

Serpentine Crescent - Gap in Noise Wall and proposed link road and tunnel intersection

I am a resident of Serpentine Crescent where currently, there is a 40 metre gap between the noise walls at the creek where noise already funnels into Serpentine Crescent along the creek impacting residents. A major piece of infrastructure is now being proposed which will further amplify the noise and light coming through this gap.

Between 2015-18, three noise walls were constructed (Hope St. Dudley St. and Boronia St) to protect residents from noise levels and light pollution from the existing traffic flow on Burnt Creek Deviation (BCD) (*See Annex 1 for more details*). The combined impact of all three of these walls have addressed some residents concerns, with the exception of Serpentine Crescent which has been overlooked and indeed seen large increases in noise levels and light pollution.

The southern section of Serpentine Crescent is particularly exposed to noise and light through the gap along the creek created by the 3 walls. The Hope St. wall angles away from the source of the noise by following the northbound direction of Hope St and not the direction of the BCD which acts as an acoustic funnelling channel where noise flows through the gap into Serpentine Crescent along the creek. The Dudley St. wall reflects direct and indirect noise which would otherwise disperse eastwards, back westwards which further amplifies the noise funnelled through the gap into Serpentine Crescent along the creek.

The latest proposed location of the link road between Sydney road would exacerbate an already adversely affected area. I understand that the location of this link road and tunnel entrance went through a number of changes with the preferred option now shown below in Figure 1. There are many benefits to this move which I do support including reduced costs of tunnelling, reduced staging and night-works on the BCD. This plan removes the requirement to remove and replace the Kitchener St Bridge. There is less impact on the creek and no requirement to divert creek, and a removal of the requirement to sever and reconnect major utilities around the creek area. I support the logic and the initiatives for a more beneficial outcome.

However, what appears to have been overlooked is the impact on the area near the creek and the residents of Serpentine Crescent. The current 40M gap is located along the only stretch of unprotected residents on the 1.5Km long BCD where the Beaches Link Environmental Impact Statement (EIS) now proposes the following works:

- **construction of a new access road between BCD and Sydney road to provide access to the tunnel** (increased traffic from Manly-City – see Figure 5)
- **a new tunnel entrance on BCD** (increased traffic from Manly Vale – City – see Figure 5)
- **a widening of the current BCD from 6 lanes to 12 lanes** (to facilitate above – see Figure 3 and 4)
- **motorway facilities** (heavy plant and machinery - see Figure 3 and 4)
- **exhaust stack** (air pollution - see Figure 3 and 4)

The latest proposal indicates a widening of the BCD from 6 lanes to 12 lanes to facilitate the tunnel entrance with an intersection of a link road to bring traffic from Sydney Rd. This will essentially bring the volume of traffic which currently passes the intersection of Sydney Road and BCD back to the unprotected creek area and entrance to the tunnel.

The additional noise generated at the intersection of the link road, Burnt Creek Deviator itself plus it's proposed widened access roads to the tunnel, combined, would make this location the highest noise zone area of the Balgowlah Connection to the Beaches Link. This is the only unprotected residential area along the BCD. The location also has a detrimental impact on the visual experience which will draw increased east-west traffic light directly into the line of vision of properties, and is particularly discomforting at night.

Figure 1: Proposed construction will be at the point where there is a 40M gap between the Noise Walls feeding into Serpentine Cres



Figure 2: Link Road Noise and Light Impact - View of Gap from Burnt Creek Deviation

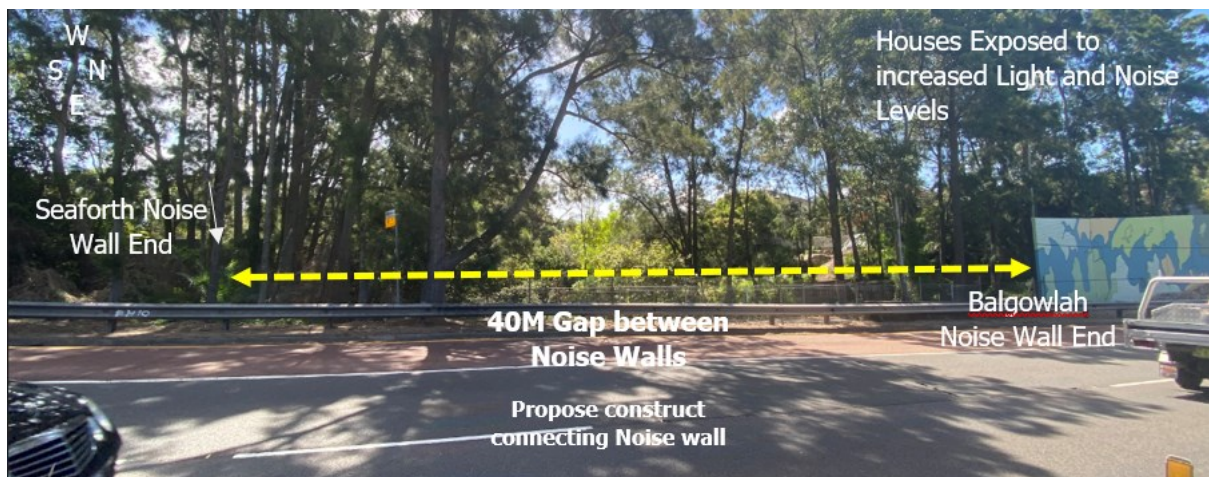


Figure 3: Taken from RMS website with amendments showing proposed outcome within 100M of Serpentine Crescent

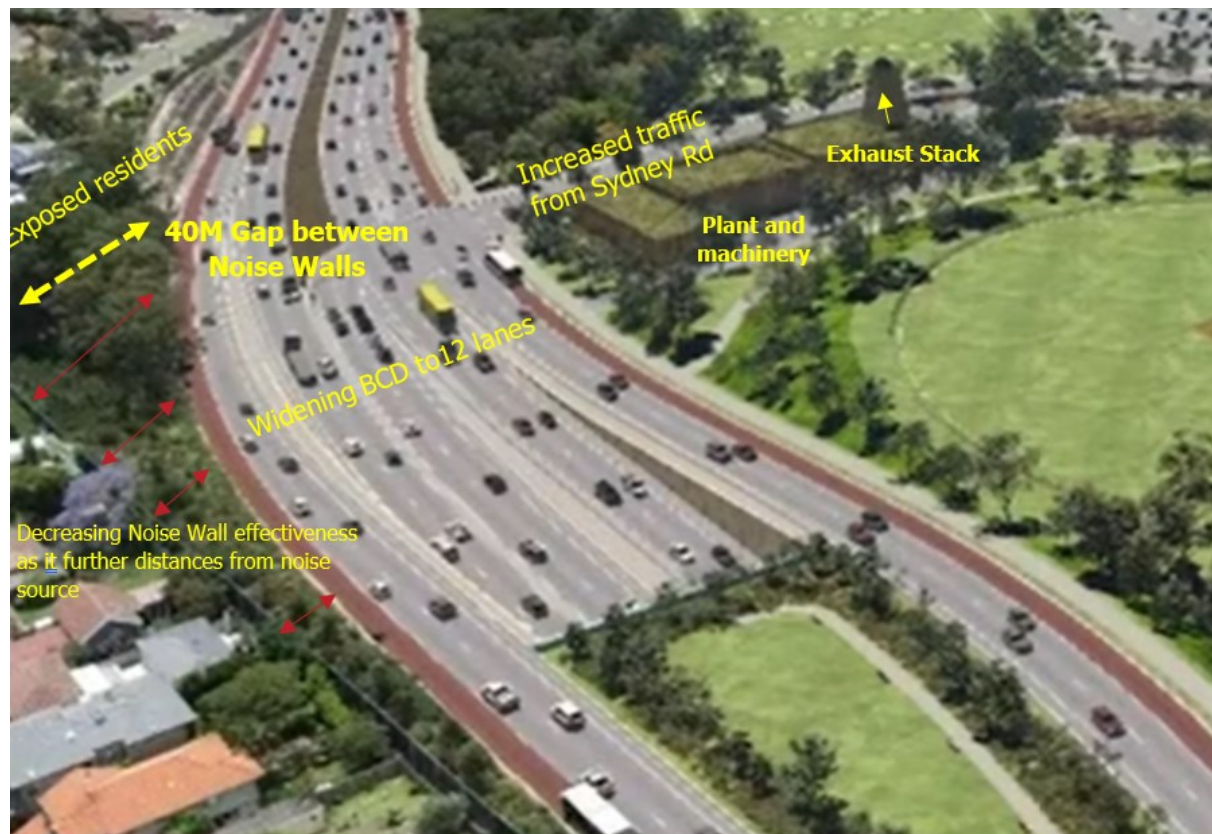


Figure 4: EIS showing 40M gap and impact of works near this 40M gap



Figure 5: Outtake from EIS showing increased traffic forecast at creek area where gap in noise wall exists

Balgowlah – End state traffic

- Tunnel portals would be located on Burnt Bridge Creek Deviation, north of Sydney Road.
- Traffic forecasting indicates a significant reduction in traffic demand at the critical Manly Road | Sydney Road intersection, due to traffic transferring to Beaches Link:
 - 35-40% reduction in traffic south of the Burnt Bridge Creek Deviation portals
 - 30-35% reduction in traffic on Sydney Road west of the Beaches Link access road.

This means 65-70% of traffic on Sydney road will move through link road
- As a result of Beaches Link:
 - Traffic demand is forecast to increase by up to 15%.
 - Average travel speeds are expected to improve by around 50-75%
 - Bus travel speeds would also improve as a result of reduced general traffic congestion

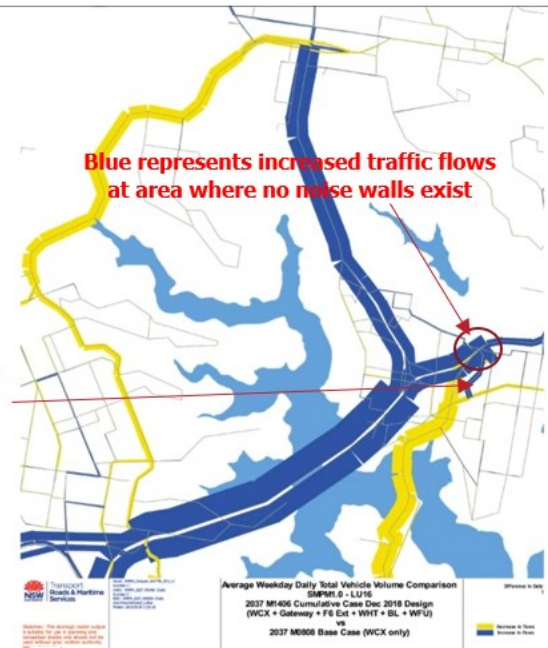


Figure 6: Link Road Noise and Light Impact - View of Gap from Balgowlah Noise Wall End



It is normal for noise walls to be constructed to protect properties close to tunnels, tunnel entrances, major intersections and equipment plants and Motorway facilities, and since the properties on Serpentine Crescent are within 100 metres of this construction zone, I would have expected for this to have already been proposed. However, I have not seen any indication of noise mitigation against the proposed construction of a tunnel and intersection.

Based on the reasons above and facilitated by the savings made by relocation the link road and tunnel entrance, I request as a minimum, the construction of a noise wall to minimise noise levels and light pollution for the residents of Serpentine Crescent.

Regards,

Ronan Maguire

35 Serpentine Crescent North Balgowlah

0404 198 760

ronanmaguire@hotmail.com

Annex 1: A brief history of the Noise Wall Gap:

In 2015 the Seaforth Noise wall behind Hope St was constructed which ended 20M short, southside of the creek itself. A well designed noise wall should run parallel to the road as close as possible to the noise source, minimising noise dispersion. However, the wall does not run parallel to the BCD, but runs parallel to the rear of Hope street boundaries. Being northside of the creek, Serpentine Crescent is exposed by the gap created and compounded by the angle of the wall which contributes to the increased acoustic funnelling which flows through that gap. Concerns were raised as to why a gap was left or why the wall did not cross the creek, or indeed why the wall seemed to angle away from the source of the noise by following the direction of Hope St and not the direction of the BCD. The response provided by RMS at the time was that these works were approved by the then Manly council whilst northside of the creek was in the Warringah council area, which at that point, had no involvement in the project.

In 2016 another noise wall (the North Balgowlah noise wall) was constructed on BCD between Boronia St to Serpentine Crescent. As the Manly, Pittwater and Warringah Councils had merged, the expectation was that this wall would plug the gap and connect both noise walls. However instead, this wall ends 20M north of the creek thereby leaving a 40M gap between noise walls which further amplified the pre-existing noise funnelled into the gap. Residents could not find a reasonable response as to why the gap between both noise walls was not plugged.

In 2018 another noise wall (Dudley St noise wall) was constructed. This wall further compounded the gap problem along the creek by reflecting back the direct and indirect noise which would otherwise have been dispersed eastwards, back westwards which further amplified the noise funnelled into the gap.

In mid-2016 acoustics engineers set up acoustic reading machines on various properties in Serpentine Crescent (including mine) for a month to baseline acoustic readings. Has there been any calibration of noise levels on how the additional noise generated by the location of the intersection of the link road between Sydney road and the Burnt Creek Deviator will now impact Serpentine Crescent?