

Appendix F

Agency consultation responses



GANNAWARRA
SHIRE COUNCIL

ABN 98 993 182 937

T5049

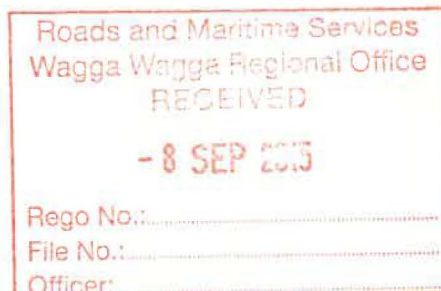
Our Ref: 30.01.024

15/01239

GR:JB

3 September 2015

Sam Millie
Roads and Maritime Services
PO Box 484
WAGGA WAGGA NSW 2650



Dear Sam

Barham Koondrook Bridge Restoration

Gannawarra Shire Council would like to take this opportunity to provide input into the restoration works on the Barham Koondrook Bridge as the proposed works impact on the connectivity, community and environment in this region. Council understands the importance of the restoration works on this iconic bridge and will support RMS in its aim to complete these works with minimal disruption.

Council supports Option 3 as the preferred alignment based on the following points:-

- The temporary bridge abuts the existing road network reducing the need for heavy vehicles to travel along narrow residential streets. During the works Council requests that no heavy vehicles travel down Dalton or Vine Street.
- Reduce the requirement for substantial infrastructure upgrade works to accommodate the increase traffic flow along residential streets.
- Reduce disruption to residents due to noise and potential safety hazards.

As part of the post work rehabilitation of the Koondrook area Council requests that RMS considers the following:-

- As you will be aware the communities of Barham and Koondrook although separated by the river function as a single town. Residents of all ages move back and forth to shore services such as the football oval, cricket ground, outdoor pool, childcare services, senior school and community centres. As such we need to ensure residents of all ages are offered safe and common access across the river. Apparently the historic bridge does not provide suitable pedestrian movements and that you are able to include a new separate footbridge as part of the reconstruction, it is extremely important that RMS permanently install a retractable pedestrian footbridge alongside the restored bridge to provide safe continuous pedestrian walkway connecting the highly utilised parks and facilities in both Koondrook and Barham. A footbridge would separate pedestrians, including gopher users, from motorists to significantly reduce the likelihood of an accident.
- A replanting program be undertaken to replace the trees that will be removed with mature native vegetation and, in addition, enhance the park area on the bank with additional landscaping. Council is concerned with the impact on both the environment and community around the removal of 32 trees including several 100 year old red gums. These trees lining the Murray River are significant to the aesthetics of Koondrook.

- Installing a Barham Koondrook Bridge themed interpretive centre on bank of the Murray River to complement the replanting program. This interpretive centre could be a focal point depicting the history of the bridge in a tasteful and captivating fashion. The centre could house old bridge components adding to the ambiance.
- Reusing the road materials used to construct the 150m of new road on the Victoria side to improve the existing track which runs parallel to the river. This track is well used especially when the monthly market is on.
- A time lapse video of the restoration be taken to show the long process quickly in an engaging fashion.

Council recognises the importance, and supports the intent, to restore the bridge, but we urge a balanced approach be taken. RMS is to be commended on the proactive community consultation undertaken to date. We offer our advice to support RMS in interfacing with our local community, to better inform them and minimise misinformation.

Thank you for the opportunity to provide input into the restoration works, which will in the future improve the connectivity between the townships. Please do not hesitate to contact me on telephone number 03 5450 9333 if you would like further detail on any aspects of our submission.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Geoff Rollinson', with a long horizontal line extending to the right.

Geoff Rollinson
DIRECTOR INFRASTRUCTURE SERVICES

Northern Region
53-61 Lansell Street
East Bendigo Victoria 3550
Telephone (03) 5434 5000
Fax (03) 5434 5003

vicroads.vic.gov.au

Gemma Barber
Senior Environmental Consultant
NGH Environmental
P.O. Box 5464
WAGGA WAGGA NSW 2650

Contact: Jeff Blackie
Telephone: (03) 5434 5156
Our ref: QD #2953324
File No: RA-625-STR-003

30 April 2015

Dear Gemma,

BARHAM/KOONDROOK BRIDGE – PROPOSED REHABILITATION OF VICTORIAN ABUTMENT

I refer to your letter dated 15 April 2015 regarding the proposed rehabilitation works to the Barham/Koondrook Bridge over the Murray River.

VicRoads supports the proposed works and notes that this project may need to comply with the requirements of a range of legislation, including but not limited to;

- Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*
- Victorian *Planning and Environment Act 1987*
- Victorian *Aboriginal Heritage Act 2006*
- Victorian *Flora and Fauna Guarantee Act 1988*
- Victorian *Water Act 1989*
- Victorian *Heritage Act 1995*
- Victorian *Wildlife Act 1975*
- Victorian *Road Management Act 2004*

It is requested that a copy of the draft REF be provided to VicRoads for review and comment prior to finalisation.

VicRoads has a particular interest in the location, design, construction and maintenance of any approach road and abutment to access a temporary bridge. Prior to any physical works commencing to the Victorian side of the bridge, VicRoads will require detailed design drawings to include location of the structure, access road geometry, swept paths for design vehicles, pavement composition details, road surfacing details, etc.

VicRoads has undertaken a basic desktop review of the site using Google and suggests that the best location for a temporary bridge may be immediately downstream of the existing structure. The temporary NSW abutment could be constructed immediately adjacent to the existing RMS site compound, which should then require minimal tree removals and could also utilise the widened sealed area on Murray Street for truck movements. On the Victorian side the abutment and access road could form an 'S' bend onto Murray Parade and Grigg Road. With consent from the Gannawarra Shire it may be

possible to close Murray Parade immediately west of the access road if this could facilitate traffic movements to and from the temporary bridge, and improve road safety. If Murray Parade were temporarily closed it may be possible to divert local traffic (not accessing the bridge) via Vine, Burnett and Dalton Streets in Koondrook.

It is suggested a joint site inspection by VicRoads, Gannawarra Shire and RMS could assist in locating a suitable temporary bridge site on the Victorian side.

I request that the above documentation be forwarded to the undersigned at the Bendigo office when available. Should you have any further queries or wish to arrange a site inspection, I can be contacted on (03) 5434 5054.

Yours sincerely,



**DAYA GOVENDER
MANAGER PLANNING**

13/05/2015

Gemma Barber
NGH Environmental
Po Box 5464
WAGGA WAGGA NSW 2650

REF: 5005657

Dear Gemma,

**RE: PROPOSED REHABILITATION OF VICTORIAN APPROACH SPAN,
TRUSS SPANS, LIFT SPAN, AND CONSTRUCTION OF TEMPORARY
BRIDGE**

PROPOSAL: BRIDGE REDEVELOPMENT

**PREMISES ADDRESS: BARHAM / KOONDRUCK BRIDGE (OVER THE
MURRAY RIVER)**

Thank you for your correspondence in relation to the above development project, referred to EPA on 24/04/2015.

EPA has reviewed the information provided and has no issues of concern with the redevelopment provided the following conditions are adhered to:

- Sediment traps or similar, must be installed to prevent the transportation of sediment and litter to the stormwater system and nearby water courses.
- Construction and post-construction activities must be in accordance with EPA Publication 275 Construction Techniques for Sediment Pollution Control 1991 or as amended.
- Should any removal of lead based paint occur, it should be collected and disposed of at an authorised waste facility.

If you have any further queries please do not hesitate to contact our Assessing Officer, Samuel Trowse on 1300 EPA VIC (1300 372 842).

Regards



Paul Ratajczyk
Team Leader - Compliance Strategy & Support
EPA North West



165-171 Hargreaves Street
Bendigo
Victoria 3550
PO Box 1466
Bendigo Central
Victoria 3552
T: 03 5438 1000
F: 03 5443 6555
DX 214537
www.epa.vic.gov.au



Gemma Barber

From: Peter.Shadwick@delwp.vic.gov.au
Sent: Monday, 28 September 2015 3:25 PM
To: Gemma Barber
Cc: Amanda.Johnson@delwp.vic.gov.au; robert.rorke@dpcd.vic.gov.au
Subject: Fw: Barham - Koondrook Bridge Proposed rehabilitation works

Hi Gemma

I refer to your email to Amanda Johnson received on 28th September regarding preliminary advice for the following proposed works associated with the rehabilitation of the Barham - Koondrook Bridge.

- Establishment of a site compound on the Victorian side upstream of the bridge.
- Construction of access ramps to pier 4
- Establishment of crane pads close to the river bank on both sides of the river
- Removal of trees affected by the work
- Construction of a new concrete Victorian abutment approx. 3 metres behind the existing timber abutment.
- Scour protection of the Victorian river bank upstream and downstream of the existing bridge
- The possible construction of a temporary bridge to provide an alternative detour route.
-

In providing advice of the proposed works, the department would require the following information:

Establishment of a site compound on the Victorian side upstream of the bridge.

The location and dimensions of the proposed compound, including access and other associated infrastructure and any disturbance to native vegetation including impact of Tree Retention Zones (TRZ)

Construction of access ramps to pier 4

The location and dimensions of the works zones including any disturbance to native vegetation

Establishment of crane pads close to the river bank on both sides of the river

The location and dimensions of the proposed crane pads including access and any disturbance to native vegetation including impact of Tree Retention Zones (TRZ)

Removal of trees affected by the work

Information in accordance with Clause 52.17 of the Swan Hill Planning Scheme.

The impact to Tree Retention Zones also needs to be considered, whereby any impacts, such as trenching, compaction etc.. that are within 12 x Diameter at Breast Height (DBH) of the tree (upto a maximum of 15 metres) will need the tree to be considered as a loss.

Construction of a new concrete Victorian abutment approx. 3 metres behind the existing timber abutment.

The location and dimensions of the proposed concrete abutment and any disturbance to native vegetation including impact of Tree Retention Zones (TRZ)

Scour protection of the Victorian river bank upstream and downstream of the existing bridge

The location and dimensions of the proposed scour protection and any disturbance to native vegetation including impact of Tree Retention Zones (TRZ)

The possible construction of a temporary bridge to provide an alternative detour route.

The location and dimensions of the proposed temporary bridge including access and any other associated works and any disturbance to native vegetation including impact of Tree Retention Zones (TRZ)

The department notes that depending on the impacts, approvals may be required in accordance with the following legislation

- Planning and Environment Act 1987
- Native Title Act 1995
- Aboriginal Heritage Act 2006
- Fisheries Act 1995
- Flora and Fauna Guarantee Act 1988
- Wildlife Act 1975
- Environment Effects Act 1978
- Environment Protection and Biodiversity Conservation Act 1999

Once the department has further information regarding the potential impacts of the proposed works further information can be provided regarding the approvals required.

Should you require further information, please contact Amanda Johnson on 54304626.

Peter Shadwick | Regional Planner | Land, Planning and Approvals | Loddon Mallee Region
Regional Services | Department of Environment, Land, Water & Planning
Cnr Eleventh Street and Koorlong Avenue, Irymple
(PO Box 905, Mildura Vic 3502)
T: 03 5051 4348 | M: 0429 954 269 | E: peter.shadwick@delwp.vic.gov.au

www.delwp.vic.gov.au





Office of
Environment
& Heritage

Your reference
Our reference: DOC15/127062
Contact: Michael Todd
Ph. 03 50218915

Ms Gemma Barber
NGH Environmental
Suite 1
39 Fitzmaurice Street,
WAGGA WAGGA NSW 2650

Dear Ms Barber

RE: Barham/Koondrook Bridge- Proposed Rehabilitation of Victorian Approach Span, Truss Spans, Lift Span, and Construction of Temporary Bridge, Review of Environmental Factors – consultation

Thank you for your letter dated 15 April 2015 to the Office of Environment and Heritage (OEH) seeking our requirements for the development of a Review of Environmental Factors (REF) for the proposed bridge rehabilitation. This response is in regard to statutory matters relating to application of the *National Parks and Wildlife Act 1974* and the *Threatened Species Conservation Act 1995*.

OEH notes that native vegetation may be cleared as part of the works. If this is the case we recommend that the REF consider the potential impacts of this clearing on both biodiversity, including threatened species, and Aboriginal cultural heritage. The impact of works on the bridge itself on the threatened bat species, Southern Myotis (*Myotis macropus*) should be considered. The location and impact of construction of the temporary bridge on biodiversity and Aboriginal cultural heritage needs to be detailed.

Further information on the requirements for the REF is provided in Attachment 1.

A section 60 approval under the *Heritage Act 1977* was issued by OEH on 11 March 2015. The REF should be consistent with the conditions of this approval.

Should you wish to discuss these matters further, please contact Michael Todd on (03) 5021 8915 or by email michael.todd@environment.nsw.gov.au.

Yours sincerely

PETER EWIN
Senior Team Leader Planning
South West Region
Regional Operations
Office of Environment and Heritage

Enclosure: ATTACHMENT 1 – Recommended matters for consideration within the REF for Barham/Koondrook Bridge Rehabilitation

ATTACHMENT 1 – Recommended matters for consideration within the REF for Barham/ Koondrook Bridge proposed rehabilitation

Biodiversity

OEH recommend the determining authority consider whether a flora and fauna assessment (assessment of significance or 7-part test) is required for the development as habitat values may be present for threatened species.

The information provided indicates that some native vegetation is proposed for removal. OEH recommend the determining authority consider the impact of the proposal on the Southern Myotis (*Myotis macropus*) which has been recorded at the bridge in 2009. Because the species is known to use man-made structures adjacent to watercourses (foraging habitat), in particular bridges, it is considered possible that the species is using the bridge as roosting habitat (Campbell, 2009; Campbell *et al.* 2010). It needs to be determined whether the species does roost under the bridge. If it does then mitigation measures need to be considered potentially involving provision of alternative roosting habitat and relocation of the bats to another site and/or the completed bridge post rehabilitation. There is a precedent for successful relocation of *Myotis* colonies under bridges (<http://ecoltrans.net/wp-content/uploads/Frank-Lemckert.pdf>).

An assessment of significance should be completed for developments that may impact on threatened flora, fauna, endangered ecological communities or endangered populations. An assessment of significance should address all threatened species potentially occurring on site that may be directly or indirectly impacted by the proposal. Guidelines for completing an assessment of significance can be found on the OEH website at www.environment.nsw.gov.au/resources/threatenedspecies/tsaguide07393.pdf.

The OEH threatened species website (www.environment.nsw.gov.au/threatenedspecies/) and Atlas of NSW Wildlife (www.bionet.nsw.gov.au/) can be used to generate a list of threatened species, populations and ecological communities predicted or known to occur in the area. Vegetation map datasets can be accessed through the OEH website at mapdata.environment.nsw.gov.au/. Habitat preferences can then be used to determine the likelihood of these species occurring in the study area. Appropriate measures to avoid, minimise and mitigate any losses to vegetation and threatened species habitat should be set out in the REF. If impacts on biodiversity are likely to be significant, then one option to mitigate these impacts is through the use of a biodiversity offset. If an offset is to be used, then the principles for its implementation are available from the OEH website at www.environment.nsw.gov.au/biodivoffsets/oehoffsetprincip.htm.

With regard to the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, the assessment should identify any relevant Matters of National Environmental Significance and whether the proposal has been referred to the Commonwealth or already determined to be a controlled action.

References

- Campbell, S. (2009) So long as it's near water: variable roosting behaviour of the large-footed myotis (*Myotis macropus*), *Australian Journal of Zoology* 57(2): 89-98.
- Campbell, S., Coulson, G., and Lumsden, L.F. (2010) Divergent Microclimates in Artificial and Natural Roosts of the Large-Footed Myotis (*Myotis macropus*), *Acta Chiropterologica* 12(1): 173-185.
- Hoye, G.A. (1995) A bat survey of the River Red Gum, Box Woodland and Mallee forests of southern Western New South Wales, Unpublished report, State Forests of NSW.
- Law, B. and Anderson, J. (1999) A survey for the Southern Myotis, *Myotis macropus* (Vespertilionidae) and other bat species in River Red Gum *Eucalyptus camaldulensis* forests of the Murray River, New South Wales, *Australian Zoologist* 31(1):166-174.

Aboriginal Cultural Heritage

OEH has a statutory role under the *National Parks and Wildlife Act 1974* (NPW Act) in the protection and preservation of Aboriginal sites. It is an offence to do any of the following things without an exemption or defence provided for under the NPW Act (penalties apply):

- knowingly harm or desecrate an Aboriginal object (the 'knowing' offence)
- harm or desecrate an Aboriginal object or Aboriginal place (the 'strict liability' offence)

The NPW Act provides a number of exemptions and defences to these offences and also excludes certain acts and omissions from the definition of harm.

OEH notes that the bridge site is significantly disturbed and the likelihood of Aboriginal cultural heritage (ACH) being present is low however the proposed works occurring within the state of NSW associated with abutments, piles, scour and bank protection are occurring within an archaeologically sensitive area (within 200 metres of a watercourse). OEH considers that there exists potential for impacts to ACH especially where ground disturbance activities are proposed.

The proposed construction of a temporary bridge to allow for continued river crossings while the rehabilitation work is being undertaken will need to be assessed. The removal of trees and maintenance of the NSW site office and compound have also been specified as activities associated with the project that will need to be addressed in the assessment of ACH.

OEH requires that the proponent undertake a cultural heritage assessment of the potential impacts of the proposed development. The assessment should contain:

- A description of the Aboriginal objects and declared Aboriginal places located within the area of the proposed development,
- A description of the cultural heritage values, including the significance of the Aboriginal objects and any declared Aboriginal places, that exist across the whole area that will be affected by the proposed development, and the significance of these values for the Aboriginal people who have a cultural association with the land,
- A description of how the requirements for consultation with Aboriginal people as set out in clause 80C of the *National Parks and Wildlife Regulation 2009* have been met. OEH's *Aboriginal Cultural Heritage Consultation Requirement for Proponents 2010* provides further explanation of the consultation requirements (www.environment.nsw.gov.au/licences/consultation.htm),
- The views of those Aboriginal people regarding the likely impact of the proposed development on their cultural heritage. If any submissions have been received as a part of the consultation requirements, then the report must include a copy of each submission and your response,
- A description of the actual or likely harm posed to the Aboriginal objects or declared Aboriginal places from the proposed activity, with reference to the cultural heritage values identified,
- A description of any practical measures that may be taken to protect and conserve those Aboriginal objects or declared Aboriginal places
- A description of any practical measures that may be taken to avoid or mitigate any actual or likely harm, alternatives to harm or, if this is not possible, to manage (minimise harm), and
- In the event that harm to Aboriginal objects cannot be avoided then an application for an Aboriginal Heritage Impact Permit (AHIP) will be required to be submitted to OEH for consideration

In considering the above requirements, the proponent must comply with the processes described in the following documents;

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* www.environment.nsw.gov.au/licences/consultation.htm. This document further explains the consultation requirements that are set out in clause 80C of the *National Parks and Wildlife Regulation 2009*. The process set out in this document must be followed and documented in the Environmental Assessment Report.
- *Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales* www.environment.nsw.gov.au/licences/archinvestigations.htm. The process outlined by this Code should be followed and documented where the assessment of Aboriginal cultural heritage requires an archaeological investigation to be carried out.
- *Guide to investigation, assessing and reporting on Aboriginal cultural heritage in NSW* www.environment.nsw.gov.au/licences/investassessreport.htm. This document provides guidance on the process for investigating and assessing Aboriginal cultural heritage in NSW and OEH's requirements for an assessment report.
- *Applying for an Aboriginal Heritage Impact Permit: Guide for Applicants* www.environment.nsw.gov.au/licences/applyforahip.htm.



**Primary
Industries**

RECEIVED
19 MAY 2015

BY:

Our Ref: C14/160

Date: 1 May 2015

Gemma Barber
Senior Environmental Consultant
NGH Environmental
PO Box 5464
WAGGA WAGGA NSW 2650

Dear Bryson,

Proposed Barham/Koondrook Bridge – rehabilitation of Victorian span, truss spans, lift span and construction of temporary bridge.

Thank you for seeking Fisheries NSW comments regarding the Review of Environmental Factors (REF) for the rehabilitation works to the Barham/Koondrook Bridge.

The Departments requirements for the preparation of an REF or similar environmental assessment document are attached to this letter. As any works that involve works within waterways have the potential to impact on aquatic habitats and associated species, any environmental assessment document prepared for Roads and Maritime Services (RMS) should be forwarded to Fisheries NSW for review and comment before the works commence. Adequate time should be given for consultation between RMS and Fisheries NSW on the design and construction of the bridge works to be undertaken.

RMS should be aware that if the bridge works involve any dredging and reclamation works, as per Section 199 of the *Fisheries Management Act*, written notice of the work must be provided and consider any matters concerning the proposed work that are raised within 28 days after giving of the notice. If the proposed works will permanently or temporarily inhibit, obstruct or block the movement of fish then the applicants will be required to obtain a permit under Part 7 of the *Fisheries Management Act*

The REF should assess whether there is likely to be any significant impacts on listed aquatic threatened species, populations or communities. A 7 part test as per Section 5A of the *Environmental Planning and Assessment Act 1979* should be undertaken for aquatic threatened species potentially impacted on by the proposal.

Aquatic Habitat Protection Unit
Unit 3, 556 Macaulay St ALBURY NSW 2640
Tel: (02) 6042 4213 Fax: (02) 6021 0113
ABN 72189 919 072-002
www.dpi.nsw.gov.au

Further information and a comprehensive list of threatened species, populations and ecological communities can be found on our website.

Key Threatening Process (KTP) are also listed under the threatened species provisions of the Fisheries Management Act 1994. The REF should outline any KTPs that are going to be undertaken as part of or as a result of the works, these may include the degradation of native riparian vegetation (including aquatic vegetation), removal of large wood debris, or the installation and operation of instream structures that alter the natural flow regimes of rivers or streams. Information should also be presented outlining any mitigation measures that are to be undertaken as part of the proposal (i.e revegetation).

Please include in the REF any impact mitigation measures that will be undertaken before, during and after the proposed works are completed including sediment and erosion control and site rehabilitation measures.

If you have any queries please call me on (02) 60424213

Yours sincerely,



Luke Pearce
Regional Assessment Officer South
Aquatic Habitat Protection
NSW Department of Primary Industries

NSW DEPARTMENT OF PRIMARY INDUSTRIES REQUIREMENTS FOR THE PREPARATION OF ENVIRONMENTAL PLANNING AND ASSESSMENT DOCUMENTS

Fisheries NSW is responsible for managing aquatic species (including aquatic invertebrates), aquatic habitat and aquatic biodiversity throughout NSW. Aquatic biodiversity occurs in permanent and intermittent waterways including marine, estuarine, fresh, flowing and still waters.

Fisheries NSW requirements for the preparation of environmental planning and assessment documents are outlined in the current NSW Fisheries *Policy and Guidelines for Aquatic Habitat Management and Fish Conservation 1999* pp 49-51. This document can be viewed on the Fisheries website (www.industry.nsw.gov.au).

Of primary concern to Fisheries NSW are the disturbance and/or destruction of aquatic habitats and any adverse impacts on aquatic species. Disturbance can be in the form of siltation from excessive sediment runoff, blockages to fish passage such as the construction of causeways, culverts and temporary crossings and direct impacts on aquatic habitat such as the removal of aquatic vegetation and desnagging activities.

Fisheries NSW has also introduced threatened aquatic species legislation, which allows for the listing of aquatic species, populations or communities as either endangered or vulnerable. This legislation is outlined in Part 7A of the *Fisheries Management Act 1994*. Aquatic threatened species are widely distributed across NSW and should be considered in any environmental assessment process. Up to date information is available on the Fisheries NSW website (www.dpi.nsw.gov.au).

Any environmental planning and assessment documents should include the following information as **an absolute minimum** to allow staff from Fisheries NSW to make an informed decision about the potential impacts that any proposed works may have on aquatic species and their habitats.

- Location of works (including topographic map)
- Name of adjacent watercourse(s)
- Description of works to be undertaken
 - Method/s of construction
 - Timing and duration of works
- Obstructions to fish passage (temporary and permanent) identified
- Aquatic habitat conditions at the site – particularly riparian and aquatic vegetation, water depth, permanence of water flow and snags in the vicinity of the proposed works.
- Potential impacts upon aquatic and riparian habitats (both temporary and permanent)
- Proposals to mitigate impacts upon riparian and aquatic vegetation and aquatic habitats.
- Potential impacts upon water quality of the proposed works.
- Proposals to mitigate impacts upon water quality.
- An assessment of the potential impact that proposed works may have on aquatic threatened species, populations and ecological communities.

The above list outlines the minimal amount of information that is required by Fisheries NSW to undertake an assessment of the potential impacts that a proposed activity or works may have on the local aquatic environment. Large scale works will require more detailed information to be submitted to the Department for assessment.

Further information can be obtained from:

Luke Pearce
Regional Assessment Officer South
NSW Department of Primary Industries

Unit 3, 556 Macauley St

ALBURY NSW 2640

Ph: (02) 6042 4213

Our reference: EF13/8663 DOC15/136474
Contact: Chris Burton, 02 6022 0609

RECEIVED
05 MAY 2015

BY:

The Senior Environmental Consultant
NGH Environmental
PO Box 5464
WAGGA WAGGA NSW 2650

Dear Ms Barber

Re Proposed Bridge Works Barham-Koondrook

I refer to your letter dated 15 April 2015 to the Environment Protection Authority (EPA) requesting our comments on the proposed rehabilitation of the Barham-Koondrook Bridge and the construction of a temporary bridge to be used during the proposed works.

The EPA understands that the proposed works include construction of access ramps and abutments, a sheet piling cofferdam, crane pads and scour protection of the river bank. In addition there will be replacement of timber decking, corroded webbing and the removal of lead paint by grit blasting.

The proposed works are not required to be licensed under the *Protection of the Environment Operations Act 1997*. However, the proponent must take all necessary precautions to prevent pollution of waterways during the proposed works. The measures to prevent water pollution should be included in the Review of Environmental Factors for the project.

Based on the information provided, we have no further comments to make on the proposal at this stage.

If you have any further enquiries about this matter please contact me by telephoning 02 6022 0609.

Yours sincerely



CHRIS BURTON
Acting Head, Albury Unit
Environment Protection Authority

Gemma Barber

From: David Pietsch <david.pietsch@gannawarra.vic.gov.au>
Sent: Friday, 24 April 2015 1:59 PM
To: Gemma Barber
Subject: FW: Victorian Planning Provisions

Hi Gemma

Nice talking to you earlier.

Here is my email address. I have also attached a few references for your information.

My direct number is 54 509 324.

Thanks for your help.

Regards

David

http://planningschemes.dpcd.vic.gov.au/schemes/vpps/52_17.pdf

http://planningschemes.dpcd.vic.gov.au/schemes/gannawarra/ordinance/52_17s_gann.pdf

<http://www.depi.vic.gov.au/environment-and-wildlife/biodiversity/native-vegetation/native-vegetation-permitted-clearing-regulations>



David Pietsch | Manager Planning | Gannawarra Shire Council

p. 03 5450 9333 f. 03 5450 3023 e. david.pietsch@gannawarra.vic.gov.au | www.gannawarra.vic.gov.au



Gemma Barber

From: Steven Hoare <steven.hoare@lls.nsw.gov.au>
Sent: Friday, 24 April 2015 2:34 PM
To: Gemma Barber
Subject: RE - Barham/Koondrook Bridge-proposed rehabilitation of Victorian approach span

Hi Gemma,

Thank you for giving Murray Local Land Services the opportunity to comment on the proposed works on the Barham/Koondrook bridge. Based on the information provided in your report I wish to provide the following comments .

The Native Vegetation Act 2003 regulates all clearing of native vegetation in areas zoned as rural or rural - residential in NSW.

Noted in your report the majority of works that are required to be undertaken occur on the Victorian side of the Murray River, if this is the case then formal approval is not required under the *Native Vegetation Act 2003* but my require formal approval under other existing legislative acts in Victoria.

Any vegetation clearing carried out on the NSW side of the Murray River will require approval before removing and may need to undergo a formal assessment.

If you require any further information or need approvals for vegetation removal on the NSW side then please do not hesitate to contact me.

regards
Steve

--

Steven Hoare | Senior Lands Services Officer
Murray Local Land Services
PO Box 835 | Victoria St | Deniliquin NSW 2710
T: 03 5880 1416 | **F:**03 5880 1444 | **M:** 0417854350
E: steven.hoare@lls.nsw.gov.au
W: www.murray.lls.nsw.gov.au

This message is intended for the addressee named and may contain confidential information. If you are not the intended recipient, please delete it and notify the sender. Views expressed in this message are those of the individual sender, and are not necessarily the views of their organisation.

Our Ref: F14/2471

Victorian Aboriginal Heritage Council
GPO 2392
Melbourne VIC 3001
Tel: 03 9208 3243
Fax: 03 9208 3292
vahc@dpc.vic.gov.au

RECEIVED
07 MAY 2015

28 April 2015

BY:

Ms Gemma Barber
Senior Environmental Consultant
NGH Environmental

Dear Ms Barber

Thank you for your letter to the Victorian Aboriginal Heritage Council (Council), dated 15 April 2015, in which you invited the Council to comment on the proposed rehabilitation work on the Barham/Koondrook Bridge over the Murray River.

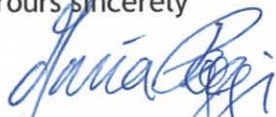
The Council was created under the *Aboriginal Heritage Act 2006* (Act) and has a state-wide statutory role in the protection and management of Aboriginal cultural heritage. The Council's highest priority is the appointment of Registered Aboriginal Parties (RAPs). RAPs are organisations that hold decision-making responsibilities for the protection, management and preservation of Aboriginal cultural heritage in a specified geographical area.

I understand that NGH Environmental has engaged Jo Bell Heritage Services Pty Ltd to investigate any impacts the project may have on Aboriginal cultural heritage. I presume the cultural heritage adviser has advised you there is currently not a RAP for the area where the rehabilitation works are proposed.

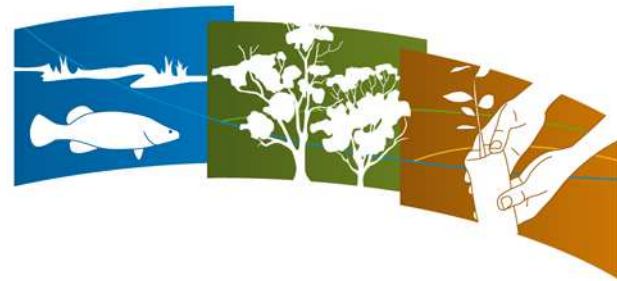
In these circumstances, the Office of Aboriginal Affairs Victoria (OAAV) is the relevant decision maker under the Act. You may wish to seek further information from OAAV (Dr Mark Eccleston, Manager of Heritage Operations at mark.eccleston@dpc.vic.gov.au or 9208 3281) about the obligations of NGH Environmental under s65 of the Act regarding consultation with relevant Traditional Owners and Traditional Owner bodies.

If you have any other queries about this matter, please contact me at maria.pizzi@dpc.vic.gov.au or on 9208 3243.

Yours sincerely



Maria Pizzi
Manager, Secretariat
Victorian Aboriginal Heritage Council



Application Number: **W-2015-0052**
Document Number: 2
Date: 28 April 2015

Gemma Barber
Email: ngh@nghenvironmental.com.au

Dear Gemma

I refer to your correspondence dated 21 April 2015, received at North Central Catchment Management Authority (CMA) on 21 April 2015.

Below is the Authority's understanding of the application:

Applicant: Gemma Barber, NGH Environmental
Location: Murray River at Grigg Road, Koondrook
Proposed Works: Bridge Maintenance Works

I write to confirm that North Central CMA does not object to the works being undertaken as described and that there is no requirement on this occasion to obtain a Works on Waterway Permit. However, there is a requirement that the list of enclosed conditions are adhered to, to ensure the protection of bed and banks of the waterway.

All works must comply with the conditions set out in Appendix A.

You are also advised that you may require approvals from other Authorities for the works. It is your responsibility to obtain all necessary approvals before the commencement of works.

Note that some ground disturbing activities may require the preparation of a Cultural Heritage Management Plan (CHMP) by a suitably qualified Heritage Advisor. It is your responsibility to determine whether or not a CHMP is required and, if so, an approved CHMP must be submitted with this licence application before a licence can be approved. For further information please contact Aboriginal Affairs Victoria at www.aboriginalaffairs.vic.gov.au or by telephone (03) 9208 3333.

The North Central CMA takes no responsibility for damage or injury to any person or property, which may arise during construction of the works, or at any time thereafter.

Should you have any queries, please do not hesitate to contact me on (03) 5440 1896. To assist the Authority in handling any enquiries please quote **W-2015-0052** in your correspondence with us.

Yours sincerely

Sarah Stanaway

Sarah Stanaway
Waterways and Floodplain Officer

ENCL/ **Appendix A**

Appendix A

1. The works must be undertaken in accordance with the application and plans submitted.
2. Works must be undertaken in accordance with EPA Victoria's Publication 480, *Environmental Guidelines for Major Construction Sites*.
3. All Aboriginal cultural heritage (places, human remains and objects) are protected under the Aboriginal Heritage Act 2006. It is an offence to do an act that harms or is likely to harm Aboriginal cultural heritage. It is recommended that you seek advice as to whether a record exists on the Victorian Aboriginal Heritage Register in relation to proposed works on a nominated area of land. If you discover or uncover Aboriginal cultural heritage before or during your activity, work must cease immediately in that area and the discovery reported to Aboriginal Affairs Victoria (03) 9208 3333 who will provide further advice. If suspected human remains are discovered, all activity in the vicinity must stop immediately and the area avoided to ensure damage is minimised. The human remains must be left in place and protected from harm or damage. The Victoria Police and the Coroner's Office must be notified immediately.
4. The waterway must not be deviated in any manner for construction purposes, except with the specific approval of the Authority. If necessary, the flow shall be pumped around the construction site or construction undertaken in stages, with flow confined to one portion of the waterway.
5. Disturbance of the bed and banks of the waterway and the use of construction plant and equipment must be kept to a minimum during construction. Removal, destruction or lopping of native vegetation must also be kept to a minimum. Suitable conservation measures must be implemented to prevent vegetation, silt, chemicals and spillage from construction activities either entering the waterway or moving downstream. No discharge/dumping of wastewater or other materials to the waterway is permitted, unless specifically authorised by the Authority.
6. Removal of exotic vegetation must be carried out in an approved manner having regard for the propagation potential of the target species. This may require repeat treatments to manage regrowth or regeneration. The manner of disposal of the vegetative material from this exotic vegetation must have regard for the propagation characteristics of the species.
7. Vegetation that has been cleared for construction purposes and any heaps of excavated soil remaining after the completion of works must be removed from site. No material of any sort shall be pushed into the waterway or left in a manner where it can slip or be moved by floodwaters, into the waterway.
8. Any works in the bed of the waterway must be designed and constructed so as not to impede fish passage.
9. All disturbed bank areas must be graded to remove humps and hollows and top soiled and planted with locally occurring native species of grasses and shrubs.
10. Logs and boulders removed from the waterway, as a result of construction activity, must be returned to the waterway and randomly distributed.
11. The works must be maintained in good order by the landowner.
12. It is the responsibility of the person issued with this permit to obtain the necessary approval of the works prior to their commencement:
 - a) From the relevant planning authority;
 - b) from the Department of Environment and Primary Industries in relation to the *Land Act 1958*, *Forests Act 1958* the *Flora and Fauna Guarantee Act 1988*, the *Conservation, Forests and Land Act 1987* and the *Catchment and Land Protection Act 1994*.

End of Conditions

14 September 2015

Sam Millie
Bridge Works Manager
Roads & Maritime Services
PO Box 484
WAGGA WAGGA NSW 2650

Dear Sam,

BARHAM KOONDROOK BRIDGE RESTORATION

Wakool Shire Council would like to take this opportunity to provide input into the restoration works on the Barham Koondrook Bridge as the proposed works impact on the connectivity, community and environment in this region. Council understands the importance of the restoration works on this iconic bridge and will support RMS in its aim to complete these works with minimal disruption.

After considering all the option tabled by RMS it is the officer's view that Option 3 is the preferred alignment based on the following points:-

- The temporary bridge abuts the existing road network hierarchy, thus maintains prevailing traffic flow.

As part of the post work rehabilitation of the Barham area Council requests that RMS considers the following:-

- As you will be aware the communities of Barham and Koondrook, although separated by the river, function as a single town. Residents of all ages move back and forth to shore services such as the football oval, cricket ground, outdoor pool, childcare services, senior school and community centres. As such, we need to ensure residents of all ages are offered safe and common access across the river.
- The present pedestrian crossing over the bridge is unsafe and dangerous. The central part of the bridge has a high conflict area between pedestrians and vehicles.
- RMS is requested to recognise importance of the traffic flow around the Barham shopping strip.

Council recognises the importance and supports the intent to restore the bridge but we urge a balanced approach be taken. RMS is to be commended on the proactive community consultation undertaken to date. We offer our advice to support RMS in interfacing with our local community, to better inform them and minimise misinformation.

Thank you for the opportunity to provide input into the restoration works, which will in the future improve the connectivity between the townships. Please do not hesitate to contact me on telephone number (03) 5887 5007 if you would like further detail on any aspects of our submission.

Yours sincerely,



Sunil Prakash
DIRECTOR TECHNICAL SERVICES

for General Manager

gs

Gemma Barber

From: MILLIE Sam <Sam.MILLIE@rms.nsw.gov.au>
Sent: Friday, 1 May 2015 11:22 AM
To: Gemma Barber
Cc: JENKINS Gavin D; david.stratton@bigpond.com
Subject: FW: Maritime feedback on proposed RMS Barham/Koondrook Bridge over Murray River rehabilitation project
Attachments: Attachment 1- Examples of Navigation Channel Markers.pdf; Attachment 2 - Examples of Blocked Channel Markers.pdf

Gemma

Please see attached feedback from Maritime, and include in REF. As some actions are considerations, please use words to that effect, as not all suggestions may be practically achievable.

Regards

Sam Millie

Bridge Works Manager
Asset Maintenance | Regional Maintenance Delivery | Bridge Works South West
T 02 6938 1194 | Extn 71194 | M 0429 665 954 | F 02 6938 1185
www.rms.nsw.gov.au

Roads and Maritime Services
63-65 Johnston St Wagga Wagga NSW 2650 | PO Box 484 Wagga Wagga NSW 2650

From: Edward Douglas [mailto:Edward.Douglas@rms.nsw.gov.au]
Sent: Thursday, 30 April 2015 5:17 PM
To: MILLIE Sam
Cc: Deon Voyer
Subject: RE: Maritime feedback on proposed RMS Barham/Koondrook Bridge over Murray River rehabilitation project

Dear Sam

Thank you for your ongoing consultation with Maritime in relation to the Barham/Koondrook Bridge over Murray River rehabilitation project. It is noted that all of our previous recommendations in relation to this project have been accommodated and adopted. Maritime acknowledges that these works are essential.

The following response is provided following discussions with appropriate Maritime delegates.

It is noted that a four knot speed restriction applies in waters throughout the construction zone and extends approximately 2km upstream and downstream of the existing bridge. Accordingly vessels transiting this area should be moving slowly mitigating some risk.

Historically a higher number of vessels (including larger vessels) require passage through this area during the summer and peak holiday periods between November and March. Predominately these vessels are recreational with a small number commercial. This should be considered when establishing the schedule of proposed works for this project particularly in regard to the deck height.

As the proposed works will impact users of the waterway (mainly houseboats and paddleboats) we provide the following to ensure safe navigation.

Consultation

Its apparent RMS will need to engage and inform boat owners along the river about the proposed works. The key local waterway stakeholder groups are:

- Murray River Paddle steamers, Echuca
- Port of Echuca Paddle Boats

- Echuca-Moama River Watch and User Group
- Sunraysia User Group

Noting that these works are essential we do not foresee any complaints if appropriate consultation is undertaken with boat owners. The area of most contention is the liftspan being unavailable on the temporary bridge and impact to commercial enterprise.

In accordance with Section 12 of the Marine Safety Act 1998 (MSA), Maritime will declare the precinct of the works a “Special event” which can provide any necessary restrictions to navigation. A Notice is required to be published in the local newspapers (Barham, Koondrook, Echuca, Swan Hill and Mildura) and there is a facility on the RMS website. This Notice should also be displayed at nearby boat ramps (we can advise) to ensure legal bases are covered.

As with previous similar projects I recommend that our Section 12 Notice is published in combination with any Roads notification to negate any confusion and in the interest of agency harmonisation. We both use the same method of publication so it’ll be easy to achieve a combined approach. We will contact you shortly to coordinate this.

The s.12 Notice will include details of the proposed works, nominated period and restrict navigation for any vessel over a nominated height (air draft). We will need this information from you when drafting this notice.

Ensuring Safe Navigation

1. A navigable channel through the construction zone should be maintained (for vessel up to a nominated height) and marked appropriately. It is recommended that at least two sets of buoys be employed either side of the construction zone (eight in total). The current RMS Aids to Navigation (AtoN) contractor is Solar Tech Pty Ltd can supply / install these buoys. Maritime can coordinate this aspect of the project on request. See Attachment 1 for examples.
2. If any part of the channel is blocked to navigation at any stage (eg: a span of the bridge is closed to navigation) blocked channel markers must be displayed on either side of the bridge. Again Solar Tech can supply these but they can be easily installed as needed without engaging Solar Tech. See Attachment 2 for examples.
3. An electronic variable message board (VMB) showing a different message every few seconds (like those used by RMS for road works etc) is installed upstream and downstream of the construction site positioned such that they’re visible to approaching vessels.

This message board should include messages:

- a. Warning vessel operators about the construction zone.
- b. Providing a maximum vessel height (air draught) that can safely navigate under the temporary bridge. Note: this height should be adjusted with river level fluctuations.
- c. Advising that a four knot limited applies throughout the construction zone.
- d. Providing communication details for the site controller (i.e. mobile phone or UHF radio channel).

I encourage you to report any observations of vessels (registration, number of persons on-board and time) not complying with these restrictions to local Boating Safety Officer, Steve Jordan.

We also provide responses to relevant proposed works in blue text below.

Proposed Works

1. Establishment of a site compound on the Victorian side upstream of the bridge in an open area away from the trees. The size of the compound would be similar to the established compound on the NSW side of the river. Inadequate site sediment and erosion controls measures have been issues with some previous works adjacent to the river. Its noted that you propose ‘Scour protection of the Vic river bank upstream and downstream of the existing bridge’.
2. Construction of access ramps to pier 4 (pier closest to Victoria). The ramps would be on both upstream and downstream sides of the bridge within 10 metres of the bridge abutment. This is similar to what has been completed on the NSW side.
Maritime advises that construction of these ramps provides adequate river width for navigation.

3. Install a sheetpiling cofferdam instream around pier 4 and the abutment on the Victorian side. The extent of the work will be similar to what has been completed on the NSW side.
For safety it is recommended that the section of channel between the VIC shoreline and the pylon on the VIC side of the centre span is blocked during the installation of this sheetpiling. Channel blocked markers need to be installed on each side of the bridge in this section (Attachment 2).

4. Establishment of crane pads close to the river bank on both sides of the river.
As stated above, inadequate site sediment and erosion controls measures have been issues with some previous works adjacent to the river. As above its noted that you propose 'Scour protection of the Vic river bank upstream and downstream of the existing bridge'.

Additionally, Maritime advises that construction of these ramps provides adequate river width for navigation.

5. Replacement of timber pier 4 with timber trestles on concrete piles and concrete pile caps, similar to what has been completed on the NSW side.
Reflective material (i.e. strips or reflective discs) should be placed on the upstream and downstream sides of the trestles to aid navigation at night and low light periods. The reflective strips should be above the annual mean water level and spaced no greater than 500mm apart.
6. Construction of a temporary bridge, at a location, either upstream or downstream of the existing bridge,. It is noted the need, and preferred location could change subject to other project and community requirements, which are currently being assessed as part of this Review of Environment Factors (REF).
7. A temporary bridge is being investigated to provide an alternative detour route to avoid significant disruption to the community from bridge closures while carrying out the rehabilitation works.
8. The temporary bridge would be approximately 110m long, 2 lanes-2 way, with a pedestrian footway. It would be constructed with concrete abutments, and piers in the river working from either a barge or rock platform in the river. Once in service, it may require minor traffic detours within Barham and Koondrook. There would be either one or two in-stream piers. It would be in place for approximately 12 months from around June 2016 to June 2017.
9. The temporary bridge crossing would not have a liftspan so would not allow passage of larger boats during high river flows. Its deck level would be approximately equal to that of the existing bridge.
As stated above historically a higher number of vessels (including larger vessels) require passage through this area during the summer and peak holiday periods between November and March. This should be considered when establishing the schedule of proposed works for this project particularly in regard to the deck height.

In consideration of the critical requirement of the temporary bridge to avoid significant road traffic disruptions, we recommend the following measures be put in place to reduce impacts to navigation:

- Construct the middle section of the temporary bridge last and remove it first to ensure vessel passage is restricted for the shortest possible time period.
 - Construct the pylons and supports of the temporary bridge in-line with the pylons and supports of the existing bridge to reduce the impact of navigation for smaller vessels.
 - The temporary bridge/roadway be adequately lit between the hours of sunset and sunrise.
 - Channel markers shall be installed upstream and downstream of the centre span indicating the navigable channel (Attachment 1).
 - Reflective material (i.e. strips) shall be placed on the upstream and downstream sides of the pylons/supports of the temporary bridge to aid navigation/visibility at night and during low light periods. The reflective strips shall be placed above the annual mean water level and should be spaced no greater than 500mm apart.
 - We suggest that the deck clearance of the temporary bridge is made equal to or greater than the existing bridge.
10. Rebuild and strengthen the 2 timber truss spans over the river.
 11. Replacement of timber decking and sheeting with a stress laminated timber deck and surface with asphalt or spray seal.
 12. Replacement of corroded webbing in both the iron pylons under the lift span.
 13. Remove existing lead paint by grit blasting and repainting of lift span towers. This lead pant work would involve scaffold and containment to prevent lead exposure to the environment.
 14. Upgrade and replacement of mechanical components of the lift span.

Maritime notes that this work will to be completed while the temporary bridge is in place.

Upon completion of works on the bridge reflective material (i.e. strips) shall be placed on the upstream and downstream sides of each pylon/support of the bridge to aid navigation at night and during low light. The reflective strips shall be above the annual mean water level and should be spaced no greater than 500mm apart.

If you require any further information or have any queries in relation to our response please contact Boating Safety Officer Steve Jordan on 0409 130 579.

Thanks

Edward Douglas
Project Officer - South
Boating Operations | Maritime
T (02) 4274 0359
M 0475 960 502
www.rms.nsw.gov.au

Roads and Maritime Services

Level 2, 91 Foreshore Road Port Kembla NSW 2505
PO BOX 1441 Wollongong NSW 2500



-----Original Message-----

From: MILLIE Sam []
Sent: Thursday, 16 April 2015 10:24 PM
To: Bill Neyland
Cc: Gemma Barber; JENKINS Gavin D
Subject: Maritime feedback on proposed RMS Barham/Koondrook Bridge over Murray River rehabilitation project

Bill Neyland, Coordinator, Boating Operations Branch, Maritime, T 02 8874 6585 M 0428 606 469, Roads and Maritime Services, 25 Waterworks Road Albury NSW 2640

Not sure if you are the right person in Maritime. If not, could you please pass on to the correct person, as we are seeking Maritime feedback on our proposed Barham/Koondrook Bridge over Murray River rehabilitation project. Please see project info below. Of particular interest to Maritime is that the proposed temporary bridge crossing would not have a liftspan so would not allow passage of larger boats during high river flows. Its deck level would be approximately equal to that of the existing bridge.

Your response within 2 weeks would be greatly appreciated. Please call me if you need further information.

RMS Regional Maintenance Delivery propose to conduct rehabilitation work on the Barham/Koondrook Bridge over the Murray River. The bridge connects the towns of Barham in NSW and Koondrook in VIC.

Previous stages 1 and 2 of the overall project, including preliminary repairs to the lift span and the replacement of the NSW side abutment and approach span, have been completed. Roads and Maritime now propose under stages 3, 4 and 5 of the project to replace the Victorian side abutment and approach span, the two timber truss spans, and perform painting and mechanical upgrade of the lift span. This work may also include the construction of a temporary bridge while these works are performed.

The proposed work would include:

* Establishment of a site compound on the Victorian side upstream of the bridge in an open area away from the trees. The size of the compound would be similar to the established compound on the NSW side of the river.

- * Construction of access ramps to pier 4 (pier closest to Victoria). The ramps would be on both upstream and downstream sides of the bridge within 10 metres of the bridge abutment. This is similar to what has been completed on the NSW side.
- * Install a sheetpiling cofferdam instream around pier 4 and the abutment on the Victorian side. The extent of the work will be similar to what has been completed on the NSW side.
- * Establishment of crane pads close to the river bank on both sides of the river.
- * Maintenance of the NSW side site office and compound.
- * Removal of trees affected by the work.
- * Replacement of timber pier 4 with timber trestles on concrete piles and concrete pile caps, similar to what has been completed on the NSW side.
- * Construction of a new concrete Vic abutment approximately 3 metres behind the existing timber abutment. This would provide a spill through abutment.
- * Replacement of the Victorian timber approach span with a steel and concrete composite deck structure.
- * Reconstruction of the approach road to suit new abutment location and height.
- * Scour protection of the Vic river bank upstream and downstream of the existing bridge.
- * Construction of a temporary bridge, at a location, either upstream or downstream of the existing bridge,. It is noted the need, and preferred location could change subject to other project and community requirements, which are currently being assessed as part of this Review of Environment Factors (REF).
- * A temporary bridge is being investigated to provide an alternative detour route to avoid significant disruption to the community from bridge closures while carrying out the rehabilitation works.
- * The temporary bridge would be approximately 110m long, 2 lanes-2 way, with a pedestrian footway. It would be constructed with concrete abutments, and piers in the river working from either a barge or rock platform in the river. Once in service, it may require minor traffic detours within Barham and Koondrook. There would be either one or two in-stream piers. It would be in place for approximately 12 months from around June 2016 to June 2017.
- * The temporary bridge crossing would not have a liftspan so would not allow passage of larger boats during high river flows. Its deck level would be approximately equal to that of the existing bridge.
- * Rebuild and strengthen the 2 timber truss spans over the river.
- * Replacement of timber decking and sheeting with a stress laminated timber deck and surface with asphalt or spray seal.
- * Replacement of corroded webbing in both the iron pylons under the lift span.
- * Remove existing lead paint by grit blasting and repainting of lift span towers. This lead pant work would involve scaffold and containment to prevent lead exposure to the environment.
- * Upgrade and replacement of mechanical components of the lift span.

A Statement of Heritage Impact (SoHI) has been prepared to assess the potential impacts of the work on the heritage significance of the bridge. The SoHI has been submitted to the Heritage Office in accordance with section 60 of the NSW Heritage Act 1977. Vic Heritage will also be consulted in accordance with the Victorian Heritage Act 1995.

NGH Environmental has been engaged to prepare a Review of Environmental Factors (REF) for the proposed work to assess and address the likely environmental impacts. The REF will include a contamination assessment of bridge timber and abutment soils, construction and traffic noise assessments and Aboriginal archaeological assessments.

Regards

Sam Millie

Bridge Works Manager

Asset Maintenance | Regional Maintenance Delivery | Bridge Works South West T 02 6938 1194 | Extn 71194 | M 0429 665 954 | F 02 6938 1185 www.rms.nsw.gov.au

Roads and Maritime Services

63-65 Johnston St Wagga Wagga NSW 2650 | PO Box 484 Wagga Wagga NSW 2650



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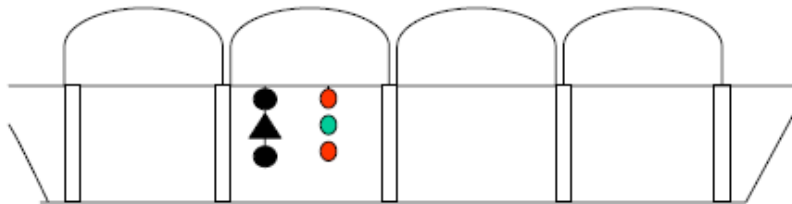
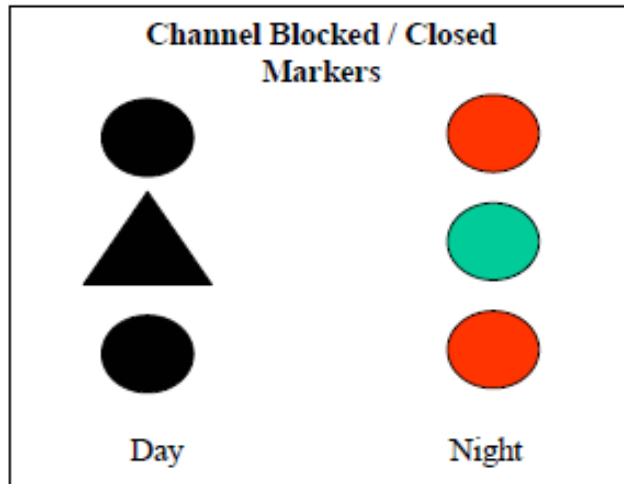
Above: Example of how Port and Starboard Lateral Buoys are used to create a navigable channel.



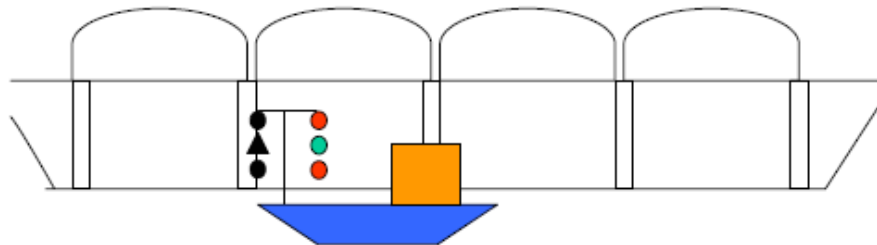
Above: Example of Port and Starboard Lateral Buoys that can be used.



Above: Example of Port Lateral Buoy with flashing red light.



Above: Channel Blocked Day shapes and Night Lights suspended from Bridge Structure.



Above: Floating Barge with Channel Blocked day shapes and night-lights.