

# Armadale Road to North Lake Road Bridge

Online Survey Report

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## **Summary**

In January 2019, Main Roads conducted an online survey to gauge community sentiment around the two design options under consideration for the Armadale Road to North Lake Road Bridge project. The design options are as follows:

Option A – Armadale Road passing over the intersections of Tapper Road and Solomon Road

Option B – Armadale Road passing over the intersection of Tapper Road and under the intersection of Solomon Road

The survey was linked to an extended computer-generated animation of each option and a detailed Q&A document which enabled participants to find out more about the salient aspects of the project.

The survey was released on 17 January 2019 and ran for four weeks.

The campaign was publicised through Facebook and an email broadcast to the project mailing list of over 700 people. Personalised letters were also sent to 330 residential property owners located to the south of the alignment in Atwell and 70 commercial businesses located north of the alignment in Jandakot, to encourage participation.

The campaign complemented the extensive round of face-to-face engagement undertaken by Main Roads in mid-2018, which comprised stakeholder briefing, residents meetings, door knocks and two community information sessions.

#### **Participation**

396 people participated in the survey, with 189 providing comments in addition to their preferred option. Pleasingly, many participants live in relative proximity to the project area and/or use the current road network on a regular basis.

#### **Results summary**

Feedback from the survey was broadly consistent with that received during earlier rounds of engagement.

There is no definitive preference for either Design Option A or Design Option B, with responses split as follows:

#### Option A – 47 per cent

#### Option B - 53 per cent

However, an assessment of the geographical spread of responses indicates that support for Design Option B is primarily concentrated in a 'cluster' in the northern part of Atwell. Design Option A supporters appear to be more dispersed throughout the southern suburbs.

Much of the community commentary received was favourable towards the project, and the issues raised were consistent with what the community has already told us during previous rounds of engagement. A detailed analysis of these issues is presented on the following pages.

Main Roads is confident that many of the issues raised can be mitigated through the detailed design process following selection of a design option and the award of a contract. The Alliance structure of the contract will provide additional flexibility for our contractor to review

community feedback and accommodate concerns.

#### **Next steps**

Main Roads will carefully assess proposals from two shortlisted proponents in March/April 2019. Selection of a preferred option will be based on design, cost constructability and amenity considerations. The outcomes of this survey and other community engagement undertaken to-date will inform the assessment.

An Alliance contract for delivery of the project is expected to be awarded in May 2019 with construction anticipated to commence later in the year.

# Survey analysis

#### Question

The headline survey question was as follows:

Q: The Armadale Road to North Lake Road Bridge project will be the first of its kind to be constructed in Western Australia, with an elevated roadway passing over a roundabout at Tapper Road and over or under a roundabout at Solomon Road, in order to separate freeway-bound and east-west through-traffic from local road users.

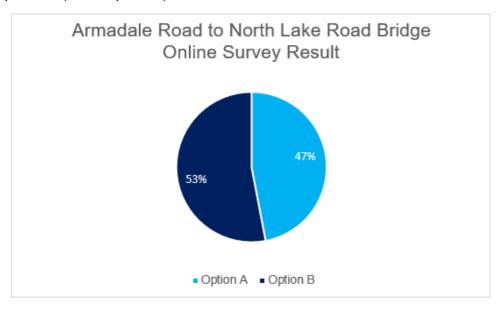
Based on our latest animations, which design option do you prefer for the Armadale Road to North Lake Road Bridge project?

- ☐ Option A Armadale Road passing over the intersections of Tapper Road and Solomon Road
- Option B Armadale Road passing over the intersection of Tapper Road and under the intersection of Solomon Road

#### **Results**

Option A – 47 per cent (186 responses)

Option B – 53 per cent (210 responses)



#### **Analysis**

#### Geographical spread

In the instances where respondents' address details were provided as part of the survey (or were previously known to Main Roads), we were able to undertake an assessment of where respondents live. We were able to map 87 responses. This sample provides a strong indication that support for Option B is concentrated in the northern pocket of Atwell, among residents who may be affected by the project. Support for Option A is more dispersed across Perth's southern suburbs. This feedback is consistent with Main Roads' previous assumptions and feedback collated from other engagement activity.

#### Fig 1. All addressed responses:

NOTE: Most responses were concentrated in the vicinity of the project area, however, others were received from residential communities along Armadale Road and in the southern part of Atwell adjacent to Kwinana Freeway. Feedback from the Armadale Road corridor is also considered useful as these road users are likely to traverse the project area on a regular basis.

Red pins = Option A

Yellow pins = Option B

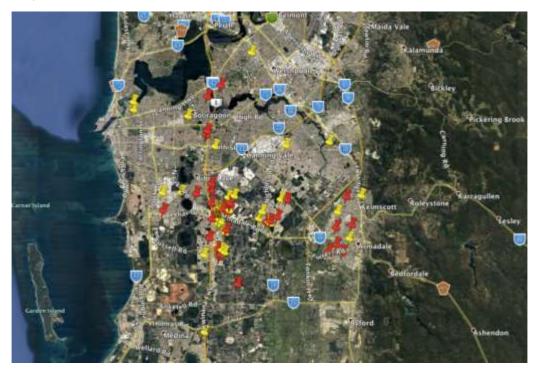


Fig 2. Snapshot of addresses from Atwell and communities east of Kwinana Freeway



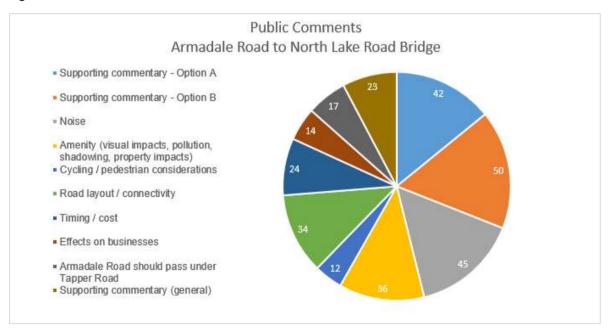
#### **Commentary summary**

The reasons participants provided to support their preferred options appears to correlate with their geographical location. For example, supporters of Option A (generally located further away from the project area) cited simplicity of road design (57%), and perceived lower cost (17%) as the key reasons for their preference.

Those in favour of Option B (concentrated immediately to the south of the project area) referenced better visual amenity (39%) and noise reduction (29%) as the key drivers behind their preference, in addition to concerns about the impacts of Option A at Solomon Road.

#### Fig 3: Summary of all comments received

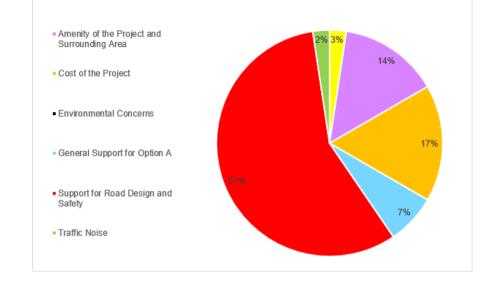
The majority of comments provided justification for respondents' preferred options, however, a number of other comments and issues were provided about the project in general.<sup>1</sup>



<sup>&</sup>lt;sup>1</sup> Note: as most respondents' comments addressed more than one of the issues listed above, it is not possible to assign specific percentage values to the above pie chart. For example, although a total of 189 comments were received, most of these comments addressed more than one issue / subject.

#### Fig 4: Reasons respondents provided in support of Option A

As noted above, respondents considered Option A to be more simplistic, road-user friendly and safer in terms of design. They also expressed a view that Option A would be cheaper and easier to construct, enabling timely delivery.

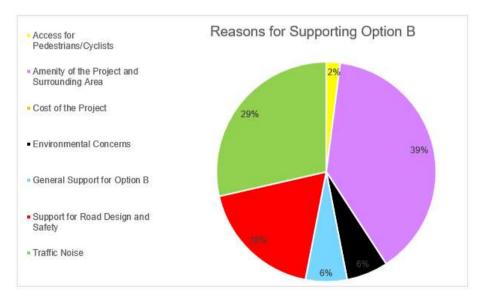


Access for Pedestrians/Cyclists

Reasons for Supporting Option A

#### Fig 5: Reasons respondents provided in support of Option B

Supporters of Option B overwhelmingly cited the amenity of local residents and noise as the reasons for their preference.



### **Detailed commentary and Main Roads' response**

Issue / subject	Frequency of Reference	Selection of comments received (respondents' identities removed)	Main Roads' response to the issue(s) raised
Supporting Commentary: Option A	42	<ul> <li>"Option A is probably easier and cheaper to build, however I am not sure how myself and others will get through the area, and for example to park and catch the train."  "Option A looks to be my preferred option, especially when looking at pedestrian crossing and movements around Solomon and Armadale roads intersection."</li> <li>"Option A gets a lot of the traffic up away from the local traffic (both vehicle and pedestrian) where Option B creates a huge trench cut access from north to south access significantly and creating a dangerous hazard to have to navigate."</li> <li>"Option A appears to be free flowing and not complicating the accesses".</li> <li>"Option A seems more logical and aesthetically pleasing."</li> <li>"It looks the easier to drive on and to get to the various roads coming off Armadale Road."</li> <li>"If there is noise protection and screening on the bridge then option A should be the most cost effective value for money whilst addressing community impacts."</li> <li>"Option A just appears to be a more straightforward option, with, I think, better potential for future alterations when required."</li> <li>"I prefer Option A. Option B looks unsafe for the seasons we have a lot of rain and rain in Perth can be extreme."</li> <li>"With traffic travelling west into a setting sun it would be better for traffic to be continuing straight rather than needing to negotiate a busy roundabout."</li> <li>"Option A would appear a simple layout for drivers to understand rather than the 'Duck &amp; Dive' option."</li> </ul>	<ul> <li>The key arguments provided in support of Option A pertain to simplicity of design, safety and ease of understanding for road users.</li> <li>While Option A does appear to be a more traditional and simplistic design, both options provide the same level of vehicle connectivity and traffic performance.</li> <li>Irrespective of which option proceeds, extensive communication, signage and road user education campaigns will be undertaken prior to project opening to ensure drivers are familiar with the changes to the road network.</li> <li>In relation to the perceived cost advantages of Option A over Option B, we are currently undertaking a procurement process in which the cost differential will be one of a number of factors considered.</li> </ul>
Supporting Commentary: Option B	50	<ul> <li>"I prefer Option B on the basis that it's less of an eyesore for local people and businesses."</li> <li>"Option B should reduce noise experienced by local residents."</li> <li>"The more minimalistic the solution the better."</li> <li>"Not impressed with either option, but there is no other way to ease the congestion, Option B would reduce the visual impact."</li> <li>"I feel it would be better for Armadale Road to pass under Solomon Road as hopefully it would result in less traffic noise from Armadale Road."</li> <li>"Option B much better for noise into Atwell. I'm guessing it is more expensive but please spend the extra money. It will also be better in terms of visual appeal and our property values."</li> </ul>	<ul> <li>Should Option B proceed, visual impacts for residents living in the northern part of Atwell would be less than Option A although parts of Armadale Road / Solomon Road intersection may still be visible.</li> <li>It is likely that there will be a change in noise levels, requiring mitigation such as noise walls, irrespective of which option proceeds. The installation of noise walls will ensure levels remain within the approved parameters and local residents are no worse off in terms of noise levels experienced at present.</li> </ul>

		<ul> <li>"Better of the two options for locals."</li> <li>"We prefer option B as we believe this option provides better noise reduction by going under the new roundabout as opposed to option A. It also looks better visually."</li> <li>Option B is more aesthetically pleasing and would allow increased privacy to those who live nearby."</li> <li>"Option B because it is less invasive and intrusive for the residents of those estates. It is more streamlined, with less infrastructure."</li> </ul>	Additional noise modelling will be undertaken by our Alliance partner in mid-2019, which will inform the detailed design of the project
Noise impacts	45	<ul> <li>"Ok with either option as long as noise pollution is contained."</li> <li>"My biggest concern is that the overpass at Armadale Road and Tapper Road will increase the noise levels."</li> </ul>	<ul> <li>It is likely that there will be a change in noise levels, requiring mitigation such as noise walls, irrespective of which option proceeds.</li> <li>The installation of noise walls will ensure levels remain within the approved parameters and local residents are no worse off in terms of noise levels experienced at present.</li> <li>Additional noise modelling to determine the final height and locations for noise walls will be undertaken by our Alliance partner in mid-2019, which will inform the detailed design of the project.</li> </ul>
Amenity (visual impacts, pollution, shadowing, property impacts)	36	<ul> <li>"I believe the underpass may take a little longer to complete however, the visual impact will be less."</li> <li>"Serious concerns about the degradation to the adjacent housing and commercial premises. There doesn't appear to be enough visual and acoustic barrier between the elevated traffic and the adjacent land uses."</li> <li>"Sinking road would seem to lessen the visual and noise impact on local residents and businesses."</li> <li>"This project and the visual and auditory impact it will have on our lovely part of Atwell is going to change it permanently for the worse."</li> </ul>	<ul> <li>The bridge at the Tapper Road section of the project will be visible from certain locations within the northern pocket of Atwell.</li> <li>The extent of the impacts closer to Solomon Road depend upon which option is selected.</li> <li>Landscaping and a carefully considered urban design strategy will be used to minimise the visual impacts of the bridge.</li> <li>We will also work closely with our Alliance partner to lower the profile of the bridge wherever possible as part of the detailed design process.</li> <li>The importance of aesthetic treatment for the bridge and screen walls is being made clear to industry as part of the design and construction of the project</li> <li>We also welcome input from the community around the design and aesthetics of the structure.</li> </ul>
Provisions / connectivity for cyclists and pedestrians	12	<ul> <li>"Both options present hazards to cyclists. Travelling westwards, a cyclist either has to cross busy lanes to take the central path or if they choose staying to the left then they have to negotiate two roundabouts. On approaching the roundabouts cyclists have the hazard of traffic turning left crossing their paths. Travelling in the opposite direction creates similar situations."</li> <li>Will there be some sort of pedestrian bridge?</li> </ul>	<ul> <li>Both design options would significantly improve access around the area for pedestrians and cyclists.</li> <li>A Principal Shared Path (PSP) will be constructed on the northern side of Armadale Road between the Kwinana Freeway and the new PSP being constructed as part of the Armadale Road Upgrade project between Anstey Road and Tapper Road.</li> </ul>

		<ul> <li>"What provision has been made for pedestrians living in Atwell to cross Armadale Road to the Bunnings shopping complex from Tapper Road?"</li> <li>"Option A is perhaps better and safer option for cyclists and pedestrians."</li> <li>"Option A seems more practical for including a PSP / cycle path."</li> <li>"I am concerned about the lack of grade separation, median islands and crossing points for pedestrians and bike riders along Armadale Road and North Lake Road. Please ensure that safe crossings are possible."</li> <li>Can the paths be built away from the road and closer to the residential noise walls so that pedestrians and bike riders are not so close to busy traffic, except at crossing points?"</li> <li>"Both are not ideal for pedestrians and cyclists and present significant barriers."</li> <li>"I think you need to get substantial input from cycling representative groups. I think both these options provide significant risk and danger to cyclist road users."</li> </ul>	<ul> <li>A footpath will be constructed on the southern side of the road from Knock Place to Tapper Road, connecting with the existing foot path.</li> <li>Pedestrian crossings will be located along the local road network for pedestrians to cross.</li> <li>These changes represent a significant improvement on the inconsistent and piecemeal path network currently in place in this location.</li> <li>The only difference between Options A and B in regard to cyclists and pedestrians would be a location of a mid-block pedestrian crossing across Armadale Road, between the Tapper Road and Solomon Road intersections.</li> <li>Main Roads is liaising with the Department of Transport and cycling groups as part of project development and will continue to do so as the project moves into detailed design and construction.</li> </ul>
Road Layout/Connectivity	34	<ul> <li>"People missing that Solomon Road turn off seems like a common issue."</li> <li>"The area needs infrastructure to improve traffic flow and sustainable living in the city. Please allow for future transport links such as light rail from Cockburn through the Armadale Road corridor."</li> <li>"What is happening to the existing entry and exit from the freeway and accessing Beeliar Drive and Gateway shopping Centre?"</li> <li>"Keep it streamlined. I'm a truck driver so in that respect it's better for us to go up once and stay up rather than go down, up, along a bit then up again."</li> <li>"I travel this way to work every day from Armadale. I think a roundabout at Ghostgum would work better than lights. Now that the roundabout is in at Nicholson and Armadale Road, the traffic is moving all the time. I'm not waiting at the lights like I was before, waiting for 3-5 light changes."</li> </ul>	road user education campaigns will be undertaken prior to project opening to ensure drivers are familiar with the changes to the road network.  In the meantime, the <i>Getting Around</i> section of our project FAQ document provides some simple

Timing / cost of the project	24	<ul> <li>"The choices are very similar. It should come down to what is the simpler and cheaper solution that causes the least disruption." Also, what would be easier to maintain in the future.</li> <li>"Both good options, do the cheapest."</li> <li>"Both options will work. Go with the cheapest and quickest option!!! Let's get it done!"</li> <li>"Whatever is cheapest, quickest and less disruptive during construction!"</li> <li>"The decision should be made on what the fastest option is to build it and the one that can allow for future growth if needed."</li> <li>"Option B is more aesthetically pleasing but Option A is cheaper &amp; this is what will be built."</li> <li>"Please make it quick as the traffic is so bad at the moment."</li> </ul>	<ul> <li>In relation to the perceived cost advantages of Option A over Option B, we are currently undertaking a procurement process in which the cost differential will be one of a number of factors considered.</li> <li>Constructability, future proofing and maintenance will also be carefully considered as part of the assessment process.</li> </ul>
Impacts of the project on local businesses	14	<ul> <li>"How will this affect the businesses on Armadale Road adjacent to Solomon Road (Caltex, KFC etc)? What are the plans for access to these shops and exits during works? How long is this expected to take?"</li> <li>"Boring screen walls close to commercial retail shops can even be fitted with electronic signboards to display ads to promote their businesses"</li> <li>" If (Option B) proceeds won't the view of the South Central business district (looking from Kwinana freeway) and potentially</li> </ul>	<ul> <li>Main Roads has been engaging with local landowners and business representatives to the north of Armadale Road for approximately 12 months.</li> <li>While the project will result in some access changes (both during and post construction), we will work closely with the business community to ensure appropriate information to road users and patrons is provided for the duration.</li> <li>The project should address the current levels of congestion on the approach to the Cockburn Gateway Shopping Centre by deviating freeway-bound and east-westbound traffic to the north.</li> </ul>
Why can't Armadale Road pass beneath Tapper Road as well as Solomon Road?	17	<ul> <li>"Why is there not an option C which has Armadale Road passing UNDER both the Tapper and Solomon Road intersections?"</li> <li>"I think the project should be modified so Armadale Road passes under both the Tapper Road and Solomon Road intersections."</li> <li>"Has an option of a double underpass been considered? That would be my preference over both of these options."</li> <li>"I feel the ideal solution, whilst likely already considered and deemed unfeasible, would be to have "pass-unders" at both Tapper Road and Solomon Road. Coupled with a little more</li> </ul>	<ul> <li>Early project development activity identified belowground constraints at the intersection of Armadale Road and Tapper Road.</li> <li>Any significant excavation activity in this location would intersect with ground water, presenting a major logistical and environmental challenge. As a result, it is necessary for Armadale Road to pass over the top of Tapper Road.</li> </ul>

Supporting commentary in 23 favour of the project generally	greenery, I feel this would result in the most successful integration of the motorway with its surroundings."  • "I consider this to be an excellent project and I hope that strategic common sense and future thinking continue to be applied in the development of this project."  • "It would seem that both options are effectively the same enabling the same driving movements, with the only significant amendment being an overpass vs tunnel."  • "MRWA should select the most cost-effective proposal.  • This project is needed to grow this area into a high-density precinct."  • "I think this is a great project, maybe someone should think about allowing Acrod vehicles to use bus lanes."  • "Looks really good just worried about long time roadworks."  • "Looks easy to drive and to get to various roads coming off Armadale Road."  • "Both projects look well thought out and will have a positive impact."  • "Dynamic intersections and a unique crossing of Solomon would make for a distinct local landmark."  • "It's such a beautiful and thoughtful project. As a resident I appreciate your efforts. Thank you."  • "Both options look good – good to see more details re freeway access ramps."  • "Both options are awesome and appear to achieve the same outcome."	<ul> <li>Main Roads welcomes community support for this project, which has been in the planning process for more than 20 years.</li> <li>The sentiment expressed in this survey is consistent with feedback received through traditional engagement activity to inform this project, including stakeholder briefings, information sessions and meetings of the Community Reference Group.</li> <li>We will continue to work closely with stakeholders and the local community as the project moves into construction later this year.</li> </ul>
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## **Appendix**

#### Email to mailing list – 17 January 2019

Click here if you are having trouble viewing this message.

MAIN ROADS WESTERN AUSTRALIA

### Armadale Road to North Lake Road Bridge





Dear

### Opportunity to share your thoughts on our design options

The Armadale Road to North Lake Road Bridge project will be the first of its kind to be constructed in Western Australia, with an elevated roadway passing over a roundabout at Tapper Road and over or under a roundabout at Solomon Road, in order to separate freeway-bound and east-west through-traffic from local road users. Upon completion, the project will:

- Address congestion at the Kwinana Freeway, Armadale Road and Beeliar Drive interchange,
   Perth's fifth most congested intersection
- Create a bypass around Cockburn Central Train Station and the Cockburn Gateway shopping centre
- · Provide shorter and more consistent journey times
- Improve access to and from Cockburn Central Train Station, by alleviating heavy congestion around the station car park during peak times
- Unlock development potential and deliver additional investment opportunities in the City of Cockburn, creating new jobs and economic activity
- Complement other major road improvements in Perth's southern suburbs, including the Kwinana Freeway Northbound Widening project between Russell Road and Roe Highway

#### Computer generated animation - share your thoughts

To view our latest computer-generated animations of each design option under consideration, please follow the links below:

Option A - Armadale Road passing over the intersections of Tapper Road and Solomon Road

Option B – Armadale Road passing over the intersection of Tapper Road and under the intersection of Solomon Road

Once you have had chance to view our animations, please let us know your preferred option and share your thoughts on the project through this <u>quick survey</u>.

#### Facebook post - 18 January 2019



#### Letter to residents - issued 29 January 2019



24 January 2019

Dear Resident/s

Community Update: Armadale Road to North Lake Road Bridge project

We'd like to invite you to participate in a survey regarding the Armadale Road to North Lake Road Bridge project.

Announced in May 2017 as part of the Commonwealth and State Governments' \$2.3 billion investment in road and rail infrastructure, the project involves construction of a bridge over Kwinana Freeway that connects Armadale Road to North Lake Road, and construction of free flowing regional traffic lanes using grade separated intersections on Armadale Road through the Solomon Road and Tapper Road intersections. The project will address congestion at the Kwinana Freeway, Armadale Road and Beeliar Drive interchange, Perth's fifth most congested intersection.

As you may recall from previous correspondence, there are two design options being considered for the intersections of Armadale Road and Tapper Road and the Armadale Road and Solomon Road:

- Option A Armadale Road is elevated, passing over the intersections of Tapper Road and Solomon Road, which will be reconstructed at ground level in the form of roundabouts
- Option B Armadale Road is elevated, passing over a new roundabout at the intersection of Tapper Road (as per Option A); and then passes under the new roundabout at Solomon Road in the form of an underpass (or trench) structure

Both options provide the same level of vehicle connectivity and traffic performance, but have differing impacts on visual amenity, noise and pedestrian connectivity.

We now have computer generated animations available on our website. There is also a link to a quick survey, where you can let us know your preferred option and share your thoughts on the project. Please provide your feedback now to assist in the assessment process.

To view the animations and access the survey, please take the following steps:

- Visit: https://project.mainroads.wa.gov.au/home
- In the banner along the top of the page, navigate to: 'South Metropolitan', and in the drop down menu, click 'Armadale Road to North Lake Road Bridge'.
- The animations for each option and the link to the survey are located under the 'Latest News' section.

If you are on our email database you would have received this information last week. We thank you if you have already responded to the survey.

Main Roads Western Australia

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