

Stage 4: Devils Pulpit to Richmond River | July 2022

Operational noise compliance review report



Australian Government



Bridge over Richmond River at Broadwater, looking south

The Australian and NSW governments are jointly funding the Woolgoolga to Ballina Pacific Highway upgrade.

The Devils Pulpit to Richmond River section of the Pacific Highway upgrade opened to traffic between September and December 2020. The operational noise compliance review monitoring was completed during October and November 2021.

In this update, we explain the outcomes of the operational noise compliance review report for Stage 4: Devils Pulpit to Richmond River.

Devils Pulpit to Richmond River fast facts



Noise logging at
24 locations



546 residential
properties assessed



2 non-residential
properties close to the project



The noise model
is considered valid



46 residential properties
eligible for consideration of
at-house noise treatment

It’s a process

A preliminary operational noise assessment was completed during the project’s concept design and as part of the Environmental Impact Statement (EIS), and Submissions Preferred Infrastructure Report (SPIR).

The team released an operational noise review in 2018 after completion of the detailed design phase. This outlined predicted operational noise levels for the completed upgrade together with measures taken to reduce impacts. The operational noise review outlined the predicted operational noise impacts at properties within 0-600 and 601-900 metres from the upgrade.

As part of the project’s Minister’s Conditions of Approval, operational noise compliance monitoring must be carried out within twelve months of the motorway opening to traffic at full speed.

This program was carried out in stages to reflect the opening of the upgrade:

- Stage 1 Glenugie to Maclean
- Stage 2 Richmond River to Pimlico
- Stage 3 Maclean to Devils Pulpit
- Stage 4 Devils Pulpit to Richmond River.

The results of the monitoring are captured in an operational noise compliance review report which was released in the stages above.



Outcomes for stage 4:
Devils Pulpit to Richmond River

Noise monitoring, modelling and assessment for the operational noise compliance review was carried out by specialist noise consultant, AECOM, on behalf of Transport for NSW.

The report was submitted to the NSW Environment Protection Authority (EPA) and NSW Department of Planning and Environment (DPE) as required under the Woolgoolga to Ballina Pacific Highway upgrade Minister’s Conditions of Approval.

Noise monitoring occurred at 24 locations which are identified in section 10.4 of the report.

There were 546 residential properties assessed between Devils Pulpit and Richmond River. Of these, 111 are between 0–600 metres, 136 are between 601–900 metres and 399 are located greater than 900 metres. There were 2 non-residential receivers close to the project.

The operational noise compliance review identified 46 residential receivers between Devils Pulpit to Richmond River as eligible for consideration of at-house noise treatment.

Properties between 0-600 metres	Properties between 601-900 metres	Greater than 900 metres
46	0	0

Property owners with residences identified as eligible for consideration of at-house noise treatment will be contacted by the project team.

We are committed to working with affected residents to design at-house treatments that achieve the best outcome for property owners.

Stage 4 of the compliance review report confirms the project complies with its conditions in relation to operational noise between Devils Pulpit and Richmond River. Apart from the properties identified in the report, no further properties or noise mitigation measures are required.



Woodburn interchange, looking north

FAQs – Explaining operational noise

What operational noise mitigation measures were installed before opening the motorway between Devils Pulpit to Richmond River?

Following the operational noise review in 2018, the following noise mitigation measures were installed between Devils Pulpit to Richmond River before opening:

- 66 at-house noise treatments at eligible properties within 0-600 metres of the upgrade.

What is the purpose of the operational noise compliance review?

This review compares actual noise levels against those predicted to determine whether the mitigation treatment implemented is appropriate.

In addition, the review confirms which properties over 601 metres from the upgrade are identified as eligible for at-house treatment.

Eligibility for assessment of at-house noise treatment is applied where there is an exceedance of the noise criteria guideline. Eligibility ceases once the noise model shows the criteria has been met.

What does the operational noise compliance review involve?

The review involves concurrently carrying out:

- traffic counting
- unattended noise monitoring (for about two weeks)
- short term attended noise monitoring.

Monitoring locations were chosen to inform the validation of the noise model and provide a representative sample of the existing road traffic noise conditions.

Sufficient locations were monitored to validate or 'confirm' that the noise model is accurately determining noise levels for all properties between monitoring locations. Once the model is demonstrated to be valid, it is used to predict noise levels for a "Build" and "No build" scenario at two periods in time – the year the project opened and ten years after opening.

How is the noise model validated?

The validation process involves comparing the predicted noise level with a measured noise level. If the prediction is within the acceptable level of accuracy of the measured level (+/- two decibels), the model is considered valid.

The noise level is predicted at receivers using the Calculation of Road Traffic Noise (CoRTN) method. This is a three-dimensional mathematical computer model that has been specifically validated under Australian conditions and is accepted as the industry standard by the Environmental Protection Authority.

What information is included in the report?

The report outlines the guidelines and legislation the operational noise process is bound by and details the methodology used for the operational noise compliance review.

A summary of key findings is included in the compliance review for:

- Stage 1: Glenugie to Maclean
- Stage 2: Richmond River to Pimlico
- Stage 3: Maclean to Devils Pulpit
- Stage 4: Devils Pulpit to Richmond River.

The operational noise compliance review report is available on the project website.

My property is listed as eligible, what happens now?

Property owners with residences identified as eligible for consideration of at-house noise treatment will be contacted by the project team.

Not all properties identified as being eligible for assessment will receive treatment. The installation of any treatment is subject to further consideration which includes, but is not limited to:

- property inspection
- structural condition
- façade construction
- heritage considerations
- planning approval for the dwelling
- supporting infrastructure.

We are committed to working with affected residents to design at-house treatments that achieve the best outcome for property owners.



Broadwater, looking south

Operational noise compliance review report

Why isn't my property eligible for treatment when I can still hear the noise?

We appreciate the impacts the new highway has had on residents and acknowledge the community's concerns about increased traffic noise.

Operational noise mitigation measures are guided by the relevant government policy and guideline documents as outlined in the operational noise review report and operational noise compliance review report.

These documents provide a consistent and equitable approach to the evaluation, selection and design of the most appropriate noise mitigation measures for a road project.

The compliance review confirms the project complies with its conditions in relation to operational noise and only the additional properties identified will be considered for further at-house noise treatments.



Sand bridge, looking north

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Why is only at-house noise treatment being considered?

The solutions to reduce road traffic noise are identified and developed during the design phase of the project. These can include:

- noise walls and mounds (at-source treatment)
- low noise pavement (at-source treatment)
- at-house noise treatments.

When assessing noise mitigation measures, we look at what is 'feasible and reasonable' in the circumstances. We take into consideration different factors such as noise benefits, cost, constructability, safety and maintenance requirements.

At-house treatment is only considered where alternate options cannot feasibly and reasonably be satisfied at the source.

At-source treatments were investigated as part of the operational noise review and these have been built.

At-source treatments were also investigated as part of the operational noise compliance review. This review did not identify any additional requirements for at-source treatment, however it did identify additional properties to receive at-house noise treatments.

Contact us

Please contact the project team if you have any questions or would like more information:



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