



Transport for NSW

# Sydney Gateway

Tempe noise walls | December 2021

Sydney Gateway is a new, toll-free connection from St Peters Interchange to the International and Domestic Terminals. It is being delivered to improve travel times to Sydney Airport, the M5 and Eastern Distributor.

## Tempe Lands construction work

We held a LiveStream event in October to discuss our work in Tempe Lands. Since then work has been progressing well with the majority of our earthworks completed in the area. We've already installed 80 concrete stabilising columns to help build the foundations of the new road and work is well underway with the construction of our temporary noise mound. We have built 300m of the temporary noise mound and started the earth works for the permanent noise wall too.

This update provides further information on both the temporary noise mound and permanent noise wall in Tempe Lands to help answer your questions.

If you would like to organise a meeting with the team, please contact us via email or phone using the details on the back page of this update.



Artist impression of the permanent noise wall with planted noise mound

## Tempe Lands temporary noise mound

We are currently building the temporary noise mound using topsoil from the project. When finished it will be 560m in length, 4m wide and 5m high near the wetlands and 2.4m high by IKEA.

You can see the location of the temporary noise mound on the map provided.

Building a noise mound has less impact on residents than the original wall option. It is less noisy to install and we will reuse the soil for our landscaping and planting work. This makes it a more sustainable option than a wall made with post and panels that would need to be removed and most likely disposed of in the future.

The mound has the same noise treatment as the wall option and we'll seal and grass seed it, making it into a natural grass verge to fit better with the wetlands.

The mound will stay in place for the majority of the project duration and will only be removed when landscaping starts on the project. This signals the end of major construction works in Tempe Lands.

The temporary noise mound ends at our construction compound. There is no room to continue the noise mound further west as the 4m wide mound would block access to the work site. Our site compound west of the noise mound, however, provides an added noise barrier to our work.

## Where construction is happening

There are no construction activities happening in the small area without a barrier near the properties in Tempe. Our closest work activities are 250m away and unlikely to create significant noise.

The land features also helps to reduce our construction noise. With the work zone and temporary noise mound being above Tempe residents, they do not have line of sight, and are therefore protected from construction noise.

The majority of our construction work is east of Tempe Wetlands and is protected by the noise barrier. We are monitoring noise levels throughout construction during our day and night shifts to ensure we are within our approved noise levels.



Start of construction of the temporary noise mound



Noise monitoring on South Street during our day shift work in Tempe Lands.

## How we monitor construction noise

We use a noise model to predict our construction noise levels for Tempe residents for all our work activities. We have modelled a worst-case scenario for work taking place in Tempe Lands and the predicted levels are from 1 - 11dBA (decibels) increase from the everyday background noise.

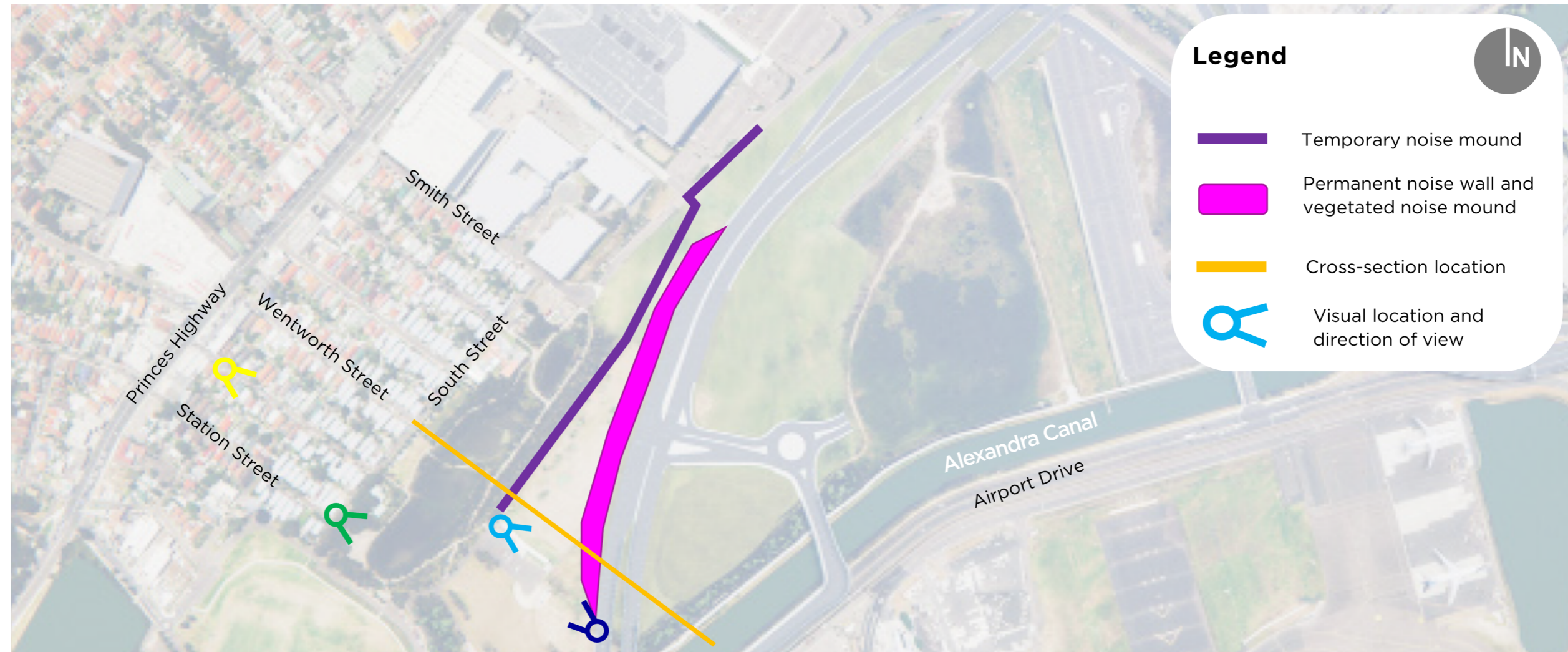
Over the past 6 months we have been monitoring noise from our various construction activities and all noise levels have been below our approved noise levels. The highest noise levels recorded have come from aircraft taking off and landing.

The table below shows construction noise levels during a variety of work activities in the Tempe Lands area. We carry out noise monitoring at the closest residential property to identify our noise impact. Most of our work activities are over 100m from Tempe residents, helping to keep our construction noise levels down to reduce noise levels.

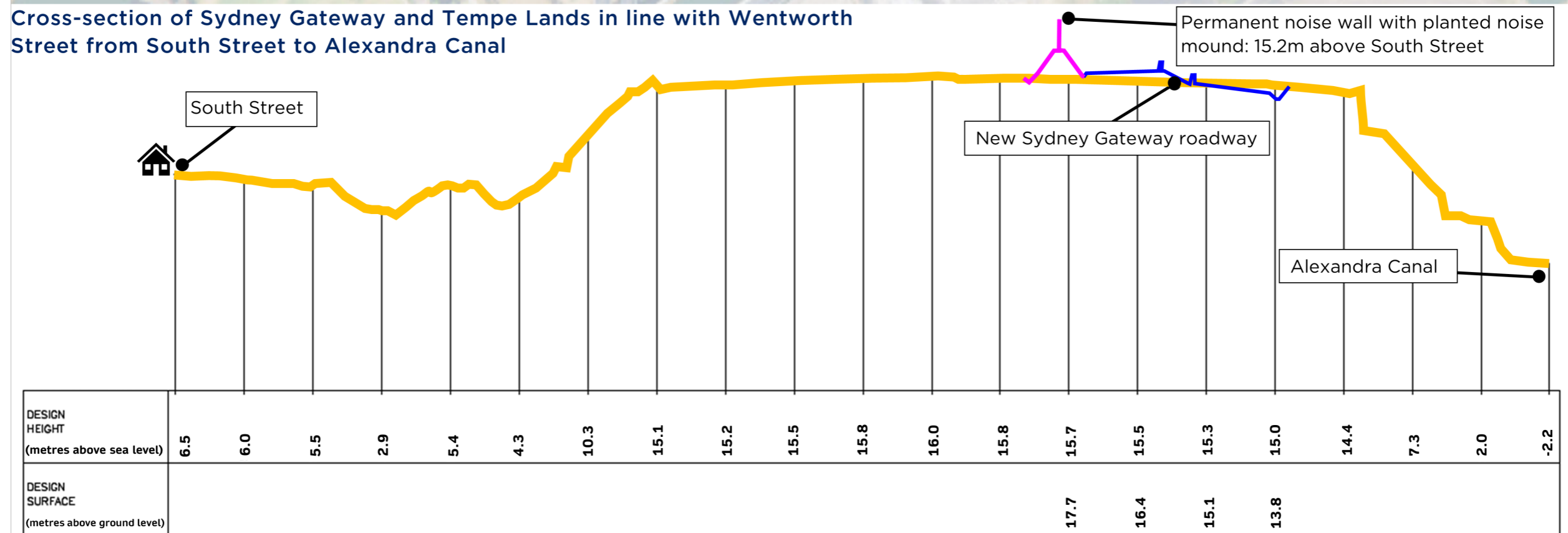
The table also shows the highest noise impact recorded during these activities.

Work activity	Day / night work	Noise treatment in place	Construction noise levels	Activity with highest noise impact
Removing a concrete slab with excavator and hammer	Night work	Noise mats reducing noise levels by 10dBA	63dBA	Aircraft - 81dBA
Removing road surface on Smith Street with excavator and hammer	Day work	Noise mats reducing noise levels by 10dBA	work was inaudible with background noise of cars and factories	Truck leaving factory - 71dBA
Earth works in Tempe Lands using an excavator and trucks	Day work	Temporary noise mound reducing noise levels by 5-10dBA	50dBA	Aircraft - 76.8dBA

# Location of temporary noise mound and permanent noise wall with vegetated noise mound



Cross-section of Sydney Gateway and Tempe Lands in line with Wentworth Street from South Street to Alexandra Canal



## Visuals of Sydney Gateway

The images below are visuals from our 3D model. They show the views from the areas located on our map. The images are indicative only and may change through final design and construction.



View of Tempe Lands from Wentworth Street. Sydney Gateway not visible.



View of Tempe Lands from South Street and Station Street. Sydney Gateway not visible.



View of Sydney Gateway from the edge of Tempe Wetlands.



View of Tempe Lands from edge of the twin arched bridge looking back towards the Tempe Wetlands.

## Tempe Lands permanent noise wall

The permanent noise wall is located next to the new road to provide the greatest noise reduction. It is 240m long and 5m high. The noise wall is made up of two sections which overlap to create a single solid barrier to the traffic noise. The two sections allow pedestrian and cycle access to Link Road and the International Terminals. The access to the pedestrian crossing between the two noise wall sections, does not reduce the efficiency of the noise wall. There is no increase of noise to residential properties through this access due to a 20m long overlap in the wall sections .

The permanent noise wall has a planted noise mound and post and panel noise wall. The greenery was requested by the community during our Environmental Impact Statement (EIS) consultation and we updated the design of the noise wall to respond to this feedback. The permanent noise wall will reduce the traffic noise by at least 5-10dBA

You can see the location of the permanent noise wall on the map provided.

We used noise modelling to determine the location of the permanent noise wall. The modelling considers the lay of the land, elevation changes (including the road dipping down over the hill to meet Airport Drive) and building and vegetation buffers, when it predicts the noise levels of the road when it opens to traffic in late 2024.

The noise wall finishes just before the twin arch bridge connections to the International Terminals. At this point the road slopes down to connect to the existing Airport Drive. The bridge connection being dug into the landscape means the hill itself provides a natural noise barrier, protecting the Tempe residents from the road noise. With this natural barrier in place there is no benefit to continue the wall further south. The new roadway is also around 300m away from the Tempe residents at this point and the noise model shows a noise wall wouldn't noticeably reduce noise levels.



Artist impression of the Link Road connection through the permanent noise wall

## Sydney Gateway Operational Noise and Vibration Report

The Sydney Gateway Operational Noise and Vibration Report (ONVR) is developed as part of the final design to predict noise and vibration levels for the project when it opens to traffic in late 2024.

The report uses modelling to assess airborne noise and vibration and ground borne noise and vibration.

The ONVR is available to view on the project website [nswroads.work/onvr](https://nswroads.work/onvr).



Artist impression of aerial view of Sydney Gateway from Princes Highway

## Noise when Sydney Gateway is open to traffic

The noise model factors in the general background noise expected from the new road when it is open. The model predicts that Tempe residents will experience noise levels between 56dBA and 73dBA, compared with the current noise levels in the area of 51dBA and 76dBA. With increases at the quietest points by just 5dBA, the permanent noise wall is helping to keep any noise level increases to a minimum.

When the road opens in late 2024, we will carry out noise monitoring within Tempe to check our modelling is correct. If it isn't as predicted, we will identify what additional noise treatment is required and install this.



### Holiday shutdown period

From **Friday 24 December** the Sydney Gateway project will stop work for the holiday period and restart work on **Monday 10 January 2022**.

We wish you and your families a safe and happy festive season and sincerely thank you for your patience while we've been working this year.

## Contact us

If you have any questions or would like to organise a meeting with the team please contact us:

-  1800 654 446
-  [sydneygateway@jhs.com.au](mailto:sydneygateway@jhs.com.au)
-  [nswroads.work/sydneygateway](https://nswroads.work/sydneygateway)



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