Barham-Koondrook Bridge – Truss span transport route work

Addendum review of environmental factors

Roads and Maritime Services | August 2018

NSW GOVERNMENT

BLANK PAGE

Barham-Koondrook Bridge – Truss span transport route work

Addendum review of environmental factors

Roads and Maritime Services | August 2018

Prepared by Roads and Maritime Services

Document controls

Approval and authorisation

Title	Barham-Koondrook Bridge – Truss span transport route work Addendum review of environmental factors
Accepted on behalf of NSW Roads and Maritime Services by:	Sam Millie Bridge Works Manager
Signed:	
Dated:	6-Aug-2018

Contents

Tables

Appendices

1. Introduction

1.1 Proposed modification overview

Roads and Maritime Services (Roads and Maritime) proposes to modify the Barham-Koondrook Bridge – Truss and Victorian approach span restoration by including the removal of up to four trees, temporary removal of an electricity stay pole and the possible removal and replacement of a boundary fence (proposed modification).

The location of the proposed modification is shown in Figure 1-1 and Figure 1-2. Chapter 3 describes the proposed modification in more detail.

A review of environmental factors (REF) was prepared for the Barham-Koondrook Bridge – Truss and Victorian approach span restoration in February 2016 (referred to in this addendum REF as the project REF). The project REF was placed on public display between 29 February 2016 and 18 March 2016 for community and stakeholder comment. A submissions report, dated May 2016 was prepared to respond to issues raised.

In addition, the Barham-Koondrook Bridge – Pedestrian pathway improvements addendum REF was prepared in April 2017 and the Barham-Koondrook Bridge – Additional stockpile site addendum REF was prepared in April 2018.

Figure 1-1: Location of the proposed modification

Figure 1-2: The proposed modification

1.2 Purpose of the report

This addendum review of environmental factors (REF) has been prepared by Roads and Maritime South West Region. For the purposes of this work, Roads and Maritime is the proponent and the determining authority under Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

This addendum REF is to be read in conjunction with the project REF, submissions report and previous addendum REF for the project. The purpose of this addendum REF is to describe the proposed modification, to document and assess the likely impacts of the proposed modification on the environment, and to detail mitigation and management measures to be implemented.

The description of the proposed work and assessment of associated environmental impacts has been undertaken in context of clause 228 of the Environmental Planning and Assessment Regulation 2000, *Is an EIS Required? Best Practice Guidelines for Part 5 of the Environmental Planning and Assessment Act 1979* (*Is an EIS Required?* guidelines) (DUAP, 1995/1996), *Roads and Road Related Facilities EIS Guideline* (DUAP, 1996), the *Biodiversity Conservation Act 2016* (BC Act), the *Fisheries Management Act 1994* (FM Act), and the Australian Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

In doing so, the addendum REF helps to fulfil the requirements of Section 5.5 of the EP&A Act including that Roads and Maritime examine and take into account to the fullest extent possible, all matters affecting or likely to affect the environment by reason of the activity.

The findings of the addendum REF would be considered when assessing:

- Whether the proposed modification is likely to result in a significant impact on the environment and therefore the necessity for an environmental impact statement to be prepared and approval to be sought from the Minister for Planning under Division 5.2 of the EP&A Act.
- The significance of any impact on threatened species as defined by the BC Act and/or FM Act, in section 1.7 of the EP&A Act and therefore the requirement for a Species Impact Statement or a Biodiversity Development Assessment Report.
- The significance of any impact on nationally listed biodiversity matters under the EPBC Act, including whether there is a real possibility that the activity may threaten long-term survival of these matters, and whether offsets are required and able to be secured.
- The potential for the proposed modification to significantly impact any other matters of national environmental significance or Commonwealth land and therefore the need to make a referral to the Australian Government Department of the Environment and Energy for a decision by the Australian Government Minister for the Environment on whether assessment and approval is required under the EPBC Act.

2. Need and options considered

2.1 Strategic need for the proposed modification

Chapter 2 of the project REF addresses the strategic need for the project. The proposed modification described and assessed in this addendum REF is consistent with the strategic need for the project.

The proposed modification is needed to allow the transport of the old NSW truss span from the Barham-Koondrook Bridge to the ancillary site for dismantling and the transport of the new truss span from the ancillary site to the bridge. Clearance is needed at the corner of Parkman Avenue and Gonn Street to provide turning area for the long, wide load. The proposed modification is needed to allow efficient and timely construction of the Barham-Koondrook Bridge – Truss and Victorian approach span restoration.

2.2 Proposal objectives and development criteria

Section 2.3 of the project REF identifies the proposal objectives and development criteria that apply to the proposed modification. The objectives for the proposed modification include:

- Minimise impact on the environment
- Minimise impact on the community
- Minimise need for infrastructure and utility adjustments
- Be suitable for a truck carrying a long, wide, heavy load
- Be cost effective.

2.3 Alternatives and options considered

The following route options were considered, as shown in Figure 2-1:

Option 1 (green) – Lawson Road, Moulamein Road

This transport route involves travelling north from the ancillary site in Parkman Avenue, turning right into Lawson Road, right into Moulamein Road, right into Gonn Street and left into Thule Street to the Barham-Koondrook Bridge work area.

This option would require trimming, lopping or removal of a number of trees near the intersection of Lawson Road and Moulamein Road. Material would need to be placed on the eastern side of Moulamein Road to allow the truck to turn from Lawson Road. At least six electricity wires cross over Moulamein Road, which is a main entrance road to Barham, would need to be held up for the truss span to pass under. This transport route also involves driving over the newly upgraded roundabout at the intersection of Moulamein Road and Gonn Street with a very heavy load.

Option 2 (blue) – Parkman Avenue, Gonn Street

This transport route involves travelling south from the ancillary site in Parkman Avenue, turning right into Gonn Street and left into Thule Street to the Barham-Koondrook Bridge work area.

This option would involve the trimming, lopping or removal of up to four trees, the removal and replacement of an electricity stay pole and the possible removal and replacement of a boundary fence.

Option 3 (orange) – Lawson Road, Cobwell Street

This transport route involves travelling north from the ancillary site in Parkman Avenue, turning left into Lawson Road, left into Cobwell Street, left into Gonn Street and right into Thule Street to the Barham-Koondrook Bridge work area.

This option would involve the trimming or lopping of trees along Lawson Road and Cobwell Street. The trailer wheel track would be wider than the road in places along this route, which is also not rated for heavy vehicles. There are several low power lines, a culvert and a sharp corner that restrict manoeuvrability of the truck.

Figure 2-1 Transport route options

2.4 Preferred option

Option 1 risks damaging the newly constructed roundabout at the corner of Moulamein Road and Gonn Street. This option would also have a greater impact on road users than the other options and would need work on Moulamein Road at its intersection with Lawson Road to allow adequate turning circle for the transport truck. Option 1 is not the preferred option.

Although option 3 would be cost effective and would minimise the impact on road users, the route is not suitable for a truck carrying a long, wide, heavy load. Option 3 is not the preferred option.

Option 2 transport route is suitable for a truck carrying a long, wide, heavy load and would minimise the impact on road users and the environment. This option would be cost effective and minimises the risk of damaging road infrastructure. This option best meets the objectives of the proposed modification and is the preferred option.

3. Description of the proposed modification

3.1 The proposed modification

The proposed modification is needed to provide enough clearance for the old NSW truss span to be transported from the Barham-Koondrook Bridge to the ancillary site in Parkman Drive and to transport the new NSW truss span from the ancillary site to the Bridge.

Roads and Maritime proposes to modify the Barham-Koondrook Bridge – Truss and Victorian approach span restoration REF to include:

- Trimming, lopping or removal of up to four trees if needed (shown in Figure 3-1)
- Removal and replacement of boundary fencing if needed (shown in Figure 3-2)
- Removal and replacement of an electricity stay pole (shown in Figure 3-3).

Figure 3-1 Trees to be trimmed, lopped or removed

Figure 3-2 Fence to be removed and replaced if needed

Figure 3-3 Electricity stay pole to be removed and replaced (looking south-west from Parkman Ave)

3.2 Public utility adjustment

The proposed modification would involve the following public utility adjustments:

- An electricity stay pole along Gonn Street in front of Lot 61 DP 866352 (refer to Figure 1-2) would be removed immediately before the truss span transportation and would be replaced once transportation is complete
- Where needed, electricity lines that cross the transportation route would be held up while the truck passes underneath.

3.3 Property acquisition

No property acquisition would be needed for the proposed modification.

4. Statutory and planning framework

4.1 Environmental Planning and Assessment Act 1979

This addendum REF has been completed under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), and describes the expected level of impact of the proposed work. This addendum REF has been prepared to consider whether the proposal would have a significant impact on the environment under section 5.5 of the EP&A Act and section 228 of the Environmental Planning and Assessment Regulation 2000.

4.1.1State Environmental Planning Policies

State Environmental Planning Policy (Infrastructure) 2007

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) aims to facilitate the effective delivery of infrastructure across the State.

Clause 94 of ISEPP permits development on any land for the purpose of a road or road infrastructure facilities to be carried out by or on behalf of a public authority without consent.

As the proposed modification is for a road infrastructure facility and is to be carried out by Roads and Maritime, it can be assessed under Division 5.1 of the EP&A Act. Development consent from council is not required.

The proposed modification is not located on land reserved under the *National Parks and Wildlife Act 1974* (NPW Act) and does not affect land or development regulated by State Environmental Planning Policy No. 14 – Coastal Wetlands, State Environmental Planning Policy No. 26 – Littoral Rainforests, State Environmental Planning Policy (State and Regional Development) 2011 or State Environmental Planning Policy (Major Development) 2005.

Part 2 of the ISEPP contains provisions for public authorities to consult with local councils and other public authorities prior to the commencement of certain types of development. Consultation, including consultation as required by ISEPP (where applicable), is discussed in chapter 5 of this addendum REF.

Other SEPPs

Murray Regional Environmental Plan No. 2 – Riverine Land

The main objective of this plan is to ensure that appropriate consideration is given to development with the potential to adversely affect the riverine environment of the River Murray. Murray River is one of 11 local government areas to which the Murray REP applies.

Clause 8(c) states that the planning principles set out in Part 2 (clauses 9 and 10) apply when a public authority proposes to carry out development which does not require development consent but which has the potential to adversely affect the riverine environment of the River Murray. The general principles of the plan that must be taken into account include:

- *The aims, objectives and planning principles of this plan*
- *Any relevant River Management Plan*
- *Any likely effect of the proposed plan or development on adjacent and downstream local government areas*

- *The cumulative impact of the proposed development on the River Murray.*

Clause 10 of the plan also states a number of specific principles that should be taken into account with regard to access, bank disturbance, flooding, land degradation, landscape, river related uses, settlement, water quality and wetlands. This clause does not apply to the proposed modification.

Clause 12 requires consultation under specific circumstances. Agency consultation is not needed under the provisions of this clause.

Clause 13 requires consultation with agencies and authorities for particular activities and undertakings. Although the proposed modification involves “destruction of native vegetation”, the vegetation to be removed is not located on land mapped as native vegetation on the Murray REP map (see land labelled “V” in Figure 4-1). Clause 13 does not apply to the proposed modification.

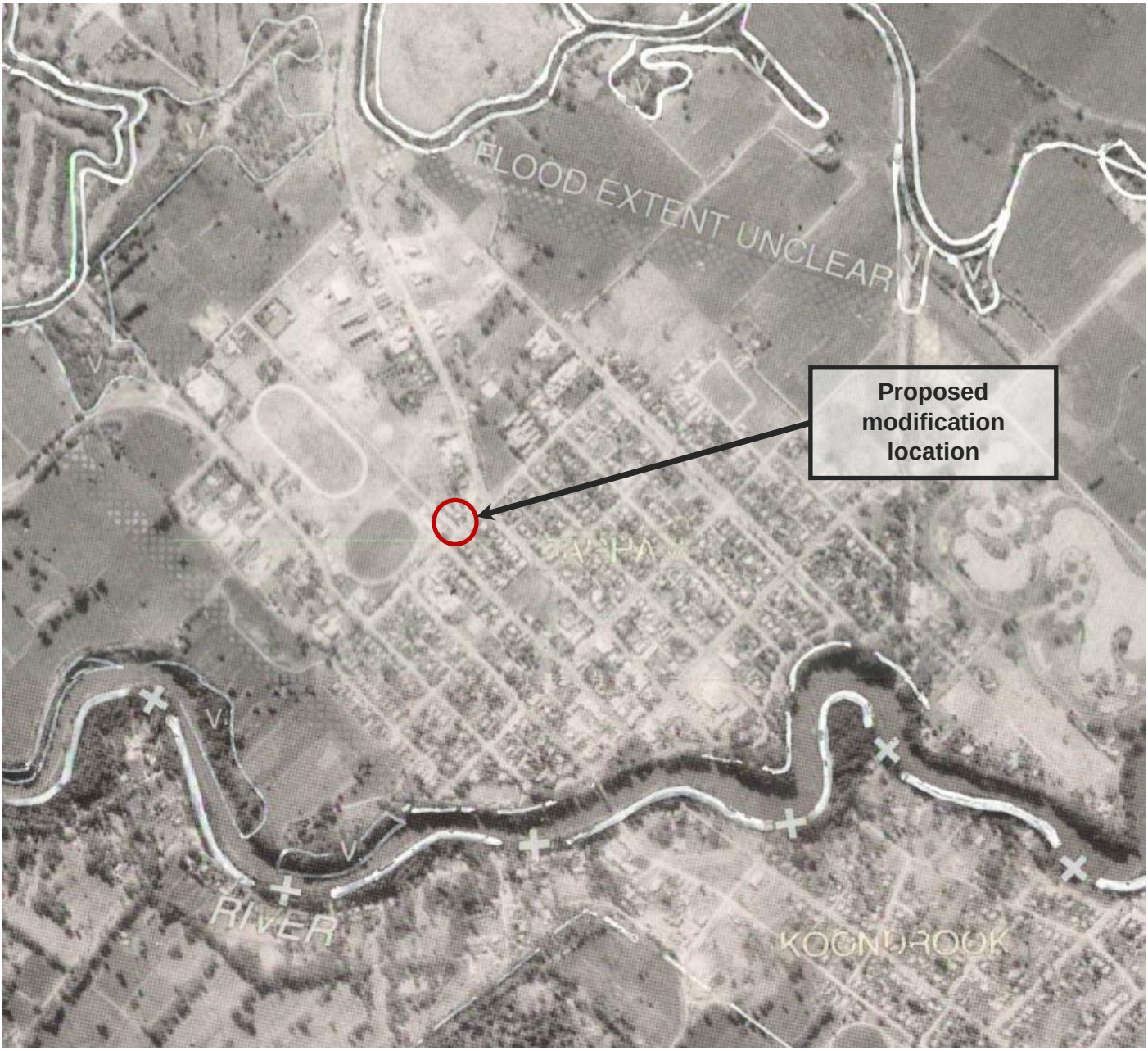

Figure 4-1 Murray REP Map (Native vegetation labelled as “V”)

State Environmental Planning Policy No. 44 Koala Habitat Protection (SEPP 44)

The SEPP 44 encourages the conservation and management of natural vegetation areas that provide habitat for Koalas to ensure that permanent free living populations would be maintained over their present range.

The SEPP 44 aims to identify areas of potential and core Koala Habitat. These are described as follows:

- Core Koala Habitat is defined as an area of land with a resident population of Koalas, evidenced by attributes such as breeding females, and recent and historical records of a population
- Potential Koala Habitat is defined as areas of native vegetation where the trees listed in Schedule 2 of SEPP 44 constitute at least 15 per cent of the total number of trees in the upper or lower strata of the tree component.

While SEPP 44 does not apply to proposals assessed under Part 5 of the EP&A Act, as a matter of best practice, consideration has been given to the intent of the SEPP.

The Koala has been recorded within 10 kilometres of the proposal site, including within the Koondrook-Perricoota State Forest several kilometres away. The riparian vegetation along the Murray River next to the proposal site provides potential Core Koala Habitat, and is near the Koondrook-Perricoota State Forest. SEPP 44 applies to the Murray River LGA. An assessment of the potential impact to the Koala has been included in Section 6.3 of the project REF. No further assessment is considered necessary given the trees that may be removed have been planted and are isolated in an urban environment. Additionally, no scratches or scat were present within the proposed modification area.

4.1.2Local Environmental Plans

Wakool Local Environmental Plan 2013

The proposed modification is located within the Murray River Local Government Area (LGA) and is governed by the *Wakool Local Environmental Plan 2013* (LEP). The provisions of the LEP do not apply to the proposal due to the application of the ISEPP. Nevertheless, consideration is given below to the provisions of the LEP.

The proposed modification is located in NSW on land zoned R1 General Residential under the LEP. The objectives of the R1 zone are to: provide for the housing needs of the community; provide for a variety of housing types and densities; enable other land uses that provide facilities or services to meet the day to day needs of residents; and ensure development is ordered in such a way as to encourage walking and cycling in close proximity to settlement. It is considered that the proposed modification is consistent with the objectives of this zone.

4.2 Other relevant NSW legislation

4.2.1 NSW Threatened Species Conservation Act 1995 (TSC Act)

The *Threatened Species Conservation Act 1995* (TSC Act) aims to conserve and protect certain classes of threatened, endangered and vulnerable species, populations and ecological communities.

Section 5A of the EP&A Act lists a number of factors to be taken into account when deciding if there is the likelihood of a significant impact on threatened species, populations and their habitat or on ecological communities. If there is a chance of an impact, then an assessment of significance would be required to determine the significance of the impact.

The potential for impact on ecology has been considered in section 6. The assessment concludes that the proposal would be unlikely to have a significant impact on any threatened species, populations, ecological communities or their habitats listed under the TSC Act. A species impact statement is therefore not required.

Where a significant impact is likely to occur a species impact statement must be prepared for projects assessed under Part 5 of the EP&A Act. The content of a species impact statement is outlined in Sections 110 – 112 of the TSC Act and includes requesting Director General's requirements.

Clause 50 requires public authorities to have regard to critical habitat when exercising their functions on land to which a critical habitat declaration applies.

4.3 Commonwealth legislation

4.3.1 Environment Protection and Biodiversity Conservation Act 1999

Under the EPBC Act a referral is required to the Australian Government for proposed 'actions that have the potential to significantly impact on matters of national environmental significance or the environment of Commonwealth land. These are considered in Appendix A and section 6 of the addendum REF.

A referral is not required for proposed road actions that may affect nationally listed threatened species, endangered ecological communities and migratory species. This is because requirements for considering impacts to these biodiversity matters are the subject of a strategic assessment approval granted under the EPBC Act by the Australian Government in September 2015.

Potential impacts to these biodiversity matters are also considered as part of chapter 6 of the addendum REF and Appendix A.

Findings – matters of national environmental significance (other than biodiversity matters)

The assessment of the proposed modification's impact on matters of national environmental significance and the environment of Commonwealth land found that there would be no change to the findings of the determined activity and would be unlikely to cause a significant impact on matters of national environmental significance or the environment of Commonwealth land. A referral to the Australian Government Department of the Environment and Energy is not required.

4.4 Confirmation of statutory position

The proposed modification is categorised as development for the purpose of a road infrastructure facility and is being carried out by or on behalf of a public authority. Under clause 94 of the ISEPP the proposed modification is permissible without consent. The proposed modification is not State significant infrastructure or State significant development. The proposed modification can be assessed under Division 5.1 of the EP&A Act. Consent from Council is not required.

5. Consultation

5.1 Ongoing or future consultation

Consultation listed in Table 5-1 is to be carried out by Roads and Maritime prior to commencement of the proposed modification.

Table 5-1 Consultation to be carried out for the proposed modification

Stakeholder	Issue
Murray River Council	• General consultation about proposed modification • Revegetation species and maturity.
State Forests	• Trimming, lopping or removal of trees • Possible removal and replacement of boundary fence.
Electricity asset owner	• Removal and replacement of electricity stay pole.
Affected residents	• Removal and replacement of electricity stay pole.

Initial verbal consultation with State Forests has indicated the trees provide shade for the depot in the afternoon. If trees need to be removed, revegetation would be carried out in consultation with State Forests and Murray River Council (refer to additional safeguards B20 and B21 in section 7.2).

Consultation would continue with councils and the community while the work is being carried out. Future planned consultation activities are outlined in section 5 of the project REF.

6. Environmental assessment

This section of the addendum REF provides a detailed description of the potential environmental impacts associated with the construction and operation of the proposed modification of the Barham-Koondrook Bridge – Truss and Victorian approach span restoration. All aspects of the environment potentially impacted upon by the proposed modification are considered. This includes consideration of the factors specified in the guidelines *Roads and Related Facilities EIS Guideline* (DUAP, 1996) and *Is an EIS required?* (DUAP, 1999) as required under clause 228(1) of the Environmental Planning and Assessment Regulation 2000. The factors specified in clause 228(2) of the Environmental Planning and Assessment Regulation 2000 are also considered in Appendix A.

6.1 Other impacts

6.1.1Existing environment and potential impacts

Environmental factor	Existing environment	Potential impacts
Biodiversity	The threatened species, populations, and ecological communities likely to occur in the area of the proposed modification are the same as those identified in the project REF.	The proposed modification may involve the removal of up to four trees. Given these trees have been planted, are isolated and are located within an urban environment, minor impact on biodiversity is expected.
Aboriginal cultural heritage	The trees have no evidence of cultural scarring. An AHIMS search carried out on 26 July 2018 for the proposed modification found no recorded Aboriginal cultural heritage sites within 1000 metres of the proposed modification area (refer to Appendix C).	Given no Aboriginal cultural heritage sites have been recorded within 1000 metres of the proposed modification site and no scarring is evident on the trees that may be removed, it is considered unlikely that Aboriginal cultural heritage sites or artefacts would be found on-site. An unexpected finds protocol applies should any Aboriginal cultural heritage sites or artefacts be uncovered during work (refer to section 7.2 safeguard AH1).
Non-Aboriginal cultural heritage	The proposed modification is located about 650 metres north-east of the state heritage listed Barham-Koondrook Bridge. There are no items of non-Aboriginal heritage within the vicinity of the proposed modification.	The proposed modification would not impact any listed heritage items.
Noise and vibration	The nearest sensitive receivers to the proposed modification are 21 Mellool Street and 72 Gonn Street, on the southern side of Gonn Street near the electricity stay pole. The dwellings are about 12 metres away from the stay pole.	The trimming, lopping or removal of trees and the temporary removal and replacement of the electricity stay pole is expected to generate noise. It is considered the impact would be minor given work would be carried out during standard hours and would be short in duration. The affected residents would be notified in accordance with safeguard NOISE3 listed in section 7.2.

Environmental factor	Existing environment	Potential impacts
Landscape character and visual amenity	The proposed modification area is located in a developed urban environment with a mixture of residential, industrial and recreational uses nearby.	If the identified trees need to be lopped or removed there would be a minor impact on landscape character and visual amenity. If the trees need to be removed, trees would be replanted in consultation with Murray River Council (safeguard B21 in section 7.2).
Air quality	See project REF. The nearest sensitive receivers to the proposed modification area are 21 Mellool Street and 72 Gonn Street, on the southern side of Gonn Street.	The proposed modification may generate localised dust and emissions from trimming, lopping or removing trees and from vehicles and equipment. The expected impact is considered to be minor given the small scale of the modification and short duration of the work.
Waste and resource management	See project REF.	The proposed modification is likely to generate mulch from the trimming, lopping or removal of trees. The handling of removed branches or trees is to be carried out in accordance with safeguard WASTE4 in section 7.2. Any other waste, such as fencing or stay pole materials that cannot re-used, is to be handled in accordance with safeguard WASTE1 in section 7.2 and Project Specific Plan Attachment 8.2 – Waste Minimisation and Management Plan. No problems associated with the disposal of waste are expected.
Soil and water	See project REF.	No additional impact.
Traffic and access	See project REF.	No additional impact.
Socio-economic	See project REF.	No additional impact.
Climate change	See project REF.	No additional impact.

6.1.2 Safeguards and management measures

Additional safeguards B20 and B21 have been included in the summary of safeguards and management measures in section 7.2 to minimise the impact on biodiversity.

6.2 Cumulative impacts

6.2.1 Potential impacts

The proposed activities have the potential to have cumulative environmental effects with other existing or likely future activities, however the effects would be minimal due to the limited scope of work for the activities covered in this addendum assessment and the potential impacts on the environment would be minimised with the implementation of the safeguards listed in section 7.2.

6.2.2 Safeguards and management measures

No additional or revised safeguards or management measures are required.

7. Environmental management

7.1 Environmental management plans

Two additional safeguards are needed for the proposed modification to minimise the impact on biodiversity. Should the proposed modification proceed, these safeguards would be incorporated into the Project Environmental Management Plan (PEMP) and Contractors Environmental Management Plan (CEMP) and applied during construction.

7.2 Summary of safeguards and management measures

Environmental safeguards and management measures for the Barham-Koondrook Bridge – Truss and Victorian approach span restoration are summarised in Table 7-1. Additional or revised safeguards or management measures identified in this addendum REF are included in bold and italicised font. The safeguards and management measures will be incorporated into the CEMP and the PEMP and implemented during construction and operation of the proposed modification, should it proceed. These safeguards and management measures will minimise any potential adverse impact arising from the proposed work on the surrounding environment.

Table 7-1: Summary of safeguards and management measures

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
G1	General	All environmental safeguards must be incorporated within the following: • Project Environmental Management Plan • Detailed design stage • Contract specifications for the proposal • Contractor's Environmental Management Plan	Project manager	Pre-construction	
G2	General	• A risk assessment must be carried out on the proposal in accordance with the Roads and Maritime Services Project Pack and PMS risk assessment procedures to determine an audit and inspection program for the work. The recommendations of the risk assessment are to be implemented. • A review of the risk assessment must be undertaken after the initial audit or inspection to evaluate is the level of risk chosen for the project is appropriate. • Any work resulting from the proposal and as covered by the REF may be subject to environmental audit(s) and/or inspection(s) at any time during their duration.	Project manager and regional environmental staff	Pre-construction After first audit	
G3	General	• The environmental contract specification G36 must be forwarded to the Roads and Maritime Services Environment Manager South West Region for review at least 10 working days prior to the	Project manager	Pre-construction	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
		commencement of construction. • A contractual hold point must be maintained until the CEMP is reviewed by the Roads and Maritime Services Environment Manager South West Region.			
G4	General	The Roads and Maritime Services Project Manager must notify the Roads and Maritime Services Environmental Officer South-West Region at least five working days prior to work commencing.	Project manager	Pre-construction	
G5	General	All businesses and residences likely to be affected by the proposed work must be notified at least five working days prior to the commencement of the proposed activities.	Project manager	Pre-construction	
G6	General	Environmental awareness training must be provided, by the contractor, to all field personnel and subcontractors.	Contractor	Pre-construction and during construction as required.	
SW1	Soil and Water	<u>Soil and Water Management Plan</u> A Soil and Water Management Plan will be prepared in accordance with QA Specification G38 and implemented as part of the CEMP. The Plan will identify all reasonably foreseeable risks relating to soil erosion and water pollution associated with undertaking the activity, and describe how these risks will be managed and minimised during construction. That will include arrangements for managing pollution risks associated with spillage or contamination on the site and adjoining areas, and monitoring during construction.	Project Manager	Pre-construction	
SW2	Soil and Water	<u>Install erosion, sediment and water quality controls</u> Consistent with any specific requirements of the approved Soil and Water Management Plan, control measures will be implemented to minimise risks associated with erosion and sedimentation and entry of	Project Manager, Contractor	Pre-construction	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
		materials to drainage lines and waterways. That will include, but not necessarily be limited to: - sediment management devices, such as fencing, hay bales or sand bags - measures to divert or capture and filter water prior to discharge, such as drainage channels and first flush and sediment basins - scour protection and energy dissipaters at locations of high erosion risk - installation of measures at work entry and exit points to minimise movement of material onto adjoining roads, such as rumble grids or wheel wash bays - appropriate location and storage of construction materials, fuels and chemicals, including bunding where appropriate.			
SW3	Soil and Water	<u>Stockpile management</u> Stockpiles will be designed, established, operated and decommissioned in accordance with the RTA *Stockpile Site Management Guideline 2015*.	Project Manager, Contractor	Pre-construction, During construction, Post construction	
SW4	Soil and Water	<u>Dewatering</u> Any dewatering activities will be undertaken in accordance with the RTA Technical Guideline: Environmental management of construction site dewatering in a manner that prevents pollution of waters.	Project Manager, Contractor	During construction	
SW5	Soil and Water	<u>Work in waterways</u> A detailed Environmental Work Method Statement (EWMS) will be prepared and implemented for all works undertaken within waterways. The EWMS will detail measures to avoid or minimise risks from erosion and sedimentation to water quality and biodiversity. It will be prepared in accordance with relevant guidelines including, but not limited to:	Project Manager, Contractor	Pre-construction, During construction	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
		- RMS Biodiversity Guidelines - Protecting and managing biodiversity on RTA projects - NSW DPI (Fisheries) guidelines Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings.			
SW6	Soil and Water	<u>Monitor</u> Consistent with any specific requirements of the approved Soil and Water Management Plan a monitoring program will be implemented during construction to ensure effective implementation of all temporary and permanent soil, erosion and water pollution safeguards. The timing and frequency of monitoring inspections will be set out in the SWMP. The inspections will assess implementation and success of the controls, actions required to ensure on-going effective operation, and compliance with any statutory approvals. A register of inspections will be established.	Project Manager, Contractor	During construction	
SW7	Soil and Water	<u>Efficient use of water</u> Work practices will be implemented during construction to support efficient water use and minimise waste. That will include, but not necessarily be limited to, measures to reuse and recycle water where practicable for use in road construction (such as dust suppression and concreting) and irrigation or revegetated areas.	Project Manager, Contractor	During construction	
SW8	Soil and Water	<u>Rehabilitation</u> All areas disturbed during construction, including areas for stockpiles compound sites, temporary access roads and temporary work areas, would be stabilised and rehabilitated to prevent future erosion.	Project Manager	Post construction	
SW9	Soil and Water	<u>Hazardous materials storage</u> All fuels, chemicals and other hazardous materials must be stored in a roofed, fire-protected and impervious bunded area at least 20 metres from waterways, drainage lines, basins, flood-affected areas or slopes above 10%. Bunding design must comply with relevant Australian	Project Manager, Contractor	During construction	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
		Standards, and should generally be in accordance with guidelines provided in the EPA Authorised Officers Manual. Appropriate on-site signage must be provided to identify the materials stored.			
SW10	Soil and Water	<u>Emergency equipment</u> Appropriate emergency equipment will be provided on-site and located at strategic, accessible locations. This will include: - fire response measures, including fire extinguishers, fire blankets and accessible water - spill kits - first aid kits - external showers.	Project Manager, Contractor	During construction	
SW11	Soil and Water	<u>Refuelling</u> Refuelling will occur in impervious bunded areas at least 20 metres from drainage lines and waterways. Refuelling on barges will occur within a double-bunded area.	Project Manager, Contractor	During construction	
SW12	Soil and Water	<u>Cleaning and washing</u> Cleaning of equipment and vehicles will only occur in areas where water pollution will not occur. Wash-down or wash-out will only occur in bunded areas.	Project Manager, Contractor	During construction	
SW13	Soil and Water	<u>Incident reporting and response</u> Environmental incidents, such as pollution spills and unauthorised vegetation clearing, will be reported and managed in accordance with the RMS Environmental Incident Classification and Reporting Procedure.	Project Manager, Contractor	During construction	
SW14	Soil and Water	<u>Garnet</u> Controls would be stablished during sand blasting of bridge elements to prevent garnet being released to the environment.	Project Manager, Contractor	During construction	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
SW15	Soil and Water	Fill imported onto the proposal site for the construction of the in-stream working platforms will be clean, inert rock spoil with a minimum grade of 50mm.	Contractor	Construction, Operation	
SW16	Flooding	The detailed design and construction of the coffer dam will take into consideration potential flooding impacts during construction. Ongoing management of the coffer-dam will be included in the Construction Environmental Management Plan (CEMP).	Project Manager	Pre-construction	
TT1	Minimise impacts to existing traffic	<u>Local community notification</u> Consultation will be undertaken with potentially affected residences prior to the commencement of and during works in accordance with the RTA's Community Involvement and Communications Resource Manual. Consultation would include but not limited to door knocks, newsletters or letter box drops providing information on the proposed works, working hours and a contact name and number for more information or to register complaints	Project Manager	Pre-construction, During construction	
TT2	Minimise traffic related risks during construction	Traffic Management Plan A Traffic Management Plan (TMP) will be prepared and implemented as part of the CEMP. The TMP will be prepared in accordance with the RMS Traffic Control at Work Sites Manual and the worksite manual RMS Specification G10. The TMP will include: - confirmation of haulage routes - measures to maintain access to local roads and properties - site specific traffic control measures (including signage) to manage and regulate traffic movement - measures to maintain pedestrian and cyclist access - requirements and methods to consult and inform the local community of impacts on the local road network - access to construction sites including entry and exit locations and measures to prevent construction vehicles queuing on public roads.	Project Manager	Pre-construction,	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
		- a response plan for any construction traffic incident - consideration of other developments that may be under construction to minimise traffic conflict and congestion that may occur due to the cumulative increase in construction vehicle traffic - monitoring, review and amendment mechanisms.			
TT3	Access	<u>Notifications to landowners</u> Disruptions to property access and traffic will be notified to landowners at least five days prior in accordance with the relevant community consultation processes outlined in the TMP.	Project Manager	Pre-construction, During construction	
TT4	Access	<u>Wide Loads</u> Consultation and notification of the transport industry and road freight providers would occur in relation to the reduced width capability of the temporary bridge.	Project Manager	Pre-construction, During construction	
TT7	Reduce speeds, traffic delays and disruptions during construction	<u>Community information</u> Road users and local communities will be provided with timely, accurate, relevant and accessible information about changed traffic arrangements and delays owing to construction activities.	Roads and Maritime	Pre-construction, During construction	
TT8	Local road dilapidation	<u>Dilapidation reports</u> Pre-construction and post construction road dilapidation reports for local roads likely to be used for construction will be prepared. Any damage resulting from construction (not normal wear and tear) will be repaired unless alternative arrangements are made with the relevant road authority. Copies of road dilapidation reports will be provided to the local roads authority.	Project Manager	Pre-construction	
TT9	Water Traffic	Four knot speed limit and no wash within construction zone will be implemented from 600 metres upstream and 900 metres downstream	Roads and Maritime	During construction	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
		of the bridge.			
TT10	Water Traffic	Work schedule must give consideration to vessels that would need passage. It is noted that a higher number of vessels require passage during summer and peak holiday periods.	Roads and Maritime	Pre-construction	
TT11	Water Traffic	Roads and Maritime will consult with boat owners along the river regarding any changes to river traffic arrangements, including but limited to: • Murray River Paddle steamers, Echuca • Port of Echuca Paddle Boats • Echuca-Moama River Watch and User Group • Sunraysia User Group.	Roads and Maritime	Pre-construction	
TT12	Water Traffic	"No Anchorage" signs would be installed near the streamflow gauge located about 50 metres downstream of the bridge on the Victorian bank of the Murray River.	Roads and Maritime	During construction	
B1	Pre-clearing	Obtain a planning permit from Gannawarra Shire Council to remove or prune native vegetation on the Victorian side of the Murray River.	Project Manager	Pre-construction, During construction	
B2	Minimise risks to native flora and fauna during construction	<u>Flora and Fauna Management Plan</u> A Flora and Fauna Management Plan will be prepared and implemented as part of the CEMP. It will address terrestrial and aquatic matters and include, but not necessarily be limited to: a) plans for the construction site and adjoining area showing native vegetation, flora and fauna habitat, threatened species and endangered ecological communities b) plans showing areas to be cleared and areas to be protected, including exclusion zones and protected habitat features (eg. hollow-bearing trees), and areas for rehabilitation or re-	Project Manager	Pre-construction, During construction	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
		establishment of native vegetation c) requirements set out in the RTA Landscape Guideline d) procedures addressing relevant matters specified in the Biodiversity Guidelines - Protecting and managing biodiversity on RTA projects (RTA 2011) including but not limited to: - pre-clearing, including the outcomes of final flora and fauna species checks, establishment of exclusion zones and on-ground identification of specific habitat features to be retained (such as hollow-bearing trees) - vegetation clearing and bushrock removal, including staged habitat removal and any specified seasonal limits on clearing activities - fauna handling and unexpected threatened species finds - rehabilitation, revegetation, re-use of soils, woody debris and bushrock, and other habitat management actions - weed and pathogen management e) procedures addressing relevant matters specified in the NSW DPI (Fisheries) Policy and guidelines for fish habitat conservation and management f) monitoring during construction and post-construction g) adaptive management measures to be applied if monitoring indicates unexpected adverse impact.			
B3	Minimise risks to native flora and fauna during construction	<u>Pre-construction check</u> Pre-clearing surveys will be undertaken in accordance with Guide 1: Pre-clearing process of the Biodiversity Guidelines - Protecting and managing biodiversity on RTA projects (RTA 2011).	Project Manager, Contractor	Pre-construction, During construction	
B4	Minimise risks to native flora and fauna during construction	<u>Detailed design</u> Measures to further avoid and minimise the construction footprint and native vegetation or habitat removal will be considered during the detailed design stage and implemented where practicable and feasible.	Project Manager, Contractor	Pre-construction, During construction	
B5	Protect native flora	<u>Unexpected threatened species</u>	Project Manager	Post	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
	and fauna and avoid inadvertent impacts	Consistent with the Biodiversity Guidelines - Protecting and managing biodiversity on RTA projects, and any specific requirements of the approved Flora and Fauna Management Plan, an unexpected finds procedure will be implemented in the event that a threatened species or ecological community that had not been identified and assessed by the REF is unexpectedly encountered during the construction process.		construction	
B6	Protect native flora and fauna, minimise edge effects and avoid inadvertent impacts	<u>Exclusion zones and protected habitat features</u> Consistent with the approved Flora and Fauna Management Plan: - the limits of clearing within the construction site will be delineated using appropriate signage and barriers, identified on site construction drawings and during construction staff induction - vegetation and habitat features to be retained, such as hollow-bearing trees, will be clearly identified and protected by suitable fencing, signage or markings - identified areas containing habitat for microchiropterean bats, arboreal birds and woodland species will not be cleared during the breeding season between September and January, where practicable.	Project Manager, Contractor	Pre-construction, During construction	
B7	Protect native flora and fauna and avoid inadvertent impacts	<u>Stockpiles, plant and ancillary sites</u> Vehicle parking, machinery, construction compounds, material stockpiles and the like, will be located in cleared or disturbed areas, not within the drip-zone of vegetation to be retained or within other protected or exclusion zones identified in the Flora and Fauna Management Plan.	Project Manager, Contractor		
B8	Protect native flora and fauna	<u>Fauna handling</u> Fauna handling will be managed in accordance with Guide 9: Fauna handling of the Biodiversity Guidelines - Protecting and managing biodiversity on RTA projects, and any specific requirements of the approved Flora and Fauna Management Plan.	Project Manager	Post construction	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
B9	Rehabilitation	Rehabilitation All areas disturbed during construction, including areas for stockpiles compound sites, temporary access roads and temporary work areas, would be stabilised and rehabilitated to prevent future erosion.	Project Manager, Contractor	During construction	
B10	Minimise weed, pest species and pathogen risks	Weed, Pest Species and Pathogen Management Weed species will be managed in accordance with Guide 6: Weed Management of the Biodiversity Guidelines - Protecting and managing biodiversity on RTA projects, and any specific requirements of the approved Flora and Fauna Management Plan.	Project Manager, Contractor	Pre-construction, During construction	
B11	Support future rehabilitation or revegetation	Topsoil management - future re-use Consistent with the Biodiversity Guidelines - Protecting and managing biodiversity on RTA projects, topsoil removed during construction, which has been assessed as low-risk for weeds and with good potential for containing indigenous flora seed material, will be stockpiled in cleared or disturbed areas for re-use in post-construction rehabilitation or revegetation. Until re-use occurs the stockpile will be managed in accordance with the RTA Stockpile Site Management Guideline.	Project Manager, Contractor	Construction	
B12	Restore and rehabilitate habitat	Habitat management - species selection Consistent with the Biodiversity Guidelines - Protecting and managing biodiversity on RTA projects, and any specific requirements of the approved Flora and Fauna Management Plan, locally indigenous plant species will be used during rehabilitation and revegetation.	Project Manager, Contractor	During construction	
B13	Clearing of native vegetation	• Clearing of vegetation will be restricted to that assessed in the project REF and includes trees located within 30 metres east of the bridge along the southern riverbank. The limit of clearing would be delineated (eg temporary site fencing, flagging, earth bunding) along the river and at the stockpile and compound site. Clearing	Project Manager, Contractor	During construction	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
		limits would be discussed in the site induction to ensure staff and contractors are made aware of limits of clearing • Trees will be removed in such a way as not to cause damage to surrounding vegetation. This will ensure groundcover disturbance is kept to a minimum • Areas already impacted by previous clearing or disturbance will be used to minimise clearing where feasible. Trimming is preferred over removal where feasible.			
B14	Fauna and habitat impact Microchiropteran bat species	• A bat management plan will be developed for the proposed work and must include the following: ○ Staff should be educated about microchiropteran bats, their ecological role, conservations significance, and the risk of disease with certain species ○ Undertake final inspection of the bridge components to be removed to locate any bat roost sites prior to the commencement of removing each component ○ If evidence of roost sites are identified, implement exclusion techniques such as the use of spotlights on the bridge at night, installing netting/ plastic sheeting once bats have left, starting an oxy-torch (to cut bolts) ○ If bats are observed emerging from the bridge components to be removed, work must cease and an experienced ecologist with bat handling experience be consulted. ○ If roost sites in the form of hollow bearing trees have to be removed an experienced ecologist must be on hand to inspect each hollow prior to the destruction so bats can be excluded and or have time to relocate. ○ Timing of deck removal must avoid bat breeding and lactating periods (September-November).	Project Manager, Contractor	During construction	
B15	Disturbance to fallen timber and dead wood	• Any snags located within the study area would be relocated to nearby areas of habitat, if necessary • DPI Fisheries will be contacted regarding the re-use of CWD as aquatic habitat	Project Manager,	Pre-construction, During construction	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
		• Coarse Woody Debris will be placed within the nearby river bank and will be managed in accordance with the requirements the Roads and Maritime Biodiversity Guidelines (RTA, 2011) - Guide 5 (CWD).			
B16	Temporary bridge construction – Barge for crane in river.	• Ensure the height of the river is sufficient to avoid contact with the stream bed • Ensure that the barge has a sufficient bund to prevent and spills entering the waterway. • Timing of work to occur outside of spawning of native fish species.	Project Manager	Pre-construction, During construction	
B17	Temporary bridge construction – Rock platform for crane in the river.	• Fish passage will be maintained throughout the site during the length of the work • Any snags located within the study area will be relocated to nearby areas of habitat, if necessary • DPI Fisheries will be contacted regarding the re-use of CWD as aquatic habitat.	Project Manager	Pre-construction, During construction	
B18	Crane pads on the river banks (1 in NSW and 1 in VIC)	DPI Fisheries will be contacted regarding the re-use of CWD as aquatic habitat.	Project Manager, Contractor	Pre-construction, During construction	
B19	Extra coffer dams may need to be built in the river for removal of piles, depending on design of temporary bridge	• Notify DPI Fisheries prior to any work within water land not included in the scope of this Biodiversity Assessment. • Any snags located within the study area will be relocated to nearby areas of habitat, if necessary • DPI Fisheries will be contacted regarding the re-use of CWD as aquatic habitat.	Project Manager, Contractor	Pre-construction, During construction	
B20	***Truss span transport tree***	***Trees identified in the Barham-Koondrook Bridge – truss span transport route work addendum review of environmental factors***	***Project Manager***	***During construction***	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
	removal	***are to remain if possible. Impact to the trees is to be kept to the minimum amount necessary to transport the truss spans.***			
B21	***Truss span transport revegetation***	***Where trees identified in the Barham-Koondrook Bridge – truss span transport route work addendum review of environmental factors are lopped or removed, revegetation will be carried out in consultation with Murray River Council.***	***Project Manager***	***During construction***	
AH1	Unexpected finds	Unexpected finds The Standard Management Procedure - Unexpected Heritage Items must be followed in the event that a known or potential Aboriginal object(s), including skeletal remains, is found during construction. This applies where RMS does not have approval to disturb the object(s) or where a specific safeguard for managing the disturbance (apart from the Procedure) is not in place. Work may only re-commence once the requirements of that Procedure have been satisfied.	Project Manager, Contractor	Pre-construction, During construction	
AH2	Accidental discovery of items of Aboriginal cultural significance	• All contractors and/or employees of contractors who are supervising work during the activity in relation to earthmoving or ground disturbance will attend an on-site cultural heritage induction. • The on-site cultural heritage induction must cover: a. The specific requirements of this CHMP; b. The contingency plans contained in this CHMP; and c. Cultural awareness training.	Pre-construction, During construction	Pre-construction, During construction	
NAH1	Unexpected finds	Unexpected finds Should any heritage items, archaeological remains or potential relics of Non-Aboriginal origin be encountered, then construction work that might affect or damage the material must cease and notification provided to the relevant RMS officer identified in the RMS Standard Management Procedure - Unexpected Archaeological Finds. Work may only re-commence once the requirements of that Procedure have been satisfied.	Project Manager, Contractor	Pre-construction, During construction	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
NAH2	Enhancing public understanding and awareness	<u>Heritage interpretation</u> A Non-Aboriginal Heritage Interpretation Strategy will be prepared and implemented to promote community understanding and awareness of the site's heritage values. The Strategy will be prepared in accordance with guidelines published by the Office of Environment and Heritage.	Project Manager	Pre-operation	
NAH3	Legislative requirement	Roads and Maritime have obtained a Section 60 Approval for the proposal. All conditions of the approval must be followed as listed below. <u>Nominated heritage consultant</u> • A heritage consultant shall be nominated for the project. Their name is to be submitted to the Heritage Council of NSW and approved prior to the commencement of work • The nominated heritage consultant is to provide advice on the detailed design, undertake on-site heritage inductions and inspect the demolition and removal of material to ensure that no significant fabric or elements are damaged or removed • All work shall be carried out by suitably qualified tradespeople with practical experience in conservation and restoration of similar heritage items. The nominated heritage consultant shall be consulted prior to the selection of appropriate tradespeople. <u>Site protection and work</u> • Significant building fabric and elements are to be protected during the works from potential damage. Protection systems must ensure historic fabric is not damaged or removed • The installation of new services shall be carried out in such a manner as to minimise damage to or removal of historic fabric and shall not obscure historic features. <u>Archival recording</u> A report must be provided to the Heritage Division at the completion	Project Manager	Pre-construction	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
		of work that includes: • An archival photographic recording of the bridge undertaken prior to and during the work, in accordance with the Heritage Council document, Photographic Recording of Heritage Items using Film or Digital Capture • A summary of the work, up to 5 pages, including a description of the work undertaken, the methodology and any other relevant matters.			
NAH4	Changes to the heritage values of the bridge	An archival recording be prepared for Barham-Koondrook Bridge. This should follow the guidelines for Items of State Heritage Significance as outlined in the NSW Heritage Branch publication How to Prepare Archival Records of Heritage Items.	Project Manager	Pre-construction	
NAH5	Changes to the heritage values of the bridge	Methodology for painting the lift span will be finalised during detailed design in consultation with the NSW Office of Environment and Heritage - Heritage branch.	Project Manager	Pre-construction	
NAH6	Design	Conditions of section 60 approval for the proposed modification must be satisfied.	Roads and Maritime/Contractor	Pre-construction, construction	
NOISE1	Minimise noise and vibration risks during construction	<u>Noise and Vibration Management Plan</u> A Noise and Vibration Management Plan will be prepared and implemented as part of the CEMP. The Plan should generally follow the approach in Practice Note VI of the RTA Environmental Noise Management Manual and identify: - all potential significant noise and vibration generating activities associated with the activity - measures to be implemented during construction to minimise noise and vibration impacts, such as restrictions on working	Project Manager, Contractor	Pre-construction	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
		hours, staging, placement and operation of work compounds, parking and storage areas, temporary noise barriers, haul road maintenance, and controlling the location and use of vibration generating equipment - feasible and reasonable mitigation measures to be implemented, determined in accordance with OEH's Interim Construction Noise Guideline and taking into account the RMS Beyond the Pavement urban design policy, process and principles - a monitoring program to assess performance against relevant noise and vibration criteria - arrangements for consultation with affected neighbours and sensitive receivers, including notification and complaint handling procedures - contingency measures to be implemented in the event of non-compliance with noise and vibration criteria.			
NOISE2	Minimise risks to local and sensitive receivers	<u>Standard construction hours</u> • Monday to Friday 7.00 am to 6.00 pm • Saturdays 8.00 am to 1.00 pm • No construction on Sundays or Public Holidays.	Project Manager, Contractor	Pre-construction, During construction	
NOISE3	Community notification	<u>Local community notification - sensitive receivers</u> All sensitive receivers (eg. schools, local councils) likely to be affected must be notified at least five days prior to commencement of any works associated with the activity that may have an adverse noise or vibration impact. The notification must include details of: the project; construction period and construction hours; contact information for project management staff; complaint and incident reporting; and how to obtain further information.	Project Manager, Contractor	Pre-construction, During construction	
NOISE4	Working hours	If possible, restrict the hours that noisy activities such as the use of rock breakers, jack hammers and piling rigs will occur, taking into account times identified by the community when they are less	Project Manager, Contractor	During construction	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
		sensitive to noise (such as mid-morning or mid-afternoon for work near residences) and whether the community is prepared to accept a longer period of construction in exchange for restrictions on construction times.			
NOISE5	Noise during the removal of the temporary bridge	If the temporary piles are broken by rock hammer, attended noise monitoring should occur with a focus on the 'Recommended Area' identified in Figure 9 of the Noise and Vibration Impact Assessment (Project REF Appendix K)	Project Manager, Contractor	During construction	
NOISE6	Noise monitoring	Attended noise monitoring will be undertaken during the pile driving work to confirm the predicted noise levels	Project Manager, Contractor	During construction	
NOISE7	Staff training	Briefing of the work team in order to create awareness of the locality of sensitive receivers and the importance of minimising noise emissions.	Project Manager, Contractor	Pre-construction, During construction	
NOISE8	Community information	Prior to piling activities commencing, a letterbox drop will be conducted to all occupants of buildings within the 'Recommended Area' highlighted in Figure 8 of the Noise and Vibration Impact Assessment (Project REF Appendix K) to inform them of the proposed works ahead of time. This letter will outline the proposed timing and duration of work as well as provide the community with a contact number or liaison officer available to adequately respond to all project related enquiries	Project Manager	Pre-construction, During construction	
NOISE9	Vibration impacts	• All construction works should be carried out Monday to Friday, 7:00 am to 6:00 pm, where possible • When working close to sensitive receivers, use lower vibration generating items of plant and equipment where possible eg	Project Manager, Contractor	Pre-construction, During construction	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
		smaller vibratory rollers and hydraulic hammers • Minimise consecutive vibration intensive works in the same locality (if applicable)			
UD1	Pre-construction / detailed design	<u>Urban Design and Landscape Plan</u> An Urban Design and Landscape Plan will be prepared in consultation with Gannawarra Shire Council to support the final detailed project design and implemented as part of the CEMP. The Plan will present an integrated urban design for the project, providing practical detail on the application of design principles and objectives identified in the environmental assessment. The Plan will include design treatments for: - Location and identification of existing vegetation and proposed landscaped areas, including species to be used (cross-referencing any relevant specified biodiversity safeguards) - Built elements including retaining walls, bridges and noise walls - Pedestrian and cyclist elements including footpath location, paving types and pedestrian crossings - Fixtures such as seating, lighting, fencing and signs - Details of the staging of landscape works taking account of related environmental controls such as erosion and sedimentation controls and drainage - Procedures for monitoring and maintaining landscaped or rehabilitated areas.	Project Manager	Post construction	
UD2	Minimise visual and landscape impacts during construction	<u>Work sites</u> Project work sites, including construction areas and supporting facilities (such as storage compounds and offices) will be managed to minimise visual impacts, including appropriate storage of equipment, parking, stockpile screening and arrangements for the storage and	Project Manager, Contractor	During construction	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
		removal of rubbish and waste materials.			
UD3	Visual amenity	Mature trees will be used for revegetation as much as possible and practical.	Project Manager	Post Construction	
AIR1	Community notification	<u>Local community notification - sensitive receivers</u> All sensitive receivers (eg. schools, local councils) likely to be affected must be notified at least five days prior to commencement of any works associated with the activity that may have an adverse impact on local air quality. The notification must include details of: the project; construction period and construction hours; any recommended measures that can be implemented (eg. window closure, staying indoors, etc), contact information for project management staff; complaint and incident reporting; and how to obtain further information.	Project Manager	Pre-construction, During Construction	
AIR2	Protect local air quality and avoid inadvertent impacts	<u>Protecting air quality</u> Dust suppression measures will be implemented to protect local air quality.	Project Manager, Contractor	During Construction	
AIR3	General air quality impact	Construction activities are to be managed to minimise dust and fuel emissions.	Project Manager, Contractor	During Construction	
AIR4	Dust	Stockpiles or areas that may generate dust are to be managed to suppress dust emissions in accordance with the Stockpile Site Management Guideline (Roads and Maritime, 2015).	Project Manager, Contractor	During Construction	
WASTE1	Avoid, minimise and sustainably manage waste	<u>Waste Management Plan</u> A Waste Management Plan will be prepared and implemented as part of the CEMP. It will provide specific guidance on measures and controls to be implemented to support minimising the amount of waste produced and appropriately handle and dispose of unavoidable waste. It will also address the importation of waste to the site for use in	Project Manager	Pre-construction	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
		undertaking the project. The Plan will give effect to any management measures contained in any waste assessment undertaken for the project and include, but not necessarily be limited to: - Measures to avoid and minimise waste associated with the project - Classification of wastes generated by the project and management options (re-use, recycle, stockpile, disposal) - Classification of wastes received from off-site for use in the project and management options - Identifying any statutory approvals required for managing both on and off-site waste, or application of any relevant resource recovery exemptions - Procedures for storage, transport and disposal - Monitoring, record keeping and reporting, including any documentation management obligations arising from resource recovery exemptions. The Plan will be prepared taking into account the RMS Environmental Procedure - Management of Wastes on Roads and Maritime Services Land and relevant RMS Waste Fact Sheets.			
WASTE2	Pre-construction / detailed design	<u>Pre-construction assessment</u> Prior to land being used for ancillary construction purposes (compounds, storage, parking, etc) a pre-construction land assessment must be undertaken to identify the presence of any pre-existing wastes. The assessment is to be prepared in accordance with the RMS Environmental Procedure - Management of Wastes on Roads and Maritime Services Land. Where the land is privately owned, a copy of the assessment will be provided to the landowner.	Project Manager	Pre-construction	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
WASTE3	Avoid, minimise and sustainably manage waste	Sampling of waste materials - to be exported off-site Waste materials (such as soils and aggregates) obtained from the project and to be exported to a non-road construction site or project must be sampled and managed in accordance with relevant Roads and Maritime Waste Fact Sheets.	Project Manager	Pre-construction, During construction	
WASTE4	Avoid, minimise and sustainably manage waste	Vegetated waste Any trees to be removed shall be reused as millable timber wherever practicable. Other vegetated material from native species shall be mulched and re-use on-site for landscaping or rehabilitation purposes if consistent with the approved Flora and Fauna Plan for the project. Weed species, or vegetation not considered appropriate for re-use on-site, will be removed and disposed of to an appropriately licenced facility.	Project Manager, Contractor	Pre-construction, During construction	
WASTE5	Compliance monitoring of waste management	Monitor implementation of safeguards - construction phase Consistent with any specific requirements of the approved Waste Management Plan a monitoring plan will be implemented during construction for {insert time-frame} to assess effective implementation of waste safeguards, identify any unexpected or inadvertent impacts, and identify recommended revisions or improvements.	Project Manager	Pre-construction, During construction	
WASTE6	Compliance monitoring of waste management	Adaptive management - during construction After considering the outcomes and recommendations arising from the monitoring program, and any other relevant information that becomes available during construction, appropriate measures will be implemented to address identified deficiencies or undertake actions needed to address waste related impacts. If necessary, the Waste Management Plan will be reviewed and updated to include any additional measures.	Project Manager	Pre-construction, During construction	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
WASTE7	Final condition of ancillary sites	<u>Post-construction assessment</u> A post-construction land assessment must be undertaken of land that was used for ancillary construction purposes (compounds, storage, parking, etc) to determine the suitability for hand-back to the landowner. The assessment is to be prepared in accordance with the RMS Environmental Procedure - Management of Wastes on Roads and Maritime Services Land. Where the land is privately owned, a copy of the assessment will be provided to the landowner.	Project Manager	Post construction	
SE1	Pre-construction / detailed design	<u>Communication Plan</u> A Communication Plan (CP) will be prepared and implemented as part of the CEMP to ensure provision of timely and accurate information to the community during construction. The CP will include (as a minimum): - Mechanisms to provide details and timing of proposed activities to affected residents, including changed traffic and access conditions - Contact name and number for complaints. The CP will be prepared in accordance with the Roads and Maritime Services Stakeholder Engagement Toolkit.	Project Manager	Pre-construction	
SE2	Construction	<u>Emergency access</u> Access for emergency vehicles will be maintained at all times during construction. Any site-specific requirements will be determined in consultation with the relevant emergency services agency.	Project Manager, Contractor	During construction	
SE3	Impacts to residents	<u>Local community notification</u> Stakeholder engagement will be undertaken with potentially affected residences prior to the commencement of and during works in	Project Manager	Pre-construction, During	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
		accordance with the Roads and Maritime Services Stakeholder Engagement Toolkit. Communication activities may include door knocks, newsletters or letter box drops providing information on the proposed works, working hours and a contact name and number for more information or to register complaints.		construction	
SE4	Property impacts	Consultation - property owners Consultation will be undertaken with all affected property owners during detailed design and construction to develop and implement measures to mitigate impacts on land use viability, infrastructure and severance.	Project Manager	Pre-construction, During construction	
SE5	Impacts on viability of businesses	Consultation - businesses Consultation will occur with Koondrook and Barham businesses to identify appropriate management strategies to avoid or minimise impacts on access and operations. This will include consideration of measures such as additional signage and alternative access arrangements	Project Manager	Pre-construction, During construction	
SE6	Impacts to community	Complaints A complaints handling procedure and register will be included in the CEMP.	Project Manager	Pre-construction, During construction	
SE7	Impacts to residents and general community	Community information Road users and local communities will be provided with timely, accurate, relevant and accessible information about changed traffic arrangements and delays owing to construction activities.	Project Manager	Pre-construction, During construction	
CC1	Climate change	The construction contractor will consider: • The life cycle environmental impact of materials and plant used in the construction process (this will be considered during procurement) • Establishing operating procedures for site vehicles to increase the	Project Manager	Pre-construction	

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
		efficiency of vehicle fuel use • Reducing vegetation clearing as much as feasible, and re-establishing vegetation in suitable areas when construction is completed • Reducing site wastage by re-using and recycling waste materials as a preference before disposing to landfill.			

7.3 Licensing and approvals

All relevant licenses, permits, notifications and approvals needed for the Barham-Koondrook Bridge – Truss and Victorian approach span restoration and when they need to be obtained are listed in Table 7-2. Additional or changed licenses and approval requirements identified in this addendum REF are indicated by underlined and/or struck out font.

Table 7-2: Summary of licensing and approval required

Instrument	Requirement	Timing
Gannawarra Planning Scheme	Planning permit to remove mature vegetation and to carry out work on land subject to inundation in Victoria	Prior to commencement of work
VicRoads	Approval to carry out work in the road reserve in Victoria	Prior to commencement of work

The following approvals may be needed to carry out the work:

- If the list span is to be blasted and repainted off-site, application to the Office of Environment and Heritage to amend the existing Section 60 approval conditions would be needed
- Should water need to be extracted from the Murray River, a Water Works Approval would be required from the NSW Office of Water
- If the work would inhibit, block or obstruct the passage of fish, a permit under Part 7 of *Fisheries Management Act 1994* is required.

8. Conclusion

8.1 Justification

The proposed modification would assist the restoration of the Barham-Koondrook Bridge which will ensure the long-term viability of the structure and improve the safety for road users travelling along MR319 between Victoria and NSW. The work would also maintain the integrity and functionality of a state heritage item.

The adverse impact on the environment is expected to be minor. The benefits of the proposal are considered to outweigh any minor impact on the environment. Two additional safeguards have been recommended to minimise the potential impact on the environment.

8.2 Objects of the EP&A Act

Object	Comment
1.3(a) To promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources.	The proposed modification meets this object. An adverse impact on the environment or the social or economic welfare of the community is not likely.
1.3(b) To facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment.	The proposed modification meets this object, as discussed in sections 8.2.1 to 8.2.4 below.
1.3(c) To promote the orderly and economic use and development of land.	Not relevant to the proposed modification.
1.3(d) To promote the delivery and maintenance of affordable housing.	Not relevant to the proposed modification.
1.3(e) To protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats.	The proposed modification meets this object. As discussed in section 6, there would be negligible impact on threatened and other species of native animals and plants, ecological communities and their habitats.
1.3(f) To promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage).	Not relevant to the proposed modification.
1.3(g) To promote good design and amenity of the built environment.	Not relevant to the proposed modification.
1.3(h) To promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants.	Not relevant to the proposed modification.
1.3(i) To promote the sharing of the responsibility for environmental planning and assessment between	Not relevant to the proposed modification.

Object	Comment
the different levels of government in the State.	
1.3(j) To provide increased opportunity for community participation in environmental planning and assessment.	Consultation with the community has occurred to date and would continue for the duration of the work. Consultation has been carried out with Murray River Council regarding the proposed use of the established stockpile site. Given the minor nature of the proposed modification, consultation with the public has not been carried out.

To further address the objects of the EP&A Act in relation to ecologically sustainable development (Object 1.3(b)), the principles of ESD are further discussed below, as defined in the Environmental Planning and Assessment Regulation 2000, Schedule 2, Part 7, Section 4:

(a) the ***precautionary principle***, namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:

(i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment

(ii) an assessment of the risk-weighted consequences of various options.

(b) ***inter-generational equity***, namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations

(c) ***conservation of biological diversity and ecological integrity***, namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration

(d) ***improved valuation, pricing and incentive mechanisms***, namely, that environmental factors should be included in the valuation of assets and services, such as:

(i) polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement

(ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste

(iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

8.2.1 The precautionary principle

Given the small scale of the proposed modification and a minor impact on the environment is expected, serious or irreversible environmental damage is unlikely.

8.2.2 Intergenerational equity

The proposed modification would not impact on natural or cultural features to a level that would compromise the health, diversity or productivity of the environment to a level that would impact on future generations.

The proposed modification would assist in completing the rehabilitation of the Barham-Koondrook Bridge, benefiting future generations by ensuring the safety of road users and conserving a state heritage listed item.

8.2.3 Conservation of biological diversity and ecological integrity

The proposed modification involves the trimming, lopping or removal of up to four planted trees. The trees would be removed only if needed and would be replaced. There would be minor adverse impact on biological diversity and ecological integrity.

8.2.4 Improved valuation, pricing and incentive mechanisms

This principle gives monetary values to environmental resources. The proposed modification would assist in the restoration of Barham-Koondrook Bridge which is a state heritage listed item.

The selected truss span transportation route avoids and minimises impacts on the natural, built and social environments. In doing so, the cost of impact associated with the proposal have been minimised as far as reasonably practical. These factors ensure that the development would conform to the principles of “ecologically sustainable development”.

8.3 Conclusion

This addendum REF has examined and taken into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the proposed activity.

This has included consideration where relevant, of conservation agreements and plans of management under the NPW Act, biodiversity stewardship sites under the BC Act, wilderness areas, areas of outstanding value, impacts on threatened species, populations and ecological communities and their habitats and other protected fauna and native plants. It has also considered potential impacts to matters of national environmental significance listed under the Federal EPBC Act.

The proposed modification as described in the addendum REF best meets the project objectives and would result in only minor impacts on the environment. Two additional safeguards have been included to minimise the potential impact on the environment. The proposed modification would also assist in the Barham-Koondrook Bridge restoration. On balance the proposed modification is considered justified and the following conclusions are made.

Significance of impact under NSW legislation

The proposed modification would not result in a change to the findings of the project REF, submissions report, pedestrian pathway improvements addendum REF or additional stockpile site addendum REF and would be unlikely to cause a significant impact on the environment. Therefore it is not necessary for an environmental impact statement to be prepared and approval to be sought from the Minister for Planning under Division 5.2 of the EP&A Act. A Biodiversity Development Assessment Report or Species Impact Statement is not required. The proposed modification is subject to assessment under Division 5.1 of the EP&A Act. Consent from Council is not required.

Significance of impact under Australian legislation

The proposed modification would not likely cause a significant impact on matters of national environmental significance or the environment of Commonwealth land within the meaning of the EPBC Act. A referral to the Australian Government Department of the Environment and Energy is not required.

9. Certification

This addendum review of environmental factors provides a true and fair review of the proposed modification in relation to its potential effects on the environment. It addresses to the fullest extent possible all matters affecting or likely to affect the environment as a result of the proposed modification.

Gemma Barber

Environment Officer

Roads and Maritime Services

Date: 2 August 2018

I have examined this addendum review of environmental factors and accept it on behalf of Roads and Maritime Services.

Sam Millie

Bridge Works Manager

Roads and Maritime Services South West

Date: 6-Aug-2018

10. References

Terms and acronyms used in this addendum REF

Term / Acronym	Description
BC Act	*Biodiversity Conservation Act 2016* (NSW).
CEMP	Construction / Contractor's environmental management plan
EIA	Environmental impact assessment
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW). Provides the legislative framework for land use planning and development assessment in NSW
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth). Provides for the protection of the environment, especially matters of national environmental significance, and provides a national assessment and approvals process.
ESD	Ecologically sustainable development. Development which uses, conserves and enhances the resources of the community so that ecological processes on which life depends, are maintained and the total quality of life, now and in the future, can be increased
FM Act	*Fisheries Management Act 1994* (NSW)
Heritage Act	*Heritage Act 1977* (NSW)
ISEPP	State Environmental Planning Policy (Infrastructure) 2007
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan. A type of planning instrument made under Part 3 of the EP&A Act.
NES	Matters of national environmental significance under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.
NPW Act	*National Parks and Wildlife Act 1974* (NSW)
Roads and Maritime	NSW Roads and Maritime Services
SEPP	State Environmental Planning Policy. A type of planning instrument made under Part 3 of the EP&A Act.
TSC Act	*Threatened Species Conservation Act 1995* (NSW)
QA Specifications	Specifications developed by Roads and Maritime Services for use with road work and bridge work contracts let by Roads and Maritime Services.

Appendix A

Consideration of clause 228(2) factors and matters of national environmental significance

Clause 228(2) Checklist

In addition to the requirements of the *Is an EIS required?* (1995/1996) guideline and the *Roads and Related Facilities EIS Guideline* (DUAP, 1996) as detailed in the addendum REF, the following factors, listed in clause 228(2) of the Environmental Planning and Assessment Regulation 2000, have also been considered to assess the likely impacts of the proposed modification on the natural and built environment.

Factor	Impact
a. Any environmental impact on a community? Any impact on a community would be negligible.	Nil
b. Any transformation of a locality? The proposed modification would not transform a locality.	Nil
c. Any environmental impact on the ecosystems of the locality? The proposed modification would not have an impact on the ecosystems of the locality.	Nil
d. Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality? The proposed modification would not have an impact on the aesthetic, recreational, scientific or other environmental quality or value of a locality.	Nil
e. Any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations? The proposed modification would not have an impact on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations.	Nil
f. Any impact on the habitat of protected fauna (within the meaning of the *National Parks and Wildlife Act* 1974)? The proposed modification would not have an impact on the habitat of protected fauna.	Nil
g. Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air? The proposed modification would not endanger any species of animal, plant or other form of life.	Nil
h. Any long-term effects on the environment? The proposed modification would not have any long term effects on the environment.	Nil
i. Any degradation of the quality of the environment? The proposed modification is unlikely to degrade the quality of the environment.	Nil
j. Any risk to the safety of the environment? It is not likely that the proposed modification would pose any risks to the safety of the environment.	Nil
k. Any reduction in the range of beneficial uses of the environment? The proposed modification would not cause a reduction in the range of beneficial uses of the environment.	Nil

Factor	Impact
l. Any pollution of the environment? The proposed modification would result in minor additional short term air and noise pollution from plant and machinery. Pollution would be minor considering the nature and duration of the work.	Minor negative Short-term
m. Any environmental problems associated with the disposal of waste? No problems with the disposal of waste are expected.	Nil
n. Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply? The proposed modification would not generate increased demands on resources that are or are likely to become in short supply.	Nil
o. Any cumulative environmental effect with other existing or likely future activities? Given the minor nature of the proposed modification, the work is unlikely to have a cumulative impact on the environment.	Nil
p. Any impact on coastal processes and coastal hazards, including those under projected climate change conditions? The proposed modification would not have an impact on coastal processes or coastal hazards, including those under projected climate change conditions.	Nil

Matters of National Environmental Significance

Under the environmental assessment provisions of the EPBC Act, the following matters of national environmental significance and impacts on Commonwealth land are required to be considered to assist in determining whether the proposed modification should be referred to the Australian Government Department of the Environment.

Under the EPBC Act strategic assessment approval a referral is not required for proposed road actions that may affect nationally listed threatened species, populations, endangered ecological communities and migratory species. Impacts on these matters are assessed in detail as part of this addendum REF in accordance with Australian Government significant impact criteria and taking into account relevant guidelines and policies.

Factor	Impact
a. Any impact on a World Heritage property? The proposed modification would not have an impact on a World heritage property.	Nil
b. Any impact on a National Heritage place? The proposed modification would not have an impact on a National Heritage place.	Nil
c. Any impact on a wetland of international importance? An EPBC Act Protected Matters search identified six wetlands of international importance as existing within the same catchment as the proposal: • Banrock station wetland complex • Gunbower forest • Kerang wetlands • NSW central murray state forests • Riverland • Coorong, and lakes alexandrina and albert wetland. The proposal is unlikely to impact on these areas given the minimal scope of the work and the distances to the wetlands.	Nil
d. Any impact on a listed threatened species or communities? The proposed modification would not have an impact on listed threatened species or communities, as discussed in section 6.	Nil
e. Any impacts on listed migratory species? The proposed modification would not have an impact on listed migratory species.	Nil
f. Any impact on a Commonwealth marine area? The proposed modification would not have an impact on a Commonwealth marine area.	Nil
g. Does the proposed modification involve a nuclear action (including uranium mining)? The proposed modification would not involve a nuclear action.	Nil
Additionally, any impact (direct or indirect) on Commonwealth land? The proposed modification would not have a direct or indirect impact on Commonwealth land.	Nil

Appendix B

Statutory consultation checklists

ISEPP

Council related infrastructure or services

Issue	Potential impact	Yes / No	If 'yes' consult with the relevant local council(s).	ISEPP clause
Stormwater	Are the works likely to have a *substantial* impact on the stormwater management services which are provided by council?	No		ISEPP cl.13(1)(a)
Traffic	Are the works likely to generate traffic to an extent that will *strain* the capacity of the existing road system in a local government area?	No		ISEPP cl.13(1)(b)
Sewerage system	Will the works involve connection to a council owned sewerage system? If so, will this connection have a *substantial* impact on the capacity of any part of the system?	No		ISEPP cl.13(1)(c)
Water usage	Will the works involve connection to a council owned water supply system? If so, will this require the use of a *substantial* volume of water?	No		ISEPP cl.13(1)(d)
Temporary structures	Will the works involve the installation of a temporary structure on, or the enclosing of, a public place which is under local council management or control? If so, will this cause more than a *minor* or *inconsequential* disruption to pedestrian or vehicular flow?	No		ISEPP cl.13(1)(e)
Road & footpath excavation	Will the works involve more than *minor* or *inconsequential* excavation of a road or adjacent footpath for which council is the roads authority and responsible for maintenance?	No		ISEPP cl.13(1)(f)

Local heritage items

Issue	Potential impact	Yes / No	If 'yes' consult with the relevant local council(s)	ISEPP clause
Local heritage	Is there is a local heritage item (that is not	No		ISEPP

Issue	Potential impact	Yes / No	If 'yes' consult with the relevant local council(s)	ISEPP clause
	also a State heritage item) or a heritage conservation area in the study area for the works? If yes, does a heritage assessment indicate that the potential impacts to the heritage significance of the item/area are more than *minor* or *inconsequential*?			cl.14

Flood liable land

Issue	Potential impact	Yes / No	If 'yes' consult with local Council(s)	ISEPP clause
Flood liable land	Are the works located on flood liable land? If so, will the works change flood patterns to more than a *minor* extent?	No		ISEPP cl.15

Public authorities other than councils

Issue	Potential impact	Yes / No	If 'yes' consult with	ISEPP clause
National parks and reserves	Are the works adjacent to a national park or nature reserve, or other area reserved under the *National Parks and Wildlife Act 1974*, or on land acquired under that Act?	No	Office of Environment and Heritage	ISEPP cl.16(2)(a)
National parks and reserves	Are the works on land in Zone E1 National Parks and Nature Reserves or in a land use zone equivalent to that zone?	No	Office of Environment and Heritage	ISEPP cl. 16(2)(b)
Aquatic reserves and marine parks	Are the works adjacent to an aquatic reserve or a marine park declared under the *Marine Estate Management Act 2014*?	No	Department of Industry	ISEPP cl.16(2)(c)
Sydney Harbour foreshore	Are the works in the Sydney Harbour Foreshore Area as defined by the *Sydney Harbour Foreshore Authority Act 1998*?	No	Sydney Harbour Foreshore Authority	ISEPP cl.16(2)(d)
Bush fire prone land	Are the works for the purpose of residential development, an educational establishment, a health services facility, a correctional centre or group home in bush fire prone land?	No	Rural Fire Service	ISEPP cl.16(2)(f)

Issue	Potential impact	Yes / No	If 'yes' consult with	ISEPP clause
Artificial light	Would the works increase the amount of artificial light in the night sky and that is on land within the dark sky region as identified on the dark sky region map? (Note: the dark sky region is within 200 kilometres of the Siding Spring Observatory)	No	Director of the Siding Spring Observatory	ISEPP cl. 16(2)(g)
Defence communications buffer land	Are the works on buffer land around the defence communications facility near Morundah? (Note: refer to Defence Communications Facility Buffer Map referred to in clause 5.15 of Lockhart LEP 2012, Narrandera LEP 2013 and Urana LEP 2011).	No	Secretary of the Commonwealth Department of Defence	ISEPP cl. 16(2)(h)
Mine subsidence land	Are the works on land in a mine subsidence district within the meaning of the *Mine Subsidence Compensation Act 1961*?	No	Mine Subsidence Board	ISEPP cl. 16(2)(i)

Appendix C

AHIMS Search results

AHIMS Web Services (AWS)
Search Result

Purchase Order/Reference : Barham Bridge Tree Addend

Client Service ID : 360138

Roads and Maritime - Wagga

193-195 Morgan Street
Wagga Wagga New South Wales 2650

Attention: Gemma Barber

Email: gemma.barber@rms.nsw.gov.au

Date: 26 July 2018

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lat, Long From : -35.6242, 144.1282 - Lat, Long To : -35.6241, 144.1283 with a Buffer of 1000 meters, conducted by Gemma Barber on 26 July 2018.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.

A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the NSW Government Gazette (http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date .Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

3 Marist Place, Parramatta NSW 2150
Locked Bag 5020 Parramatta NSW 2220
Tel: (02) 9585 6380 Fax: (02) 9873 8599

ABN 30 841 387 271
Email: ahims@environment.nsw.gov.au
Web: www.environment.nsw.gov.au

rms.nsw.gov.au/

13 22 13

Customer feedback
Roads and Maritime
Locked Bag 928,
North Sydney NSW 2059

August 2018
RMS.18.1011
ISBN: 978-1-925797-79-4