

Section 1

Mains

Pre-commencement Meeting

Before the construction of the new water main commences, a pre-commencement site meeting will be arranged by appointment. This meeting is usually attended by a representative from the Water Company and the developer. Where appropriate, a representative from the self lay organisation should also be present. During the pre-commencement meeting the following will be discussed and agreed:

- Site induction requirements
- Health and Safety obligations
- Programme of onsite work and expectation of date for main installation
- Material of pipework (i.e. barrier or plastic) and ducting arrangements
- Entry point and route of the new water main
- Minimum length of excavation required
- Designated areas for the storage of pipes and fittings, if required
- Trench specification
- National Joint Utilities Group (NJUG) guidance
- Line and levels
- Site scaffolding
- Water Quality including flushing and sampling
- Position of meter boxes and/or internal meter housing
- Postal addresses
- Temporary Building Supplies and Disconnections
- Site permits
- Aborted works

Construction Design & Management (CDM) Regulations 2007

Under the CDM Regulations 2001 the developer has responsibilities for the new mains construction on site, which includes:

- The selection and appointment of a competent CDM co-ordinator
- The selection and appointment of a competent principle contractor
- The provision of a suitable construction phase plan prior to commencement
- The provision of suitable welfare facilities

Two-day Pre-site Visit

Prior to your mains installation an Affinity Water Contractor representative will pre-arrange a visit to your site to confirm you are ready for your mains installation.

If you are not ready at this time it will be the developer's responsibility to confirm that the proposed works will be ready in order to meet the date specified. If confirmation is not received at this time we will reserve the right to reschedule the works accordingly.

If, on the day of the installation the agreed length of trench to be excavated has not been completed by the developer, a charge for the remobilisation of the contractor and any additional charges will be issued to the developer and we will reserve the right to leave site and re-programme the works.

Site Preparation for Mains Laying

Before the construction of the new main commences it is essential that the developer ensures:

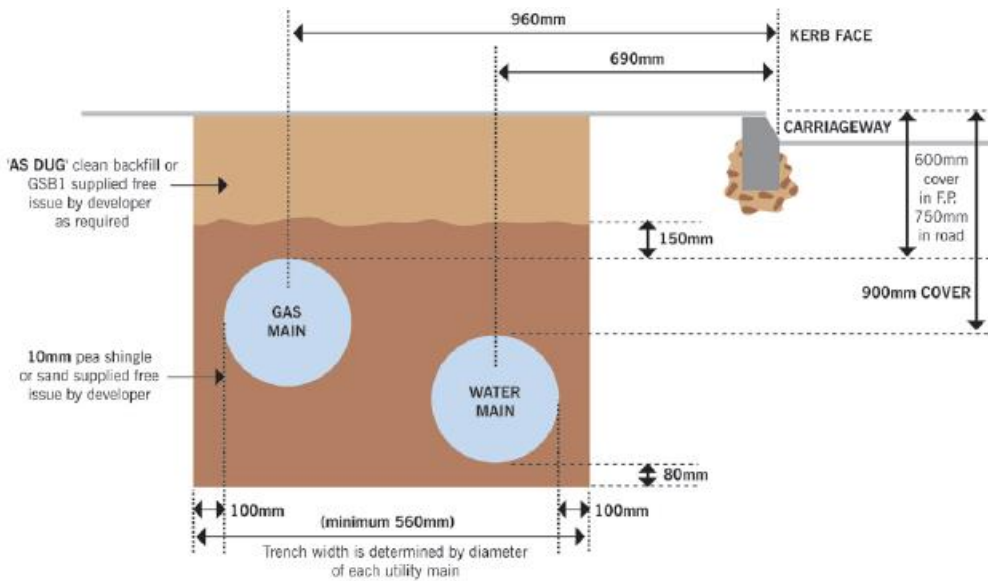
- The line and level is clearly set out on site in accordance with the final design drawing
- A kerb line or other identification of the limits of the roads or footpaths is in place
- The proposed line of the main is clear and free from obstructions to create a safe working environment
- The trench has been excavated in advance of our arrival, the length of which agreed during the pre-commencement site meeting
- A dedicated team is made available on site for further excavation, if requested by representatives from the Water Company
- A certified driver and appropriate excavator and/or lifting equipment is provided, if requested by representatives from the Water Company
- Suitable plant and labour is available for any additional trenching and back-fill, if requested by representatives from the Water Company
- Pea shingle is available and placed in the base of each open trench (minimum 80mm deep)
- All excavated soil is placed a minimum of 1m away from edge of trench and surplus soil removed
- GSB1 materials are provided where required to meet highways specification
- Suitable welfare facilities are available for use by the Affinity Water contractor representative
- Suitable provision is made for the storage of materials and fittings

All of the above will be verified at your two day pre-site visit. (Refer to pg: 5)

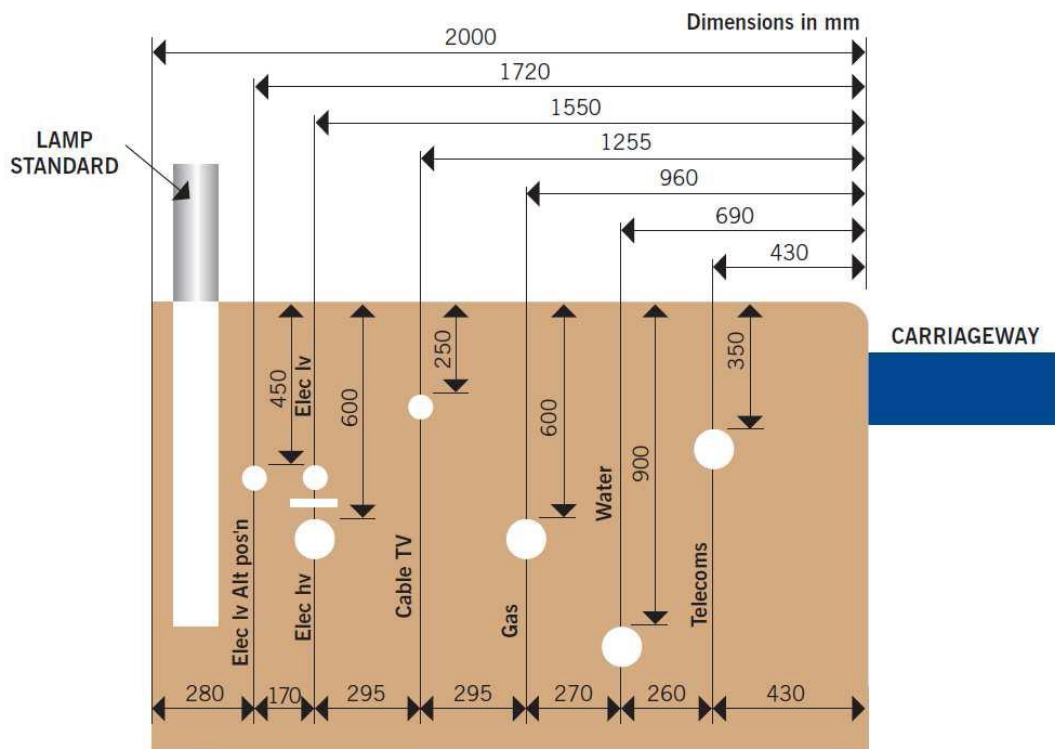
The Water Company and its contractor's staff shall be given a site induction by the developer immediately upon arrival on site. The Water Company and its contractor's staff shall sign in and out at the site office each day.

Where possible, water mains will be constructed with a minimum cover of 900mm from the top of the main to the finished surface level, and 690mm from the centre of the main to the kerb face in accordance with the National Joint Utilities Group (NJUG) guidelines on the positioning and colour coding of utilities apparatus.

A minimum clearance of 300mm must be maintained where any works or services are installed adjacent to the water main. The developer will be recharged for any diversionary works where this can not be achieved.



Trench specification for water and gas mains laid in a common trench (off the public highway)



NJUG (National Joint Utility Group) recommended arrangement of services in a metre wide footway

Test & Chlorination

In all cases, long or large service pipes greater than 63mm OD will need to be chlorinated and pressure tested before the final connection is made.

Once the main has been laid by Affinity Water, we will conduct a pressure test on that main which will then be followed by a water sample. Once the sample has passed the final back-to-back connection will be made. This procedure can take between 10-15 working days. At this point you will be able to call off your services.

If you have laid a supply pipe greater than 63mm OD we will require a Pressure Test and Chlorination Certificate from you. Please make sure that you liaise with your Project Manager at Affinity Water to co-ordinate when you should undertake the test as your certificate will only be valid for 14 days. If the main is not connected within the period of the certificate the test will need to be retaken.

You will need to forward your Project Manager the results of the test, please find details below of what we require. We will confirm the results with our contractor and give them the approval to go ahead with the final connection based on your final results.

New supplies/mains should be swabbed, flushed, filled with chlorinated water not less than 50mg/l and allowed to stand for 1 hour, following which the chlorinated water should be flushed out, the pipe refilled, and a sample taken.

The certificate must indicate the name of the company performing the disinfection, date of disinfection, confirmation that the pipe has been swabbed and flushed prior to disinfection, a 'hypochlorite solution has been used, the chlorine level of the source water, the chlorine level after dosing, the contact time, the chlorine level after contact, and the chlorine level after flushing. It must also detail the onsite test for appearance, odour and taste.

The certificate must clearly state that the disinfection has been carried out in accordance with BS6700.

The 'method statement' must indicate the details of the disinfection carried out, the diameter and length of pipe disinfected, the source of the water used, the sample location point and a diagram.

The 'sample results' must include E-coli, total coliforms, turbidity and plate counts taken at both 22°C and 37°C.

Taste and Odour

Physical

Electrical Conductivity @ 20 degree C

Hydrogen Ion (pH)

On-Site

Free Chlorine

Total Chlorine

Quantitative Taste

Quantitative Odour

The sample results must be from a 'UKAS' accredited laboratory.

It is the customer's responsibility to ensure that the designated disinfection company is aware of our requirements.

Failure to provide all the information above will result in the delay of making the final connection. If after 14 days of the final back-to-back connection being made, the main remains stagnant *(i.e. No services have been connected or the main has not been turned over with the use of a standpipe at least once every 14 days) the process of testing and chlorinating the main will be repeated at your own cost.

- The main should be flushed every 14 days at 3 times the volume of the main installed (please see footnote and calculation sheet in Section 6)

If your supply is less than 63mm OD and it has been stored in a safe place and the ends have always been sealed, there will be no requirement to chlorinate this supply. However it will need to be adequately flushed upon connection.

Unauthorised use of a fire hydrant is an offence under section 174 of the Water Industry Act 1991.¹

Post-construction Site Inspection

Once the new water main has been commissioned, the Water Company or its contractor will walk the line of the new main to ensure that:

- All fittings have been installed as per the design drawing
- All fittings are in chambers and set to the finish levels provided by the developer
- The correct covers are fitted
- The correct marker posts are installed
- There is no damage to installed pipes or fittings (if any damage is noted the developer will be liable for any cost of rectification)

Once the site is signed off as complete and there are no outstanding defects, any subsequent damage to the main or main fittings will be recharged to the Developer.

¹ In order to avoid the risk of legal proceedings please contact the Water Company to get authorisation to use a fire hydrant and to hire a standpipe, their email address is Hydrant.Licensing@affinitywater.co.uk you can also visit our website for further information <https://www.affinitywater.co.uk/hydrant-licensing-central.aspx>