CROSSRIVERRAIL

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TUNNEL & STATIONS

Fact Sheet

Controlled blasting

Major excavation work is now underway at multiple sites across the Cross River Rail project. Some of the sites, including Woolloongabba and the caverns at Albert Street and Roma Street, contain areas of very hard rock which require the project team to undertake controlled blasting.

Controlled blasting has major benefits for both the project team and the surrounding communities.

Excavation using rock hammers alone has a higher impact and longer duration. Using controlled blasting in conjunction with reduced hammering will significantly reduce the duration of these high impact works.

What is controlled blasting?

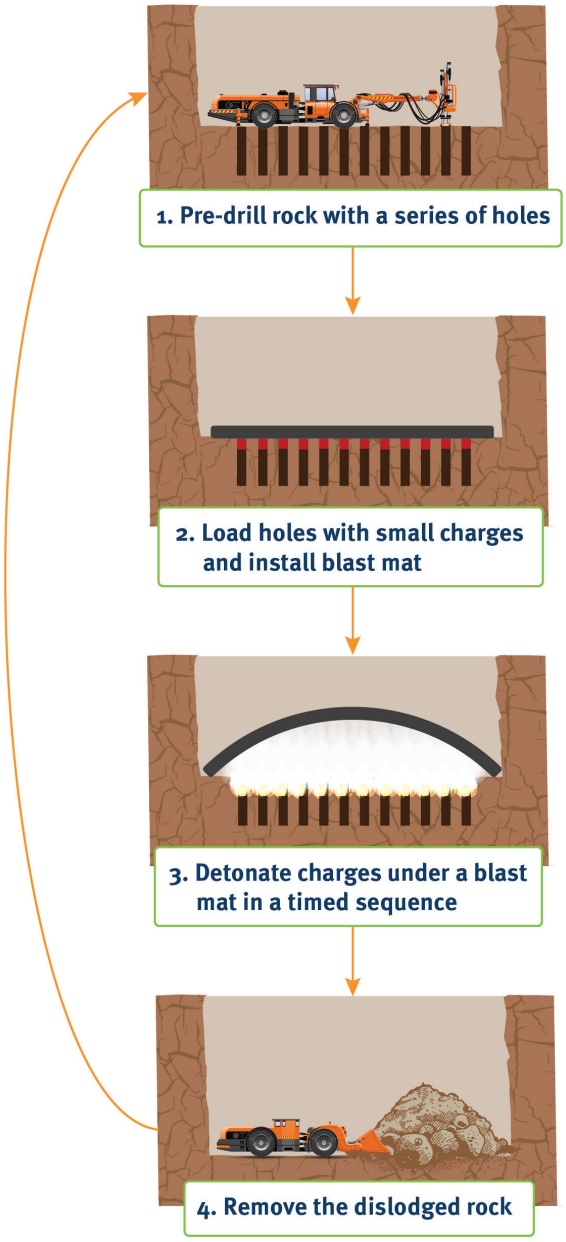
Controlled blasting involves the pre-planned and safe use of small explosive charges to break up hard rock.

Blasting will be carried out on the Cross River Rail project – for the vertical shafts and cavern at Albert Street, the Roma Street cavern and the horizontal caverns at both Albert Street and Woolloongabba.

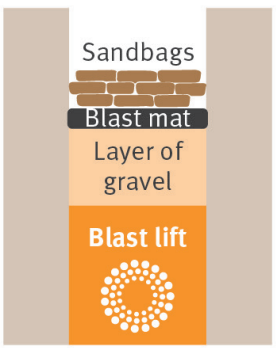
There are four stages of blasting which include:

1. Pre-drilling the rock with a series of holes
2. Loading the holes with small charges and other materials
3. Electronically detonating the charges in a timed sequence, which results in the rock being broken up into small, removable pieces
4. Removing the dislodged rock.

Following the blast, machines will grind away any uneven rock, including the use of rock hammers before installing rock anchors to stabilise the rock face. Surveying is then undertaken to prepare for the next blast.



How is dust and vibration managed?



Once the charges are loaded, the 'blast lift' is covered by multiple layers to prevent flyrock and dust, as well as to decrease the impact of noise, overpressure and vibration from the site. These layers include:

- Up to two metres of gravel which acts like a cork to contain pressure
- 'Blast mats' made of thick, shock-absorbing rubber
- Sand bags to secure blast mats.

Dust, noise and vibration monitoring will occur during blasting.

Is blasting safe?

Controlled blasting is strictly regulated by the Department of Natural Resources, Mines and Energy (DNRME), the Coordinator-General and SafeWork QLD. Blasting operations are conducted to the highest safety standards including Australian Standard AS2187.

Controlled blasting is a widely adopted excavation methodology used successfully around the world and in Australia, including CLEM7, AirportLink and Legacy Way in Brisbane.

The project team has developed a comprehensive blast management plan to manage and monitor the safety of our team, nearby properties and the environment during these works.

Other safety measures include:

- Strict controls and safety processes for each blast including safe transportation and storage of materials
- Engagement of specialist contractors to conduct controlled blasting operations
- Compliance monitoring by an independent third party before and after each controlled blast.

Trial blasting

Prior to controlled blasting commencing, a number of trials are undertaken. Trial blasting involves a smaller scale blast which is carried out prior to production blasting to confirm predicted impacts, understand ground conditions and confirm noise and vibration levels of local receivers.

Trial results will inform any required exclusion zones for future production blasting.

When will blasts occur?

Blasting will be carried out in accordance with the Coordinator-General conditions and will be undertaken between 7:30am and 4:30pm, Monday to Saturday. Blasts will not take place on Sundays or public holidays.

How will I know about the timing of controlled blasts?

Nearby residents and businesses will be notified at least 48 hours ahead of controlled blasts.

Notification will be made across a range of channels, including:

- Regular email updates to subscribers*
- SMS alerts 4 hours prior to each blast to subscribers*
- Signage installed around site
- Sirens sounding near the blasting area prior to the blast.

What can I expect during blasting?

People in close proximity of the blasting area may hear and feel the controlled blast. The sound is similar to rumbling thunder and some slight vibration may be felt

Minimal noise and vibration impacts will be experience outside of the blasting area. During the trial blast, noise and vibration monitors will be in place to record and analyse the data to refine the blast design if necessary

There may be brief pedestrian and traffic stoppages directly adjacent to the work site, these changes will be communicated in advance.

Will blasting cause damage to my property?

Blasting is not expected to cause damage to any properties.

Eligible properties have been offered building condition surveys to provide property owners with a record of their property's condition should any concerns arise.

Will I need to be relocated?

There will be no need to leave home or work during blasting.

Will the controlled blast affect my pets?

Similar to thunder, it is recommended that pets remain inside during the controlled blasts, if possible, as a precaution.

Will blasting affect utilities?

The project team is working closely with utility providers to ensure there is no disruption to utility services.

What if I have concerns or further questions about controlled blasting?

Please contact the project's Community Relations team on **1800 010 875** to discuss your individual circumstances.

*Register to receive email and SMS updates

Please send your name, phone number and home address by email to **crossriverrail@cbgujv.com.au** or by text to **0419 679 314** (message and data rates may apply).

Personal information collected for the purposes of SMS services will be managed in accordance with the Information Privacy Act 2009 (QLD).