



# **Sydney Harbour Bridge – Replacement of Arch Maintenance Units**

Submissions Report

**May 2020**

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## Executive summary

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Transport for NSW will replace the four existing Sydney Harbour Bridge arch maintenance units (AMUs) with two new AMUs. Each of the AMUs will have a movable gantry and two smaller building maintenance units (BMUs). The replacement is needed to allow safe access to all areas of the arch above the road level for inspections and maintenance. The project is likely to start in 2021 and may take up to five years to complete.

Transport for NSW prepared a Review of Environmental Factors (REF) for the project which was on display between Tuesday 4 February 2020 and Tuesday 25 February 2020. The REF was available on the project webpage to view or download and a hard copy of the document was also made available. During this time, Transport for NSW invited the public to provide feedback on the project.

Public display of the REF resulted in one submission from a member of the community. The main issues raised were:

- No details provided on lead paint removal and recoating of the bridge arch and hangers using the new AMUs
- The REF contained limited information on the process and criteria used to guide option selection
- Specific engineering design suggestions to improve the functionality and safety of the project.

A summary of the response to these is provided below:

- The main objective is to design and install a safe system to allow access to all areas of the arch above the deck of the Bridge that have previously been difficult to access for inspections and maintenance. Maintenance activities would continue to include the removal of lead paint and recoating using existing safe processes
- The design of the access system was developed to meet the objective of safe access but also considered key constraints such as the need to minimise impacts on significant heritage fabric, visual impacts from key viewpoints on the bridge and in the surrounding area, limitations on additional loads to the bridge structure and disruption to traffic using the bridge
- The project maximises access to the bridge arches while minimising visual impacts from key viewpoints and direct impacts on significant heritage fabric. No further design changes are proposed.

Transport for NSW as the determining authority has considered the information in the REF and this submissions report and has decided to proceed with the project.

Transport for NSW will continue to keep the community informed as this project progresses.

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# 1 Introduction and background

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## 1.1 The project

Transport for NSW will replace the four existing Sydney Harbour Bridge arch maintenance units (AMUs) with two new AMUs. Each of the AMUs will have a movable gantry and two smaller building maintenance units (BMUs). The replacement is needed to allow safe access to all areas of the arch above the road level for inspections and maintenance.

The main features of the project are:

- Removal of the four existing AMUs
- Installation of a track system along the top of bridge arches
- Installation of two new AMUs
- Relocation of the existing walkways on the bridge arch from the centre to the outer edge.

A more detailed description of the project can be found in the Sydney Harbour Bridge – Replacement of arch maintenance units Review of Environmental Factors prepared by Transport for NSW in January 2020.

## 1.2 REF display

Transport for NSW prepared a Review of Environmental Factors (REF) to assess the potential environmental impacts of the proposed work. The REF was on display for 22 days between Tuesday 4 February and Tuesday 25 February 2020. The REF was available on the project webpage to view or download. A hard copy of the document was also available at the Milsons Point Transport for NSW office (20-44 Ennis Road, Milsons Point). During this time, Transport for NSW invited the public to provide feedback on the project.

The website link and information about the hard copy was provided in a Community Update distributed to about 11,000 residences and businesses (including key stakeholders) to the north and south of the bridge.

## 1.3 Purpose of the report

This submissions report relates to the Sydney Harbour Bridge replacement of Arch Maintenance Units REF, and should be read in conjunction with that document.

The REF was placed on public display and one submission was received by Transport for NSW. This submissions report summarises the issues raised and provides responses to each issue (Chapter 2) and identifies new or revised environmental management measures (Chapter 3).

## 2 Response to issues

Transport for NSW received one submission. Submissions were accepted up until Tuesday 25 February 2020. Table 2-1 lists the respondents and each respondent's allocated submission number. The table also indicates where the issues from each submission have been addressed in Chapter 3 of this report.

**Table 2-1: Respondents**

Respondent	Submission No.	Section where issues are addressed
Individual	1	Section 2.2

### 2.1 Overview of issues raised

One submission from a member of the community was received in response to the display of the REF.

The submission has been examined to understand the issues being raised. The issues raised have been summarised, and corresponding responses to the issues have been provided. The issues raised and Transport for NSW response to these issues forms the basis of this chapter.

The submission received objected to the project in its current form.

The main issues raised in the submission were:

- No details provided on lead paint removal and recoating of the bridge arch and hangers using the new AMUs
- The REF contained limited information on the process and criteria used to guide option selection
- Specific engineering design suggestions are made to improve the functionality and safety of the project.

No submissions from government agencies and no form letter submissions were received during the public display period.

### 2.2 Assessment of paint removal and repainting

#### Submission numbers

1

#### Issue description

The submission queries why details of lead paint removal and recoating of the bridge arch and hangers using the new AMUs are not included in the REF. The submission notes that details of enclosures and the air recovery and cleaning system should have been included. There is a further suggestion that these works need to be investigated so that the choice of AMUs does not limit how these works can be carried out.

#### Response

The main objective of the project is to design and install a system to allow safe access to all areas of the arch above the deck of the bridge that have previously been difficult to access for inspections and maintenance. Maintenance activities would

include the removal of lead paint and recoating. Transport will continue to use its existing processes to meet its work health and safety and environment protection obligations in accordance with relevant Australian standards for lead paint removal and management.

## **2.3 Options development and evaluation**

### **Submission numbers**

1

### **Issue description**

The submission notes that the only information contained in the REF on refinement of options relates to use of plate web girders versus trusses for the main supports of the gantry. The submission queries whether there was a comprehensive set of operation and performance criteria and asks whether the chosen option met all of the criteria.

### **Response**

The design of the access system was developed considering key constraints such as the need to minimise impacts on significant heritage fabric, visual impacts from key viewpoints on the bridge and in the surrounding area, and disruption to traffic using the bridge. The main operational criteria for providing safe access to all areas of the bridge arches has been achieved in the design.

## **2.4 Functionality of the project**

### **Submission numbers**

1

### **Issue description**

The submission suggests the project will not provide the level of performance which could be achieved and that it should aim to provide maximum functionality and safety. The following specific comments on functionality were made in the submission:

- The project relies on swing stages with no form of lateral control which and leaves the operation of the system open to wind conditions similar to the existing situation. A criteria could have been set defining an operating wind speed allowing operation in a wider variety of wind conditions
- It is unclear whether the two AMUs can be used to lift materials, and if so, where they would land at road deck level and how this would be safely managed
- It is not clear if the proposed basket configuration, with support ropes at the ends, will allow workers to access the southern and northern faces of the hangers except by reaching out, and using tools etc. with no support beneath. This appears to be an unnecessary deficiency which could have been overcome in the performance specification.

### **Response**

The project maximises access to the bridge arches while minimising visual impacts from key viewpoints and direct impacts on significant heritage fabric. No further design changes are proposed.

The following is also noted in response to the issued raised in the submission:

- The adopted cradle option eliminates the need to have complicated rigid structures on top of the bridge that generate higher loads and high levels of negative visual impacts from a heritage perspective. Clamping of the cradle to the bridge provides for greater stability. Wind information screens would also be provided in the AMU to assist with decisions about operation
- The AMUs can be used to lift materials from the road deck level. The management of safe operations, including detailed safety requirements and training, are currently being identified in operational procedures
- The project allows for safe access to the hangers. Operational procedures cover safety requirements when carrying out work using the basket at all locations, including the hangers.

## **2.5 Suggested changes to the project**

### **Submission numbers**

1

### **Issue description**

The submission suggests the following design improvements:

- Add a positional control pack to each work cradle with a specified set of operational wind speeds under which it would achieve stability. This would require power to be available to the cradle. Another problem for the proposed concept which shows no provision for power
- Have a cradle extension at one or both ends which would allow workers to move directly to arch centreline rather than being offset
- Replace the swing stage concept with a powered basket or platform system. These might, if configured for the bridge, allow workers to drive to any point on the upper and possibly lower planes of the arch and be much less affected by wind. It may be that one unit rather than two is sufficient on the gantry, possibly facilitated by a second unit providing crane, davit and general support, including perhaps, deployment of a containment structure.

### **Response**

The project maximises access to the bridge arches while minimising visual impacts from key viewpoints and direct impacts on significant heritage fabric. No further design changes are proposed.

The following is also noted in response to the issues raised in the submission:

- Clamping of the cradle to the bridge provides for greater stability. Wind information screens would be provided in the AMU to assist with decisions about operation. Power will be provided to the cradle
- Complicated structural elements that could be designed for access on top of the arches would likely have greater visual impacts including associated impacts on heritage significance. The current design would provide access to all areas of the Bridge arch above the deck.

## **2.6 Objection to the project**

### **Submission numbers**

1

### **Issue description**

The submission objected to the project in its current form.

### **Response**

The objection is noted and the reasons for the objection to the project have been considered in the sections above.

## **3 Environmental management**

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The REF for the project identifies the framework for environmental management, including safeguards and management measures that would be adopted to avoid or reduce environmental impacts (section 7.2 of the review of environmental factors).

After consideration of the issues raised in the public submissions no changes to proposed safeguards and management measures were considered necessary.

Environmental management will be guided by the framework and measures outlined below.

### **3.1 Environmental management plans**

A number of safeguards and management measures have been identified in the REF in order to minimise adverse environmental impacts, including social impacts, which could potentially arise as a result of the project. These safeguards and management measures would be incorporated into the detailed design and applied during the construction and operation of the project.

A Construction Environmental Management Plan (CEMP) and associated Environmental Work Method Statements (EWMS) will be prepared to describe the safeguards and management measures identified. The CEMP and EWMS will provide a framework for establishing how these measures will be implemented and who would be responsible for their implementation.

The CEMP and EWMS will be prepared prior to construction of the project and must be reviewed and certified by the Transport for NSW Environment Officer, Greater Sydney Project Office, prior to the commencement of any on-site works. The CEMP will be a working document, subject to ongoing change and updated as necessary to respond to specific requirements. The CEMP would be developed in accordance with specifications including QA Specification G36 – Environmental Protection (Management System) and QA Specification G10 – Traffic Management.

### **3.2 Summary of safeguards and management measures**

The REF for the project identifies a range of environmental outcomes and management measures that would be required to avoid or reduce the environmental impacts.

After consideration of the issues raised in the public submissions, the environmental management measures for the project (refer to Chapter 7 of the REF) have been retained without changes. The environmental management measures in Table 3-1 will guide the subsequent phases of the project.

**Table 3-1: Summary of safeguards and management measures**

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
GEN1	General - minimise environmental impacts during construction	<p>A CEMP (and EWMS) will be prepared and submitted for review and endorsement of the Transport for NSW Environment Manager prior to commencement of the activity.</p> <p>As a minimum, the CEMP will address the following:</p> <ul style="list-style-type: none"> <li>• any requirements associated with statutory approvals</li> <li>• details of how the project will implement the identified safeguards outlined in the REF</li> <li>• issue-specific environmental management plans</li> <li>• roles and responsibilities</li> <li>• communication requirements</li> <li>• induction and training requirements</li> <li>• procedures for monitoring and evaluating environmental performance, and for corrective action</li> <li>• reporting requirements and record-keeping</li> <li>• procedures for emergency and incident management</li> <li>• procedures for audit and review.</li> </ul> <p>The endorsed CEMP will be implemented during the undertaking of the activity.</p>	Transport for NSW Project Manager	Pre-construction	Standard Safeguard
GEN2	General - notification	All businesses, residential properties and other key stakeholders (e.g. schools, local councils) affected by the activity will be notified at least five business days prior to commencement of the activity.	Transport for NSW Project Manager	Pre-construction	Standard Safeguard
GEN3	General – environmental awareness	All personnel working on site will receive training to ensure awareness of environment protection requirements to be implemented	Transport for NSW Project Manager	Pre-construction	Standard Safeguard

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
		<p>during the project. This will include up-front site induction and regular "toolbox" style briefings. Site-specific training will be provided to personnel engaged in activities or areas of higher risk. These include:</p> <ul style="list-style-type: none"> <li>• Heritage values and the requirements of Heritage Act 1977 exemptions</li> <li>• Air quality management measures (including encapsulation of work areas)</li> <li>• Location of noise sensitive receivers and noise management measures.</li> </ul>			
GEN4	General	Any proposal to substantially modify the design of the proposal, works and boundaries applicable to the project as described in the REF would require additional environmental impact assessment.	Transport for NSW Project Manager	Pre-construction	Additional safeguard
GEN5	General	Greater Sydney Project Office environment staff will be consulted in relation to any proposal to trial new surface preparation, maintenance and/or repair techniques. Any additional safeguards or other requirements will be incorporated into the CEMP prior to proceeding with the trialling of the new activity.	Transport for NSW Project Manager	Pre-construction	Additional safeguard
GEN6	General	Any works resulting from this approval and as covered by the REF may be subject to an environmental audit(s) and/or inspection(s) at any time during their duration.	Transport for NSW Environment Staff	Construction	Additional safeguard
GEN7	General	The Transport for NSW Project Manager is to notify Greater Sydney Project Office environment staff, at least 5 days prior to work commencing.	Transport for NSW Project Manager	Pre-construction	Additional safeguard
NAH1	Non-Aboriginal heritage	The materials used in new works will be compatible with the visual character of the Sydney Harbour Bridge. This includes	Transport for NSW Project Manager	Detailed design	Additional safeguard

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
		selection of modern and lightweight materials that are, where appropriate, coloured to match the existing fabric of the bridge including existing steelwork tones. The material palette of the proposal will be consistent with other Sydney Harbour Bridge projects.			
NAH2	Non-Aboriginal heritage	Where feasible, works will be designed to reduce the visual prominence of new elements along the top of the main arch structure.	Transport for NSW Project Manager	Detailed design	Additional safeguard
NAH3	Non-Aboriginal heritage	A photographic archival recording of the affected areas will be prepared prior to the start of works and following completion of works, in accordance with the NSW Heritage Division publications How to prepare archival records of heritage items and Photographic Recording of Heritage Items using Film or Digital Capture. The original copy of the archival record will be deposited with the Heritage Division, Office of Environment and Heritage, and an additional copy will be provided to the City of Sydney and North Sydney Council.	Transport for NSW Project Manager	Pre-construction Construction	Additional safeguard (s.60 approval)
NAH4	Non-Aboriginal heritage	All work will be carried out by suitably qualified tradespersons with demonstrated experience in conservation of similar heritage structures, methods and materials. All tradesmen are to be inducted on the significance of the heritage item prior to works commencing.	Contractor	Construction	Additional safeguard (s.60 approval)
NAH5	Non-Aboriginal heritage	A suitably qualified and experienced heritage consultant will be nominated. The nominated heritage consultant will provide input into the detailed design and supervise the works to minimise impacts to heritage values. The nominated heritage practitioner will be consulted prior to the selection of appropriate	Transport for NSW Project Manager	Detailed design Pre-construction Construction	Additional safeguard (s.60 approval)

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
		tradespersons and must be satisfied that all work has been carried out in accordance with the conditions of the Heritage Act s.60 approval.			
NAH6	Non-Aboriginal heritage	Significant elements will be adequately protected during the works from potential damage. Protection systems will ensure historic fabric is not damaged or removed.	Transport for NSW Project Manager	Construction	Additional safeguard (s.60 approval)
NAH7	Non-Aboriginal heritage	A heritage induction will be provided for all workers prior to works commencing. The induction will cover all heritage related safeguards and management measures.	Transport for NSW Project Manager	Pre-construction	Additional safeguard
NVI1	Construction noise	All employees, contractors and subcontractors are to receive an environmental induction. The induction must at least include: <ul style="list-style-type: none"> <li>• All project specific and relevant standard noise and vibration mitigation measures</li> <li>• Relevant licence and approval conditions</li> <li>• Permissible hours of work</li> <li>• Any limitations on high noise generating activities</li> <li>• Location of nearest sensitive receivers</li> <li>• Construction employee parking areas</li> <li>• Designated loading/unloading areas and procedures</li> <li>• Site opening / closing times (including deliveries)</li> <li>• Environmental incident procedures</li> </ul>	Transport for NSW Project Manager	Pre-construction Construction	Construction Noise and Vibration Guideline Appendix B
NVI2	Construction noise	The following would be raised in inductions and avoided during works: <ul style="list-style-type: none"> <li>• Swearing or unnecessary shouting</li> <li>• Loud stereos/radios</li> </ul>	Transport for NSW Project Manager	Construction	Construction Noise and Vibration Guideline Appendix B

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
		<ul style="list-style-type: none"> <li>• Dropping of materials from height, throwing of metal items and slamming of doors</li> <li>• Use of equipment which generates impulsive noise, where possible</li> <li>• Metal-to-metal contact on equipment, where possible.</li> </ul>			
NVI3	Construction noise	A letterbox drop notification for residential receivers will occur at least five days prior to works on approach spans that are likely to exceed noise management levels. The extent of the notification will be determined with reference to the noise assessment and the specific types of activities proposed. The notification will detail work activities, dates and hours, impacts and mitigation measures. It will also include a contact number for enquiries and complaints.	Transport for NSW Project Manager	Construction	Construction Noise and Vibration Guideline Appendix C
NVI4	Construction noise	Works likely to exceed construction noise management levels during evening and night periods will be managed in accordance with the Transport for NSW Construction Noise and Vibration Guideline.	Transport for NSW Project Manager	Construction	Construction Noise and Vibration Guideline Appendix C
NVI5	Construction noise	Verification of background noise and construction noise levels will occur in response to noise related complaints. Verification will be in accordance with Appendix F of the Construction Noise and Vibration Guideline. The results of the noise measurements will be used to inform consideration of any necessary changes to work practices or additional mitigation measures.	Transport for NSW Project Manager	Construction	Construction Noise and Vibration Guideline Appendix C
NVI6	Construction noise	The noisiest works will be scheduled to occur before 11 pm where possible.	Transport for NSW	Construction	Construction Noise and Vibration

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
					Guideline Appendix C
WQU1	Water quality impacts associated with paint repair	Removal of all materials identified as being coated with paint containing lead (or other hazardous metallic pigments) will be conducted in accordance with guidance as set out in AS/NZS 4361.1:2017 Guide to hazardous paint management Part 1 Lead and other hazardous metallic pigments in industrial applications. This will include conducting a Lead Risk Assessment for each work location1.	Transport for NSW Project Manager	Construction	Additional safeguard
WQU2	Water quality impacts	There is to be no release of dirty or contaminated water into Sydney Harbour.	Transport for NSW Project Manager	Construction	Additional safeguard
WQU3	Spills	Plant and equipment will be inspected regularly to ensure there are no leakages of fuel, oil and hydraulic fluid.	Transport for NSW Project Manager	Construction	Additional safeguard
WQU4	Spills	Work practices will be structured to minimise the risk of spills on-site.	Transport for NSW Project Manager	Construction	Additional safeguard
WQU5	Spills	An emergency spill kit is to be kept on site at all times and maintained throughout the construction work. The spill kit must be appropriately sized for the volume of substances at the work site.	Transport for NSW Project Manager	Construction	Additional safeguard
WQU6	Spills	Storage of chemicals and fuels and refuelling of plant and equipment is to occur on impervious surfaces with spill containment available.	Transport for NSW Project Manager	Construction	Additional safeguard
WQU7	Spills / incidents	If a spill or incident occurs, the <i>Environmental Incident Classification and Reporting Procedure</i> (Roads and Maritime Services, 2017) is to be followed and the Transport for NSW Regional Environment Manager notified immediately.	Transport for NSW Project Manager	Construction	Additional safeguard

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
WQU8	Spills / incidents	In the event of a maritime spill, an incident emergency plan would be implemented in accordance with Sydney Ports Corporation's response to shipping incidents and emergencies outlined in the <i>NSW State Waters Marine Oil and Chemical Spill Contingency Plan</i> (Roads and Maritime Services, 2016). The plan would be part of the Construction Environmental Management Plan and would include relevant emergency contacts.	Transport for NSW Project Manager	Construction	Additional safeguard
AQU1	Air quality impacts associated with paint repair	Paint dust and flakes would be contained during paint removal or repair works. The methodology adopted would be dependent on the location, expected wind loads and form of access and would be informed by the risk assessment carried out in accordance with AS/NZS 4361.1:2017.	Transport for NSW Project Manager	Construction	Additional safeguard
AQU2	Air quality impacts associated with paint repair	Works (including the spraying of paint and other materials) are not to be carried out during strong winds or in weather conditions where high levels of dust or air borne particulates are likely.	Transport for NSW Project Manager	Construction	Additional safeguard
AQU3	Air quality impacts associated with paint repair	Works must cease when air borne dust cannot be controlled.	Transport for NSW Project Manager	Construction	Additional safeguard
AQU4	Air quality impacts associated with paint repair	Paints containing fast drying solvents will be used to minimise the impact of air sprayed paint emissions.	Transport for NSW Project Manager	Construction	Additional safeguard
AQU5	Air quality impacts associated with paint repair	Air quality monitoring will be undertaken in accordance with AS/NZS 4361.1:2017 Guide to hazardous paint management Part 1 Lead and other hazardous metallic pigments in industrial applications.	Transport for NSW Project Manager	Construction	Additional safeguard

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
VIS1	Visual impacts during works	Works areas will be maintained in a clean and tidy state and visual clutter will be minimised.	Transport for NSW Project Manager	Construction	Additional safeguard
VIS2	Ongoing visual impacts	All services pipes, wiring or cable trays will be concealed in the structure.	Transport for NSW Project Manager	Detailed design	Additional safeguard
VIS3	Ongoing visual impacts	Bolt fixings will have domed heads and will be painted to match existing, subject to structural and maintenance requirements.	Transport for NSW Project Manager	Detailed design	Additional safeguard
VIS4	Ongoing visual impacts	A preferred parking location for the AMUs will be determined to minimise visual impacts (a position along the arch may be a more appropriate place than at the ends where the line of the arch is interrupted).	Transport for NSW Project Manager	Detailed design	Additional safeguard
VIS5	Ongoing visual impacts	Works would ensure retention of the “bridge grey” colour scheme.	Transport for NSW Project Manager	Construction	Additional safeguard
WMA1	Construction waste management	<p>The following resource management hierarchy principles would be followed:</p> <ul style="list-style-type: none"> <li>• Avoid unnecessary resource consumption as a priority.</li> <li>• Avoidance would be followed by resource recovery (including reuse of materials where possible, reprocessing, and recycling and energy recovery).</li> </ul> <p>Disposal would be undertaken as a last resort (in accordance with the <i>Waste Avoidance and Resource Recovery Act 2001</i>).</p>	Transport for NSW Project Manager	Construction	Additional safeguard
WMA2	Construction waste management	Working areas are to be maintained, kept free of rubbish and cleaned up at the end of each working day.	Transport for NSW Project Manager	Construction	Additional safeguard
WMA3	Construction waste management	All wastes would be collected and disposed of legally in accordance with their classification under the <i>Waste Classification Guidelines Part 1: Classifying Waste</i> (Environment Protection Authority, 2014).	Transport for NSW Project Manager	Construction	Additional safeguard

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
OTH1	Biodiversity	Fauna handling must be carried out in accordance with the requirements the <i>Biodiversity Guidelines</i> - Guide 9 (Fauna Handling).	Transport for NSW Project Manager	Construction	Additional safeguard
OTH2	Traffic and transport	Access for vehicular, cyclist and pedestrian traffic across the bridge will be maintained, except when a full bridge closure is required.	Transport for NSW Project Manager	Construction	Additional safeguard
OTH3	Traffic and transport	Works within the rail corridor (at deck level) will only occur during scheduled track possession periods.	Transport for NSW Project Manager	Construction	Additional safeguard
OTH4	Socio-economic	<p>A Communication Plan will be prepared and implemented as part of the CEMP to help provide timely and accurate information to the community during construction. The Communication Plan will include (as a minimum):</p> <ul style="list-style-type: none"> <li>• Mechanisms to provide details and timing of proposed activities to affected residents, including changed traffic and access conditions</li> <li>• Contact name and number for complaints</li> <li>• Notification requirements for noise generating activities</li> <li>• Procedures for communicating with other projects to determine the potential for concurrent activities and associated cumulative impacts.</li> </ul>	Transport for NSW Project Manager	Construction	Standard safeguard
OTH5	Socio-economic	The Bridge Concessionaire will be provided with at least 14 days' notice for planned works and at least 24 hours' notice unplanned repairs and/or maintenance requiring diversion of climbing routes. Notification is to be consistent with any with the applicable agreement	Transport for NSW Project Manager	Construction	Additional safeguard

No	Impact.	Environmental safeguards	Responsibility	Timing	Reference
		between Transport for NSW and the Bridge Concessionaire.			
CII1	Cumulative impacts	<p>Current and upcoming projects with the potential to interact with bridge maintenance activities will be monitored. Where potential cumulative impacts are identified, the scheduling of works will be coordinated with interacting projects to minimise potential impacts. This will include</p> <ul style="list-style-type: none"> <li>• Scheduling works to allow suitable respite periods for construction noise</li> <li>• Coordinating lane closures and pedestrian/cyclist diversions to minimise the overall number of occasions where disruption occurs.</li> </ul>	Transport for NSW Project Manager	Construction	Additional safeguard

### 3.3 Licencing and approvals

Table 3-2 provides a summary of the licensing and approval requirements relevant to the project.

**Table 3-2: Summary of licensing and approvals required**

<b>Instrument</b>	<b>Requirement</b>	<b>Timing</b>
Heritage Act 1977	Heritage Council approval required in relation to works affecting a State Heritage Register item.	On 6 June 2018, the Heritage Council approved the proposed replacement of the AMUs under section 63 of the Heritage Act, subject to eight conditions (refer to Appendix C).
Roads Act 1993 (Section 138)	Road occupancy licence for lane closures on the Sydney Harbour Bridge and approaches.	Prior to road occupancy
Protection of the Environment Operations (Waste) Regulation 2014 (Part 4)	Tracking requirements for hazardous waste (which includes lead paint waste). Obligations for consignor, transporter and receiver of waste.	Prior to transport of hazardous waste.

## References

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