

Appendix D

REGULATORY CONSULTEES RESPONSES



David Walker
Geolyse
PO Box 1963
ORANGE NSW 2800

Contact Tim Baker
Phone 02 6841 7403
Mobile 0428 162 097
Fax 02 6884 0096
Email Tim.Baker@dpi.nsw.gov.au
Our ref 70ERM2015/0358

COWRA HEAVY VEHICLE BYPASS REF- REQUEST FOR ASSESSMENT REQUIREMENTS

I refer to your letter dated 22nd April 2015 requesting comments on preparation of a Review of Environmental Factors for the proposed Cowra Heavy Vehicle Bypass. The NSW Office of Water (Office of Water) has reviewed the supporting documentation and provides key comments below. General assessment requirements are included in **Attachment A**.

Key aspects relevant to Office of Water for the proposed bypass are likely to include:

- Construction within 40m of the Lachlan River and Waugoola Creek and resulting impacts to bank stability, water quality and the riparian vegetation. Cowra Shire Council as a public authority is exempt from requiring a Controlled Activity Approval under the *Water Management Act 2000* for works within 40m of a watercourse.
- Construction of a new bridge over the Lachlan River and potential for an upgrade of the existing crossing of Waugoola Creek.
- Water demands and sources for dust suppression and road construction.
- Potential for groundwater interception due to potential excavation.

It is recommended the REF include:

- Details of water proposed to be taken via groundwater interception or water supply sources.
- Concept design of watercourse crossings and works within 40m of the high bank of watercourses.
- Assessment of potential impacts on flooding due to the proposed road construction, particularly near the Lachlan River and Waugoola Creek.
- Assessment of impacts on surface and ground water sources (both quality and quantity), watercourses, riparian land, and groundwater dependent ecosystems, and measures proposed to reduce and mitigate these impacts.
- Management of erosion and sediment control to mitigate impacts on water sources.
- Assessment of any water licensing requirements.
- Consideration of relevant policies and guidelines such as the "*Guidelines for Controlled Activities on Waterfront Land (2012)*" and the "*NSW Aquifer Interference Policy (2012)*".

Should you have any further general queries in relation to this submission please do not hesitate to contact myself on (02) 6841 7403.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Z. Baker', with a long horizontal flourish extending to the right.

Tim Baker
Senior Water Regulation Officer
30 April 2015

NSW Office of Water Comments on REF Preparation

Relevant Legislation

The Review of Environmental Factors (REF) should take into account the objects and regulatory requirements of the *Water Act 1912* and *Water Management Act 2000* (WMA 2000), as applicable. Proposals and management plans should be consistent with the Objects (s.3) and Water Management Principles (s.5) of the WMA 2000.

Water Sharing Plans

The proposal is located within the area covered by the WSP for the Lachlan Regulated River Water Source and the WSP for the Upper Lachlan Unregulated and Alluvial Water Sources. The REF is required to:

- Demonstrate how the proposal is consistent with the relevant rules of the WSP including rules for access licences, distance restrictions for water supply works and rules for the management of local impacts in respect of surface water and groundwater sources, ecosystem protection, water quality and surface-groundwater connectivity.
- Provide a description of any site water use (amount of water from each water source) and management including all sediment dams, clear water diversion structures with detail on the location, design specifications and storage capacities for all the existing and proposed water management structures.
- Provide an analysis of the proposed water supply arrangements against the rules for access licences and other applicable requirements of any relevant WSP.
- Provide a detailed and consolidated site water balance.

Relevant Policies and Guidelines

The REF should take into account the following policies (as applicable):

- Guidelines for Controlled Activities on Waterfront Land (2012);
- Aquifer Interference Policy (2012);
- NSW State Rivers and Estuary Policy (1993);
- NSW State Groundwater Policy Framework Document (1997);
- NSW State Groundwater Quality Protection Policy (1998);
- NSW State Groundwater Dependent Ecosystems Policy (2002); and
- Department of Primary Industries Risk Assessment Guidelines for Groundwater Dependent Ecosystems (2012).
- NSW Water Extraction Monitoring Policy (2007)
- Australian Groundwater Monitoring Guidelines (2012)

<http://www.water.nsw.gov.au/Water-management/Law-and-policy/Key-policies/default.aspx>
<http://www.water.nsw.gov.au/Water-licensing/Approvals?Controlled-activities/default.aspx>

The REF needs to demonstrate the proposal is consistent with the spirit and principles of these policy documents.

Licensing Considerations

The REF is required to provide:

- Details of the water supply source(s) for the proposal including any proposed surface water and groundwater extraction from each water source as defined in the relevant Water Sharing Plan/s and all water supply works to take water.

- Information on the purpose, location, construction and expected annual extraction volumes including details on all existing and proposed water supply works which take surface water, (pumps, dams, diversions, etc).
- Details on all bores and excavations for the purpose of investigation, extraction, dewatering, testing and monitoring. All predicted groundwater take must be accounted for through adequate licensing.
- Details on existing dams/storages (including the date of construction, location, purpose, size and capacity) and any proposal to change the purpose of existing dams/storages.
- Details on the location, purpose, size and capacity of any new proposed dams/storages.

Water allocation account management rules, total daily extraction limits and rules governing environmental protection and access licence dealings also need to be considered.

The Harvestable Right gives landholders the right to capture and use for any purpose 10 % of the average annual runoff from their property. The Harvestable Right has been defined in terms of an equivalent dam capacity called the Maximum Harvestable Right Dam Capacity (MHRDC). The MHRDC is determined by the area of the property (in hectares) and a site-specific run-off factor. The MHRDC includes the capacity of all existing dams on the property that do not have a current water licence. Storages capturing up to the harvestable right capacity are not required to be licensed but any capacity of the total of all storages/dams on the property greater than the MHRDC may require a licence.

For more information on Harvestable Right dams:

<http://www.water.nsw.gov.au/Water-licensing/Basic-water-rights/Harvesting-runoff/Harvesting-runoff>

Groundwater Assessment

To ensure the sustainable and integrated management of groundwater sources, the REF needs to include adequate details to assess the impact of the project on all groundwater sources including:

- The predicted highest groundwater table at the site.
- Works likely to intercept, connect with or infiltrate the groundwater sources.
- Any proposed groundwater extraction, including purpose, location and construction details of all proposed bores and expected annual extraction volumes.
- A description of the flow directions and rates and physical and chemical characteristics of the groundwater source.
- The predicted impacts of any final landform on the groundwater regime.
- The existing groundwater users within the area (including the environment), any potential impacts on these users and safeguard measures to mitigate impacts.
- An assessment of the quality of the groundwater for the local groundwater catchment.
- An assessment of groundwater contamination (considering both the impacts of the proposal on groundwater contamination and the impacts of contamination on the proposal).
- Measures proposed to protect groundwater quality, both in the short and long term.
- Measures for preventing groundwater pollution so that remediation is not required.
- Protective measures for any groundwater dependent ecosystems (GDEs).
- Proposed methods of the disposal of waste water and approval from the relevant authority.
- The results of any models or predictive tools used.

Where potential impact/s are identified the assessment will need to identify limits to the level of impact and contingency measures that would remediate, reduce or manage potential impacts to the existing groundwater resource and any dependent groundwater environment or water users, including information on:

- Any proposed monitoring programs, including water levels and quality data.
- Reporting procedures for any monitoring program including mechanism for transfer of information.
- An assessment of any groundwater source/aquifer that may be sterilised from future use as a water supply as a consequence of the proposal.
- Identification of any nominal thresholds as to the level of impact beyond which remedial measures or contingency plans would be initiated (this may entail water level triggers or a beneficial use category).
- Description of the remedial measures or contingency plans proposed.
- Any funding assurances covering the anticipated post development maintenance cost, for example on-going groundwater monitoring for the nominated period.

Groundwater Dependent Ecosystems

It is suggested the REF considers the potential impacts on any Groundwater Dependent Ecosystems (GDEs) at the site and in the vicinity of the site and:

- Identify any potential impacts on GDEs as a result of the proposal including:
 - the effect of the proposal on the recharge to groundwater systems;
 - the potential to adversely affect the water quality of the underlying groundwater system and adjoining groundwater systems in hydraulic connections; and
 - the effect on the function of GDEs (habitat, groundwater levels, connectivity).
- Provide safeguard measures for any GDEs.

Watercourse and Riparian Land

The REF should consider the Guidelines for Controlled Activities on Waterfront Land (2012).

The REF should address the potential impacts of the project on all watercourses likely to be affected by the project, existing riparian vegetation and the rehabilitation of riparian land. It is recommended the EIS provides details on all watercourses potentially affected by the proposal, including:

- Scaled plans showing the location of:
 - watercourses and top of bank;
 - riparian corridors widths to be established along the creeks;
 - existing riparian vegetation surrounding the watercourses (identify any areas to be protected and any riparian vegetation proposed to be removed);
 - the site boundary, the footprint of the proposal in relation to the watercourses and riparian areas; and
 - proposed location of any asset protection zones.
- Photographs of the watercourses.
- A detailed description of all potential impacts on the watercourses/riparian land.
- A description of the design features and measures to be incorporated to mitigate potential impacts.
- Geomorphic and hydrological assessment of water courses including details of stream order (Strahler System), river style and energy regimes both in channel and on adjacent floodplains.

David Walker

From: Orange <orange@geolyse.com>
Sent: Friday, 1 May 2015 9:33 AM
To: 'David Walker'
Subject: FW: Proposed Cowra Heavy Vehicle Bypass - Comments Sought

From: Allan Lugg [mailto:allan.lugg@dpi.nsw.gov.au]
Sent: Monday, 27 April 2015 10:34 AM
To: orange@geolyse.com
Subject: FW: Proposed Cowra Heavy Vehicle Bypass - Comments Sought

Hi there,

The main items of interest in relation to the proposed project from a fisheries perspective relate to the crossings of the Lachlan River and Waugoola Creek. Both the Lachlan River and Waugoola Creek are considered to be Key Fish Habitat. See Cowra KFH map available at:

<http://www.dpi.nsw.gov.au/fisheries/habitat/publications/protection/key-fish-habitat-maps>

There is an existing crossing of Waugoola Creek (Campbell Street?). The REF should explain whether this will be retained, upgraded or replaced. If the latter, the REF should provide details.

Both the river and creek are within the geographic range of the Lower Lachlan Endangered Ecological Community. Information on this listing can be found at:

<http://www.dpi.nsw.gov.au/fisheries/species-protection/conservation/what-current/endangered/lachlan-river-eec>

As a result, the REF should include a Test of Significance for this EEC.

The nature, quality and extent of riparian and instream habitats at the bridge site(s) should be detailed. The potential impact upon riparian and instream habitats resulting from the construction of the new bridge(s) should be detailed.

Please forward the completed REF to the Huskisson office for review.

Regards Allan

Allan Lugg | Regional Manager – Aquatic Ecosystems (South)

NSW Department of Primary Industries

4 Woollamia Road | PO Box 97 | HUSKISSON NSW 2540

T: 02 4428 3401 | **F:** 02 4441 8961 | **M:** 0409 912 686 | **E:** Allan.Lugg@dpi.nsw.gov.au

W: <http://www.dpi.nsw.gov.au/fisheries>

Habitat Policy and Guidelines available at:

<http://www.dpi.nsw.gov.au/fisheries/habitat/publications/policies,-guidelines-and-manuals/policy-and-guidelines-for-fish-habitat-conservation-and-management-update-2013>

Key Fish Habitat maps and Permit Application forms available at:

<http://www.dpi.nsw.gov.au/fisheries/habitat/protecting-habitats/toolkit>

Information on threatened species is available at:

<http://www.dpi.nsw.gov.au/fisheries/species-protection/conservation>

From: David Ward [mailto:david.ward@dpi.nsw.gov.au]

Sent: Thursday, 23 April 2015 9:19 AM

To: Allan Lugg

Cc: lgollner@geolyse.com

Subject: Fwd: Proposed Cowra Heavy Vehicle Bypass - Comments Sought

Hi Allan,

For your response.

Cheers

David

----- Forwarded message -----

From: **Lisa Gollner** <lgollner@geolyse.com>

Date: 22 April 2015 at 17:04

Subject: Proposed Cowra Heavy Vehicle Bypass - Comments Sought

To: david.ward@dpi.nsw.gov.au

Cc: David Walker <dwalker@geolyse.com>, Orange Document Control <odoccontrol@geolyse.com>

Dear Mr Ward,

Please find attached our letter in regards to the above.

Thank you,

Lisa Gollner

Project Administration Officer

Geolyse Pty Ltd

154 Peisley St

PO Box 1963

Orange NSW 2800

Ph: 02 6393 5000

Fx: 02 6393 5050

Email: lgollner@geolyse.com

Web: www.geolyse.com

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David Ward | Regional Assessment Officer (Tamworth) |

Aquaculture & Aquatic Environment | Department of Primary Industries |

4 Marsden Park Road | Calala NSW 2340 |

T: 02 6763 1255 | **F:** 02 6763 1265 | **M:** 0429 908 856 | **E:** david.ward@dpi.nsw.gov.au

PERMIT APPLICATION FORMS & FISH HABITAT POLICIES AVAILABLE AT:

www.dpi.nsw.gov.au/fisheries/habitat/protecting-habitats/toolkit

Submit permit applications via email to: ahp.central@dpi.nsw.gov.au

NB from date of receipt of application please allow:

- 28 days for Permits, Consultations and Land Owner's Consent responses
- 40 days for Integrated Development Applications

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David Walker

From: Lisa Gollner <lgollner@geolyse.com>
Sent: Tuesday, 28 April 2015 2:47 PM
To: 'David Walker'
Subject: FW: Proposed Cowra Heavy Vehicle Bypass - Comments Sought

Hi David,

I just received this from John Holland Pty. Ltd.
Do you want me to reply/respond in any way?

Cheers,

Lisa Gollner
Project Administration Officer
Geolyse Pty Ltd
154 Peisley St
PO Box 1963
Orange NSW 2800
Ph: 02 6393 5000
Fx: 02 6393 5050
Email: lgollner@geolyse.com
Web: www.geolyse.com

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From: CRN 3rdpartyworks [mailto:CRN.3rdpartyworks@jhg.com.au]
Sent: Tuesday, 28 April 2015 2:36 PM
To: Lisa Gollner
Subject: RE: Proposed Cowra Heavy Vehicle Bypass - Comments Sought

Hi Lisa,

Thank you for your email. For any works on John Holland Land, you will need to submit and application form. Please use the link below:

<https://adobeformscentral.com/?f=BdUcAI0uf0KcRRjta3s0DA>

If you require any further information, please do not hesitate to contact me.

Kind Regards

Kristy Morris

Property Officer
Country Regional Network
John Holland Pty Ltd ABN 61 009 252 653

E: CRN.3rdpartyworks@jhg.com.au | www.johnholland.com.au

The Building Code 2013, applies to this contract. This document is available at www.deewr.gov.au/BuildingCode.

From: Lisa Gollner [lgollner@geolyse.com]
Sent: 22 April 2015 17:02
To: CRN 3rdpartyworks; CRN Property
Cc: 'David Walker'; Orange Document Control
Subject: Proposed Cowra Heavy Vehicle Bypass - Comments Sought

Dear Sir/Madam,

Please find attached our letter in regards to the above.

Thank you,

Lisa Gollner
Project Administration Officer
Geolyse Pty Ltd
154 Peisley St
PO Box 1963
Orange NSW 2800
Ph: 02 6393 5000
Fx: 02 6393 5050
Email: lgollner@geolyse.com
Web: www.geolyse.com

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David Walker

From: Anna Fletcher <Anna.Fletcher@jhgc.com.au>
Sent: Wednesday, 13 May 2015 3:03 PM
To: David Walker
Cc: Orange Document Control; CRN 3rdpartyworks; David Maertins; Stan Knight-Smith
Subject: RE: 214346 FW: Proposed Cowra Heavy Vehicle Bypass - Comments Sought

Hi David,

As mentioned on the phone earlier and in relation to your enquiry regarding Council's proposal to construct a heavy vehicle bypass beneath a rail bridge in Cowra, JHR and TfNSW would be stakeholders identified in your REF and it is worth noting the following:

1. Approval process would be two part:
 - a. Approval in Principle – approval of the concept
 - b. Construction approval – final approval being granted with the issuing of legal agreements (Works Deed and Infrastructure licence)
2. The Road Rail Interface Agreement between JHR and Council would need to be updated.
3. It is likely the Engineering Manager would require a structural assessment of the bridge (with the selected contractor requiring Engineering Authority to be granted by JHR Principal Structural Engineer prior to the assessment being carried out)
4. If Council is planning on gazetting the road for heavy vehicles, JHR/TfNSW would need to be a stakeholder in the process, especially given the changes to the Heavy Vehicle National Law.
5. JHR have an Environmental Protection Licence over the proposed area.
6. Any encroachment on the corridor would need to be approved (if no fence – generally 15m from the outer face of the rail).
7. Comments from our Environmental Manager Amber Grant:
 - a. RING won't apply in this instance;
 - b. Assume the soil is at least industrially contaminated unless tested otherwise (I recommend testing – any soil removed will have to be classified).
 - c. The rail steel structure bridge is heritage listed, and impacts must be assessed (design/alignment pending).
 - d. As they probably know, the consultation must be as per ISEPP part 3, division 15 ; subdivision 2 *Development in Rail Corridors*, noting that whilst JHR P/L are not specifically referenced, we are the RIM on behalf of TfNSW and must be consulted during the draft REF stage.

Additionally, I believe you will encounter accreditation implications if you need to alter the structure of the bridge, refer to the Rail Safety National Law 2012 for more detail (I believe it is Section 62?). It will be similar to the Troy Junction Project as you would need to be an accredited RIM to perform work on the rail structure.

If you have any other questions please just give me a ring ☺

Amber's details should you want to discuss with her:

Amber Grant
Environmental Manager
Country Regional Network



PO Box 177, Mayfield NSW 2304
117-119 Maitland Rd, Mayfield NSW 2304
T. + 61 2 4028 9409 | F. + 61 2 4028 9494 | M. 0457 844 770
E. Amber.Gibbins@jhgc.com.au | www.jhcrn.com.au

Cheers,
Anna Fletcher

Network Area Manager – Network Operations
Country Regional Network



PO Box 177 Mayfield, NSW 2304
117-119 Maitland Road Mayfield, NSW 2304
P. 02 4028 9418 | F. 02 4028 9494 | M. 0429 787 771
E. anna.fletcher@jhgc.com.au | W. jhrcrn.com.au

The Building Code 2013, applies to this contract. This document is available at www.deewr.gov.au/BuildingCode.

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15 May 2015

David Walker
Geolyse Pty Ltd
PO Box 1963
Orange NSW 2800

RECEIVED
27 MAY 2015



John Holland Rail Pty Ltd
ABN 61 009 252 653

Level 1, 20 Smith Street
Parramatta NSW 2150
Australia

PO Box 215
Parramatta NSW 2124
Australia

Telephone: 02 9685 5100
Facsimile: 02 9685 5190
crncorres@jhg.com.au
www.johnholland.com.au

Dear Sir,

**COUNTRY REGIONAL NETWORK
ENVIRONMENTAL ASSESSMENT OF THE PROPOSED COWRA HEAVY VEHICLE BYPASS
Attention: David Walker**

We refer to your letter dated 22 April 2015 to JHR regarding the Proposed Environmental Assessment for the Cowra Heavy Vehicle Bypass.

The New South Wales Government's Transport for NSW is the land owner of the Country Regional Network (CRN) railway lines across NSW. As of 15 January 2012, John Holland Rail Pty Ltd (JHR) has been appointed to manage the CRN. As such JHR is responsible for reviewing developments, plans and policies adjoining the rail corridor to ensure any potential impacts of or on future rail operations are considered.

Based on the alignment provided in your letter JHR requests that the following matters are addressed in the Environmental Assessment:

- Crossing of rail corridor: It appears the proposed bypass crosses the rail corridor immediately west of the Lachlan River crossing. With any crossing JHR should be consulted regarding the appropriate vertical and horizontal clearances and other engineering requirements.
- Boundary treatments: It appears in some locations the proposed bypass will directly adjoin the rail corridor. In these locations JHR requests details of the proposed method of separation, including fencing and/or landscaping treatments.
- Details of any excavation within 25 metres of the rail corridor: Should any excavation in excess of 2 metres be proposed within 25m of the rail corridor JHR will require a geotechnical assessment of any impact on the rail corridor.
- Stormwater disposal: The proposal should ensure no additional stormwater flows toward the rail corridor. Any proposed rail crossings for stormwater should be accompanied by geotechnical assessment of any impact on the rail corridor.
- Any proposed alignment of the rail corridor: Should any realignment be proposed operational noise assessment as well as construction noise assessment will be required. Operational Noise must be assessed against the Rail Infrastructure Noise

Guidelines (RING).

- Contamination: The Rail Corridor is to be assumed to be (at least) industrially contaminated unless proven otherwise and must be assessed by a contaminated lands specialist to determine WH&S risk, and pollution risk.
- Any access to the corridor to undertake vegetation/soil (etc) assessment must be through 3rd party works. The third party access application can be completed online at:

<https://adobeformscentral.com/?f=BdUcAl0uf0KcRRjta3s0DA>

Should you have any further enquiries with regard to this matter please do not hesitate to contact Danny Sloane, JHR Property Agreements Manager, either via email at danny.sloane@jhg.com.au or telephone (02) 9685 5065 / 0421 617501.

Yours faithfully

JOHN HOLLAND RAIL PTY LTD

A handwritten signature in black ink, appearing to read 'Michael Hockings', written over a faint circular stamp.

Michael Hockings

**Manager Performance, Innovation, & Strategic Asset
Management**



Contact: Stuart Read
Phone: 02 9873 8554
Fax: 02 9873 8599
Email: stuart.read@environment.nsw.gov.au
DOC No: DOC15/132118
File No.: EF15/7982
Your ref: 214346_LET_002B_Heritage

Mr David Walker
Town Planner
Geolyse P/L
PO Box 1963
ORANGE NSW 2800
By email: orange@geolyse.com

Dear Mr Walker

RE: Cowra Heavy Vehicle Bypass Route – issues in preparation of a Review of Environmental Factors (REF)

I refer to your letter dated 22 April 2015 requesting input from the Heritage Council of NSW (Heritage Council) for the Review of Environmental Factors (REF) for the above proposal.

The REF should address the following issues:

- The heritage significance of the route and any impacts that the development may have upon this significance should be assessed. This assessment should include natural areas and places of Aboriginal, historic or archaeological significance. The assessment should also include a consideration of wider heritage impacts in the area surrounding the site;
- The Heritage Council maintains the State Heritage Inventory which lists items protected under the *Heritage Act 1977* and other statutory instruments. This register can be accessed at <http://www.heritage.nsw.gov.au>;

The legal standing of items listed on the State Heritage Register can also be provided by applying for a section 167 Certificate through the Heritage Division home page at the address given below;

You should consult lists maintained by the Office of Environment & Heritage, the National Trust of Australia (NSW), the Australian Government under the *Environment Protection and Biodiversity Conservation Act 1999* and Cowra Shire Council in order to identify any identified items of heritage significance in the area affected by the proposal. Such items may have been identified in the Cowra Heritage Study but may not have proceeded to statutory listing on Cowra Local Environmental Plan. An example is Jerula homestead, cottage and private cemetery on Darby Falls Road. Please be aware that these lists are constantly evolving and that items with potential heritage significance may not yet be listed;

- Non-Aboriginal heritage items within the area affected by the proposal should be identified by field survey. This should include any buildings, works, relics (including relics underwater), gardens, landscapes, views, trees or places of non-Aboriginal heritage significance. A statement of significance and an assessment of the impact of

the proposal on the heritage significance of these items should be undertaken. Any policies/measures to conserve their heritage significance should be identified. This assessment should be undertaken in accordance with the guidelines in the *NSW Heritage Manual*. Field survey and assessment should be undertaken by a qualified practitioner or consultant with historic sites experience.

- The proposal should have regard to any impacts on places, items or relics of significance to Aboriginal people. Where it is likely that the project will impact on Aboriginal heritage, adequate community consultation should take place regarding the assessment of significance, likely impacts and management/mitigation measures. For guidelines regarding the assessment of Aboriginal sites, please contact the Environmental Protection & Regulation Group of the Office of Environment & Heritage;
- The relics provisions in the *Heritage Act 1977* require an excavation permit to be obtained from the Heritage Council, or an exception to be endorsed by the Heritage Council, prior to commencement of works if disturbance to a site with known or potential archaeological relics is proposed. Where possible, refer to archaeological zoning plans or archaeological management plans held by Cowra Shire Council. If any unexpected archaeological relics are uncovered during the course of work excavation should cease and an excavation permit, or an exception notification endorsement, obtained;
- If any exist, archaeological zoning plans or archaeological management plans should also be consulted;
- If approval is required under the *Heritage Act 1977* due to the listing of an item or place on the State Heritage Register, or being subject to an Interim Heritage Order, the Heritage Council's approval must be sought prior to an approval being issued by the consent authority under the *Environmental Planning and Assessment Act 1979* (except where application relates to Integrated Development or State Significant Infrastructure or State Significant Development Major Projects under Parts 4 or 5 of the *EP&A Act 1979*). In accordance with section 67 of the *Heritage Act 1977*, any approval given by a consent authority is void if it is given before the Heritage Council's determination of the application has been notified to the consent authority,.

The Heritage Division of OEH would be happy to review further documentation that may address any likely heritage impacts. If you have any further enquiries regarding this matter, please contact Stuart Read, Heritage Officer, Office of Environment and Heritage on (02) 9873 8554.

Yours sincerely



Ed Beebe

A/Manager Conservation
Heritage Division
Office of Environment and Heritage

As Delegate of the Heritage Council of NSW

Date 12 May 2015

Your reference : 214346_LET_002B_OEH_EPA
Our reference: : EF13/4930; DOC15/132261-01
Contact: : Mr Allan Adams; (02) 6332 7610

RECEIVED
06 APR 2015

Mr David Walker
Town Planner
Geolyse Pty Ltd
PO Box 1963
ORANGE NSW 2800

4 May 2015

Dear Mr Walker

COWRA HEAVY VEHICLE BYPASS – EPA REF REQUIREMENTS

I refer to your letter dated 22 April 2015 to the Environment Protection Authority (EPA) regarding the proposed Cowra Heavy Vehicle Bypass (the Proposal) and your request for EPA input regarding the development of the Review of Environmental Factors (REF) for the Proposal.

Planning / Licensing

The EPA is aware that the proposed route is an 8.4 kilometre section that will utilise approximately 5 kilometres of existing road (including widening and improvements) but would also involve the construction of approximately 3.4 kilometres of new road. With respect to licensing, the EPA requests that the status of the road construction be determined by the proponent with regards to Section 35 – Road Construction in Schedule 1 of the *Protection of the Environment Operations Act 1997* (the POEO Act).

If it is determined a licence is not required, the EPA will however be the Appropriate Regulatory Authority (ARA) in relation to any environmental pollution matters for the proposal as the work is being undertaken by, or on behalf of, a public authority, in this instance Cowra Council. Council must comply with the requirements of the POEO Act including, but not limited to:

- Section 115 and 116 (regarding disposal of waste and leaks, spillages and other escapes);
- Section 120 (regarding pollution of waters);
- Section 124 and 126 (regarding operations that result in air pollution);
- Section 139 (regarding noise pollution); and
- Section 167 (regarding the appropriate maintenance and operation of plant and equipment).

Council should also be aware of Section 257 of the POEO Act which encompasses vicarious liability.

The proposed works should not result in the pollution of land/waters so long as best management practices for erosion and sediment control are undertaken during construction activities, and appropriate remediation measures are implemented on a progressive basis.

Environmental Impacts Requiring Consideration

The EPA requests that the following issues be addressed in the REF with the Guidance Material enclosed:

- **Noise and Vibration** – identify potential noise and vibration impacts during both the construction and operational stages and identify mitigation strategies to be incorporated for both stages to minimise noise and vibration and comply with relevant legislation on noise control and any relevant NSW policies;
- **Air Quality and Odour** – identify potential air quality impacts (point source diesel emissions from plant and equipment and/or fugitive dust emissions) during the construction stage and identify mitigation strategies to minimise point and/or fugitive emissions;
- **Land Contamination** – identify if the soils in the area of the Proposal are contaminated and if so, identify any remedial and/or disposal actions that will be required/undertaken;
- **Water Contamination** – identify potential impacts to surface and groundwater during the construction and operational stages (including waterway crossings) and identify appropriate pollution control systems/measures to protect surface and groundwater resources, particularly erosion and sediment controls during the construction stage and the rehabilitation stage and the inclusion of permanent erosion and sediment controls where required;
- **General Flooding Impacts** – any developments should be designed and undertaken in accordance with the State Government's Flood Policy as outlined in the NSW Government Floodplain Development Manual 2005 (or any revision).
- **Waste Management** – identify options and strategies for waste minimisation; reuse and recycling across all activities during the construction stage and appropriate disposal options;
- **Storage of Chemicals/Fuels** - ensure adequate control measures are in place for storages to reduce the risk of spills contaminating waterways and land during the construction stage; and
- **Incident Management Procedures** - adequate procedures should be established including notification requirements to the Appropriate Regulatory Authority and other relevant authorities for incidents that cause, or have the potential to cause material harm to the environment (Part 5.7 of the POEO Act).

It is recommended that priority should be given to achieving a high standard of erosion and sediment control and general site housekeeping throughout the construction period. Council, or any contractor engaged by Council, should develop and implement activities associated with the Proposal in accordance with relevant guidelines, particularly the EPA endorsed publication *"Managing Urban Stormwater – Soils and Construction, 4th Edition"* (Landcom, 2004) (or any revision) and the EPA produced addendum publications *"Volume 2A: Installation of Services"* and *"Volume 2D: Main Road Construction"* (DECC, 2008) etc.

Please note that matters relating to Aboriginal Cultural Heritage, Biodiversity and Native Vegetation are handled by the Office of Environment and Heritage (OEH). The appropriate OEH contact is Mr Peter Christie, Regional Manager OEH North-West, by telephoning (02) 6883 5347 or e-mail peter.christie@environment.nsw.gov.au.

Should you have any further enquiries regarding this matter, please contact Mr Allan Adams at the EPA's Central West Office (Bathurst) by telephoning (02) 6332 7610.

Yours sincerely



DARRYL CLIFT
Head Central West Unit
Environment Protection Authority

Enclosed: General EPA guidance document list

EPA GUIDANCE MATERIAL April 2015

Assessing Noise and Vibration Impacts

Construction:

- Interim (Final) Construction Noise Guideline (DECC, 2009), accessed via:
<http://www.environment.nsw.gov.au/noise/constructnoise.htm>
- Assessing Vibration: a technical guidelines (Dec, 2006), accessed via:
<http://www.environment.nsw.gov.au/noise/vibrationguide.htm>

Operational:

- NSW Road Noise Policy (DECCW, 2011), accessed via:
<http://www.environment.nsw.gov.au/noise/traffic.htm>

Assessing Air Quality and Odour Impacts

Air Quality

- No EPA specific guidance material exists for the control of dust from construction sites. Consideration should be given to the POEO Act and the Local Government Air Quality Toolkit (DECC, 2007), accessed via:
<http://www.environment.nsw.gov.au/air/aqt.htm>

Assessing Land Contamination Impacts

- National Environment Protection (Assessment of Site Contamination) Measure 1999 (Amended 2013).

Assessing Water Contamination Impacts

- Managing Urban Stormwater – Soils and Construction, 4th Edition (Landcom, 2004, revised 2006).
- Volume 2A: Installation of Services (DECC, 2008), accessed via:
<http://www.environment.nsw.gov.au/stormwater/publications.htm>
- Volume 2D: Main Road Construction (DECC, 2008), accessed via:
<http://www.environment.nsw.gov.au/stormwater/publications.htm>

Consideration should also be given to any RMS Policy Documents, including, but not limited too, the RMS's Code of Practice for Water Management (or any revision).

Assessing Flooding Impacts

- NSW Government Floodplain Development Manual 2005, accessed via:
<http://www.environment.nsw.gov.au/floodplains/manual.htm>

Assessing Waste Types

- Waste Classification Guidelines – 4 Parts (EPA, 2014), accessed via:
<http://www.epa.nsw.gov.au/wasteregulation/classify-waste.htm>

Assessing Chemical and Fuel Storage

- Storage and Handling of Dangerous Goods – Code of Practice (WorkCover, 2005)
<http://www.workcover.nsw.gov.au/formspublications/publications/Documents/storage-handling-dangerous-goods-1354.pdf>



Your reference: 214346_LET_002B
Our reference: DOC15/144429
Contact: Michelle Howarth 02 6883 5339
Date: 4 May 2015

David Walker
Town Planner
Geolyse
154 Peisley Street
Orange NSW 2800

Dear David

RE Proposed Cowra Heavy Vehicle Bypass

Thank you for your letter (dated 22 April 2015) seeking advice from the Office of Environment and Heritage (OEH) regarding our requirements for the preparation of a Review of Environmental Factors (REF) for the proposed Cowra heavy vehicle bypass.

The background information provided indicates that the proposed activities include the construction of 3.4 kilometres of new road, widening and improving of 5 kilometres of existing road and the construction of a new bridge across the Lachlan River.

OEH Role

OEH has responsibilities under the:

- *National Parks and Wildlife Act 1974* - namely the protection and care of Aboriginal objects and places, the protection and care of native flora and fauna and the protection and management of reserves; and the
- *Threatened Species Conservation Act 1995* which aims to conserve threatened species of flora and fauna, populations and ecological communities to promote their recovery and manage processes that threaten them.
- *Native Vegetation Conservation Act 2003* – ensuring compliance with the requirements of this legislation.

OEH understands from the correspondence that the proposed activity is a Part 5 application pursuant to the *Environmental Planning and Assessment Act 1979 (EP&A Act)*. As such OEH only has a statutory role in assessing such an activity if the determining authority determines that:

- a) the activity is likely to significantly affect a threatened species, population, ecological community, or its habitat, as listed under the *Threatened Species Conservation (TSC) Act 1995*; and/or
- b) An Aboriginal Heritage Impact Permit is required.

The *Environmental Planning and Assessment Act 1979 (EP&A Act)* requires that the REF should fully describe the proposal, the existing environment and impacts of the proposal. It is the responsibility of

the proponent and consent authority to adequately consider the requirements under the *EP&A Act* and the *Environmental Planning and Assessment Regulation 2000*.

OEH can provide advice on the REF where it deals with and natural and cultural heritage conservation issues. OEH may also comment on the legitimacy of the conclusions reached regarding the significance of impacts by the proposed development to these components of the environment.

This letter directs you primarily to our generic guidance material. However please note that it is up to the proponent (and later the consent/determining authority after appropriate consultation) to determine the detail and comprehensiveness of the surveys and level of assessment required to form legally defensible conclusions regarding the impact of the proposal. The scale and intensity of the proposed development should dictate the level of investigation. It is important that all conclusions are supported by adequate data.

OEH Requirements

In summary, the OEH's key information requirements for the proposal include an adequate assessment of:

- 1. Impacts to Aboriginal cultural heritage objects; and**
- 2. Impacts on flora, fauna, threatened species, populations, communities and their habitats.**

This assessment should include consideration of direct and indirect impacts as a result of both construction and operation of the project. Assessment of any cumulative impacts of this and other developments in the area will be essential.

Flora, Fauna and Threatened Species

A copy of our generic Environmental Impact Assessment requirements for biodiversity are included in Attachment 1. Associated guidance documents are referenced in Attachments 1 and Attachment 2. These guidelines address requirements under the *EP&A Act* and OEH's areas of responsibility relating to flora, fauna and threatened species, populations and ecological communities and their habitats.

OEH is committed to the protection, appropriate management, and where necessary, rehabilitation of native vegetation. For these reasons, OEH considers that careful planning should precede any development that involves further vegetation clearance or other significant impact within areas of remnant vegetation.

Cultural Heritage

The importance of protecting Aboriginal Cultural Heritage is reflected in the provisions under Part 6 of the *NP&W Act 1974*, as amended. That Act clearly establishes that Aboriginal objects and places are protected and may not be harmed, disturbed or desecrated without appropriate authorisation. Importantly, approvals under Parts 4 and 5 of the *EP&A Act 1979* do not absolve the proponent of their obligations under the *NP&W Act 1979*.

Under the *NP&W Act 1974*, it is the responsibility of each individual proposing to conduct ground disturbance works to ensure that they have conducted a due diligence assessment to avoid harming Aboriginal objects by the proposed activity. OEH has produced a generic due diligence process, which is not mandatory to follow, however any alternative process followed must be able to demonstrate their process was reasonable and practicable in attempts to avoid harm to Aboriginal objects.

Consultation must also be in accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW 2010) as set by OEH if impact to cultural heritage is unavoidable.

Further advice regarding Aboriginal cultural heritage can be found on the OEH web-site at: <http://www.environment.nsw.gov.au/licences/achregulation.htm>. and within guidance documents listed in Attachment 2.

Should you require further information please contact Michelle Howarth, Conservation Planning Officer on (02) 68835339 or email michelle.howarth@environment.nsw.gov.au.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'S Ardill'. The signature is fluid and cursive, with the first letter 'S' being large and prominent.

SONYA ARDILL
Senior Team Leader Planning, North West Region
Regional Operations

ATTACHMENT 1: EIA REQUIREMENTS REVIEW OF ENVIRONMENTAL FACTORS – BIODIVERSITY

INTRODUCTION

These are introductory, generic specifications of the Office of Environment and Heritage (OEH) for an adequate assessment of the impacts of a development proposal on native flora and fauna (ie including protected and threatened species).

However, OEH recognises that the scale and complexity of the project will to some extent, dictate the level of information that is required to address the questions posed below. Consequently, flora and fauna assessments need to be tailored to suit the proposal. For example, a development which is proposed on land which has already been totally (or substantially) cleared should address the issues raised below but the amount of work required to address these issues may be substantially less than if the area comprised undisturbed bushland and, therefore, of more significant wildlife habitat value. A preliminary assessment, including a desktop investigation and a preliminary site inspection, may indicate the need for a detailed survey of the site.

It is up to the proponent (and later the consent and/or determining authorities) to determine the detail and comprehensiveness of assessment required to form legally defensible conclusions regarding the impact of the proposal. The scale and intensity of the proposed development should dictate the detail of investigation. It is important that all conclusions are supported by adequate data and that these data are clearly presented in EIA documentation.

OEH will consider the following issues when reviewing an EIA document:

1. **Concerns** - What are OEH's concerns regarding the conservation of natural and cultural heritage in accordance with the relevant legislation? Is the proposal likely to affect natural and cultural heritage? How?
2. **Provision of Information** - Is adequate information provided for a valid assessment of the impacts?
3. **Validity of Conclusions** - Has the proponent arrived at valid conclusions as a result of the assessment of impacts?
4. **Recommended Conditions of Consent/Approval** (where appropriate) - Should Consent or Approval be granted, what conditions (if any) are required to ensure that the project is developed, and thereafter managed in accordance with natural and cultural heritage conservation and the provisions of legislation administered by OEH?

Thus the EIA document should fully describe the existing environment including flora and fauna, so that future impacts can be properly assessed and then reviewed (eg during the public participation phase).

FLORA

Background

Although the proposed site may be disturbed by various landuses, any remnants of native vegetation are of significant natural heritage value, including riparian and wetland areas. The area of vegetation and habitat at the proposed site may provide an area of high biological diversity, high conservation value or may not be well represented or protected elsewhere. It may also act as a corridor or migratory route for wildlife, drought refuge habitat or have other important values.

OEH is committed to the protection, appropriate management, and where necessary, rehabilitation of native vegetation. For these reasons, OEH considers that careful planning should precede any development that involves further vegetation clearance or other significant impact within areas of remnant vegetation.

Negative impacts to native vegetation (eg clearing) should be avoided where possible. Where impacts cannot be avoided, mitigation measures must be implemented. Where residual impacts remain the EIA should detail how a “maintain or improve” outcome for biodiversity will be achieved via compensatory measures such as offsets - the provision of sites of similar type of vegetation to that impacted that will be managed in perpetuity for conservation. BioBanking provides a voluntary mechanism through which this can be achieved.

The BioBanking Assessment Methodology allows quantification of impacts and assessment of the value of offset areas and associated management regimes for those areas. The BioBanking scheme provides an alternative path for proponents to the current threatened species assessment of significance process. Information about BioBanking is located on OEH’s website at <http://www.environment.nsw.gov.au/biobanking/>

Where an offset package will not be determined using the BioBanking Assessment Methodology then the package should:

- a) Meet the OEH’s *Principles for the use of biodiversity offsets in NSW*¹, which are available at: <http://www.environment.nsw.gov.au/biodivoffsets/oehoffsetprincip.htm> ;
- b) Identify the conservation mechanisms to be used to ensure the long term protection and management of the offset sites; and
- c) Include an appropriate Management Plan (such as vegetation or habitat) that has been developed as a key amelioration measure to ensure any proposed compensatory offsets, retained habitat enhancement features within the development footprint and/or impact mitigation measures (including proposed rehabilitation and/or monitoring programs) are appropriately managed and funded.

Report Requirements

The EIA documentation should include a report on the flora that includes the following:

- detailed location map and identification of the area surveyed (including the location of photographs, transects, areas of significance etc),
 - at least one of the following: a land satellite image, vegetation communities map, aerial photograph, or a remnant vegetation map,
 - A map identifying the vegetation communities located in the study area and the areas of each vegetation community to be impacted.
 - a complete plant list (including scientific names of those plants) of all tree, shrub, ground cover and aquatic species, categorised according to country of origin (ie., native versus exotic),
 - a detailed description of vegetation structure (in terms of a scientifically accepted classification system) and spatial distribution (i.e. plant densities and patterning) on the site, including a vegetation map,
 - describe the condition and integrity of the vegetation including a description of any past disturbance,
 - an account of the likely original vegetation communities (pre-, or at early settlement), and an assessment of the likely regional distribution of the original communities,
 - an assessment of whether the plant communities are adequately represented in conservation reserves or otherwise protected,
 - an account of the hydrology of the area and how this relates to the dynamics of the vegetation communities,
 - a list of **known** and **likely** threatened species as listed under Schedules 1 & 2 (*Threatened Species Conservation Act 1995*) which might occur at the site. The OEH database needs to be accessed and the likelihood of occurrence of threatened flora species determined,
-

- an assessment of the impacts of the proposal on flora, on-site and off-site (eg siltation, water availability or drainage changes) and measures to mitigate these impacts,
- an assessment of the significance of the impact of the development at both the site and at the regional scale,
- a detailed rehabilitation/management plan including a list of the plant species to be used during rehabilitation (if required),
- detail methodologies used and a list of the reference literature cited, and
- any other issues that may be considered relevant.

The above guidance will provide some of the information necessary to conduct an Assessment of Significance required for threatened flora and fauna under Section 5A of the *EP&A Act*, should threatened species be likely or known to occur in the locality of the subject development proposal. Similarly, it will provide some of the information required if an application is found to be necessary under the *Native Vegetation Act (2003)*. However the above relates mostly to the specific environmental assessment processes under the *EP&A Act* and does not constitute an Assessment of Significance.

Similarly, the above guidance will provide some of the information required for BioBanking, but may not be sufficient for BioBanking offset calculations. Please refer to the BioBanking website or contact OEH for specific information relating to BioBanking assessment requirements. The BioBanking scheme provides an alternative path for proponents to the current threatened species assessment of significance process.

FAUNA

Background

The present high rate of biodiversity decline is associated with clearing and reduced condition of habitats. Native vegetation including wetland, riparian and remnant environments are very significant areas of fauna habitat. Therefore any development in such areas should fully consider the impact on fauna and its habitat.

Report Requirements

The EIA document should include a report on the fauna (including protected and threatened species), that includes the following:

- detailed location map and identification of the area surveyed (including the location of photographs, transects, areas of significance etc),
- at least one of the following: a land satellite image, vegetation communities map, aerial photograph, or a remnant vegetation map,
- a complete list of all **known** and **likely** terrestrial and aquatic species (eg birds, mammals, reptiles and amphibians including scientific names). It is suggested that invertebrates also be considered as they form part of the food chain for many fauna species,
- those species which are protected, threatened or listed under any international agreements, as well as introduced species,
- those species known or likely to breed in the area,
- any species which have specific habitat requirements found within the project area,
- those species or populations which may be near the limit of their geographic range or are a disjunct/isolated population,
- assessment of the importance or otherwise of the location as a corridor, migratory route or drought refuge, in relation to other remnant vegetation, riparian and wetland areas or habitat in the region,
- assessment of the impacts of the proposal on all fauna and its habitat, at both the site and at the regional scale,

- identification of any mitigation measures proposed to limit or ameliorate the impact of the proposal,
- detailed methodologies used and a list of the reference literature cited, and,
- any other issues that may be considered relevant.

Again, the above guidance will provide some of the information necessary to conduct an Assessment of Significance required for threatened flora and fauna under Section 5A of the *EP&A Act*, should threatened species be likely or known to occur in the locality of the subject development proposal. However the above relates mostly to the specific environmental assessment processes under the *EP&A Act* and does not constitute an Assessment of Significance.

Similarly, the above guidelines will provide some of the information required for the Threatened Species component of BioBanking, but may not be sufficient for BioBanking offset calculations. Please refer to the BioBanking website or contact OEH for specific information relating to BioBanking assessment requirements

SEPP No. 44 - Koala Habitat Protection

The Shire may be listed in Schedule 1 of SEPP No. 44 - Koala Habitat Protection. If so, the requirements of the SEPP regarding Koala habitat protection should be considered by the proponents.

THREATENED SPECIES OF FAUNA AND FLORA

Background

The proponent will need to address the requirements of legislation that currently governs threatened species protection and impact assessment in NSW.

The *Threatened Species Conservation Act (1995) (TSC Act)* protects all threatened flora and fauna native to NSW (excluding fish and marine plants). The proponent will need to consider the provisions of this Act.

The *TSC Act* contains lists of threatened species, which are divided into a number of categories – those presumed extinct, endangered species, critically endangered species and vulnerable species. It also contains lists of endangered populations and endangered ecological communities. This Act also allows for the declaration of critical habitat, key threatening processes and the preparation of both Recovery Plans and Threat Abatement Plans. These listings and plans must be considered as part of the EIA process.

If an activity or development is proposed in a locality **likely** or **known** to be occupied by a threatened species, population, ecological community or critical habitat, any potential impact to that threatened species must be taken into account during the development assessment process. However under the *EP&A Act*, some types of development are not required to go through approval processes. Please note that a licence may still be required under the *TSC Act* if such a development/activity is likely to harm a threatened species, population or ecological community.

Proponents can voluntarily use BioBanking to minimise and offset their impacts on biodiversity. The scheme provides an alternative path for proponents to the current threatened species assessment of significance process.

Assessment of Significance & Species Impact Statements

If during the flora or fauna assessment or survey, threatened species are **found** or are **likely** to occur in the area, the proponents must undertake an Assessment of Significance as outlined in section 5A of the *EP&A Act* to determine whether or not the development would be likely to have a significant impact upon threatened species.

The Assessment of Significance is a statutory mechanism which allows decision makers to assess whether a proposed development or activity is likely to have a significant effect on threatened species, populations or ecological communities, or their habitats.

The Assessment of Significance is contained within section 5A of the *EP&A Act* and consists of seven factors which need to be addressed for informed decisions to be made regarding the effect of a proposed development or activity on threatened species, populations or ecological communities, or their habitats. A copy of OEH's *Threatened species assessment guidelines: The assessment of significance* can be obtained from the OEH website at:

<http://www.environment.nsw.gov.au/resources/threatenedspecies/tsaguide07393.pdf>

Following threatened species assessment via the Assessment of Significance, it may be necessary to prepare a Species Impact Statement (SIS). The proponent will need to prepare a SIS in the following circumstances:

- If (after having addressed Section 5A) the flora/fauna assessment concludes that there is likely to be a significant impact to threatened species, or
- The proposed development is likely to affect critical habitat declared under the TSC Act.

If a SIS is required, the proponent (not the consultant) must write to OEH for any formal requirements for the SIS that he might deem appropriate. The SIS must then be prepared in accordance with these requirements and provided to the OEH. In some instances the Minister for the Environment will also need to be consulted for approval.

Methods to reduce the impact on the protected and threatened species should be considered fully, and are considered an integral requirement within any SIS document.

The OEH advises that conducting an Assessment of Significance or an SIS according to the provisions of the *EP&A Act* and the *TSC Act* is a complex task and should be undertaken by suitably qualified person(s).

AVAILABLE BIODIVERSITY DATA

The following information sources are recommended:

- **Atlas of NSW Wildlife** - A general search for flora and fauna records can be conducted via:
<http://www.bionet.nsw.gov.au/>

Please note that not all the information associated with the individual records is available on this website. You can apply to the Office of Environment and Heritage for more detailed information about individual sightings (terms and conditions apply). Contact the Wildlife Data Unit for more information on (02) 9995 5000.

- **OEH Threatened Species website** - detailed information relating to threatened species, populations, ecological communities and their habitats can be obtained at:

<http://www.environment.nsw.gov.au/threatenedspecies>

The **BioBanking Threatened Species Database**, the **Vegetation Types databases** (available via the OEH website at <http://www.environment.nsw.gov.au/threatenedspecies> and <http://www.environment.nsw.gov.au/biobanking/vegtypedatabase.htm>, respectively) and **other data sources** (e.g. PlantNET, Online Zoological Collections of Australian Museums (<http://www.ozcam.org/>), previous or nearby surveys etc.) may also be used to compile the list.

Attachment 2 – Guidance Material

Title	Web Address
<i>Commonwealth Environment Protection & Biodiversity Conservation Act 1999</i>	http://www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/
<i>Environmental Planning and Assessment Act 1979</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N
<i>Fisheries Management Act 1994</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+38+1994+cd+0+N
<i>National Parks and Wildlife Act 1974</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+80+1974+cd+0+N
<i>Threatened Species Conservation Act 1995</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+101+1995+cd+0+N
Aboriginal Cultural Heritage	
Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010)	http://www.environment.nsw.gov.au/licences/consultation.htm
Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010)	http://www.environment.nsw.gov.au/licences/archinvestigations.htm
Due Diligence Code for the Protection of Aboriginal Objects in NSW (DECCW 2010)	http://www.environment.nsw.gov.au/resources/cultureheritage/ddcop/10798ddcop.pdf
Aboriginal Site Impact Recording Form	http://www.environment.nsw.gov.au/licences/DECCAHiMSSiteRecordingForm.htm
Aboriginal Heritage Information Management System (AHIMS) Registrar	http://www.environment.nsw.gov.au/contact/AHiMSRegistrar.htm
Biodiversity	
BioBanking Assessment Methodology (OEH, 2014)	http://www.environment.nsw.gov.au/resources/biobanking/140661BBAM.pdf
BioBanking Assessment Methodology and Credit Calculator Operational Manual (DECCW, 2008)	http://www.environment.nsw.gov.au/biobanking/calculator.htm
Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna – Amphibians (DECCW, 2009)	http://www.environment.nsw.gov.au/resources/threatenedspecies/09213amphibians.pdf
Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities – Working Draft (DEC, 2004)	http://www.environment.nsw.gov.au/resources/nature/TBSAGuidelinesDraft.pdf
OEH Threatened Species website	http://www.environment.nsw.gov.au/threatenedspecies/
Atlas of NSW Wildlife	http://www.environment.nsw.gov.au/wildlifeatlas/about.htm
BioBanking Threatened Species Database	http://www.threatenedspecies.environment.nsw.gov.au/tsprofile/home_species.aspx
Vegetation Types databases	http://www.environment.nsw.gov.au/biobanking/vegtypedatabase.htm
PlantNET	http://plantnet.rbgsyd.nsw.gov.au/
Online Zoological Collections of Australian Museums	http://www.ozcam.org.au/
Threatened Species Assessment Guideline - The Assessment of Significance (DECCW, 2007)	http://www.environment.nsw.gov.au/resources/threatenedspecies/tsaguide07393.pdf
Principles for the use of biodiversity offsets in NSW	http://www.environment.nsw.gov.au/biodivoffsets/oehoffsetprincip.htm



SF2012/026176; WST15/00061

Mr David Walker
Geolyse Pty Ltd
PO Box 1963
ORANGE NSW 2800

Dear Mr Walker

**Proposed Cowra Heavy Vehicle Bypass
Preparation of Review of Environmental Factors (REF)**

Thank you for your letter dated 22 April 2015 requesting Roads and Maritime Services provide advice to assist you in the preparation of an REF for a proposed heavy vehicle town bypass at Cowra.

The route proposed by Council has been reviewed. The bypass is located on existing and proposed public roads including a new bridge over the Lachlan River. The proposal will also involve new intersections or upgrades to existing intersections with State classified roads, being, Mid Western Highway (HW6), Olympic Highway (HW78) and Lachlan Valley Way (MR56). The proposed route also crosses Darbys Falls Road (MR576) which is a regional classified road.

Roads and Maritime notes Council has engaged Geolyse to prepare an REF for this route only. Therefore, the comments you seek are confined to environmental and safety aspects of the route, as now proposed, and not in relation to the suitability of the route itself.

To assist in the development of an REF, Roads and Maritime provides the following comments:

- Mid Western Highway, Olympic Highway, Lachlan Valley Way and Darbys Falls Road are classified roads. Under Section 138(2) of the *Roads Act 1993* the concurrence of Roads and Maritime is required prior to a consent being issued for any new connections or upgrading of intersections to these roads.
- Proposed bypass route intersections with classified roads will need to be designed and constructed in accordance with *Austrroads Guide to Road Design* and Roads and Maritime Supplements. To understand the impacts of and intersection requirements for the bypass route, a Traffic Study will need to be prepared which identifies vehicle types, volumes and origin/destination projected to access and travel the bypass. To assist you in the development of the Traffic Study, Roads and Maritime suggests the standard format for preparing traffic impact studies provided in Table 2.1 Section 2 of the *RTA's Guide to Traffic Generating Developments 2002*.

- Intersections (private and public) with the bypass route will need to achieve Safe Intersection Sight Distance (SISD). Table 3.2 Part 4A of *Austroads Guide to Road Design* is attached which provides SISD minimum measurements. Intersections with classified roads will need to provide for a 2 second reaction time. Careful attention needs to be given to providing SISD, in particular, at the intersection of the bypass route and the Olympic Highway.
- Consideration of, and adequate provision for, school bus stops need to be included in the design of the bypass route.
- Adequate vertical and horizontal clearances should be provided along the route to accommodate over-size and over-mass vehicles.
- Where the bypass route intersects with classified roads, traffic on the classified road will have priority over traffic on the proposed bypass road.
- 90 degree bends in the route should be avoided by providing curves with larger radii to better accommodate heavy vehicles.

Roads and Maritime welcomes the opportunity to provide assistance in the development of an REF. The proposed bypass will interface with 3 state roads in 4 locations and is designed to attract heavy vehicles currently using the State road network. In this regard, it is important Council continues to engage with Roads and Maritime to ensure both Council and Roads and Maritime's obligations and objectives are understood and accommodated in this project. To this end, Roads and Maritime seeks further opportunities to discuss this project with Council and their representatives.

Please keep Roads and Maritime informed on the progress of this proposal. Should you require further information please contact Andrew McIntyre on 02 6861 1453.

Yours faithfully



1/6/15

Peta Smith
Acting Network & Safety Manager
Western

21 November 2016

SF2012/026176; WST15/00061/02

General Manager
Cowra Shire Council
Private Mail Bag 342
COWRA NSW 2794

Dear Sir

Proposed Cowra Heavy Vehicle Bypass: Draft Review of Environmental Factors (REF)

I refer to an email sent to Roads and Maritime Services on behalf of George Ridley, Director Infrastructure and Operations for Cowra Shire Council, on 15 July 2016 referring the draft REF for the proposed Cowra Heavy Vehicle Bypass for comment. Reference is also made to a site inspection attended by representatives from Council, Geolyse and Roads and Maritime on 7 November 2016, a senior management meeting between Council and Roads and Maritime on 8 November 2016 and an email from David Walker of Geolyse dated 8 November 2016.

Roads and Maritime provides in-principle support for the proposed bypass, including the proposed at-grade intersections with the classified road network.

As discussed with Council, at this time RMS does not provide concurrence under section 138(2) of the *Roads Act 1993* for the proposed intersections with the classified road network, at Lachlan Valley Way (MR56), the Mid Western Highway (HW6), Olympic Highway (HW78) and Darby Falls Road (MR576). I confirm that Council is not currently seeking concurrence and understands that concurrence will be subject to further consideration once the designs of the intersection treatments have advanced.

To assist in progressing the bypass project, Council has also requested Roads and Maritime to comment on the following matters, in addition to giving in principle support:

- 1) Factors that could affect future consideration of the proposed bypass route for gazettal as a classified road:
 - Classified roads perform a higher function than local roads in terms of the regional movement of freight and people. Because of this higher function, it is important that the road environment provides a high level of road safety, traffic reliability and infrastructure integrity. In this regard, the following features of the proposed corridor and alignment have been identified that may require further consideration:
 - The number and frequency of private accesses and local road intersections along some lengths of the proposed route, should such access to the bypass be retained, is consistent

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with an urban environment and low speed zone. Consideration should be given to preserving a road corridor that allows adequate width to create service roads for accesses and minimises the number of intersections with the bypass route.

- The proposed horizontal alignment includes curves with radii that appear deficient for an 80 km/h alignment, in particular on Airport Road.
 - The proposed vertical alignment includes grades that appear deficient for an 80 km/h alignment, particularly for heavy vehicles and on approach to intersections.
 - Vertical clearances, in particular at the proposed intersection with Lachlan Valley Way. Adequate vertical and horizontal clearances should be allowed for to accommodate over-dimension vehicles.
 - There does not appear to be a planning scheme designed to ensure adjoining and nearby land uses are compatible with the proposed bypass route. Land use planning that provides compatible land-uses and appropriate controls to limit access to the route, would assist in preserving the amenity of the proposed route and in reducing the risk of land use conflict between neighbouring landholders and the bypass.
 - It is not currently clear that the proposed 8.4 kilometre bypass route will be a convenient and efficient route and therefore, an attractive alternative to the existing State road routes for through traffic.
 - The identified constraints of the proposed corridor and concept alignment suggest that it will be difficult to achieve an 80 km/h speed for the larger part of the route, and includes lengths which may be suitable for no more than a 50 km/h speed limit. In designing the proposed bypass, the travel speed should be identified as part of the design brief so that the number, frequency and treatment types for accesses and intersections are designed accordingly, as well curves, crests, formation width and clear-zones.
 - In terms of designing a road that may be considered for future gazettal as a classified road, the level of safety, journey reliability, pavement quality and amenity to road users and adjacent landholders should offer an improvement on the existing classified network. As discussed with Council, Roads and Maritime understands that Council may stage the development of the proposed bypass. In this regard Road and Maritime recommends that the next step should be the identification and preservation of a road corridor that could accommodate such an alignment.
- 2) The level of detail required for Roads and Maritime to consider granting concurrence for the proposed intersection treatments with classified roads:
- Concept plans are to be prepared for the bypass, including for each intersection of the proposed bypass with classified roads. Concept plans for each intersection with a classified road are to be accompanied by a road safety audit.
 - All intersection treatments will need to be designed in accordance with *Austroads Guide to Road Design* and relevant Roads and Maritime supplements.
 - The proposed bypass intersection with Mid Western Highway (eastern end) will require a right turn acceleration lane on the highway. Careful planning of the location of the intersection and acceleration lane will need to occur to ensure the intersection complies with relevant *Austroads* requirements including sight distance, levels, grades and lane lengths.
 - Intersection treatments are to be designed in accordance with the current sign-posted speed zones, unless otherwise agreed by Roads and Maritime.
 - Intersection pavement design is to accommodate projected heavy vehicle traffic, including size, weight and number of turning movements.

Roads and Maritime appreciates the opportunity to provide comment in the development of the REF. The proposed bypass will interface with 3 State roads in 4 locations. Please continue to engage with Roads and Maritime to ensure both Council and Roads and Maritime's obligations and objectives are understood throughout the project.

Please keep Roads and Maritime informed on the progress of this proposal. Should you require further information please contact Andrew McIntyre, Manager Land Use Assessment on 02 6861 1453, or myself on 02 6861 1687.

Yours faithfully

A handwritten signature in blue ink, appearing to read 'Susie Mackay', with a large, sweeping loop at the bottom.

Susie Mackay
Network & Safety Manager
Western



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Contact Tim Baker
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Our ref ERM2016/0591

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Dear George

Cowra Heavy Vehicle Bypass – Draft Review of Environmental Factors

I refer to your letter dated 14th July 2016 providing DPI Water (formerly NSW Office of Water) an opportunity to comment on a draft Review of Environmental Factors for the proposed Cowra Heavy Vehicle Bypass. DPI Water has reviewed the documentation and provides the following comments which include recommendations:

- Section 3.3.5 indicates the proposed bridge has the potential to impact residential properties due to the impacts to flood levels, and that flood impacts need to be minimised by alternative bridge design. This concept is supported by DPI Water.
- It is understood the flood modelling assessment completed for this project is based on a concept rather than detailed design and that no detailed assessment of changes in flood levels and extent have been completed. The potential impact on adjacent properties (houses, infrastructure and agricultural land) is therefore not certain and the final bridge design is yet to be confirmed. The proposed further flood modelling to confirm impacts is therefore supported, and will also assist in confirming potential impacts to channel stability both at the Lachlan River and Waugoola Creek. Consultation with the Office of Environment and Heritage (OEH) Urban Flood Group identified the need for the use of LIDAR surveying and 2 dimensional modelling to support the finalised flood assessment. It is recommended Council contact the OEH Urban Flood Group to discuss the modelling recommendations.
- DPI Water supports the concept that post development flows are consistent with pre-development levels at Waugoola Creek crossing. This is to mitigate impacts due to flood levels on surrounding properties.
- Table 4.1 refers to the exemption for a Controlled Activity Approval and no requirement for a Water Access Licence. DPI Water confirms this statement based on the information provided. DPI Water advises that a Flood Work Approval is relevant to the earthen bank used for construction of the road on the floodplain. However Council is exempt from this requirement.
- DPI Water supports the mitigation measures detailed in Section 6.2.4 and Table 7.1 of the REF. The key measures relevant to DPI Water include;
 - preparation of a Soil and Water Management Plan.
 - designing works near waterways in accordance with the “*Guidelines for Controlled Activities on Waterfront Land*”. This includes standards for watercourse crossings in addition to general works in waterfront land such as riparian vegetation structure and banks stabilisation methods.
 - Installation of scour protection to minimise bank erosion, and stabilising and rehabilitating all disturbed areas.
- DPI Water understands a coffer dam and excavation is proposed for the construction of the piers. It is recommended an assessment be included on the proposed depth of the piers

and the potential for impact on groundwater and surface water, and the likely dewatering requirements. This information will assist in determining potential licensing/approval requirements.

- Table 7.1 refers to creek realignment controls. It is unclear what creek or controls this relates to, therefore further detail is requested to enable DPI Water to consider any approval requirements or specific comments.
- It is understood Town Water Supply is extracted from the Lachlan River downstream of the proposed bridge. It is therefore critical to ensure adequate mitigation of potential contaminants/sediments entering the waterway or groundwater during bridge construction.

DPI Water would appreciate consultation on further revisions of the REF and the detailed flood modelling proposed. Should you have any further queries in relation to this submission please do not hesitate to contact Tim Baker on (02) 6841 7403.

Yours sincerely



Vickie Chatfield
Regional Manager
22 August 2016