



Enquiries: John Braid – 9323 6183

Our Ref:

Your Ref: CMS17891

23 September 2021

Mr Anthony Sutton
Executive Director
EPA Services
Locked Bag 10
Joondalup DC WA 6919

Dear Anthony

RESPONSE TO NOTICE REQUIRING FURTHER INFORMATION – SWAN RIVER CROSSINGS

Thank you for your letter dated 8 February 2021, requesting further information from Main Roads Western Australia (Main Roads) on the Swan River Crossings Proposal (the Proposal) under section 38A(1) of the *Environmental Protection Act 1986* (the EP Act).

Main Roads has defined the disturbance footprint following an extensive public consultation program and selected the “Western” alignment (Alignment One) you referred to in your previous correspondence.

The following sections provide further information requested in your letter dated 8 February 2021.

Background

The Proposal is a regionally significant infrastructure project which includes the construction of new road and rail bridges, the upgrading of the existing rail bridge and the demolition of the existing Fremantle Traffic Bridge (FTB) over the Swan River in Fremantle, Western Australia (WA).

The existing FTB was opened in 1939 as a temporary structure, and at the time had an estimated life of approximately 40 years. The bridge’s structure has been deteriorating over a number of years, and despite extensive maintenance and repair works, the bridge has to be replaced. Further information on the condition of the FTB is available here: <https://www.mainroads.wa.gov.au/globalassets/projects-initiatives/projects/metro/swan-river-crossings/swan-river-crossings-fremantle-traffic-bridge-condition-fact-sheet.pdf>

Once completed, Fremantle’s Swan River Crossings will consist of:

- Existing rail bridge, and a new rail bridge with two new rail tracks
- New road bridge with four road lanes to the west of the existing FTB (Alignment One)
- New Principal Shared Path (PSP) including pedestrian/cyclist facilities
- New pedestrian footpath
- Foreshore activation, which includes retaining a portion of the FTB.

On 31 August 2020, Main Roads referred the Swan River Crossings Proposal to the EPA under Section 38 of the EP Act. The referral showed the location of the proposed traffic



bridge to the east of the existing FTB ('Alignment Option Three').

In your correspondence on 8 November 2020, you advised Main Roads that the EPA had received public comments on the referral, indicating a high level of public interest. One of the key issues raised was the need for further public consultation on the Proposal, particularly regarding the alignment of the bridge structures and associated environmental impacts.

Main Roads subsequently facilitated a series of community and stakeholder engagement activities. This initial consultation in late 2020 identified that there was significant public concern about the proposed "Eastern" option for the FTB. As a result of this consultation, Main Roads committed to undertaking further investigations to determine whether other bridge alignments were viable.

Main Roads appointed the Fremantle Bridges Alliance (the Alliance) in January 2021 to design and construct the Swan River Crossings Project, with the first activity being the Alignment Options Assessment to determine the most suitable location for the proposed bridges.

On 8 February 2021, you issued a letter requiring further information and a path forward for the Proposal, including defining an alignment, undertaking a noise assessment and completing in-river surveys.

Main Roads outlined in a letter to the EPA dated 8 March 2021 that the preferred path forward was to submit a package of information to address the issues raised by the EPA, once the alignment selection process was completed. Main Roads advised that the package of information would include:

1. Disturbance footprint
2. Road and rail traffic noise assessment
3. River surveys.

The project development activities undertaken by Main Roads to address your request for information are summarised in the following sections.

Additional Project Development Activities and Proposal Definition

Bridge Alignment Selection Process

A comprehensive Alignment Options Assessment commenced in January 2021 with significant input from the public. Main Roads reviewed four bridge options to determine which alignment responded most suitably to community and stakeholder sentiment, addressed all technical challenges, mitigated environmental impacts, and delivered value for money. The Project alignment options which were considered are shown in Figure 1 of Attachment 1.

The evaluation included:

- Extensive community and stakeholder consultation with multiple briefings and workshops with key stakeholders (refer to following section)
- Qualitative multi-criteria assessment, including environmental, heritage and social impacts
- Value-for-money assessment considering the cost, program, benefits, trade-offs, risks and opportunities.



Public Consultation

A comprehensive program of public engagement was undertaken as part of the Alignment Options Assessment for the Proposal. The consultation period included key stakeholder engagement commencing in April 2021.

The program consisted of forums, workshops, pop-up information stands, written updates and dozens of face-to-face meetings, as well as an interactive online visualisation tool (<https://au.opencitiesplanner.bentley.com/WSP/swanrivercrossings>) and public survey.

A Community Forum in May 2021 brought together stakeholders and local community representatives who had participated in two previous sessions with Main Roads in 2020.

During the consultation process there was a clear preference for the “Western option” (Alignment One). Alignment One received significantly more support from the community and stakeholders, as it improves connectivity and maximises river foreshore for future activation. It also provides an opportunity to reduce environmental and social impacts during the construction phase.

Alignment One reduces the proposed Disturbance Footprint (Figure 3 in Attachment 1) when compared to the “Eastern” option (Alignment Option Three). Reducing the impact area also maximises the available space for improved urban design outcomes on the southern bank. Alignment One will allow for the existing traffic bridge to remain operational for most of the construction process.

The public preference for Alignment One was a significant factor in this option being chosen as the preferred alignment. As shown on Figure 2 of Attachment 1, Alignment One will deliver:

- A new four-lane road traffic bridge provided on an alignment between the existing bridges, west of the existing FTB and to the east of the new rail bridge
- A new rail bridge with a new two-track passenger rail line to the east of, and parallel to, the existing rail bridge.

Following completion of the bridge alignment selection process, the most recent phase of community consultation has included a series of forums and discussions on priorities relating to heritage interpretation, urban design and connectivity for pedestrian and cycling paths. This public engagement has included feedback mechanisms to demonstrate how community and stakeholder sentiment will be reflected through the design process. Consultation has included:

- Targeted briefings on the design consultation process with key stakeholders, including City of Fremantle and Town of East Fremantle
- The release of a design inspiration document to share heritage visions, stories and themes with the community
- Four community Design Forums (26 August 2021, 28 August 2021, 30 August 2021 and 31 August 2021)
- An online survey seeking feedback from community and stakeholders on aesthetics and heritage interpretation opportunities for the Proposal.

A summary of the stakeholder and community consultation is provided in Attachment 2.



Aboriginal Engagement

An Aboriginal Archaeological and Ethnographic Site Identification Heritage Survey (provided in Attachment 3; Confidential document, not for circulation) was undertaken by Archae-aus and Ethnoscience in October 2020. The assessment was undertaken alongside representatives of the Whadjuk Nyoongar community in accordance with the Nyoongar Standard Heritage Agreement (NSHA) and supported Main Roads' application for consent under Section 18 of the *Aboriginal Heritage Act 1972*. Approval was granted from the Department of Planning, Lands and Heritage (DPLH) on 25 May 2021 (provided in Attachment 4).

In accordance with Nyoongar cultural protocols, a group of five Elders were invited to develop the cultural context for the Proposal. Workshops were held on Monday 26 October and 18 November 2020. Together the group prepared site-specific stories and developed the cultural narrative for the project from a Whadjuk Nyoongar perspective, which informed the preliminary Heritage Interpretation Strategy for the Proposal.

A Whadjuk Elders Advisory Group has since been established to guide heritage interpretation and Aboriginal engagement activities by Main Roads. Workshops were held 26 July and 30 August 2021 and related primarily to cultural narrative and heritage interpretation. Further to this, the Advisory Group will maintain a role on the project providing advice on Aboriginal heritage, engagement opportunities and employment outcomes.

The Whadjuk Elders Advisory Group also released a statement relating to the significance of the Derbarl Yerrigan (Swan River). Pier structures are culturally disruptive because they interfere with the flow of water and disturb the movement of songlines and totems through the area. The Whadjuk Elders have asked for the number of structures in the river to be minimised, including from the existing FTB (provided in Attachment 5).

Two Aboriginal representatives, nominated by the South West Aboriginal Land and Sea Council, have undertaken ceremonies prior to the commencement of investigative works. Aboriginal representatives have also been present for all ground disturbing works on the land intersecting Aboriginal Site ID 3536 (Swan River).

Noise Assessment

A preliminary noise assessment (provided in Attachment 6) was undertaken to determine whether noise impacts differed significantly between the four bridge alignment options. The noise assessment compared the predicted traffic noise impacts from Alignment Options 1-4 with the current traffic noise from the FTB, without consideration of the existing architectural noise treatments in adjacent buildings and potential noise mitigation measures that would be implemented.

The preliminary noise assessment demonstrated that the traffic noise generated from the existing FTB currently exceeds State Planning Policy (SPP) 5.4 criteria. However, the predicted traffic noise from the Proposal is comparable to the existing traffic noise levels, and in some cases will be reduced. Alignment One showed lower predicted noise impacts on nearby sensitive receptors when compared to Alignment Option Three, and this was considered during the alignment selection process.

A detailed noise assessment for Alignment One (provided in Attachment 7) was completed in August 2021 in accordance with the requirements of the SPP 5.4 to understand the traffic noise impacts from the Proposal on nearby sensitive receivers. This noise assessment included a review of existing noise treatments and identified potential mitigation measures to be incorporated into the design to reduce traffic noise impacts.

The results of the detailed noise assessment confirm that the Proposal has no significant



impact when compared with the “no build” scenario and, in fact, shows a reduction in noise levels in a number of cases as a result of the change in alignment or shielding of the railway line as a result of the elevated road bridge section. The vibration assessment confirms that design options being considered are unlikely to result in a significant increase in vibration levels at the buildings located adjacent to the project route.

The detailed noise assessment provides recommendations for further noise mitigation, and these opportunities will be explored during project development, and submitted as part of the development application to the Western Australian Planning Commission (WAPC).

In-River Studies

Main Roads consulted with the Department of Biodiversity, Conservation and Attractions (DBCA) Rivers and Estuaries Division on in-river impacts and the studies required to establish a baseline and assess potential impacts. DBCA provided input into the scope of each in-river study. As a result of that consultation, Main Roads commissioned the following studies and investigations to support the Proposal:

- Benthic Habitat Report, RPS February 2021 (Attachment 8)
- Preliminary Sediment Contamination and Acid Sulfate Soil Assessment, RPS March 2021 (Attachment 9)
- Preliminary Site Investigation and Sampling and Analysis Quality Plan, RPS November 2020 (Attachment 10)
- Sediment Sampling Report, ICM January 2021 (Attachment 11)
- Sediment Survey Report, RPS June 2021 (Attachment 12)
- Aquatic Noise Assessment (which includes draft Noise Management Plan), SLR March 2021 (Attachment 13)
- Assessment of Backwater Impacts – Technical Note, MP Rogers 2021 (Attachment 14)
- Surface Water Monitoring Reports, RPS September 2020 to August 2021 (Attachment 15).

Investigative works within the Development Control Area (DCA) were undertaken in accordance with DBCA permits.

These additional environmental studies have been reviewed and subsequently supported an updated environmental impact assessment against the relevant EPA factors and objectives, provided in Attachment 17 (which also includes a significance assessment). The assessment demonstrates that the relevant EPA objectives can be met for the Proposal.

Disturbance Footprint

As outlined above, a series of additional studies and investigations were undertaken to further define the potential environmental impacts from implementation of the Proposal. The results of these surveys and investigations informed the ongoing design of the Alignment One.

Main Roads has defined a proposed Disturbance Footprint for the Proposal as shown on Figure 3 **Error! Reference source not found.** (Attachment 1), which incorporates the areas for proposed infrastructure, existing infrastructure to be demolished, and existing roads and rail corridors. The chosen option Alignment One reduces the Disturbance Footprint within the river compared to the original proposal. The total Disturbance Footprint for the Proposal is 12.76 ha and all of the area has been previously disturbed.



The Development Envelope and the proposed Disturbance Footprint are shown on Figure 3 (Attachment 1). Shapefiles for the proposed Disturbance Footprint are provided in Attachment 16.

Consideration of Significance

The Proposal will have several potential impacts on environmental and heritage values. Most of these impacts will be temporary during construction and, with mitigation, the impacts can be minimised to acceptable levels of impact. An assessment of the relevant EPA factors and objectives including the proposed mitigation strategies is presented in Attachment 17. Main Roads has evaluated the potential impacts of the revised Proposal in accordance with the EPA Statement of Environmental Principles Factors and Objectives (EPA April 2020), and Section 5 Consideration of Significance.

The Proposal is located within a highly disturbed area within an active port, and the refinements to the Disturbance Footprint and additional supporting studies presented in this letter, demonstrate a reduction in social and environmental impacts.

The revised Proposal sees both bridges constructed within Fremantle Port waters, outside of the Development Control Area as defined by the *Swan and Canning Rivers Management Act 2006*. The selected alignment also results in a reduced Disturbance Footprint within the Swan River.

Additional consultation and engagement with the community and stakeholders was conducted to improve social outcomes associated with the Proposal. In addition, the noise studies demonstrate that Alignment One had the lowest predicted impacts compared to any other alignment, and traffic noise levels are not expected to appreciably increase because of the Proposal.

The bridge design for Alignment 1 results in reduced marine impacts and improved environmental outcomes when compared to the original proposal. In the refinement of the Proposal, the number of piers for the road bridge has been reduced from six to three, and the rail bridge piers reduced from five to two (total of five in-water piers for the Proposal). The existing traffic bridge has a total of 24 piers; therefore the Proposal has a reduced operational in-water footprint, reducing impacts to the Swan River particularly with regards to sediment disturbance and scour protection. The reduction in piers also reduces the number of in-river piles and associated underwater noise and vibration impacts to marine fauna during construction. Reducing piles and other riverbed disturbance is strongly supported by the Whadjuk Nyoongar Elders. The proposed pier locations and abutments are shown on Figure 4 (Attachment 1).

Impact extents in relation to land-based activities will not change with Alignment One. Main Roads is preparing an Urban and Landscape Design Strategy which is focused on ecological restoration of the foreshore. This document is being developed in consultation with community, stakeholders and State Agencies, and will be submitted as part of the development application to WAPC, with review and comment by DBCA.

Despite a number of the EPA's factors being relevant, Main Roads considers that the Proposal will meet the EPA's environmental objective for each factor. Most impacts will be temporary in nature and occur within an area that has been subject to previous disturbance activities. Where impacts are permanent, such as impacts to a listed heritage site, the management strategy is being developed in consultation with the public and on advice of DPLH and the Heritage Council of Western Australia (HCWA).

All impacts associated with the Proposal are effectively managed through other legislation and regulation, as detailed in the following section.



Supporting Approvals

Main Roads is currently preparing the following additional approvals in consultation with State Agencies to support the Proposal.

1. Development Approval – WAPC

A development application will be lodged in early December 2021 to obtain the necessary planning approvals for the new traffic and rail bridges, and associated public realm works. This will be via the State Development Assessment Unit (SDAU) for approval by the WAPC under Part 17 of the *Planning and Development Act 2005*. As part of this process, a 'Form 17A pre-lodgement advice' request was lodged in July 2021 to the SDAU to assist in progressing the project. In addition to the public comment period of six weeks, the development application will be referred to external agencies and landowners for comment, including:

- DBCA (providing advice to WAPC on potential in-river impacts)
- Fremantle Ports
- City of Fremantle
- Department of Planning, Lands and Heritage
- Public Transport Authority, and
- Department of Transport.

2. Part 4 Permit – DBCA

Under division 2 of the Swan and Canning Rivers Management Regulations 2007, a Form 7 will be lodged with the DBCA to establish a laydown area on the southern foreshore, north of Beach Street in Fremantle. Main Roads met with the DBCA on 8 September 2021 to discuss the application process, with lodgement planned for early October 2021.

3. Development Approvals – Fremantle Ports

Under the *Port Authorities Act 1999*, use and development not directly related to port operations requires Fremantle Ports' planning approval. These planning approvals for proposed permanent and temporary impacts to Fremantle Ports are required in addition to the overarching Development Approval that will be obtained from the WAPC. Consultation with the Fremantle Ports has confirmed that the environmental and social impacts will be considered as part of the development applications, and Fremantle Ports will consider advice from the DBCA in their determination.

4. Impacts to a Heritage Asset – Heritage Council of Western Australia (HCWA)

The '*Fremantle Traffic Bridge and ferry capstan base*' are listed on the State Register of Heritage Places. Main Roads has had ongoing engagement with the HCWA in the development of the Heritage Interpretation Strategy for the Proposal, and again during the Alignment Options Assessment. Since the selection of Alignment One, Main Roads has consulted regularly with HCWA, including formal presentations on 13 August and 10 September 2021 on heritage interpretation opportunities. A Heritage impact Statement and Heritage Interpretation Plan will be lodged with DPLH (Heritage) for approval and included in the development application to WAPC.

In addition to the key planning and development approvals described above, Main Roads will obtain all approvals, permits and licenses required to support the construction works. These will be identified through the development application process and through ongoing consultation with regulatory bodies.



Closing

The Proposal has a number of benefits, environmentally, socially and economically including but not limited to:

- Improved safety for road users and pedestrians. The current Fremantle Traffic Bridge does not meet current safety standards for road users and pedestrians. The new bridge will meet all modern safety standards.
- Increased rail efficiency. The Proposal will result in a dedicated freight rail line from Fremantle Port, increasing the number of rail movements available to and from the port. This will enable more freight to be transported by rail rather than road.
- Improved river navigation. The current Fremantle Traffic Bridge has only two navigation spans that do not align well with the rail bridge navigation spans. The new bridges will increase the size of the navigation spans under the traffic bridge and will better align the navigation spans with the existing rail bridge to improve river navigation.
- Improved water flows. The large number of piles in the river from the existing FTB causes some impediment to water flows to and from the Swan Estuary. This creates a turbulent water flow and affects river navigation. A reduction in the number of piles will allow a less turbulent flow of water under the bridge.
- Acknowledgement of the history of this place as a crossing point of the Swan River. The Swan River entrance was a natural crossing point of the Swan River by Aboriginal people for thousands of years before European settlement. This location has also been the site of four previous road bridges since European settlement and will continue to be an important crossing point of the river. The Proposal will acknowledge this through the retention of part of the existing bridge as an interpretive centre.

Although the Proposal will potential affect up to six of the EPA's factors, Main Roads considers that the potential effect on each factor is minor, temporary, readily managed and thoroughly regulated through other regulatory processes. The Proposal will meet the EPA's environmental objective for each factor.

Main Roads will continue to conduct comprehensive stakeholder consultation on the Proposal to maximise positive environmental, social and economic outcomes. In addition, meaningful engagement with the community will continue throughout design development and lodgement of planning and development approvals, and into the construction phase.

Should you require any additional information in relation to this change request, please contact John Braid, Principal Environment Officer – Office of Major Transport Infrastructure Delivery, via email (John.Braid@mainroads.wa.gov.au) or on (08) 9323 6183.

Yours sincerely

Ashley Vincent
Project Director – Office of Major Transport Infrastructure Delivery



Enclosed:

Attachment 1: Figures (electronic only)

Figure 1. Project Alignment Options 1 - 4

Figure 2. Chosen Option - Alignment One

Figure 3. Development Envelope and Proposed Disturbance Footprint

Figure 4. Proposed Pier Locations and Abutments

Attachment 2: Stakeholder Consultation (electronic only)

Attachment 3: Aboriginal Archaeological and Ethnographic Site Identification Heritage Survey (Confidential document, not for circulation) (electronic only)

Attachment 4: Section 18 Approval (electronic only)

Attachment 5: Statement of Significance – Derbarl Yerrigan (Confidential document, not for circulation) (electronic only)

Attachment 6: Preliminary Noise Assessment (electronic only)

Attachment 7: Detailed Noise Assessment (electronic only)

Attachment 8: Benthic Habitat Report (electronic only)

Attachment 9: Preliminary Sediment Contamination and Acid Sulfate Soil Assessment (electronic only)

Attachment 10: Preliminary Site Investigation and Sampling and Analysis Quality Plan (electronic only)

Attachment 11: Sediment Sampling Report (electronic only)

Attachment 12: Sediment Survey Report (electronic only)

Attachment 13: Aquatic Noise Assessment (electronic only)

Attachment 14: Assessment of Backwater Impacts – Technical Note (electronic only)

Attachment 15: Surface Water Monitoring Reports (electronic only)

Attachment 16: Swan River Crossings – Proposed Disturbance Footprint Shapefile (electronic only)

Attachment 17: Consideration of Significance – Summary Table (electronic only)