



# **Whangarei District Council Policy**

***Building Over or Near Public  
Sewer and Stormwater  
Pipelines***

***Policy #0022***

**June 2015**

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## Legislative Requirement

All activities must comply with all applicable Acts, Regulations and By-Laws.

## Purpose

The intent of this policy is to outline the Council's position on building over or near public sewer or stormwater pipelines.

## Policy

Having structures over or near buried sewer and stormwater pipelines can cause problems such as;

- Limiting the ability to maintain or renew the pipe;
- Building or maintaining the structure may damage the pipe;
- Failure of the pipe under a structure may cause damage to the structure.

For these reasons, Council has rules for construction over or near public pipelines.

Unless written dispensation is provided by the Council Waste and Drainage Manager, Council does not permit the following:

- Building over or within a horizontal distance of 2 metres measured from the outside of pipe (also refer Appendix 1);
- Building within the zone of influence of the pipe. See Appendix 1 for calculations of zone of influence.
- Building within 2 metres horizontally of the outside of any maintenance structure (manholes, lampholes, maintenance shafts and sewer dead ends);
- No driven piles shall be installed closer than 5 metres from any pipe unless documentation is provided to Council's satisfaction showing that the proposed works will not damage the asset.

A dispensation to build over or near a public pipe may be considered in special cases.

Note that Council has identified some of its assets as being at higher risk than others from construction above or near them. Damage to pressurised sewer pipe (rising mains) or gravity sewer pipes that form the backbone of a sewer network (trunk mains) can have large environmental and public health impacts or can significantly undermine structures if damaged. Obtaining dispensation for building near these lines is likely to be more difficult than for other assets.

## Procedures, Processes, Standards & Guidelines

### Local Government Act

Section 451 of the Local Government Act 1974 states:

- 1 *If any person proposes to erect any building or to carry out any work in such a location and at such levels that the diversion, alteration, protection, or replacement of any drainage works of Council appears to be essential to the erection of the building or carrying on of the work*
  - a. *That person shall notify Council of his proposals; and*
  - b. *If Council is satisfied that it is practicable for its drainage works to be diverted, altered, protected, or replaced without material interference with the services for which it is responsible and that it is reasonable that this can be done, it may enter into an agreement with that person as to the manner in which the drainage works shall be diverted, altered, protected, or replaced.*

- 2 *The cost of so diverting, altering, protecting, or replacing the drainage works of Council shall be borne by that person, and all other cost.*
- 3 *If that person fails to comply with any condition specified in any such agreement, he commits an offence against this Act.*

## **Application for Dispensation to Build Over or Near Public Pipe**

All applications for dispensations to build within the exclusion zone of the pipe should be made in writing to the Waste and Drainage Manager.

Any dispensation is at the discretion of the Waste and Drainage Manager and is subject to the following considerations:

- Reasonable alternatives for the property owner including re-design of the building or relocation of the pipeline;
- Whether the building or associated work will impose structural load on the pipe;
- Pipe size or risk of damage (usually trunk sewers have high risk);
- Age and condition of the pipe;
- Whether the pipe has adequate capacity;
- Location of the pipe in the network (e.g. the how many connections upstream);
- The type of structure being built (e.g. carport, garage, shed, veranda etc); and
- The length of the pipe under the building.

Council may impose relevant approval conditions where necessary to maintain its serviceability of the asset. These include but not limited to the following:

- Closed-circuit television (CCTV) inspection before and after any work is done;
- Replacing the existing sewer main under or within 2 metres of the building and within the zone of influence of the footings and foundations with a similar or larger diameter pipe;
- Elevate or cantilever the building a minimum of 2 metres vertical clearance from ground level such that the requirements for access, repair and maintenance can be met without disturbing the building.

The applicant must obtain Council approval of each proposal, in writing, prior to obtaining a building consent.

All applications must contain a site plan with all the public pipes accurately located on-site in relation to the proposed building works.

The following information must be shown on the site plan:

- i. Distance between the proposed building and all legal boundaries.
- ii. Distance between the proposed building and any existing buildings.
- iii. Distance from public pipe(s), manhole(s) centre(s) and all legal boundaries.
- iv. Dimensions and cross section details of the proposed structures and footings.
- v. Details of known hazards on or near the site.

## **Diverting, Renewal or Alteration of Public Pipeline**

Where approved by Council, as an alternative, diverting a public pipeline around the proposed structure is treated as any other work on public drainage and requires compliance with the Whangarei District Council (WDC) Environmental Engineering Standards and engineering plan approval from WDC.

An application for the engineering plan approval shall be made to WDC. Engineering details including the site plan and longitudinal sections must be provided.

Council will check the pipe capacity with regard to the ultimate catchment development and this will determine the diameter of the pipe to be laid.

The cost of diverting, renewal or alteration of the line shall be met by the applicant. Council may contribute towards the additional costs associated with upgrading the pipe size.

All work must be undertaken by Council registered-licensed contractors for Waste and Drainage. The list of Council registered-licensed contractors is available at the WDC website.

Where diversion works are required in any adjoining property, the applicant is responsible for obtaining written consent from the affected property owners.

## Secondary Flow Paths

When building over a public stormwater drain in areas potentially affected by tailwater conditions, an alternative flow path must be provided.

## Definitions

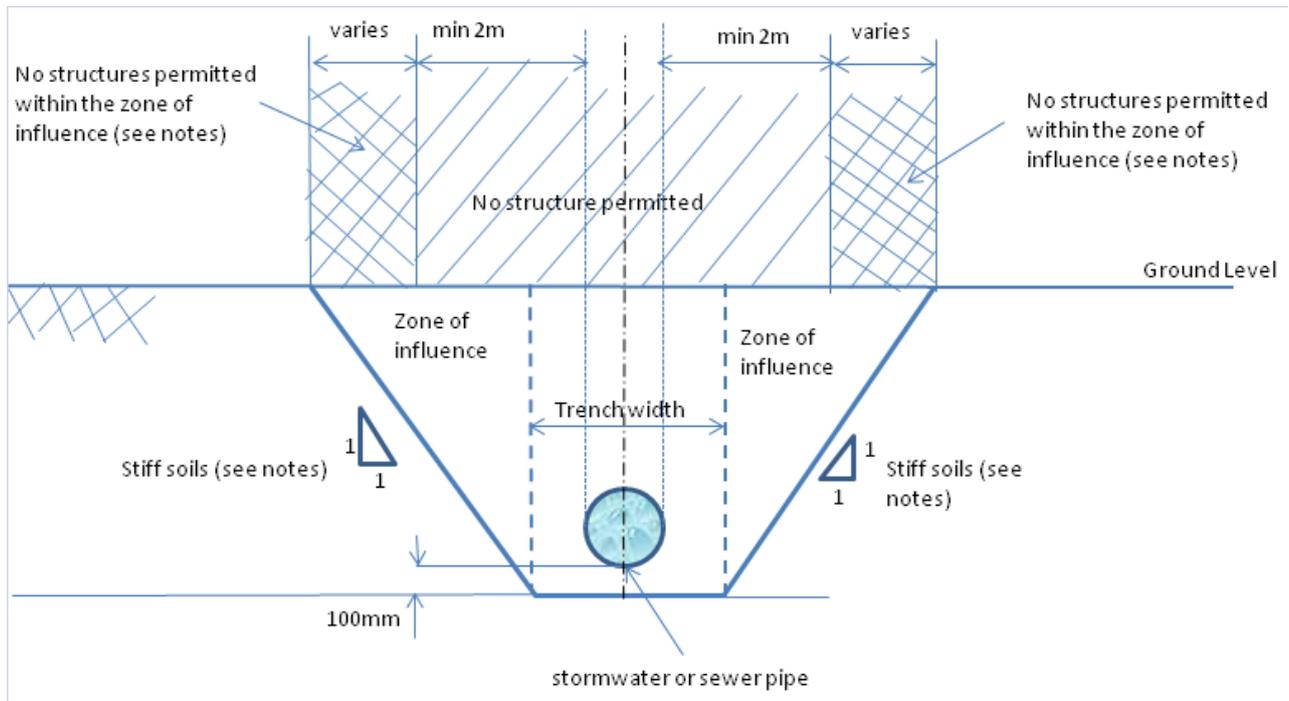
For the purpose of this policy, the following definitions shall apply:

Applicant:	The party who applies to Council for its written consent to build over or near public pipe.
Building:	Includes, but is not limited to buildings or other structures, including 'light', 'temporary' or 'slab' structures (e.g, garages and carports, sheds, verandah, swimming pools, retaining walls and hard landscaping)
Council or WDC:	Whangarei District Council
Public pipeline:	Includes wastewater or stormwater pipe networks that are owned and maintained by Whangarei District Council
Structure	As for Building.
Zone of influence:	means the area associated with the buried pipe that, if built within or over, could cause undue loading on the pipe. See appendix 1 for general calculations of zone of influence.

## Related Policies and Documents

- Whangarei District Council Wastewater Bylaw
- Whangarei District Council Environmental Engineering Standards
- Registered-Licensed Contractors
- Whangarei District Council Pressure Sewer Policy

## Appendix 1: Building Exclusion Zone and Zone of Influence



### Zone of Influence

No structures to be built within the zone of influence of the pipe.

The zone of Influence is that section of the ground along the alignment of a buried pipeline, extending both horizontally and vertically where:

1. Settlement or disturbance of the ground surrounding the pipe may cause damage to buildings or structures on the surface above.
2. Loads from buildings or structures on the surface could be transmitted to the sewer.

The boundary of the Zone of Influence coincides with the angle of repose of the soil encountered. Common practice shows that the angle of repose in stiff soils (clay etc) is 1 horizontal: 1 vertical. The angle of repose in sand, filled ground, loam, etc is 2 horizontal: 1 vertical.

The zone of influence shall be determined by extending a line at an angle of repose to the surface, starting from a point 100mm below the invert of the pipe and half of the trench width measured horizontally from the pipes centreline (See figure above)

A suitably qualified engineer must be consulted to determine the correct zone of influence for a particular site.

## Adoption

This Policy has been approved for adoption by the Waste and Drainage Manager and the Group Manager Infrastructure and Services.

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Waste and Drainage Manager

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Date

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Group Manager Infrastructure and Services.

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Date

Policy adopted by Infrastructure Committee Resolution on 10 June 2015.