

Name of document:	Guidelines for Building Over or Near Council Water and Sewer Services
Last review date:	January 2025
Associated policies/documents:	Building Over or Near Council Water and Sewer Mains Policy
Responsible division:	Water Planning & Assets

Contents

General.....	2
Development considerations.....	2
Types of water and sewer assets.....	2
Building Restrictions.....	3
Restricted under the policy.....	3
Restricted under best practice.....	3
Plans for Consideration	3
Building plans	3
Design Premise.....	3
Access to council plans	3
Assumptions with the policy.....	4
Zone of Influence and Submission Requirements.....	5
Zone of influence	5
Required plans to seek build over approval	6
Submission of plans	6
Restrictions and Allowances	6
Conditions to ensure protection of the asset.....	6
Restrictions.....	7
Allowances.....	8
Temporary Protection of Pipes During Construction.....	12
Machinery loading and pipe depth.....	12

General

Prior to building over, adjacent or close to a MidCoast Council (Council) water or sewer asset, you must obtain written approval from Council and satisfy all conditions to ensure protection of the asset. Council reserves the right to reject any submission to build over or near a water or sewer main.

When building over, adjacent or close to a Council water or sewer asset, you must not:

- Obstruct access to Council assets
- Cause damage to Council assets
- Weaken or expose Council assets

This document is a guideline that should be read in conjunction with the policy [Building Over or Near Council Water and Sewer Mains \(BONCWSM\)](#).

Council does not allow structures to be built over any sewer rising main or water main. Council may approve structures either adjacent to a water/ sewer asset, within the zone of influence (ZOI) or over a sewer gravity main, subject to case-by-case approval. This procedure is applicable to any development or structure proposed over or adjacent to a potable water main, recycled water main or sewer main.

Council will review the information provided by the applicant such as site plans and engineering plans. Council will determine the relevant conditions that the applicant needs to satisfy prior to the commencement of any works where applicable.

Each submission to build over or near a water or sewer asset will be reviewed independently and holds no precedent for future submissions.

Development considerations

If building over or near an asset is proposed, Council may require an asset to be replaced, relined, relocated or otherwise augmented prior to the commencement of any works at the cost of the applicant. Maintenance structures must not be in or under the proposed build over section.

As outlined in the policy, the factors Council consider are:

- Pipe Depth
- Access to assets
- Zone of Influence (ZOI)
- Main Size/ Condition
- Easements

Types of water and sewer assets

The Council network includes a wide range of water and sewer assets. Assets vary in size and function and may be either above-ground or buried underground. Each asset operates under different pressures and flow conditions and include the following:

- Water and sewer mains
- Maintenance structures
- Junctions and inspection openings
- Valves
- Hydrants

Building Restrictions

Restricted under the policy

The [BONCWSM policy](#) outlines that Council will not provide approval for structures to be built over any sewer rising main or water main. It also outlines:

- No structures are permitted over or projecting over a sewer rising main or water main
- No structures are permitted within an easement for water supply
- No structures are permitted to overhang or project into a water main easement

Restricted under best practice

There are additional restrictions to ensure a safe and efficient water and sewer network. These restrictions are:

- Stormwater must not be discharged into the reticulated sewer network.
- Swimming pool discharge to sewer requires Council approval. Council may condition restricted discharge rates or balance tanks to impede the flow into the sewer system.
- No structure shall be built over a low-pressure sewer main or vacuum sewer main.

Plans for Consideration

Building plans

The building plans submitted for consideration must identify the proposed works in detail. The plans should outline the extent to which a structure will impact Council's asset/s. The applicant shall provide a proposed methodology for protecting the asset. As a guide, plans should include:

- Site plan with water and sewer services and zone of influence clearly identified
- Structural footing details (if required)
- Soil classification and capacity
- Location of connections, junctions, maintenance structures and openings

As outlined in the policy, structural details shall be prepared by a structural engineer. Structural engineers must hold one of the following registrations:

- Engineers Australia (CPEng)
- Registered Professional Engineer (RPEng)
- Registered Professional Engineer of Queensland (RPEQ)

Plans shall clearly demonstrate/ certify that the load of any proposed structure does not impact the existing main.

Design Premise

Access to council plans

Information relating to Council's water and sewer assets can be accessed by following the steps below:

1. Navigate to the Council website "Customer Report and Request (Water and Sewer"
[MidCoast Council Customer Report and Request - Water and Sewer](#)

2. Raise a request
3. The subject line should contain “Water and sewer infrastructure / asset enquiry”
4. Additional Information: “GIS water service query: Build over or near information”

Council will be able to provide an outline of water and sewer assets that can be relied on for concept design only.

Assumptions with the policy

The [BONCWSM policy](#) outlines conservative estimates that can be utilised for a concept design only. The applicant will need to physically confirm any assumptions ahead of construction. The assumptions are:

- Unless known, the gravity main has an assumed depth of 1.5 meters.
- Foundations shall have a minimum horizontal clearance of 600mm to the main and main encasement (if applicable)

Zone of Influence and Submission Requirements

Zone of influence

The Zone of Influence (ZOI) is an area above and beside a buried asset, where load from a structure on the surface may impact the pipe underground. Additionally, the ZOI is put in place to ensure that Council can access the asset for maintenance or repairs. The ZOI is dependent on the pipe depth and the soil type. Generally, deep assets or unstable ground conditions lead to a larger ZOI. Pipe depth, size and soil site classification will need to be demonstrated within the submitted plans to council.

Table 1: Trench Width and Bedding Information

Pipe Diameter (mm)	Trench Width (mm)	Bedding (mm)
<225	600	300
>225	1000	300

Figure 1: Zone of influence: clay soils

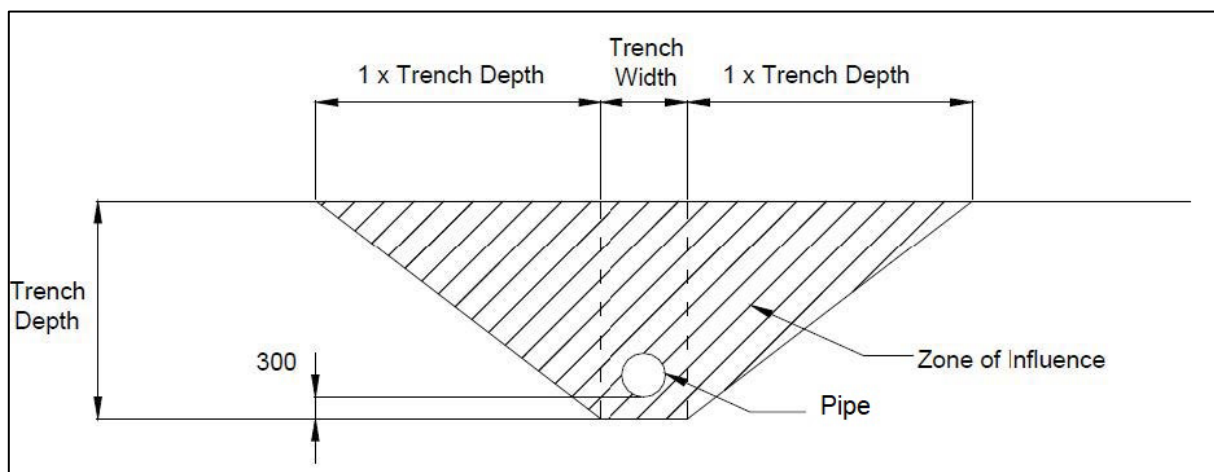
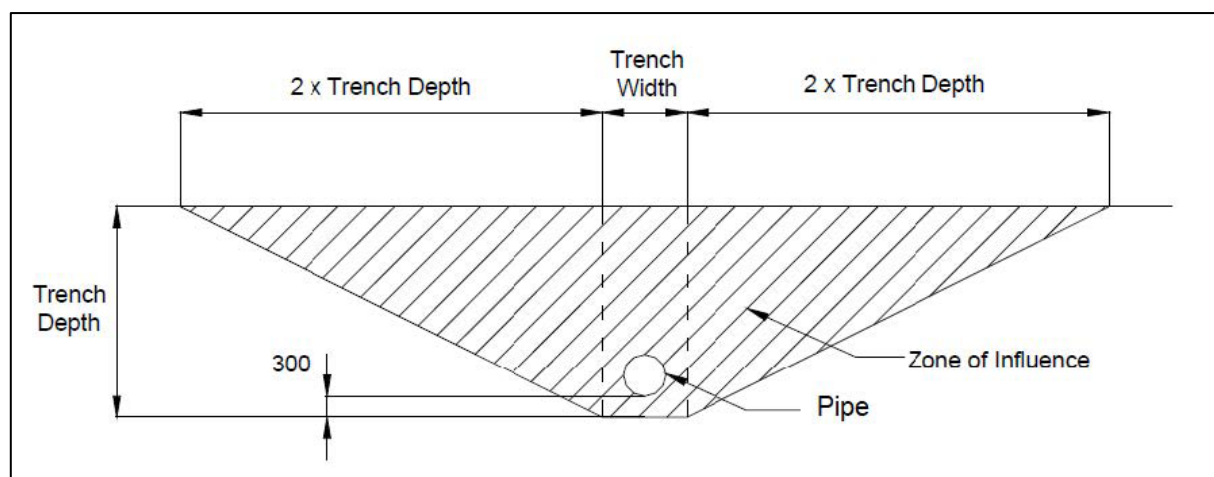


Figure 2: Zone of influence: sandy soils, filled ground & loam



Required plans to seek build over approval

When applying to build over or near an asset, the following information will be required:

- A site plan outlining (as a minimum):
 - Proposed building/structure location
 - Location of water and sewer mains including the zone of influence
 - All fixtures such as junctions, maintenance structures and inspection openings
 - Foundation details such as bridging or piling details
- The structural component of the design must be prepared by a structural engineer, the engineer must demonstrate that the load from the proposed structure has been mitigated away from the asset, with confirmation of the following details:
 - Confirmation of the soil site classification in relation to the foundation design.
 - Foundations and piers must not be closer than 600mm to the wall of a sewer main its encasement (If applicable).
 - Load dissipation away from the asset.

Submission of plans

The plans can be submitted to Council in a number of ways:

1. A Section 68 application to Council ([Water & Sewer Approval Application](#))
 - a. If adjustments to water or sewer is applicable, the approval to build over or near assets can be sought via the Section 68 application for water and sewer services or through your Development Approval (DA).
2. Council's report and request system
 - a. If you are engaging a private certifier or where there is no adjustment to water or sewer assets, you can make a submission through the request system.
 - b. Navigate to the council website "Customer Report and Requests – Water and Sewer" [MidCoast Council Customer Report and Request - Water and Sewer](#)
 - c. Raise a request
 - d. The subject line shall contain "Request Build Over or Near Water or Sewer"
 - e. Information to include Outline the applicant details, land details, attached plans and any other information related to the build over or near request.
3. Submission in person at any of the Council offices.

Restrictions and Allowances

Conditions to ensure protection of the asset

Council will review the information and determine whether specific conditions apply on a case-by-case basis. The conditions will reflect both the criticality and the need to protect the asset. These conditions may outline, but are not limited to, the conditions outlined in Table 2: Asset protection conditions.

Table 2: Asset protection conditions

Condition	Commentary
Relining	To prevent deterioration of the pipe when the host pipe is in fair condition. This prevents soil, roots and liquids from entering through cracked sections or broken joints. The relining may also provide structural support to the host pipe.
Replacement	If the pipe age is nearing the end of its serviceable life, replacement may be conditioned. This would address access constraints once the build over occurs.
Bridging/ piling	Applicable to the majority of build over or near water or sewer assets to ensure surface loads do not transfer to the pipe.
Concrete Encasement	To provide strong protection to the pipe, where access to a pipe will be permanently compromised and/or where load dissipation is difficult to achieve.
Reinforced Concrete Encasement	A maintenance free solution that provides extreme support to the host pipe due to load and size of the structure above.
Relocation	Applicable to pipes that are deemed a critical asset.
Pile Driving Protection	Council may seek a bond, CCTV video (before and after) or seek public liability insurance from the contractor to ensure protection of assets.

Restrictions

Table 3: Restrictions to build over sewer and/ or water

Structure	Build Over Considerations	Information
Sewer rising main	No tolerance, maintain ZOI or existing setback and do not build over.	Rising main pipes smaller than 200mm in diameter maintain an offset of 1.5m. If the sewer rising main pipe is larger than 200mm, contact Council for specific offset requirements.
Sewer vacuum pits	No tolerance, maintain ZOI or existing setback and do not build over.	Maintain a minimum offset of 1.5m.
Water valves and hydrants	No tolerance, maintain setback or request that the asset is relocated/ adjusted at developers' cost.	If adjustment of a valve or hydrant is required, submit information relating to the proposed location and adjustment to the asset.
Sewer manholes, inspection points, access chambers and dead ends	No tolerance, maintain offset or relocate/ adjust at developers' cost.	Offsets: Manhole: 1.5m Dead End: 1m Junction: 1m Inspection Opening: 1.5m Vertical clearance: 3m If adjustment is sought, submit information relating to the proposed location and adjustment to the asset.
Vent shafts	No tolerance, maintain setback and access requirements.	Radial clearance: 2m Height: Minimum 2m above roof level Access requirements: Access for a 2.4m wide and 3m high vehicle.

Structure	Build Over Considerations	Information
Low-pressure sewer mains	No tolerance, maintain ZOI or existing setback and do not build over.	Boundary fences exempt (maintain 600mm offset for fence posts).
Sewer vacuum mains	No tolerance, maintain ZOI or existing setback and do not build over.	Boundary fences exempt (maintain 600mm offset for fence posts).
Water mains	No tolerance, maintain ZOI or existing setback and do not build over.	Driveways must maintain vertical clearance from the watermain as per Council standards, refer to driveway construction within Table 4.

Allowances

Table 4: Allowances to build over or near sewer and/or water

Structure	Build Over Considerations	Information
Driveway construction	<p>Physical confirmation of pipe depth and condition is required. Council may condition the replacement of pipes, piercing, relocation of pipes, lowering of pipes and/or the adjustment to valves/ manholes.</p> <p>Sewer Domestic Driveway: 750mm Commercial/ Industrial Driveway: 900mm</p> <p>Water Domestic Driveway: 600mm Commercial/ Industrial Driveway: 600mm</p> <p>Cover is measured from the top of the pipe to the finished surface level of the pavement. If the cover is insufficient, the structural engineer must propose a protection method which may include:</p> <ul style="list-style-type: none"> • A protective slab • Concrete encasement • Piers 	<p>Council will consider the pipe condition, criticality of the asset and necessary protection conditions to ensure adequate protection of the pipe.</p> <p>Sewer: If the pipe is shallow, Council may condition a structurally engineered footing with piers, or, request sewer access structures are moved to be outside of the driveway.</p> <p>Water: If the pipe does not have sufficient cover Council may condition that the pipe is lowered. Separately, Council may condition that the location of valves or hydrants are altered, to be separated from the driveway.</p>
Footpath construction	<p>Recommended Pipe Cover:</p> <p>Sewer: 600mm Water: 600mm</p> <p>Cover is measured from the top of the pipe to the finished surface level of the pavement. Protection of the pipe may be conditioned to avoid future access/ maintenance issues.</p>	<p>Sewer: Council may condition relining or replacement of the pipe to manage future access and maintenance issues.</p> <p>Water: If the pipe does not have sufficient cover Council may condition lowering of the pipe. Separately, Council may condition that the location of valves or hydrants are altered.</p>

Structure	Build Over Considerations	Information
Rain gardens	<p>Maintain minimum offset of 1.5m from the edge of the raingarden to the centre of the pipe where achievable. Otherwise provide details of the raingarden arrangement in relation to the sewer asset.</p> <p>Outline the proposed cover between the bottom of the rain garden and top of the pipe.</p>	Relocation, relining or encasement of the pipe may be conditioned. It is best to avoid building stormwater structures over or near water or sewer assets.
Stormwater swales	<p>Maintain minimum offset of 1.5m from the edge of the stormwater swale to the centre of the pipe where achievable.</p> <p>Otherwise, provide details of the stormwater swale arrangement in relation to the sewer asset. Outline the cover proposed to the pipe.</p>	Relocation, relining or encasement of the pipe may be conditioned. It is best to avoid building stormwater structures over or near water or sewer assets.
Detention basins	<p>Detention basins are not generally an acceptable build over structure. The developer must demonstrate that the detention basin cannot be placed elsewhere and/or that the assets cannot be relocated.</p> <p>If a detention basin is proposed over a sewer pipe or within the ZOI, provide detailed plans of the detention basin and the position and depth of the pipe.</p>	<p>Assessed case by case.</p> <p>Council will consider the criticality of the pipe and may condition a full encasement of the pipe and adjustment of nearby assets.</p>
Gardens and greenhouses	Lightweight gardens and greenhouses are permitted over/near sewers without protection if at least 1.5m from the centre of a sewer access chamber/shaft.	The garden or greenhouse should not have a concrete pad, otherwise consider the requirements of a concrete footpath.
Carparks	<p>Minimum cover requirements:</p> <p>Sewer domestic: 750mm Sewer commercial/ industrial: 900mm Water: 600mm</p> <p>Cover is measured from the top of the pipe to the finished surface level of the pavement.</p>	Multi-level or underground carparks will be assessed on a case by case basis. Council may condition the encasement or relocation of a pipe.
Swimming pools	Maintain a minimum 600mm separation between a pool and the pipe. Verandas, tiles and decks built within the 600mm separation will trigger concrete encasement.	Where the pool impacts the Zone of Influence of the pipe, concrete encasement, relocation or foundation piercing may be conditioned.

Structure	Build Over Considerations	Information
Patio/ deck/ veranda	<p>Structures should be constructed from lightweight materials which should be demonstrated on the plans submitted to Council. The plans should consider the following:</p> <ul style="list-style-type: none"> • Demonstrate support posts are not closer than 600mm from the side of a sewer pipe. • Demonstrate that the materials are lightweight and demountable. 	<p>Lightweight/ demountable structures do not include concrete or masonry.</p> <p>Council may condition that the pipe is replaced or re-lined if the asset is reaching the end of its serviceable life.</p>
Carports and sheds with a concrete slab	<p>The structure should be demountable and re-constructable without the need to replace major structural building components. Consider the following:</p> <ul style="list-style-type: none"> • Support posts shall have a setback of 1.5m of a sewer manhole, access chamber or inspection opening. • Support posts shall be offset 600mm from the centre of a sewer pipe. 	<p>The placement of support posts and construction joints should provide Council the ability to gain access to the sewer pipe (if required) with the smallest impact to the landowner.</p> <p>Council may condition that the pipe is replaced, relined or encased.</p>
Any class of building	<p>A structural engineer must design the elements within the ZOI to ensure the following:</p> <ul style="list-style-type: none"> • The building is self-supporting within the zone of influence. • Footings should be below the zone of influence or based on solid rock (if present). • If buildings are proposed over or within 600mm of a sewer pipe, the engineer should propose replacement, encasement or relocation to ensure protection of the pipe and associated branches. <p>No foundation protection (piers) can be within 600mm of a sewer pipe or its encasement.</p>	<p>The level of pipe protection will be determined when considering the pipe age, size, depth, condition and criticality.</p>
Retaining wall	<p>Retaining walls should maintain a 1.5m offset from the centreline of the sewer pipe where achievable.</p> <p>If the retaining wall is greater than 1m tall and within 600mm of the sewer pipe, concrete encasement or relocation shall be proposed by the engineer designing the wall.</p>	<p>Retaining walls must be designed and certified by a structural or geotechnical engineer. The wall should be self-supporting if it is located within the zone of influence and should ensure proper load dissipation to protect the buried pipe.</p>

Structure	Build Over Considerations	Information
	<p>If an applicant is seeking approval to build directly over the sewer pipe, consider:</p> <p>Retaining walls under 1m:</p> <ul style="list-style-type: none"> • Wall posts must be at least 600mm clear from the pipe • A bridging slab must be designed by a structural engineer that demonstrates protection of the pipe. The soil conditions will need to be considered within the design. <p>Retaining walls over 1m:</p> <ul style="list-style-type: none"> • An engineer must design foundation piers to dissipate the load to the sewer pipe. • Piers must not be proposed within 600mm of the sewer pipe or its encasement. 	<p>Retaining walls less than 1m do not require encasement but all attempts should be made to maintain an offset from the sewer pipe or provide a concrete foundation at points where the retaining wall intercepts with the pipe.</p> <p>If the sewer pipe is at a depth greater than 3m, the structural engineer can propose that no encasement is required. They will need to demonstrate that the load is dissipated within the soil and that the retaining wall has no load bearing onto the buried pipe.</p>
<p>Tree planting</p>	<p>When planting trees near water or sewer services, consider the following:</p> <ul style="list-style-type: none"> • No trees shall be planted within a water or sewer easement. • Trees planted adjacent to a water or sewer easement should be installed with a tree root barrier within 3m of sewer pipe alignment. • Small shrubs and vegetation that grow to less than 1.5m in height may be proposed within the easement. However, shrubs and vegetation selected should have shallow root systems to minimise the likelihood of root penetration into the buried service pipe. 	<p>Consult Council or a tree specialist for suitable species and how far to plant them from pipe asset.</p> <p>Obtain a service location diagram from Before You Dig Australia (BYDA) to identify the location of underground pipes. Some plants which have shallow root bases and are unlikely to cause issues include:</p> <ul style="list-style-type: none"> ○ Azaleas ○ Bay trees ○ Bronze Cottonwood ○ Coastal Golden Wattle ○ Feijoa ○ Japanese Maple ○ Lemon Myrtle ○ Native Gardenia ○ Olive Tree ○ Tulipwood

Temporary Protection of Pipes During Construction

Machinery loading and pipe depth

Buried pipe assets can be subject to the loading from machinery on the surface, particularly if the pipe is shallow. The pipe relies on the cover of soil above to protect it from damage. Therefore, it is important to know the physical depth of the asset and the weight of any machinery that may pass over the pipe during construction.

Before starting site work, physically locate and mark the position and line of Council assets and exercise care during construction. If there are any doubts about the service or condition of any pipe asset, contact Council.

Table 5: Temporary protection of pipes

Site Condition	Restrictions
Shallow pipes	For pipes with less than 450 mm cover, no construction plant may pass or be positioned within the zone of influence. If crossing the pipe is necessary, seek an approval from Council to implement protective measures. For pipes with more than 450 mm cover, light construction plants like forklifts, small excavators, and wheel loaders are generally permitted.
Deep pipes	Construction plant is generally permitted for pipes with over 2000 mm soil cover, provided that individual wheel loads do not exceed 80 kN load.
Heavy plant	5T: minimum soil cover to pipe 450mm 10T: Minimum soil cover to pipe 750mm Also consider the following: <ul style="list-style-type: none"> • Use low vibration work methods when possible. • Avoid using heavy and mechanical vibration equipment within 750 mm of the pipe top. • Aim to control vibration at the source by opting for equipment with lower vibrations. • Council prefers the use of light rollers, plate compactors, and tampers over heavy vibratory rollers. • Use static compaction equipment instead of vibratory types. • Work in shallower layers. • For heavy construction plant or vehicles exceeding legal load limits (e.g., piling rigs, cranes, rollers). Provide an engineering assessment to Council and ensure no excessive loadings or vibrations on assets.