

## Dominic Crinnion

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**From:** Wayne Jones <wayne.jones@dpi.nsw.gov.au>  
**Sent:** Monday, 15 September 2014 12:11 PM  
**To:** Dominic Crinnion  
**Subject:** M1–M2 Project, NorthConnex (SSI\_6136)  
**Attachments:** RMS Memo.pdf

Hi Dominic

Please see following draft DPI comments on the above project. Note that RMS memo is attached (Attachment C). Formal response should follow shortly.

Regards  
Wayne

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OUT14/30305

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[Dominic.Crinnion@planning.nsw.gov.au](mailto:Dominic.Crinnion@planning.nsw.gov.au)

Dear Mr Crinnion,

**M1–M2 Project, NorthConnex (SSI\_6136)**  
**Response to exhibition of Environmental Impact Statement**

I refer to your email dated 14 July 2014 requesting advice from the Department of Primary Industries (DPI) in respect to the above matter.

Comment by Fisheries NSW

Fisheries NSW has reviewed the Environmental Impact Statement for the NorthConnex roadway and has no objection to these works, subject to implementation of the environmental mitigation measures relating to aquatic biodiversity, hydrogeology and soils, and surface water, outlined in Chapter 9 of the EIS.

For further information please contact Carla Ganassin, Fisheries Conservation Manager, (Wollongong Office) on 4254 5527 or at [carla.ganassin@dpi.nsw.gov.au](mailto:carla.ganassin@dpi.nsw.gov.au).

Comment by Agriculture NSW

Agriculture NSW advise that commitment to manage weeds is adequate.

For further information please contact Andrew Docking, Resource Management Officer (Richmond office) on 4588 2128, or: [andrew.docking@industry.nsw.gov.au](mailto:andrew.docking@industry.nsw.gov.au).

Comment by Crown Lands

Crown Lands advise no issues.

For further information please contact Rebecca Johnson, Co-ordinator Client Services, (Newcastle Office) on 4920 5040 or at [rebecca.johnson@lands.nsw.gov.au](mailto:rebecca.johnson@lands.nsw.gov.au).

Comment by NSW Office of Water

The NSW Office of Water has reviewed the Environmental Impact Statement (EIS) for the NorthConnex proposal and provides comments and recommendations for consideration at **Attachment A** and recommended conditions of approval at **Attachment B** should the project be approved.

For further information please contact Rohan Macdonald, Water Regulation Officer, Major Projects (Newcastle Office) on 4904 2642 or at [rohan.macdonald@water.nsw.gov.au](mailto:rohan.macdonald@water.nsw.gov.au).

## **Attachment A**

### **M1–M2 Project, NorthConnex (SSI\_6136) Response to exhibition of EIS Additional comments by NSW Office of Water**

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#### **Assessment of impacts to groundwater resources**

The NorthConnex tunnels are proposed to be constructed as drained tunnels, with ongoing groundwater inflow, capture and discharge. The EIS predicts 2 GL of groundwater will need to be abstracted and discharged during the 5 year construction period, with ongoing abstractions of 170 to 700 ML per year during operation. By virtue of Section 18 and clause 2 of Schedule 5 of the *Water Management (General) Regulation 2011* roads authorities are currently exempt from the requirement to hold a water access licence to account for water taken for road construction and maintenance.

Ongoing licensing arrangements for road infrastructure are currently under development in consultation with the Roads and Maritime Service (RMS). The Office of Water will not currently require licensing for water taken by a roads authority for this project, however requests a commitment from the proponent to liaise with the Office of Water and ensure any necessary licences are held once these arrangements are finalised.

During assessment of the EIS the Office of Water requested additional information regarding the assessment of potential groundwater impacts as a result of the project. In particular, the Office of Water sought additional information regarding long-term inflows to the tunnels, the potential impacts to nearby groundwater dependent ecosystems and the justification for the design option selected.

RMS subsequently provided a letter and memo (**Attachment C**) responding to this request. This additional information, together with the information provided in the publicly exhibited EIS, was considered in the Office of Water's assessment of potential impacts to groundwater resources. The key conclusions of this assessment are as follows:

- Groundwater inflow to the tunnel is proposed to be limited to 1 L / s / km through engineering means, such as grouting.
- Details of the hydrogeological investigations completed to support the design of the tunnels have not been provided, making it difficult to confirm the validity or otherwise of the hydrogeological inferences underpinning the design.
- The assessments of groundwater behaviour and the impacts associated with dewatering caused by the tunnels lack rigour and detail.
- The potential impacts of most interest are the baseflow impacts in the tributaries of the Hawkesbury River northwest of the tunnel and of Lane Cove River to the south and east. These tributaries lie within the Berowra Valley Regional/National Park and Lane Cove National Park respectively (refer Figure 1 attached), both of which are inferred in Geoscience Australia's Groundwater Dependent Ecosystems Atlas to contain flora with varying potential for groundwater interaction.
- These impacts, which lie outside the construction corridors and thus the nominated study areas do not appear to be considered or addressed either within the EIS or in Appendix J "Technical Working Group: Biodiversity". Additional information is included in the supplementary information provided by RMS but assessment of these potential impacts remains limited.
- Advice should be sought from the Office of Environment and Heritage about the specific values and impacts in relation to these tributaries.

#### **Assessment of impacts to surface water resources**

Potential impacts to surface water resources as a result of the proposal include impacts to flow regimes, water quality and disturbance of waterfront land during construction of the proposal, and impacts due to the discharge of captured construction water, stormwater and groundwater to receiving surface waters during construction and operation.

Section 7.9.4 of the EIS outlines proposed environmental management measures to mitigate the potential impacts arising from the proposal. These measures are generally considered adequate to manage potential impacts to surface water resources and should be incorporated into the project approval, should approval be granted.

### Recommendations

1. A condition of consent should require that groundwater inflows should be limited to 1 L/s/km. This limit is to be applied over any given kilometre of tunnel rather than as an average value.
2. Specific advice should be sought from the Office of Environment and Heritage about the values and importance of the various ecosystems which may be affected by potential baseflow losses (including spring discharges) arising from tunnel groundwater inflows, whether any potential biodiversity impacts would be of concern if realised, and appropriate mitigation and response measures to address potential impacts.
3. A Groundwater Management Plan should be developed which takes account of the risks associated with potential baseflow reduction impacts caused by dewatering. The plan should include monitoring, impact trigger definition and response actions to effectively manage potential impacts to groundwater and surface water resources and dependent ecosystems from both construction and ongoing dewatering caused by the drained tunnel.
4. The Groundwater Management Plan should include "make good" provisions to be implemented in the event of adverse impacts to nearby groundwater users.
5. A commitment is required from the proponent to continue to liaise with the Office of Water regarding licensing the long-term operational take of groundwater.
6. A Surface Water Management Plan should be developed incorporating the environmental management measures outlined in Table 7-179 of the EIS. The plan should include monitoring, impact trigger definition and response actions for all watercourses and riparian land potentially impacted by the project.
7. By virtue of section 115ZG of the *Environmental Planning and Assessment Act 1979* SSI projects are currently exempt from the requirement to obtain controlled activity approvals in accordance with section 91 of the *Water Management Act 2000* (WMA). Notwithstanding, all activities taking place in, on or under waterfront land, as defined in the WMA should be conducted in accordance with the NSW Office of Water's Guidelines for Controlled Activities available at [www.water.nsw.gov.au](http://www.water.nsw.gov.au) >> Approvals >> Controlled activities.

**END ATTACHMENT A**

### Attachment B

**M1–M2 Project, NorthConnex (SSI\_6136)  
Response to exhibition of EIS  
NSW Office of Water recommended conditions of approval**

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1. Groundwater inflows are to be limited to 1 L/s/km for any given kilometre of tunnel.
  2. A Groundwater Management Plan for the project including:
    - a. a protocol for the measurement of groundwater inflows to the tunnels during construction and operation;
    - b. mitigation and response measures to be implemented to maintain groundwater inflows within the prescribed limit of 1 L/s/km;
    - c. a procedure for the investigation and evaluation of the risks to groundwater and surface water resources and dependent ecosystems as a result of potential baseflow reduction impacts caused by dewatering;
    - d. monitoring, impact trigger definition and response actions to mitigate and manage potential impacts to groundwater and surface water resources and dependent ecosystems from both construction and ongoing dewatering caused by the drained tunnel;
    - e. "make good" provisions to be implemented in the event of adverse impacts to nearby groundwater users from both construction and ongoing dewatering caused by the drained tunnel; and

- f. a protocol for ongoing communication with the Office of Water regarding licensing requirements for the operational take of groundwater.
- 3. A Surface Water Management Plan should be developed for the project including:
  - a. implementation of the environmental management measures outlined in Table 7-179 of the EIS; and
  - b. monitoring, impact trigger definition and response actions for all watercourses and riparian land potentially impacted by the project.
- 4. All activities taking place in, on or under waterfront land, as defined in the WMA should be conducted in accordance with the NSW Office of Water's Guidelines for Controlled Activities.

**END ATTACHMENT B**

**Attachment C**

**M1–M2 Project, NorthConnex (SSI\_6136)  
Response to exhibition of EIS  
Roads and Maritime Services Memorandum**

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**SEE ATTACHED**

Regards  
Wayne

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