
NMP 1.4 – EXCAVATION AND PILING NEAR SEWERS, STORMWATER DRAINS AND WATER MAINS

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Purpose

To ensure protection is provided against damage to existing underground infrastructure services and access is available for future maintenance of the services.

Application

This standard applies to all classes of buildings and structures on sites containing sewer and stormwater drainage lines and water mains (other than the associated house drainage and water supply pipes).

Referral Agency

There is no referral agency.

Associated Requirements

- *Plumbing and Drainage Act 2002*
- *Workplace Health & Safety Act 1995*
- *Building Regulation 2006.*

Referenced Standards

- AS/NZS 3500.2.2 – 1996- National Plumbing and Drainage Code – Acceptable Solutions.
- AS/NZS 1477- 1996- PVC pipes and fittings for pressure applications.

Definitions

Note – Italicised words within the body of the text are defined.

Access cover – a removable cover to provide access for cleaning or inspection for sewers, stormwater drains and water mains.

Associated structure – sewer manhole, water meter.

Bedding sand – as defined in s5.4.2 of AS3500.2.2 being crushed rock or gravel of 7mm to 10mm and sand capable of being passed through a 2mm mesh sieve not containing any clay, organic or deleterious material.

Building – as defined in the *Building Act 1975*. See also “**structure**”.

Competent person - as defined in the *Building Regulation 2006*.

Connection point – as defined in the *Standard Plumbing and Drainage Regulation 2003*.

Compressible material – 10mm foam lagging, flexible moisture resistant material, or impermeable flexible plastic material as prescribed in various parts of AS/NZS 3500 .

Horizontal distance – the minimum distance between the outermost edge of the walls, slab, footing, driven pile, bored pile and any integral parts of the building and the outside face of the service or associated structure.

Invert level - the bottom, inside of the pipe, drain, etc.

Manhole- an access chamber being a below ground level structure, with a cover, built in the line of a sewer or sanitary drain, through which a person may enter the sewer or drain.

Sewer – includes sanitary drain jump-ups and capped slope junctions and manholes.

Service - for the purpose of this standard includes sewers, stormwater drains and water mains.

Structure – for the purpose of this standard includes a masonry fence, deck, pergola, swimming and spa pool, satellite dish and water storage tank.

Interference – means dig up, expose or damage .

Zone of influence - the area under the ground, which is deemed to be loaded by the footings of the building or structure.

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
<p>Building work adjacent to local government mains</p>	
<p>P1 The carrying out of building work near a <i>sewer</i>, stormwater drain or water main or <i>associated structure</i> must not -</p> <ul style="list-style-type: none"> (a) adversely affect the function of the service; or (b) place any additional load on the service. 	<p>A1</p> <ul style="list-style-type: none"> (a) Any footing of the <i>building</i> or <i>structure</i> is located at least 2m clear of a <i>sewer</i>, stormwater drain or water main; or (b) a <i>sewer</i>, stormwater drain or water main is relocated at least 2m clear (measured horizontally) of any building or structure; or (c) any footings of the <i>building</i> which are between 600mm and 2m from the <i>sewer</i>, stormwater drain or water main are extended at least 300mm below the <i>zone of influence</i> (refer Fig. 1) either with piers or a continuous footing; or (d) the footings of the <i>building</i> which are within 600 mm of the <i>sewer</i> or stormwater drain or water main comply with the following: <ul style="list-style-type: none"> (i) The footings are supported on bored piles or piers which are installed more than 1m <i>horizontal distance</i> from the <i>service</i> and which extends at least 300mm below the <i>invert level</i> of the <i>service</i>; and (ii) A minimum clearance of 300mm is maintained between the underside of any

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
<p>Adequate access to local government mains</p> <p>P2 Adequate access must be provided to the <i>sewer</i> or stormwater drain or water main for future maintenance.</p>	<p>footing and the top of the <i>service</i>; and</p> <p>(e) A <i>compressible material</i> is placed between the underside of the footings and a 75mm layer of compacted <i>bedding sand</i> over the <i>service</i>, to provide for differential movement.</p>
<p>Access to access covers to local government mains</p> <p>P3 Adequate access must be provided to any <i>access covers</i> associated with a <i>sewer</i> or stormwater drain or water</p>	<p>A2</p> <p>(a) Any wall, footing or floor of the building or structure is located at least 600mm (measured horizontally) from the <i>service</i>; and</p> <p>(b) Where the <i>service</i> is located between the property boundary and the building or structure - the <i>horizontal distance</i> between the property boundary and any wall, footing or floor of the building or structure is-</p> <p>(i) not less than 2.0m or</p> <p>(ii) where any wall, footing or floor of the building or structure (measured horizontally) falls within 2m of a <i>sewer drain</i>, the <i>sewer</i> is re-laid in a material complying with AS/NZS 1477 for the part of the building concerned.</p> <p>A3 An <i>access cover</i> -</p> <p>(a) does not have fill placed over it; and</p>

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
main.	<ul style="list-style-type: none"> (b) has a clear area of 2m x 2m maintained around it; and (c) any <i>manhole</i> or pit has a minimum horizontal clearance of 1.5m from any building or <i>structure</i>; and (d) has a minimum unobstructed vertical clearance of 2400mm; and (e) where any fill is to be placed adjacent to or around an <i>access cover</i>, the level of the <i>access cover</i> is a minimum of 100mm above the surrounding finished surface level.
<p>Access to the sewer connection point</p> <p>P4 Access must be maintained to a <i>sewer connection point</i> at all times.</p>	<p>A4 A <i>sewer connection point</i> and jump-ups and slope-downs have-</p> <ul style="list-style-type: none"> (a) a clear area of at least 2m x 2m maintained around the <i>sewer connection</i>; and (b) a minimum horizontal clearance of 1m from any building; and (c) a minimum unobstructed vertical clearance of 2.4m.

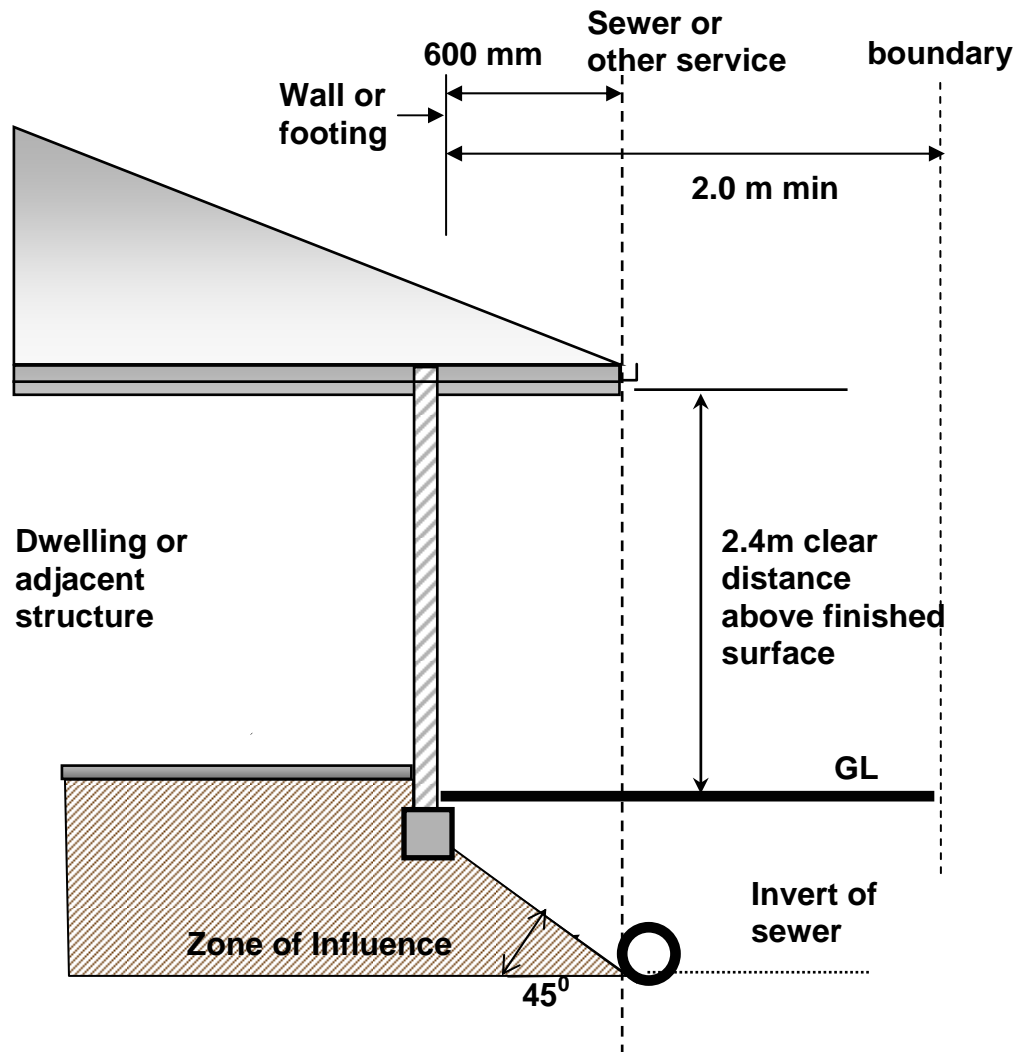


FIG 1
Depicts A1

Access to Services