

Mining influence area

Subsidence is described as the lowering or settling down of the land's surface.

When underground mining takes place, the earth's forces are redistributed and there is a tendency for the void to close. Some of this effect may be transferred to the surface as mine subsidence.

Not all mining results in subsidence, nor does all subsidence cause damage to surface structures.

Subsidence can result from natural causes, for example earthquakes, and from human activities such as underground mining.

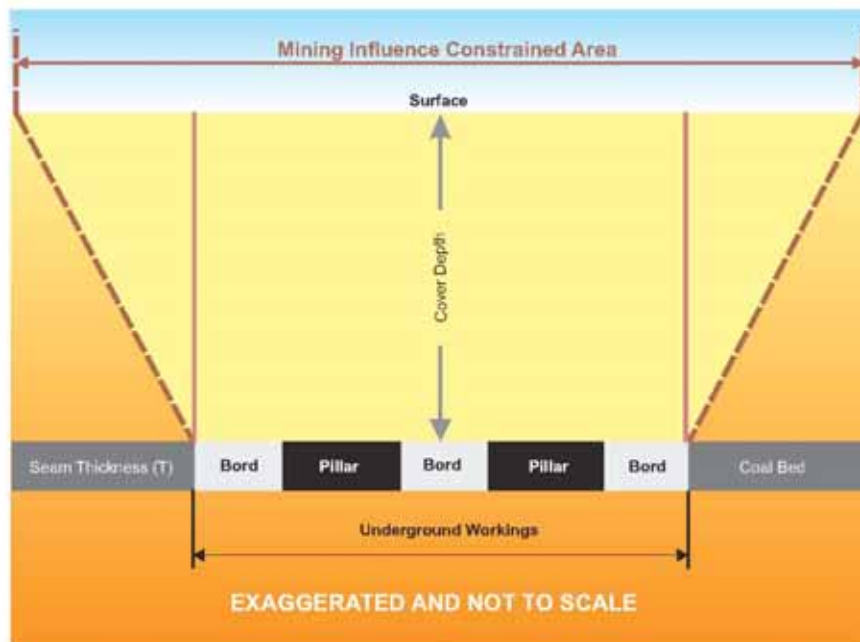
The limit, magnitude and nature of subsidence movements are dependent on numerous factors such as mine design, geological conditions, surface topography, and the distance between the mine workings and the ground surface (the cover depth).

The pale yellow area in the diagram below shows the area of *mining influence*.

The area of influence includes the:

- area *directly above* the mine workings — where the extraction of coal may cause subsidence of the rock and soil mass directly above the mine workings.
- broader influence area — that includes areas on the surface not directly above the mine workings, but that may be affected by possible subsidence.

The rock or soil mass within the mining influence zone may move three-dimensionally anywhere within that zone. That is, the extraction of coal may result in vertical as well as horizontal movements.



Subsidence diagram derived from 'Mine Subsidence' a joint publication of the New South Wales Coal Association, the Department of Mines and Energy (NSW) and the NSW Mine Subsidence Board.