



Office of
Environment
& Heritage

Your reference: SSI-5225
Our reference: SF14/33033
Contact: Rachel Hannan
8837 6088

Ms Lisa Mitchell
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Attention: Belinda Scott

Dear Ms Mitchell

I refer to your letter of 13 October 2014 inviting the Office of Environment and Heritage (OEH) to comment on the proposal for the Nepean River Pump and Pipeline (NRPP), SSI-5225. OEH has reviewed the proposal and provides comments in relation to Aboriginal cultural heritage and biodiversity in Attachment 1.

If you have any queries regarding this matter please contact Rachel Hannan, Conservation Planning Officer, on 8837 6088.

Yours sincerely

S. Harrison 18/11/14

SUSAN HARRISON
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Attachment 1: OEH comments on the Nepean River Pump and Pipeline Environmental Impact Statement

1. Aboriginal Cultural Heritage

OEH has reviewed Section 10 of the Environmental Impact Statement (EIS) relevant to the Nepean River pump and Pipeline project, SSD 5225 and has the following advice for the suitability of this document.

The Director General's Environmental Assessment Requirements (DGEARs) required that the EIS:

"must demonstrate the likely impacts on the project on Aboriginal cultural heritage (including cultural and archaeological significance and consideration of the existing Aboriginal Heritage Impact permit (AHIP) issued on 12/12/2011)".

OEH understands that the AHIP which was issued at this time is the most up to date compilation of Aboriginal cultural heritage values relevant to the Penrith Lakes Scheme which explains why the EIS was required to address the Aboriginal cultural heritage values outlined in this approval. However as the current project is considered state significant development within the meaning of section 89C of the *Environmental Planning and Assessment Act, 1979 (EP&A Act, 1974)*, the recommendations provided within the EIS relevant to Aboriginal cultural Heritage are inappropriate. These recommendations indicate that a variation under section 90d of the *National Parks and Wildlife Act, 1974* to the existing AHIP issued by OEH on 12/12/2011 will be necessary in order to undertake the proposed works. This is incorrect, section 89J (d) of the *Environmental Planning and Assessment Act, 1979* specifies that an Aboriginal Heritage Impact Permit (AHIP) under section 90 of the *NPW Act, 1974* is not required for this project. This means that it is inappropriate for the existing documentation to reference the need to vary an existing approval which was issued in 2011 under section 90 of the *NPW Act, 1974* for the current project approval.

The Assessment was directed by the DGEAR's to address certain elements where impacts to Aboriginal heritage were identified, however the assessment has relied upon previous investigations undertaken from 2005 which provided support for the AHIP which was issued in December 2011. The EIS relies heavily upon this previous assessment including survey with members of the Aboriginal community from 2005 of the subject land. OEH notes that the EIS should ensure that any assessment including site survey is current and directly relevant to the current study area under consideration. The only components of the EIS investigation which appear to have been updated include the searches of relevant heritage registers (Native Title Register, Indigenous Land Use Agreements). However during the previous studies in 2005 and 2011 no archaeological or cultural sites were specifically identified in this area. Consequently in accordance with the DGEARs there is no further requirement for impact assessment for Aboriginal heritage as there are no identified sites (including areas of cultural significance) in the subject land.

In summary, OEH does not support the need to vary the existing AHIP application as outlined in the EIS to include the study area. As no Aboriginal Heritage values have been identified during this assessment, no further consideration of Aboriginal cultural heritage will be necessary at this point in time. However OEH notes that should the Penrith Lakes Scheme require any additional approval in future, the assessment process should rely on up to date survey, site data and cultural investigation in order to support the determination of whether Aboriginal cultural heritage values will be affected by the proposed project.

2. Biodiversity

The flora and fauna impact assessments conclude that the proposed NRPP project is unlikely to result in a significant impact to threatened species, populations and ecological communities. However, a number of limitations must be noted:

- The previous flora and fauna impact assessment (Biosis Research 2006) did not include assessment of the proposal in its current form. It assessed a number of route options for the pipeline and no options for the associated powerline. The Assessments of Significance consisted of the now superseded Eight Part Tests.
- The current flora and fauna impact assessment (PLDC 2014) is largely a copy-and-paste of the previous Biosis Research however does include more recent site visits on 4 December 2012 and 8 April 2014. The current report still discusses the previous pipeline options and clearing areas, even in the transformed Seven Part Tests (although the total area of RFEF to be cleared has been increased within the Seven Part Test). The current proposed powerline route was not assessed. Updated database searches were undertaken however only included a small search area (and did not include the usual 10 km search buffer to detect more mobile species).

The OEH has reviewed the information provided with respect to the (ecological) DGRs, and has undertaken a new search of the Atlas of NSW Wildlife, and recommends the following actions be undertaken:

- Field survey of the proposed powerline route by a qualified botanist/ecologist to determine the vegetation type and whether or not it constitutes a threatened ecological community.
- Update the Seven Part Test for River-flat Eucalypt Forest (RFEF) to accurately reflect the current proposal. As RFEF is listed as having a high probability of being a Groundwater Dependent Ecosystem (NOW 2012), it is recommended that the updated Seven Part Test discuss any potential impacts to groundwater (e.g. temporary interception during construction of trenches).
- Field survey of the subject site by a qualified zoologist/ecologist for potential Osprey nests and Diamond Firetails. Note: the Osprey was recorded only 650 m upstream of the proposed intake structure, this year.
- Preparation of Seven Part Tests for the Osprey and Diamond Firetail. Consideration of further species as required following survey of habitat within the proposed powerline corridor.
- Discussion on requirement, or otherwise, for specific biodiversity offsets (e.g. for RFEF). This discussion is to consider whether offsets are required in addition to the ecological habitat created by the Penrith Lakes Scheme and proposed mitigation measures to rehabilitate cleared areas.

Further comments on these matters is provided below.

Threatened Ecological Communities:

A thin degraded strip of River-flat Eucalypt Forest (RFEF) dominated by *Casuarina cunninghamiana* ssp. *cunninghamiana* is located on the eastern bank of the Nepean River, where the proposed pump station, motor control centre and transformer pad would be located (affecting approximately 0.23 ha). RFEF is an endangered ecological community (EEC) listed under Schedule 3 of the TSC Act.

Appendix F of the EIS includes a 'Seven Part Test' for the RFEF and concludes no significant impact however is mostly a copy-and-paste of the Biosis Research (2006) 'Eight Part Test'. It appears the EEC has not been adequately considered against the Seven Part Test questions as the text still refers to a 10 m wide disturbance area and the various options being considered at the time of the Biosis Research assessment, and not the current proposal.

OEH's Cumberland Plain and SCIVL vegetation mapping, and the NPWS (2003) mapping referred to by Biosis Research, don't map the patch of vegetation occurring within the proposed powerline corridor (700 m x 20 m; 1.4 ha). It appears this area of vegetation has not been ground-truthed as it wasn't part of the scope of works for Biosis Research and the current surveys by PLDC covered a different route. It is therefore unknown if this vegetation also constitutes an EEC.

It is recommended that a qualified botanist/ecologist survey the proposed powerline route to determine the vegetation type and whether or not it constitutes an EEC, and that the RFEF Seven Part Test be updated to more accurately reflect the current proposal. RFEF is listed as having a high probability of being a Groundwater Dependent Ecosystem (NOW 2012) and it is recommended that the updated Seven Part Test discuss any potential impacts to groundwater (e.g. temporary interception during construction of trenches).

Threatened (terrestrial) fauna species:

Biosis Research (2006) described the principal fauna habitat within and surrounding the site as river and riparian vegetation, man-made dams and shrubby understorey with scattered trees. The man-made dams referred to those within the Penrith Lake Scheme further north of the current subject site because at the time, some of the options being considered traversed this area. Man-made dams are not relevant to the current proposal (although one will be constructed at the pipeline discharge point in the future).

Biosis Research (2006) considered that potential habitat was present for the Green and Golden Bell Frog, Australian Painted Snipe, Freckled Duck and Southern Myotis. The PLDC updated the database searches and found new records and identified potential habitat for the Square-tailed Kite and Grey-headed Flying-fox (Biosis Research had considered these species but didn't consider potential habitat to occur).

A search of the OEH Atlas of NSW Wildlife (using a 10 km search buffer) identified threatened fauna species that had not been considered by either Biosis Research (e.g. due to new listings and/or records since 2005) or PLDC (e.g. due to limited search area). Two species are considered to have a low-moderate (Diamond Firetail) or moderate (Eastern Osprey) likelihood of occurrence. It is recommended that a qualified zoologist/ecologist survey the subject site for potential Osprey nests and Diamond Firetails. Following survey, a Seven Part Test should be prepared for both species.

Figure 9.2 of the EIS shows "Endangered species" as red dots. The Green and Golden Bell Frog is Endangered (TSC Act; Vulnerable under EPBC Act), the Freckled Duck is Vulnerable (TSC Act) and the other species are protected but not threatened.

Director-General Requirements:

The table below comments on the DGRs relevant to terrestrial ecology only. Note: "terrestrial" is taken to mean species listed on the TSC Act as opposed to the FM Act, but such species may still have aquatic habitat requirements (e.g. frogs and waterbirds).

Terrestrial ecology DGRs	OEH comment
A flora and fauna impact assessment taking into consideration impacts on any threatened species, populations, ecological communities, groundwater dependent ecosystems and/or critical habitat and any relevant recovery plan;	<ul style="list-style-type: none"> The PLDC prepared a flora and fauna impact assessment (2014) however it is largely a copy-and-paste of the 2006 Biosis Research report. The Biosis Research (2006) report assessed various pipeline options but no powerline options. The PLDC report assessed a different powerline route to that currently proposed. The vegetation type within the currently proposed powerline route needs to be determined. A more adequate 7PT is required for RFEF including a discussion of any potential groundwater impacts. The OEH has identified two additional fauna species that require survey and assessment (Eastern Osprey and Diamond Firetail).
Impacts on the biodiversity values of the site and adjoining areas, including terrestrial, riparian and aquatic habitats;	<ul style="list-style-type: none"> Biodiversity values in terms of habitat and connectivity were documented via field surveys (2005, 2012 & 2014). However, survey of the powerline route is required, as is survey for Osprey nests and Diamond Firetails. Impacts on biodiversity values have been assessed within the flora and fauna reports however this requires updating following the above surveys.
Details of terrestrial weed and pest species and proposed methods to control their spread;	<ul style="list-style-type: none"> Species lists which include weeds and pests have been provided as well as proposed methods to control their spread.
Details of available offset measures to compensate the biodiversity impacts of the proposal, if necessary.	<ul style="list-style-type: none"> Section 19.3.3 of the EIS states that cumulative ecological impact occurring during construction of both the pump and pipeline development and the PLS would be offset in the long-term with the creation of high

Terrestrial ecology DGRs	OEH comment
Where offset measures are proposed these should be consistent with the <i>Principles for the use of biodiversity offsets in NSW</i> .	<p>quality ecological habitat as part of the PLS. Also, Section 13.5.1 of the EIS states that rehabilitation of cleared areas (excluding operational easements) would be undertaken using indigenous species consistent with existing ecological communities.</p> <ul style="list-style-type: none"> • Following the recommended survey of the proposed powerline easement, the issue of biodiversity offsets should be revisited (i.e. if more EEC is identified that would be impacted).
Taking into account the <i>Threatened Species Assessment Guidelines</i> (DEC, 2007), <i>Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna - Amphibians</i> (DECCW, 2009), and any Environmentally Sensitive Area Mapping in the Hawkesbury-Nepean Catchment Management Authority <i>Catchment Action Plan 2007-2016</i> or held by Council.	<ul style="list-style-type: none"> • The updated flora and fauna assessment by PLDC (2014) does include Seven Part Tests in accordance with the DEC 2007 guidelines however a further update and additions (see above) are recommended. • No targeted amphibian surveys were undertaken in accordance with the DECCW 2009 guidelines as no amphibian surveys were considered necessary. • No environmentally sensitive area mapping is discussed in the flora and fauna assessment. The EIS (Section 6.4.2) states that environmentally sensitive areas include the river and riparian lands (which have been assessed). Table 8 of the EIS states that the development site does not support any areas indicated on Council's "Natural Resources Sensitive Land Map".

AECOM (2014). *Nepean River Pump and Pipeline – Environmental Impact Statement*. Prepared for Penrith Lakes Development Corporation.

Beitzel M., Charlton J. & Wilkins S (2006). *Penrith Lakes Nepean Pump and Pipeline: Terrestrial and Aquatic Flora and Fauna Impact Assessment*. Biosis Research Pty Ltd.

NOW (2012). *Risk assessment guidelines for groundwater dependant ecosystems*. NSW Office of Water, Sydney.

PLDC (2014). *Penrith Lakes Nepean Pump and Pipeline: Terrestrial and Aquatic Flora and Fauna Impact Assessment*. Penrith Lakes Development Corporation.

