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Director-General

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Peter Hurst

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Chris Wilson.

Hume Highway duplication. Concept Plan (06_0314), Sturt Highway to Tarcutta (06_0245), Kyeamba Hill (06_0246) and Little Billabong (06_0247). Response to Submissions and revised Statement of Commitments.

Dear Mr Haddad

I refer to the late submission from the NSW Department of Primary Industry to the above Hume Highway duplication environmental assessments and forwarded to the RTA on 2 May 2007.

Whilst noting that a formal response has not been required, for your assistance in completing assessment of the project(s), attached is the RTA's response to the issues raised in the submission together with revised commitments arising from consideration of those issues.

Please contact Peter Hurst on 6923 4315 should you wish to discuss or clarify any issues.

Yours sincerely

BJ Watters

16/5/07

Brian Watters
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Attachment A – Response to issues

General

DPI Comment

- The EA documents are relatively general and specific plans for individual sites such as stream crossings and aquatic habitat rehabilitation measures are not provided. DPI requests further and more detailed consultation in relation to any works to be conducted at locations affecting any water courses.

RTA response

The design of waterway crossings will be developed further in detailed design of the individual sections of the Hume Highway Duplication. The crossings will be designed to facilitate fish passage where appropriate following relevant DPI policies and guidelines, including but not limited to *Fishote: Policy and Guidelines for Fish Friendly Waterway Crossings* (NSW Fisheries 2003), *Why do fish need to cross the road? Fish Passage Requirements for Waterway Crossings* (Fairfull and Witheridge 2003) and *Policy Guidelines for Aquatic Habitat Management and Fish Conservation* (NSW Fisheries 1999). Consultation with DPI regarding the engineering design and location will be undertaken prior to the commencement of construction. Refer to the revised commitment in Attachment B (Ref # B16).

The detailed methodology for restoring aquatic habitat disturbed by the Hume Highway Duplication will be documented during the development of the environmental management plans. This will include reference to relevant government guidelines and policies and will involve consultation with government agencies where appropriate.

Threatened aquatic species

DPI Comment

- DPI recommends that threatened species management measures be clearly outlined and presented to DPI for review prior to construction.
- Protecting any remaining remnant pools in affected creek systems is particularly important as they may act as refuges for fish. DPI requests that the RTA work closely with DPI in areas where there is remnant pools and seek advice prior to works commencing.
- The Little Billabong EA refers to the threatened Purple Spotted Gudgeon and Southern Pygmy Perch as unlikely to occur in Billabong Creek or its anabranch based on the small stream size and degradation of habitat. However, without detailed aquatic sampling, using methods able to identify and quantify fish communities, it is not possible to make this assessment. These species are relatively small and can remain in small pools during periods of dry conditions.

RTA response

Threatened species management measures relating to aquatic species and their habitat (eg. remnant pools) will be documented during the development of the environmental management plans for the Hume Highway Duplication. This will include reference to relevant government guidelines and policies and will involve consultation with government agencies where appropriate.

The potential for threatened fish species or populations, particularly the Purple Spotted Gudgeon and Southern Pygmy Perch, to occur within the Little Billabong Creek and/or its anabranch is noted. Aquatic surveys undertaken for the Yarra Yarra to Holbrook section of the Hume Highway Duplication did identify the Southern Pygmy Perch within Billabong Creek (which Little Billabong Creek is a tributary of). Therefore based on the identification of the Southern Pygmy Perch further downstream of the Little Billabong section and the ability of both the Purple Spotted Gudgeon and Southern Pygmy Perch to remain in pools during

periods of dry conditions, it is considered that these species could potentially occur within Little Billabong Creek and/or its anabranch.

Nonetheless, consideration of the threatened Purple Spotted Gudgeon and Southern Pygmy Perch within the threatened species management measures described above and the use of relevant DPI policies and guidelines on waterway crossings (such as *Why do fish need to cross the road? Fish Passage Requirements for Waterway Crossings* (Fairfull and Witheridge 2003)) will minimise the risk of any significant impact occurring to these species.

Legislative requirements

DPI Comment

- In regards to the permit and/or licence requirements under the *Fisheries Management Act 1994* relating to dredging and reclamation and blockage to fish passage, State government agencies are exempt from these requirements but will need to obtain concurrence of DPI.

RTA response

Comments relating to the need for State government agencies to obtain the concurrence of DPI in regard to permit and/or licence requirements under the *Fisheries Management Act 1994* is noted. The RTA will undertake consultation with DPI in areas where there is potential for dredging and reclamation (as defined under the *Fisheries Management Act 1994*) to occur for the Hume Highway Duplication. Additionally, the RTA is committed to maintaining fish passage during construction.

Riparian vegetation

DPI Comment

- DPI supports the revegetation of riparian zones as stated in the EA documents.
- Plans for rehabilitation activities including landscape plans are to be provided to DPI for comment prior to works and rehabilitation of riparian sites is to be completed to the satisfaction of DPI.

RTA response

The support for the revegetation of riparian zones as stated in the EA documents is noted. The detailed methodology for the revegetation will be documented during the development of the environmental management plans for the Hume Highway Duplication. This will include reference to relevant government guidelines and policies and will involve consultation with government agencies where appropriate.

Woody debris

DPI Comment

- DPI requests that any snags requiring removal from waterways as part of the works are to be reinstated at an appropriate location, in consultation with DPI. Where possible, snags should be retained and returned to their original location or as close as possible.

RTA response

As part of the RTA's commitments to minimise impacts to aquatic habitats, any snag management required as part of the Hume Highway Duplication will be undertaken in consultation with DPI and will follow the principles described in *Policy Guidelines for Aquatic Habitat Management and Fish Conservation* (NSW Fisheries 1999). Refer to the new commitment in Attachment B (Ref # B20).

DPI re-snagging project

DPI Comment

- DPI requests that felled native hardwood timber is retained for the re-snagging project for the Murray River.

RTA response

The RTA is committed to consulting with DPI regarding the use of cleared vegetation in the re-snagging program for the Murray River. However, the supply of the cleared vegetation in the re-snagging program would not compromise any of the other environmental objectives of the Hume Highway Duplication, such as maintaining fauna habitat through the placement of logs in landscaping works.

Fish passage

DPI Comment

- Designs for all crossings (including temporary crossing and permanent bridge, box and pipe culverts) must be designed in accordance with DPI policies and. DPI must be consulted during the detailed design phase of all stream crossings on Class 1 – 4 watercourses.
- DPI supports that design of culvert modification/extension and bridges in accordance with the requirements outlined in Fairfull and Witheridge (2003) is listed as a mitigation and management measure in the EAs. In addition, DPI supports that fish passage is to be maintained at all times during the extension and modification and bridge construction, and the placement of woody debris downstream of culverts as described in the mitigation and management measures.

RTA response

The support for the mitigation and management measures regarding fish passage in the EAs is noted. Waterway crossings will be designed to facilitate fish passage where appropriate following relevant DPI policies and guidelines, including *Fishote: Policy and Guidelines for Fish Friendly Waterway Crossings* (NSW Fisheries 2003), *Why do fish need to cross the road? Fish Passage Requirements for Waterway Crossings* (Fairfull and Witheridge 2003) and *Policy Guidelines for Aquatic Habitat Management and Fish Conservation* (NSW Fisheries 1999). Consultation with DPI regarding the engineering design and location will be undertaken prior to the commencement of construction. . Refer to the revised commitment in Attachment B (Ref # B16)

Water quality

DPI Comment

- DPI supports the notion to plant macrophytes along stream banks to filter flow and enhance bank stability as outlined in the mitigation and management measures.

RTA response

The support for planting macrophytes along stream banks to filter flow and enhance bank stability as outlined in the mitigation and management measures is noted.

Mitigation Measures and Monitoring

DPI Comment

- Where aquatic habitat is affected habitat restoration shall be undertaken to the satisfaction of DPI and a five year annual monitoring program implemented to determine the success of the restoration works. Proposed methods to carry out rehabilitation works for any streams (existing or creek diversions) and riverbanks disturbed during the development and any degraded riparian zones within the site should be developed and presented to DPI for comment prior to works. The monitoring strategy is to be designed to measure riparian and aquatic vegetation distribution and abundance, numbers and identity of aquatic species, and water quality parameters.

RTA response

The detailed methodology for aquatic habitat restoration, such as revegetation of riparian areas, will be documented during the development of the environmental management plans for the Hume Highway Duplication. This will include reference to relevant government guidelines and policies and will involve consultation with government agencies where appropriate. In addition to the initial establishment of the aquatic habitat disturbed by the construction of the Hume Highway Duplication, a monitoring program will also be developed to allow the effectiveness of the restoration to be assessed and modified if necessary. Refer to the new commitment in Attachment B (Ref # B21)

Attachment B – Revised Statement of Commitments

Provided below are the revised Statement of Commitments for the Hume Highway Duplication which relate to impacts on the aquatic environment. The revisions are in addition to the commitments documented in the *Hume Highway Duplication Submissions Report and Revised Statement of Commitments: Concept Plan, Sturt Highway to Tarcutta, Kyeamba Hill and Little Billabong Environmental Assessments* (RTA, April 2007). Amendments to those commitments are shown in italics and new commitments are underlined.

Objective	Ref #	Commitment	Timing	Reference Document
Maintain fish passage	B16	*Waterway crossings* will be designed to facilitate fish passage where appropriate *and in consultation with relevant government agencies.*	Pre-Construction	Fishote: Policy and Guidelines for Fish Friendly Waterway Crossings (NSW Fisheries 2003) Why do fish need to cross the road? Fish Passage Requirements for Waterway Crossings (Fairfull and Witheridge 2003)
	B17	Fish passage will be maintained during construction.	Construction	Why do fish need to cross the road? Fish Passage Requirements for Waterway Crossings (Fairfull and Witheridge 2003)
Minimise impacts to aquatic habitat	B18	Riparian areas disturbed by the Proposal will be progressively revegetated using plant species of local provenance.	Construction	
	B19	DPI Fisheries will be consulted regarding use of cleared vegetation in re-snagging programs for waterways.	Construction	
	B20	Snag management will be undertaken in consultation with relevant government agencies and will follow the management principles of lopping as the first priority followed by realignment, then relocation with removal as the last resort.	Construction	Policy Guidelines for Aquatic Habitat Management and Fish Conservation (NSW Fisheries 1999)
	B21	A monitoring program will be developed to allow the effectiveness of revegetating the riparian areas to be assessed and modified if necessary.	Pre-Construction, Construction and Post Construction	