POLICY DOCUMENT

RESOLUTION:

MOUNT ISA CITY COUNCIL
Building over or close to Council Sewer Requirements for Development Applications Policy

FILE REFERENCE: 1208 Council Policies **Int. Ref.** 597474

POLICY STATEMENT

1.0 Purpose

The purpose of this operational procedure is to prescribe the requirements for buildings and other structures constructed over or close to Council sewers.

2.0 Applicability

As the city develops more and more applications are being received where building over a Council sewer or close to a Council sewer is proposed. In general Council wants to preclude the construction of building, structures with footings, carports with concrete floors, swimming pools, and major retaining walls being built directly over or close to Council sewers.

The procedure outlined here within, is to be applied with the level of applicant's input/compliance being proportional to the extent of construction over the sewer and the nature of the sewer potentially being built over. For example:-

- Council would not be expecting an applicant applying for permission to construct a demountable structure such as a carport, to be required to consider the re-directing of a sewer main for this purpose nor the replacement or sleeving of the existing sewer.
- Council may however wish to consider requiring an applicant to upgrade a section of an old earth-ware service line or/and concrete encase an existing line or/and sleeve existing sewer line if approval is to be given for the construction of a more permanent structure such as an extension of a dwelling, limiting access to the sewer for future maintenance or access.
- Finally, for an applicant who intends to construct a large multiple shopping or housing complex over a Council sewer trunk main, the assessing officer would apply the procedure as outlined (steps 1 through to 3) to ensure that the sewer main's performance and future capacity upgrade potential are protected.

3.0 Proposed Council Operational Procedure

An application must be made to Council whenever it is proposed to build over or within 1.5m of a Council sewer. All applicants are required to fill out the "Building over or close to a sewer – Request for Consent" application form. A processing fee may apply as part of the application.

Applications will be assessed through a three step process:

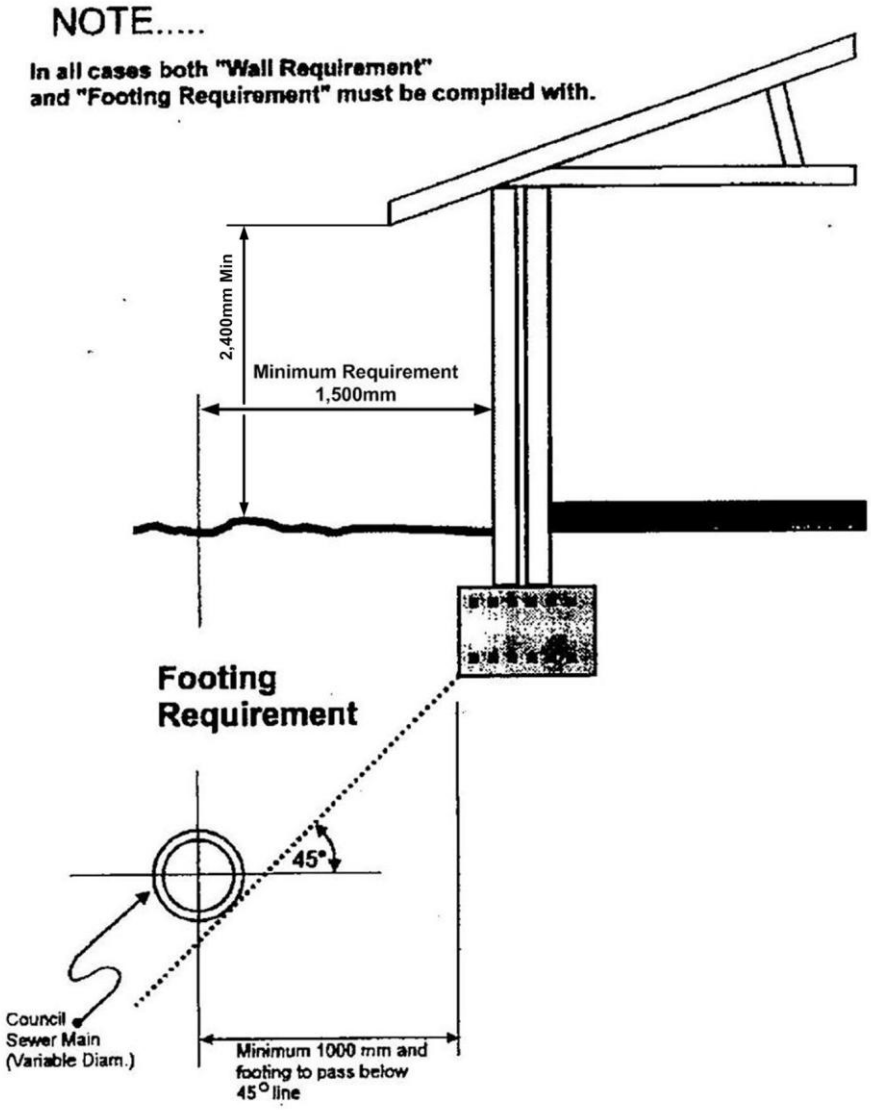
3.1 Step 1 - Redesign of Development Layout Plan

3.1.1 Where ever possible, the development at a site is to be designed to avoid any buildings being constructed over or close to Council sewers. Figure 1 below defines the limits for both the wall and footing requirements for building close to Council sewers.

3.1.2 If building over the Council sewer cannot be avoided the development layout plan shall be reviewed to ensure that the amount of sewer being built over is minimised.

3.1.3 The developer must demonstrate to Council that the development layout cannot be designed to avoid building over or close to a Council sewer before considering Step 2.

FIGURE 1 – Building Close to Council's Sewers



3.2 Step 2 – Relocate Existing Sewer Pipeline

Where it can be demonstrated to Council that the development layout plan cannot be redesigned to avoid building over a Council sewer (Step 1), then relocation of the Council sewer is to be considered:

3.2.1 The relocated sewer should (where possible) continue to be located on the applicants land. The proposed route should be kept as short as possible to enable the fall between manholes to be sufficient for the size of the pipe.

3.2.2 Council access to all existing and new sewer manholes is to be provided. See Section 3.3.5 for details.

3.2.3 The new sewer is to be designed and constructed to Council's standards and at the expense of the developer. Live connections are to be constructed by Council or under Council supervision at the developer's expense.

As for Step 1 the developer must demonstrate to Council that relocating the existing sewer main is not feasible before Council will consider any proposal to build over Council sewers. Only if both Steps 1 and 2 have been exhausted can a developer apply to Council for approval to build over a Council Sewer.

3.3 Step 3 – Building Over Council Sewers

If Step 1 and Step 2 are not successful in removing the need for building over Council Sewers then the developer has to undertake the following design requirements. There are two parts to the required design.

3.3.1 Part A - Pipe Replacement

Replacement of the existing sewer pipeline is required.

i. Vitrified Clay sewer pipelines are to be replaced with a new sewer pipeline. Where possible this is to be done from manhole to manhole.

ii. AC sewer pipelines up to and including 150mm dia. are to be replaced with a new sewer pipeline. Where possible this is to be done from manhole to manhole.

iii. AC sewer pipelines greater than 150mm dia. are to be exposed by the developer and inspected by Council to determine if the pipe is sound and is in a condition that it can be retained. If the pipe is accepted by Council then it is to be fully concrete encased as per WSSA drawing No SEW -1205 attached for a distance of at least 2m outside the proposed building line.

iv. For any other pipe material with any diameter the action in iii above is to be followed.

The replacement pipe material to be used is either DICL or UPVC (SN8). If UPVC is used then it must be either concrete encased or sleeved from at least 2m outside the building lines. In the case of sleeving the outside pipe is to be UPVC glue jointed.

3.3.2 Concrete Encasement of Pipe Replacement

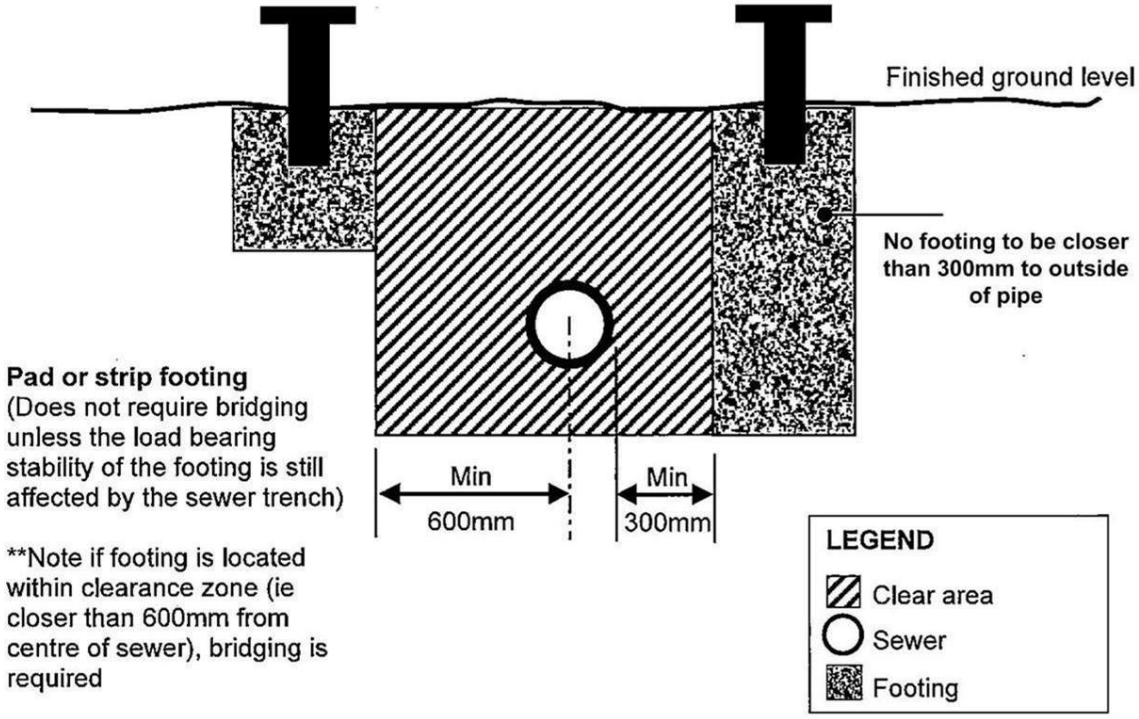
When concrete encasement is used a short length of pipe is required to supply a complete flexible joint at both ends of the encased pipe. An acceptable solution would be to provide a metre length of pipe with a flexible coupling at each end. Alternative solutions can be used provided they are first approved by Council.

Any concrete encasement is to be constructed as per WSAA standard drawing No SEW-1205 attached.

3.3.3 Footings Close To Council Sewers

When building over Council sewers the distances shown in Figure 1 can be reduced provided it can be demonstrated that no structural load is being placed on the sewer. Figure 2 below shows acceptable solutions for footings constructed close to a Council sewer.

FIGURE 2 – Footings Close to Sewer Pipe



3.3.4 Part B – Bridging of Council Sewers

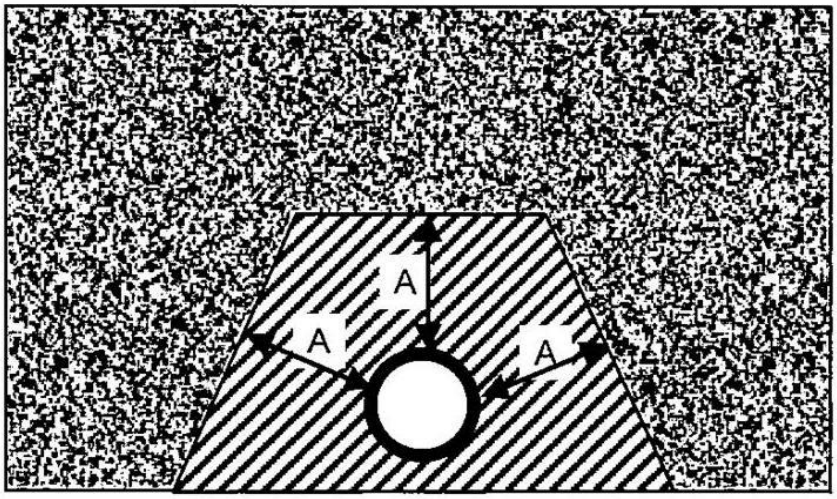
Part B covers the design required to avoid any load being placed on Council sewers. This design requirement shall be in accordance with Figures No 2, No 3 and No 4 and includes the following:

i. All footings are to be taken to a depth to avoid the effects of building loads (i.e. pressure) on the sewer pipe. The angle of influence is the angle from the bottom of the footing to the bottom of the sewer main and it is to be no steeper than 45 degrees. When the footing is between 300mm and 600mm from the sewer main then the footing shall be founded at least 300mm below the sewer pipe.

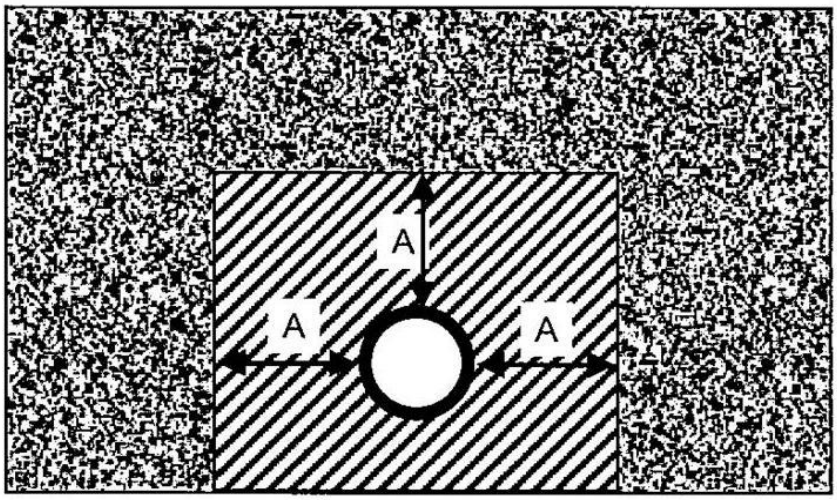
ii. Under no circumstances is a footing to be constructed closer than 300mm from the outside edge of the sewer pipe.

iii. Where a structure is to be built over the sewer main, then bridging of the sewer main is required. See Figures No 3 and No 4 for details.

FIGURE 3 – Examples of Bridging



A = min 300mm

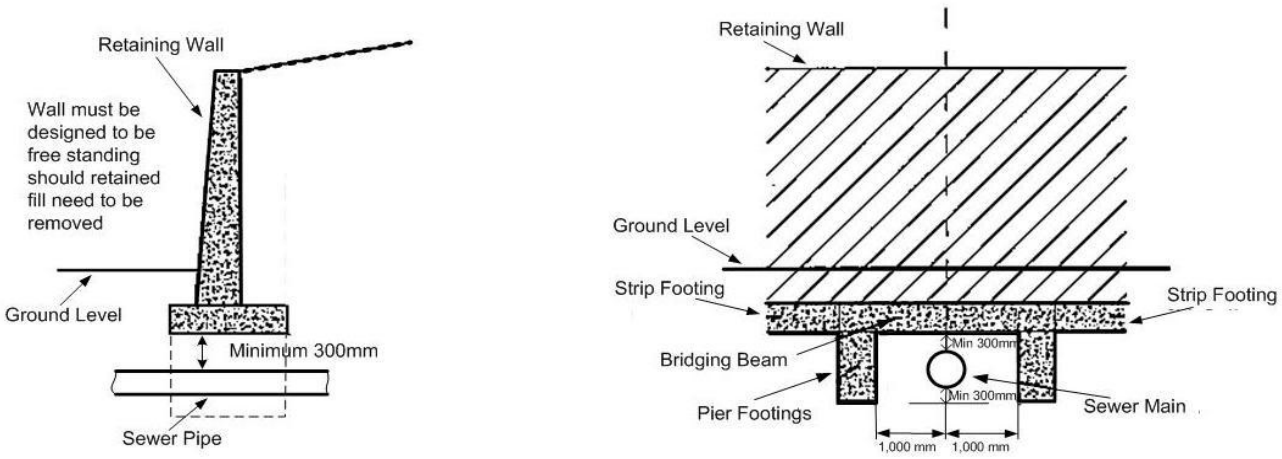


A = min 300mm

LEGEND

- Clearance from sewer
- Sewer
- Footing

FIGURE 4 – Retaining Wall Crossing Sewer Main



3.3.5 Access to All Manholes

For existing sewer manholes that will be enclosed by the action of building over the sewer main, the owner of the property is required to provide Council authority to access the manhole for normal routine maintenance and emergency maintenance. To this end the following is required:

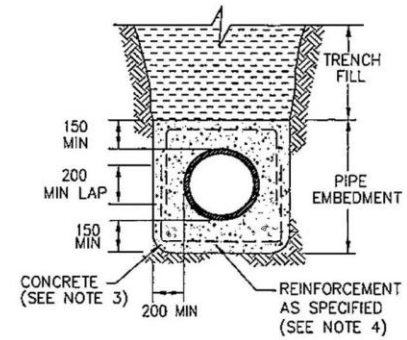
i. The owner of the building is to provide Council with an easement (width 3m) over the sewer main and especially the manhole(s) requiring access.

ii. A 3m dia. area around and on top of the manhole is to be kept clear.

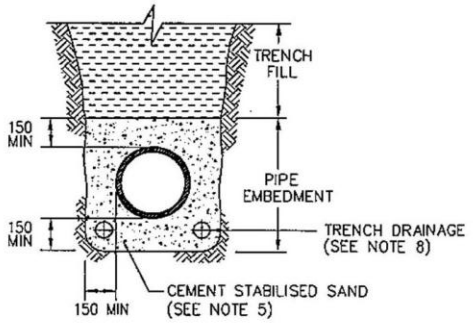
iii. Council is to have clear access from outside the building to the manhole via a minimum 3m wide permanent opening in the building wall.

3.3.6 Design Certification

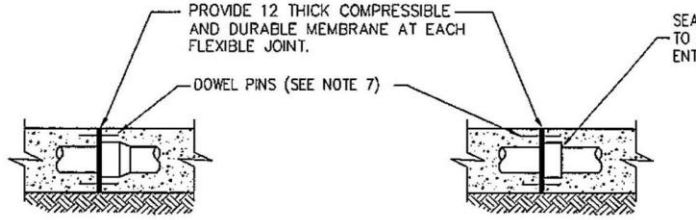
Except for minor structures the design work for the bridging structure is to be undertaken by a qualified structural engineer (RPEQ) and construction work is to be supervised by a qualified structural engineer (RPEQ), who is to provide certification that all work has been carried out as per the design. Minor structures include car ports, tool sheds, single/double garages, small house extensions.



TYPE 12 SUPPORT
UTILISING CONCRETE EMBEDMENT
(RIGID & FLEXIBLE PIPES)



TYPE 13 SUPPORT
UTILISING CEMENT STABILISED EMBEDMENT
(RIGID & FLEXIBLE PIPES)



SPIGOT/SOCKET JOINT

SLEEVED COUPLING

CONCRETE ENCASEMENT JOINT DETAILS

NOTES:

1. ALL DIMENSIONS IN MILLIMETRES.
2. USE THESE SUPPORT SYSTEMS WHERE SPECIFIED BY DESIGNER DETAILS TO BE PROVIDED IN DESIGN DRAWINGS.
3. USE UNREINFORCED CONCRETE CLASS N20 MIN, AND REINFORCED CONCRETE N25 MIN. FOR AGGRESSIVE CONDITIONS USE SPECIAL CLASS CONCRETE.
4. WHERE SPECIFIED MINIMUM STEEL REINFORCEMENT OF 0.4% CONCRETE CROSS SECTION PLACED CENTRALLY AND WITH 65 MINIMUM COVER TO EXTERNAL FACE. SPECIFY REINFORCEMENT FOR THE APPLICABLE LOADING IN DESIGN DRAWINGS.
5. CEMENT STABILISED SAND OR WELL GRADED CRUSHED ROCK TO BE 25:1 SAND:CEMENT (PLACED DRY).
6. DURING THE ENCASEMENT PROCESS PIPES WILL REQUIRE A RESTRAINT SYSTEM TO PREVENT PIPE MOVEMENT AND/OR FLOTATION.
7. PROVIDE DOWEL PINS, AS DETAILED IN DESIGN DRAWINGS AT EACH CONCRETE ENCASEMENT JOINT TO PREVENT PIPE DAMAGE.
8. SEE SEW-1207 IF CONTINUOUS TRENCH DRAINAGE REQUIRED.

EMBEDMENT TYPES TO BE SPECIFIED IN DESIGN DRAWINGS

WATER SERVICES ASSOCIATION of Australia	SEWERAGE CODE OF AUSTRALIA SPECIAL EMBEDMENT CONCRETE & STABILISED SUPPORTS	NOT TO SCALE SEW-1205 © WSAA. 2002 V2.1