

Pacific Highway pavement grinding trial

Community survey feedback summary

Transport for NSW | January 2020



Foreword

Transport for NSW (TfNSW) has carried out diamond grinding on three sections of existing concrete pavement along the Pacific Highway upgrade near Valla Beach.

The trial took place after this section of the Pacific Highway upgrade opened to traffic and following a number of community complaints, including a petition from a resident about road noise in the Valla area.

The Minister for Roads, Maritime and Freight and the Director, Pacific Highway visited the residents on 25 August 2017 to discuss their concerns.

Following the site visit, the Minister announced to the community that TfNSW would carry out a trial of diamond grinding on sections of concrete pavement north and south of Valla Beach.

The aim of the diamond grinding trial was to determine if there was a noise benefit from the grinding process. The trial assessed the difference in road noise between a concrete pavement surface and the vehicle tyre by changing the texture of the road surface.

To accurately measure this change before and after grinding of the surface, we needed to measure the noise as close as we could get to the road surface and with limited influence from other types of vehicle noise and other variables such as weather. Carrying out noise monitoring at residences was not required as it would not provide accurate data.

The diamond grinding trial is separate from the Nambucca Heads to Urunga post operational noise report released in 2017. The trial is outside the noise mitigation provided for the project and testing was carried out at this location to see whether the process provided a noise benefit to the nearby area.

In June 2018, residents near the trial location were invited to complete a community survey to record their current perceptions of road traffic noise as a baseline, before the pavement trial.

Roadside noise measurements were taken by an independent noise specialist.

Pavement grinding work on three sections of the Pacific Highway was completed in October 2018 and noise testing carried out soon after.

In April 2019, residents near the trial location were invited to complete another community survey to record their current perceptions of road traffic noise after the pavement grinding work.

A noise report for the diamond grinding trial is available on the project website. The results of the noise study have found the provision of diamond grinding produces comparable noise levels to the traditionally used 'low noise' stone mastic asphalt pavement used on other areas of the Pacific Highway upgrade to reduce noise levels.

Feedback summary

Residents living within a 500 metre radius of the trial area were asked to complete two surveys. The first survey was carried out before the pavement grinding took place and asked questions about their perception of the highway road traffic noise. The second survey asked questions about their perception of the highway road traffic noise after the pavement grinding work was complete. Both surveys were completed by residents within and outside the trial area.

In June 2018, 140 responses were collected with 29 per cent of respondents within the trial area.

The following table summarises these results.

Survey One - June 2018 (before pavement grinding)	
Number of responses	140 survey responses including 37 online and 103 by post
Postal survey response rate	117% (103 surveys received and about 80 distributed)
Age	Most were 55 years of age or older (67%)
Gender	51% male, 49% female
Location	Most survey respondents were in the Valla Beach area or close to the Pacific Highway. Roads and Maritime calculated that 66% of respondents were located in Valla and 21% from Valla Beach, 13 % from other locations 29% of respondents were within a trial area
Highway road traffic noise disturbance	88.5% of the survey respondents had been bothered, disturbed or annoyed by highway road traffic noise in the previous 12 months Of this 37% identified as extremely, 22.5% very, 19.5% moderately and 9.5% slightly 11.5% indicated they were not at all bothered, disturbed or annoyed or didn't hear
Types of highway road traffic noise (multiple options could be selected)	90% of the survey respondents selected specified types of highway road traffic noise that have bothered, disturbed or annoyed them in the past 12 months This included truck engines 60%, tyre noise 56%, general traffic 39% and truck engine brakes 28%
Traffic moving from concrete to low noise pavement	42% identified with noticing a difference, 38% couldn't tell and 20% didn't know
Aspects of home life most affected by highway road traffic noise (multiple options could be selected)	Top three activities that respondents indicated road traffic noise affected home life included sleeping 75%, spending time outdoors at home 67%, and reading, relaxing or other quiet activities 51%
Time of day most affected by highway road traffic noise	Weekday nights, evenings and weekend nights
Weather	80% of survey respondents indicated that the weather affects the traffic noise Wind and rain were the most common responses when asked which weather conditions increase traffic noise (73%, 21%, 20% temperature)

After the pavement grinding was complete, residents living within a 500 metre radius of the trial areas were asked to complete another survey about their perceptions of highway road traffic noise.

In April 2019, 51 responses were collected. This is considerably less than the June 2018 number of responses. 35 per cent of respondents were within the trial area.

The following table summarises the results from second survey.

Survey Two - April 2019 (after pavement grinding)	
Number of responses	51 responses including 30 online and 21 by post
Postal survey response rate	17% (21 hard copy surveys received and about 80 distributed)
Age	Most were 55 years of age or older (56%)
Gender	56% male, 43% female
Location	Most survey respondents were in the Valla Beach area or close to the Pacific Highway, 74% of respondents were located in Valla, 16% from Valla Beach and 10% from other locations (Urunga, Nambucca Heads, Hyland Park) 35% of respondents were within a trial area
Highway road traffic noise disturbance	88% of the survey respondents selected specified types of highway noise and general traffic that had bothered, disturbed or annoyed them in the previous four weeks Of this 37% identified as extremely, 13% very, 23% moderately and 15% slightly 9% indicated that they were not at all bothered, disturbed or annoyed or didn't hear
Types of highway road traffic noise (multiple options could be selected)	98% of the survey respondents selected specified types of highway road traffic noise that had bothered, disturbed or annoyed them in the previous four weeks This included truck engines 54%, tyre noise 44%, general traffic 20% and truck engine brakes 10%
Traffic moving from concrete to low noise pavement	42% identified with noticing a difference, 41% couldn't tell and 14% didn't know (3% did not respond to this question)
Traffic moving from concrete to diamond ground concrete surface	36% identified with noticing a difference, 47% couldn't tell, and 14% didn't know (3% did not respond to this question)
Aspects of home life most affected by highway road traffic noise (multiple options could be selected)	Top three activities that respondents indicated road traffic noise affected home life included sleeping 63%, spending time outdoors at home 34%, and reading, relaxing or other quiet activities 24%
Time of day most affected by highway road traffic noise	Weekday nights and evenings
Weather	86% of survey respondents indicated that the weather affects the traffic noise Wind and rain were the most common responses when asked which weather conditions increase traffic noise (73%, 23%)

For more information

For more information about the Pacific Highway upgrade visit the www.pacifichighway.com.au

A copy of the Pavement Grinding Noise Report can be found on the Nambucca Heads to Urunga web page www.pacifichighway.nsw.gov.au/project-sections/port-macquarie-to-coffs-harbour/nambucca-heads-to-urunga in the document library.