

7 Mistrel Street
BALLINA NSW 2478

19 December 2011

The General Manager
Ballina Shire Council
PO Box 450
BALLINA NSW 2478

Dear Sir

Re: Building over Council's Assets – Draft Policy for Public Comment

I would like to take the opportunity to comment on the Council's draft review of its current policy entitled 'Building over Council Assets'.

It is obvious from a review of the following documents that the objectives of the policy are to minimise the risk of damage to the Council's underground assets and to provide easy access for Council's staff and equipment in the event of blockages and/or breaks:

- The report to the Council meeting of 27 March 2008 seeking adoption of the draft 'Building over Council's Assets' policy,
- The policy adopted by the Council on 22 May 2008,
- The report to the Council meeting on 24 November 2011 and
- The associated draft review policy document put out for public comment.

My comments are related to residential property where an underground asset, such as a sewer line, is located at the front of such property forward of the building line and where an easement does not exist.

Section 3 – How close can you build to an underground asset?

Section 1 of the draft review policy provides, inter alia, that if any part of a structure is proposed to be located over an underground asset/pipeline, within an easement or, where an easement does not exist, within specified distances of the asset/pipeline then the application will be refused.

The report to the Council meeting on 27 March 2008, when the initial policy was first submitted in draft form for consideration, included the following comment under 'Sustainability Considerations':

"The implementation of this document will assist in ensuring that Council's water, sewer and stormwater assets are protected and will allow staff to easily access these pipelines in the event of blockages and/or breaks thus minimising any possible impact to the environment arising from such events".

In this regard, Section 3.1 provides the dimensions limiting the distance that the external edge of a structure (such as an eave or a gutter) can be located to the external edge of an asset, where an easement has not been provided.

The obvious intent of section 3.1 is to provide a sufficient area in which the Council's excavating and other equipment can work in the event of a break or blockage, thereby minimising the cost factor and without endangering the proposed structure and the Council's underground asset.

Comment:

Unfortunately, neither of the two reports to the Council provided Councillors with any data that allowed the perceived difficulties to be put into perspective. Such data might comprise:

- The number of residential properties that have sewer lines crossing the properties forward of the building line and for which an easement does not exist.
- The total number of residential properties in the Shire
- Options available to the Council to use other equipment or methods to carry out repairs or maintenance should a structure be built with the roof going over the sewer line.

Section 4 – Zone of Influence for Underground Assets

This section of the draft review policy provides the means adopted by the Council for calculating the 'zone of influence' surrounding an underground asset of the Council.

Comment:

1. The draft policy does not appear to provide any reference to the source of the methodology used by the Council's staff to arrive at the 'zone of influence' examples outlined in Section 4.

It is suggested that the source of the methodology be referenced in the policy. This would enable the draft policy to be adequately reviewed by the Councillors and by members of the public at the public comment stage so as to gauge whether Council staff might be over cautious in arriving at the extent of the exclusion zone.

2. Given the explanation in Section 4.2 and 4.3 of how the zone is calculated and the wording in 'Sand, Filled Ground, Loam etc.', should the zone exclusion figure given as 6100mm be 5800mm?

That is, $2500\text{mm} \times 2 + 300 = 5300$.

$5300 + 500 = 5800\text{mm}$.

3. In addition, should the words "each side of the asset" be added to the wording in 'Sand, Filled Ground, Loam etc ., as is the case in the wording in 'Red Clay Soils'?"

Section 5 – Minor Variations for building over underground assets.

Section 5 of the policy adopted by the Council on 22 May 2008 provided that minor exceptions could be made for certain limited light demountable structures to be built over council assets where it could be demonstrated that the operation and maintenance of those assets would not be hindered. These types of structures were limited to light structures that were bolted together and readily removed.

It is noted that the draft review policy submitted to the Council on 24 November 2011 recommended deletion of almost all of Section 5 regarding the description of minor variations for residential type structures but left in place the remaining paragraph. This paragraph appears to be related to full scale development rather than individual properties.

The report to the Council stated that the review of the policy identified only minor changes.

Comment:

The deletion of two full and very descriptive paragraphs from Section 5 does not, on the surface, appear to be a minor change. In addition, the accompanying report did not explain why the deletions are regarded by the staff as necessary or minor.

The report to the Council meeting on 24 November 2011

Comment:

The report to the Council meeting on 24 November 2011 indicated that the Sustainability Considerations of the Environment, Social and Economic Factors are "not applicable".

As this is a revised draft of an existing policy, it is considered that these factors should have been revisited in the report to the Council and taken into account by the Council in its consideration of the draft policy.

In regard to the Social Factor, it is considered that the Council's policy in relation to refusing an application where a proposed structure would overhang an underground asset such as a sewer line, that is not subject to an easement, is socially inequitable.

There are ratepayers who purchased residential property in the years prior to the adoption of the Council's policy on 27 March 2008 and through no fault of their own, have a sewer line going through their block of land. These ratepayers are now being penalised by not being allowed to erect a permanent carport or other structure (forward of the building line) over that sewer line.

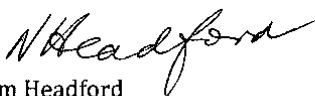
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By contrast, a quick tour of some of the Ballina township revealed thirty one attached carports and twenty two detached carports forward of the building line. These properties obviously do not have an underground council asset in their front yard.

As Councillors are aware, in addition to their prescribed duties and responsibilities to the Council, they are also elected to represent their constituents. The policy originally adopted by the Council and now the subject of review and public comment gives little if any consideration to affected ratepayers.

It is hoped that the Councillors in their consideration of the draft review policy will remedy that situation.

Yours faithfully


Norm Headford

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POLICY NAME: DRAFT REVIEW
BUILDINGS OVER COUNCIL ASSETS

POLICY REF: B06

MEETING ADOPTED: 22 May 2008
Resolution No. 220508/27

POLICY HISTORY:



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OBJECTIVE

This policy document has been prepared as a guideline for proposed development/s where approval is required from Council for building over or adjacent to Council's gravity sewer mains, sewerage rising mains, water mains, stormwater pipes or other Council asset. The implementation of this policy will ensure that Council's assets are protected.

BACKGROUND

This statement may include descriptions of the following where relevant:

- need for Policy eg: legislative or business requirements;
- context in which policy has arisen and what it will resolve;
- benefits of having the policy.

DEFINITIONS

Asset	Any underground pipe, pit, main, shaft or structure owned by Council.
Council	Ballina Shire Council
Easement	Is a strip of land dedicated for the laying of underground pipes. Not all lots have easements and not all underground lines are located in easements. If a lot has an easement it will be shown on the Deposited Plan that is created when the land is subdivided and described in the section 88b document attached to the land title as to its type, width etc.
Junction	This is the point where household pipes connect to the Council's sewer line.
Inspection Shafts	This is the pipe rising to ground level that is the connection point between the owner's pipes and Council's pipes. It is usually a PVC pipe, either 100 mm or 150 mm in diameter and finished 100 mm above ground level with a concrete surround. The inspection shaft is used to access both the owner's pipes and Council's pipes when there is a blockage etc.
Inter-allotment Drainage Lines	These pipes usually PVC or concrete and take roof water and ground runoff from properties where it is not possible to drain to the street.
Manhole	Used to provide direct access to the sewers for maintenance and clearing blockages. Located where sewers change direction or about every 100 metres on long lines. They are usually concrete, about 600mm in diameter and flush with the ground.

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Sewer Pipes	These pipes take waste water from dwellings, shops and industrial premises. The drains from kitchen sinks, laundry tubs, showers, baths, hand basins, toilets, etc, are connected to the sewer line.
Sewerage Rising Mains	These pipelines take wastewater from sewerage pumping stations to the treatment plant.
Stormwater Pipelines	These pipes, pits or box culverts collect and transport roof water or surface water from properties and streets and discharge it to nearby waterways or lakes.
Water Mains	These pipelines provide drinking water to dwellings, shops and industrial premises or recycled water if coloured lilac. Pipes for recycled water are coloured lilac.

SCOPE OF POLICY

This policy applies to (add or delete where necessary):

- Council employees
- Developers/Builders
- Council Consultants/Contractors

RELATED DOCUMENTATION

Nil.

APPLICATION OF POLICY

This policy applies to the construction of all buildings, dwellings, carports, garages, sheds, swimming pools, pergolas, decking, retaining walls and permanent structures within Council's area that are to be built near water mains, sewers and sewerage rising mains, stormwater pipes or other Council assets.

POLICY

1. 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 underground Council assets. All applications should show the position of any Council assets in relation to the property and existing or proposed structure. Plans should be drawn to scale of 1:200 or 1:100.

It is advisable to contact Council to ascertain the general location of any asset/pipelines and whether special designs will be required for the proposed structure before submitting plans. If any part of the structure is proposed to be located over the underground asset/pipeline, within the easement or, where an easement does not exist, within specified distances of the asset/pipeline then the application will be refused. In this case the applicant will be requested to redesign the structure so that it does not encroach on the underground assets.

A structure that is to be built close to an easement may require a Structural Engineer's assessment to ensure that it does not place additional loading within the "zone of influence" of the sewer gravity main, sewerage rising main, water main, storm water pipeline or any other Council assets. Before plans are submitted to Council for assessment, the applicant should have a surveyor locate the asset/pipeline and an engineer to ensure that footing designs are adequate for the proposed structure. This may be required in some circumstances where Council's records are not able to be confirmed do not confirm the asset location.

2. How close can you build to a water main or sewerage rising main?

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

Under no circumstances will approval be given for any structure to be built over a pressure water main, sewerage rising main or within their easements.

Where an easement has not been provided, a corridor at least 3m wide plus the outer diameter of the pipe or asset and centred on the pipeline is used to determine the offset distance in which a structure cannot be located. Refer to Section 3.4

3. How close can you build to an underground asset? How Close can you Build to an Underground Gravity Sewer Main / Storm Water Pipe?

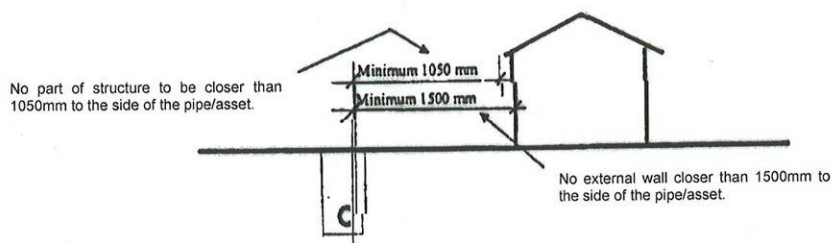
3.1 Where an easement has not been provided the following dimensions shall apply.

The closest distance that the external edge of a structure can be located to the outside edge of an asset is:

- 1050 mm from the outside edge of an overhang such as an eave or gutter. and
- 1500 mm from an external wall or footing (where the depth of the main is 1500mm or less), and
- The depth of the pipeline from the invert level to finished surface level (where the depth of the main is greater than 1500mm) in accordance with the requirements of Section 4 - zone of influence.

(The above distances allow a maximum eave overhang of 450mm. For larger overhangs the distance of the wall to the side of the asset would have to be greater than 1500mm).

Note – these distances are measured horizontally between the proposed structure and a line drawn vertically from the side of the asset as shown in the following diagram:

Minimum Distances from the side of assets (Diag. 1.)**3.2 Proposed Structures of 2 or more Storeys**

An allowance may be made for 2 or more storey structures where the eave is well above the ground level (>3000mm) to allow further encroachment of an overhang. In these cases an individual assessment will be made. This assessment will consider the distance from the pipe to the external wall of the structure, the distance from the lowest point of the overhang to the ground level, the depth of the **asset/pipe** and the difficulty of access for machinery.

3.2 Easements

Where an easement **has been** provided the following conditions will apply. (The easement is defined on the Deposited Plan or registered dealing for each lot and its width can vary.)

- No **external wall of a** structure or part thereof 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 would be 450mm.
- It cannot be assumed that the easement will always cover the entire zone of influence of the **asset/pipeline (section 4)**. Where an easement does not cover the zone of influence of the **asset/pipe** it will be necessary that any adjacent structures be designed to ensure that their integrity is not affected by the **asset/pipeline** **nor the structure does not affect the Council asset**. In these cases the external wall of the structure can be built up to the edge of the easement however the footings must be a pier footing or similar design with the load bearing component of the footing being at or below the level of the invert of the adjacent **asset/pipeline**.

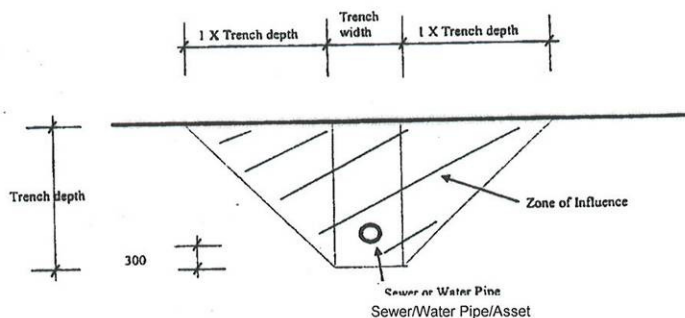
4. Zone of Influence for Underground Assets

The "Zone of Influence" is located within the soils surrounding an asset and is that part of the soils that will be affected by any damage occurring to the asset or during excavation of a trench. For example, should an asset break or a joint leak, subsidence may occur within the "Zone of Influence". The size of the zone is determined by the **depth of the asset/pipeline**, the **type of soil** and the **slope of the site**. **Structures will generally not be approved within the zone of influence of an underground asset.**

How the “Zone of Influence” is calculated:

- 4.1 The asset depth and its position in relation to the proposed building site is found. (These details are taken from Council’s records, by inspection of the site, or by having a survey done to locate assets).
- 4.2 The **depth** of the trench containing the asset/pipe work is calculated by adding 300mm to the asset/pipe depth
- 4.3 The **width** of the trench depends on the asset/pipe diameter. As a guide, pipes up to 225mm diameter will have a trench width of 600mm whilst pipes over 225mm 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.
- 4.4 The zone is calculated using the depth of the trench and half the trench width **each side of the asset**. This calculation is affected by the type of soil (see diagrams 2 & 3)

Red Clay Soils (diag. 2)

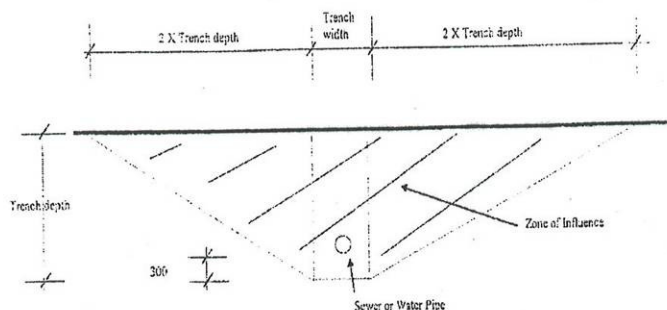


The “Zone of Influence” extends out from the edge of the asset/pipe trench the same distance as the depth of the trench (The ratio used is 1:1). For clay soils the zone will extend the same distance as the depth plus half the width of the trench **each side of the asset**:

For example: For a pipe line of 150mm diameter and a depth of 1500mm.
 Trench depth is 1800mm deep (i.e. 1500 + 300).
 The zone extends 2100mm from the asset/pipe centre line (i.e. 1800 + 300). Being the trench depth plus 1/2 trench width eg: 1800 + 300)

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Sand, Filled Ground, Loam etc (diag. 3).



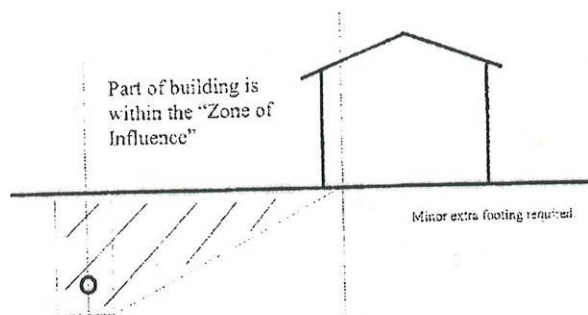
The "Zone of Influence" extends out from the edge of the asset/pipe trench twice the distance as the depth of the trench. (The ratio used is 2:1). For sand, filled ground (including controlled fill), loam, etc, the zone will extend **twice** the depth of the trench plus half the width of the trench – **each side of the asset**.

For example: For a pipe line of 375mm diameter and a depth of 2500mm:
The trench depth is 2800mm deep (eg: $2500 + 300$)
The zone extends 6100mm from the pipe centre line (i.e. $\text{trench depth} \times 2 + \frac{1}{2} \text{trench width}$ (2800×2) + 500).

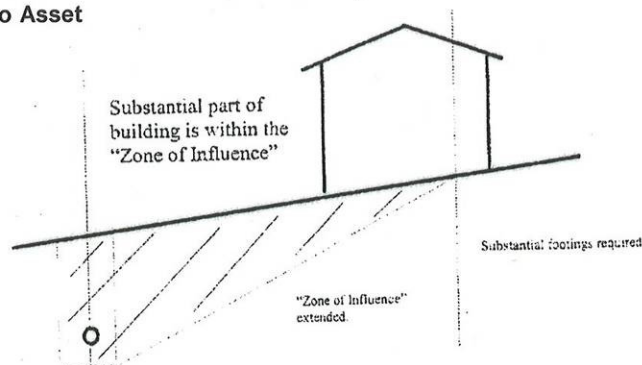
The zone of influence may be affected by the topography of the site. If the proposed building is to be located on a slope above the pipe then the zone may be substantially extended. Alternatively, if the proposed building is to be located on a slope below the pipe then the zone may be substantially reduced. On steep blocks substantial footings may be required to overcome the effect of the zone of influence.

See diagrams 4a, 4b & 4c on the next page.

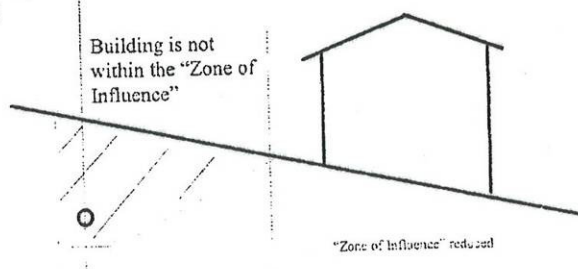
Flat Ground
(Diag 4a)



Slope Down to Asset
(Diag 4b)



Slope Up to Asset
(Diag 4c)



5. Minor Variations for Building Structure over or adjacent to Underground Assets

Minor exceptions may be made to this policy to allow certain limited, light demountable structures to be built adjacent to or over Council assets where it can be demonstrated that the operation and maintenance of these assets will not be hindered. Where an applicant feels that the underground mains will unreasonably limit their design then discussions should be held with Council staff to explore options before submitting a proposal.

Consideration may be given to approving a strictly limited range of light demountable structures located over an underground asset if, and only if, it is not practical to build the structure elsewhere on the block. Any proposal seeking exemption would be considered in

~~the light of the options for locating the structure on other parts of the site and the type of structure proposed.~~

~~The type of structures that may be considered are limited to light timber or metal carports, pergolas and awnings that are bolted together and can readily be removed, car parking areas, fences and gardens. Properly designed interlocking retaining walls that cross the easement at right angles to the pipeline are also permissible. No other structures will be permitted. Any structures approved under this section of the policy cannot be altered (eg by enclosing carports with walls to make a garage) without Council approval.~~

~~The types of structures that may be refused approval include (but not limited to) carports, pergolas and awnings that have been permanently fixed (eg using nails, welds, etc), garages, all garden sheds, aviaries, ferneries, glasshouses, pools and sporting facilities (eg tennis courts using artificial surfaces) etc.~~

Where this policy unreasonably restricts the ability to develop in an appropriate manner for that area (eg commercial areas) then proposals will be investigated on an individual basis in line with the objectives of this policy.

6. **Swimming Pools (In Ground)**

A proposed inground swimming pool is to be positioned outside the zone of influence of the asset should Council consider inground swimming pool be constructed within the zone of influence of a Council asset, the pool must be designed and constructed as a self supporting structure that will not load the asset in any way. The swimming pool must be positioned outside of the zone of influence of the asset or a least a minimum of 1.5m from the edge of the asset. The design must ensure that the structural integrity of the pool will be maintained in the event that adjoining soils are excavated to provide access to the adjacent pipeline/asset for maintenance/reconstruction works and the asset is protected during pool construction.

~~Where it is proposed that an in ground swimming pool be constructed within the zone of influence of a water main, sewer rising main, sewer gravity main, drainage pipe or easement, the pool must be designed and constructed as a self supporting structure. The design must ensure that the structural integrity of the pool will be maintained in the event that adjoining soils are excavated to provide access to the adjacent pipeline for maintenance /reconstruction works.~~

7. **Existing Structures**

Any structures built under the exempt and complying development codes shall not be erected over any underground assets in accordance with this policy.

Where structures have been built over an underground asset without Council approval 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 asset 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 to be undertaken because of the illegal structure.

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Where a structure has been given permission, previously by Council, to be built over an asset then no further extensions, additions or reconstructions will be allowed. Council recognises that the existing structure presents a risk to both the building and Council's liability. Therefore Council will not be prepared to increase this risk by approving further structures or additions and alterations.

8. Application Requirements

All Development and Construction Certificate applications where the structure is to be built adjacent to a Council asset will be required to have footing details that show how the proposed structure will be designed to accommodate the zone of influence from these adjacent pipelines. These details may need to be designed and certified by a Registered Practising Structural Engineer. Plans should be drawn to an appropriate scale (i.e. 1:200 or 1:100)

REVIEW

The Building over Council Assets Policy will be reviewed every four years or as deemed necessary.