

Surface development guideline 1A

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

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 1A

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

Guideline 1A applies to properties with a reduced risk of pothole formation due to higher certainty of the state of mine workings. The maximum size pothole forming on the surface has been assessed as less than 3m in diameter. These properties have shallow workings and;

- Subsidence Advisory's records or a geotechnical investigation indicates that the workings have failed, and the mine subsidence risk is predominately limited to ongoing settlement
- Subsidence Advisory risk engineers, or a geotechnical assessment of the site indicates that the maximum size pothole forming on the surface is three (3) metres in diameter.

3. Allowable residential construction

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

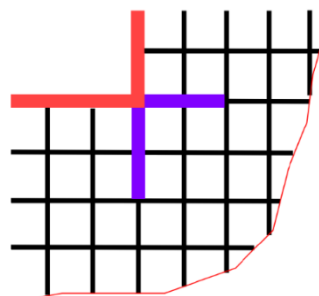
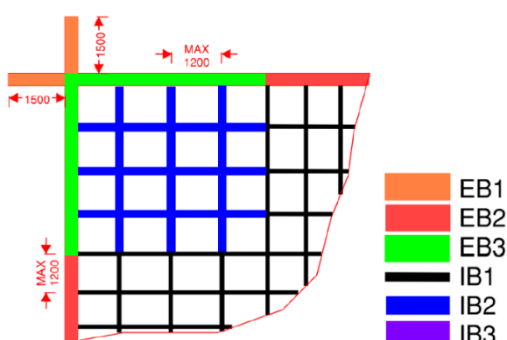
Option 1:

Single storey brick veneer or two storey lightweight clad residential developments constructed on a waffle pod slab and limited to a maximum length of 24 metres and maximum footprint size of 400m².

- This design is applicable to sites that would otherwise be classified as;
 - class S to H2 (excluding the classification of class P due to mine subsidence)
- A minimum waffle-pod slab thickness of 85mm is required. SL82 mesh shall be used for residences with maximum plan dimensions of less than 20m, otherwise SL92 mesh shall be used
- Modifications to the waffle pod design requirements under AS 2870-2011 are outlined in the following table.

Edge Beam and Corner Requirements

Re-entrant Corner Requirements



Beam Type	Section	Depth (mm)	Width (mm)	Reinforcement (Bars evenly spaced and minimum 50mm from top and 50mm from sides)		R10 ligature spacing
				Top	Bottom	
Edge Beam 1 (EB1)	Rectangular	365	300	3 x N16	3 x N16	150
Edge Beam 2 (EB2)	L-shaped	Variable – use minimum depth based on AS 2870	300	3 x N16	3 x N16	200
Edge Beam 3 (EB2)	L-shaped	385	300	1 x N16	3 x N16	N/A
Interior Beam 1 (IB1)	Rectangular	385	110	1 x N16	1 x N16	N/A
Interior Beam 2 (IB2)	Rectangular	385	200	2 x N16	1 x N16	N/A
Interior Beam 3 (IB3)	Rectangular	385	300	3 x N16	3 x N16	N/A

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 to engineering principles by a qualified structural engineer to accommodate a pothole of maximum diameter of 3m forming at any point underneath the building structure. The structure should be capable of both spanning and cantilevering over a 3m 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 3m 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:

- Integral retaining walls supporting the structure of the building
- Basements (including partial basements where one or more walls acts as a retaining wall)
- Suspended, drop edge or stepped slabs
- Masonry internal walls (cavity brick/blockwork) or load bearing masonry.

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 1A** affected properties will require certification from a qualified structural engineer that they will remain serviceable under a 1.5m diameter pothole and safe under a 3m 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 60m² 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.