, "Principles of Water Supply Hygiene and Technical Guidance Notes".

Appendix 2

Non-contestable costs – Scale of charges

Design of Works (undertaking or checking)

Onsite & hydraulic Incl.

Inspection/Supervision

Site visits to monitor mainlaying progress and witness pressure test and mains cleansing works Incl.

Vetting and SLP approval

Review of Company and scheme issues (insurances, bonds, personnel and materials) £0

Commissioning

**Including on-site works, supply of water, final connection, normal sampling costs, shut, labour and materials for final connection. £4,194 /nr

†Subsequent piece through connections to closed valves following the removal of washout hydrants £1,816 /nr

**costs of commissioning schemes where connection to mains greater than 300mm diameter, price on application

† Prices for piece through connections are based upon a) the SLP pre-excavating the connection hole b) pipe ends are a maximum of 1m apart c) the pipe ends are in alignment d) SLP backfills and reinstates as necessary. Where this is not the case, additional charges will be applied.

Abortive/Additional Costs

Additional samples £116 each

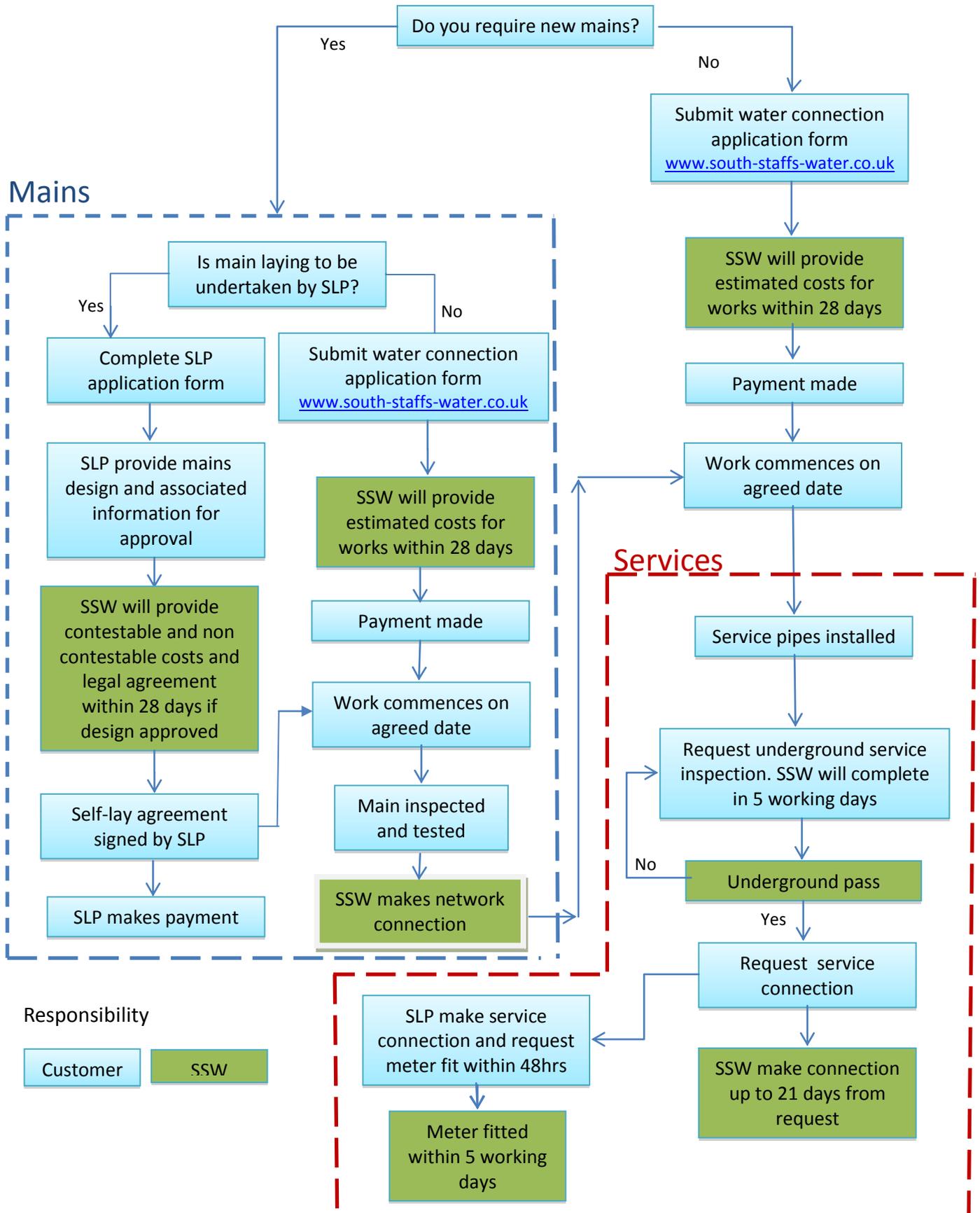
Extra site visits £91 /visit

Agreements

Preparation and administration of legal agreements for self-lay works Incl.

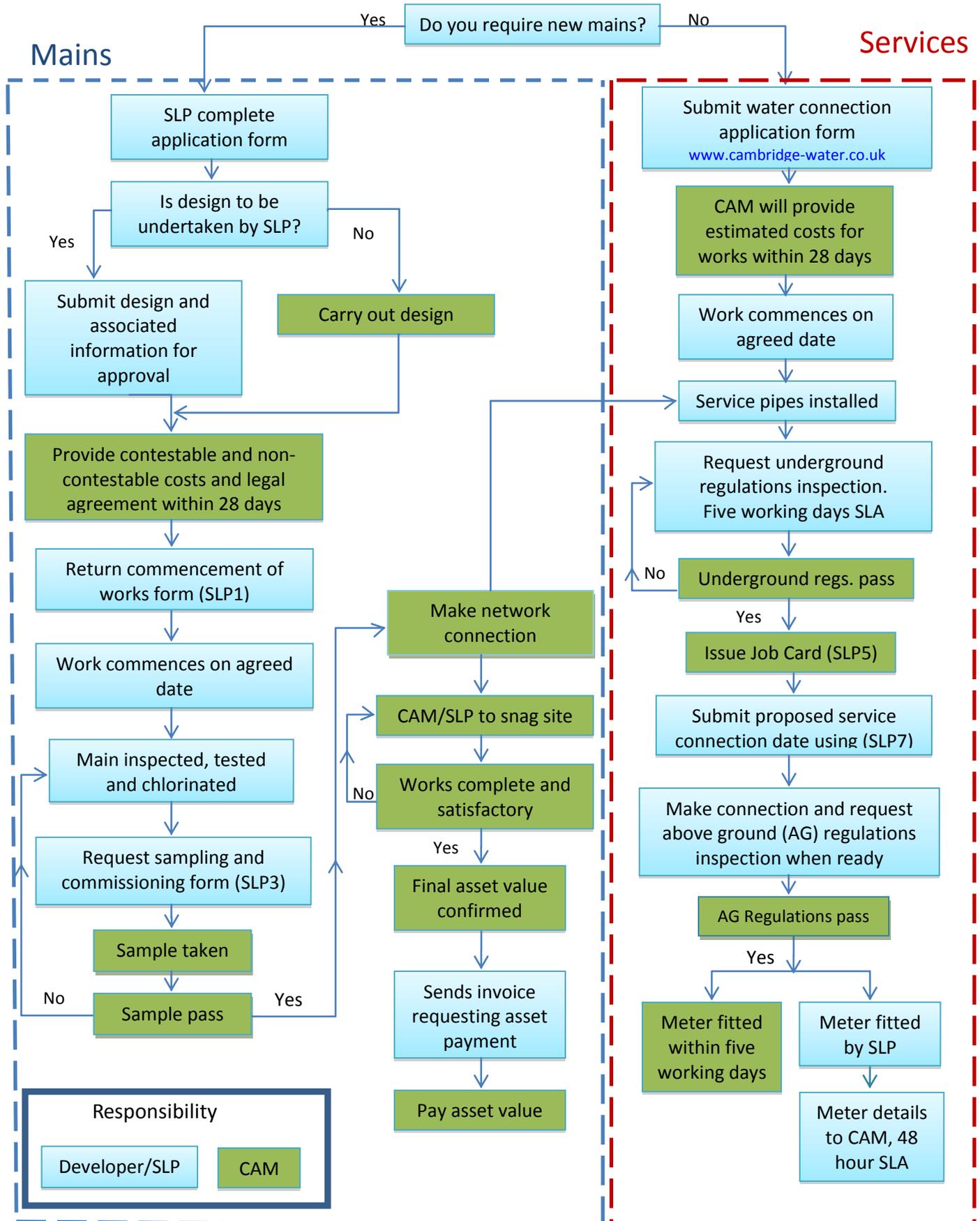
Appendix 3

Process map for Main Laying and Service Connections (South Staffs Region)



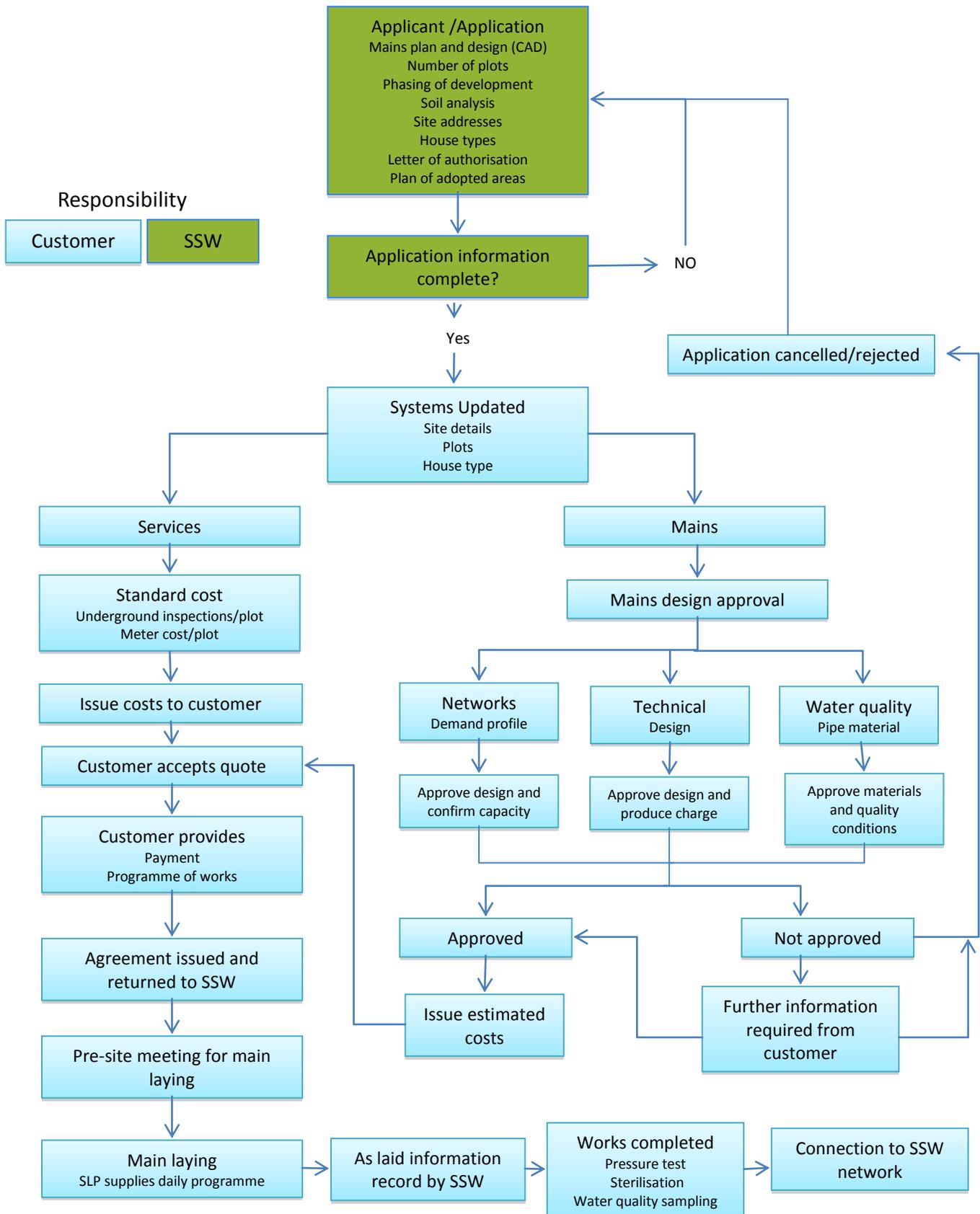
Appendix 4

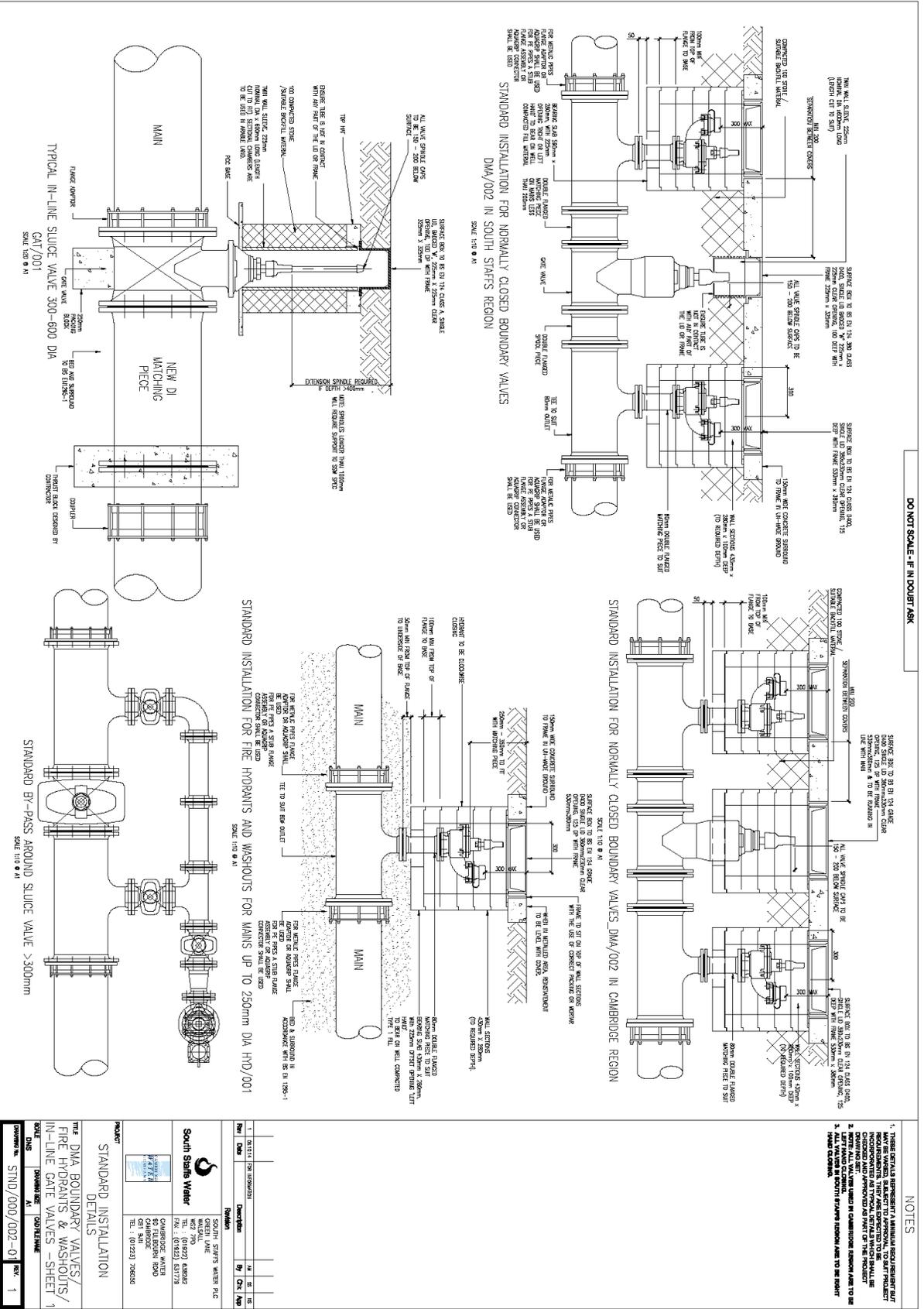
Process map for Self-lay Main Laying and Services (Cambridge Region)
Note this to take precedence over diagrams in CoP where there is a conflict



Appendix 5

Self-lay process for mains and services (South Staffs Region)





South Staffs Water

South Staffs Water PLC
Walsley
Tel: (01927) 43832
Fax: (01927) 53778

CONSUMER WATER
CAMBRIDGE
Tel: (01223) 20658

PROJECT
DMA BOUNDARY VALVES/
FIRE HYDRANTS & WASHOUTS/
IN-LINE GATE VALVES - SHEET 1

SCALE
DIMS: 1:50 @ A1
OTHER: 1:10 @ A1

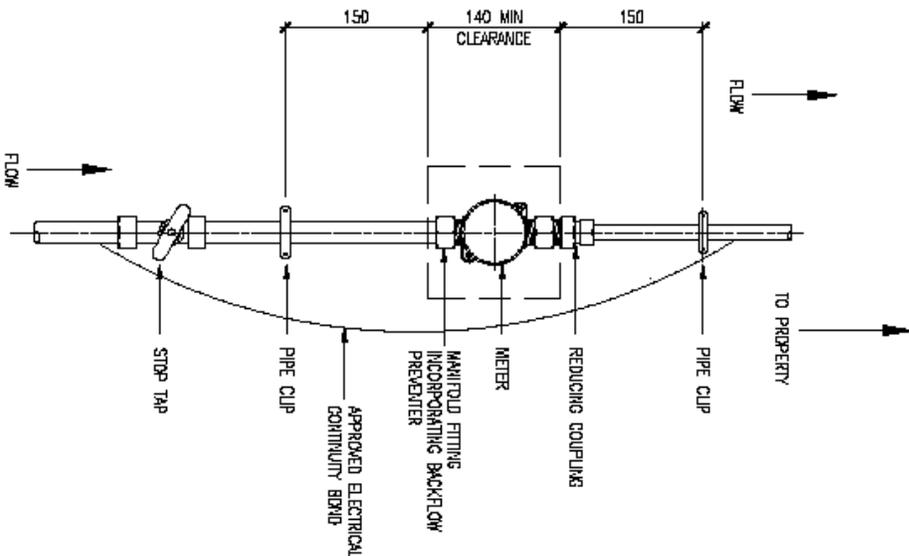
Drawn
By: []
Checked: []
Date: []

Rev

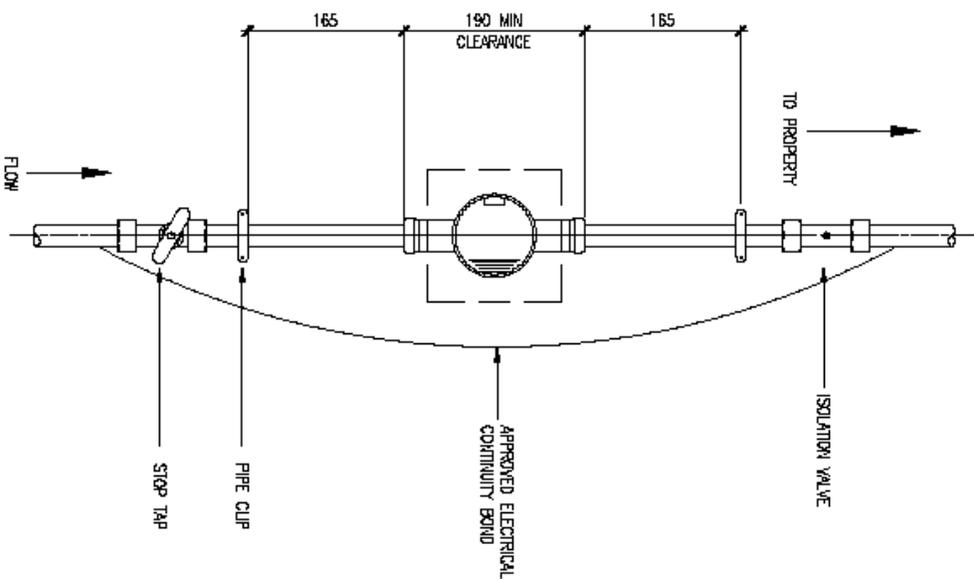
1	REVISED (NO DIMENSIONS)	By: []	Chk: []
2			
3			
4			
5			
6			

DATE: 1

DO NOT SCALE - IF IN DOUBT ASK



INTERNAL METER FITTING
SCALE 1:5



INTERNAL INLINE METER FITTING (15/20mm)
SCALE 1:5

NOTES

1. THESE DETAILS REPRESENT A MINIMAL REQUIREMENT BUT MAY BE VARIED, SUBJECT TO APPROVAL, TO SUIT PROJECT REQUIREMENTS. THEY ARE EXPECTED TO BE INCORPORATED AS TYPICAL DETAILS WHICH SHALL BE CHECKED AND APPROVED AS PART OF THE PROJECT DRAWING SET.
2. NOTE: INSTALLATION NOT TO BE WITHIN A 1.00M RADIUS OF A W/P PNL.
3. INSTALLATION BASED ON ASSUMPTION THAT A STOP TAP & DRAIN DOWN VALVE ARE PRESENT AT THE POINT OF ENTRY TO THE CUSTOMER'S PROPERTY AS REQUIRED BY THE WATER REGULATIONS ACT.

NO	DATE	DESCRIPTION	BY	CHK	APP
1	06.11.11	FOR INFORMATION			

South Staffs Water



SOUTH STAFFS WATER PLC
GREEN LAKE
WALSALL
WS2 9PD
TEL : (01922) 654992
FAX : (01922) 831779

CAMBRIDGE WATER
90 FLEURBAUM ROAD
CAMBRIDGE
CB1 5AH
TEL : (01223) 709000

PROJECT: STANDARD INSTALLATION DETAILS

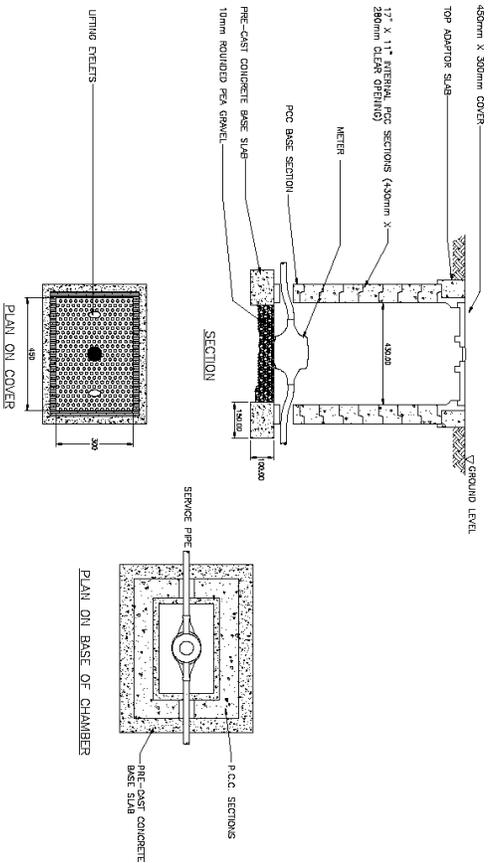
TITLE: INTERNAL METERS

DATE: 06/11/11

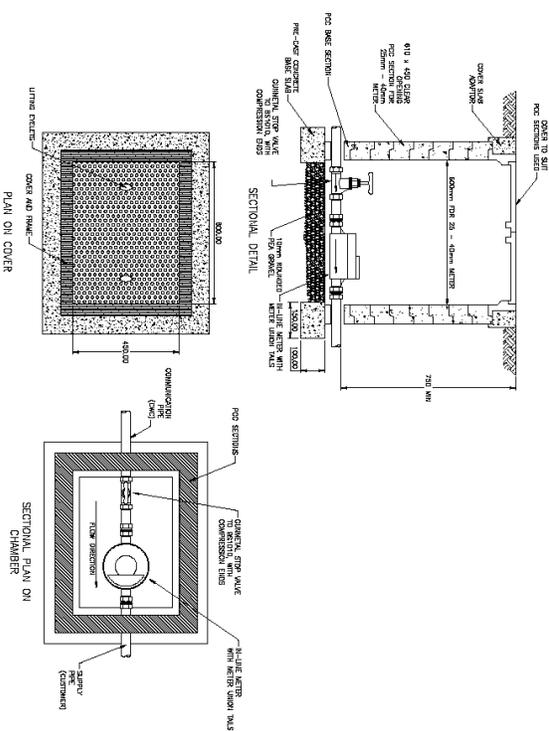
DRAWING NO: STND/900/019

REV: 1

DO NOT SCALE - IF IN DOUBT ASK



20mm METER CHAMBER DETAIL
SCALE 1:10 @ A1



25mm - 40mm METER WITH STOP TAP CHAMBER DETAIL
SCALE 1:10 @ A1

NOTES

1. THESE DETAILS REPRESENT A MINIMUM REQUIREMENT. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND MATERIALS AGAINST THE PRODUCT REQUIREMENTS. THEY ARE DIRECTED TO BE RESPONSIBLE FOR THE QUALITY OF THE WORK. THE DRAWING SET IS THE BASIS FOR THE CONTRACT. ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE.
3. ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE.
4. ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE.
5. ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE.
6. ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE.
7. ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE.
8. ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE.
9. ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE.
10. ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE.

SECTIONAL CHAMBERS

1. INSTALLATION IS HEREBY SUBJECT TO HIGHWAY AUTHORITY APPROVAL. CHAMBERS ARE NOT TO EXCEED 1.5M LOW TO RESPEY ADDITIONAL REQUIREMENTS WHEN DEPTH IS GREATER.

Rev	Date	Description	By	Chk	App
1	04/11/14	FOR REVISION			

South Sains Water
 SOUTH SAINS WATER PLC
 GREEN LAKE
 W62 7YD
 TEL: (01922) 838982
 FAX: (01922) 831778
 CAMBERG WATER
 OAKWOOD ROAD
 G81 5AJ
 TEL: (01223) 206050

PROJECT
 STANDARD INSTALLATION
 20mm METER &
 25mm-40mm METER WITH
 STOP TAP CHAMBER DETAILS
SCALE A1
DATE 04/11/14
DESIGNED BY CHATFIELD
CHECKED BY CHATFIELD
SCALE 1:10 @ A1
DATE 04/11/14

Standard Forms and Notifications

SLP1

Commencement of self-lay works

Site details

Developer name:

Site address:

South Staffs Water job number:

Self-lay organisation name:

Contact name:

Contact telephone number:
(preferably a mobile)

Commencement of works

Please enter actual start dates as appropriate and not proposed or week commencing start dates.

Mainlaying will start on:
(day/month/year)

Pressure testing and chlorination will start on:
(day/month/year)

Requirements for connection to existing main:

Name of company conducting testing & chlorination:

Contact name & telephone number:

SLP2
Commencement of Pressure testing for self-lay works



Site details

Developer name:

Site address:

South Staffs Water job number:

Self-lay organisation name:

Contact name & email address:

Contact telephone number:
(preferably a mobile)

Commencement of works

Please enter proposed dates for commencement of pressure testing a minimum of 5 working days in advance of the test.

Proposed date of pressure testing: (day/month/year)

Size and material of main to be tested:

Length of main to be tested:

Approx. volume of water required:

Approx flow rate requirements:

For South Staffs Water use only

Approval of test by South Staffs Water (Signed):

Date:

Email completed form to developerservices@south-staffs-water.co.uk for SSW region or networkdevelopment@cambridge-water.co.uk for CAM region

SLP3
Request for mains sampling and commissioning
for water self-lay works



Site location and mains material details

Self-lay organisation name:

Site contact name:

Contact telephone number:
(preferably a mobile)

Site location and section of
main: (if applicable)

Material of main:

Length and diameter:

Test data

Operation	Date	Disinfection	Result
Charge main		Cl ₂ concentration – start	mg/l
Pressure test (test certificate to be attached)		Cl ₂ concentration – end	mg/l
Swabbed		Chlorination contact time	(hours)
Chlorination (minimum 20mg/l)			
De-chlorinated			

I confirm the above main is ready for sampling and commissioning and would like
samples taken on _____ (insert preferred date)

Print name:

Signature:

date: ___ / ___ / _____

Email completed form to developerservices@south-staffs-water.co.uk for SSW region or
networkdevelopment@cambridge-water.co.uk for CAM region

**SLP5
CAMBRIDGE WATER COMPANY JOB CARD
SELF-LAY SCHEMES**

A JOB HAS BEEN SET UP FOR THE WORKS SHOWN BELOW:

Job No: Job Code: Date:

CWC contact:

Location: Work to be done:

.....

Customer:

Contact name: Site Contact:.....

NOTE:

*** PLOT NUMBER TO BE WRITTEN ON INSIDE OF METER BOX ***

✂-----

Detach and return to Cambridge Water Company, 90 Fulbourn Road, Cambridge CB1 9JN

-within 5 working days of making service pipe connection.

Job No:

I confirm that a service connection has been completed at:

.....
.....
.....

Date of connection

Name (please print) Signature

