



Dwr Cymru Welsh Water's  
Addendum to the WRc  
Self-laying of  
Water Mains and Services  
Code of Practice  
for  
England and Wales  
2<sup>nd</sup> Edition

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## 1.0 Introduction

Following the introduction of the Water Act 2003, Dwr Cymru Welsh Water (DCWW) revised its approach to self-lay. Our revised approach enables a developer to elect to design and construct water mains themselves, or by a nominated Self-Lay Organisation (SLO).

The WRc code of Practice 'Self Laying of water Mains and Services (2<sup>nd</sup> Edition) May 2009, covers the design and installation of new on-site water mains and communication pipes, including boundary stopcock and / or meter chambers, and the installation of off-site mains. This addendum is to be read in conjunction with the Code of Practice. There shall be no departure from the Code of Practice except where formally approved by DCWW. The Code of Practice for the self-laying of water mains and services in England and Wales 2<sup>nd</sup> Edition May 2009 is available from the WRc. The following site can be used to purchase a copy from the WRc:  
[www.WEBookshop.com](http://www.WEBookshop.com) ISBN Number 978 1898920 63 2

The self-laying of water mains and service is split into contestable work, which the Developer/SLO (Dev/SLO) can carry out and non-contestable work which only DCWW can complete. These two categories are detailed in Section 1.8 of the Code of Practice.

The Developer and/or landowner and the SLO shall enter into a legal agreement with DCWW. A copy of DCWW's Self-lay Legal Agreement is available upon request. Tel: 0800 9172652 requesting the Self-Lay Coordinator.

Under a Self-lay agreement if the developer or SLO installs water mains to supply water for domestic purposes, and the pipes are constructed in accordance with the terms of the agreement, DCWW shall connect the water mains to DCWW's existing water network and adopt responsibility for the pipes. DCWW shall make an asset payment to the Developer or SLO if elected for the water mains it adopts upon receipt of an invoice, providing any defects that are identified are repaired by the Developer or SLO.

The option of requesting DCWW to provide new water supplies is always available to the Developer.

The Code of Practice and this document (the addendum), aligns with the Ofwat document:

[Competition in providing new water mains and service pipes; Guidance to companies \(version 3.0 2009\)](#)

Other documents for reference are as follows:

- Ofwat's document ['Guidance on financial arrangements for self-lay and requisitioning Agreements \(version 2.0\)](#)
- Ofwat have a publication 'Process for handling disputes and appeals: Requisitioning for water mains and public sewers and/or lateral drains and adoption of self-laid mains' which sets out the process Ofwat will follow in the event of a dispute.

- Civil Engineering Specification for the water Industry (CESWI) 6<sup>th</sup> edition.
- DCWW's self-lay legal agreement

If you have any queries or questions relating to self-laying of water mains or services, please contact us on 0800 9172652 or email us at [new.connections@dwrcymru.com](mailto:new.connections@dwrcymru.com) stating 'Self Lay enquiry'.

Our Self-Lay Addendum, standard forms and application can be found on our website, [www.dwrcymru.co.uk](http://www.dwrcymru.co.uk)

DCWW consider all diversionary work to fall under Sect 185 of the Water Industry Act 1991 and no asset value will be paid.

## **2.0 Self Lay Policy**

### **2.1 Scope**

- 2.1.1 The same arrangements are available to all developers and developments, large or small.
- 2.1.2 The self-lay policy generally applies to requests for water mains to provide domestic and non-domestic supplies.
- 2.1.3 Self-lay may also include the laying of services (including fittings, chambers, meter fittings, boundary stopcocks), to commissioned mains on new developments. This includes mains constructed by self lay or mains requisitioned and constructed by DCWW.
- 2.1.4 Self-lay may also include the laying of services (including fittings, chambers, meter fittings, boundary stopcocks) to existing mains subject to DCWW approval. DCWW has the right to refuse such service connections, for the following but not limited to reasons.
- Main is a trunk or strategic main.
  - Main has a high failure rate.
  - Mains material, for example PVC that needs depressurisation before connection.

Where SLO's carry out service connections in the public highway they will be required to meet all the provisions of the current New Road and Street Works Act and Traffic Management Act, including all noticing and defects liability periods.

Developments with multiple occupancy will be considered and a guidance note is available on request.

- 2.1.5 Self-lay works can include both on-site mains and those off-site that extend to the point of connection on the existing network, as determined by DCWW.

- 2.1.6 Self-lay works may also include the new mains part of any diversion, but not the connections of the diverted main.
- 2.1.7 For water mains for non-domestic usage and on diversion works no asset payment will be made.
- 2.1.8 The Dev/SLO shall not be permitted to work on any existing 'live' DCWW mains whether by replacement, reinforcement or connection thereto without prior approval.
- 2.1.9 The Dev/SLO shall provide all the necessary approved materials and resources to adequately construct the works. All material must comply with the relevant British Standards (BS) and Water Industry Standards (WIS), a material schedule shall be provided to DCWW upon request.
- 2.1.10 Final flushing, pressure testing and disinfection shall be carried out by the Dev/SLO under the supervision/inspection of DCWW or in accordance with DCWW specifications.
- 2.1.11 DCWW retains the right to undertake water quality sampling and sample analysis as a non-contestable activity.
- 2.1.12 The Dev/SLO may design both the on-site and off-site works, although DCWW retains the right to design the off-site systems if it wishes to do so. DCWW must check and approve any design carried out by the Dev/SLO. DCWW will design any reinforcement works. All designs carried out by DCWW or the SLO shall be in AutoCAD format.
- 2.1.13 DCWW shall provide all information on its water network, in as much as it has responsibility for the information, to facilitate developers and SLOs in carrying out self-lay work.
- 2.1.14 DCWW install water meters on Self lay sites however the Dev/SLO can install meters provided by DCWW, which will be issued to the Dev/SLO free of charge. Dev/SLO's are to install DCWW meters to connections greater than 32mm at the time of connection. The Dev/SLO will be responsible for providing accurate meter details and meter locations for each meter fitted. The detail we require is explained on our standard forms SL4 or SL5. Only DCWW forms are to be used for service connections.
- 2.1.15 All self-lay schemes should be applied for using DCWW's self lay application form .
- 2.1.16 Dev/ SLOs who wish to design water mains for the site themselves can request DCWW to provide a point of connection. The 'Request for a point of connection form' is available on our website or can be sent to you on request.

## **2.2 Standards and Specifications**

- 2.2.1 The Dev/SLO shall be required to work to DCWW's standards and specifications, current at the time, in relation to all activities. Similarly, DCWW

(and its contractors) shall comply with its policy and procedures current at the time.

- 2.2.2 The Dev/SLO may design on-site systems subject to DCWW's standards and specifications, current at the time. Where they elect to do so the Dev/SLO shall provide full details of designs and, where necessary, risk assessments and action plans, for approval by DCWW prior to construction on site.
- 2.2.3 All the relevant parties shall enter into and comply with a legal agreement and specification for self-lay work before any work commences on site.
- 2.2.4 Separate legal agreements shall be required to cover projects carried out in phases or stages.
- 2.2.5 The Dev/SLO shall work to all other applicable statutes, codes and regulations and indemnify DCWW accordingly.
- 2.2.6 Dev/SLOs need to be competent in the activities they propose to carry out. Any Dev/SLO wishing to carry out the self-lay of water mains and services is to be partially or fully accredited with the Water Industry Registration Scheme (WIRS) administered by Lloyds Register. Details of the scheme and the relevant application forms and specific information can be found on the Lloyds Register website [www.lr.org](http://www.lr.org).

Non-WIRS accredited Dev/SLO's are to ensure that all their individual employees who carry out the installation of water mains and /or services have an appropriate combination of education, training and practical experience relating to the construction activity to be undertaken. Appropriate Energy and Utility Skills such as the modular 'Network Construction Operations (Water)' qualification cover the competencies required to lay water infrastructure. A Dev/SLO is required to be competent only in the activities the Dev/SLO proposes to carry out. We require Dev/SLO's to be competent in the basic elements of self-lay work, such as main and service laying, connections, understanding material selection and basic hydraulics. You can contact us to discuss the foregoing on 0800 9172652 and ask for 'Self Lay'.

- 2.2.7 All SLO operatives must hold a current National Hygiene card issued by Energy and Utility Skills, and have it available for audit on site at any time.
- 2.2.8 A Developer or SLO shall fulfil all requirements under the current New Roads and Street works Act and Traffic Management Act including retaining responsibility for the excavation and reinstatement of any street.

### **2.3 Supervision and inspection**

- 2.3.1 DCWW retain the right to carry out the Supervision/inspection for pressure testing, final flushing, swabbing and disinfection.
- 2.3.2 DCWW retain the right to access any part of the self-lay works for inspection at any time.

- 2.3.3 DCWW retain the right to inspect and take samples of any materials used or intended for use in connection with the self-lay works.
- 2.3.4 DCWW reserve the right to charge an additional supervision fee to developers or SLOs who are only partially accredited to the WIRS scheme and to non WIRS accredited Dev/SLOs.
- 2.3.5 DCWW reserves the right to notify Lloyds Registers of any discrepancies found during any audit, inspection or supervision.

## 2.4 Charging

- 2.4.1 DCWW shall require the Developer to provide a deposit with the signed legal agreement. This deposit will be 10% of the full cost of the works subject to a minimum amount of £1000.  
The full cost of any off site works including any network reinforcement charges or any diversion shall also be included.
- 2.4.2 Self-lay work may not commence until the signed legal agreement and the appropriate payments are received by DCWW.  
The cost of the legal agreement will be advised by our solicitor and is to be paid by the Developer.
- 2.4.3 Upon our issue of the Vesting Certificate the asset payment will become payable and will be paid upon receipt of an invoice from the Developer / SLO.
- 2.4.4 DCWW's charges for non-contestable elements of self-lay work shall reflect the reasonable costs of doing the work had the work been requisitioned.  
These charges will be reviewed for the 1<sup>st</sup> April each year.
- 2.4.5 Any additional supervision / inspection of the work carried out by the Dev/SLO by DCWW shall be charged for based on the appropriate hourly rate of the DCWW attendee.
- 2.4.6 The Dev/ SLO shall reimburse DCWW for any additional site visits, sampling, mains connections or abortive costs it incurs in the process. There will also be additional charges for any re-designs needed due to site layout changes and any non-contestable or contestable works that are undertaken on behalf of the Dev/SLO.
- 2.4.7 Where DCWW approves works which are sized to accommodate future development, DCWW shall fund the additional costs over and above those required for the development under consideration and recover the additional costs from the developers of future developments.
- 2.4.8 Where the Dev/SLO makes service pipe connections, the Dev/SLO pays DCWW the relevant cost per plot, as indicated in the current DCWW Scheme of Charges.
- 2.4.9 Where DCWW carries out service pipe connections, the Developer shall pay DCWW the cost of each service pipe connection as specified within the current DCWW Scheme of Charges.

- 2.4.10 Water and sewerage infrastructure charges if applicable are payable on all new service connections whether carried out by DCWW or the SLO.
- 2.4.11 DCWW shall make an Asset payment for mains laid for domestic purposes. Payments shall be based on statutory requirements as set out in the Water Act 2003 and the calculations in Ofwat's guidelines. This takes account of income received from new customers and is consistent with the calculation of requisitioning charges. DCWW shall make payments to the Developer (or SLO if elected by the Developer to receive the payment), on receipt of an invoice. Payments shall be made as set out in the legal agreement.

## **2.5 Process**

- 2.5.1 DCWW will aim to comply with the levels of service defined in Appendix 7 of the Code of Practice. DCWW shall not start recording against the levels of service until all the required information is received.
- 2.5.2 Upon receipt of a completed self-lay application form, DCWW will acknowledge the application as complete. If it is not complete DCWW will notify the developer of any omissions, we aim to complete this within 3 working days.
- 2.5.3 DCWW will size the main(s) for the development and where appropriate will prepare an estimate for the off-site and reinforcement costs, the non-contestable charges including inspection, disinfection and sampling, connections to existing mains and building water. Also, any mains that are to be upsized for future developments will be identified and the Dev/SLO notified of the DCWW contribution to the upsized element.  
DCWW calculates the asset payment that is due to the Developer in accordance with methodology that is set out in the Water Act 2003.

Where the SLO asks DCWW to do the design:

For developments up to 500 domestic properties we aim to complete in 20 working days.

For developments greater than 500 properties or where significant off-site design is required or where there are changes to the Developer's prior notifications or where specialist advice or investigation is required, DCWW will confirm the date for providing full details of the estimate we aim to complete in 10 working days.

- 2.5.4 Where the Dev/SLO elects to do the design they are to request the point of connection from DCWW.  
DCWW will specify the point of connection and provide system design parameters for developments not greater than 500 properties on receipt of design and drawings from the SLO.  
We will aim to complete this in 10 working days.

In the event that the developer elects to complete the design of the self-lay works, DCWW will check the design and calculate the asset payment and provide full details of the cost of non-contestable items and services, and issue the legal agreement. For developments not greater than 500 properties we aim to complete this within 15 working days on receipt of the design from the Dev/SLO.

- 2.5.5 DCWW shall in all cases liaise with the Fire Authority regarding the numbers and positioning of fire hydrants. Designs shall progress subject to modifications required by the Fire Authority.
- 2.5.6 DCWW will aim to check the final details of the application within 5 working days assuming that there are no significant changes from earlier submission, i.e. site lay changes, programme for development or point of connection, requiring significant revision of asset payment and/or non-contestable charges.
- 2.5.7 Following approval by DCWW, where necessary, of designs and contractors, and payment by the developer of all appropriate fees, DCWW shall provide the developer with a legal agreement for signature.
- 2.5.8 The SLO shall aim to give at least 15 working days notice of his intention to start mains laying on site using standard form SL1 "Notification of commencement of mains work for water self lay scheme". All notifications to DCWW shall be by the DCWW self lay forms available on our website. If the Dev/SLO does not commence works within the timescales quoted on the notification form, a new notification form must be submitted.

Between the serving of this notice and starting on site, a pre-construction site meeting must take place between Developer, SLO, and DCWW to agree the scope and timescales of work.

- 2.5.9 The Dev/SLO is to pay the appropriate charges and at least 15 working days ahead of the Dev/SLO's intention to commence the self lay works, the developer shall submit to DCWW for approval:
- Programme and method statement for self lay works;
  - Subcontractor details; (All sub contractors must comply with WIRS Requirements or have appropriate Energy and Utility skills approved by DCWW)
  - Materials details;
  - Any other information reasonably required.
- 2.5.10 The works shall be completed within 3 months of commencement on site, unless DCWW agrees an extension in writing.
- 2.5.11 The Dev/SLO shall aim to give DCWW a minimum of 10 working days notice of pressure testing, flushing and disinfection works, which requires inspection and/or approval by sending DCWW form SL1 "Notification of commencement of mains work for self lay scheme" with the appropriate section completed. Repeat SL1 forms are to be sent to DCWW for each section of main.
- 2.5.12 DCWW shall liaise with the developer or SLO to complete any off-site works for which it is responsible either before, or as soon as reasonably practical after, the completion of the on-site works.
- 2.5.13 The Dev/SLO shall aim to give at least 10 working days notice of the date when it requires DCWW to make mains connections by using standard form SL2 "Request for water mains sampling and mains connection for Self-lay scheme". Repeat forms are to be used as necessary.

- 2.5.14 Before making mains connections, the water main and any other plant or apparatus shall have been pressure tested, swabbed, cleansed and disinfected and satisfactory water samples taken. DCWW will arrange for a sample to be taken within 3 working days of the Dev/SLO request. Where a sample fails DCWW will inform the Dev/SLO within 24hours.
- 2.5.15 When the mains connection is ready to be made, and prior to the connection being made the Dev/SLO shall provide DCWW with :
- as laid plans of the self-lay works,
  - all evidence of work on-site, including pressure test certificates
- 2.5.16 Upon receipt of the above, DCWW shall make the mains connection(s).
- 2.5.17 Following a joint site inspection between the Developer, SLO and DCWW, once DCWW is satisfied that the self-lay works have been properly commissioned and connected in all respects, DCWW shall issue a Vesting Certificate to the developer or SLO at this point the self-lay works become vested in DCWW.
- 2.5.18 Upon issue of the Vesting Certificate any outstanding charges shall become payable. DCWW will pay the Asset Value, less any sums due under the terms of the Agreement on receipt of an invoice.
- 2.5.19 If DCWW is not satisfied, it shall within 14 days of the inspection, specify further work or action to be taken by the Dev/ SLO. The Dev/ SLO shall notify DCWW when that work or action is complete. A Defects Liability Period shall, for mains, commence from the date of adoption. The Defects Liability Period shall last for 2 years and shall ensure that the Dev/SLO guarantees the works against any defect including damage.
- 2.5.20 The Developer or SLO shall aim to give at least 10 working days notice of the date when it intends to make service pipe connections or requires DCWW to make service pipe connections. Using standard form SL3 "Notification of commencement of water service connections for a water self lay scheme"
- 2.5.21 Before any service connection is connected to a new main, DCWW has the right to inspect the external pipe work to be connected to ensure compliance with the Water Supply (Water Fittings) Regulations 1999.
- 2.5.22 The Developer or SLO shall aim to notify DCWW within 2 working days of the service connections completed using either of the following forms:
- If the Dev/SLO complete the connections and install the meters use SL4 "Notification of completed service connections and meter installations on a self lay water mains scheme".
- Or
- If the meters are to be installed by DCWW use SL5 "Notification of completed service connections on self lay scheme where DCWW are to install meters"

Where the Dev/SLO will install the meter, each meter box must be tagged clearly showing the plot it serves.

- 2.5.23 DCWW shall aim to install meters within 5 working days on receipt of form SL5. Where DCWW are asked to supply meters for the SLO to fit we will aim to supply them within 5 working days or within reasonable procurement timescales.
- 2.5.24 A Defects Liability Period shall, for service pipes, commence from the date of connection, which is also when the service pipes shall be adopted. The Defects Liability Period shall last for 2 years and shall ensure that the developer or SLO guarantees the works against any defect including damage.
- 2.5.25 All boundary boxes on service connections shall be installed in the public highway at the property boundary but shall not be installed in driveways or vehicle crossovers.

## 2.6 Variations

- 2.6.1 Should the developer change the site layout or number of plots after the design has been completed or approved, DCWW must be informed of changes immediately, for the design and the estimated asset payment to be reassessed.
- 2.6.2 If for any reason the new water main cannot be constructed as per the design, no variations to the design will be permitted without the approval of DCWW Designer.
- 2.6.3 If any contaminants are found on site which had not been highlighted by the ground investigation report, mains construction must cease immediately and the DCWW Designer and Project Manager consulted.

## 3.0 Materials specifications

All material used on self lay schemes must meet the DCWW specifications as detailed below:

All pipes must be delivered and stored with end caps

All MDPE fittings must be delivered and stored in plastic heat sealed bags

Mains on non contaminated sites	All pipes to be DWI regulation 31a approved Mains 90mm and above to be HPPE (PE100) 90mm to 225mm and 225mm and above to be at the appropriate pressure for the network application. <b>All pipes must be marked with PN code and SDR on the pipe</b>
Mains on contaminated site	Mains up to 180mm shall be in barrier pipe Mains 225mm and above can be barrier if available or Ductile Iron compliant with BS EN 545 1995 and WIS 4-41-01, the minimum external corrosion protection shall be zinc coated with epoxy to BS EN 545, and all ductile pipes and fittings shall be internally lined.

Services on non contaminated sites	Services up to and including 63mm to be MDPE (PE80)
Services on contaminated site	Either barrier pipe (preferred) or plastic coated underground copper (BS EN 1057/1996)
Electro fusion couplings for mains	To be HPPE (PE100) and can be blue or black in colour, all electro fusion fittings to incorporate fusion indicators.
Electro fusion tapping saddles for MDPE / HPPE mains	To be self tapping and of under-clamp bottom loading design, all electro fusion fittings to incorporate fusion indicators <b>No gunmetal tapping saddles to be used on MDPE / HPPE mains.</b>
Tapping saddles for ductile iron, cast iron, UPVC, and asbestos mains	All tapping saddles to be made to BS 1400 LG2 C 2789 grade 500/7, and are capable of withstanding pressures of 16 bar.
Valves	Compliant with BS EN 5163, internal and external protection to be blue fusion bonded epoxy powder coating. <b>All valves to be right hand (clockwise) close, unless marked otherwise on the design drawing.</b>
Fire Hydrants	Compliant with BS750. All hydrants to have a gunmetal or epoxy coated stainless steel outlet. The hydrant shall have an automatic frost valve, no water shall escape during operation and the body shall fully drain afterwards. <b>All hydrants to be of a fixed jumper design</b>
Chamber sections	Chamber sections to be rectangular and made of either plastic or pre cast concrete. Square if for Sluice Valves and plinths for stop taps.
Chamber covers	All covers shall comply with BS EN 124/ BS 5834.
Boundary Boxes Non contaminated sites	A Single boundary box unit or multi port manifold may be used (if multi port manifold, construction should be of DZR Brass). The boundary box must be able to incorporate a manifold meter with 1 ½” thread, stop tap and non-return valve. All boundary boxes must have height adjustment capabilities
Boundary Boxes Contaminated sites	Where boundary boxes are used on contaminated sites they must comply with WIS-4-37-01 be watertight and shall have gunmetal connection fittings that are able to accept either barrier pipe or plastic coated copper pipes. Boundary boxes must be the ‘sealed’ version with ¾” female connections, ¼ - turn spherical Valve and 1 ½” concentric meter position with check valve.
Meters	Meters issued by DCWW will be supplied free of charge and conform to the following specification: <b><u>Meter Specification</u></b> <b><u>15mm/20mm Domestic &amp; Commercial Positive Displacement In-line &amp; Concentric Meters (P)</u></b>

	<ul style="list-style-type: none"> <li>• Standards ISO 4064 &amp; EEC Metrological requirements.</li> <li>• Type Model P available for the UK Market for its unique billing application.</li> <li>• IP68 Super Sealed Stainless Steel M3 Register c/w magnified Glass lens.</li> <li>• 10 year warranty against condensation.</li> <li>• IP68 Sealed Pulse under Glass Register (1 Pulse per Litre).</li> <li>• Both pulse and optical output models available.</li> <li>• Maximum Working Pressure 10 bar.</li> <li>• Maximum Temperature 50 degrees C.</li> <li>• Corrosion-proof copper alloy meter body or DCWW approved composite body.</li> <li>• Meter must be able to be installed in any position (horizontal, vertical or inclined).</li> <li>• Meter must be full of water while operating.</li> <li>• Prior to installation of a new meter the pipeline must be flushed out.</li> <li>• DCWW approved Model P installation Keys required.</li> </ul> <p><b><u>Larger meters, varying types.</u></b></p> <ul style="list-style-type: none"> <li>• Individual guidance from DCWW to be obtained in regard to other sizes and types of meters</li> </ul>
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## 4.0 Disputes

In the event of a dispute please refer to the DCWW booklet 'How we handle your complaints What to do if you are unhappy with our service'. This can be provided by contacting us on 0800 052 0138 or visit our website at [www.dwrcymru.com](http://www.dwrcymru.com)

