

# Safety Bulletin

Date: June 2023

## Rockfall injuries to workers increase in underground mines

This safety bulletin provides safety advice for the NSW mining industry.

### Issue

There has been a rise in the number of incidents involving material falling from mine development faces and hurting workers.

There were 5 incidents in which rocks fell from development faces during the past 3 years and caused injury to workers, with one incident sending the worker to hospital. There have been a further 13 incidents involving rocks falling from development faces.

### Circumstances

A Jumbo drill rig operator was marking up a development face in preparation to drill the next advance of the drive on 2 April 2023. While marking up, a rock fell from the left-hand side of the face and hit the operator on the back of the head. The operator was admitted to hospital and required 25 scalp stitches. The rock was estimated to be 400 kg.

Figure 1: Incident scene showing the approximate location of the slab that fell (top circle), the approximate location of the operator who was hit (circle on left) and the slab of rock that fell from the face (circle on right).



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Figure 2: The slab of rock that hit the Jumbo operator



### Investigation

It is reasonably foreseeable that recurring rockfalls are caused by the inability to accurately predict geological conditions and rock damage caused by blasting. Less than adequate risk management and control of those conditions through procedures and scaling of the development face will lead to the injury or death of mine workers. Because geological conditions cannot be altered and therefore the hazards and risks will always be present, engineering controls must be put in place to manage the risk of rockfalls at development faces.

A review of other mine jurisdictions within Australia has found similar incidents. The details are summarised below:

- In South Australia, a Jumbo operator was killed in 2015 while changing drill bits on a Jumbo at the development face.
- A charge-up operator in Queensland suffered serious injuries in 2016, including a broken collar bone, broken ribs and facial lacerations due to rocks falling from a development face while charging the lifters.

[Miner struck by rockfall at a development face | Resources Safety & Health Queensland \(rshq.qld.gov.au\)](https://www.rshq.qld.gov.au/)

- Queensland issued Bulletin No 159 in 2016 - Managing rockfall hazards at development headings in response to an increase in injuries and near misses.

[Managing rockfall hazards at development headings | Resources Safety & Health Queensland \(rshq.qld.gov.au\)](https://www.rshq.qld.gov.au/)

- WorkSafe Victoria issued a serious mining incident notice in 2022 - Rock fall hits employee during development heading charging.

[Serious mining incident – Rock fall hits employee during development heading charging | WorkSafe Victoria](https://www.worksafe.vic.gov.au/)

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The approach in the NSW mining industry is predominately managed through procedural controls that have shown to be ineffective in consistently protecting workers against rockfalls. Meshing the face has already been identified as a control by some mines in NSW, which adds a greater level of protection to workers at the face from falling rocks.

## Recommendations

Mine operators should:

- review the risk assessments for ground and/or strata failure to identify engineering controls or higher to control material falling from the face of development headings
- implement engineering controls, including ground support to faces: mesh, thin skin liners (TSL) or shotcrete with bolts.

**Note:** Please ensure all relevant people in your organisation receive a copy of this safety bulletin and are informed of its content and recommendations. This safety bulletin should be processed in a systematic manner through the mine’s information and communication process. It should also be placed on the mine’s common area, such as your notice board where appropriate.

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