

Fact sheet

Construction noise and vibration

The \$2.4 billion Parramatta Light Rail will connect Westmead to Carlingford via the Parramatta CBD and Camellia. Major construction is underway, and Transport for NSW has a number of measures in place to reduce the impact on the local community.

Transport for NSW approach

While noise and vibration are an unavoidable part of a major project such as the Parramatta Light Rail, Transport for NSW works hard to minimise impacts on the community.

Where possible, specific works are prioritised to minimise the duration of construction, and community feedback is taken into account when designing construction programs.

Where out-of-hours work is required in residential areas, Transport for NSW teams are generally not permitted to work in any one location for more than four nights in a seven-day period, to ensure the community receives regular respite while construction works are ongoing.

Causes of noise and vibration

Common sources of noise include heavy machinery, trucks, pavement works, excavation or earthworks that involve jackhammering or rock-breaking, and mandatory reversing alarms on mobile equipment.

Transport for NSW works to guidelines that limit the level of vibration that can be generated, minimising the risk of cosmetic damage to nearby residential or commercial buildings.

Construction works generate varying degrees of vibration, depending on the types of equipment and methods used. These include earthworks, site clearing and demolition, concrete breaking and removal, and ground compaction.

Measuring noise and vibration

Construction noise and vibration is temporary and often changes as activities change and work progresses. During construction activity, noise and vibration is regularly measured to ensure it does not exceed approved standards.

The perceived level of impact may vary from person to person depending on the location of their property, the type of construction activity and duration of works.

Impact on property

Prior to any vibration-generating construction, properties adjacent to work areas might undergo a 'dilapidation survey', also known as a 'pre-construction property condition survey'. Properties are inspected to record their current condition and to document any existing defects. This is compared to a second survey once construction work is complete.

Managing community impacts

Expert consultants have carried out extensive noise and vibration modelling for Parramatta Light Rail construction works to predict expected levels of noise and vibration and how these can best be managed.

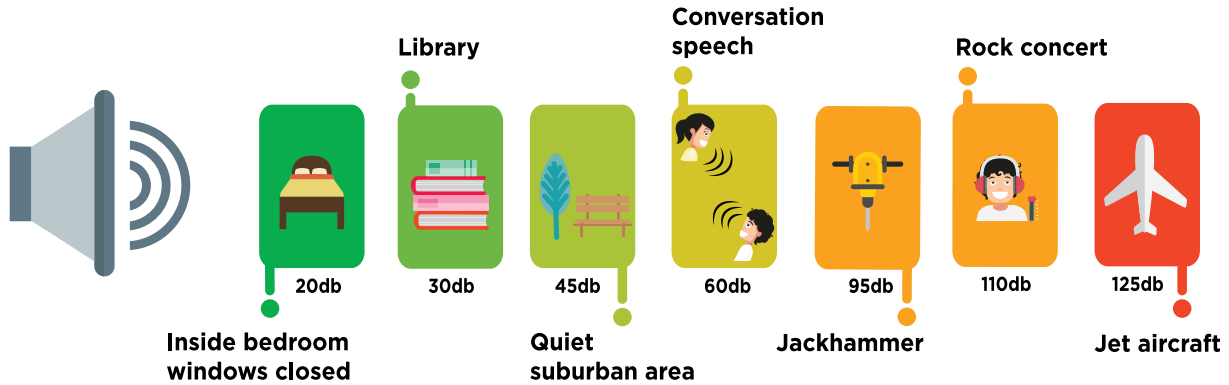
The modelling considers a range of factors including, but not limited to:

- the location of residents, businesses and sensitive community organisations (for example, schools, childcare centres and places of worship)

Noise Level Comparisons

People's perception of noise is strongly influenced by their environment.

A noise level that is perceived as loud in one situation may appear quiet in another.



- the type of construction activities and the machinery and equipment used
- existing background noise and vibration levels
- topography (the shape and features) of the area.

Reducing noise and vibration

A range of mitigation measures are used to reduce noise and vibration during construction, including:

- selecting machinery and planning activities that will minimise construction impacts
- installing noise mitigation measures where possible, such as noise blankets, acoustic sheds and non-tonal reversing alarms (these make a low noise similar to a “quacking” sound)
- providing respite periods
- limiting high vibration-causing activities to standard construction hours, where possible
- notifying nearby residents in advance of noisy or vibration-generating works
- noise and vibration monitoring to ensure works are kept within allowable limits, undertaken at locations identified by the project’s acoustic and vibration consultants.

Working hours

Most light rail construction work is carried out during ‘standard hours’: from 7am to 7pm Monday to Friday, and 8am to 6pm on Saturday, with exceptions in some areas. Typically, the light rail construction crews do not work on Sundays or public holidays.

There will be occasions where work needs to occur outside standard hours (for example, at night) for safety or operational reasons, such as major road closures and work at critical intersections, or works that would be considered excessively disruptive to businesses, residents and road users during standard hours.

Businesses and residents are notified in advance anytime that construction activities need to take place outside standard hours, unless it’s an emergency.

Complaints and enquiries

If you have concerns or questions about Parramatta Light Rail construction noise or vibration, you can call our 24-hour community hotline on 1800 139 389.

To find out more about the Parramatta Light Rail, visit parramattalightrail.nsw.gov.au.



Artists impression of Centenary Square