



Metro
Body of
Knowledge

Planning Approval Environmental Review Form

SM-22-00008046

Sydney Metro – Metro Body of Knowledge (MBoK)

Assessment Name:	High Street Steps rectification
Prepared by:	Sydney Metro
Prepared for:	Sydney Metro and Besix Watpac – Barangaroo Station contractor
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Table of Contents

Environmental Review	3
1. Proposed works and justification.....	3
2. Consistency with Conditions of Approval.....	5
3. Environmental review	5
4. Recommendation	7
5. Certification	7
6. Endorsement	8

Environmental Review

1. Proposed works and justification

An environmental review is applicable to design changes which are consistent with the conditions of approval and would have negligible impacts on the community and/or the environment. This environmental review is required to demonstrate compliance with the conditions of approval and Sydney Metro Chatswood to Sydenham Environmental Impact Statement (EIS) and the Chatswood to Sydenham Submissions and Preferred Infrastructure Report (SPIR). A description of activities is listed in Table 1 and an assessment provided in Section 2.

Table 1 Description of proposed works

Description	Overview
Location of works	High Steps, Barangaroo. The High Street steps are a part of the Hickson Road Retaining Wall (also known as the High Street Cutting, or High Street Retaining Wall) at its southern end.
Scope of works	As part of the High Street steps tie-in works, to provide a smooth transition with the existing stair landing surface, rectification would be required to return the stair landing back to its original appearance and provide safety benefits. This would require saw-cutting and/or jack hammering of the landing to remove the concrete slab repairs to install a 105mm gang sawn sandstone slab. The concrete landing surface is not original and has a neutral or intrusive value. Replacement with a sandstone slab will distinguish the landing from the adjacent footpath and be sympathetic with the landing recess which is of exposed cut rock. The repairs will restore the landing surface to its original fabric type and appearance and eliminate safety hazards.
Justification for works	The landing of the High Street steps is in need of repair. The cement render surface is cracked, has rough edges, and old concrete repairs are failing, causing an uneven edge. Reinstatement of the Hickson Road footpath by the project requires the new footpath surface to be level with the High Street steps landing. The uneven edge will be a trips and falls risk once the footpath is reinstated, therefore requiring the rectification works.
Timeframe for works	Works are proposed to occur for approximately one week during September 2023.
Work hours, workforce and equipment / machinery	Work would be completed during standard construction hours, 7am to 6pm, Monday to Friday and 8am to 6pm on Saturday. Equipment would include saw-cutter and jack hammering.

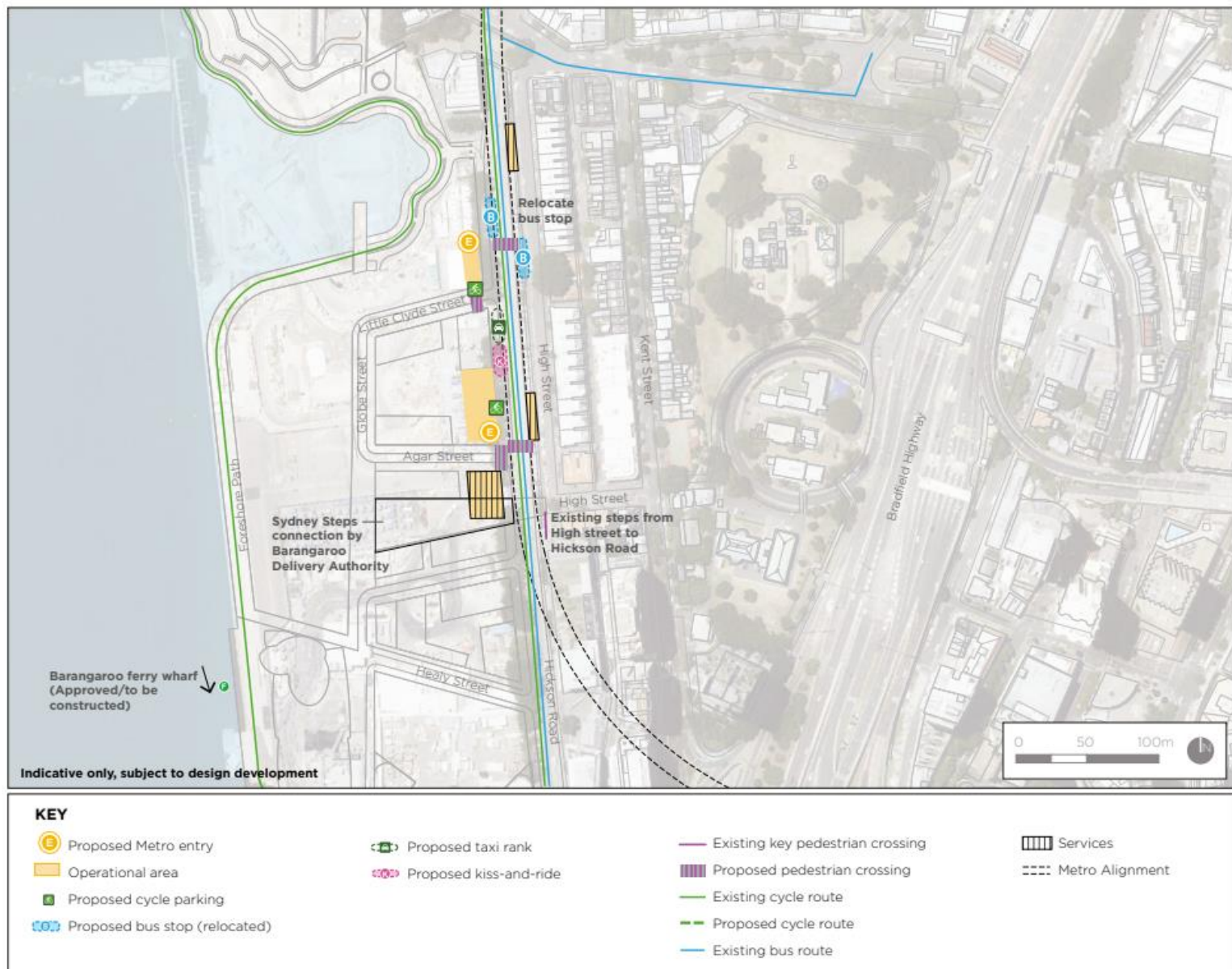


Figure 1 Location of works area (Figure 9-6 of the EIS)

2. Consistency with Conditions of Approval

The following table outlines whether the proposed changes would be consistent with the relevant Conditions of Approval.

Table 2 Comparison of the proposal with relevant elements of the Approved Project

Relevant elements of the Approved Project	Proposed Change
The approved project (SSI 7400) allows for alterations to pedestrian and traffic arrangements and public transport infrastructure around the new Stations.	The proposed works are consistent with the EIS. Due to safety concerns, alterations are required to rectify the landing of the High Street steps to connect to the new footpath at the base of the heritage wall and reduce trip hazard.
Section 14.5.6 of the EIS assessed negligible indirect heritage impacts to Palisade fence and High Steps, for views and vistas only.	Repairs are proposed to the landing surface of High Steps (Sydney LEP 2012 (Palisade Fence and High Steps, 1882)) to eliminate safety risks. Whilst the EIS considered the visual heritage impact, the physical impact was not assessed. Repairing the landing of the High Street steps will respect and restore the heritage significance of the Millers Point & Dawes Point Village Precinct by ensuring the continued use and function of the steps.

3. Environmental review

The following table provides a risk review of the potential environmental impacts of the proposed works.

Table 3 Environmental review

Environmental review	Yes / No	Description of impacts (including consideration of safeguards required by the Approved Project)
Is the proposal to take place outside of the construction footprint of the project	Yes	Location of works are directly on/ adjacent to the construction footprint. The proposal is required to rectify High Street Steps which are in need of repair to eliminate safety concerns.
Is the location of works within the existing EPL premise boundary	No	N/A. No EPL associated with the Project.
Will the works take longer than 2 weeks to complete.	No	No, the works would take approximately one week to complete, commencing 7 September 2023. These dates are weather dependent and may be subject to change.
Does the work require OOHV approval	No	N/A. No OOHV would be required.
Will the works impact an EEC or threatened species	No	N/A. No EEC or threatened species applicable to the area.
Will works impact on native vegetation	No	N/A. No clearing of vegetation required.
Will the works impact on habitat trees	No	N/A. No clearing of vegetation required.
Will clearing of non EECs or ground disturbance be of High /	No	N/A. No clearing of vegetation required.

moderate condition vegetation. What is the area of impact		
Will the works result in medium / high noise or vibration impacts Will noise and vibration impacts on sensitive receivers be greater than that predicted in the EIA	No	The equipment that would be used during the works would include saw-cutting and/or jack hammering. Any noise impacts produced would be temporary in nature and would be consistent with the noise levels assessed with the EIS.
Will the works result in medium/ high air quality impacts	No	N/A. Works would not cause any air quality impacts.
Will the activity be located adjacent to or in close proximity to sensitive receivers	Yes	The closest residential sensitive receiver is located within close proximity on High Street. The proposed works wouldn't result in additional noise impact and would be temporary in nature.
Would there be additional impact from what was predicted in the EIS on an Aboriginal / Historic heritage site as a result of the works	No	<p>The EIS considered the visual heritage impact but did not assess for the physical impacts to High Steps. Heritage assessment was obtained and is provided in Appendix A.</p> <p>The Hickson Road Retaining Wall (also known as the High Street Cutting, or High Street Retaining Wall) is a contributory element to Item 01682 on the State Heritage Register (SHR) and shares its State significant heritage values.</p> <p>The High Street steps are a part of the retaining wall at its southern end. The steps have a separate listing on the Sydney LEP 2012 (Palisade Fence and High Steps, 1882).</p> <p>The steps are of heritage significance as an integral part of the pedestrian network of Millers Point that connected the wharfs to the suburb above.</p> <p>Repairing the landing of the High Street steps with a sandstone surface will respect and restore the heritage significance of the Millers Point & Dawes Point Village Precinct by ensuring the continued use and function of the steps.</p> <p>The concrete landing surface is not original and has a neutral or intrusive value. Replacement with a sandstone slab will distinguish the landing from the adjacent footpath, and be sympathetic with the landing recess which is of exposed cut rock.</p> <p>The replacement of the concrete slab repairs with a gang sawn sandstone slab is consistent with the principles of restoring original fabric and appearance.</p> <p>Overall, the proposed works would have a positive heritage impact to the project by complying with the conservation policies and recommendations set out in <i>Hickson Road Retaining Wall Barangaroo: Conservation Policy and Guidelines</i> (GML Heritage, 2021).</p>
Are works within 10m of a watercourse	No	No watercourses are located within 10m of the location of works.
Are works in an area of known contamination	Yes	There would be no soil disturbance as part of the proposed works. There would be concrete rectification works only
Will the works result in temporary or long-term traffic impacts	Yes	The works would result in temporary pedestrian impacts. The pedestrian High Steps would be closed as part of the proposed works.
Will the works result in visual impacts to sensitive receivers	No	The works are temporary in nature and would result in negligible visual impacts to sensitive receivers.

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4. Recommendation

Based on the above assessment, and with reference to the Sydney Metro Chatswood to Sydenham Environmental Impact Statement (EIS) and Chatswood to Sydenham Submissions and Preferred Infrastructure Report (SPIR), including the conditions of approval and associated CEMP and plans, it is recommended that:

✓	The proposed design/construction change is consistent with the Approved Project Sydney Metro Chatswood to Sydenham EIS and Chatswood to Sydenham SPIR including the conditions of approval, has negligible impacts on the community and environment and no further assessment is required.
	The proposed design/construction change is likely to be consistent with the Approved Project Sydney Metro Chatswood to Sydenham EIS and Chatswood to Sydenham SPIR, however more than a negligible impact on the community and environment may result and further assessment in the form of a Planning Approval Consistency Assessment form is required to be completed and submitted to the Planning team for the proposed design/ construction change.
	The proposed design/ construction change is not substantially the same as the Approved Project and is considered a radical transformation. A new planning pathway should be considered.

5. Certification

The above information provides a true and fair review of the proposed works.

Prepared by (signed):

Isabella Caruso

Date: 13.9.23

Name: Isabella Caruso

Position: Planning Approval Officer


6. Endorsement

I have reviewed the above review and provide the following endorsement:

✓	The proposed design/construction change is consistent with the Sydney Metro Chatswood to Sydenham EIS and Chatswood to Sydenham SPIR, has negligible impacts on the community and environment and no further assessment or modification of the planning approval is required.
	The proposed design/construction change is likely to be consistent with the Sydney Metro Chatswood to Sydenham EIS and Chatswood to Sydenham SPIR, however more than negligible impacts are expected on the community and environment and further assessment is required.
	The proposed design/construction change constitutes a project modification and requires further assessment and approval.

This endorsement is conditional on the following:

1. All works will be carried out in accordance with the Sydney Metro Chatswood to Sydenham Environmental Impact Statement (EIS) and Chatswood to Sydenham Submissions and Preferred Infrastructure Report (SPIR) and the Project Conditions of Approval.
2. All works will be carried out in accordance with the approved Construction Environmental Management Plan and any relevant sub plans.

Signed:	
Endorsed by:	Fil Cerone
Date:	7 September 2023

Appendix A – Heritage Memos

MEMO



DATE: 1 September 2023

AMBS Ref: 20870 Memo 11

TO: Rory Geerin, Site Engineer, BesixWatpac Group

FROM: Mike Hincks, Senior Historical Heritage Consultant, AMBS Ecology & Heritage

SUBJECT: Advice for repairs to High St Steps landing, Hickson Road Retaining Wall and cutting, Barangaroo

The Sydney Metro & City Southwest project was approved by the Minister for Planning on 9 January 2017 as Critical State Significant Infrastructure. AMBS Ecology & Heritage (AMBS) was responsible for managing all heritage aspects of the Sydney Metro City & Southwest Chatswood to Sydenham Metro project TSE works, and production of the overarching Construction Heritage Management Plan for the project.

The construction of the new Barangaroo Station for the project involved substantial excavations for the station box in Hickson Road, adjacent to the Hickson Road Retaining Wall. The Barangaroo Station site is within the *Millers Point & Dawes Point Village Precinct*, which is Item 01682 on the State Heritage Register (SHR). The Precinct has identified historical, associative, aesthetic, and social significance, research potential, rarity and representativeness. The Hickson Road Retaining Wall (also known as the High Street Cutting, or High Street Retaining Wall) is a contributory element to item 01682 and shares its State significant heritage values. The High Street steps are a part of the retaining wall at its southern end. The steps have a separate listing on the Sydney LEP 2012 (*Palisade Fence and High Steps*, 1882). The steps are of heritage significance as an integral part of the pedestrian network of Millers Point that connected the wharfs to the suburb above. They are of historical significance for their association with the Sydney Harbour Trust's redevelopment early in the 20th century.

Proposed Works

The landing of the High Street steps is in need of repair. The cement render surface is cracked, has rough edges, and old repairs are failing, causing an uneven edge. Reinstatement of the Hickson Road footpath by the project requires the new footpath surface to be flush with the High Street steps landing. The uneven edge will be a trips and falls risk once the footpath is reinstated. Repairs are proposed to the landing surface to eliminate those risks (Figure 1).

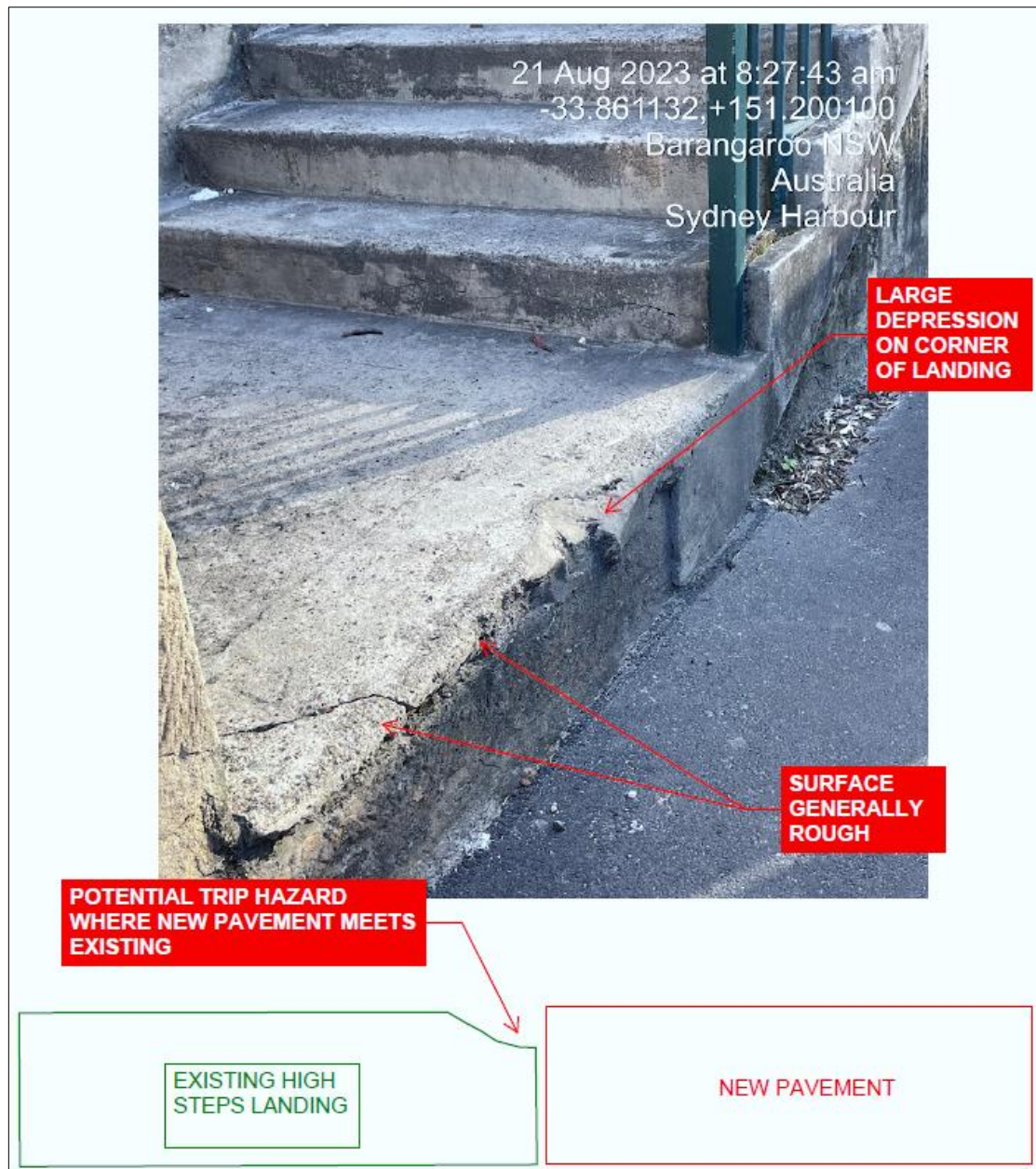


Figure 1: Illustration showing the uneven edge and trip hazard once the Hickson Road footpath is reinstated.

Background

The Minister's Condition of Approval relevant to the protection of heritage is:

E10 The Proponent must not destroy, modify or otherwise physically affect any Heritage item not identified in documents referred to in Condition A1 (which refers to the project EIS and PIR).

The proposed repairs to the High Street steps are outside of the scope of the original project description, but are similar in scope and nature to several make good works related to the Hickson Road retaining wall which have been approved since that time.

In 2021, GML Heritage prepared a guiding document for all future repairs and works affecting the Hickson Road retaining wall and cutting, of which the High Street Steps form a part. The *Hickson Road Retaining Wall Barangaroo: Conservation Policy and Guidelines* (GML Heritage, 2021) provided policies and guidelines against which future works could be measured. The Conservation Principles include a responsibility to retain and conserve significant features of the retaining wall, including the High Street steps in an open/function state, including the concrete steps, metal palisade and balustrades, and wall surfaces (GML Heritage, 2021, p. 16). The proposed repairs satisfy this responsibility.

RJC Group (RJC, stonemasons) were engaged in 2022 to provide a methodology for removal of anchors and rockfall mesh and repairs to the Hickson Road retaining wall. The study included a methodology for repairing the cement render and sandstone parts of the wall. The methodology was approved by Heritage NSW. RJC should be consulted to provide advice where matching of original concrete colour and texture is required.

Construction and condition of the steps landing

The landing recess has been cut from the outcropping sandstone which forms the lower part of the wall and cutting in this area. The area of the landing has been cut 80-85mm lower than the existing surface and then finished with concrete. There appears to be a layer of fine and brittle cement mortar (c.40mm) between the sandstone and the concrete. This was only visible where the lip of the landing had broken away (Figure 3). The concrete finish contains a dense gravel aggregate (Figure 2). The steps and landing are all finished with the same mix, although there are twentieth-century repairs throughout that have not been matched correctly. The Hickson Road face of the landing step was originally cement rendered, but this has mostly broken away (Figure 4). The remaining render on the face has no aggregate and appears to be part of a later repair.



Figure 2: Small pebble aggregate and cracking at the edge of the landing.

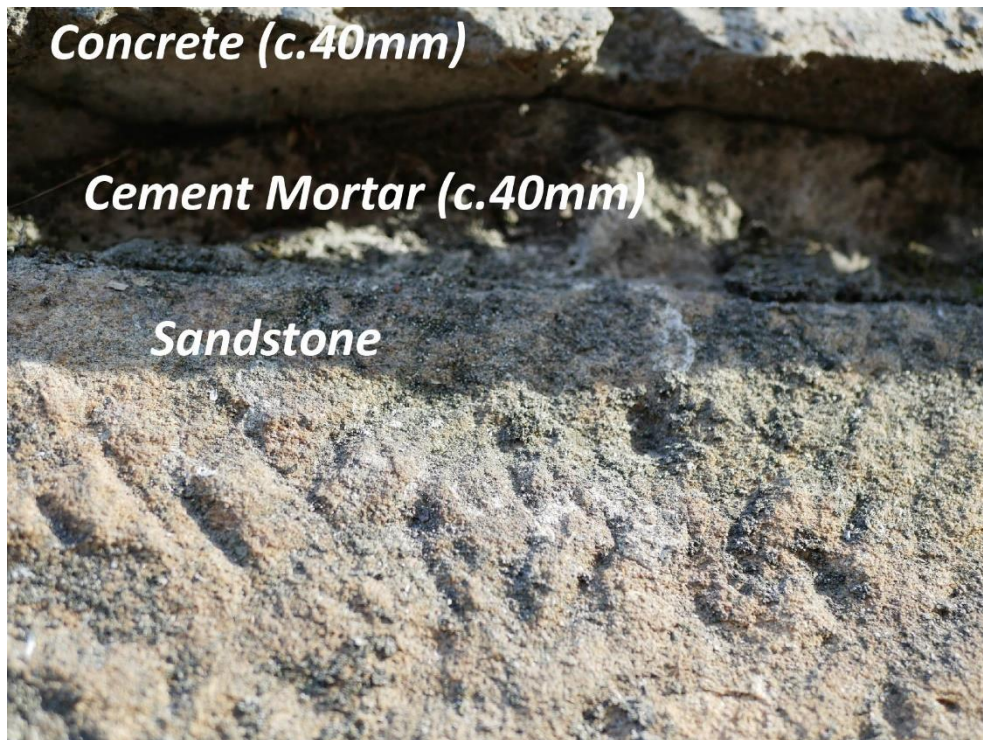


Figure 3: Detail showing the layers of construction within the landing surface.



Figure 4: The remaining render on the Hickson Road face of the landing step does not appear to be original and has no aggregate.

Recommendations

Repair of the concrete should be consistent with the recommendations and policies of the *Hickson Road Retaining Wall Barangaroo: Conservation Policy and Guidelines* (GML Heritage, 2021).

Damage to the original sandstone cut should be avoided. Surface repairs should be limited to the removal and replacement of the areas of damaged concrete and underlying cement mortar, and the intrusive repairs only.

RJC stonemasons should be consulted to advise on the concrete mix so that an appropriate match is made, in line with the approved methodology for repairs to other parts of the Hickson Road retaining wall.

Compliance with Recommendations, Policy and Guidelines

The aims of the *Hickson Road Retaining Wall Barangaroo: Conservation Policy and Guidelines* (GML Heritage, 2021) report were to address the management of physical and visual impacts to the wall and provide guidance on the management of works more generally within the heritage setting (2021, p. 1). The steps are assessed as having a High degree of original fabric, with a policy to retain and conserve (GML Heritage, 2021, p. 13). In the absence of direct recommendations for the repair and replacement of the concrete that forms the steps surfaces, the general principles for repairing the cement parts of the wall should be followed.

Conservation policies relating to the cement-rendered concrete parts of the wall that are relevant to the current works (GML Heritage, 2021, p. 15) include the following responsibilities addressed in the table below:

Responsibility	Compliance
Minimise change or impacts to significant natural or built features including the High [Street] steps. Retain the original cement render finish where possible.	Only parts of the concrete surface necessary to eliminate risk of trips and falls should be removed and replaced. All original surface fabric will be retained wherever possible.
New render repairs are to involve only necessary patching which match in mix/composition, colour, grain, and texture. Patch the wall with a matching render in colour and texture.	The area of the repair should be patched with a concrete mix matching the existing colour and texture. Dense gravel aggregate will be added to the mix to match the existing mix. A record of the mix used will be documented for future repairs.

The guidelines for works to heritage fabric (p. 19) include the following general principles:

- Conserve and re-use all sound original/early fabric where possible.
- Ensure that whenever early fabric is dismantled for repair, the work is done in such a way as to retain as much of the original fabric as possible.
- Ensure significant early fabric is protected from ongoing deterioration by undertaking appropriate repairs using specified and/or otherwise approved methods and materials.
- Ensure that whenever fabric is removed it is done carefully, so as to retain maximum original fabric.

- Ensure that all new work to replace damaged and/or missing components and/or fabric matches the significant early materials and detail identified on site. Prior to commencement, a selected section/component of original work will be nominated by the heritage consultant, in consultation with the contractor, as a suitable sample for matching.

Assessment against heritage values and significance

Repairing the landing of the High Street steps will respect and restore the heritage significance of the *Millers Point & Dawes Point Village Precinct* by ensuring the continued use and function of the steps. The damaged part of the landing edge includes repairs which have not been matched and are intrusive. The repairs will restore those parts of the landing. The recommended methodology ensures that the patches will match the colour, texture and surface properties of the surrounding fabric.

The High Street Retaining Wall, including the High Street steps has been identified as having historic, aesthetic and social significance, and should also be considered to have technical significance. The repairs proposed by the project respect the heritage values of the Hickson Road Retaining Wall and comply with the conservation policies and recommendations set out in *Hickson Road Retaining Wall Barangaroo: Conservation Policy and Guidelines* (GML Heritage, 2021).

References

AMBS Ecology & Heritage (2017) *High Street Cutting, Millers Point Statement of Heritage Impact*, Report to John Holland CPB Ghella Joint Venture.

GML Heritage (2021) *Hickson Road Retaining Wall Barangaroo: Conservation Policy and Guidelines*, Report prepared for Sydney Metro April 2021.

MEMO



DATE: 13 September 2023

AMBS Ref: 20870 Memo 12

TO: Rory Geerin, Site Engineer, BesixWatpac Group

FROM: Jennie Lindbergh, Director Historic Heritage, AMBS Ecology & Heritage

SUBJECT: Additional advice for repairs to High St Steps landing, Hickson Road Retaining Wall and cutting, Barangaroo

RJC stonemasons have been engaged by BesixWatpac to repair the landing of the High Street steps in accordance with AMBS Memo 11, dated 1 September 2023.

Upon removal of part of the concrete slab, an earlier slab was exposed below. RJC have assessed the slabs as being successive attempts to repair the uneven landing after wear and tear and erosion. The upper slab was steel reinforced, suggesting that it was a relatively late repair. RJC suggest that the original landing is likely to have been sandstone, in keeping with the recess for the landing and stairs, which displays the original cut rock.

RJC propose to remove the concrete slab repairs to install a 105mm gang sawn sandstone slab, returning the landing back to its original appearance with sympathetic tooling. A 'gang sawn' finish gives the stone a rough textured surface, in keeping with the sandstone face of the cutting for the High Street steps.

Advice in Memo 11 was based on an assumption that the concrete surface of the landing was original or early. As the surface has since been assessed as a late repair to an original sandstone landing, its contributory significance to the High Street steps and Hickson Road cutting and retaining wall is one that is neutral, or intrusive.

In 2021, GML Heritage prepared a guiding document for all future repairs and works affecting the Hickson Road retaining wall and cutting, of which the High Street Steps form a part. The *Hickson Road Retaining Wall Barangaroo: Conservation Policy and Guidelines* (GML Heritage, 2021) provided policies and guidelines against which future works could be measured. The Conservation Principles include a responsibility to retain and conserve significant features of the retaining wall, including the High Street steps in an open/function state, including the concrete steps, metal palisade and balustrades, and wall surfaces (GML Heritage, 2021, p. 16).

The landing is at the interface of the concrete steps and the tooled sandstone face of the cutting. The walls of the landing recess are cut stone, as is the exposed Hickson Road face of the landing which is flush with the face of the wall.

The guidelines for works to heritage fabric (p. 19) include the following general principles:

- Conserve and re-use all sound original/early fabric where possible.
- Ensure that whenever early fabric is dismantled for repair, the work is done in such a way as to retain as much of the original fabric as possible.

- Ensure significant early fabric is protected from ongoing deterioration by undertaking appropriate repairs using specified and/or otherwise approved methods and materials.
- Ensure that whenever fabric is removed it is done carefully, so as to retain maximum original fabric.
- Ensure that all new work to replace damaged and/or missing components and/or fabric matches the significant early materials and detail identified on site. Prior to commencement, a selected section/component of original work will be nominated by the heritage consultant, in consultation with the contractor, as a suitable sample for matching.

The replacement of the concrete slab repairs with a gang sawn sandstone slab is consistent with the principles of restoring original fabric and appearance.

Assessment against heritage values and significance

Repairing the landing of the High Street steps with a sandstone surface will respect and restore the heritage significance of the *Millers Point & Dawes Point Village Precinct* by ensuring the continued use and function of the steps. The concrete landing surface is not original and has a neutral or intrusive value. Replacement with a sandstone slab will distinguish the landing from the adjacent footpath, and be sympathetic with the landing recess which is of exposed cut rock. The repairs will restore the landing surface to its original fabric type and appearance.

The High Street Retaining Wall, including the High Street steps has been identified as having historic, aesthetic and social significance, and should also be considered to have technical significance. The repairs proposed by the project respect the heritage values of the Hickson Road Retaining Wall and comply with the conservation policies and recommendations set out in *Hickson Road Retaining Wall Barangaroo: Conservation Policy and Guidelines* (GML Heritage, 2021).

References

GML Heritage (2021) *Hickson Road Retaining Wall Barangaroo: Conservation Policy and Guidelines*, Report prepared for Sydney Metro April 2021.