NSW GOVERNMENT | Department of Primary Industries

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Department of Planning and Infrastructure
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Dear Michael

Pacific Highway Upgrade-Woolgoolga to Ballina Project (SSI-4963) Comments on the Environmental Impact Statement and Recommended Conditions of Approval

Thank you for providing NSW Department of Primary Industries (DPI) with the Environmental Impact Statement for the Pacific highway Upgrade - Woolgoolga to Ballina Project (SSI-4963) for comment and recommended conditions of approval. The following submission is from the Agriculture NSW and Fisheries NSW (including the Marine Park Authority) divisions of DPI.

Agriculture NSW
Although the Environmental Impact Statement recognises limited potential impact on agricultural production at a regional scale, it is likely to have a greater impact on local agricultural production and services to agriculture. There is also likely to be a financial and emotional impact on owners of land proposed for acquisition that is not clearly articulated in the EIS.

The terms 'Remnant Land and Property Strategy', 'Remnant Land Use Strategy' and 'Remnant Land Strategy' are used interchangeably in the EIS and should be rectified for consistency.

Agriculture NSW recommends that RMS consider:

- Rehabilitating remnant land where it can be returned to agriculture uses should be to existing agricultural capability;
- Rehabilitating and/or reconstructing dams, including any irrigation infrastructure to minimum existing capacity or provide another water source for the impacted agricultural properties;
- Negotiating compensation or acquiring land that agricultural landholders are no longer able to access due to sterilisation or land use severance; and
- Acknowledging that consultation with landholders during construction and rehabilitation phases is on-going.

For further information please contact Andrew Docking, Resource Management Officer, Richmond 4588 2128.

Fisheries NSW - Fisheries Ecosystems Branch
Chapter 5 Description of the project
Page 5-179 All Class 1 waterways (i.e. waterways containing or with a high probability of containing Oxleyan Pygmy Perch (OPP) or other threatened species) should have appropriate structures to cross the waterway, such as a bridge or arch. The crossing at Station 134.6 is

proposed as a culvert, which is inappropriate for the site as it supports a known population of OPP and by default is a Class 1 waterway as per Fisheries NSW guidelines.

Page 5-186 Creek realignments. The proposed rock chute and plunge pool pose an obstruction to fish passage and are thus inappropriate for Class 1 to 3 waterways.

Page 5-184 Combined Fauna and Drainage Structures. Consultation on these structures should include Fisheries NSW.

Chapter 8 Hydrology and flooding

Culvert flood relief structures proposed for sections 6 to 9 should be designed to have an appropriate velocity during flood events that allow the dispersal of OPP during small to medium flood events. Fisheries NSW should be consulted during the detailed design of culverts. This does not apply to Class 1 waterways where culverts are not an appropriate structure.

Hydrology working paper

Section 6.32, page 320. The table of peak velocities in OPP habitat in small flood events shows an increase in velocity through most of the proposed structures, including in areas that preliminary analysis identified as critical habitat. The velocity is doubled from 0.1 m/s to 0.2 m/s in Broadwater National Park. This impact may impede the movement of OPP across the floodplain and it is recommended that the proposed structures require further assessment and review to reduce expected velocities.

Section 8.1.5, page 399, and C.3 page 441. The proposed plunge pool and rock chute to dissipate energy in Piccaninny Creek will act as barriers to fish passage and the impact of this should be assessed and modified where necessary.

Chapter 10 Biodiversity

Page 10-156. The pH for OPP in table 10-23 should be 3.3 to 6.9, and the pH for Purple Spotted Gudgeon (PSG) should be 5 to 8.

Page 10-213. As noted above, all waterways containing or with a high probability of containing OPP or other threatened species should be classified as Class 1 waterways, and appropriate structures such as bridge or arches should be installed.

Biodiversity working paper

Page 250, Table 3.8. Fisheries NSW recommends Oaky Creek should be classified as a Class 1 waterway as it is a named permanent creek with a very high probability of containing Oxleyan Pygmy Perch. Fisheries NSW recommends further aquatic surveys in both Oaky Creek and Nortons Gully to establish the presence or absence of OPP.

Section 3.7.1 Watercourses; pages 251 & 252, paragraph 2; and Table 3.9.
Culvert structures are proposed for two of the 21 currently identified Class 1 waterways, and these structures and/or waterways require further discussions with Fisheries NSW.
As recent extensive surveys indicate that OPP are unlikely to occur in Redbank Creek, Fisheries NSW suggest this creek be reclassified as a Class 2 Waterway.

Conversely, the un-named waterway at Station 134.7 has a confirmed population of OPP (and should therefore be classified as a Class 1 waterway), and a bridge or Bebo arch is the only acceptable structure at this location to ensure minimal impact on this species.

Fisheries NSW recommend the waterway classifications of Oaky Creek, the tributary of MacDonald Creek at Station 136.5, and Nortons Gully should be considered under review pending further aquatic surveys targeting OPP. Any waterways that are known or likely to contain

populations of OPP should be classified as Class 1 waterways and thus should be crossed with a bridge or arch structure.

Page 256 Figure 3.66. The key to this figure requires clarification. OPP habitat as described seems inconsistent. Likely habitat in section 7 has been excluded, whereas marginal habitat in Section 1 has been included. The figure should be amended to show likely OPP habitat in a consistent manner. OPP habitat should include areas that are suitable for OPP especially in close proximity to known existing populations whether or not OPP were found in recent aquatic surveys.

Page 391 Table 4.19 Waterways and the Location of Threatened Species. This table should be considered under review, pending further aquatic surveys to establish the classification of waterways as described above.

Page 417 Bridge and Culvert Design. Fisheries NSW notes the commitment to address waterway crossing design in the detailed design phase in relation to Class 1 waterways that are currently proposed to have culverts installed. Fisheries NSW recommends including a commitment to the use of a bridge or Bebo arch for Class 1 waterways as per Fisheries NSW policy and guidelines for waterway crossings.

Water Quality working paper

Page 40 3.1 Potential construction impacts. These should also include:

- The risk of conducting lime stabilisation of fill material where wind or water borne lime can increase the pH of receiving waters;
- The risk of alkaline runoff from concreting activities during the curing process such as bridge decks, parapets etc. which can raise the pH of receiving waters; and
- The risk of stockpiled lime becoming wind blown or entrained in runoff from ASTA or storage areas, particularly where large volumes are required to treat Acid Sulfate soils.

The second last dot point in the impact section should also include potential increase in alkalinity of waters due to run off from construction activities.

Section 3.1.1 Impacts of water quality changes on fish habitats, page 41. The dot points should be amended as the pH shown is incorrect. Also the OPP and Purple Spotted Gudgeon (PSG) have different water quality requirements and are usually found in slightly different habitats with OPP preferring more acidic water than PSG. The OPP recovery plan states the pH parameters for OPP as 3.32 to 6.96. PSG are generally found in water with a pH of 6 to 7.5. Table 3.1 has a different pH listed from the text in 3.1.1.

Section 4.2.16 Stockpile mitigation measures, page 65. This section should indicate that lime stockpiles will be lined, bunded and covered and any runoff captured and treated to ensure no impact from alkaline water on waterways.

Section 4.2.19 Impact mitigation measures for sensitive receiving environments, page 66. This section should separately discuss and propose mitigation measures for OPP habitat with respect to the re-use of construction water, irrigation to land etc. as detailed in the Devils Pulpit SWMP and as discussed in section 4.2.21.

Section 5 Impacts and mitigation in high risk areas, page 74. The list of high risk areas should be expanded to cover all OPP habitat from Section 6 to 9.

Section 5.5 Impacts and mitigation in high risk areas, page 80, and section 5.3 Tabbimoble swamp and Broadwater National Park, page 83. This section should separately discuss and propose mitigation measures for OPP habitat with respect to the re-use of construction water, irrigation to land etc. as detailed in the Devils Pulpit SWMP and as discussed in section 4.2.21.

Section 5.7 Threatened fish, page 88. Measures such as locating concrete batch plants 50 metres away from OPP habitat pose an unacceptable risk. Other related project approvals have concrete batch plants at least 200 metres from any waterway. Devils Pulpit SWMP should be examined to provide a more comprehensive suite of protection measures for OPP. Figures D6 through to D9 sedimentation basins are shown throughout OPP habitat. This strategy should be revised in line with Devils Pulpit SWMP and a commitment given to develop a specific strategy for OPP habitat.

Groundwater working paper

Fisheries NSW notes the lack of data for the Harwood to Woodburn section and Glenugie to Grafton section. The working paper recognises the need for more data to be obtained particularly during geotechnical investigations. This is supported by Fisheries NSW. As Oxleyan Pygmy Perch is found in the Harwood to Woodburn section, this data is important to ensure that any groundwater impacts during and post-construction can be identified and mitigated. Fisheries NSW endorses the commitment made to assess, monitor and develop a mitigation strategy for any impacts on groundwater particularly from Type A cuts. Fisheries NSW notes the comments on Acid Sulfate Soils (ASS) and endorses the proposed monitoring. As widespread fish kills have occurred in the Richmond catchment in part due to ASS, Fisheries NSW recommends inclusion of an Acid Sulfate Soils Management Strategy or similar strategy, primarily aimed at mitigating the potential oxidisation of ASS due to a drop in groundwater levels.

Recommended Conditions of Approval

1. Fisheries NSW should be consulted during the preparation of the Construction Environmental Management Plan which should include;
    - A Soil and Water Management Plan including specific measures to ensure appropriate surface and groundwater quality and levels are maintained in identified Oxleyan Pygmy Perch habitat;
    - A Construction Flora and Fauna Management Plan including a specific Oxleyan Pygmy Perch Management and Monitoring Plan as well as protocols for managing pest species and native fish when dewatering the site; and
    - Erosion and sediment control measures shall be implemented prior to any works commencing, consistent with *Managing Urban Stormwater - Soils and Construction Vols 1 and 2, 4th Edition* (Landcom, 2004) and *Managing Urban Stormwater Soils And Construction Vols 2A and 2DMain Road Construction* (DECC 2008).

2. The Proponent should consult with Fisheries NSW on the design of the bridge crossings and any other watercourse crossings. All crossings should be designed and constructed consistent with the *Guidelines for Controlled Activities Watercourse Crossings* (DWE, 2008) and *Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings* (NSW Fisheries, 2003). Class 1 waterways should be bridged, or at a minimum utilise an arch structure. Class 2 watercourse crossings should be bridged where feasible and reasonable, alternatively both Class 2 and 3 watercourse culvert replacements shall incorporate a naturalised base.

3. The Proponent shall prepare and implement a Surface Water Monitoring Program to monitor the impacts of the project on surface water quality during construction and operation. The Program shall be developed in consultation with Fisheries NSW and shall include but not necessarily be limited to:

    - Identification of surface water quality monitoring locations which is representative of the potential extent of impacts from the project;
    - Identification of works and activities during construction and operation of the project, including emergencies and spill events, that have the potential to impact on surface water quality;

- Background monitoring of surface water quality parameters for twelve months prior to the commencement of construction to establish baseline water conditions;
- Development and presentation of indicators or standards against which any changes to surface water quality will be assessed, having regard to the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000* (ANZECC, 2000);
- Contingency and ameliorative measures in the event that adverse impacts to surface water quality are identified;
- A minimum monitoring period of three years following construction or until the waterways are certified by an independent expert as being rehabilitated to an equal or better condition; and
- Reporting of the monitoring results to Fisheries NSW.

4. Any mangroves, seagrass or saltmarsh harmed by the project should be compensated at a ratio of 2 to 1. A compensation plan should be developed in consultation with Fisheries NSW.

5. The Proponent shall prepare and implement a Tannin Leachate Management Protocol prior to the commencement of construction to manage the stockpiling of mulch and use of cleared vegetation and mulch filters for erosion and sediment control. The protocol shall be developed in accordance with the RMS Mulch Protocol.

Should you have any queries regarding issues raised by the Fisheries Ecosystems branch of Fisheries NSW, please contact James Sakker, Fisheries Conservation Manager - Pacific Highway Upgrade on 0419 185 378.

Fisheries NSW - Solitary Islands Marine Park

The Solitary Islands Marine Park may be affected by works conducted in Section 1 of the project and the following comments only relate to works proposed for Section 1, in particular those within the catchments of the Corindi River and Arrawarra Creek.

It is pleasing to note that the concerns raised in previous correspondence have been addressed in the current Environmental Impact Statement, particularly through the following commitments:

- Not to place stockpiles (including mulch stockpiles) within 100m of the waterways that flow into the Solitary Islands Marine Park;
- Use of 90% sediment basins in the vicinity of waterways flowing into the Solitary Islands Marine Park and the commitment to consider 100% basins in some circumstances;
- The use of permanent water quality basins to protect waterways from pollution events; and
- The management of vegetation mulch in accordance with the provisions of the *RMS Environmental Direction – Management of Tannins from Vegetation Mulch 2012*.

Should you have any queries regarding comments related to Solitary Islands Marine Park, please contact David Greenhalgh, Project Officer - Marine Assessments, on 6691 0604.

Yours sincerely

Bill Talbot
A/Executive Director Fisheries NSW

Date: 30/1/13