



# Coffs Harbour bypass

Transport for NSW

## Fact Sheet

### Construction noise and vibration | November 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.

The Coffs Harbour bypass project team recognises that noise from construction can be disruptive to the surrounding community. We are committed to minimising the impact of noise and vibration for nearby residents and business owners.

This fact sheet provides information on how construction noise and vibration is identified, assessed, monitored and how we mitigate impacts from our work.



Jackhammer in use on the Coffs Harbour bypass

## What is construction noise and vibration?

We describe construction noise as sound caused by our activities to build the Coffs Harbour bypass. Noise levels vary depending on the type of work and equipment being used. While noise can affect people differently, we take a consistent approach to monitoring and assessing our construction noise. Noise is measured on a scale of units called decibels and by averaging the quietest and loudest measurements while considering how the human ear perceives it.

Ground borne noise and vibration occurs during intensive work such as hammering, where the sound and vibration is transmitted through the ground into a building. Vibration can be disruptive to the community and on rare occasions can cause minor cracking in some buildings. The Coffs Harbour bypass is working with nearby property owners to capture and repair any damage construction vibration activities cause.

Some of our construction work generates increased levels of noise and vibration to what people might have in their day-to-day lives. These activities include:

- Major earthwork
- Vehicle movements and reversing alarms and beepers
- Controlled blasting
- Rock hammering, breaking and crushing
- Bridge building and piling
- Concrete saw cutting and jackhammering
- Manufacturing and laying asphalt and concrete
- Loading, unloading and moving equipment and construction materials
- Tunnelling (mechanical excavation, drilling and controlled blasting).



**Bulldozer breaking through rock on the Coffs Harbour bypass**

## How is construction noise and vibration managed?

During planning, design phases and during construction of the project, we monitor and assess construction noise and vibration impacts in line with Australian and international guidelines. We must also follow the Coffs Harbour bypass Minister's Conditions of Approval (MCoA) and Environmental Protection Licence (EPL) which set out limits and criteria to meet compliance requirements to manage noise and vibration levels for the project.

A *Construction Noise and Vibration Management Plan (CNVMP)* has also been prepared. This plan describes how potential construction noise and vibration impacts will be managed to minimise impact on community and the environment during construction of the project.

## How do we monitor construction noise and vibration?

In the planning and design stages of the project, we completed a noise impact assessment which included monitoring background noise levels for residential receivers. The data collected was used to determine the existing environment and appropriate Noise Management Levels for noisy construction work. In construction, we predict construction noise impacts based on planned activities and monitor air borne and ground borne noise levels using a combination of attended and unattended real-time monitoring techniques such as noise loggers and hand held sound level meters. Ground borne noise monitoring may be used to determine noise impacts in locations where activities such a tunnelling may exceed Noise Management Levels. Given the limited number of residences and businesses in close proximity to the tunnels, and no impacted properties located directly above the tunnels, the risk of ground-borne noise impacts from the project is low.

For out of hours work, noise monitoring including a visual inspection of the activities, may be undertaken to verify the predicted noise levels identified in the noise impact assessment and ensure noise mitigation measures are implemented. Monitoring results will be compared with the predicted levels and additional mitigation measures will be determined, if required.

Vibration monitoring will take place at the location of the most affected residence or business when high vibration activities are expected within designated safe working distances for the activity. The results will be assessed against standards including where human comfort is a concern and where damage to property is a concern.

We will use the results from noise and vibration monitoring activities to determine the effectiveness of our approach to manage noise and vibration and consider additional mitigation measures to reduce construction noise and vibration impacts on the community.



**Noise monitor in place on the Coffs Harbour bypass**

## How do we reduce construction noise and vibration?

We are committed to prioritising community well-being and the environment, and where possible, will reduce the impacts of noise and vibration during construction of the project.

Our approach to noise and vibration management includes:

- Implementing a noise monitoring program for the duration of the project to assess our performance and ensure compliance with industry guidelines
- Scheduling vehicle movements during less sensitive times, conducting driver behaviour training, regular vehicle maintenance, and avoiding the use of engine compression brakes
- Ongoing engagement with residents and businesses located close to noisy activities
- Adherence to construction noise and vibration conditions and requirements set out in the MCoA and the project's EPL
- Implementing additional mitigation measures in areas where noise and vibration impacts may exceed guidelines such as providing alternative accommodation and undertaking additional noise monitoring of background noise levels and construction noise
- Scheduling noisy work at certain times of the day and night when it is likely to have a lesser impact on the community
- Regular consultation with community on out of hours work and appropriate periods of respite such as limiting out of hours construction work to no more than three consecutive evenings per week

- Ensuring all controlled blasting activities are carried out safely and without generating unacceptable noise and vibration impacts on residences and sensitive receivers
- Regularly maintaining construction equipment
- Using temporary noise barriers
- Installing acoustic sheds or curtains at tunnel sites to reduce noise and vibration from construction work in these areas during 24hr activities
- For heritage items, vibration testing before and during vibration generating activities will be undertaken to identify minimum working distances to prevent cosmetic damage
- Undertaking building condition surveys by an appropriately qualified independent professional for the buildings, structures and utilities located near main vibration generating activities
- Implementing at-property operational noise mitigation measures and noise walls
- Where possible, using quieter construction methods such as grinding, rock splitting or terrain levelling instead of hydraulic rock breaking.

## Work hours and out of hours work

Our EPL and Noise and Vibration Management Plan outlines our approved working hours for the project. We are permitted to work from **7am to 6pm Monday to Friday** and **8am to 1pm on Saturdays**. At times we will need to carry out work outside of these hours because of safety and to meet technical requirements for construction. Examples of these include working close to live traffic and pouring concrete earlier in the day to avoid high temperatures that impact the setting process.

## Where can I get more information?

If you would like more information about how the Coffs Harbour bypass project manages construction noise and vibration or the requirements we need to meet, contact the project team or read our Construction Environment Management Plan at [www.pacifichighway.nsw.gov.au/coffsharbourbypass](http://www.pacifichighway.nsw.gov.au/coffsharbourbypass) or our Environmental Protection Licence at [www.gamuda.com.au/coffs-harbour-bypass](http://www.gamuda.com.au/coffs-harbour-bypass).



## Contact us

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



## Translation and interpreting service

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