



Tonkin Gap Project and Associated Works



Frequently Asked Questions - Noise Walls

General

Q. Why do I need a noise wall behind my house?

A: Main Roads WA is generally required to meet noise limit regulations set by the Western Australian Planning Commission (WAPC), and that includes building noise walls in areas where transport infrastructure will potentially increase the noise beyond acceptable limits.

The WAPC has prepared a 'State Planning Policy 5.4, Road and Rail Transport Noise and Freight Considerations in Land Use Planning', which explains the intended use of land for road and rail corridors in WA. As many cities grow with increased volumes of traffic and freight-related traffic to Perth's newer urban and residential regions, community members are also more aware of amenity and quality-of-life issues.

Growing community interest has led to transport noise becoming increasingly more topical in the planning of land use.

Sleep, relaxation and the ability to hold conversations can be adversely affected by higher than ambient levels of noise. Numerous studies have also found long-term exposure to noise can have serious health implications, as well as learning and development impacts on children.

With those considerations in mind, noise criteria have been developed to ensure the long-term amenity of communities and to protect people from unreasonable levels of transport noise. The policy also addresses best locations for freight corridors, in keeping with healthy noise levels for nearby communities.

Tonkin Gap Alliance will design and build noise walls to reduce the effect of noise levels from expected traffic levels and generally meet noise level limits required by the WAPC Road and Rail Noise Policy (State Planning Policy 5.4).

Q: Do I get a say on the location of the noise wall?

A: Noise wall location is decided by the level of noise mitigation that is required, and therefore individuals are unable to determine the position of these.

Some noise walls have been designed to be close behind some property fence lines, and some at the road boundary, to ensure noise requirements are reached.

Noise walls are an effective method of ensuring anticipated noise levels are moderated for the long-term well-being of all residents close to the road.

Q: How does noise modelling work?

A: Noise modelling considers existing and future traffic volumes and speed, the road gradient and surface, height and location of nearby buildings and how natural and constructed noise walls reduce the effects of noise.

Noise measurement devices are positioned in various locations along the Tonkin Gap section to measure the ambient noise, across a specified timeframe. The devices are typically in place for up to a week to calculate the average day and night noise levels. Data collected from the devices builds a picture of the noise levels in the area and it's then used to construct a noise model of the existing road network. It also enables us to look at predicted noise levels against measured noise levels. The data collected is used to calculate the urban traffic demand up to the year 2041.

Q: How loud will the new road be?

A: The noise walls will ensure the ambient or 'outside noise' heard from inside a residence will generally not be more than 60 decibels between 6am and 10pm or 55 decibels between 10pm and 6am.

In some positions along the Highway, traffic will be heavier than in other areas. With this in mind, noise levels may vary along the road – possibly at intersections or at different times of the day. Regardless

of road use, all noise will be managed to meet the limits set.

Q: What will it sound like in my house with the new road?

A: In most cases, you will notice an improvement in noise levels with the walls.

Using outside noise limits as examples, the ambient traffic noise of 55 decibels can be compared to the noise made by a refrigerator. Sixty decibels can be compared to the noise made by an air-conditioner.

By positioning noise walls between the road and residential properties, sound waves coming from the road are forced to bend around the edges of the walls, which reduce direct sound pressure. In a typical situation, noise walls can reduce traffic noise by about 5 to 10 decibels.

Q: Will you be building noise walls on the Redcliffe Bridge?

A: We are pleased to let you know that after completing our investigation into constructing noise walls on the Redcliffe Bridge, we will be constructing noise walls on the east and west sides of the bridge.

We are still working through the design of the noise walls and we will share more information as it becomes available. In the meantime, [click here](#) to read our Redcliffe Bridge construction fact sheet.

Design

Q. What is the design of the noise walls?

A. All noise walls will be made of materials with noise-buffering properties. The majority of noise walls for the Tonkin Gap Project will be made of concrete panels and steel posts. Some noise walls will have tinted pure acrylic sheets along the top section to allow for optimal sunlight to shine through, while still ensuring the noise limit criteria are met.

The residential side of the wall will be painted, and the roadside will have a pattern or design consistent with the noise walls north and south of the Tonkin Gap section.

Q: How do you decide on the heights of the noise walls?

A: The heights of noise walls will vary between 3m and 5m, depending on existing and predicted noise levels in the area and how close they are to the road.

Noise modelling data feeds into the height and design of noise walls based on the noise that needs to be reduced, the distance between residential properties, and the Highway, and location of the properties in relation to the new road levels.

Q: How close will the noise wall be to my existing back fence?

Noise wall footings will be as close as practical to the existing property boundary fence. Usually this is between 300mm and 500mm from the existing boundary. No part of the noise wall, including the footings, will be on your property.

Q: Do I get to choose the colour of the wall facing my property?

A: We will consult with you and your neighbours on the colour for the property-facing side of the noise wall. Our urban designer has selected three colour options which reflect the natural landscape and predominant fencing colours in the area.

Q: The noise wall is not on my property boundary, but I can see it from the front of my house. Do I get a say in the abutment colour?

A: Any wall that is not on a property boundary will be decided by our Urban and Landscape Designer as part of the overall design. This will ensure aesthetic continuity across the project.

Q: Do I get to choose the colour of the steel posts or acrylic?

A: No. This will be selected by the Urban and Landscape Designer.

Q. Will the noise wall change the light in my back yard?

A. Noise walls will not have an adverse impact on light quality and availability. The tinted panels will be made

from acrylic. The acrylic sheets are completely straight without any concave or convex bends – this means they will not concentrate sun rays. The sheets of acrylic are 20mm thick and 3.4m wide. They absorb UV rays, meaning they provide protection from noise without reducing sunlight.

Similarly, they do not reflect heat from the sun which means heat is still available to pass through during winter. Building the top section from acrylic will ensure light levels are unaffected while still ensuring noise reduction requirements are met.

Q: What are you doing to ensure birds don't strike the acrylic panels?

A: We are aware that this a concern. We will be installing tinted acrylic panels which will minimise the potential for bird strikes.

Construction

Q: When will construction start?

A: Where possible, noise walls will be installed early in the construction schedule to limit impacts of the work.

We anticipate noise wall construction to commence mid-2021. It will be completed in stages which is dependent on the construction schedule.

Q: How long will the new wall take to construct?

A: The construction timeline will depend on the location and noise wall type. It will typically take between four and eight weeks. The concrete walls will be built first, and then the team will come back later to install the tinted acrylic panels and do the painting.

Q: Will you need to access my property?

A: More than likely. If access to your property is required, we will contact you first to request access. Residents will be asked to ensure animals are secured before we access the property.

Q: Do I need to remove structures and garden beds from against my back fence before construction starts?

A: If your property has trees, branches or structures hanging into the road reserve, these should be cleared before noise wall installation begins. You are welcome to clear them, or we will undertake the work in consultation with you. If you have concerns or questions about this process, please email or phone us as soon as possible.

Q: Will you permanently remove my back fence?

A: Yes, it is recommended your back fence is removed once the noise wall is constructed. This means the noise wall will act as your new boundary perimeter, however, will remain Main Roads WA land. There may be a period where your back fence will be replaced with temporary fencing. We will extend your side-boundary fence to meet with the noise wall on both sides.

When you have the existing back fence removed, you can choose to keep the material on your property, or we will remove it after it has been dismantled.

Q: When will be back fence be removed if it cannot remain?

A: If the fence can be left in place during construction it will remain until the new noise wall panels are installed. However, some fences may need to be removed to allow the new noise wall to be constructed.

If your back fence is required to be removed before construction of the noise walls, we will install a temporary fence. This will then be removed once the noise wall is constructed.

Q: What do I do if I have a large dog that might knock over the temporary fencing?

A: We want to ensure that your animals are safe. Please contact the team at Tonkin Gap to discuss options.

Q: Will my existing side fence be extended to the new noise wall?

A: Yes. We will extend your existing side fence to the noise wall with the same material.

Q: My side fence is in poor condition. Will you replace the whole fence?

A: No. Only the section that needs extending will be installed.

Q: What happens if you damage my property while you are constructing the noise wall?

A: All properties that are getting a noise wall have been offered a property condition survey.

A property condition survey documents the state of your property's condition. It is important you have this survey for your own protection in the event of construction damage to your property. It will ensure you have an accurate record of the current condition of your property before construction starts. We will provide you with a copy of the report, which can be used for future reference. You are strongly encouraged to take up the offer of a survey to ensure accurate documentation is recorded. There will be no cost to you.

Q: Will you reinstate my backyard once construction is complete?

A: Any disturbed areas will be filled in and levelled with clean sand.

Q: What construction impacts will I notice while the wall is being built?

A: During construction there will be some noise and disturbance. However, works will be completed during the day. Our crew will, at times, be able to see over your fence during construction. We will notify residents in advance before we start construction of the noise walls.

Q. What can I do with the noise wall? Can I grow plants on it/attach things to it/build a structure against it?

A. The noise walls have been designed as a barrier against traffic noise and to provide privacy screening for residents. They have not been designed to support the weight of structures or to bear loads. For that reason, it is not recommended that items or structures are attached to the noise walls.

Vegetation can be planted to screen or cover the wall; however, large tree varieties are not preferred due to their potential impact on the wall over time.

Q: Who is responsible for maintaining the noise wall?

A: Main Roads WA is responsible for the maintenance of the noise wall. This includes removing any graffiti if required.

Q: Who owns the land in between my fence and the new noise wall?

A: This remains Main Roads WA land.

Further information

If you have any concerns or questions or wish to subscribe to updates, please contact us.

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