



Construction Near Underground Services POLICY

Policy Version 2.0

Category: Statutory

Adopted: September 2022



Construction Near Underground Services Policy

Purpose

The purpose of this Winton Shire Council (Council) policy is to establish conditions under which Council may allow the construction of buildings or other structures near or over Council underground services.

Council will not approve structures to be built over a sewer rising main, a water main or within any Council easement.

Council will permit structures to be built over a sewer or within the distances specified in this document – subject to the conditions as specified in this document.

Scope

This policy applies to all property upon which Council infrastructure is situated and applies irrespective of whether the infrastructure is contained within an easement, however does not override the stated easement condition for the particular easement.

Definitions

Access Chamber/Manhole	shall mean a chamber with a removable cover that allows human and machine access to an underground asset.
Adjacent	shall mean building works and/or foundations located partly or wholly within the Zone of Influence of an asset, but not directly over the asset.
Asset	includes, but is not limited to water, sewer and stormwater pipes, chambers, maintenance structures, vent shafts and pumping stations.
Connection Drain/sewer Connection	shall mean any pipe that takes waste from a residential, commercial or industrial structure to a Council owned sewer main. The connection drain/sewer connection is the responsibility of the land owner.
Easement	shall mean an area of land, or part of a lot reserved by law for a specific purpose, such as for access.
Horizontal Distance	shall mean the minimum distance between the outermost edge of the wall, slab, footing, fascia, guttering, driven pile, bored pile, and any integral parts of the building and the outside of the service or underground asset.
Professional Engineer	shall mean a suitably qualified engineer (civil, structural or geotechnical) having RPEQ accreditation or listed on the National Professional Engineer Register (NPER).
Sewers	shall mean any pipe taking wastewater from dwellings, shops, commercial and industrial premises. The drains from kitchen sinks, laundry tubs, showers, baths, hand basins, toilets etc. are connected to the sewer line.
Sewer Rising Mains	shall mean the pipelines that take wastewater to dwellings, shops and industrial premises.



Structure	shall include all structures such as demountable buildings, houses, decks, pergolas, swimming pools, retaining walls, water storage tanks, garden sheds, garages, sheds, carports and all domestic type dwellings including all buildings as defined in the Building Act 1975.
Water Mains	shall mean the pipelines that provide treated drinking water to dwellings, shops and industrial premises.
Underground Service	includes an underground asset owned by Council e.g., a sewer main.
Zone of Influence	shall mean the envelope within which above ground and/or below ground building works have the potential to exert influence on an asset.

Policy

The objective of this policy is to:

- Preventing structural damage to water or sewer pipes. This damage is a result of the load from the structure bearing on the pipework. This may cause the pipes to subside and/or fracture.
- Preventing damage to buildings. Buildings located on or near underground pipes can be subject to subsidence with consequent damage to the structure. Subsidence can occur when a pressurised pipeline breaks and the flow of water undermines the surrounding soil. When a hole occurs in an underground sewer, the surrounding soil can be drawn into the pipe leaving a void, which may then collapse. Any structure located over or near this collapsing ground may be damaged unless piers adequately support it.
- Maintaining access to manholes, junctions, and inspection shafts. This will allow staff to undertake regular maintenance to pipework without having to remove structures. Sewers, in particular, are subject to blockages that need to be cleared quickly.
- Enabling efficient and economical access to pipework for major repairs and/or replacement without damaging structures. Large earthmoving equipment is used to repair pipelines. This equipment needs room to manoeuvre. Structures that are too close to the line will make access difficult and may also be at risk of being damaged.
- Reducing future maintenance costs to Council. It is reasonable that Council, and subsequently customers, should incur unnecessary costs when carrying out maintenance and/or repairs caused by having to remove and then replace structures that have been built over or too close to an underground asset.
- Providing a consistent approach to building over or near underground pipework throughout the Winton Shire. This will assist in maintaining the structural integrity of existing buildings that may be affected by new building proposals. Existing buildings may become at risk where a new building has been built without consideration for nearby pipelines. A new structure may impose a load on an underground line causing it to fail. This failure may, in turn, cause damage to the existing structures.

New Development and/or Building Applications

When an application is made to build a new structure or extend and/or alter an existing structure, an assessment is made of the effect the proposal may have on any nearby sewers, sewer rising mains or water mains.



All applications should show the position of any sewer or water main in relation to the property and existing or proposed structures. Plans should be drawn at a scale of 1:200 or 1:100. It is advisable to contact Winton Shire Council to ascertain the general location of any pipelines and whether special designs will be required for the proposed structure before submitting plans (see Section 11).

If any part of the proposed structure is to be located over the underground service the application may be refused, unless the applicant has abided by the Clauses outlined in this Policy. The applicant will be required to design the structure so that it does not impose additional loads on the underground service.

A structure that is to be built close to an easement will require a Structural Engineer's certificate to ensure that it does not place a loading above what the Zone of Influence of the sewer, sewer rising main, or water main is able to withstand.

Before plans are submitted, the applicant should have a surveyor locate the pipeline to ensure that footing designs will be adequate for the proposed structure.

Building Near an Underground Water Main or Sewer Rising Main

These pressure mains are usually located under footpaths or roads and are sited well away from most structures. However, occasionally pressure mains are located through private property and in these cases, advice should be obtained from Winton Shire Council before commencing design work. A burst water main may quickly cause severe damage to an adjacent structure.

Note: Under no circumstances will approval be given for any structure to be built over a water main or sewer rising main or within their easements.

Building Near an Underground Gravity Sewer

Where Easements Are Not Provided

Where possible all structures should be located away from any underground services and applicants will be actively encouraged to investigate alternatives to locating structures over underground services.

Note: Under no circumstances will an individual footing or concrete pier be located directly above an underground service.

All structures proposed to be located over an underground service shall have a footing/foundation system designed by a Registered Professional Engineer (RPEQ) and certification shall be provided by the Professional Engineer that no part of the structure will place additional loading on the underground service.

The design plans will be submitted to Council for approval and will include drawings to scale (plans and elevations) including full details on the exact location of the underground service. This level of detail will only be obtained if a registered surveyor has surveyed the location of the underground service and verified its location and depth.

In all cases where a structure is permitted to be constructed over an underground service the property owner will indemnify Winton Shire Council against repair or replacement of the underground service, up to 50% of the total costs of repair, where it can be determined that the footing or structure caused or contributed to the damage to the underground service.

The indemnity is not to replace the need of taking reasonable precautions. Where approved the indemnity may include an undertaking to remove the structure, or an undertaking not to make Council responsible for restoration of other items.



The terms of the indemnity will state that Council is not held responsible for any damage to the structure apart from negligence by Council or its employees. This condition is transferred to successors in title even if they fail to renew the original indemnity and undertaking.

Where Easements Are Provided

Easements of specified width are defined on the Registered Plan for each Lot. Where an easement has been provided the following conditions will apply:

- No external wall of a structure can be built within an easement.
- An overhang is permitted within an easement. Where a structure is to be built up to the easement the maximum eave overhang should be not greater than 450mm i.e., the maximum eave protrusion into the easement should be no greater than 450mm measured horizontally from the edge of the easement to the vertical line drawn from the outmost edge of the structure (whether that be the fascia board or the gutter).
- It cannot be assumed that the underground service will always be located in the centre of the easement. Where the service has been located to one side of an easement then it may be necessary for a structure to be located well outside the easement to maintain the minimum distances from the service. In these cases, an individual assessment will be made to determine the minimum wall and eave setbacks required. This assessment will consider the distance from the service to the edge of the easement, the depth of the service and the difficulty of access for machinery.

Zone of Influence for Sewers, Drains, and Water Mains

The “Zone of Influence” is located within the soils surrounding a pipe and is that part of the soil that will be affected by any damage occurring to the pipe or during excavation of a trench. For example, should a pipe break or a joint leak, subsidence may occur within the Zone of Influence.

The depth of the pipeline, the type of soil and the slope of the site determine the size of the zone, but since Winton is generally flat and clay soil predominantly is found within the town, the Zone of Influence will be set as per Figure 1.

How the Zone of Influence is calculated:

- The main depth and its position in relation to the proposed building site is found. (These details are taken from Council's records or by inspection of the site, but in either case needs to be confirmed accurately).
- The depth of the trench containing the pipework is calculated by adding 300 mm to the pipe depth.
- The width of the trench depends on the pipe diameter. As a guide, pipes up 225 mm diameter will have a trench width of 600 mm whilst pipes over 225 mm diameter will have a trench width of 1000 mm. In the case of large diameter pipes and/or deep trenches the trench width may be larger than the preceding values. In these cases, an individual assessment will be made. The zone is calculated using the depth of the trench and half the trench width. Figure 4.1 shows the Zone of Influence that will be applied in Winton and used for the application of this policy.



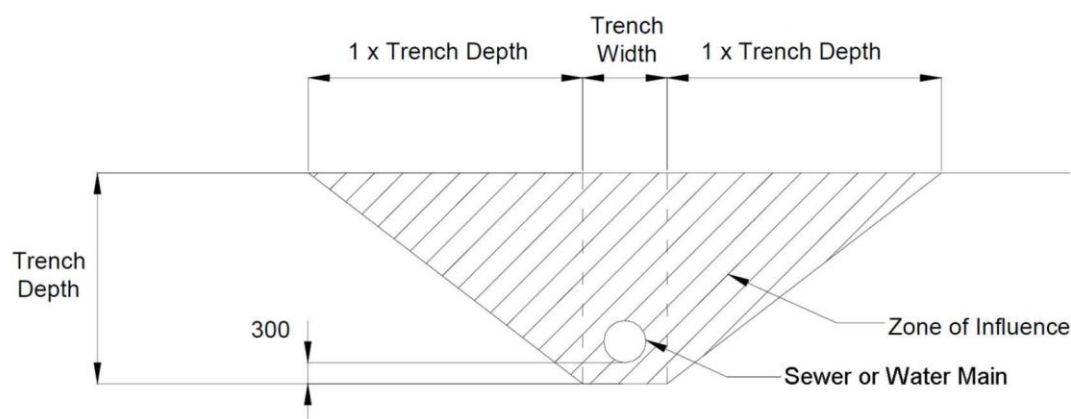


Figure 1 - Zone of Influence

Footings Located in the Zone of Influence

Footings located in the Zone of Influence as illustrated by Figure 2, will be permitted providing certain conditions are complied with.

Any footing that is founded in, under or passes through the Zone of Influence as indicated in Figure 2 is required to be designed by a Professional Engineer (RPEQ).

Additionally, the engineer is also required to certify that the footing will not impose any additional loading on the trench material and consequently the sewer or water main. The professional Engineer is required to submit a Compliance Certificate for Building Design (Form 15).

Additionally, all footings that are founded in, under, or pass through the Zone of Influence are required to be inspected following excavation and placement of any steel reinforcement and prior to the pouring of any concrete by either the Building Certifier or a Professional Engineer.

It will be at the discretion of either of these parties to organise a competent person to undertake the inspection if they are not available. Any concrete placed or piles etc. driven prior to an inspection being carried out will be required to be removed at the applicant's expense.

In all cases where a structure is constructed within the Zone of Influence of a sewer main the property owner will indemnify Winton Shire Council against repair or replacement of the sewer main, up to 50% of the total costs of repair, where it can be determined that the footing or structure caused or contributed to the damage to the sewer main. The indemnity is not to replace the need of taking reasonable precautions.

Where approved the indemnity may include an undertaking to remove the structure, or an undertaking not to make Council responsible for restoration of other items. The terms of the indemnity will state that Council is not held responsible for any damage to the structure apart from negligence by Council or its employees. This condition is transferred to successors in title even if they fail to renew the original indemnity and undertaking.



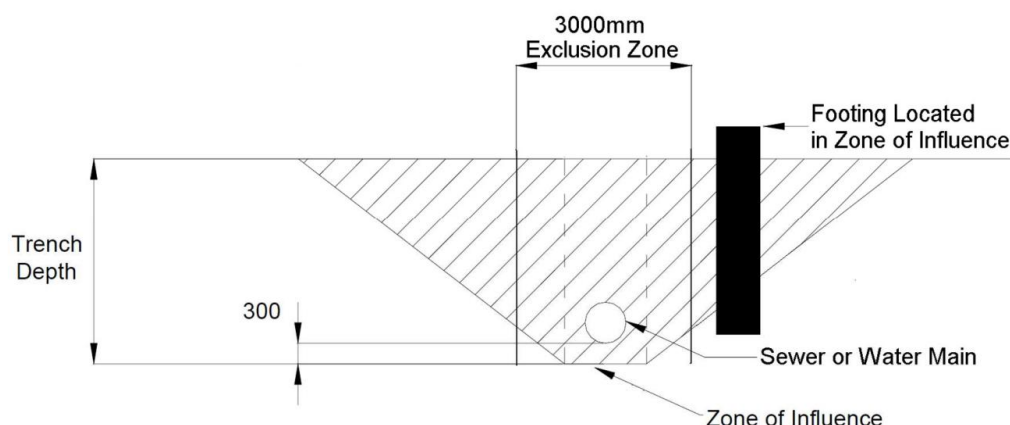


Figure 2 - Footings Located in the Zone of Influence

Connections From a Sewer Main to a Structure

Due to the alignment of sewer mains in Winton it is highly likely that connections from a structure to a sewer main may pass under a neighbouring property. Where a property owner proposes to carry out a development it is their responsibility to verify the location of any sewer connections that may affect the development.

Where the development involves the construction of a structure and it is determined that a sewer connection falls within the foundation footprint of that structure, then the relocation/realignment of that connection will be required to be carried out and the cost for such works borne by the party carrying out the development.

Any relocation/realignment of the connection shall be done after consultation with the affected party/s and have due regard to their rights. Where possible a connection drain should be placed at least 1000mm from the edge of any footing of a structure.

Relocations of Sewer Mains and Access Chambers (Manholes)

Council will consider the relocation of sewer mains and access chambers in order for development to occur on any particular parcel of land. Any such proposal should be submitted to Council for consideration.

The full cost of any relocation or realignment (if approved by Council) would be paid for by the applicant, with Council assuming ownership of the infrastructure.

Access Chambers (Manholes)

Building over a sewer access chamber (manhole) or within a 1.5m radius (measured from the outside concrete edge) of the manhole is not permitted.

Working space around the manhole must be provided. When a building over a manhole has been demolished, rebuilding over the manhole will not be permitted.

Existing Structures

Where structures have been built over a sewer or water main without Council approval (since the inception of this policy), then Council may require that the structure be demolished, moved, or substantially modified so that it complies with this policy.

Where it is necessary to access an underground access chamber, sewer, or water main for maintenance or repair work, Council will not be held liable for the cost of restoring any illegal structures and the property owner may be charged for extra work required due to the illegal structure.



Possible Variations to this Policy for Commercial Premises

Variations to this policy will be allowed for construction of structures in areas zoned Commercial where 100% land coverage is permitted. In this case the Council may request other alternatives be investigated.

When full coverage is permitted, designers should take care that rodding access is available to the sewer and to private drainage connections from points within the building.

Building foundations should not impose additional load on the sewer. Variations to the Policy will be assessed on a case-by-case basis.

Enquiries from the Public

The point at which Council approves or refuses to approve building plans for construction adjacent to underground assets is after those plans are submitted. Anything said by Council officers prior to submission of plans, or any other information provided to an intending applicant, can only be of a general preliminary nature and does not constitute approval.

The precision with which such information can be given is necessarily dependent on the precision of the information supplied by the intending applicant.

Plans submitted to council should set out the manner of construction, the type of material to be used and the precise location of the structure in relation to Council's sewer and other structures, boundaries etc.

These factors can influence the Council's building adjacent to sewer/water main requirements and enable Council to determine the proposed location of the structure in relation to any underground assets.

It is only at the building plan stage that final details can be given to the likely effects of structures on Council underground assets.

Communication

Council's management team shall ensure that:

- Councillors, Council employees and members of the public have access to this policy.
- Councillors and Council employees be provided with the opportunity to be involved in the review of this policy.
- Changes and/or amendments made to this policy shall be communicated to Councillors, Council employees and members of the public.

Related Council Documentation

- Complaints Management Policy WSC-GOV-POL-003
- Council's Local Laws
- Work Health and Safety Policies and Procedures

Legislation, Recognised Authorities and Other Sources

- *Neighbourhood Disputes (Dividing Fences and Trees) Act 2011*
- *Work Health and Safety Act 2011*
- *Work Health and Safety Regulation 2011*
- *Building Regulation 2006*
- *Plumbing and Drainage Act 2002*
- *Water Act 2000*



- *Water Supply (Safety and Reliability) Act 2008*
- *The Queensland Development Code.*

Review of Policy

This policy remains in force until amended or repealed by resolution of Council. This document will be reviewed biannually or as required.

RECORD OF AMENDMENTS and ADOPTIONS			
DATE	REVISION NO	REASON FOR AMENDMENT	ADOPTED BY COUNCIL
February 2011	Version 1.0	Adopted by Council	February 2011
September 2022	Version 2.0	Review of policy	

