

Hawke's Bay Expressway – Section 1

Managing traffic noise: What you need to know

What planning stage are you in?

We are working on the detailed design between Taradale Road and Links Road. This is Section 1 of the Hawke's Bay Expressway project. This work refines the plans and design, including identifying and planning appropriate noise mitigation measures. Noise modelling is underway to help determine appropriate noise mitigation measures.

What are you planning to manage or reduce traffic noise?

The primary noise mitigation we're considering is the use of high-performance low-noise pavements (LN).

This solution tackles traffic noise directly at the source and is widely recognised as the most effective and proven method for reducing road noise. It offers a substantial improvement over traditional chipseal, delivering significantly quieter road conditions for nearby communities.

Even with additional lanes, we're expecting traffic noise to decrease at most properties along this section of the expressway. This is because of the difference in noise generated by vehicles driving over the existing chipseal compared to low-noise road surfaces.

We expect the vehicle numbers on the road to stay about the same. A key benefit of the additional lanes is to ease congestion during peak times.

What does low-noise asphalt actually do?

Low-noise asphalt reduces the sound of car tyres. This is usually the main source of traffic noise on highways due to the speed they are travelling.

For Section 1, we're proposing to use the low-noise (LN) road surface LN5, which can reduce noise levels by more than 7 decibels compared to standard chipseal. This makes this surface type a superior choice for urban and residential areas.

Are you planning to build noise walls?

We are planning to use low-noise road surfaces rather than noise walls because it offers a more effective, sustainable, and community-friendly solution to traffic noise.

- **Better noise reduction at source:** Low-noise road surfaces help reduce traffic noise right where the tyres meet the road making them a quieter option than coarse chipseal. This is often more effective than noise walls, which mainly reduce noise for the properties located closest to them, where they can block more of the direct sound path. For homes further away, the benefit is smaller because the sound has more ways to travel around the wall.
- **Visual and spatial benefits:** Noise walls can be visually intrusive and require significant space, which is not desirable in an urban, residential setting.
- **Maintenance and cost:** Noise walls are expensive to install and maintain, and their upkeep can be disruptive due to construction noise. In contrast, low-noise road surfaces integrate easily into road upgrades and typically require less long-term maintenance.

What else are you planning to do to reduce traffic noise?

We're planning to only install rumble strips in non-residential areas within Section 1. This will prevent residents being disrupted by the noise of people driving over them, which can be especially noticeable at night.

We're also addressing another common source of road noise - bridge joints. Instead of leaving exposed joints that create a 'thump' when vehicles pass over, we're planning to asphalt over them to create a smoother, quieter transition.



Contact us if you have any questions or require any further information
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Can trees reduce traffic noise?

Trees do not reduce traffic noise unless planted very densely and deeply. As a general rule—if air can pass through, so can sound. When visual barriers like trees are removed, people often perceive noise as louder. This is because they can now see the traffic more clearly, even if the actual noise levels haven't changed. We are looking for opportunities for planting to block the view of road traffic and need to wait for the final design to be complete.

Why don't you start planting now so trees have time to grow?

There are several important reasons why this isn't feasible at this stage:

- **Site access:** The original trees and plants were removed to allow safe site access. Planting now would disrupt construction and risk damaging new vegetation.
- **Final design still in progress:** Landscaping depends on the final layout, including infrastructure and utilities, so we need to wait until the final design is ready.
- **Funding:** Landscaping is part of the main construction budget, so funding for major planting isn't available yet.
- **Soil and site conditions:** Construction changes the land, so planting too early could harm plants or require redoing the work.
- **Timing and maintenance:** Early planting would need ongoing care during construction, which is costly and inefficient. It's better to plant once the site is ready.

Engine braking noise is a concern - how are you addressing it?

We acknowledge that truck engine braking can be disruptive. NZTA has engine braking guidelines in place and is working with the industry to address unnecessary engine-braking

noise. Excessive engine braking can also be addressed through enforcement.

There is an existing no engine braking sign on the expressway near Kennedy Road that has been temporarily removed to enable construction. This will be reinstated as part of the project.

Excessive engine braking noise can be addressed through enforcement. Police, NZTA officers, or local council officers have the authority to enforce the relevant legislation. However, the preferred approach is to engage directly with the responsible driver or company first. If the issue continues, regulatory action may be taken.

Why are you undertaking noise tests along Section 1?

We use expert noise modelling to guide our design and noise mitigation plans. Our approach follows independent standards and builds on lessons from past projects.

We measured noise levels at selected properties before vegetation was removed and did additional tests in May 2025 to understand the existing road traffic noise. This helps us verify the noise modelling. We measure noise to make sure our predictions are accurate - so we don't underdo or overdo noise mitigation. It's about getting the balance right: enough protection where it's needed, without overspending where it's not.

It also helps us understand the change in noise level from the current road this year to the proposed road in the future.

How were these properties and locations selected?

We chose noise testing locations close to the existing road, where nothing - like barriers, hills, fences, or trees - blocks the sound between the road and the measuring equipment. This way, we only measure noise from that road, and not from nearby streets.

We avoided places with other loud noise sources, like industrial areas, schools, parks, or commercial zones, so the results wouldn't be affected.

By carefully choosing where we measure, we can be confident the noise levels we record are only from the existing state highway—not from other sources. This helps us check that our noise model is accurate and gives reliable results.

Why are you not measuring indoor noise levels?

The standards we are working to - which align with industry best-practice - require noise to be measured and predicted at the façade of any building.

The noise tests allow us to see if the predictions are accurate and to understand how the current outdoor noise compares to what is expected for a future point in time.

Indoor noise levels would only be considered if we were looking at building-specific mitigation options. Noise mitigation at buildings is the least preferred mitigation method as it only helps indoors and for one property. Low-noise surfaces on the other hand reduces noise externally and benefit many homes and outdoor areas.

Are you considering any noise mitigation options for nearby properties, such as double glazing?

The best form of noise mitigation is at or near the road. Our planned noise mitigation for this project is low-noise road surfaces. This reduces noise at the source, to help both outside and inside homes. We expect this will be very effective in reducing noise levels for residents or similar.

Providing building upgrades like double-glazing, ventilation, or façade upgrades only helps a single property. It also only controls noise within buildings, leaving outdoor areas still exposed to high levels of road-traffic noise. That's why it's the least preferred option for mitigating noise.