

## CONSTRUCTION NOISE, VIBRATION AND DUST

Building roads and bridges will inevitably generate some noise and vibration at times for our closest neighbours and communities. The key is how well we manage that noise and vibration – to keep them within acceptable levels.

Our Construction Management Plan sets levels for noise and vibration, and spells out how sites will be managed to prevent dust. All these effects are monitored so we comply with resource consents issued by local Councils.

### MANAGING NOISE



Motorscrapers will be used on the project. While they may generate more noise than excavators and trucks, they work faster so the noise is for shorter periods.

We have set limits for noise and we monitor noise levels using equipment set up in neighbouring properties. The limits are measured in decibels and the limits vary, depending on the day of the week and time of day.

This ability to measure is critical because different people have different perceptions about what level of noise is acceptable and what is not.

Minimising construction noise begins at the source. Some of our noisiest earthmoving machines are fitted with noise screening equipment that will reduce the level of noise reaching neighbouring properties.

Generally, we will keep noise levels within our limits by managing which machines are working in any given area. However, at times we may need to carry out work that exceeds those levels for a short period of time, e.g. bridge piling. In those cases, we will contact our neighbours and discuss noise levels and timeframes before starting work.

### MANAGING VIBRATION



Ground improvement and piling activity generate vibration near bridge construction sites, along with pavement machines such as vibrating rollers.

Vibration can be caused by bridge piling or by large earthmoving machines such as trucks or vibrating rollers.

On this project, the homes and properties located nearest to bridge construction sites are most likely to be affected. Vibration levels will depend on the piling methods used on each bridge.

While vibration can be unsettling, it is unusual for it to cause physical damage to buildings or properties.

However, to provide peace of mind for those households located near our construction zones, pre-construction surveys will be carried out on all homes located closest to the alignment, at the project's cost. Further surveys will be carried out after construction at the owner's request. These 'before and after' surveys will allow home owners and the project to accurately assess any effects on properties and buildings.

### MANAGING WIND-BLOWN DUST



Water carts will be used to dampen down potential dust hotspots.

The keys to managing dust generation are planning and prevention.

Our team monitors a range of online weather forecasts to collect data on wind direction and strength, to accurately predict the risk of windblown dust.

We know that some exposed silts on this project are prone to dry out and generate dust, so we will be monitoring those areas closely.

To prevent dust generation, all earth slopes, stockpiles and other exposed areas will be topsoiled or stabilised as soon as possible using mulch, straw, hydroseeding or sprayed polymer. Polymer acts like glue to form a protective crust to hold soil or sand in place.

Water trucks will take water from ponds on site and spray on roads, tracks and flat areas to suppress dust. When dust is present, they will operate on working days and non-working days to suppress it.

If dust is being generated by machines or vehicles, the project may halt some works or restrict vehicle speeds.

**If you have concerns about noise levels, vibration or dust please contact us immediately.**



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