

6.4.5 Demolition

No demolition should be allowed within 150m of an asset for 400m for a structure mass greater than 10,000 tonnes without an assessment of the vibration levels at the asset.

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec.

For iron assets, the peak particle velocity at the asset shall be limited to a maximum level of 25mm/sec.

The promoter of the works should provide the Cadent Plant Protection Officer with the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure the allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

6.4.6 Blasting

The Maximum Instantaneous Charge (MIC) dictates the distance at which an assessment of the vibration levels (at the located asset) is required. The measured distances are as follows:

- 500m if the MIC is greater than 200kg
- 250m if the MIC is greater than 10kg but less than 200kg
- 100m if the MIC is 10kg or less

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec.

For iron assets, the peak particle velocity at the asset shall be limited to a maximum level of 25mm/sec.

The promoter of the works should provide the Cadent Plant Protection Officer with the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

6.4.7 Surface mineral extraction

An assessment shall be carried out on the effect of surface mineral extraction activity within 100m of a gas asset. Consideration should also be given to extraction around plant and equipment associated with assets (e.g. cathodic protection ground beds).

Where the mineral extraction extends up to the asset easement, a stable slope angle and stand-off distance between the asset and slope crest shall be determined. Where an easement exists, the easement strip shall be clearly marked by a suitable permanent boundary, such as a post and wire fence. Additionally, where appropriate, slope indicator markers shall be erected to facilitate the verification of the recommended slope angle as the slope is formed, by the third party. The asset easement and slope need to be inspected periodically to identify any signs of developing instability. This may include any change of slope profile including:

- Bulging
- The development of tension cracks on the slope or easement
- Any changes in drainage around the slope

The results of each inspection should be recorded.

Where surface mineral extraction activities are planned within 100m of the asset but do not extend up to the asset easement boundary, an assessment should be made as to whether this could promote instability in the vicinity of the asset. This may occur where the asset is routed across a natural slope or the excavation is deep. A significant cause of this problem is where the groundwater profile is affected by changes in drainage or the development of lagoons.

Where the extraction technique involves explosives, the provisions of Section 6.4.6 apply.

6.4.8 Deep mining

Gas assets within 1km of active deep mining may be affected by subsidence resulting from mineral extraction. The determination of protective or remedial measures will normally require expert assistance, which can be arranged through Cadent.

6.4.9 Landfilling

The creation of slopes outside of the asset easements may promote instability within the vicinity of the asset. Cadent should carry out an assessment to determine the effect of any landfilling activity within 100m of an asset. The assessment is particularly important if landfilling operations are taking place on a slope in which the asset is routed.

6.4.10 Pressure testing

Pressure testing should not be permitted within 8m of an asset unless suitable precautions have been taken against the effects of a pipe failure.

6.4.11 Seismic surveys

The promoter of works shall advise Cadent of any seismic surveying work in the vicinity of PE or steel assets that will result in peak particle velocities in excess of 75mm/sec at the asset or for iron assets that will result in peak particle velocities in excess of 25mm/sec at the asset.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

6.4.12 Hot work

Where the Cadent's metallic gas assets have been exposed, welding (or other hot works that may involve naked flames) should not be carried out in proximity of the gas asset. This may be reduced if suitable protection and precautions have been agreed with Cadent.

If the gas asset is PE (or a PE asset is contained within a metallic sleeve) welding, or other hot works that may involve naked flames, shall not take place within 500mm of the gas asset. For further advice contact your network Plant Protection Officer.

Protection measures shall be agreed with the Cadent Plant Protection Officer prior to installation to prevent the effects of sparks, radiant heat transfer etc.

Any hot works in proximity to a Cadent gas asset require leakage surveys prior to, during and after the works. If gas is detected, all works shall stop, and the leak immediately reported to the National Gas Emergency Service on 0800 111 999.

The Cadent Plant Protection Officer will determine the need to remain on site to monitor all welding, burning or other 'hot work' that takes place.

6.4.13 Wind turbines

Wind turbines shall not be sited any closer than 1.5 times the proposed height of the turbine mast away from the nearest edge of the asset.

Further guidance can be found from UKOPA's Good Practice Guide 13 (UKOPA/GP/013) - Requirements for the Siting and Installation of Wind Turbines Installations in the Vicinity of Buried Pipelines.

6.4.14 Solar farms

Solar Farms can be built adjacent to gas assets, but never within an easement. Advice shall be sought from Cadent at the early stages of design to ensure that electrical interference, security, future access and construction methods can be mutually agreed.

Interference checks shall be completed by the third party to ensure that the solar installations and associated infrastructure have no negative effect on cathodic protection systems.

Further guidance can be found from UKOPA's Good Practice Guide 14 (UKOPA/GP/014) - Requirements for the Siting and Installation of Solar Photovoltaic (PV) Installations in the Vicinity of Buried Pipelines.

6.4.15 Lifting operations

Where lifting operations are planned to be carried out in the vicinity of medium pressure apparatus a site-specific risk assessment and lift plan is required to be reviewed by the Cadent Plant Protection Officer.

Protection shall be afforded to live apparatus when carrying out the works to prevent impact damage in the event of an uncontrolled failure or drop. Any loads shall be secured using suitable and sufficient lifting accessories to reduce the likelihood of the load being dropped.

Consideration shall be given to the location of lifting equipment and the loads induced into the ground to avoid the potential overloading of buried apparatus. Where the site cannot be laid out to avoid loading gas apparatus, the asset shall be suitably protected with the consent of the Cadent Plant Protection Officer. Alternatively, the asset will require replacement/diversion.

6.5 Backfilling and reinstatement

Reinstatement around Cadent apparatus still poses a risk to the integrity of the asset. A gas asset must not be located within the footway or carriageway construction as this has the potential to cause damage to the apparatus during and post completion of the reinstatement.

No backfilling should be undertaken without Cadent's agreement to proceed. Some equipment may not be suitable for use over or around assets due to the adverse effects of excessive compaction and vibration levels.

A gas asset shall not be encased in concrete or have concrete positioned within 300mm of the asset, or anywhere above an iron gas asset due to the need for future access.

The fine fill material should be firmly packed around the pipe in 100mm layers to achieve a compacted thickness of 75mm and shall be laid to a minimum depth of 150mm above the crown of the asset.

Mechanical compaction equipment shall not be used until a 250mm hand rammed layer has been compacted above the crown of the pipe.

For backfilling and reinstatement in the vicinity of iron apparatus, in addition to the above, the maximum weight of compaction equipment used above the crown of the asset shall not exceed 1.5t/m² and vibratory compaction shall not be used.

Material used in the backfill shall conform to the following requirements:

- Sand shall be well-graded in accordance with BS EN 13242:2002+A1:2007
- It shall not contain any sharp objects, large stones or bricks

- Foamed concrete shall not be used

We will require marker tape to be installed at least 250mm above the crown of the main.

Prior to backfilling, if the asset is coated, Cadent require the opportunity to inspect its condition in order to assess and to carry out any repairs as necessary. Please contact your network Plant Protection office to arrange this. Any damage to the asset or coating shall be reported to the Cadent Plant Protection Officer so that damage can be assessed, and repairs carried out.

Minor (and existing) damage to pipe coating and cathodic protection test leads will be repaired by Cadent free of charge. If the asset has been backfilled without the knowledge of the Cadent Plant Protection Officer, the third party will need to re-excavate to enable the condition of the asset coating to be assessed.

All temporary supports shall be removed prior to backfill but only when the asset is sufficiently supported by bedding material around the pipe.



7. Working in the Vicinity of a Low Pressure Gas Asset (Operating at Pressures up to 75 mbar)

For planned and emergency works in the vicinity of Low Pressure gas assets, the promoter will be advised proceed with caution. The guidance contained within this section must be followed. If it cannot, contact shall be made with the network Plant Protection office for advice.

7.1 Temporary and permanent structures

No temporary or permanent structures are permitted to be installed above, or in close proximity to a gas asset or easement due to the restriction of access this imposes. This includes, but is not limited to, permanent street furniture such as planters and bollards and temporary buildings such as welfare units and other enclosed spaces. The building proximity distances for low pressure assets is as follows:

Material	Minimum proximity to premises
All materials	1m

Please note that the easement distance may be greater than the building proximity distance, for any proposed structures in the easement please consult with the Cadent network Plant Protection Officer.

7.2 Excavation

7.2.1 General

Mechanical excavators should not be sited or moved above an asset.

Mechanical excavators and any other powered mechanical plant shall not dig on one side of an asset with the cab of the excavator positioned on the other side. All traffic should be positioned far enough away from the trench to prevent trench wall collapse.

Excavation with a powered mechanical excavator should not be carried out until gas assets have been located through vacuum excavation or by hand. No mechanical excavation is permitted within 500mm of gas assets. Any mechanical excavation should utilise a banksman. Toothless buckets shall be used due to the potential of damage to assets using toothed excavator buckets.

Consideration shall be given to apparatus installed on gas assets including valves, spindles, pressure points etc. Any fitting, attachment or connecting pipework on the asset shall be exposed by hand.

Where concrete is exposed around gas apparatus this shall not be removed as it could be providing protection or anchorage to the live apparatus.

Where a third party is using any trench support system, they shall ensure that none of its components are in contact with the asset.

The use of chain trenchers to do this is not permitted within 3m of the confirmed location of the asset.

7.2.2 Working in vicinity of iron pipework

When deep excavation greater than 1.5m in depth is carried out in the vicinity of iron pipework, steps shall be taken to ensure the risk associated with immediate and latent asset failure are considered, and where necessary, excavations are cut back to reduce the shear factor created by ground disturbance likely to result in settlement. This also includes instances where excavations are part of construction works including basement conversions, underground car parks, shaft construction, etc.

Care should be taken to ensure that any exposed iron pipework is suitably supported at 1m intervals and is protected from damage to avoid creating tensions that could lead to joint disturbance or pipe barrel fracture.

Where fittings or existing repairs are uncovered care shall be taken to ensure that these are not disturbed.

When working near ductile iron pipework should any corrosion be identified on the pipeline this shall be reported to 0800 111 999 for a first call operative to attend to undertake a hazard assessment.

7.2.3 In proximity to an asset in an easement

Where sufficient depth of cover exists and the absence of attachments and projections has been confirmed (e.g. valve spindles, pressure points etc.), following evidence from hand dug trial holes, light tracked vehicles may be permitted to strip topsoil to a depth of 250mm using a toothless bucket.

No topsoil or other materials shall be stored within the easement without the written permission of Cadent. No fires are allowed in the easement strip or other gas assets.

After the completion of the work, the level of cover over an asset should be the same as that prior to work commencing.

No new service shall be laid parallel to an asset within an easement.

Where work is being carried out parallel to an asset, within or alongside an easement, suitable barriers shall be erected between the works and the asset to prevent encroachment or damage.

7.2.4 In proximity to an asset in the highway

Where sufficient depth of cover exists, and the absence of attachments and projections has been confirmed (e.g. valve spindles, pressure points etc.), following evidence from hand dug trial holes, removal of the bituminous or concrete highway surface layer by

mechanical means is permitted to a depth of 300mm. Where the bituminous or concrete highway surface layer extends below 300mm deep, it shall only be removed by handheld power assisted tools.

7.2.5 Crossing over an asset (Open cut)

Where a new service is to cross over an asset, a minimum clearance distance of 1.5 times the diameter of the gas asset or 300mm, whichever is greater shall be maintained. If this cannot be achieved, the service shall cross below the asset, see Section 7.2.6.

7.2.6 Crossing below an asset (Open cut)

Where a service is to cross below an asset, a minimum clearance distance of 1.5 times the diameter of the gas asset or 300mm, whichever is greater, between the crown of the new service and underside of the asset shall be maintained. The exposed asset shall be suitably supported and protected by matting and timber cladding. Any supports shall be removed prior to backfilling.

7.2.7 Cathodic protection

Cathodic protection (CP) is applied to some buried steel pipes and is a method of protecting assets from corrosion by maintaining an electrical potential between the asset and anodes placed at strategic points along the asset. Where a new service is to be laid and similarly protected, the party installing the CP system shall undertake tests to determine whether the new service is interfering with the cathodic protection of the Cadent asset.

Should any cathodic protection posts or associated apparatus need moving to facilitate third party works, appropriate notice, shall be given to Cadent. Cadent will undertake this work and any associated costs will be borne by the third party.

7.2.8 Installation of electrical equipment

Where electrical equipment is being installed close to Cadent's buried steel assets, the effects of a rise of earth potential under fault conditions shall be considered by the third party and a risk assessment carried out. Equipment shall not be installed if the integrity of Cadent's assets is compromised. In this case, diversion of the affected assets will be required.

The installation of electrical cables parallel to Cadent assets may induce currents into the asset. This may interfere with the effective operation of cathodic protection systems. In these instances, Cadent will require the promoter of the works to conduct pre and post energisation potential surveys of Cadent's assets. The costs for any stray current mitigation systems required will be borne by the third-party promoter.

7.3 Construction traffic

The promoter of the works should review the ground conditions, vehicle types and crossing frequency to determine the type and construction of crossing that will be required. Additionally, no undue loads such as spoil heaps, lighting columns, permanent traffic lights or road signs shall be allowed over gas assets.

Iron pipes, or pipes that are not already within an existing road such as those within footways or verges shall not be crossed by construction vehicles without suitable protection being designed and installed. Consideration shall be given to the requirement for access to low pressure apparatus therefore for large scale, long duration projects, or permanent crossings, the diversions process shall be followed to determine whether the asset requires diversion/replacement in advance of the works taking place.

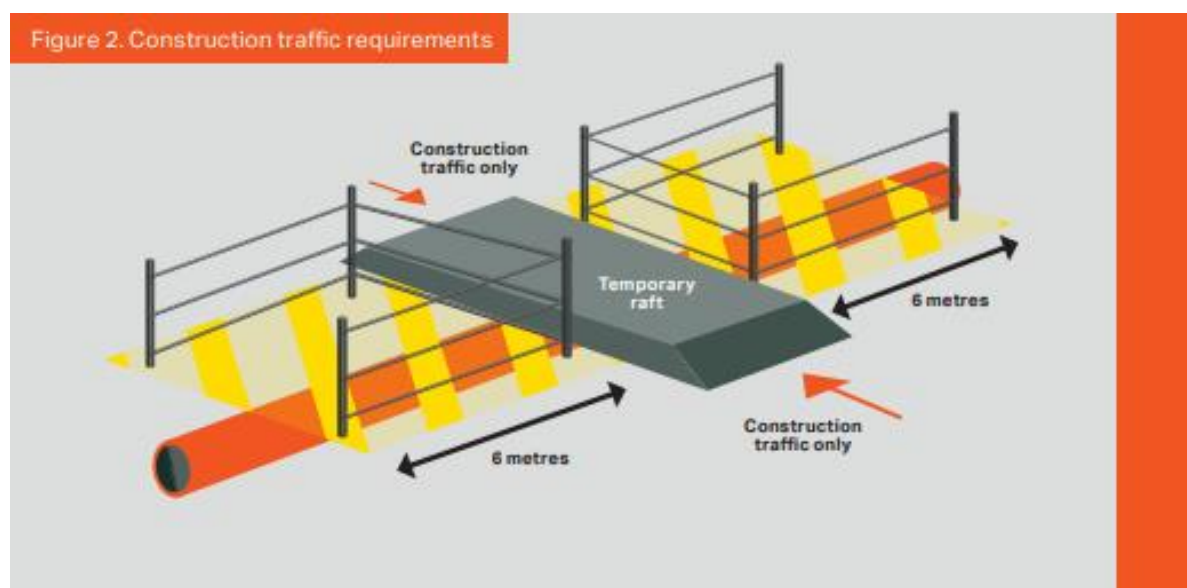
Where existing roads cannot be used, construction traffic should only cross Cadent assets with a minimum depth of cover of 750mm (post crossing construction) at specific locations, with notices directing traffic to the crossing points erected. All crossing points shall:

- Be at right angles to the asset
- Be fenced denoting the existence of the asset to ensure all traffic uses the crossing point. The fencing shall cover the width of any easements and extend a further 6m along the length of any easements on both sides (see Figure 2).
- Have signs attached to the fence denoting the asset that the crossing point is located over
- Be regularly inspected and maintained in good condition

Note: A 5mph speed restriction should be enforced at all crossing points.

Suitable protection methods may include:

- Temporary protection slab
- Free-standing bridges (prefabricated modular steel or pre-cast concrete bridges)
- Proprietary access roadways
- Haul roads (including hardcore, sleepers, steel plates or a combination)



7.4 Specific activities

This section details the precautions that need to be taken when carrying out certain prescribed activities in the vicinity of a Cadent asset. The promoter of works is required to consult Cadent when intending to undertake one of the activities listed below and further advice is required on whether the work has the potential to affect the asset.

7.4.1 Carriageway construction (including widening & bell mouth construction)

Where it is proposed to carry out carriageway construction over an asset previously located in a footway or verge you must contact the diversions team to determine if diversion or replacement of the asset is required before commencement of your works.

7.4.2 Trenchless techniques

Where trenchless techniques are being considered, a formal risk assessment and method statement shall be produced prior to commencing work.

Trial holes shall be undertaken to ensure that sufficient clearance exists between gas assets and the proposed third-party asset (or the pipe to be split if a pipe splitting technique is being used) prior to the works.

If an asset is to be replaced using pipe splitting techniques in the vicinity of iron mains, in addition to the below clauses, an integrity assessment shall be undertaken.

When running parallel to gas assets, the minimum clearance shall be:

- 1m

When crossing gas assets, the minimum clearance shall be:

- 500mm or 1.5 times the diameter of the asset, whichever is greater.

Clearances may need to be increased due to the following factors:

- Ground conditions
- Largest reamer diameter
- Type of reamer used, e.g. hollow, finned, etc.
- Accuracy of equipment being used
- Construction of adjacent services and structures
- Configuration of other underground services crossing or running parallel to the drill path
- Consequences of damage
- Pipe stress increase from potential ground movement

The exposed asset should be suitably supported and be protected by matting and suitable timber cladding to reduce the risk of damage from any broken pipe fragments (if pipe splitting is used). Supports shall be removed prior to backfill but only when the asset is sufficiently supported by bedding material around the pipe.

All lateral crossings shall be exposed around their full circumference with an additional 250mm clearance below. The width of the excavation shall be three times the diameter of the largest reamer or 500mm either side of the largest reamer, whichever is the greatest. These clearances shall be measured from the drill path centre. Each crossing should be manned during the drilling/splitting operation to watch the reamer/splitter pass.

For pipe splitting running parallel to a buried gas asset, trial holes should be undertaken at suitable and frequent locations along the proposed route to confirm sufficient clearance distances exist, and the pipe route is confirmed.

The line of the pipe to be installed/split should be monitored along its length to ensure no variance from its path.

Consideration should be given for a leakage survey to be undertaken before work starts, during the works if safe to do so and following completion. If there is any likelihood of damage to the asset, the operation shall be stopped immediately.

7.4.2.1 Tunnelling

Ground movement may occur when tunnelling in soft ground conditions. Ground movement contours from the tunnelling operation shall be calculated and all gas assets within the affected zone should be identified and assessed.

PE assets can tolerate some differential ground movement.

For cast and ductile iron assets, acceptable limits on stress increase and joint disturbances are defined in the performance acceptance criteria for iron mains.

For steel assets an integrity assessment should be carried out according to the industry standard **IGEM/TD/12 – Pipework stress analysis for gas industry plant**. An expert on Soil/Pipe Interaction Analysis should be sought when required for the evaluation of ground movement effects on the assets.

For any proposed tunnelling works, due to the likely impact on our assets you must contact the diversions team to determine if diversion or replacement of the asset is required before commencement of your works.

7.4.3 Changes to depth of cover

The depth of cover over or around Cadent's iron assets shall not be altered. If a change in the depth of cover is required, you must contact the diversions team to arrange for diversion or replacement of the asset before commencement of your works.

For PE and steel pipes, reductions in depth of cover are only permitted if the below minimum depths of cover can be maintained (following investigation across the affected length):

- In fields and agricultural land 1.1m
- In roads and verges 750mm
- In footpaths 600mm
- In private property 600mm

Substantial increases in depth of cover shall not be permitted.

Where a change in the depth of cover affects attachments and projections such as services and valves, liaison with our diversions team is required to ensure these are appropriately protected or altered.

7.4.4 Piling

No piling shall be allowed within 15m of an asset without an assessment of the vibration levels at the asset.

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec.

For iron assets, the peak particle velocity shall be limited to a maximum level of 25mm/sec.

The promoter of the works should determine the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure the allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made, which may require expert advice.

7.4.5 Demolition

No demolition should be allowed within 150m of an asset for 400m for a structure mass greater than 10,000 tonnes without an assessment of the vibration levels at the asset.

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec.

For iron assets, the peak particle velocity at the asset shall be limited to a maximum level of 25mm/sec.

The promoter of the works should determine the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure the allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought.

Where demolition is proposed you must ensure that the gas supply to the premises has been isolated in a suitable, identified location.

7.4.6 Blasting

The Maximum Instantaneous Charge (MIC) dictates the distance at which an assessment of the vibration levels (at the located asset) is required. The measured distances are as follows:

- 500m if the MIC is greater than 200kg
- 250m if the MIC is greater than 10kg but less than 200kg
- 100m if the MIC is 10kg or less

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75mm/sec.

For iron assets, the peak particle velocity at the asset shall be limited to a maximum level of 25mm/sec.

The promoter of the works should determine the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought.

7.4.7 Surface mineral extraction

An assessment shall be carried out on the effect of surface mineral extraction activity within 100m of an asset. Consideration should also be given to extraction around plant and equipment associated with assets (e.g. cathodic protection ground beds).

Where the mineral extraction extends up to the asset easement, a stable slope angle and stand-off distance between the asset and slope crest shall be determined. Where an easement exists, the easement strip shall be clearly marked by a suitable permanent boundary, such as a post and wire fence. Additionally, where appropriate, slope indicator markers shall be erected to facilitate the verification of the recommended slope angle as the slope is formed, by the third party. The asset easement and slope need to be inspected periodically to identify any signs of developing instability.

This may include any change of slope profile including:

- Bulging
- The development of tension cracks on the slope or easement
- Any changes in drainage around the slope

The results of each inspection should be recorded.

Where surface mineral extraction activities are planned within 100m of the asset but do not extend up to the asset easement boundary, an assessment should be made as to whether this could promote instability in the vicinity of the asset. This may occur where the asset is routed across a natural slope or the excavation is deep. A significant cause of this problem is where the groundwater profile is affected by changes in drainage or the development of lagoons.

Where the extraction technique involves explosives, the provisions of Section 7.4.6 apply.

7.4.8 Deep mining

Assets routed within 1km of active deep mining may be affected by subsidence resulting from mineral extraction. The determination of protective or remedial measures will normally require expert assistance.

7.4.9 Landfilling

The creation of slopes outside of the asset easements may promote instability within the vicinity of the asset. An assessment shall be carried out by the promoter of the works to determine the effect of any landfilling activity within 100m of an asset. The assessment is particularly important if landfilling operations are taking place on a slope in which the asset is routed.

7.4.10 Pressure testing

Pressure testing should not be permitted within 8m of an asset unless suitable precautions have been taken against the effects of a pipe failure.

7.4.11 Seismic surveys

The promoter of works shall advise Cadent of any seismic surveying work in the vicinity of PE or steel assets that will result in peak particle velocities in excess of 75mm/sec at the asset or for iron assets that will result in peak particle velocities in excess of 25mm/sec at the asset.

The promoter of the works should determine the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent Plant Protection Officer on request.

7.4.12 Hot work

Where the Cadent's metallic gas asset has been exposed, welding (or other hot works that may involve naked flames) should not be carried out in proximity of the gas asset.

If the gas asset is PE (or a PE asset is contained within a metallic sleeve) welding, or other hot works that may involve naked flames, shall not take place within 500mm of the gas asset.

Protection measures shall be installed to prevent the effects of sparks, radiant heat transfer etc.

Any hot works in proximity to a Cadent gas asset shall require leakage surveys prior to, during and after the works. If gas is detected, all works shall stop, and the leak immediately reported to the National Gas Emergency Service on 0800 111 999.

7.4.13 Wind turbines

Wind turbines shall not be sited any closer than 1.5 times the proposed height of the turbine mast away from the nearest edge of the asset.

Further guidance can be found from UKOPA's Good Practice Guide 13 (UKOPA/GP/013) - Requirements for the Siting and Installation of Wind Turbines Installations in the Vicinity of Buried Pipelines.

7.4.14 Solar farms

Solar Farms can be built adjacent to assets but never within an easement.

Interference checks shall be completed by the third party to ensure that the solar installations and associated infrastructure have no negative effect on cathodic protection systems.

Further guidance can be found from UKOPA's Good Practice Guide 14 (UKOPA/GP/014) - Requirements for the Siting and Installation of Solar Photovoltaic (PV) Installations in the Vicinity of Buried Pipelines.

7.4.15 Lifting operations

Where lifting operations are planned to be carried out in the vicinity of low pressure apparatus a site-specific risk assessment and lift plan is required.

Protection shall be afforded to live apparatus when carrying out the works to prevent impact damage in the event of an uncontrolled failure or drop. Any loads shall be secured using suitable and sufficient lifting accessories to reduce the likelihood of the load being dropped.

Consideration shall be given to the location of lifting equipment and the loads induced into the ground to avoid the potential overloading of buried apparatus. Where the site cannot be laid out to avoid loading gas apparatus, the asset shall be suitably protected with the consent of the Cadent Plant Protection Officer. Alternatively, the asset will require replacement/diversion.

7.5 Backfilling and reinstatement

Reinstatement around Cadent apparatus still poses a risk to the integrity of the asset. A gas asset must not be located within the footway or carriageway construction as this has the potential to cause damage to the apparatus during and post completion of the reinstatement.

No backfilling should be undertaken without Cadent's agreement to proceed. Some equipment may not be suitable for use over or around assets due to the adverse effects of excessive compaction and vibration levels.

A gas asset shall not be encased in concrete or have concrete positioned within 300mm of the asset or anywhere above an iron gas asset due to the need for future access.

The fine fill material should be firmly packed around the pipe in 100mm layers to achieve a compacted thickness of 75mm and shall be laid to a minimum depth of 150mm above the crown of the asset

Mechanical compaction equipment shall not be used until a 250mm hand rammed layer has been compacted above the crown of the pipe

For backfilling and reinstatement in the vicinity of iron apparatus, in addition to the above, the maximum weight of compaction equipment used above the crown of the pipe shall not exceed 1.5t/m² and vibratory compaction shall not be used.

Material used in the backfill shall conform to the following requirements:

- Sand shall be well-graded in accordance with BS EN 13242:2002+A1:2007
- It shall not contain any sharp objects, large stones or bricks
- Foamed concrete shall not be used

We will require marker tape to be installed at least 250mm above the crown of the pipe. Any damage to the asset or coating shall be reported to the Cadent Plant Protection Office so that damage can be assessed, and repairs carried out.

Minor (and existing) damage to pipe coating and cathodic protection test leads will be repaired by Cadent free of charge. If the asset has been backfilled without the knowledge of the Cadent Plant Protection Officer, the third party will need to re-excavate to enable the condition of the asset coating to be assessed.

All temporary supports shall be removed prior to backfill but only when the asset is sufficiently supported by bedding material around the pipe.

8. Working in the Vicinity of a Pressure Reduction Installation (PRI)

Pressure reduction installations come in a variety of forms:

- Above Ground Installation (AGI) – Sites with exposed pipes surrounded by fencing
- Above Ground Installation (AGI) – District governors often found in large above ground kiosks with vent stacks attached
- Below Ground Installation – District governors with large surface governors for valves and pressure reduction equipment with an above ground control cabinet and vent stack
- Service governor Installations – Small service governors providing gas to a small number of customers in an area often identified by a small green or brick kiosk

Where excavations are to be made within 10 metres of the perimeter of a pressure reduction installation (above or below ground), with the exception of service governor installations, appropriate protection methods should be determined and recorded by the Cadent Plant Protection Officer.

These installations may have magnetic slam shut devices which could operate in the event of high vibration levels being caused by the works. Advice on whether these are present shall be sought from the Cadent Plant Protection Officer and we may need to have an operative, with the competence to reset the plant, on site whilst your works are being undertaken.

Hazardous areas may be present around these installations and no ignition sources are permitted within these zones. Information on the zonings shall be sought from the Cadent Plant Protection Officer prior to commencement of any works on site.

There may be telemetry and pressure recording lines in the vicinity of these installations therefore extreme caution must be exercised when planning and undertaking works in the vicinity of these assets.

In addition to this, the safety advice detailed in either or a combination of Sections 5, 6 or 7 shall be observed when working in the proximity of an AGI.

Access to gas assets shall be maintained at all times.

9. Tree Planting

Before any tree planting is carried out in the vicinity of a Cadent asset or its easement, written consent should be obtained. This approval should be subject to Cadent retaining the right to remove any trees which might become a danger or restrict access to the asset at any time in the future.

The only hardwood plants which can be planted directly across an asset are shallow rooting hedge plants such as Quickthorn, Blackthorn, etc., and these shall only be planted where a hedge is necessary for screening or to indicate a field boundary.

Raspberries, Gooseberries and Blackcurrants shall not be planted within 2m of the outside edge of the pipe.

Dwarf Apple Stocks shall not be planted within 3m of an asset.

Christmas trees (Picea Abies) shall not be planted within 3 metres of an asset. However, permission may be given on the strict understanding that Christmas trees are clear-felled at intervals not exceeding seven years.

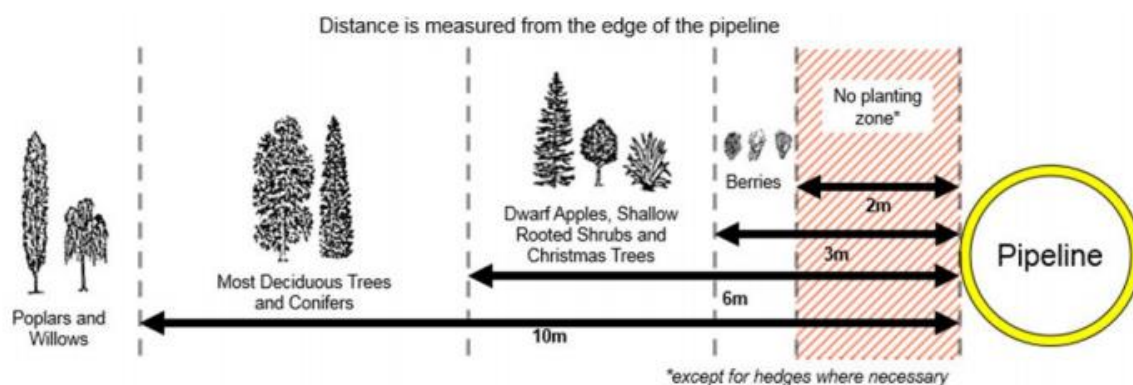
The following trees, and those of similar size which may be deciduous or evergreen, shall not be planted within 6 metres of an asset:

- Ash, Beech, Birch, most Conifers, Elm, Maple, Horse Chestnut, Oak, Sycamore, Apple, Lime and Pear trees.

Dense mass planting shall not be carried out within 10m of the outside edge of the pipe.

Poplar and Willow trees shall not be planted within 10m of the outside edge of the pipe.

For further guidance please refer to NJUG Volume 4.



10. Unidentified Exposed Pipes

An unidentified pipe is one that is not shown on any current or historical records.

Iron and steel water pipes and gas pipelines may appear very similar. If any such pipe is uncovered, it shall be treated as if it were a gas pipe.

If upon checking with all other utilities you believe an unidentified pipe to be a gas pipe, the promoter of the works shall contact plantprotection@cadentgas.com with the following information:

- LSBUD enquiry reference
- Site address (please include postcode and grid references)
- Site contact details
- Size of pipe
- Pipe material
- Confirmation that the unidentified pipe is exposed (if not, it will need to be exposed prior to our attendance)
- Confirmation that Cadent and all other asset owners plans, are available for review and inspection
- Photos of the pipe

Please be aware that it can take up to 28 days for us to confirm whether the unidentified exposed pipe is a gas asset or not.

11. Action in case of Damage to an Asset

If you hit a gas asset, whether the damage is visible or not, or in the event of an emergency, call the National Gas Emergency Service immediately on 0800 111 999*.

If the Cadent asset is damaged, even slightly, and even if no gas leak has occurred, then the following precautions shall be taken immediately:

- Shut down all plant and machinery and extinguish any potential sources of ignition.
- Evacuate all personnel from the vicinity of the asset
- Notify Cadent using the free 24-hour emergency telephone number 0800 111 999
- Notify the Cadent responsible person immediately using the contact telephone number provided.
- Ensure no one approaches the asset.
- Do not try to stop any leaking gas.
- Provide assistance as requested by Cadent, or emergency services to safeguard persons and property



12. References

Document reference	Title
HASAWA	The Health and Safety at Work etc Act 1974
CDM	The Construction (Design and Management) Regulations 2015
LOLER	Lifting Operations and Lifting Equipment Regulations 1998
RIDDOR	Reporting of Injuries, Diseases & Dangerous Occurrences Regulations 2013,
GS(M)R	Gas Safety (Management) Regulations 1996
PSR	Pipelines Safety Regulations 1996
NRSWA	New Roads and Street Works Act 1991
HS(G)47	Avoiding Danger from Underground Services
IGEM/SR/18	Safe Working Practices to Ensure the Integrity of Gas Pipelines and Associated Installations
IGEM/TD/12	Pipework stress analysis for gas industry plant
NJUG Volume 4	Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees
UKOPA/11/0027	Requirements for the Siting of Wind Turbines Close to HP Pipelines
UKOPA/GP/013	Requirements for the Siting and Installation of Wind Turbines Installations in the Vicinity of Buried Pipelines
UKOPA/GP/014	Requirements for the Siting and Installation of Solar Photovoltaic (PV) Installations in the Vicinity of Buried Pipelines

13. Glossary of Terms

Term	Definition
Easement	Easements are negotiated legal entitlements between Cadent and landowners and allow Cadent to lay, operate and maintain assets within the easement strip. Easement strips may vary in width, typically between 6 and 25 metres depending on the diameter and pressure of the pipeline. Consult Cadent for details of the extent of the easement strip where work is intended.
Liquefaction	Liquefaction is a phenomenon in which the strength and stiffness of the soil is reduced by earthquake shaking or other rapid loading. Liquefaction occurs in saturated soils, that is, soils in which the space between individual particles is completely filled with water. When liquefaction occurs, the strength of the soil decreases and the ability of the soil to support assets are reduced.
Promoter of works	The person or persons, firm, company or authority for whom new services, structures or other works in the vicinity of existing Cadent assets and associated installations operating above 7 bar gauge are being undertaken.
Cadent Plant Protection Officer	The person or persons appointed by Cadent with the competencies required to act as the Cadent representative for the purpose of monitoring a particular activity.
Banksman	Another person who assists the machine operator from a position where they can safely see into the excavation and warn the driver of any services or other obstacles. This person should remain outside of the operating radius of the excavator arm and bucket.

Appendix A – Asset Location Markers



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FY23 Mains diversion charges

Location:	Smithy Bridge Road, Rochdale
UU Reference:	4100525213
Date Issued:	04.05.2022

Non contestable / Contestable	Charges Scheme Reference	Charge Item	Charge Unit	Charge	Quantity	Net Cost	VAT rate	VAT	Total
Non contestable	4.7.2	Mains diversion administration fee	Fixed fee	£ 234.00	1	£ 234.00	20%	£ 46.80	£ 280.80
Non contestable	4.5.1	Branch connection - Surfaced (100mm to 160mm)	Each	£ 6,551.00	1	£ 6,551.00	20%	£ 1,310.20	£ 7,861.20
Contestable	4.5.1	Piece-up connection - Surfaced (100mm to 160mm)	Each	£ 1,350.00	1	£ 1,350.00	20%	£ 270.00	£ 1,620.00
Non contestable	4.5.1	End connection - Surfaced (161mm to 315mm)	Each	£ 3,021.00	2	£ 6,042.00	20%	£ 1,208.40	£ 7,250.40
Contestable	4.5.2	Additional metre of PE main - Surfaced (100mm-160mm)	Metre	£ 291.00	5	£ 1,455.00	20%	£ 291.00	£ 1,746.00
Contestable	4.5.2	Additional metre of PE main - Surfaced (161mm-315mm)	Metre	£ 363.00	10	£ 3,630.00	20%	£ 726.00	£ 4,356.00
Non contestable	4.8	Mains abandonment - Surfaced (161mm-315mm)	Each	£ 2,329.00	1	£ 2,329.00	20%	£ 465.80	£ 2,794.80
Non contestable	4.8	Chamber abandonment up to 900mm x 600mm (per chamber) - Surfaced	Each	£ 265.00	4	£ 1,060.00	0%	£ -	£ 1,060.00
Mains diversion cost						£ 22,651.00		£ 4,318.20	£ 26,969.20

Additional charges for information only. These will be invoiced separately if applicable

Non contestable	9.2	Site visit charges (Exclusive of VAT)	per visit	£ 81.00
Non contestable	9.7	Demobilisation/remobilisation charge (Exclusive of VAT)	per visit	£ 1,198.00

Description for elements of work affected by "Exceptional Circumstances" (where applicable)

Enter description of Exceptional charges

Your budget costs and guidance for your Diversion enquiry

TDS (Northern) Ltd
Northern House
3A Kennerleys Lane
Wilmslow
SK9 5EQ
FAO Caitlin Hillman

United Utilities Water Limited
Developer Services
Second Floor Grasmere House
Lingley Mere Business Park
Lingley Green Avenue
Warrington WA5 3LP

Telephone: 0345 072 6067
Email: developerserviceswater@uuplc.co.uk

Our ref: 4100525213
Date: 4th May 2022

Dear Caitlin,

Location: Smithy Bridge Road, Rochdale OL16 2SG

Please see your budget costings attached, which are based on the information provided in your enquiry.

Our charges change each year on the 1st April. If you would like us to provide formal costings for this work please email us at developerserviceswater@uuplc.co.uk or telephone on 0345 072 6067, providing the reference number above. Your request would then be evaluated and any application fees would need to be paid prior to the firm costings being calculated.

These costs are based on the following:

- a) costs have been provided by a desk top survey.
- b) we assume there are no engineering difficulties.
- c) budget costs are based on the land being non-contaminated and the use of PE pipe.
- d) No provision has been made for any Traffic Management/exceptional circumstances costs.

Existing United Utilities water assets

To help plan your development I have enclosed a copy of our asset records. This shows that we have no operational assets within the boundaries of your proposed development, other than those at the site entrance.

Important note

This copy of our asset records is only provided to help you assess the likely risks when planning your development at a desk top stage. It is not intended to be used for planning any actual excavation or construction work. You are reminded that a Health and Safety plan should include an up to date record of all underground equipment.

I trust the information is sufficient for your present requirements but if you wish to discuss the matter further please contact me on the number above. If you need any assistance with this please do not hesitate to contact us on 0345 072 6067.

Yours sincerely

Rachel Yates

Project Design Engineer

Enc. Budget costs, water mains records, standard conditions.

Standard Conditions for Works Adjacent to Pipelines

Document Ref. 90048

Issue 3.1 July 2015

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AMENDMENT SUMMARY

Amendment No. Date	Brief Description and Amending Action	Owner	Verifier
3.1 July 2015	'Easement Area' defined and legal clarifications made.	Neil Sixsmith	Jim Tresnan
3.0 March 2015	Full review and update	Neil Sixsmith	Jim Tresnan
2.0 May 2014	Full review and update. Appendix 1 incorporated to provide guidance on tree roots and planting. Improvements to document around vibration monitoring and discolouration	Peter Tucker	Nick Preston
1.2 October 2007	Alterations into Distribution Manual	Richard Duckett	
1.1 August 2007	Alteration to Guideline number 12	Paul Gough	Tony Conway
1 July 2003	First issue in standard format	Phil Hayden / Ian Skilling	Peter Womersley

HISTORY OF THE DOCUMENT

The following table details the task team involved in the full review of the Standard Conditions:

Date and Issue Number	Task Team members
3.0 March 2015	Peter Tucker – UU Engineering Nick Preston – UU Engineering Jim Tresnan – UU Engineering Neil Sixsmith – UU Water Services (Network) Owen Newton - UU Engineering Mike Taylor – UU Water Services (Network)

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1. SCOPE

This document sets out United Utilities Ltd (UU) standard conditions for work carried out over, under or adjacent to a UU Pipeline which can include multiple UU Pipelines laid adjacent to each other.

It is UU company policy not to allow any building over UU Pipelines or water mains. Any such building / structure would compromise UU's obligation to maintain a constant water supply and, in particular, would obstruct UU's ability to respond in the event of a failure of the Pipeline. Building over mains also has potential risks to the health and safety of anyone who might be affected by a failure, including the occupants of the building.

2. DEFINITIONS

Term	Definition
Pipeline	Means any aqueduct, trunk main, water distribution main, multiple pipes laid adjacent to each other or non-potable main vested in UU as water undertaker.
Easement Area	Means the easement specified in any relevant document, e.g. conveyance, transfer or deed of grant with such widths as specified therein.
Easement Width	Means the Easement Width for any Pipeline laid under statutory powers. For large diameter Pipelines, unless otherwise specified, the Easement Width shall extend 5 metres to each side of the Pipeline from its centreline (10 metres total width). For small single Pipelines of up to and including 300mm diameter, unless otherwise specified, the Easement Width shall extend 3 metres to each side of the Pipeline from its centreline (6 metres total width) Contact UU for specific Easement Width limits and conditions.
Street	The whole or part of any highway, any road, lane, footway, alley or passage, square or court, whether or not a thoroughfare. A Street can therefore be a footpath, cycle track, bridleway or full vehicular highway. Where a Street passes over a bridge or through a tunnel these are included as part of the Street.
PPV	Peak Particle Velocity
Shall or Must	Mandatory requirements are adopted through the use of 'shall' or 'must' or are otherwise specifically stated. The document also contains information and guidance that is not mandatory but is provided for consideration.
Stopping up Order	An order authorising the stopping up (removal of public rights of way) of any highway, if the Secretary of State is satisfied to do so, to allow development to be carried out in accordance to a valid and relevant planning permission granted under the Town and Country Planning Act 2008 as amended or re-enacted from time to time.
Promoter	Any utility company, self-lay organisation, developer, Highway Authority, Local Authority or any other organisation wishing to work adjacent to or cross over or under a UU Pipeline.

3. GUIDELINES

3.1. General Guidelines

3.1.1. The Standard Conditions are issued for the guidance of Promoters and others to reduce the risk of damage to the Pipeline and the consequent liability for such damage. They do not replace or alter any powers or rights exercisable by, or protection afforded to UU by virtue of: -

- a) Its ownership of the Pipeline or any rights or privileges in relation thereto;
- b) Any conveyance, lease, deed or grant, easement (see Figure 1 Easement Widths), licence, wayleave or other legal document relating to the Pipeline;
- c) Any statutory provision (including any provision in subordinate legislation) including but not limited to: -
 - i. The Water Industry Act 1991 as amended or re-enacted from time to time, will also apply.
 - ii. Any local statutory provision relating to a Pipeline and to any work of any other body or person which regulate, either generally or in relation to any specific crossing or work, the relations between UU and such other body or person, including any agreement or other document referred to in or incorporated with any such statutory provision.

In the event of any inconsistency between the provisions of these Standard Conditions and those of any document or statutory provision mentioned above, the latter shall prevail unless capable of variation by agreement and the substitution of the relevant provisions of these Standard Conditions is expressly agreed.

- 3.1.2. The Standard Conditions apply to all Pipeline(s). In the case of Pipeline(s) located in streets, the provisions of the New Roads and Street Works Act 1991 and the Traffic Management Act 2004, as amended or re-enacted from time to time, will also apply.
- 3.1.3. No work of any description shall take place on or within the Easement Area or Easement Width before full agreement has been reached with UU regarding the manner in which the work shall be carried out and consent to the same has been given in writing. At least 28 days' notice shall be given of any intention to carry out works in the Easement Area or Easement Width.
- 3.1.4. No vehicle, plant or machinery is to stand, operate or travel within the Easement Area or Easement Width of the Pipeline except as agreed by United Utilities.
- 3.1.5. UU reserves the right to supervise any work carried out on or within the Easement Area or Easement Width and to recover the costs incurred.
- 3.1.6. No buildings / structures of any description shall be erected within the Easement Area or the Easement Width.
- 3.1.7. No service shall cross the Pipeline at less than 1 metre in front of a socket face or at less than 300mm behind it. (See Figure 2)
- 3.1.8. No materials including spoil shall be placed on or stored within the Easement Area or Easement Width.
- 3.1.9. Access to and along the Easement Area or Easement Width shall be kept clear and unrestricted at all times. See Section 7, 'Easement Infringements'.

- 3.1.10. Sanitary arrangements approved by UU shall be provided for persons working on or within the Easement Area or Easement Width. Precautions shall be taken to avoid spillage of fuels, oils, paints, solvents or any other substance, which may damage the Pipeline or its protection.
- 3.1.11. Where construction of a new structure / building is proposed within 1m of the edge of the Easement Area or Easement Width, its foundations shall be designed to ensure that load from the structure / building is not transferred onto the Pipeline. The design shall also ensure that UU has full access to the lowest point of the bedding of the Pipeline for maintenance or construction purposes
- 3.1.12. No alteration to the existing ground levels or surface use of the Easement Area or Easement Width shall be made without prior written consent from UU. At least 28 days notice shall also be given of any proposal to alter ground levels or the surface of land adjoining the Easement Area or Easement Width. This includes increasing the ground level above the Pipeline by placing material to form a landscaping bund or road (or other) embankment, as this has the potential to cause settlement to the Pipeline that could damage it.
- 3.1.13. Persons or their Promoters working on or within the Easement Area or Easement Width shall be required to indemnify UU for the full cost of any damage caused to its Pipelines and for any costs, charges and expenses resulting from these operations.
- 3.1.14. In an emergency, contact shall be made immediately using the following telephone number:

The UU Response Manager is available on-

07713887302 and this number shall be used for EMERGENCIES ONLY

e.g. if the UU Pipeline is damaged / burst the UU response Manager must be contacted immediately.

Please supply the UU Response Manager with the following information:

Who you are (name and company)?

What is your contact number?

Exactly where you are (in order to quickly identify which main is damaged and potential risks to UU)?

What is the damage?

Is it causing flooding?

Is flood water entering a watercourse?

4 ISSUES AFFECTING A PIPELINE DURING CONSTRUCTION ACTIVITIES

4.1. Temporary Access

- 4.1.1. Movement of vehicles and plant with a total weight exceeding 6 tonnes across the unprotected Pipeline is forbidden. The repetitive movement of vehicles or plant of any weight over the unprotected Pipeline in the same position is forbidden. Where temporary or permanent access is required, the Promoter must consult with UU prior to gaining access.

- 4.1.2. Each proposed temporary crossing point of a Pipeline shall be considered on an individual basis. The Promoter shall submit the design of the proposed crossing point to UU for acceptance. Work to construct the temporary crossing point shall not commence without prior written consent from UU.
- 4.1.3. The Promoter shall design any temporary crossing point such that the load from any vehicle or any item of construction plant that will use the crossing point creates a suitably factored bearing pressure of not more than 8.5kN/m² at the crown of the UU Pipeline. (N.B. *This load is approximately equivalent to the loading on a Pipeline with 900mm of cover when a 6 tonne excavator crosses above it.*) In order to achieve this, the Promoter may use substantial timber baulks, reinforced concrete slabs or proprietary ground protection systems (e.g. Eve Trakway). Where it is not possible to distribute the surcharge load from the plant to less than 8.5kN/m² at the crown of the Pipeline, then the design of the temporary crossing point shall consist of a suspended crossing which bridges over the Pipeline.
- 4.1.4. Temporary crossing points shall only be used to allow vehicles and plant to traverse across a Pipeline. Temporary crossing points are not to be used as working platforms for construction plant. Plant shall not be allowed to operate above a UU Pipeline unless specific written consent is given by UU. Any request by a Promoter for them to site working plant above a UU Pipeline must demonstrate that the platform which their plant is to be sited on has been designed as a working platform and will ensure that the maximum surcharge load from that plant is distributed to less than 8.5kN/m² at the crown of the Pipeline, or bridges over the Pipeline.
- 4.1.5. All parts of a temporary crossing point must be removed when the work is complete, unless written consent is obtained from UU for the crossing to be left in place. The design and construction of the temporary crossing point shall be such that it permits for its removal (and the reinstatement of the ground beneath it) without exposing the Pipeline to undue loading, vibration or risk.

4.2. Temporary Fencing

- 4.2.1. Fencing shall be erected by the Promoter when they are working in and around the Easement Area or the Easement Width to demarcate its location, to regulate vehicle movements and to confine the crossing of the Pipeline only to approved crossing points. The fencing shall be of substantial construction. It shall be adequately maintained at all times to the satisfaction of United Utilities.

4.3. Excavations within an Easement Area or Easement Width

- 4.3.1. Prior to general excavation, trial holes shall be dug by hand to determine the precise location of the Pipeline. UU reserves the right to carry out such excavations. The cost of all such excavations shall be borne by the Promoter.
- 4.3.2. Excavations shall be fully supported and shall be backfilled to the satisfaction of UU. All work shall be carried out during normal working hours, which shall have been previously agreed with UU. UU reserves the right to stop all work on or within the Easement Area or Easement Width which, in the opinion of its officers, places the Pipeline at risk. As a consequence of such action, UU shall not accept any claims for financial loss.
- 4.3.3. All excavations within the Easement Area or Easement Width shall be carried out by hand or may be carried out by mechanical excavator if under the supervision of UU personnel. Excavation within 1 metre of the Pipeline(s) must be carried out by hand and great care must be exercised to ensure that any protective wrapping is not damaged.
- 4.3.4. If a thrust block is discovered within any excavation adjacent to a Pipeline(s), then work shall be stopped and the excavation backfilled as soon as possible.

4.4. Ground Vibration

- 4.4.1. No blasting shall be carried out within 300 metres of the Pipeline(s) without prior written consent from UU, unless it can be demonstrated that ground vibration from such activities shall not exceed a peak particle velocity (PPV) of 5mm/s in any plane at the closest point of the Pipeline(s) to the blast.
- 4.4.2. Demolition, piling, tunneling or any other construction technique which induces significant vibration (not exceeding a peak particle velocity of 5mm/s) shall be permitted up to 10 metres away from the Pipeline(s). Permission will be granted by UU provided that the Promoter has accurately established the position of the Pipeline(s) and this has been verified by UU and a written statement of the precautions to be taken to ensure the safety of the Pipeline(s) has been submitted by the Promoter and received and consented to by UU prior to works being undertaken.
- 4.4.3. Should demolition, piling, tunneling or any other construction technique which induces significant vibration be proposed within 3.5 - 10 metres of the Pipeline(s) this shall be subject to seismic monitoring in order to prevent damage to the Pipeline(s). The Promoter shall accurately establish the position of the Pipeline(s). Seismograph readings shall be taken by the Promoter's specialist organisation on the line of the Pipeline at locations to be agreed with UU. Vibration monitoring shall be done under the supervision of a specialist organisation which has significant experience of similar monitoring work. The identity of the specialist organisation shall be proposed by the Promoter and approved by UU. This approval should not be unreasonably withheld or delayed. The cost of the seismic monitoring shall be borne by the Promoter. Vibration shall be measured in terms of peak particle velocity (PPV) and the Promoter shall employ suitable methods of construction in carrying out its works such that the PPV does not exceed 5mm/s. If the measured PPV does exceed 5mm/s then work shall cease immediately and a review of the monitoring data shall be undertaken between the Promoter and UU Engineering staff. If necessary UU shall notify the Promoter of any reasonable mitigation measures to protect the Pipeline(s) that it requires the Promoter to carry out. The Promoter shall comply with these reasonable mitigation measures in carrying out its works. A written statement of the precautions to be taken to ensure the safety of the Pipeline(s) shall be submitted by the Promoter and received and approved by UU prior to works being undertaken.
- 4.4.4. If UU identify that there is a risk of discolouration of the potable water supply the Promoter shall not excavate within 1m of the Pipeline(s) in any plane. Given the fact that there shall be significant excavation by hand, it may be more economical for the Promoter to consider directional drilling or another form of trenchless technique. UU would prefer this as an alternative construction technique.
- 4.4.5. Where practical, and when requested by UU due to the risk of discolouration, downstream turbidity monitoring should be undertaken for potable water Pipelines irrespective of Pipeline diameter. If UU reports to the Promoter that the turbidity levels measured in the main are very close to or exceeding the regulatory standards then work shall cease immediately and a review of the monitoring data shall be undertaken between the Promoter and UU Engineering staff. If necessary UU shall notify the Promoter of any reasonable mitigation measures to protect the Pipeline(s) that it requires the Promoter to carry out. The Promoter shall comply with these reasonable mitigation measures in carrying out its works.

5 ISSUES PERMANENTLY AFFECTING A PIPELINE OR EASEMENT

5.1. Permanent Access

- 5.1.1. Any proposed crossing of the Pipeline shall be considered on an individual basis. Any permanent access crossing the Easement Area or Easement Width shall be

designed and constructed by the Promoter to prevent any damage to the Pipeline. This may typically consist of mass concrete filled trenches constructed on either side of the Pipeline(s) with reinforced concrete slabs spanning between them. The Promoter shall submit the design of the proposed crossing point to UU for acceptance. Work to construct the permanent crossing point shall not commence without prior express written consent from UU.

5.2. Permanent Fences and Boundaries

- 5.2.1. Fences or other boundaries structures crossing the Easement Area or Easement Width shall be as near as possible perpendicular to the line of Pipeline and in no case shall be made at an angle of less than 45 degrees. Proposals for any new fences or other boundary structures shall be submitted to UU for approval. Where necessary a lockable gate shall be provided for UU for their sole use.

5.3. Installation of New Services within the Easement

- 5.3.1. Any pipes, drains, electricity cables or sewers crossing unmade ground over or under the Pipeline shall be laid in steel conduit or ductile iron pipe ideally unjointed (or similar UU approved material) and adequately supported so as to be self-supporting over any subsequent excavation which may have to be carried out i.e. they should extend well into the undisturbed ground at each side of the Pipeline trench and shall cross as near as possible to 90 degrees to the Pipeline.
- 5.3.2. In no case shall any crossing be made at an angle of less than 45 degrees.
- 5.3.3. Provided that ground conditions are suitable, pipes crossing below the Pipeline shall be constructed by an approved tunneling method, and agreed by UU. The Promoter shall demonstrate that the predicted - and actual - ground settlement at the level of the invert of the Pipeline as a result of their pipes crossing below the Pipeline is not more than 20mm.
- 5.3.4. For UU Pipelines up to and including 300mm diameter, any pipes drains, electricity cables or sewers laid adjacent to the Pipeline must have a minimum clearance of 300mm from it. For UU potable water Pipelines over 300mm diameter (or for smaller diameter Pipelines where UU network operations have highlighted a risk of discoloration), there shall be a clearance between the pipes, drains, electricity cables or sewers and the Pipeline that is greater than or equal to the diameter of the Pipeline (ideally at least 1m clearance if possible to reduce the risk of discoloration). These clearances shall apply to crossings above or below the Pipeline, and include pipes, drains, electricity cables or sewers laid adjacent to the Pipeline.
- 5.3.5. The Promoter shall exercise suitable care when selecting and placing backfill material for any excavation dug within the Pipeline Easement to ensure that it is adequately compacted, provides sufficient support to the Pipeline and will not cause damage to the Pipeline. Reference should be made to the current version of 'Civil Engineering Specification for the Water Industry' (CESWI).

5.4. Cathodic Protection of Pipelines

- 5.4.1. Where cathodic protection is proposed for the Promoter's works, or where it exists in connection with UU's Pipeline, the Promoter shall take all necessary steps to ensure that the integrity of the system is maintained during the construction of the works. Where cathodic protection exists on UU's Pipeline, or is to be installed by the Promoter on his apparatus, interference tests shall be carried out on completion of the works at the Promoter's expense. Where such tests indicate that UU's Pipeline may be at risk, then the Promoter, at his own expense, must install suitable remedial measures, to be agreed by UU. UU must be consulted in the case of installation of electric tramways over Pipelines.

5.5 Mains Adjacent to Buildings in Streets

- 5.5.1 Water mains may be laid in a Street or an Easement Area. Sometimes this is immediately adjacent to a building. In the case of an Easement Area, new buildings and their foundations may not be built within 2.5m of an existing water main (5m for mains > 300mm). This is to facilitate repair and maintenance.

5.6. New Roads, Communal Parking and Driveways

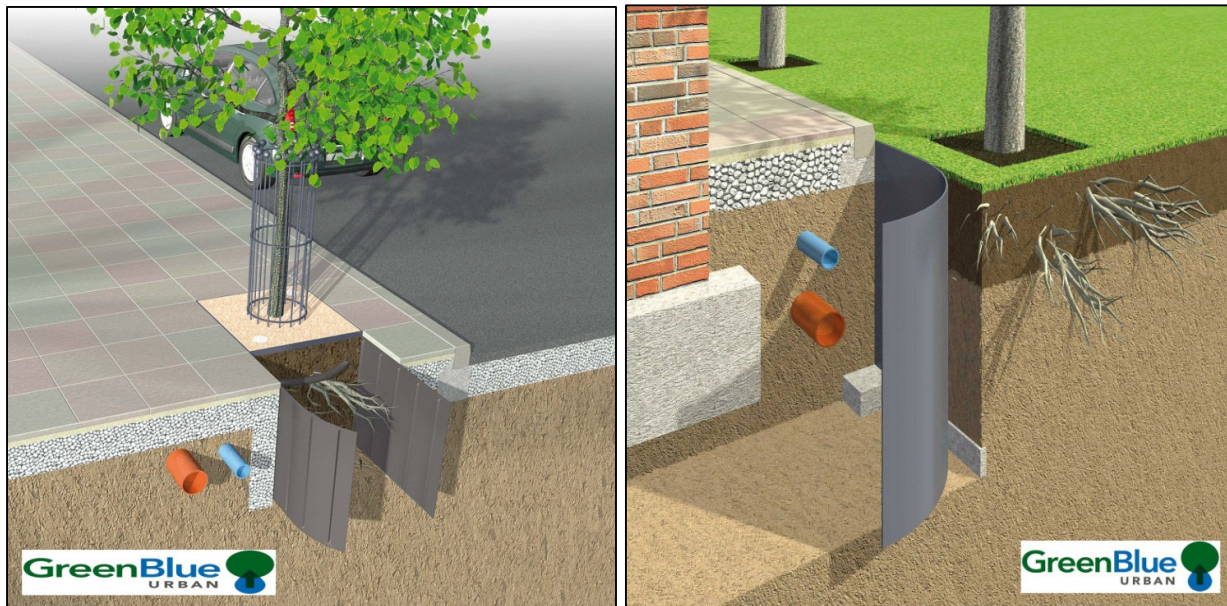
No alteration to the surface use of the Easement Area or Easement Width for the purpose of constructing a road, communal parking or private driveways (except for vehicular crossings at >45degrees) shall be made without prior written consent being obtained from UU.

6 PLANTING NEAR TO PIPELINES

- 6.1 Written consent must be obtained from UU before any tree or shrub planting is carried out. Any consent is subject to UU retaining the right to remove, at any time, all trees or shrubs that in its opinion becomes a danger or nuisance to the pipeline or asset.
- 6.2 Selection and planting of tree species should be in accordance with BS8545:2014 Trees: from nursery to independence in the landscape. Recommendation.
- 6.3 Planting of shallow rooted hedge plants, domestic soft fruiting bushes and ornamental shrubs shall be permitted however these shall not be permitted to develop as shrub trees and shall be maintained by the Promoter / Owner to a maximum height of 1.5m.
- 6.4 There shall be strictly no planting of Populus ssp. or Salix ssp. within 10 metres of a Pipeline.
- 6.5 Restrictions apply to all Easement Areas and Easement Widths see Appendix 1 for details. This includes a non-exhaustive list of trees and recommended planting distances.



- 6.6 United Utilities will consider the provision of specific tree root barriers where there is a need to establish trees closer to Pipeline(s) than would normally be acceptable best practice. Vertical or horizontal barriers can be effective and acceptable so long as they are professionally specified and installed following manufacturer's instructions and a suitable distance from the tree trunk to ensure tree stability at maturity. See the figures below for typical examples of these methods. These barriers shall be 1 – 2mm thick semi rigid type and be fitted by either a specialist installer or by very closely following the manufacturer's guidance. Further advice about root barriers can be found in BS8545.



Images supplied by GreenBlue Urban

- 6.7 A useful publication that can assist with planting near to utilities is “*NJUG Guidelines for the Planting, Installation and Maintenance of Utility Apparatus in Proximity to Trees*”

7 EASEMENT INFRINGEMENTS

- 7.1 UU acknowledges that there are situations where structures have been erected either directly above the Pipeline, or within an Easement Area or Easement Width. These encroachments should be assessed and recorded and appropriate actions taken. The assessment shall consider the potential risks to both UU's asset and the structure upon it.
- 7.2 The options available to UU are:-
- Notify owner of risks
 - Notify owner and consider mains diversion at owners cost with any required legal documentation to entered into
 - UU may take legal action to obtain a court order to instruct removal of the structure at the owners cost.

The key factors to be considered when selecting one of these options are:-

- a) Security of supply
- b) Health and safety
- c) Cost benefit
- d) Company reputation
- e) Probability of Pipeline failure and likely consequences. These will vary with the Pipeline material, diameter, depth below foundation, ground conditions and the operating regime of the Pipeline

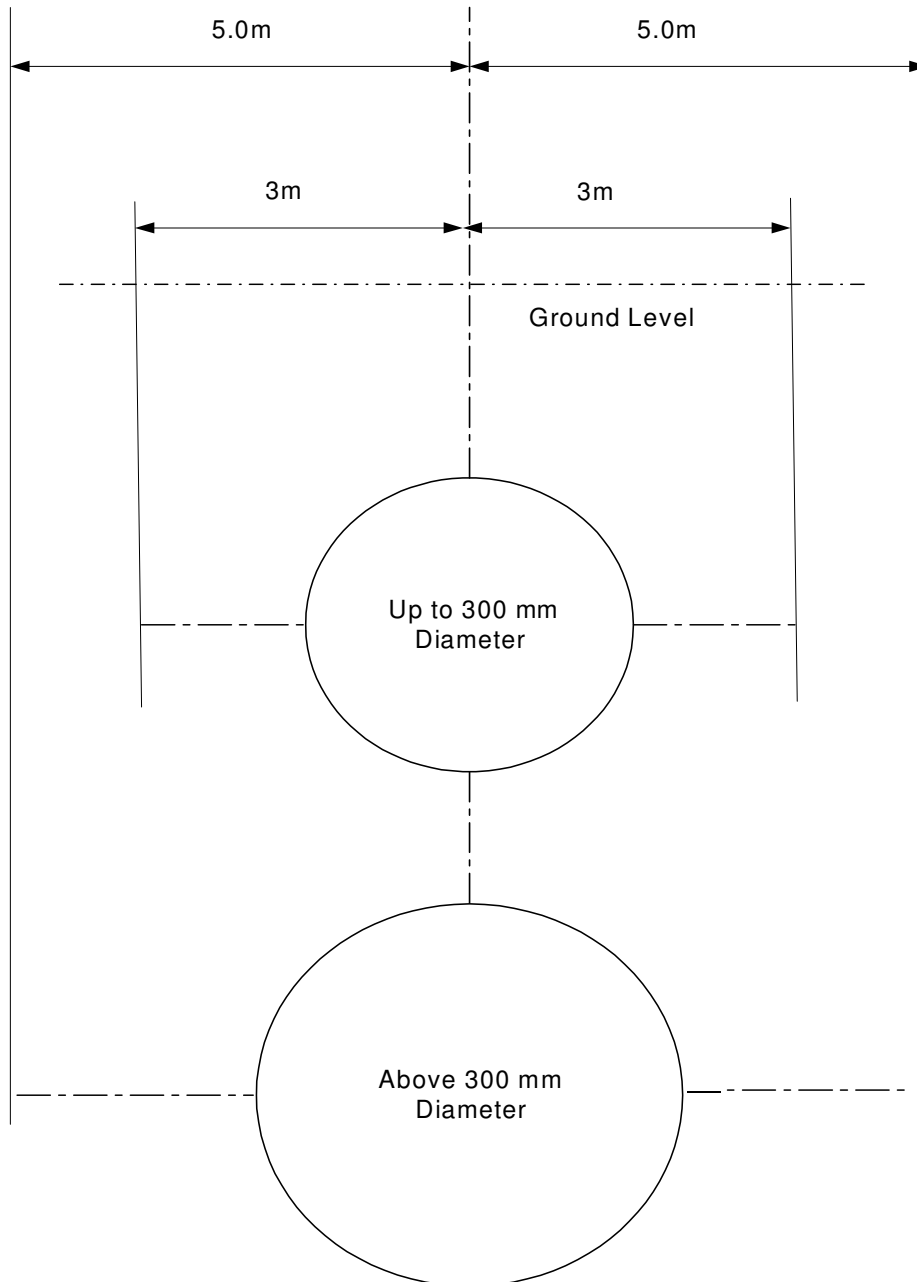
- 7.3 The notification given to the owner of the building shall state that, notwithstanding our Statutory Rights and those contained in any deed, UU shall not be liable for any costs whatsoever if damage is occasioned to the structure whilst carrying out our works.
- 7.4 In the case of structures of a temporary or easily removable character consent to such structures may after consideration be given by UU strictly on a case by case basis and the decision of UU being final. UU's access to any Easement Area or Easement Width should not be obstructed or impeded in any way

8 STOPPING UP ORDERS

- 8.1 UU has no objection to a Stopping up Order, provided that access remains for repair and maintenance of the network within the area affected.
- 8.2 If the proposed development will impede clear access, then the water main must be abandoned or diverted at the applicants cost.
- 8.3 Typically, there would be no objection if the water main remains within a Street to which there is vehicular access sufficient for UU to perform its statutory duties. It is not necessarily a problem if the Street is within a gated enclosure, e.g. alley gates are not a problem.
- 8.4 If the main does not remain within a Street, the developer must provide an easement according to UU standard conditions. Detailed information is available from the United Utilities Website
- 8.5 The following is specifically not permitted in relation to easements.
- a) Any alteration to ground level which leaves the water main at a depth less than 900mm (750mm for PE pipes), or more than 1200mm.
 - b) Any building over the main, or within the Easement Area or Easement Width, such that an excavation of the main would threaten the stability of the building.
 - c) Planting of large trees (detailed information available in Appendix 1). This shows the distances that various trees and shrubs can be planted away from Pipelines and water mains. Root barriers can be used when planting closer to the mains; however trees root barriers need to be deep enough to stop roots from penetrating under the barrier.

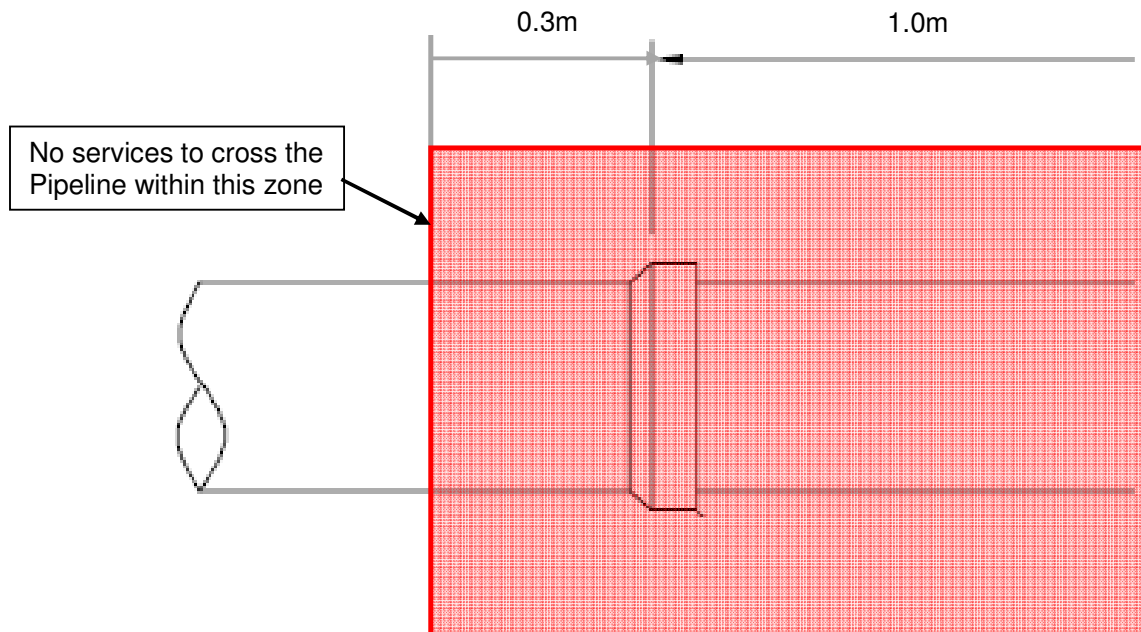
9 DRAWINGS

Figure 1: Easement Widths for Single Pipes



Note: This sketch is issued for guidance only (not to scale)

Figure 2: Service Crossing Restrictions in relation to Pipeline Sockets



APPENDIX 1: PLANTING NEAR TO PIPELINES

Latin Name	Common Name	Tree or shrub planting maintained as hedge (no higher than 1.5m height)	Individual trees planted from 3 metres of underground asset or pipe	Individual trees planted from 6 metres of underground asset or pipe	Group trees planted from 10 metres of underground asset or pipe
<i>Acer campestre</i>	Field Maple	Yes	Yes	Yes	Yes
<i>Aesculus hippocastanum</i>	Horse chestnut	✗	✗	✗	Yes
<i>Carpinus betulus</i>	Hornbeam	Yes	✗	✗	Yes
<i>Castanea sativa</i>	Sweet Chestnut	✗	✗	✗	Yes
<i>Corylus avellana</i>	Hazel	Yes	Yes	Yes	Yes
<i>Crateagus monogyna</i>	Hawthorn	Yes	Yes	Yes	Yes
<i>Fagus sylvatica</i>	Beech	Yes	✗	✗	Yes
<i>Ilex aquifolium</i>	Holly	Yes	Yes	Yes	Yes
<i>Larix decidua</i>	Larch	✗	✗	✗	Yes
<i>Ligustrum vulgare</i>	Privet	Yes	Yes	Yes	Yes
<i>Malus domestica</i>	Apple	✗	Yes	Yes	Yes
<i>Malus sylvestris</i>	Crab Apple	✗	Yes	Yes	Yes
<i>Pinus nigra</i>	Black pine	✗	✗	✗	Yes
<i>Pinus sylvestica</i>	Scots Pine	✗	✗	✗	Yes
<i>Platanus acerifolia</i>	London Plane	✗	✗	✗	Yes
<i>Prunus avium</i>	Wild Cherry	✗	Yes	Yes	Yes
<i>Prunus cerasifera</i>	Plum	✗	Yes	Yes	Yes
<i>Prunus lusitanica</i>	Laurel	Yes	Yes	Yes	Yes
<i>Prunus padus</i>	Bird Cherry	✗	Yes	Yes	Yes
<i>Prunus spinosa</i>	Blackthorn	Yes	Yes	Yes	Yes
<i>Pyrus communis</i>	Pear	✗	Yes	Yes	Yes

Latin Name	Common Name	Tree or shrub planting maintained as hedge (no higher than 1.5m height)	Individual trees planted from 3 metres of underground asset or pipe	Individual trees planted from 6 metres of underground asset or pipe	Group trees planted from 10 metres of underground asset or pipe
<i>Sambucus nigra</i>	Elder	Yes	Yes	Yes	Yes
<i>Sorbus aria</i>	Whitebeam	X	X	X	Yes
<i>Sorbus aucuparia</i>	Rowan	X	X	Yes	Yes
<i>Taxus baccata</i>	Yew	Yes	X	X	Yes
<i>Tilia cordata</i>	Lime	X	X	X	Yes
<i>Ulmus glabra</i>	Wych Elm	X	X	Yes	Yes

APPENDIX 3 – Point of Connections

Ms Caitlin Hillman
TDS LTD
Northern House,
3A Kennerleys Lane
Wilmslow
SK9 5EQ

Our Ref: 5500233413/A

T: 0800-195-4141
DD: 07788317940
E: Graham.Britton@enwl.co.uk

28 April 2022

Dear Ms Caitlin Hillman

Re: New Supply at Land off Smithy Bridge Rd, OL16 2SG

Thank you for your recent enquiry requesting a quotation in relation to the above.

Our price for carrying out the statutory works, detailed in the project specification, is £11,086.49 plus VAT of £2,217.30 totalling £13,303.79.

The quotation is valid for a period of 180 days from the date of this letter. A detailed price breakdown can be found on the following pages.

The works and the assumptions made in calculating our price are based on your application and are detailed in the Project Specification. Please take time to read through and check these details and should you wish to make any amendments please notify us at the earliest opportunity.

The offer is subject to Electricity North West General Conditions of Contract and the Project Specification. A full copy of the Electricity North West Limited General Conditions of Contract (business) can be viewed at <https://www.enwl.co.uk/get-connected/our-services/terms-and-conditions/>. If you are unable to access the internet please contact us on 0800 048 1820 and we will post a copy to you.

There is a new Competition in Connections Code of Practice that came into effect on the 30th October 2015. This party enables third party connectors to undertake more activities associated with a new connection. Further details can be found on our website.

To enable you to comply with the Construction (Design and Management) Regulations 2015, a full method statement will be provided to you once we acknowledge receipt of your signed Customer Acceptance Form. The statement will reflect the generic and site-specific risks and the working methods adopted by our appointed contractor for works undertaken on behalf of Electricity North West. If you wish to proceed, please return the following by email to cic@enwl.co.uk or by post to the address above

- Completed Customer Acceptance Form.
- Payment for the full amount of the price stated including VAT at the appropriate rate by cheque payable to Electricity North West Limited or BACS / CHAPS transfer.
- Design Approval pack from a NERS accredited company.

There are occasions where we receive two or more applications for connections which make use of the same part of the Distribution System. These may become "Interactive Connection Applications", which would result in a change to your quotation. We have a strict process to ensure fairness and you can find some guidance on Interactivity on our website <https://www.enwl.co.uk/get-connected/apply-for-a-new-connection/interactivity/>. When compiling this quotation, no interactivity with other connection schemes existed. However, since our network is dynamic, there is a possibility that this scheme may become interactive if applications are made before you accept this quotation. In this scenario we will be obliged to contact you with a notice of interactivity and a new quotation

We would like to thank you for your valued enquiry and look forward to working closely with you in due course. If you require any further assistance please do not hesitate to contact me.

Yours sincerely,

Graham Britton
Electricity North West

Description of the works**The charges included are for POC charges:**

- Only nominal costs for legal consents have been included
- HV shutdown to commission substation.
- For additional bespoke information, please refer to the project specification.
- Assessment and Design

The charges do not include for:

- Land acquisition costs for legal consents etc
- Electricity North West HV &/or LV network energisation connection.
- Damage to crops / land during operational access / work etc.
- Unidentified HV &/or LV infrastructure diversion works.
- Out of hours working.
- For additional bespoke information, please refer to the project specification.

Quotation price

The quotation price is provided based upon your application and the information you provided. The quotation only contains the non contestable charges associated with the new connection, this may include any contestable diversion and reinforcement costs.

Non Contestable Charges

If you require a full description of the non contestable charges these can be viewed on our website

<https://www.enwl.co.uk/get-connected/apply-for-a-new-connection/common-charging-methodology/>. If you are unable to access the internet please contact us on 0800 048 1820 and we will post a copy to you.

Determinations

We hope you are satisfied with the service Electricity North West has provided and hope that any possible disputes have been resolved satisfactorily. However if a situation should arise and we are unable to reach a mutually acceptable solution, you can contact The Energy Ombudsman, who will assist in resolving the dispute. You can contact The Energy Ombudsman in writing to PO BOX 966, Warrington, WA4 9DF, by telephone on 0845 055 0760 or online at www.energy-ombudsman.org.uk

BREAKDOWN OF CHARGES

Non Contestable Charges		
Connection Charges	Quantity	Charge
Assessment Charges	1	£2,990.00
Design Charges	1	£1,300.00
Legal - Ind/com Way/easement developer/3rd party	1	£1,090.00
Connections – Construction Work		
Sundry Equipment	1	£5,059.20
Labels & Nameplates	1	£647.29
Total Non Contestable Charge		£11,086.49
Total Charge		£11,086.49

CUSTOMER ACCEPTANCE FORM

Customer: TDS LTD

Our Reference: 5500233413/A

Project title: New Supply at Land off Smithy Bridge Rd

Site address: Land off Smithy Bridge Rd, OL16 2SG

I accept your offer, dated 28 April 2022 for the works referenced above and any subsequent charges, as detailed in the project specification.

I agree to pay £11,086.49 plus VAT of £2,217.30 totalling £13,303.79 and payment for the full amount.

I acknowledge and agree that the works are subject to the Electricity North West General Conditions of Contract, a copy of which I have read.

I acknowledge that I must appoint an electricity supplier to the site before the connection/s can be made live.

The site will be ready for Electricity North West to commence works on _____ **(please enter date)**.

However I have read and understand clause 7 of the Electricity North West General Conditions of Contract, in relation to commencement of the works.

Signature of customer or authorised signatory on behalf of customer:	
Date:	
SITE CONTACT DETAILS	
Contact Telephone Number:	
END USER DETAILS*	
Company/Customer Name:	
Customer Contact:	
Customer Telephone:	
Full Postal Address:	
Contact Name & Address (if different to site address):	

* If there are multiple End Users, please provide additional details.

WAYLEAVE DETAILS (if different from End User)**

Name and Address of Landowner:	
Landowner Telephone:	

** If there are multiple Landowners, please provide additional details.

Acceptance must include payment by cheque, made payable to Electricity North West Limited or by BACS/CHAPS in accordance with the guidance available on our website via the following '[Payment Guide](#)'

If you are going to self approve your scheme design in line with the [Competition in Connections Code of Practice](#) please tick here (). The ENWL's user guide can be located on our [website](#)

POC PROJECT SPECIFICATION

Connections

A system study has now been carried out based on the information you provided:

Total load requirement of your connection is 835 kVA and consists of:

Upon acceptance we will provide you with additional network data to facilitate an earthing study necessary for your design submission. You are advised to return your acceptance as soon as possible to ensure this data can be provided in a timely manner to meet your project timescales.

You have not provided details of EVC's or heat pumps etc or other low carbon technologies that may be adopted. This information will be required post acceptance and this quotation is subject to the necessary post acceptance studies including Harmonics, G55 and Flicker (P28).

HV Point of Connection 1

A Point of Connection has been identified on the High Voltage Network with a new substation to be looped in to an existing 6600V, 3c 0.2 cable using 3 x 1c300 SAC XLPE cable as shown on enclosed plan. The new substation to be located in a mutually agreed position.

Our quotation excludes all works from the point of connection to your interface.

This Point of Connection is valid for 180 days from the date of this quotation.

Offer Conditions

Application for a Point of Connection

- 1) The Point of Connection (POC) will be determined on the basis of the information on your application form and will not be guaranteed if any undeclared characteristics of the proposed load are found to cause electrical disturbances to the electricity network greater than those inferred on the original application form.
- 2) The IDNO is responsible for providing true and accurate load information to Electricity North West Limited.
- 3) All Connections for Embedded Distribution Networks shall comply with Electricity North West Limited ES 225.
 - Assessment & Design charges
 - Inspection Charges
 - Initial Energisation Cost*
 - Associated Diversion Work
 - Associated Reinforcement Work
 - Operation & maintenance charges (only if over and above the minimum cost scheme)
 - Costs for obtaining legal consents for the development

* The Initial Energisation Cost is for energisation of the installation at the POC only and will only be included in the offer if the network connection/s is a non-contestable joint/s or termination/s. It does not include for any on site non-contestable jointing work that may be requested following the initial energisation or for the energisation of any low voltage network if the POC was provided at high voltage.

- 2) The above charges become contractual on acceptance of the point of connection and will be included in the Electricity North West Limited 'Agreement to Adopt' contract which will be issued following design approval.
- 3) In certain circumstances diversion and reinforcement works are open to competition and are therefore classed as contestable (See Page 71, Section 6.12, Methodology and Charges for Connections Statement). If appropriate and if requested, a breakdown of the non-contestable elements for diversion and reinforcement costs may be supplied.

- 4) Indicative costs are given in Electricity North West Limited 'Statement of Methodology and Charges for Connection to the Electricity Distribution Network' which can be found on Electricity North West Limited web site: www.enwl.co.uk

Operational / Legal Consents

- 1) The Independent Connection Provider(ICP)/developer is legally responsible for and must make their own arrangements to obtain any legal consents to install or lay any electric line or cable on land owned by a third party. e.g. on privately owned land outside the development site. Electricity North West Limited will only obtain legal consents in so far as they are necessary or desirable for the operation of Electricity North West Limited network after asset adoption.

This will include any legal consents which the developer is required to grant for electric lines or cables within the development site which will be adopted by Electricity North West Limited. No electric lines or cables shall be installed in land not owned by the developer before agreement is reached with the landowner. This POC is, therefore, dependant on the ICP/developer being able to reach agreement with any third party landowner for any electric lines or cables, or any part thereof, which will be installed at or from the POC.

Please note that the date of energisation for the installation will not be arranged until all operational/legal consents have been completed with Electricity North West Limited.

- 2) Operational/Legal Consents include:

- Any easement, wayleave or licence required for any electric line or cable laid from the POC in private land which does not or will not form part of the public highway.
- Any lease or freehold transfer of land required for substations.
- Any Planning or statutory consent required in respect of any of the above.

- 3) The ICP/developer will be responsible for the cost of reinstating any damage to land not within the development site and for any for any costs associated with the acquisition of Operational/Legal Consents.

Health and Safety

- 1) The following information is given to assist you in maintaining safe working practices on the site:

Electricity North West Limited plans carry an endorsement stamp that is there for your safety. Before any machines are used, all of Electricity North West Limited underground assets should be located by manual excavation. All excavation should be done by taking the appropriate safety precautions in the 'Health and Safety Executive Guidance Note G47' 'Avoiding Danger from Underground Services'; taking cognisance of the fact that other plant may be in the vicinity which is not shown on the plans. Please ensure that the current issue of plans is referred to before commencing work on site.

Acceptance of Point of Connection

- 1) If you wish to accept the Point of Connection, a completed 'Acceptance' form with payment in full must be returned before the validity date expires. If your acceptance is not received before the expiry date then the available capacity on our network could be made available to subsequent applicants.
- 2) Your design submission must be submitted within 30 days of acceptance of the POC and must include the Design Submission Check List form. If your design is not received within the time stated then your acceptance will lapse and the point of connection could be allocated to another applicant without notice. Under exceptional circumstances you may apply in writing for a further 30 days extension. You will also be liable for any abortive costs incurred in failure to comply with the above.
- 3) These forms are an integral part of the design submission and the process of design approval will not start until they have been received. Any errors on the forms will also delay the start of the process.

- 4) Following design approval, Electricity North West Limited will issue the ICP with an 'Agreement to Adopt' contract. The ICP will then be responsible for obtaining all required signatures on the 'Agreement to Adopt'. Electricity North West Limited will not undertake any activities associated with the electricity connection works until this Agreement has been signed, this includes any audits of the work intended to be adopted. It should be noted that Electricity North West Limited will not adopt any new connections work that we have not had an opportunity to audit until we are satisfied that the installation meets Electricity North West Limited standards.

Generation

- 1) Unless it is included within your application, you must contact Electricity North West Limited if you intend to provide facilities to allow the export of electricity (including by means of CHP, solar cells, wind turbines etc) into the electricity distribution network or operate on site generation that interconnect with our supplies, including as a means of an emergency supply. We reserve the right to amend our price and programme of works in association with these facilities.

Non-Linear Loads (motors, welders and rectifiers)

- 1) Motors, Welders, and other equipment likely to affect the supplies to other consumers must not be connected without prior approval from Electricity North West Limited.
- 2) For all non-linear loads, it is your responsibility to ensure that the cumulative effect of any harmonic-generating equipment (e.g. Rectifiers, invertors & variable speed motor drives) complies with Industry Standards. If complaints are received from other customers connected to the Distribution System regarding supply disturbance and these can be directly attributed to your equipment, then Electricity North West Limited reserve the right to insist that you disconnect the offending equipment remedial action is taken by yourself, at your expense.

Disconnection

- 1) We have not included the costs for any existing service disconnection/s in our quotation. For all disconnections please contact Electricity North West Customer Service on 0800 048 1820.

Substation / PMT Earthing
Customer /ICP/IDNO to carry out an earthing study to ensure the safe management of Earth Potential Rise (EPR) and the establishment of safe touch, step and transfer potentials. Facilitating data to be provided by Electricity North West upon acceptance.

For Planning Purpose Only

DANGER OF DEATH

ALL EXCAVATION TO COMPLY WITH THE HEALTH & SAFETY EXECUTIVE GUIDE (HSG47) "AVOIDING DANGER FROM UNDERGROUND SERVICES" AND (HSG6), "AVOIDING DANGER FROM OVERHEAD POWER LINES". AT ALL TIMES TAKING INTO ACCOUNT THAT OTHER PLANT MAY BE IN THE VICINITY WHICH IS NOT SHOWN ON OUR PLANS.



PROJECT DETAIL

Name & Address: Land off Smithy Bridge Rd OL16 2SG, OL16 2SG

Scheme Ref Number: 5500233413A

Drawn By: Graham Britton

Date: 22.04.2022

Grid Reference: (X) 392062
(Y) 415328

Scale: N.T.S

**POINT OF CONNECTION
TECHNICAL DETAIL**

Cable Size @ P.O.C : 3c .2 6.6

Voltage : 6600 volts

Loop or Teed (HV only): Looped

Primary Substation: LITTLEBOROUGH - 304884

Feeder Name / No : LAURELS DR

Point of Connection: POC on the circuit LAURELS DR. A new substation will be looped in the above circuit between SMITHYBRIDGE RD

Transformer Size : kVA

Fuse Size : Amps

Earth Loop Impedance : ohms

% Voltage Drop

1) Including site load %

2) excluding site Load %

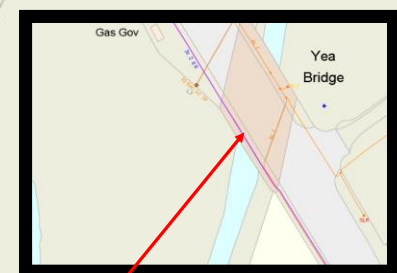
Generation:

Voltage Rise relative to primary BB : %

Positive sequence R+JX (% on 100MVA base)

Notes :

For reference only



Close up View of POC

HV Point Of Connection
A new substation will be looped in the above circuit between SMITHYBRIDGE RD AND EAFIELD RD SUBSTATIONS

**Network Configuration for
Earthing Studies**

	Primary Substation	Primary EPR (v) & Resistance (ohms)	Feeder Name/No	Normally Open Point (NOP) position
System Normal:	Littleborough	430 & 0.1 (assumed values)	LAURELS DR	
System Abnormal 1:	Wardleworth	430 & 0.1 (assumed values)	DITTON MEAD CL	WOODHEYS RD (314649)
System Abnormal 2:				
System Abnormal 3:				
System Abnormal 4:				
System Abnormal 5:				

This plan is issued by Electricity North West Limited. Unless otherwise indicated Electricity North West Limited cables are laid at depths in accordance with NJUG 2 (typically 450mm for Low Voltage & 600mm for 11KV cables in footpath). 33KV/132KV cables are laid at depths as marked. The depths and positions of Electricity North West Limited equipment was accurate as shown when the equipment was installed. However, third parties may have altered the surface level & other reference data. Therefore Electricity North West Limited accept no responsibility for the position of Electricity North West Limited equipment being different from that shown. No person, body or company, shall be relieved from liability for damage caused to Electricity North West Limited equipment by reason of being located differently to the indications on this drawing. Service cables are not necessarily shown but must be assumed to exist to all premises, streetlights and signs. There may be other Electricity North West Limited apparatus in the vicinity which is not indicated in the cable records.

Other apparatus may also be present which is owned by a third party other than Electricity North West Limited. Reproduced from or based upon Ordnance Survey's map with permission of the controller of Her Majesty's Stationery Office. Crown Copyright Reserved. LICENCE No 100017892. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. Reference should be made to HSE guidance HS(G)47 "Avoiding Danger from Underground Services" and GS6 "Avoidance of Danger from Overhead Power Lines". Electricity North West Limited, registered number 2366949, registered in England and Wales, registered office: 304 Bridgewater Place, Birchwood Park, Warrington, WA3 6XG

The network configuration for Earthing Studies detail is based on the status of the network at the time of the initial study. Please note that our distribution network is dynamic, therefore the detail on this drawing may have changed once you commence your earthing study. You must check the network configuration at the time of your earthing study to ensure the information you are providing is accurate and eligible.

Network Enquiry No : 180014120
Your Reference : OL16 2SG

Cadent Gas Limited

National Gas Emergency Service - 0800 111 999* (24hrs)
*calls will be recorded and may be monitored

Caitlin Hillman
TDS Northern LTD
3A KENNERLEYS LANE
CHESHIRE
WILMSLOW
SK9 5EQ

Date : 21st April 2022
Contact : Performance and Support
Direct Tel : 0845 3666758
Email : networkdesign@cadentgas.com

www.cadentgas.com

Dear Caitlin,

**Re: Land Enquiry for Proposed Development Site at NEW SUPPLY, LAND OFF, SMITHY
BRIDGE ROAD, ROCHDALE, OL16 2SG.**

Thank you for your enquiry which we received on 12th April 2022. I enclose details of Cadent Gas plant in the vicinity of your proposed supply.

The nearest main with sufficient capacity is 8 metres from the site boundary and it is a Low Pressure main.

This Developer Enquiry response is a reflection of the network at the time delivered and is not a guarantee of gas flow or capacity due to the changing dynamics of the gas distribution network. If you wish to secure capacity and connect to the network please submit quotation Connections Request via the official connections route allowing for further analysis to verify the capability of the network again. Standard design pressures have been used. Refer to www.Cadentgas.com

Plans attached: Yes

A copy of the Cadent Connections Charging Statement referenced in this letter can be found on Cadent's website:

<http://cadentgas.com/Get-connected>

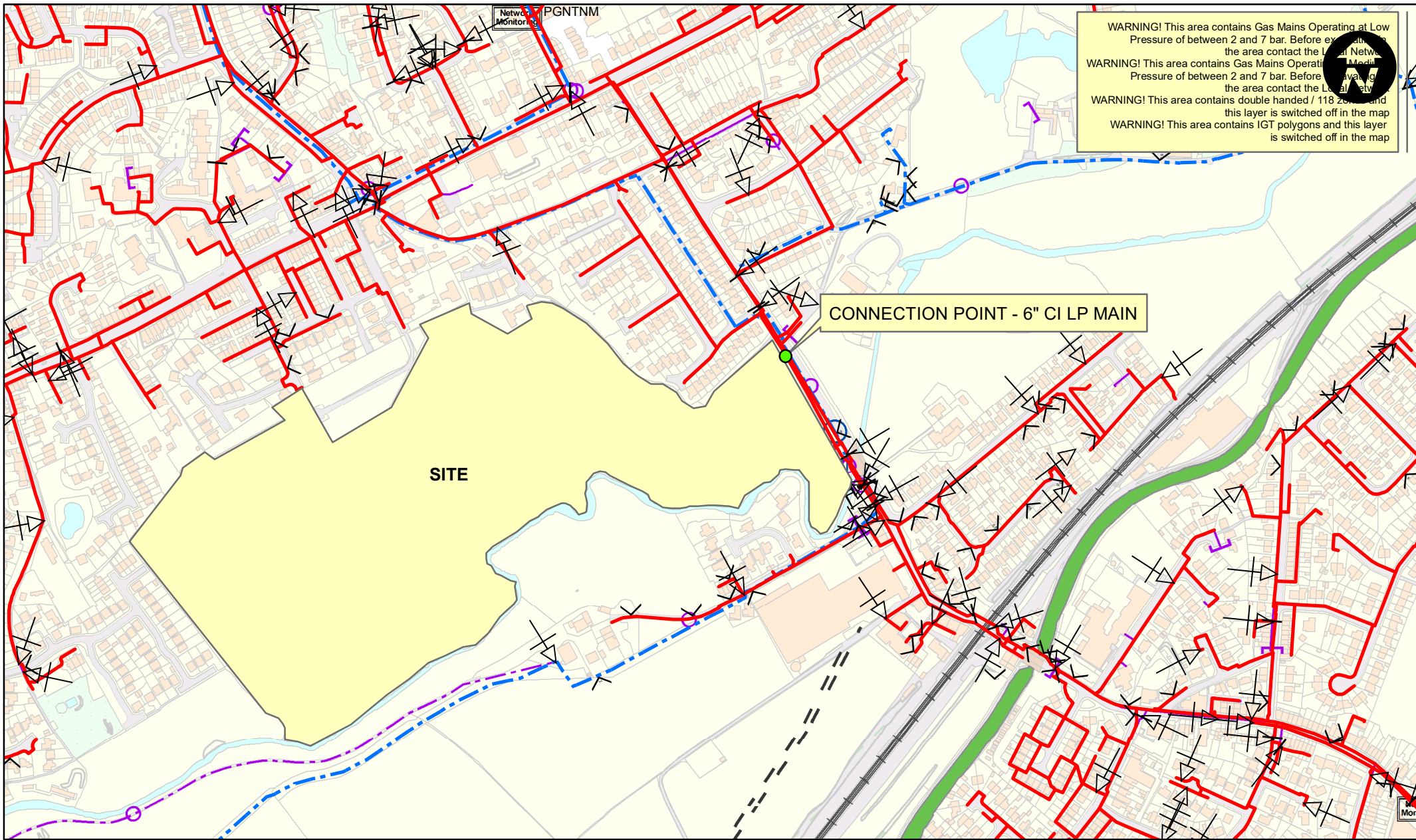
If you require a printed version please contact us on the details provided above.

I trust this meets with your requirements at this stage. If you have any queries please do not hesitate to contact Performance and Support on the above number.

Yours sincerely,



Laura Cheshire



SCALE: 1:500 @ A4

USER ID: James.Mason

DATE: 13-Apr-2022 15:39:14

INTERNAL USE ONLY

OS Ref: 392331, 415417

CENTRE: <Centre>

L/P GAS MAIN

M/P GAS MAIN

I/P GAS MAIN

H/P GAS MAIN

N/H/P GAS MAIN

PROPOSED PIPE - LP

PROPOSED PIPE - MP

PROPOSED PIPE - IP

ABANDON - LP

ABANDON - MP

Out Of Standard Service



SCHEME: <NG GDFO Scheme Name>

DESIGN: <NG GDFO Design Number>

REVISION: <NG GDFO Revision>

This plan shows those pipes owned by Cadent in its role as a Licensed Gas Transporter (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with regard to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections, etc., are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Cadent Gas Limited or their agents, servants or contractors for any error or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and any other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

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Cadent

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Some examples of Plant Items:

Valve Syphon Depth of Cover Change of Dia Change of Material

Your Guidance for your Point of connection enquiry



TDS
3A Kennerleys Lane
Wilmslow
SK9 5EQ
FAO Caitlin Hillman

United Utilities Water Limited
Developer Services Water
Water Connections
Second Floor Grasmere House
Lingley Mere Business Park
Lingley Green Avenue
Warrington WA5 3LP

Telephone: 0345 072 6067
Email: developerserviceswater@uuplc.co.uk

Your Ref:
Our Ref: 410525251
Date: 26th April 2022

Dear Caitlin,

Location: **Smithy Bridge Road, Rochdale OL16 2SG**

Based upon the information provided in your recent enquiry, and the current guidelines, the point of connection for your development will be the nearest practical point on the existing network.

The point of connection for your development will be supplied from the existing 10" CI water main, located on Smithy Bridge Road, as shown on the attached drawing.

The non-contestable works required to provide water to your development are a 160mm branch; for budgetary purposes we suggest you make an allowance of £6,551.00 exc. of VAT. Please note this cost does not include for any additional Traffic Management.

Existing United Utilities water assets

To help plan your development I have enclosed a copy of our asset records. This shows that we have no operational assets within the boundaries of your proposed development. However, our network maybe affected at the proposed site entrances depending on the proposed lines and levels to the existing road surface.

Regarding the existing water mains surrounding your development, you must establish the true position of these water mains, the lines and levels should be plotted onto your proposed layout, and a copy of the plan should then be sent to this office for my attention for approval. Please note, that if damage does occur as a result of your works, the repair/replacement of the mains network/surface boxes will be fully rechargeable to yourselves.

It is the responsibility of the developer to arrange for the disconnection of the existing services to site.

Note billing only accepts written requests to email: customer.services@uuplc.co.uk

You will need to attach the bill and the request to disconnect and confirm if the property was domestic or commercial.

Important note

This copy of our asset records is only provided to help you assess the likely risks when planning your development at a desk top stage. It is not intended to be used for planning any actual excavation or construction work. You are reminded that a Health and Safety plan should include an up to date record of all underground equipment.

Infrastructure Charges

Based on the information you have provided we would advise you to allow a budget of £581.00 per plot for water and wastewater infrastructure charges for the planned 199 new connections. At present this charge is outside the scope of VAT.

Infrastructure Credits

We have no record of any water or sewerage connections to previous premises on this site within the last 5 years. This means that we are unable to offer any infrastructure credits against new connections on your proposed development.

Income Offset

Income offset is levied against the Infrastructure Water charge and is applicable to all plots which are using water for domestic purposes which have not received an infra credit. The per plot allowance for this is £778.00 so in this instance the amount due to you for the 199 number of plots is £154,822.00. Please note this figure is only applicable for connections made in this financial year.

What to do next:

If you decide to proceed with your development, you can choose between requisitioning your new clean water directly from us, or you can employ a contractor directly to self-lay the new mains. A list of approved installers is available at Lloyds Register www.lr.org.

We have a booklet "Obtaining water supplies for new developments - Guidance notes for developers" which is available on request or can be downloaded from our website unitedutilities.com. This document contains information to help you make the right choice for your new water main or water connection.

The information given is valid for up to 6 months, if you need any further information or assistance, please do not hesitate to contact me at this office.

Please do not hesitate to contact us should you need further assistance on 0345 072 6067 or email to Developerserviceswater@uuplc.co.uk, always using our reference number provided on this letter.

Regards

Rachel Yates

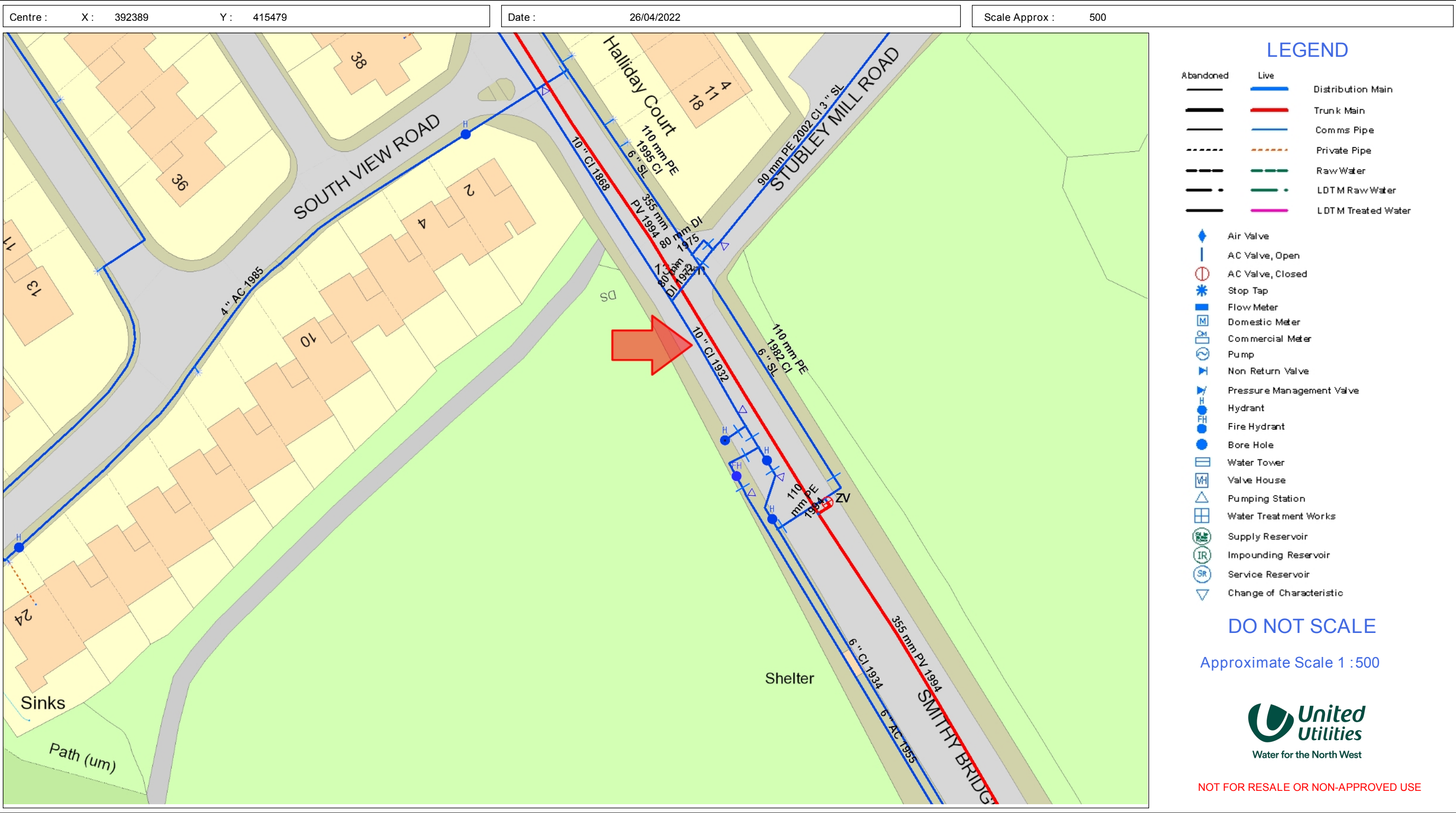
Enc. UU assets plan
 Standard Conditions for Works Adjacent to Pipelines

Water Industry Act Section 47(3) Counter Notice

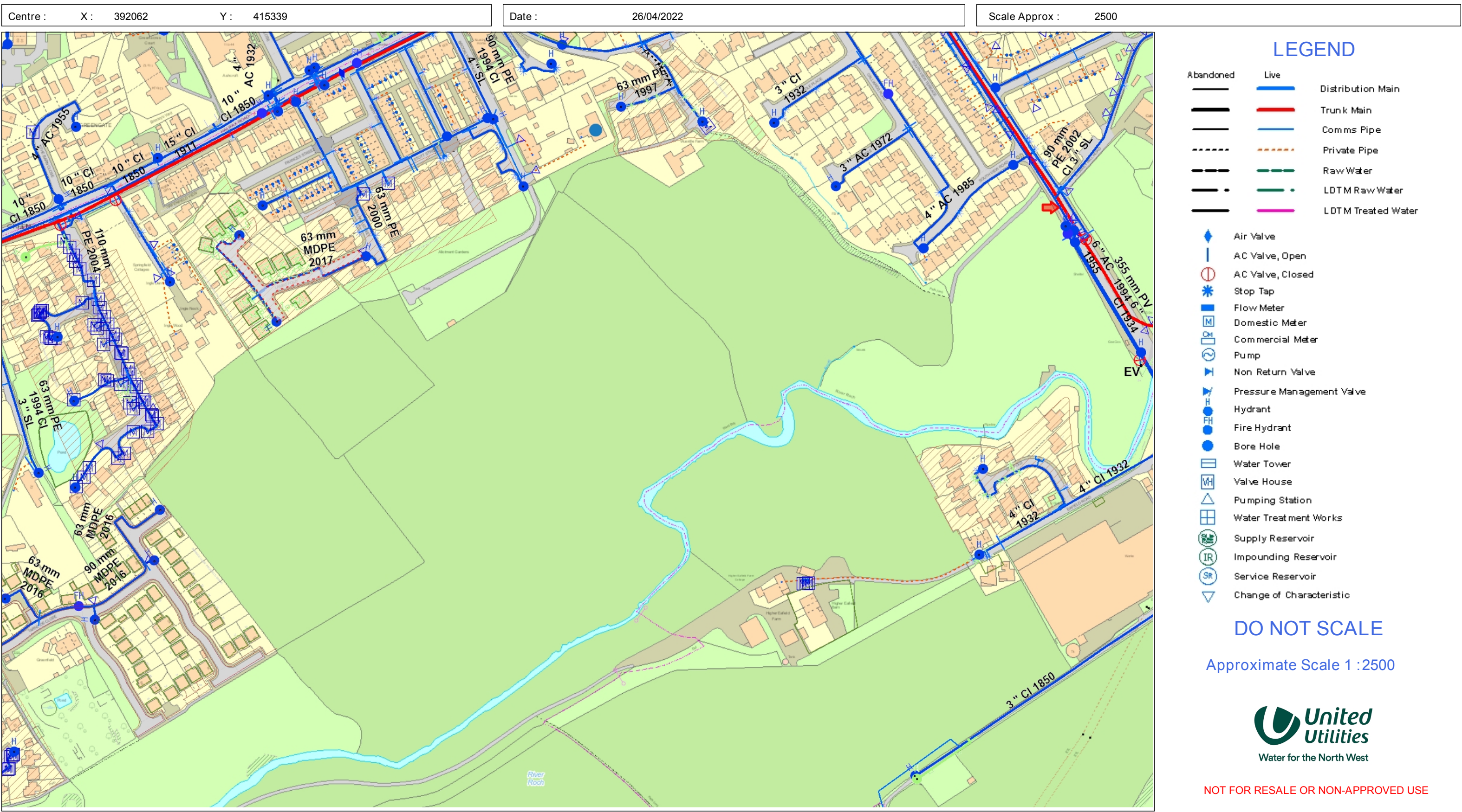
Please note that in accordance with Section 47(3) of the Water Industry Act 1991, United Utilities Water requires compliance with the conditions below, prior to the connection of any service connection to any of United Utilities Water's mains that form part of your requisition application.

- Advance security may be required to be lodged with United Utilities Water equal to the total value of any connections and associated ancillary works. We will in due course estimate the cost of these works and provide you with the value of any security that may be required.
- Premises under separate occupation must be supplied by separate individual service pipes.
- Where it is deemed appropriate by United Utilities Water, a meter will be installed to determine the volumetric charge for the supply of water which can be connected by our contractor or by an approved third party in accordance with United Utilities Water's specification.
- Laying of the service pipe to a depth of no less than 750mm and no more than 1350mm below finished ground level, within the private land from the Street boundary into your premises. Service pipes must be installed to United Utilities Water's current specifications, and have a stopcock fitted. Standard connections (up to 25mm OD) shall consist of an un-jointed appropriate type and construction of pipe with marker tape laid no more than 400mm below finished ground level. Provision for volumetric metering must be installed fully in accordance with United Utilities Water's current specifications.
- If you are installing new plumbing or making alterations to existing internal plumbing arrangements, you must ensure that the plumbing complies with the Water Supply (Water Fittings) Regulations 1999 and with United Utilities Water's specification for the purposes of ensuring it will be reasonably practicable to install and connect a meter.
- Where your development or property requires water to be delivered at a height greater than 10.5 metres below the draw off point of the reservoir or tower supplying the area it is a requirement, in accordance with Section 66 of the Water Industry Act 1991, that you install a cold water storage cistern to cover twenty-four hours demand.
- Any outstanding charges payable as a result of a disconnection notice or any charges payable for any outstanding compliance requirement from any Section 75 notice that has been served (waste, contamination or misuse) have been paid in full.

In addition to the statutory conditions above, if you have yet to provide us with a full postal address for the property/s to be connected, please remember that we will need this information before we can make any service connection/s. If you have not yet obtained or agreed this information with your local planning authority, we strongly recommend that you contact your planning representative as soon as possible to prevent your connection being delayed later on in the process.



The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.



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