



Australian Government

**BUILDING OUR FUTURE**



Transport for NSW

# Great Western Highway Upgrade Program

## Medlow Bath Upgrade Review of Environmental Factors

### Noise and vibration fact sheet

July 2021



Noise and vibration mitigation measures will be used to minimise impacts during construction

Together the Australian and NSW Governments are investing more than \$4.5 billion towards upgrading the Great Western Highway between Katoomba and Lithgow. The Great Western Highway Upgrade will reduce congestion, deliver safer, more efficient and reliable journeys for those travelling in, around and through the Blue Mountains, and better connect communities in the Central West.

Transport for NSW (Transport) knows that construction work can be noisy, which is why we will use a range of measures to reduce the impact of our work in Medlow Bath.

We have carried out a thorough noise and vibration assessment examining the potential impact to the community while we upgrade the Highway and afterwards.

This involved identifying areas which may experience changed levels of noise or vibration as a result of the upgrade and how we will manage them.

Transport is presenting a Review of Environmental Factors (REF) and Concept Design for the Medlow Bath Upgrade for community consultation from 26 July to 24 August 2021.

We invite the Medlow Bath community and other interested stakeholders to submit feedback to help inform next steps for the proposal.

 **Minimised noise and vibration**

**Positive noise benefits long-term** 

## Noise

We have identified residents eligible for individual noise mitigation measures, mainly due to noise from existing traffic flows on the Great Western Highway rather than a result of the project.

We have listened to stakeholders who expressed a preference to avoid noise barriers and we will instead propose individual architectural treatments such as glazing or fencing at affected properties.

Overall, the community will experience positive noise benefits long-term, with a slight decrease in average noise levels once the Great Western Highway Upgrade is complete.

Amenity will also be improved as trains passing through Medlow Bath Station will no longer need to sound their horn to alert pedestrians following completion of the new pedestrian bridge.



Trains will no longer need to sound their horn going through Medlow Bath when the level crossing is replaced by the new pedestrian bridge (image credit: Mott MacDonald)

## Vibration

The Medlow Bath Upgrade vibration study found the proposal is unlikely to generate operational vibration impacts on properties and heritage structures.

We will focus on managing and reducing vibration during construction to prevent damage to properties and heritage structures.

We understand people are sensitive to vibration and can feel vibration at very low levels. This is why the vibration criteria we need to meet during our work to avoid annoyance to you is more stringent than the criteria to prevent damage to property. We will ensure our measures are effective in meeting these conditions.

### When we are building

We expect a negligible impact on the local noise environment from construction traffic movements.

We will monitor, manage and mitigate noise impacts arising from construction works. As much as possible, we will schedule noise intensive works during standard construction hours.

We will monitor vibration and use appropriate equipment to minimise impacts.

During noise intensive works, we will use all appropriate noise mitigation measures to control the impact for businesses and residents adjacent to the project.

### Reducing the impact of our work

A Construction Noise and Vibration Management Plan will be prepared to identify how the project will manage noise and vibration impacts from the planned works.

We will measure vibration while we are working when we are within minimum distances to heritage and other buildings to reduce the potential for cosmetic damage.

We will continue our community consultation activities, in particular engaging with key stakeholders likely to be adversely affected by noise or vibration impacts.

## How we measure noise



Noise is measured in decibels. Our ears generally do not notice changes of one to two decibels. We also do not hear incremental changes in noise.



To our ears, a change of 10 decibels sounds either half or double as loud. For example, a motorcycle is about 10 decibels louder than a lawnmower, but sounds around twice as loud.

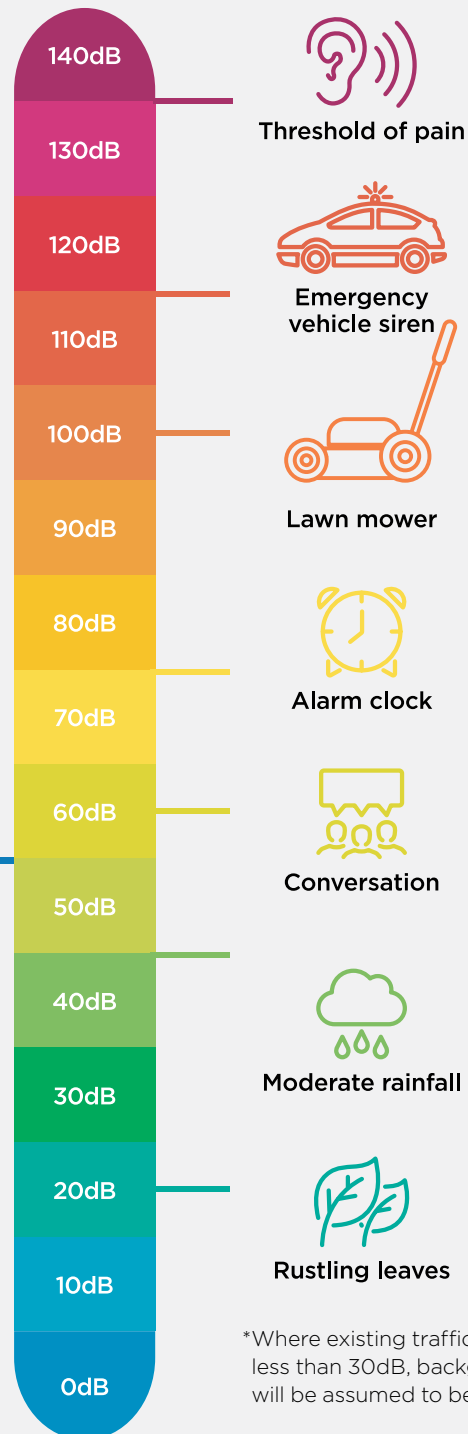
At Transport, noise is measured, predicted and assessed in accordance with relevant legislative guidelines.

Our assessments are conservative and always assess the worst case scenario. We often find that the actual noise caused by a project is lower than we predicted.

Standard guidelines for noise are:

 **50** decibels at night  
 **55** decibels during the day  
for new **freeways or main roads**

 **55** decibels at night  
 **60** decibels during the day  
for upgrades of **existing roads**



\*Where existing traffic noise is less than 30dB, background will be assumed to be 30dB.

## Noise assessments

Transport has used noise monitoring data and traffic surveys, a comprehensive noise study, site investigations and noise modelling to predict noise levels arising from the proposed Medlow Bath Upgrade.

Through the noise assessments we identified residences and businesses which are likely to be affected by noise at different stages of construction (site preparation, site establishment, vegetation clearing, roadworks, finishing works).

Our studies found that noise and vibration impacts will reduce in the long-term as the Great Western Highway Upgrade Program moves to completion.

## What is an REF?

Transport has legal obligations to assess and mitigate impacts that may result from a proposed activity. An REF details these legal obligations, and the environmental impacts and mitigation measures of a project. Feedback on this REF will inform the approval of the proposed Medlow Bath Upgrade.

## What is a Concept Design?

The Concept Design is a project design that is developed in sufficient detail to allow an assessment of likely environmental, social and economic impacts so that stakeholders can consider the proposed project and provide feedback. The concept design may change based on feedback provided by stakeholders.

### View the REF and Concept Design

You can view the Medlow Bath Upgrade REF and Concept Design at our virtual consultation room at [nswroads.work/gwhdconsult](https://nswroads.work/gwhdconsult)

### Have your say

We will hold online consultation sessions where you can ask our team any questions you have and tell us what you think.

**We recommend that you view the REF and Concept Design before you speak with the team or make a submission.**

### Speak to the project team

**Wednesday 28 July**      **Saturday 31 July**  
1.00–2.30pm              12.30–2.00pm

**Tuesday 3 August**      **Thursday 5 August**  
6.30–8.00pm              6.30–8.00pm

Register for our Microsoft Teams live-stream consultation sessions at [nswroads.work/gwhdconsult](https://nswroads.work/gwhdconsult)

Contact us on **1800 953 777** or [gwhd@transport.nsw.gov.au](mailto:gwhd@transport.nsw.gov.au) to book a personal phone consultation if you prefer.

### Face-to-face consultation

As COVID-19 restrictions are once again in place, we regret we are unlikely to be able to offer face-to-face consultation at this time.

Consultation will be held online to ensure your safety and comply with COVID-19 restrictions.

If restrictions ease before consultation ends we will organise face-to-face consultation, in line with existing guidelines at that time.

### How to make a formal submission

We welcome all feedback on the Medlow Bath Upgrade REF and Concept Design.

To have your input formally considered, and receive a response in the consultation report, use our online submission form at [nswroads.work/gwhdconsult](https://nswroads.work/gwhdconsult) or mail a printed submission to:

Great Western Highway Upgrade Program  
Medlow Bath Upgrade REF & Concept  
Design PO Box 2332, Orange NSW 2800

**Consultation and exhibition is open from 26 July - 24 August. All formal submissions must be received by midnight, 24 August.**

## Contact us

Sign up for our eNewsletter online at [nswroads.work/gwhd](https://nswroads.work/gwhd) and you'll never miss a project update.



[nswroads.work/gwhd](https://nswroads.work/gwhd)



[gwhd@transport.nsw.gov.au](mailto:gwhd@transport.nsw.gov.au)



1800 953 777



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