

# Construction noise and vibration fact sheet

Crows Nest Station August 2023

Sydney Metro is Australia's biggest public transport project.

Services started in May 2019 in the city's North West with a train every four minutes in the peak. Metro rail will be extended into the CBD in 2024, with new metro railway stations at Martin Place, Pitt Street and Barangaroo and new metro platforms at Central, and then onto Bankstown in 2025.

A W Edwards is building the new Crows Nest Station. Rail track installation and the stations main structural works are now complete and fit out and exterior works are progressing.

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This fact sheet explains how Sydney Metro Crows Nest Station team manages and mitigates construction noise and vibration.

## What is construction noise?

To build Crows Nest Station, A W Edwards needs to use machinery and equipment that will create noise. Noise can impact people differently as everyone has different sensitivities and are exposed to different environments.

The types and levels of noise will vary as construction activities change and work progresses. At times our construction work will create high levels of noise particularly when carrying out activities such as cutting and digging into rock, concrete, asphalt and metal.

Prior to key work activities starting, a complete assessment of the work to be done and the noise levels expected to be generated is conducted. Any measures that can be taken to minimise noise impacts on the community are identified. The Construction, Noise and Vibration Guidelines help us with this process and are available to view at <https://crowsnestmetrostation.com.au/>

## What is construction vibration?

Some construction work can cause a shaking sensation, known as vibration. As is the case with noise, it can have varied impacts on people as everyone has different levels of tolerance and sensitivity.

Buildings are constructed to withstand a certain level of vibration. People can be sensitive to vibration and can detect vibration levels that are well below the threshold for causing any risk of damage to buildings.

During impactful activities nearby properties may feel vibration, however the vibration levels generated are not likely to cause any impact.

## What to expect

Unfortunately, some construction activities are inherently noisy and generate vibration which cannot be avoided. Properties near the Crows Nest Station construction site can expect to hear and feel some of the following activities:

- excavation (activity involving the removal of existing surfaces such as rock, soil, pavement, and other substances from a site to form an open face, hole or cavity)
- movements of heavy vehicles
- rock hammering and crushing
- asphaltting and concreting
- saw cutting and breaking of rock, steel, pavement and concrete
- loading, unloading or moving equipment and construction materials.

We regularly monitor noise and vibration to make sure they are within predicted and approved levels, based on background noise levels obtained in 2016 as part of the preparation of the Environment Impact Statement (EIS) for the project. A Construction Noise and Vibration Impact Statement (CNVIS) for Crows Nest Station was also created, and then approved by the Department of Planning and Environment which outlines the noise and vibration management levels, and mitigation measures required. For further details on the EIS and CNVIS, documents can be found on [crowsnestmetrostation.com.au](http://crowsnestmetrostation.com.au) and [sydneymetro.info/station/crows-nest-station](http://sydneymetro.info/station/crows-nest-station).

## Key impactful work activities until project completion



### **Capping beam removal (jackhammering, saw cutting with excavator)**

This work involves the removal of a steel and concrete encasement which surrounds the station box perimeter. This work is noisy as it involves saw-cutting and jackhammering into reinforced concrete.

Machinery that will be used includes excavator/s with hammer and saw attachments, delivery trucks and heavy vehicles.

### **Public domain work (jackhammering, saw cutting)**

Public domain works involve trenching (cutting and digging) into the ground, cutting into underground services and pavers and removing concrete.

Machinery that will be used includes jackhammers, angle grinders, compaction equipment, excavators, handheld and electrical tools, concrete trucks, mixers and pumps, light vehicles, and vacuum trucks.



*Images of excavators being used for work activities.*

Advance notice is provided to the community of key construction activities. Information on specific start and end dates and any other important updates or changes will be provided in community notifications.

## Managing construction noise and vibration impacts

A W Edwards works to reduce the impact of noise and vibration when working close to residents and businesses.

Strategies to manage impacts include:

- scheduling respite periods for high noise activities, such as rock breaking
- limiting the use of multiple equipment at the same time and location
- using non-tonal reversing alarms on all equipment and turning off equipment when not in use
- installing temporary noise blankets around equipment if possible
- operating equipment on the lowest effective vibration setting
- regular maintenance of plant and equipment to reduce emissions
- monitoring noise and vibration levels to ensure compliance.
- instructing workers to keep noise to a minimum and being respectful of neighbours.



*Image of noise blankets around equipment*

## What are the project's respite periods?

Respite from high impact activities is provided between 7am-8am and 12pm-2pm, Monday to Friday. High impact noise will not occur past 1pm on Saturdays.

These respite periods are a result of community consultation conducted last year.

Respite periods are provided for certain high noise activities. High impact construction activities are defined by the Interim Construction Noise Guideline

<https://www.environment.nsw.gov.au/resources/noise/09265cng.pdf>

Activities that are defined as high impact includes:

- jackhammering
- rock hammering
- rock breaking
- rock drilling
- grinding
- use of power saws, such as used for cutting timber (at surface).

## Hours of operation



Standard construction hours are **Monday to Friday 7am to 6pm, and Saturday 8am to 6pm.**

On Saturdays **1pm to 6pm, and Sunday 7am to 6pm**, there will be no high noise activities taking place.

Work outside these hours is subject to approval from Sydney Metro, an independent Environmental Representative (ER) and independent Acoustic Advisor (AA) appointed to this project, and in some instances, the Department of Planning Environment (DPE).



Currently, the project has approval to carry out some low impact construction activities outside of standard construction hours (from 6pm to 7am) such as crane lifts, station box and tunnel fit out work and concrete finishing.

Any other night-time work is subject to additional approvals.

Reasons for night works may include: when we have received third party approvals, emergency works, oversize or overmass vehicle deliveries if they are unsafe to be delivered during standard construction hours.

Approval to work on main roads like Pacific Highway is typically not granted during daytime or peak hour traffic. As a result, some of the work on Pacific Highway can only occur during the night or the early morning.

Some work may also be undertaken outside of standard hours without additional approvals if the activity is not predicted to be intrusive.



### Have your say

Please submit any feedback you have on construction activities or communications by scanning the QR code.

## Thank you for your cooperation and understanding while we complete this essential work.

If you have any questions about Crows Nest Station, please call 1800 171 386 (24-hour community information line) and ask for the **Crows Nest Station team** or email [crowsnestmetrostation@transport.nsw.gov.au](mailto:crowsnestmetrostation@transport.nsw.gov.au)

For questions about the tunnel fit out work, please contact Systems Connect on 1800 171 386 (24-hour community information line) or email [linewidemetrol@transport.nsw.gov.au](mailto:linewidemetrol@transport.nsw.gov.au)



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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 171 386**