

**MODIFICATION REQUEST:
Homebush Bay Bridge Modification 1
Homebush Bay, between Wentworth
Point and Rhodes
(MP10_0192 MOD 1)**

Modification to bridge design



Director-General's
Environmental Assessment Report
Section 75W of the
Environmental Planning and Assessment Act 1979

February 2014

Cover image: Modification Environmental Assessment Dec 2013

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EXECUTIVE SUMMARY

The Homebush Bay Bridge was approved by the Executive Director, Development Assessment Systems and Approvals, under delegation of the Minister for Planning and Infrastructure in March 2013. The approved project is a 295 metre long bridge spanning Homebush Bay between Rhodes and Wentworth Point. Use of the bridge is limited to buses, emergency services, cyclists and pedestrians.

The proposal seeks to modify the approved bridge by increasing its deck height at the Rhodes landing, raising and extending the Wentworth Point approach road, and replacing the solid pier support at the Rhodes end with a cantilevered support.

The proposal was made publicly available on Planning and Infrastructure's website and Planning and Infrastructure wrote to key agencies such as Roads and Maritime Services, the Environment Protection Authority, the City of Canada Bay Council, Auburn City Council, and the owner of the construction site adjoining the Rhodes landing. No objections were received, but Canada Bay Council suggested the formation of a Technical Working Party between the Proponent and the two councils to address the various conditions requiring consultation with the two councils.

The assessment considered issues including view loss and visual impact, residential amenity, and public domain impacts. Planning and Infrastructure does not consider that these impacts are so significant as to warrant refusal or redesign of the modification. In fact, the public domain impacts are positive, as the revised bridge design provides grade separation at the Rhodes landing, and retains continuous access along the Rhodes foreshore.

Planning and Infrastructure considers that, on balance, the proposed modification should be approved.

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1. BACKGROUND

The Homebush Bay Bridge (MP10_0192) was approved by the Executive Director, Development Assessment Systems and Approvals, under delegation of the Minister for Planning and Infrastructure in March 2013. The approved project consists of a new bridge across Homebush Bay connecting the suburbs of Wentworth Point and Rhodes.

The Rhodes precinct at the eastern end of the bridge is largely developed and is predominantly high density residential development. An apartment building known as 'Monaco' is nearing completion on the northern side of the approved bridge, while on the southern side of the approved bridge is open space owned by the City of Canada Bay Council.

The Wentworth Point precinct at the western end of the bridge is less developed and the area adjacent to the proposed bridge access road is currently occupied by industrial buildings. The Homebush Bay West Development Control Plan Amendment Number 1 was approved by the Director General of Planning and Infrastructure in July 2013 and allows for a mixture of six to eight storey residential buildings and residential towers. The construction of the bridge is part of a Voluntary Planning Agreement (VPA) between Roads and Maritime Services (RMS) and the Proponent. Parts of Wentworth Point have been designated as an Urban Activation Precinct (UAP). The area subject to the Homebush Bay West DCP Amendment No 1 (i.e. the western bridge landing) is not within the UAP.

The approved bridge comprises two structures: a 222 metre five-span single-cell conventional girder bridge forms the main bridge structure over Homebush Bay; and a 73 metre bridge consisting of continuous deck units constructed on piers. The approval also incorporates associated road approaches and tie-ins to the local road network. The project location is shown in **Figure 1** and **Figure 2** shows the approved project layout.

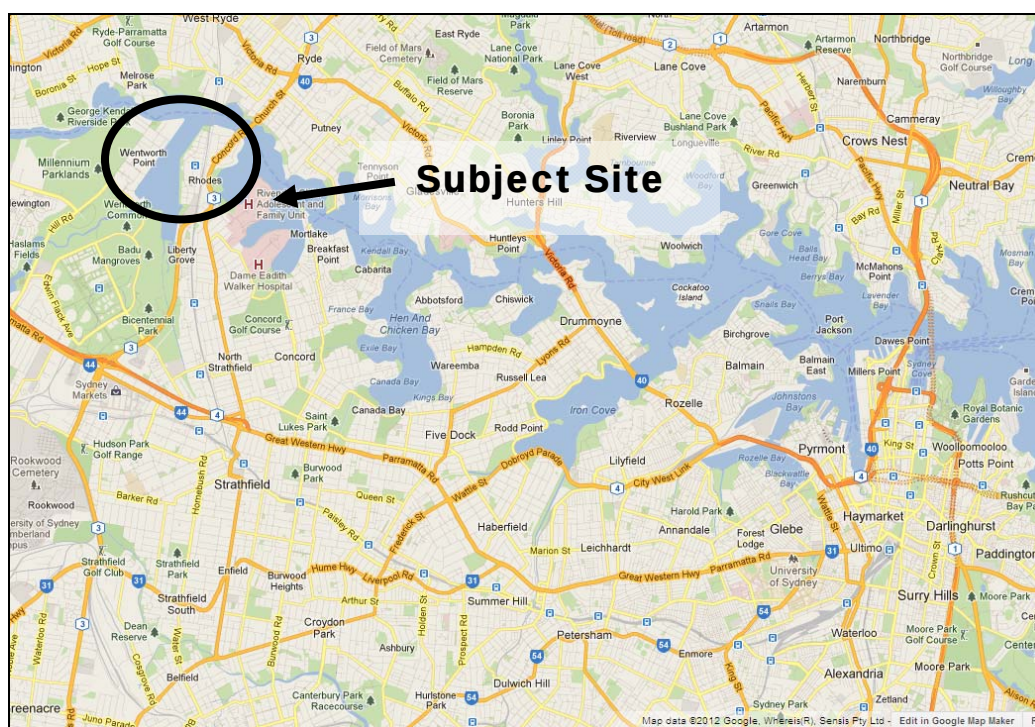


Figure 1: Project Location (Base Image Source: Google Maps 2012)

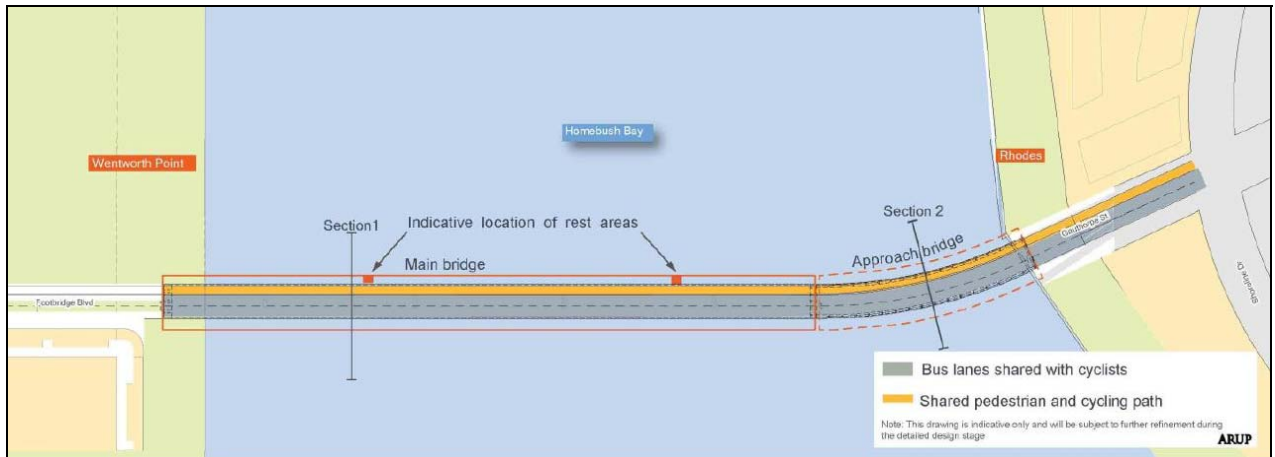


Figure 2: Approved layout (Response to submissions 2013)

The proposed modification seeks to improve the design of the bridge to reduce its environmental impacts on Homebush Bay and improve pedestrian and cycle safety by providing grade separation.

2. PROPOSED MODIFICATION

2.1 Modification Description

Fairmead Business Pty Ltd (the Proponent) has submitted a request (MP10_0192 MOD 1) under Section 75W of the Act to make improvements to the design of the proposed Homebush Bay Bridge.

The proposed modification includes adopting a balanced cantilever pre-cast bridge construction method. The new methodology would result in a reduction in the number of piers in Homebush Bay from 36 to 5. Spacing of the main bridge piers would increase from 51 metres to 68 metres.

Grade separation is proposed at Rhodes where the bridge meets the peninsula. The separation will eliminate a level crossing with bus traffic and allow for an improved pedestrian and foreshore cycleway.

The approaches to Wentworth Point have been designed as an elevated roadway to provide access to Hill Road prior to the planned completion of the remaining roads at Wentworth Point.

The proposed modified layout is shown in **Figure 3**.

The Proponent has identified that Condition of Approval B9 (which requires that the landing height at Rhodes is no higher than RL 3.0 metres) is inconsistent with the proposed modification and requests its deletion.

3. STATUTORY CONTEXT

3.1 Modification of the Minister's Approval

In accordance with clause 3 of schedule 6A of the Act, section 75W of the Act as in force immediately before its repeal on 1 October 2011 and as modified by schedule 6A, continues to apply to transitional Part 3A projects.

Section 75W of the Act provides that a proponent may request the Minister to modify the approval of a transitional Part 3A project. The Minister's approval is not required if the project, as modified, will be consistent with the original approval. The subject modification is not consistent with the approval, but does not constitute a project in its own right, and therefore a modification in accordance with section 75W of the Act is considered appropriate.

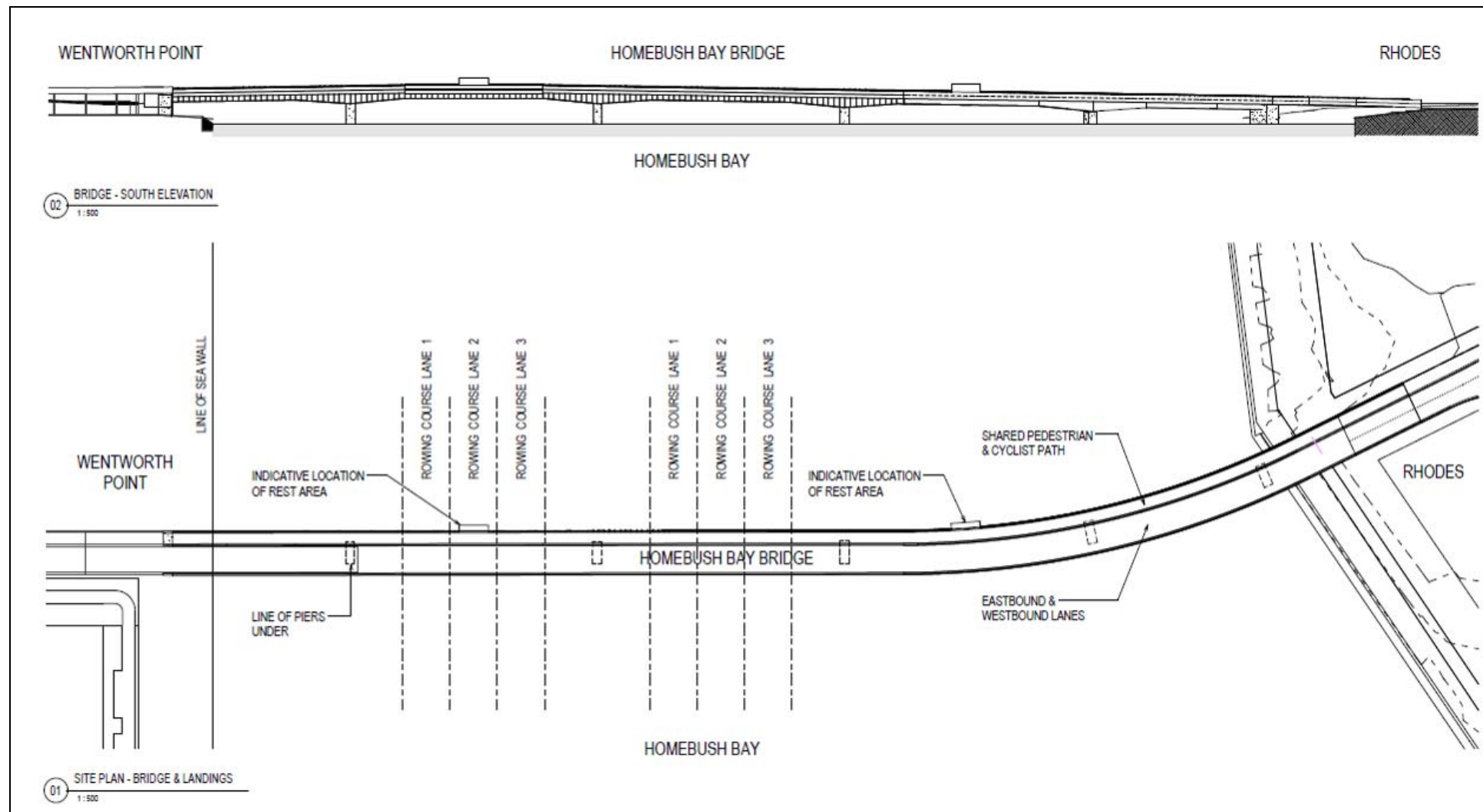


Figure 3: Proposed layout (Designs Revisions Report Nov 2013)

3.2 Delegated Authority

An application to modify a transitional Part 3A project approval may be determined by the Director, Infrastructure Projects of the Department of Planning and Infrastructure under delegation from the Minister for Planning and Infrastructure, dated 14 September 2011. This delegation applies where the local council does not object, a political disclosure statement has not been made in relation to the application, and less than 10 objections are received. This proposed modification meets the terms of this delegation, and may be determined by the Director, Infrastructure Projects.

4. CONSULTATION AND SUBMISSIONS

4.1 Exhibition

Under Section 75X(2)(f) of the Act, the Director-General is required to make the modification request publicly available. Planning and Infrastructure placed the modification request on its website and notified RMS, the Environment Protection Authority (EPA), the City of Canada Bay Council, Auburn City Council, and the adjoining building owner.

Planning and Infrastructure received comments from the EPA, RMS and Canada Bay Council.

A summary of the issues raised is provided below.

4.2 Public Authority Submissions

EPA supports the proposed modification and notes that it provides a reduced environmental impact than the approved bridge.

RMS does not object to the proposed modification but notes its ability to review the detailed design of the bridge.

The City of Canada Bay Council does not object to the proposed modification but recommends that any modified approval require that a Technical Working Party be established between the Proponent, the City of Canada Bay and Auburn Council. This Technical Working Party would meet regularly to address the various conditions of approval that require consultation with the two councils, and may operate concurrently with the Project Reference Group required by the VPA. Council recommends that the following condition be added to the approval:

Detailed Design

A technical working party shall be established to ensure consultation with Councils (CCB and Auburn) on matters related to the use of each Council's land dealt with in various conditions of this consent (A6, B2, B3, B4, B6, B13m B14, C3, c7, C8, C9, C15, E2, E3, C14) and for which Council approval will be required. The technical working party may be established in such a way as to operate concurrently with the Project Reference Group referred to in the Voluntary Planning Agreement between Roads and Maritime Services and Fairmead Business Pty Limited dated 6 December 2013(Clause 6), providing the rights of Canada Bay and Auburn Councils to decide on matters relating to the use of land within their respective areas, are not in any way diminished.

5. ASSESSMENT

Planning and Infrastructure considers the key issues for the proposed modification to be visual impact and view loss, amenity impacts on neighbouring apartments, and public domain impacts. Other issues, including contamination and pedestrian and cyclist safety are also discussed, but these issues are considered to be an improvement on the original approval.

5.1 Visual Impact and View Loss

The proposed modification will affect the views of several units in the under construction “Monaco” building adjoining the Rhodes landing.

The Proponent has provided four perspectives of the approved and proposed bridges from three ground floor units:

- ‘Unit 1’ (Views 2 and 3), the unit closest to the bridge landing;
- ‘Unit 2’ (View 1), a retail unit facing Gauthorpe Street, approximately 30 metres from the bridge landing;
- ‘Unit 3’, a unit facing Homebush Bay approximately 70 metres from the bridge. Unit 1, as the closest unit to the bridge, is likely to be the most affected unit.

Figure 4 shows the proximity of the Rhodes landing to the Monaco building:

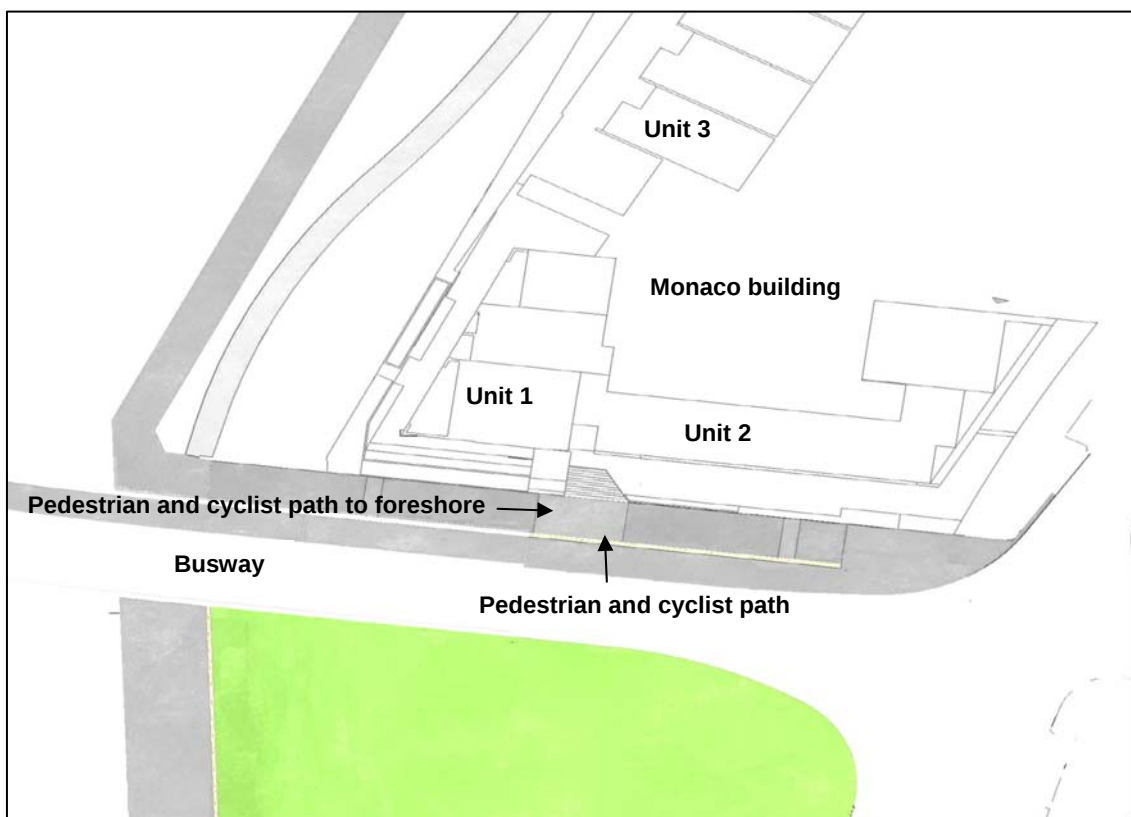


Figure 4: Location of Rhodes landing in relation to Monaco building

A commonly used assessment of the acceptability of view impacts is the planning principle provided in *Tenacity Consulting v Warringah Council* (2004) NSWLEC 140. It requires consideration of:

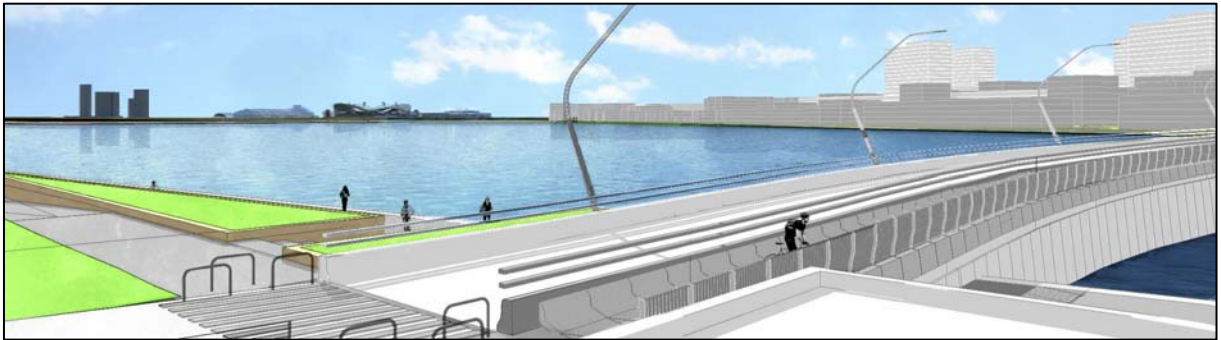
1. The assessment of the quality of views affected (e.g. water views are more highly valued than land views, and iconic views are more valuable than views without icons);
2. From which part of the property the view is obtained (e.g. impacts on views from the front or rear of a property are generally less reasonable than views from the side);
3. The extent of the impact, measured across the entire property (usually assessed qualitatively as negligible, minor, moderate, severe or devastating rather than quantitatively);

4. The reasonableness of the proposal (e.g. whether it complies with relevant planning controls and whether a redesign of the structure causing the view loss would result in a better outcome).

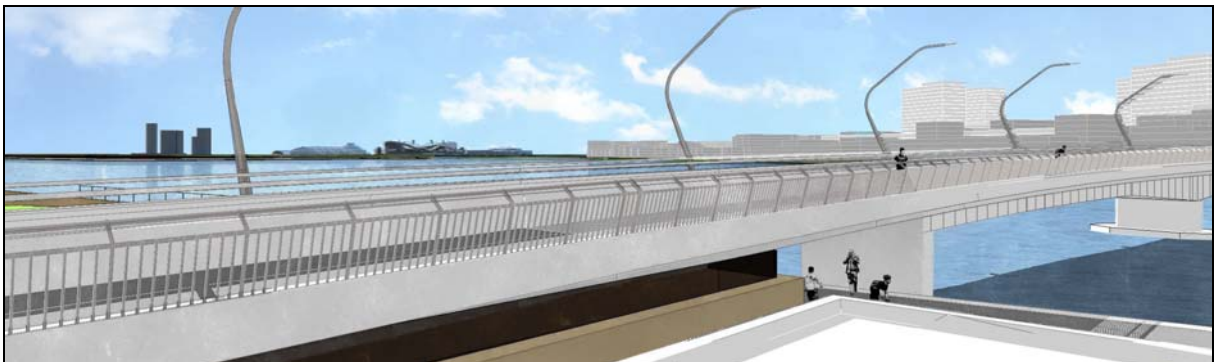
The assessment of impacts is slightly different for the three units:

Unit 1

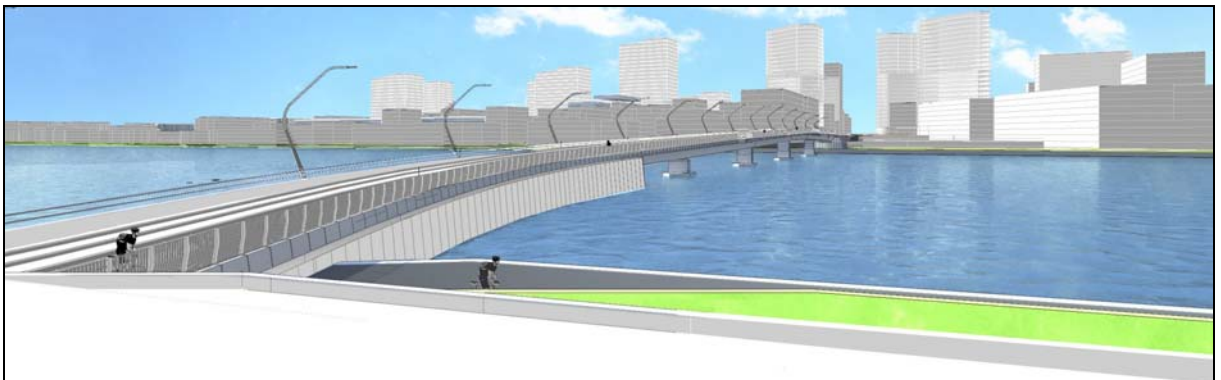
The view impacts of the approved and modified bridges are shown in **Figure 5** and outlined in **Table 1**.



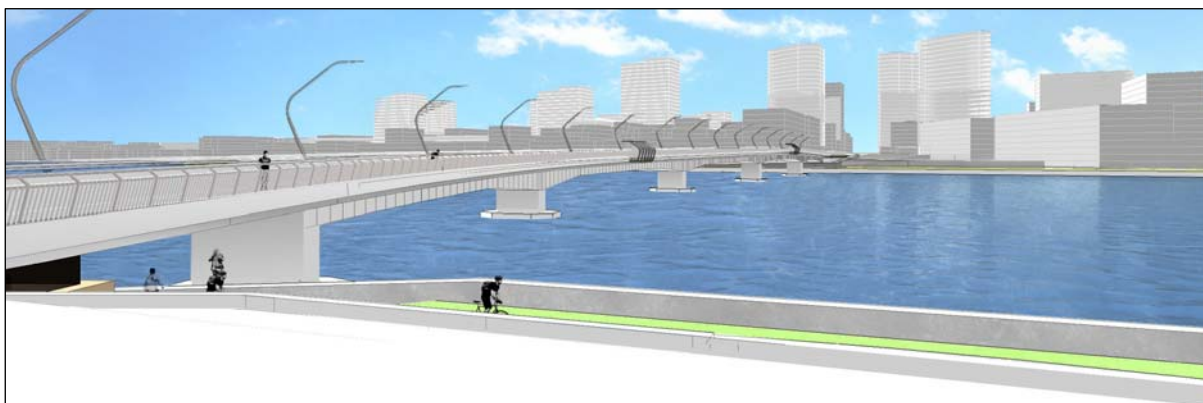
Approved view to south west from Unit 1



Proposed view to south west from Unit 1



Approved view to west from Unit 1



Proposed view to west from Unit 1

Figure 5: Comparative view impacts to Unit 1 (Source: Modification Environmental Assessment Dec 2013)

Table 1: Comparison of views from Unit 1

<i>Approved bridge</i>	<i>Modified bridge</i>
Extensive views to south-west, including Olympic Park skyline	Bridge deck and safety barriers obscure foreground water. Views to western shoreline and Olympic Park skyline retained
Views to west and north-west. View of foreground water partially obscured by pier bridge support	View of western shoreline partially obscured. Increased view of foreground water.

The view loss impact assessed against the Tenacity test is as follows:

Quality of views affected: The affected view is to the west and south-west. These views are of the near (eastern) and far (western) shores of Homebush Bay, as well as the Olympic Park skyline, which is considered to be a local landmark.

Part of property affected: Views impacted from the proposal are from the terrace, living room and one bedroom. The terrace is partly enclosed and partly open. Because Unit 1 is the corner unit and the terrace is partly open, water views from the terrace are nearly 180 degrees. The living room has water views in two directions: west, via the glass doors to the terrace, and south, via a side window. The orientation of the unit and the partial enclosure of the terrace obstruct views from the living room to the south-west. The bedroom has a water view to the south. The parts of the property affected include highly valued spaces at the front of the unit and less valued spaces at the side of the unit.

Extent of impact: The proposal affects the views from the south facing windows and from the terrace. The south facing windows and the south-western view from the terrace will retain views of the western shore of Homebush Bay and the Olympic Park skyline, but will lose views of foreground water. Views to the west from the living room and the terrace lose some of the far view of the western shore on the southern side of the bridge but gain foreground water. The view from the terrace to the north-west is unchanged. This is an approximately 60 degree plane. Given that the modification does not completely remove water views in any direction, and largely retains the valued views from the living room and terrace, the extent of the impact is considered minor to moderate.

Reasonableness of proposal: The modification of the bridge is considered to be reasonable in so far as it improves public safety and the amenity of the public domain, as discussed in Section 5.3 below.

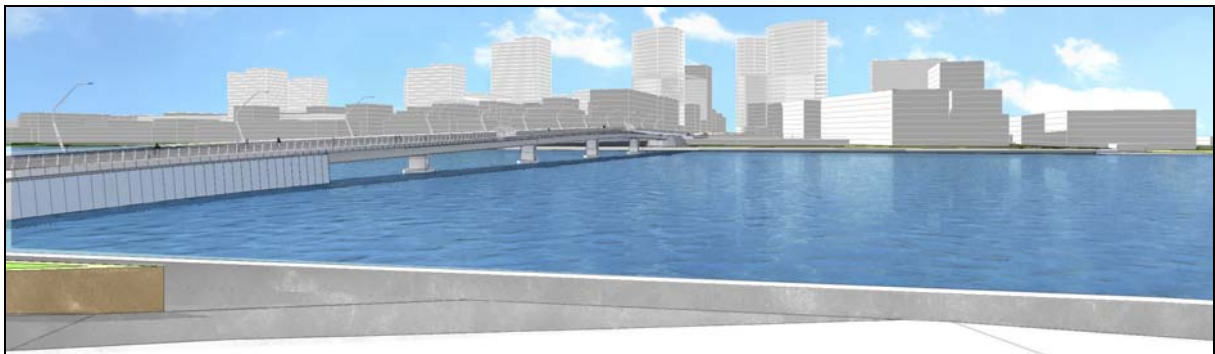
The proposal reduces the views from Unit 1 to the south and south-west, but retains views to the Olympic Park skyline and views to the west and north-west are unchanged. View impacts to Unit 1 are not considered to be unacceptable.

Unit 2

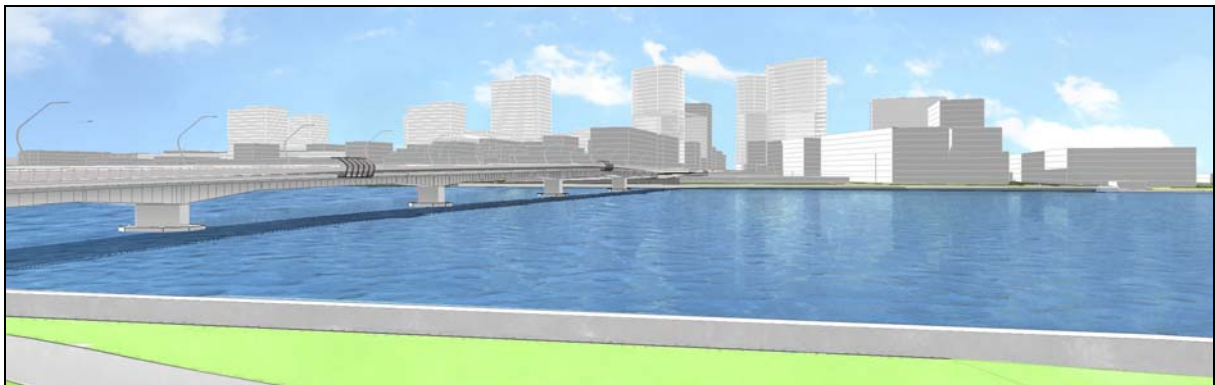
Unit 2 is a retail unit and its type of occupancy has not been determined. As this unit is not a residential unit and the future use of the unit is unknown, a view loss analysis is not considered necessary.

Unit 3

The view impacts of the approved and modified bridges are shown in Figure 1 and outlined in Table 2.



Approved view to west from Unit 3



Proposed view to west from Unit 3

Figure 6: Comparative view impacts to Unit 3 (Modification Environmental Assessment Dec 2013)

Table 2: Comparison of views from Unit 3

<i>Approved bridge</i>	<i>Proposed bridge</i>
Views to west and north-west. Solid bridge support obscures foreground and middle ground water	Views to west and north-west largely retained. Small area of western foreshore obscured. Increased view of foreground water

The view loss impact assessed against the Tenacity test is as follows:

Quality of views affected: The affected view is to the west and south-west. This is a view to the near (eastern) and far (western) shores of Homebush Bay.

Part of property affected: Views impacted from the proposal are from the west facing terrace and living room. The terrace is open and affords approximately 135 degrees of water view. The parts

of the property potentially affected include the highly valued terrace and living rooms spaces at the front of the unit.

Extent of impact: The proposal removes a sliver of visible western shoreline on the southern side of the bridge. However, by removing the solid base section, it increases the foreground water view. The impact is considered neutral.

Reasonableness of proposal: As the proposal does not have a clear negative view loss impact, the reasonableness of the proposal is not a consideration.

The proposal has a neutral impact on Unit 3, which in any case enjoys substantial water views. View impacts to Unit 3 are considered acceptable.

The proposal is likely to have a detrimental impact on views from some lower level units in the adjoining Monaco building. The view impacts have been considered against the Tenacity planning principle and, given that these units all retain shoreline and local landmark views, are not considered to warrant refusal or redesign of the proposed modification.

5.2 Amenity Impacts

The raised deck height at the Rhodes landing has the potential for amenity impacts on units within the Monaco building in terms of noise and visual privacy.

The raised bridge deck and approach will reduce the level separation between the bridge and ground floor apartments. This is expected to have negative impacts, as buses will be closer to those apartments, and positive impacts, as the removal of the pedestrian crossing at the end of the currently approved bridge and the reduction of the gradient of the approach road are expected to reduce the need for braking and acceleration.

The reduced level separation is likely to increase the visual privacy impact of the bridge. This is most evident at the southern elevation of the Monaco building, as the ground floor unit (Unit 1) has bedroom and living room windows at this elevation. The existing deck is approximately three metres below the ground floor level, which reduces overlooking opportunities to these windows. The height of the modified deck (RL 5.4 metres) will be closer to that of the finished floor level of the ground floor unit (RL 6.1 metres). This would provide bus passengers with a near level view into these windows. Pedestrians and cyclists may have a view into these units, although their vantage point would be from a lower level than that of bus passengers. Overlooking is not a concern for Unit 2 because it is a retail unit.

Planning and Infrastructure has considered the use of a privacy screen or similar measures on the bridge, but considers that such measures would have a detrimental impact on view loss from the affected rooms. Given that one of the affected rooms is a living room, from which views are highly valued, and that, based on the proposed view perspective in **Figure 5**, a screening device would likely obstruct the water view from those windows, no screening measures are recommended.

The orientation of the currently approved bridge provides overlooking opportunities to the western façade of units facing Homebush Bay. Planning and Infrastructure considers that the change in level is unlikely to significantly affect the overlooking of those units, as the view from the eastern bridge end (i.e. the raised section of the bridge) to these terraces is from an oblique angle.

The Proponent has requested the deletion of Condition B9, which requires the bridge deck height at the Rhodes landing to be no higher than RL 3.0. Planning and Infrastructure does not support this deletion, as it is important to maintain a precise deck height to ensure that impacts are as assessed. Drawing PA-002 rev A depicts the revised deck height of RL 5.3, rising at a 1:40 grade to RL 5.8. It is recommended that Condition B9 be modified to require a deck height consistent with PA-002 rev A.

The proposal is likely to impact on the amenity of the ground floor south-western corner unit in terms of visual privacy and potentially in terms of noise. These impacts are considered to be somewhat mitigated by the separation of approximately 8.5 metres to the pedestrian and cyclist lane of the bridge and 10.5 metres to the bus lane, and the inclusion of a screening device would likely create additional view loss impacts. Given that the proposal is considered to improve the public domain and pedestrian and cyclist safety, the residual amenity impacts to this unit are not considered so severe as to warrant refusal or redesign of the proposal.

5.3 Public Domain

The proposed modification is considered to be generally sympathetic to the public domain at each foreshore.

The grade separation at the Rhodes landing will improve the amenity and safety of the foreshore walkway. The pier section of the currently approved bridge is a visual and physical barrier between the walkway on the northern and southern sides of the bridge. The proposed modification will allow continuous pedestrian and cyclist access along the foreshore, and will provide a view from the northern foreshore reserve to the southern shore of Homebush Bay, as shown in

Figure 7 below:



Figure 7: Perspectives of approved (top) and proposed (bottom) bridges from foreshore pedestrian and cycleway (Modification Environmental Assessment Dec 2013)

In addition to preserving the connectivity of the walkway, the grade separation is expected to improve the safety of people using the public domain by removing the requirement for pedestrians and cyclists using the walkway to cross the bridge approach road.

The land to the south of the bridge approach is owned by the City of Canada Bay Council and future development plans for this land include a community facility and public domain works. Planning and Infrastructure considers it appropriate that the design of the modified bridge structure and associated public domain works (including the underpass) are sympathetic to Council's future plans.

The existing Condition C8 requires that the proponent prepare an Urban Design and Landscape Plan for the project, to be prepared in consultation with the two councils and the RMS. This condition can accommodate the urban design and landscaping works associated with the modified bridge.

Condition B2 requires that a detailed lighting plan be developed in consultation with the two councils and the RMS. Condition B2(a) requires "adequate lighting of the pedestrian underpass at Wentworth Point". Given that the modification introduces a pedestrian underpass at Rhodes, it is recommended that B2(a) also refer to Rhodes.

In response to the City of Canada Bay's request for a condition requiring a Technical Working Party, Planning and Infrastructure notes that the Planning Agreement between the Proponent and RMS (the eventual owner of the bridge) requires the formation of a Project Reference Group including the Proponent, the RMS, the City of Canada Bay Council, and Auburn City Council. The Planning Agreement was executed on 6 December 2013.

Planning and Infrastructure accepts the recommendation of the City of Canada Bay. While the Project Reference Group requires the involvement of the two councils, the recommended condition provides a greater focus on coordinating public domain works. The suggested condition is considered to be a sensible method of coordinating the conditions requiring council consultation and/or approval, while maintaining consistency with the requirements of the VPA. A reworded version of the proposed condition, specifying timing for the commencement of the Technical Working Party, is included in the Instrument of Approval.

In regard to Wentworth Point, the extended bridge approach raises the level of the proposed Footbridge Boulevard by approximately two metres above the level envisaged in the original proposal, although it maintains its east-west alignment. Given its limited height increase and the fact that detailed urban design of this precinct in Wentworth Point has not yet occurred, the proposed raising of the bridge approach is not expected to significantly impact upon the Wentworth Point public domain.

6. CONCLUSION AND RECOMMENDATIONS

The proposal seeks to modify the approved Homebush Bay bridge by raising its deck height at the Rhodes landing, replacing the solid pier design at the Rhodes end with a cantilevered deck, and by raising the height and length of the Wentworth Point approach road.

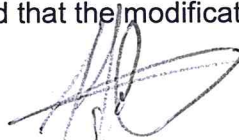
Planning and Infrastructure has considered the *Homebush Bay Bridge Minor Modification to Project Approval Environmental Assessment* dated December 2013 and the *Design Revisions Report* dated November 2013, both prepared by Scott Carver Pty Ltd, and has also considered submissions made by public authorities.

Key issues in the assessment are view loss and visual impact, amenity of adjoining residents, and public domain impacts.

Planning and Infrastructure considers that the proposal improves the public domain at the Rhodes landing by improving pedestrian and cyclist safety and removing the approved solid pier's obstruction of the foreshore pathway. Public domain impacts at Wentworth Point are considered neutral given the relatively early stage of urban development in that precinct.

The proposed modification is likely to impact upon the views, visual privacy and noise impacts of some units within the adjoining Monaco development. However, these units will retain substantial water views. Noise impacts are not expected to be substantially different to those of the approved bridge, and additional visual privacy impacts will be experienced by one unit and will be partially mitigated by the 8.5 metre separation from the bridge.

While impacts of the modification to individual units are noted, they are not considered to outweigh the proposal's broader public benefits. Therefore, based on Planning and Infrastructure's assessment, it is recommended that the modification be approved.



Alexander Scott
Planning Officer



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**A/ Team Leader
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26/2/14



Karen Jones 27.2.14
**Director
Infrastructure Projects**

APPENDIX A MODIFICATION REQUEST

See Planning and Infrastructure's website at
http://majorprojects.planning.nsw.gov.au/page/development-categories/transport--communications--energy---water/roads/?action=view_job&job_id=6314

APPENDIX B SUBMISSIONS

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APPENDIX C RELEVANT REPORTS OR DOCUMENTS

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APPENDIX D RECOMMENDED MODIFYING INSTRUMENT
