

Construction noise and vibration fact sheet

Crows Nest Station | March 2021



Image of Crows Nest station site.

A W Edwards has been awarded the contract to build the new Crows Nest Station. Station box excavation and tunnelling is now complete and rail track installation is underway. A W Edwards has now started initial work to build the station structure.

This fact sheet has been developed to provide an overview on the activities being undertaken to build Crows Nest Station. This fact sheet will also explain what is being done to help reduce and manage potential noise and vibration impacts.

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 work will create high levels of noise particularly when carrying out activities such as cutting and digging into rock, concrete, asphalt and metal.

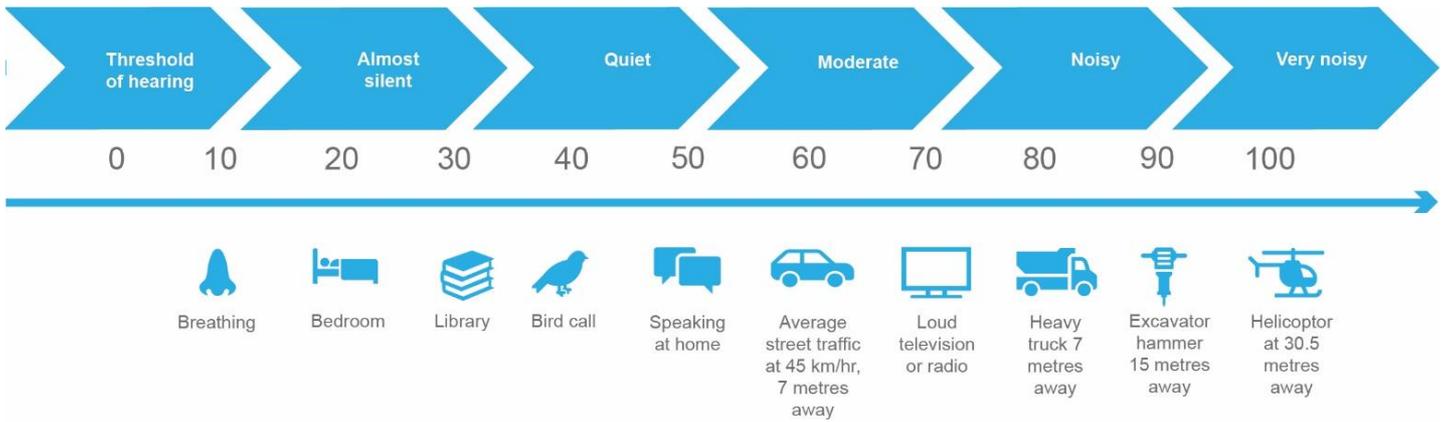
Noise level comparisons

People's perceptions of noise is strongly influenced by their environment. A noise level that is perceived as loud in one situation may appear quieter in another. Common factors which influence people's perception of noise include:

-  distance from the noise source
-  current noise conditions such as traffic on the Pacific Highway
-  topography of the area and line of sight (i.e. are there hills, slopes, depressions or barriers)
-  existing buildings, and structures such as walls or windows, and their condition (i.e. are windows sealed).

Generally, our construction activities will range from quiet or just noticeable work such as waterproofing, to noisy work such as road sawing and jack hammering. To provide an understanding of what to expect the diagram overleaf has been developed. It shows different sound levels displayed in decibels with examples of comparable noise at each level.

Sound levels in decibels (approximate)



When works are toward the noisy end, we will put in place measures to reduce potential impacts on you. These measures are explained in more detail in the sections below.

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.

Types of construction activities

To build the new Crows Nest Station we need to undertake activities that will create noise and you may sense faint vibrations. The most common activities you can expect to hear, and on occasion feel, include:

- 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
- installation of bored piles (activity where a vertical hole is drilled into the ground, using a bored piling machine. Steel is then placed into the hole and filled with concrete to provide foundation support)
- asphaltting and concreting
- saw cutting and breaking of rock, steel, pavement and concrete
- loading, unloading or moving equipment and construction materials.



Image of excavator with hammer attachment removing concrete.

How we're managing construction noise and vibration



Some construction activities are inherently noisy and generate vibration which cannot be avoided. In addition to potential noise and vibration impacts on the community, construction noise and vibration can also have impacts upon construction workers.

It is important that noise management strategies are implemented to not only reduce impact to the community, but also to our workers who are often working at the source of the noise/ vibration where it is most impactful.

A Construction Noise and Vibration Impact Statement (CNVIS) has been prepared to understand our potential noise and vibration impacts when constructing Crows Nest Station. This document has been prepared in accordance with the Project's Infrastructure Approval and Sydney Metro's Construction Noise and Vibration Strategy (CNVS). It identifies measures we can implement to reduce and manage potential noise and vibration impacts.

Noise and vibration reduction measures we are implementing include:



Image of temporary noise blankets surrounding work area.

- scheduling respite periods for high noise activities, such as rock breaking (one hour of respite after every 3 hours of continuous high noise work)
- 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
- monitoring noise and vibration levels to ensure compliance.



We also notify about upcoming work via monthly letterbox drops and weekly email updates to registered subscribers.

Work hours



Our standard approved working hours are **7am to 6pm Monday to Friday** and **8am to 1pm on Saturdays**.

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, Industry and Environment (DPIE).

Work outside standard construction hours may be scheduled for the following reasons:

- to comply with social distancing and other COVID-19 restrictions issued by State authorities
- to minimise impacts on traffic flow
- to meet the availability and requirements of the utility asset owners when undertaking work on utility assets (such as Ausgrid and Sydney Water)
- if emergency work is needed
- where disruption to essential services and/or considerations of worker safety do not allow work within standard hours.

When working outside standard construction hours, the majority of the noisier work will be done before midnight where possible. We will also notify you in advance so that you can be prepared. Some work may also be undertaken outside of standard hours without additional approvals if the activity is not predicted to be intrusive.

Contact us

If you have any questions or if you need to make a complaint about noise or vibration from our work, please contact us via the methods below:



1800 171 386 Community information line open 24 hours



crowsnestmetrostation@transport.nsw.gov.au



Sydney Metro City & Southwest, PO Box K659, Haymarket NSW 1240



If you need an interpreter, contact TIS National on **131 450** and ask them to call **1800 171 386**