Subsidence Advisory

Surface development guideline 1

Development in mine subsidence districts under s22 of the *Coal Mine Subsidence Compensation Act 2017*

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1. Introduction

Subsidence Advisory NSW is the NSW Government agency responsible for administering the NSW *Coal Mine Subsidence Compensation Act 2017* (the Act).

The construction or alteration of any building or infrastructure in a declared Mine Subsidence District requires Subsidence Advisory approval under s22 of the Act.

Surface Development Guidelines

Subsidence Advisory's Guidelines outline the requirements for complying development on properties located in Mine Subsidence Districts.

Properties within a Mine Subsidence District are each assigned a specific Guideline based on an assessment of the type of mining and predicted subsidence impact which may affect that property.

The Guidelines may include requirements related to the nature and class of any development on a property, the size, height and location of new structures, and the use of certain building materials and construction methods.

The Guidelines aim to:

- help prevent damage to improvements should mine subsidence occur
- ensure structures remain safe for residents should mine subsidence occur
- ensure that mitigating the risk of subsidence damage for residential construction is as simple and inexpensive as practicable.

The Guidelines are listed at **Table 1**.

The Guideline that applies to a particular property can be identified by searching for that property on the NSW Planning Portal's ePlanning Spatial Viewer. Find out more:

nsw.gov.au/subsidence-advisory/districts#toc-nsw-planning-portal-eplanning-spatial-viewer

Table 1 – Guidelines

Surface Development Guideline	Mining type / predicted subsidence impact	Assessment Authority
Guideline 1	**Historical mine workings – risk of pothole subsidence**	**Subsidence Advisory**
Guideline 1A	Historical mine workings – risk of goaf consolidation	Subsidence Advisory
Guideline 2	Historical mine workings – possible subsidence risk	Council* Certifier* Subsidence Advisory
Guideline 3	Historical mine workings – remote subsidence risk	Council* Certifier* Subsidence Advisory
Guideline 3A	Historical mine workings – low subsidence risk	Council* Certifier* Subsidence Advisory
Guideline 4	Current mining areas – high predicted subsidence impact	Subsidence Advisory
Guideline 5	Current mining areas – moderate predicted subsidence impact	Subsidence Advisory
Guideline 6	Current mining areas – minimal predicted subsidence impact	Council* Certifier* Subsidence Advisory
Guideline 7	On application	Subsidence Advisory
Guideline 8	No restrictions	Council* Certifier* Subsidence Advisory

**Pursuant to section 24 of the Act, Subsidence Advisory NSW has exempted works that comply with Guidelines 2, 3, 3A, 6 and 8 from the operation of section 21 of the Act provided that certification is provided by a council or registered certifier (as defined in the Environmental Planning and Assessment Act 1979) as compliant with the relevant guideline.*

2. Surface Development Guideline 1

This document explains the requirements for constructing a complying development on a property in a Mine Subsidence District that has been assigned **Guideline 1**.

Guideline 1 applies to properties undermined by shallow historical mine workings with a high or moderate risk of a pothole forming on the surface based on the geometry of the workings, thickness of the coal seam, and the nature of the overlying strata.

3. Allowable residential construction

Guideline 1 allows for up to two residential buildings that conform with the following description:

Option 1:

A single or two storey residential development limited to a maximum length of 24 meters and maximum footprint size of 400m^2 designed in accordance with the following requirements:

- Maximum height of foundation brickwork of 1m. All masonry is to be articulated in accordance with the current edition of Australian Standards AS4773.

- Infill slabs on ground are only permitted in garages with a maximum area of 50m^2 and are not to be used to support any walls.

- Reinforced concrete perimeter strip footings that comply with the following table, excluding sites that would otherwise be classified as;
    - class H2 or E
    - class P (unless classified as class P due to mine subsidence)

Building type	Site Classification (ignoring class P due to mine subsidence)	Perimeter strip footing design **note:** all perimeter footings shall be extended a minimum of 3m beyond building footprint				
		Depth (mm)	Width (mm)	Reinforcement (3 x bars evenly spaced 50mm from top and 50mm from sides)		R10 ligature spacing
				Top	Bottom	
Single/two storey Lightweight cladding Steel roof	S or M	400	300	N20	N20	200
	H1	500	300	N20	N16	250
Single/two storey	S or M	400	300	N20	N16	200

Lightweight cladding Ceramic or concrete tile roof	H1	500	300	N20	N16	250
Single storey Brick veneer Steel roof	S or M	450	300	N20	N16	200
	H1	600	300	N20	N16	300
Single storey Brick veneer Ceramic or concrete tile roof	S or M	450	300	N20	N20	200
	H1	600	300	N20	N16	300
Two storey Brick veneer lower storey lightweight cladding upper storey Steel roof	S or M	450	300	N20	N16	200
	H1	600	300	N20	N16	300
Two storey Brick veneer lower storey lightweight cladding upper storey Ceramic or concrete tile roof	S or M	450	300	N24	N20	200
	H1	600	300	N20	N20	300

Note: All longitudinal reinforcement is to be placed inside steel ties.

Option 2:

A single storey brick veneer or two storey timber or steel framed residence with lightweight cladding designed in accordance with the following conditions / constraints:

- Designed by engineering principles by a qualified structural engineer to accommodate a pothole of maximum diameter of 5m forming at any point underneath the building structure. The structure should be capable of both spanning and cantilevering over a 5m diameter depression.

- Design drawings shall be submitted to Subsidence Advisory for acceptance prior to construction with the following written certification from a qualified structural engineer that the improvements will remain:
  safe, readily repairable, and any damage from mine subsidence shall be limited to slight damage in accordance with AS2870 (Damage Classification), in the event of a 5m diameter pothole forming at any point under the building
  If applicable, improvements should also be designed to accommodate any predicted ground movements that may be associated with founding on reactive clay soils.

- Infill slabs on ground only permitted in garages and of maximum area of 50m2 and not used to support any walls.

- Certification by a qualified structural engineer upon completion that the improvements have been constructed in accordance with the approved design drawings.

- Masonry is to be articulated in accordance with the current edition of Australian Standard AS4773.

In both **Option 1 and 2**, concrete is not to be placed in the footing excavations before a Subsidence Advisory officer has inspected the reinforcement steel in position. 48 hours' notice is required to book an inspection with Subsidence Advisory. Details on this process are included in the application determination letter.

Prohibited works

The following works are not permitted under this Guideline:

- Basements (including partial basements where one or more walls acts as a retaining wall)
- Suspended, drop edge or stepped slabs
- Masonry internal walls
- Raft slab foundations – infill slabs not structurally connected to the building are permitted in garages only.

Commercial buildings or applications for more than two separate residential buildings require assessment by Subsidence Advisory in accordance with its Merit Assessment Policy.

Other allowable additions and improvements

The following detached structures on **Guideline 1** affected properties will require certification from a qualified structural engineer that they will remain serviceable under a 5m diameter pothole:

- Concrete swimming pools
- Cabanas
- Retaining walls greater than 1m high
- Detached garages (must be non-habitable space and limited to a maximum footprint of 50m2)

Granny flats (i.e., single storey lightweight structure with maximum internal floorspace of 60m^2 and sheet metal roof) shall be designed in accordance with the requirements as outlined in section 3 of this document.

Exempt developments

In addition to the above, Subsidence Advisory has exempted some minor construction works from requiring approval under s22 of the Act. For a full list of exempt developments, please refer to Subsidence Advisory's Exempt Development list available at:

nsw.gov.au/subsidence-advisory/exempt-developments

4. Proposed developments that do not comply with the applicable Guideline

Applications for proposed improvements that do not comply with the Guideline assigned to the property may be assessed under Subsidence Advisory's Merit Assessment Policy.

Please refer to Subsidence Advisory's website for further information on requirements for proposed developments that do not comply with the applicable guideline:

nsw.gov.au/subsidence-advisory/merit-policy

5. Who can assess whether development complies with Guideline 1

Applications for proposed development on this Guideline must be assessed by Subsidence Advisory.

6. Disclaimer

Please note that Subsidence Advisory's Surface Development Guidelines are subject to change.