



Coffs Harbour bypass

Fact Sheet

Controlled blasting on the Coffs Harbour bypass | June 2023

The Australian and NSW governments are funding the \$2.2 billion, 14-kilometre Coffs Harbour bypass project. The bypass will boost the regional economy and improve connectivity, road transport efficiency and safety for all local and interstate motorists.

As part of earthwork and tunnelling work, the project team will begin controlled blasting at various locations along the bypass alignment in coming months.

Controlled blasting for open cuts will take about a year to complete, weather permitting. Construction of the three tunnels will start later this year and will involve controlled blasting for about 18 months to complete, weather permitting.

What is controlled blasting?

Controlled blasting is used to excavate hard rock by drilling a series of holes into the rock and placing explosives according to a set pattern and depth. The explosives are detonated in a sequence to break up the rock. The rock is then crushed, screened, stockpiled and transported.

Tunnel construction

The bypass' three tunnels will be built using drill and blast to break through the hard argillite rock we have in Coffs Harbour.

Why aren't we using tunnel boring machines (TBMs)? Unlike the Sydney basin, which is soft sandstone, TBMs were not feasible to break through the hard geology we have in this area.



Why is the project using controlled blasting

Using controlled blasting allows us to complete the work more efficiently and with less impact to nearby residents. We are also piloting a surface mining machine in some locations. The surface miner cuts, crushes and loads rock in a single operation for improved efficiency.

We need to move about 2 million cubic metres of rock



Controlled blasting at a cut site

What is the rock used for

The high quality argillite will be used to construct the bypass. Earth moving equipment will excavate and haul the material from the blast site to lower lying areas in the alignment. This process is called cut and fill. We will also process some of the rock for use in pavement materials.

How long will controlled blasting take to complete

Controlled blasting for open cuts will take about a year to complete, weather permitting. Construction of the three tunnels will start later this year and will involve controlled blasting for about 18 months to complete, weather permitting.

When and how often will controlled blasting occur

We intentionally stage our blasts to minimise impacts for community. For cut sites, we aim for two blasts per week in a single location. This means we will schedule smaller blasts, across different locations, more often. For tunnel sites, we aim for two a day in any single location.

Controlled blasting will take place during standard construction hours. Cut blasting will take place between:

- 9am to 5pm Monday to Friday inclusive
- 9am to 1pm on Saturdays

Tunnel blasting will take place between:

- 7am to 6pm Monday to Friday inclusive
- 9am to 1pm on Saturdays

What are the expected noise impacts from controlled blasting

Noise from a blast is over quite quickly and can be compared to a loud clap of thunder. The Minister's Conditions of Approval (MCoA) for the project sets strict limits on air blast overpressure (noise from energy) and all blasts are modelled and monitored to ensure compliance.

Drilling and crushing activities are constant and can be considered very noisy. All work will take place within approved construction hours with respite

periods scheduled as required under the project's approvals. Plant and equipment will be positioned as far from sensitive receivers as possible.

Will controlled blasting cause damage to nearby property

The Minister's Conditions of Approval (MCoA) for the project sets strict limits on vibration and all blasts are modelled and monitored to ensure compliance. We don't expect controlled blasting to cause damage to nearby properties, however, all properties within 500 metres of a blast site have been offered a property condition survey to document the condition of their house prior to work starting. This report will be used as a reference to a property's pre-blast condition in the unlikely event of any new damage.

Will there be impacts to traffic

For safety, there will be short stoppages on roads that fall within a controlled blasting exclusion zone. Reduced speed limits and traffic control may also be in place on some local roads where hauling is required. We will communicate these changes on our website, Facebook, via roadside electronic messaging signs and directly with nearby residents.

How will safety risks be managed

The safety of workers and the community is our highest priority when undertaking controlled blasting activities. All blasts are managed by a licensed contractor and experienced shotfirer in line with relevant legislation. An exclusion zone will be established prior to each controlled blast and all site access points will be manned by designated blast guards to inhibit access.

All blasts are planned to prevent blast fumes being released into the environment. Blast fumes may occur from non-ideal detonation (for example, if groundwater is present) and can pose a health risk if exposure occurs. In the unlikely event of blast fumes being released beyond exclusion zones, the project team will contact sensitive receivers to shut windows and stay indoors. Blast fumes are different to the normal gases released from controlled blasting which usually disperse rapidly and pose no health risks.



Contact us

If you have any enquiries and complaints, please contact the project team on 1800 550 621 or community@chbteam.com.au



Translation and interpreting service

If you need help understanding this information, please contact the Translating and Interpreting Service on 131 450 and ask them to call us on 1800 550 621