



## Waterside Residents Association Noise Abatement Wall Submission

### To WA Main Roads & Georgiou Group

11/01/24

#### **The Waterside Residents Association**

The Waterside Residents Association (WRA) was formed in 1990 and has been serving the community continuously since that time.

We are pleased to be involved in the Mandurah Bridge Duplication Project (the Project) and have created a sub-committee to liaise between the residents, the Department of Main Roads (the Department) and its contractor for the Project, Georgiou Group (Georgiou). We are undertaking this to provide a single point of contact group for residents and broader Mandurah Community who enjoy the amenity of the Waterside area and to reduce the burden on the Department and Georgiou of managing many requests by concerned residents.

We trust that the Department and Georgiou will embrace the opportunity to engage with us and allow us to support the passage of information and reduce current anxiety among residents and the likelihood of misinformation being spread around the community, while enhancing the opportunity for all stakeholders to be kept fully informed.

We are all fully aware that this bridge duplication is a major step forward for Mandurah and are pleased to see it's finally progressing. We trust you appreciate that bringing affected residents and the Community along with the Project, ensures it is seen as a success, and not as a Project with a legacy for reducing amenity and disregarding the interests of the local Community.

We are the first of 4 Communities affected by these works and it has been upsetting for some of our residents to have been advised that clearing of bush would be "minimal", and to then be faced with complete removal of bush down to bare earth for the majority of the length of Waterside Dr.

Further, we have been verbally advised that our written request for a temporary, tall screened fence along the same area, to partially shield residents and the canals from peak winds, dust, fumes and debris is likely to be denied for the duration of this 2 year Project.

As you may know from the Department, the WRA provided a written submission before the contract was awarded to Georgiou. We are providing the noise report from this additional submission, trusting that early reinforcement of these issues before the start of construction and completion of detailed design will improve the Project legacy, improve community amenity, and enable the Project team to restore resident relations and assist the remaining 3 communities receive an improved level of engagement.



## Noise Abatement

The noise abatement concern is not a new issue. The WRA has been advocating for improved noise abatement for the whole length of Waterside Drive from the bridge to the Leslie St. lights since 2002 when a third lane was being proposed for the current bridge. We applied again to the Department of Main Roads in Feb 2022, at which time we were advised that this would be considered during the bridge duplication Project.

We are aware that noise level assessments have been carried out by the Department and that, even with the vegetation barrier, they were already beyond acceptable levels as described under State Planning Policy 5.4 (SPP 5.4). WRA also contracted its own noise measurement survey in Feb 2022 which confirms these findings, and which was shared with the Department at the time.

We have made a number of requests for copies of the noise level assessments the Department has commissioned, and it is regrettable that, during planning and now construction of the Mandurah Bridge Duplication Project, the Department has declined to share the professional noise assessment and noise management plan, as set out in the State Road and Rail Noise Policy.

In the absence of that information, members of the Waterside Residents Association sub-committee on Sustainable Amenity have applied the State policy and provide the following insights for Main Roads to consider and to meet State noise targets for this Project.

We submit the highlighted relevant extracts of the WA State Planning Policy & Guidelines on which our insights are based as an attachment to this document.

### Noise and noise targets

- Target outdoor noise - 55 db by day
- Current noise - 62 db
- Future noise (3 lanes) - 64 db

As stated in the WRA Barclay Engineering professional noise report of Feb 2022, with the vegetation screen in place, shows **actual average measurements** of 58.8dBA, 63.6dBA & 62.4dBA (the first being a weekday measurement and the latter two being measurements on the weekends).

These measurements confirm that Waterside Dr residents have been enduring noise levels up to 7db over the noise targets of the SPP5.4 since, at least, 2022.

It should also be noted that weekend noise levels are higher due to the increased volume of continuous traffic movement throughout the day, which raises the average over the weekday average where the higher noise levels are mainly centred over the morning and evening rush hours.

In addition, it is projected that the Mandurah population will increase by approximately 40% over the next one to two decades, which will increase traffic noise levels on Mandurah Rd as it is the central access route for the City.



## Environmental Screening

Removal of ~8,000 m<sup>2</sup> of mature trees (~15m deep x 600m) has increased road noise and destroyed irreplaceable amenity (wind-break, native birds and ambience) to the residents of the Waterside Canals development. This is ~1/3 of the total area yet to be cleared, affecting three other communities on the approaches to each bridge. It is also ~1/3 the size of the Optus Stadium playing field or that of the MCG. Would a reasonable person, reviewing the information provided by the Department and Georgiou to date consider this to be “minimal” clearing, described in the Environmental Plan and other documents available to the Public?

Following a request for a revised noise level assessments after the removal of this vegetation, the WRA sub-committee was advised that Project engineers considered a current assessment would not be required as vegetation has “minimal to no effect on noise abatement”. Scientific research however shows that vegetation, of the right height and density, can reduce noise levels by up to 6db.

Please see the following articles as examples of the literature on this:

<https://www.sciencedirect.com/science/article/abs/pii/S0003682X9800019X>

<https://www.researchgate.net/publication/259459894> The effects of vegetation on reducing traffic noise from a city ring road

## Noise Management Plan

By professionally applying WA road noise Policy, a quality noise management plan could reduce noise by 10db and restore some lost amenity with a combination of wall design, maximising distance of the wall from residences and adding quality, sustainable landscaping to replace lost vegetation, including water wise irrigation as used in the median strip of other sections of Mandurah Rd.

An objective of a noise management plan should be a best-practice, award winning design. No evidence exists this will be completed or shared.

Here is an example – one of several – of products which the Department and Georgiou could consider, to achieve noise targets. An Australian made, Pact Group recycled plastic noise absorption product could be a worthy contender among other proven products. Panels are 3m x 1m, light weight (60kg) and can be stacked to up to 12m high. They have a hollow middle which “absorbs” noise rather than “reflects” it as a concrete wall would do. It can be made from up to 80% recycled material and is 100% recyclable at the end of its life (approx. 40 years).

This is an example of one of many products available in Australia to achieve sustainable best practice and enhance Mandurah & WA’s environmental credentials. The successful product could be incorporated into the noise management plan for all 4 sections of residential communities.



For example, the standard flatter Lapis panels could be painted with environmental pictures on the Mandurah Rd side and planted with bush on the Waterside Drive side, further promoting Mandurah and WA's environmental credentials.

Wall background info - <https://pactgroup.com/news/viscount-wins-contract-to-supply-revolutionary-noise-wall-for-the-m5-west-road-widening-project/>

Standard panels - <https://pactgroup.com/products-services/reuse/infrastructure-solutions/noise-wall/standard-panel-noise-wall/>

### **The Noise Abatement Wall**

WRA submits that design and construction characteristics of the noise abatement wall include:

- Distance needs to be maximised between the future 3 lane road and residences. A noise wall needs to be as close to the road as possible.
- Without breaks. The current cycle re-entry track, mid-way up Waterside Dr, is rarely used due to the danger to cyclists on this section of Mandurah Rd and should be blocked off entirely.
  - It is a community direct access danger to local children/grandchildren to the main road,
  - Cyclists don't use this re-entrance as they cycle down from under the bridge and continue along Waterside Dr to the Leslie St lights from which they have direct access to the additional off-road path from Leslie St up to Pinjarra Rd.
  - Any break in a noise abatement wall reduces its effect.
- Should be 3m – 4m in height as measured from the crest of Mandurah Rd. This is an important aspect of the wall design and professional recommendations are required, to allow the Community to understand the science. For example, residents at the southern end of Waterside Dr are significantly lower than Mandurah Rd at the bridge end.
- Needs to run from the bridge, all the way to the Leslie St traffic lights. Noise levels are already confirmed to be above the SPP 5.4 levels at the northern end of Waterside Dr. and at the dog park.

Please see the attached plan as our suggestions pending receipt of other professional advice from the Department and Georgiou.



## Final Concerns

At our recent meeting and via emails Waterside Residents have voiced the following community concerns:

- As stated in WA road noise Policy “Noise is unwanted sound which carries a variety of negative effects that can adversely affect community health and amenity.”
- With the removal of the vegetation, two asthma suffering residents have already noticed deterioration in their conditions.
- Light pollution is already evident in houses where bedrooms are on the Waterside Dr side of the house.
- Wind ingress has also considerably increased given the removal of the vegetation which provided a significant wind break increasing the level of debris being seen in the canal.
- Residents are already experiencing anxiety at the increased noise levels, and loss of environmental amenity since the removal of the vegetation.
- Residents are concerned and anxious about property devaluation if noise abatement is not adequately addressed. Property devaluation will of course also necessitate rates reductions from the City of Mandurah.

## WRA Requests

- 1) WRA requests sharing of the professional noise assessments taken for Waterside Dr. by the Department for 2002 and the current assessments for Mandurah Bridge Duplication Project
- 2) WRA requests a new professional noise assessment be conducted following removal of verge vegetation to provide a true base line.
- 3) WRA requests the Project share its noise management plan.
- 4) WRA requests the Project review our submission and that Managers and Engineers from the Department and Georgiou meet with us on site to discuss it’s merits.
- 5) WRA requests that a temporary, screened, chain link fence of 1.8-2.4m in height be erected immediately behind the existing short fence to provide privacy, dust, fumes and debris screening for residents and the canals which should be maintained for the duration of the 2-year project.

We believe these to be reasonable requests from the community and look forward to receiving your answers to our requests in a timely manner.

## Conclusion & Attachments

We look forward to a productive and amicable relationship and to the successful completion of Mandurah Bridge Duplication Project.

[Waterside Residents Association](#)

[Sub-committee Chair Mel Horton](#)

- Attachments -
- Highlighted relevant extracts of the WA State Planning Policy & Guidelines.
  - WRA 2022 Barclay Engineering professional noise measurement report.
  - WRA suggested plan for noise abatement along Waterside Drive.