



**Unity**water

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# Pr9689 - BOAA Technical Standard Category B

Guidelines for the assessment of proposed structures/works over and adjacent to Unitywater's pressure mains up to and including 250mm internal diameter (water mains/recycled water mains/rising mains)



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Document Owner	Development Services Manager
References	<a href="#">OP9692</a> - Building Over and Adjacent to Unitywater Assets Policy

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## 1. Introduction

These Guidelines relate to construction works to be carried out over and adjacent to Unitywater's pressure mains up to and including 250mm internal diameter (both in the water supply and the sewerage network).

It is mandatory to use the Queensland Development Code Mandatory Part 1.4 'Building over or near relevant infrastructure' (QDC MP1.4) to assess applications for building works over and adjacent to a service provider's asset in the first instance. The Queensland Development Code (QDC) MP 1.4 – Building over or near relevant asset can be found at [www.hpw.qld.gov.au](http://www.hpw.qld.gov.au). Utilities service lines are the exception to this whereby QDC MP1.4 does not apply and assessment of utilities service lines will be in accordance with this technical standard.

Where building work proposed within Unitywater's service region does not comply with an acceptable solution under the QDC MP1.4 or the proposed building work will not maintain the prescribed clearances between the work and Unitywater infrastructure as outlined in the QDC MP1.4, the proposal (building development application) must be referred to Unitywater for concurrence assessment.

In summary, the applicable minimum distances from Unitywater infrastructure are:

- The zone of influence must be sufficiently clear;
- 3 metres for a class 1 or 10 building or structure;
- 5 meters for a class 2 to 9 building;
- 5 meters for driven piles or piers; and
- 10 meters for ground anchors or rock bolts.

## 2. Definitions

Term	Meaning
Access	Unitywater requires access for sewer infrastructure maintenance purposes and unencumbered entry to the sewer is to be maintained.
Air Valve (AV)	A valve for controlling the flow of air in a water main.
Authorised Person	A person acceptable to, authorised by or approved by Unitywater under s.45 of <i>Water Supply (Safety &amp; Reliability) Act 2008</i> .
Appurtenance	A component of a pipeline such as a fitting, valve, hydrant, etc. – WSA 03-2011 Third Edition Version 3.1
Cantilevering	Structure or beam extended from a wall or foundation to support a balcony or wall.
Connection Point	Point of connection between the water main and the water meter. Also called property connection point.  In the case of low pressure sewer mains, the point of connection between the low pressure sewer main boundary kit and the house drain.  Also called the property sewerage connection.

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Term	Meaning
Demountable	Any structure or roof, which can be manually dismantled and removed from its current position by two people within a four hour period.  <i>Note: A statement by the structural engineer supporting this will be required, should this option be requested.</i>
Developer	A person, organisation, local government authority or government authority (other than the Water Agency) carrying out works over and within 3.0 m of Unitywater's pressure main (potable, recycled water or rising main).
Easement (generally easement in gross')	An easement in gross is only registered against the burdened lot and is granted to public utility providers such as Unitywater. An easement in gross is a right held by a public utility to enter onto land owned by another person or make use of the land of another for certain purposes e.g. access and maintenance (refer to <i>Property Law Act 1974</i> ).
Hydrant	A valve on a pipe with a nozzle or spout for drawing water from a water main, generally for firefighting purposes.
Non-trafficable areas	Areas not subject to vehicular traffic.
Private property owner	The organisation or person/s registered to be the owner of the connected premises. An owner is the registered proprietor of land under the provisions of the <i>Land Title Act 1994</i> ; the lessee or licensee of the land under the <i>Land Act 1994</i> ; a person who has lawful control of the land; or a person who is entitled to receive rents and profits from the land. Includes the occupier of the land, i.e. a person who is in charge of the land, but not a tenant occupier, e.g. an occupier of residential or commercial premises under a tenancy or similar agreement.
Private property	Real property that is held by an individual or entity as freehold or leasehold, as defined in the <i>Land Act 1994</i> , and to which the public does not have access or has access only on limited conditions with the consent of the owner/occupier.
Pressure Reducing Valve (PRV)	A device that regulates the flow of water through the water main by opening, closing, or obstructing.
Residence	Detached or attached dwelling, no greater than 2 stories high, used, or intended to be used, as a place of habitation or mainly as a place of habitation.
Sewer mains	Pipe or other construction, usually buried, designed to carry sewage from more than one source to a point of discharge or treatment.
Sewer Rising Main	A pipe through which sewage is pumped generally rising from the pumping station to the point of discharge into the receiving sewer. Sewer rising mains are usually located in the road reserve. <i>Also called a sewer pressure main.</i>
Sluice Valve (SV) (Also 'Stop Valve')	A valve that can be closed or opened at will, as by hand, for preventing or regulating the flow of water in a pipe.



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Term	Meaning
Trafficable areas	Areas subject to vehicular traffic.
Water Meter	A device for measuring the quantity or rate of water flowing through a water main.
Pressure Main	A pipe into which water, non-drinking water or sewage is pumped from the pumping station.

### 3. Roles and Responsibilities

Position title	Roles and responsibilities
Development Services Manager	<ul style="list-style-type: none"> <li>• As Document Owner responsible for: <ul style="list-style-type: none"> <li>○ Conducting and/or delegating regular reviews to ensure this manual and related resources (e.g. forms, website content) remain fit for purpose, consistent and current.</li> <li>○ Approving this manual for publication.</li> <li>○ Ensuring all relevant stakeholders and team members have been consulted and feedback is captured and actioned (where applicable).</li> <li>○ Ensuring appropriate communication and/or training is provided to relevant team members when implementing a new, amended or obsolete document (where applicable).</li> <li>○ Monitoring compliance with internal/external requirements (e.g. monitor legislation changes and assess/update this manual when required).</li> </ul> </li> </ul>
Team members	<ul style="list-style-type: none"> <li>• Working in accordance with this manual.</li> <li>• Advising the Document Owner if this manual is not consistent with current practices.</li> <li>• Where possible, minimise printing and/or avoid creating duplicate copies of this manual. Ensure current versions are sourced from the <a href="#">Document Centre</a>.</li> </ul>



## 4. Abbreviations

Abbreviation	Meaning
kg	kilogram
m	metre
mm	millimetre
m <sup>2</sup>	Square metre
min	minimum
UPVC	unplasticised polyvinyl chloride
°	degree

**NOTE:** Unless otherwise stated, "Diameter" is the nominal inside diameter of the pipe.

## 5. Guidelines for different circumstances

No.	Item	Works/Structure	Criteria
1	<b>Pressure reducing valves (PRV), stop or sluice valves (SV), air valves (AV), hydrants, water meters and inspection chambers containing these appurtenances</b>	All works	<ul style="list-style-type: none"> <li>Construction over PRV, SV, AV, Hydrant, Water meter and Inspection chambers containing these appurtenances is not permitted, as access is required;</li> <li>Construction adjacent to PRV, SV, AV, Hydrant, Water meter and Inspection chambers containing these appurtenances requires a minimum horizontal clearance of: <ul style="list-style-type: none"> <li>3.0 m from the edge of the cover surround;</li> </ul> </li> <li>Footings/foundations must extend to below the zone of influence of the invert level of the PRV, SV, AV, Hydrant, Water meter and Inspection chambers containing these appurtenances to ensure that no additional load will be placed on the PRV, SV, AV, Hydrant, Water meter and Inspection chambers containing these appurtenances by the structure;</li> <li>Driven piles are not permitted within 5.0m of the PRV, SV, AV, Hydrant, Water meter and Inspection chambers containing these appurtenances</li> <li>Inspection or maintenance chamber cover levels must match new surface levels, where excavation works are</li> </ul>



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No.	Item	Works/Structure	Criteria
			<p>applicable (work to be carried out by a Unitywater authorised person).</p> <ul style="list-style-type: none"> <li>Access is required from the street frontage (of the property containing the maintenance structure) to the maintenance structure around the outside of buildings or structures, the design must ensure clear access of at least 1.0m wide unobstructed horizontal clearance, opened to the sky and is provided to the maintenance structure from the front entrance of the property (containing the maintenance structure). Access must be available at all times for maintenance; and</li> <li>The design must ensure access is provided to the structure where changes to Finished Surface Level along the access route do not exceed 1.0m vertically. Multiple changes to Finished Surface Level are possible subject to a minimum 1.0m x 0.5m horizontal pad at each vertical change in Finished Surface Level (that does not exceed 1.0m vertically)</li> </ul>
2	<p><b>Property water service connection points servicing own or adjoining property</b></p>	All works	<ul style="list-style-type: none"> <li>Construction over a property water service connection point servicing either own or adjoining property, is not permitted;</li> <li>For property water service connection points, up to and including 25mm a minimum horizontal clearance of 0.5 m from the closest edge of the building and</li> </ul>



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No.	Item	Works/Structure	Criteria
			<p>the property water service connection point must be maintained;</p> <ul style="list-style-type: none"> <li>For property water service connection points greater than 25mm a minimum horizontal clearance of 3.0m from the closest edge of the building and the property water service connection point must be maintained;</li> <li>Footings/foundations must extend below the zone of influence of the invert level of the property water service connection to ensure that no additional load will be placed on the property water service connection by the structure;</li> <li>Driven piles are not permitted within 5.0m of the property water service connection point</li> </ul>
3	<p><b>Easements reserved for water supply or sewer rising main purposes</b></p> <p>- either containing a Unitywater asset or not</p>	All works	<ul style="list-style-type: none"> <li>Construction of structures is NOT permitted within a Unitywater easement;</li> <li>Driveways, letter boxes, landscapes, retaining walls &lt; 1.0m high (excluding masonry) are permitted.</li> <li>Other Utility services are to traverse an easement at a 90° ± 15°;</li> <li>Other utility services traversing an easement must maintain a minimum vertical clearance as per SEQ Amendment to WSAA Sewerage Code of Australia;</li> <li>Other utility services parallel to a sewer main within an easement must maintain a minimum horizontal clearance as per SEQ Amendment to WSAA Sewerage Code of Australia.</li> </ul>





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No.	Item	Works/Structure	Criteria
4	<p><b>Pressure mains (Water mains/non-drinking water mains/sewer rising mains)</b></p>	<p>Residences, Carports, Decking, Eaves and cantilevers on buildings other than ground floors, Garages &amp; Sheds, Gazebos &amp; Pergolas, Home workshops (colourbond, timber, brick or concrete construction), Sails, Swimming pools and spas, Verandas,</p> <p>Commercial, Industrial, Public, Multi-unit and high rise apartment buildings, Sport stadiums, Transport terminals, street furniture and the like</p>	<ul style="list-style-type: none"> <li>• Construction of structures is NOT permitted over any pressure mains;</li> <li>• For construction adjacent to a pressure main: <ul style="list-style-type: none"> <li>○ A minimum horizontal clearance of 3.0 m between the proposed structure/foundation/pier and the outside edge of the pressure main must be maintained;</li> <li>○ Footings/foundations must extend a minimum depth to the zone of influence of the pressure main, to ensure that no additional load will be placed on the main by the structure;</li> <li>○ Driven piles are not permitted within 5.0m of the pressure main.</li> </ul> </li> </ul>



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No.	Item	Works/Structure	Criteria
5	<p><b>Pressure mains</b> (Water mains/ non-drinking water mains/sewer rising mains)</p>	Fences and retaining walls	<p>Timber or light weight construction:</p> <ul style="list-style-type: none"> <li>• A minimum horizontal clearance of 1.0 m between the proposed structure / foundation and the outside edge of the pressure main must be maintained;</li> <li>• A minimum horizontal clearance of 1.0 m between the posts of the fence and the outside edge of the pressure main must be maintained where the fence is traversing the water main;</li> </ul> <p>Masonry (Brick, stone and other similar materials):</p> <ul style="list-style-type: none"> <li>• Footings/foundations must extend below the zone of influence of the invert level of the pressure main, to ensure that no additional load will be placed on the pressure main by the structure;</li> <li>• A minimum horizontal clearance of 1.0 m between the proposed footings/ foundations and the outside edge of the pressure main must be maintained;</li> <li>• Foundations traversing the pressure main must maintain a minimum vertical clearance of 600 mm to the outside edge of the pressure main;</li> <li>• Driven piles are not permitted within 5.0m of the pressure main;</li> <li>• Retaining walls must traverse the pressure main at a <math>90^{\circ} \pm 15^{\circ}</math> or engineering design</li> <li>• Added fill over pressure main must not increase the depth to invert beyond 1.5 m;</li> <li>• A minimum cover over the pressure main in accordance with the requirements of the <i>South-East Queensland Water Supply and Sewerage Code (SEQ WS &amp; S D&amp;C Code)</i> must be maintained</li> </ul> <p><i>Note: If requested, Unitywater may perform an inspection. A standard fee applies.</i></p>

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No.	Item	Works/Structure	Criteria
6	<b>Pressure mains (Water mains/ non-drinking water mains/sewer rising mains)</b>	Driveways, Paving, Storage areas, Concrete vehicle parking areas	<p><i>Residential driveways and paving:</i></p> <ul style="list-style-type: none"> <li>A minimum cover over the pressure main in accordance with the requirements of the <i>SEQ WS &amp; S D&amp;C Code</i> must be maintained.</li> </ul> <p><i>Commercial/industrial driveways and paving:</i></p> <ul style="list-style-type: none"> <li>A minimum cover over the pressure main in accordance with the requirements of the <i>SEQ WS &amp; S D&amp;C Code</i></li> <li>PRV, SV, AV, Hydrant, Water meter and Inspection chamber cover levels must match the new surface level where applicable (work is to be carried out by a Unitywater authorised person);</li> <li>No additional load is to be placed on the water main by the works;</li> </ul>
7	<b>Pressure mains (Water mains/ non-drinking water mains/sewer rising mains)</b>	Excavation and landscaping	<ul style="list-style-type: none"> <li>Consent is not required for the planting of trees, shrubs and gardens; please consider the <a href="#">type of trees</a> to be planted.</li> <li>Consent is required for the placement of rockeries (constructed with rocks weighing more than 25kg) and other garden features (larger than 1.0m in any dimension);</li> <li>The depth of fill permitted to be placed over the pressure main must not increase the depth to invert beyond 1.5m and be placed without the use of heavy compaction equipment;</li> <li>A minimum cover over the pressure main in accordance with the requirements of the <i>SEQ WS &amp; S D&amp;C Code</i> must be maintained;</li> <li>PRV, SV, AV, hydrant(s), water meter and inspection chamber cover levels must match the new surface levels where applicable (work to be carried out by an authorised person);</li> </ul>



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No.	Item	Works/Structure	Criteria
8	<b>Pressure mains (Water mains/ non-drinking water mains/sewer rising mains)</b>	Utilities service lines	<ul style="list-style-type: none"> <li>Services are to traverse the water main at a <math>90^\circ \pm 15^\circ</math>;</li> <li>Services traversing the pressure main must maintain a minimum vertical clearance in accordance with the requirements of the <i>SEQ WS &amp; S D&amp;C Code</i>;</li> <li>Services parallel to the pressure must maintain a minimum horizontal clearance in accordance with the requirements of the <i>SEQ WS &amp; S D&amp;C Code</i>;</li> <li>No additional load is to be placed on the pressure main by the services;</li> </ul>
9	<b>Pressure mains (Water mains/ non-drinking water mains/sewer rising mains)</b>	Telecommunication and electrical transmission poles and towers	<ul style="list-style-type: none"> <li>A minimum horizontal clearance of 3.0 m between the foundations and the outside edge of the pressure main must be maintained;</li> <li>Footings/foundations must extend below the zone of influence of the invert level of the pressure main, to ensure that no additional load will be placed on the main by the structure;</li> </ul>
10	<b>Pressure Mains (Water mains/non-drinking water mains/sewer rising mains)</b>	Basements	<ul style="list-style-type: none"> <li>Pressure mains are not permitted to be located within a basement.</li> </ul>