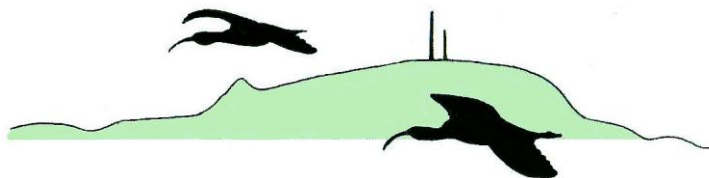


ORANGE FIELD NATURALIST

& CONSERVATION SOCIETY INC.

PO Box 369, ORANGE NSW 2800



To Belinda Scott

belinda.scott@planning.nsw.gov.au

OFNCS & Orange Drought Relief Connection ie Macquarie Pipeline

The Orange Field Naturalist and Conservation Society Inc. (OFNCS) is opposed to the Macquarie River to Orange Pipeline Project - Orange Drought Relief Connection (hereafter referred to as the Macquarie Pipeline). The main justification for the Society's objection lies in the following:

1. The survey methodology used to produce the Environmental Assessment (EA) is considered inadequate in certain ways
2. There is considerable uncertainty surrounding the route and off-take point, which is contrary to the Director-General's requirements
3. There is inadequate consideration of long term, regional alternatives to the pipeline.
4. The damage to the environment, particularly threatened species such as Superb Parrot and Ecologically Endangered Communities, is considered unacceptable and there is inadequate detail relating to suitable offsets.
5. Lack of detail in the planning for prevention of mortality to fauna during pipeline construction means that assessment of the project is not possible.

The justification for this position is provided below.

OFNCS was established in 1975, incorporated in 1993 and has about 100 individual and family members. Through its membership the Society has considerable professional expertise in natural history and knowledge of the flora and fauna of the study area delineated in the Environmental Assessment.

Members of the Society have been involved with the process of preparing this submission by attending meetings such as those held by Orange City Council,

ECCO, the Orange Regional Water Security Alliance, the NSW Office of Water Rural Landholder Sub-Committee and the Consultative Committee.

1. Survey methodology

1.1 Aquatic ecology

The survey methods were not adequate to detect all the rare species known by local people to be present, nor to be used in the review process. It was even stated in the report that *“The survey undertaken was not intended to serve as a baseline for impact assessment.”*

Furthermore, much of the river (> 27 km) had no in-depth habitat assessment carried out. Critical habitat of the threatened species had not been adequately addressed.

The other main gap in the assessment by Cardno (2012) was that although an assessment of significance for the EPBC Act was completed for two species trout cod and silver perch, no assessment of significance for the Fisheries Management Act was undertaken. This assessment requires a 7 part test as described under the Threatened Species Conservation Act.

1.2 Terrestrial Ecology

Although the consultants' report in relation to terrestrial ecology (Biosis report Appendix F), has a much more comprehensive survey methodology than for aquatic ecology, there are still some problems that we would argue have led to a failure to detect rare species. There are also species that we consider should have been subject to species impact assessment.

Small mammals

The number of Elliott trapping sites does not appear to follow the guidelines which the consultants purport to have followed viz: Draft Guidelines For Threatened Species Assessment, DEC & DPI, 2005. According to this report *“Where developments occur over a large area the sampling regime must encompass the geographic extent of the development and sample the full range of environments that occur.”* However, the number of sites (3) does not equate to the 'range of environments' along this 37 km route. The consultants found six BVT (Broad Vegetation Types), plus many minor communities. Logically, one would have thought that stratification using these six BVTs would have been a minimum standard.

Birds

This project has been identified as a Controlled Action and subject to

Commonwealth approval. One might assume therefore, that the survey design would follow Commonwealth guidelines for detecting threatened species viz: *Australian Government, Department of the Environment, Water, Heritage and the Arts, Survey guidelines for Australia's threatened birds: Guidelines for detecting birds listed as threatened under the EPBC Act.*

However, the survey effort is much smaller than that recommended. For example the survey effort required for detecting Swift Parrot is deemed to be 20 hours over 8 days – whereas in this case only six hours of diurnal bird survey altogether were undertaken.

An indication of the lack of survey effort with birds is that the surveyors failed to detect the migratory Australian reed-warbler *Acrocephalus australis* in spite of this being very common in summer along the pipe route where it crosses streams with reedy banks. Other federally-listed migratory species known in the study area include rainbow bee-eater *Merops ornatus*, Satin Flycatcher *Myiagra cyanoleuca* and Latham's Snipe *Gallinago hardwickii*, (CKinross pers. comm.) It is to be hoped that the biodiversity offset plan is not predicated on the one and only migratory species recorded, the rufous fantail (see p12.23), as this bird is very rarely recorded in this area as there is little suitable habitat.

In respect of flora, the vegetation appears to have been well described. However, we are concerned that two species have not been highlighted: *Eucalyptus robertsonii* subsp. *hemisphaerica* – Robertson's Peppermint . This listed species has potential to occur in the area and is listed as 'vulnerable' under the EPBC Act. App F App 3 does refer to this species, but the likelihood of occurrence is listed as 'low' whereas we consider the likelihood moderate to high.

The other is *Acacia meiantha*. This species is not listed under the TSC or EPBC Acts, but it is known to occur close to the pipeline route in the Mullion Ranges and is classed as a Threatened species: ROTAP: 2RCi (Royal Botanic Gardens 2002).

Expert Advice

° The people providing 'expert advice' on the flora and fauna for this study area may well be worthy scientists, but none of them is local (two were from Bathurst one from Coonabarabran). Several of our members are highly qualified ecological and botanical scientists and have good local knowledge, one indeed living right on the route, but were not consulted.

2 Uncertainty surrounding the route

The route needs to be clearly identified before any approvals can be granted. This is a requirement of the Director General that has not been adhered to. The route has

changed several times and we have direct evidence of this as one of our members is an affected landowner. She had offered OCC a route through a treeless part of the property adjacent to the Ophir Road. This offer was initially accepted, but after the EA process had been finalised, it was switched back to the roadside itself, which may have more severe consequences for mature roadside vegetation.

Worse still, the off-take point described in the EA is now under review. In fact, according to the affected landowners, and related correspondence, OCC has five different options under consideration. This alone puts a cloud over the recommendations of the EA, particularly the aquatic environment review and will require new assessments to be undertaken for each option.

3 Consideration of alternatives

The alternatives (including a 'do-nothing' approach) have not been adequately considered. The 'do-nothing' approach has not been fairly considered as the project has been based on an artificially high water demand of an 'unrestricted' daily water use of 404 litres/person/day, which Orange has not provided for many years, nor is it deemed necessary in a town with such restricted water options. Other towns appear to manage on much lower demands eg Goulburn 337 L/p/d and Canberra 302 L/p/d.

The multi-criteria analysis used in the EA process is, to our mind, flawed, as flora, fauna, and their habitat have been inadequately weighted in the process. Table 10 in Appendix B provides the criteria used to select the preferred alternative. There are three groups identified: Environment (6 criteria), Social (7 criteria) and Governance (6 criteria). Within the 'environment group' one address the infrastructure footprint, one water quality, one efficient use of water resources, one carbon footprint, and one resilience to climate change. The actual physical impact on aquatic and terrestrial flora and fauna is bundled with heritage and land use (eg farming) in the first criterion. This is clearly untenable. To present a more balanced picture, this first criterion should be split into more precise sections, each equally weighted, such as 1) aquatic environment 2) terrestrial environment 3) threatened species 4) EECs 5) ecological processes 6) Aboriginal heritage 7) cultural heritage 8) climate change 9) water quality 10) carbon footprint. Land use, water efficiency etc. should be moved to a different section.

Other water sources, including that of Burrendong Dam, would come up higher in the analysis if the following factors were taken into consideration: water coming from a dam would be more efficiently pumped (only used when needed; less spill), much of the pipeline could be above ground in cleared areas along the railway line (save on cost and vegetation clearing).

4 Unacceptable damage to the environment (terrestrial) It

should be noted that, whilst the society is focusing its comments on the terrestrial environment, but fully supports the submission by the Orange and Region Water Security Alliance, which critiques the aspects of the EA relating to the aquatic environment and threatened species.

4.1 Ecologically Endangered Communities (EECs)

In the Executive Summary of the EA, it is stated that: *Assessments of significance completed for Box Gum Woodland conclude that the project is likely to impose a significant effect on this community.*

This Society views the loss of 7.8 ha of EEC and threatened species habitat as an unacceptable price to pay for this pipeline. The 5.8 ha listed under the EPBC Act is listed as critical habitat. Retention of this (and the other non-threatened) woodland is important not only as it provides habitat for a wide diversity of flora and fauna (including other threatened species such as diamond firetail and brown tree-creeper), but also helps to improve productivity (shade, shelter etc.) for agricultural areas. It also provides important ecosystem services such as pest control (providing habitat for sugar gliders that consume Christmas beetles, for example). Other benefits include: acting as reserves for native plant seeds, tourism (particularly for bird-watching groups) and benefits for the health of the soil (NSW NPWS nd).

There is a curious anomaly in the BIOSIS report that states: *The project would directly impact up to 0.37% of the estimated extent of EPBC Act-listed box gum woodland in the locality.* It is not made clear, however, what 'the locality' means. Does it refer to the study area? This should have been clarified, so the actual proportion can be judged as to whether it is a 'significant area' of the community in relation to the eight-part test (c) 'in relation to the regional distribution of the habitat of a threatened...ecological community, whether a significant areais to be modified or removed'.

4.2 Threatened Species (terrestrial)

The Executive Summary states that: *the project has the potential to result in a significant impact on one threatened fauna species, the Superb Parrot.*

The society supports this view. We would also argue that some of the other threatened species that were found along the pipeline route could also be affected, but were not considered for Part 3A Assessments. These include: varied sittella, speckled warbler, hooded robin, and flame robin (none observed, but assumed to be present) as the 'habitat to be removed is not considered limiting for this species'.

Firstly, we would argue that should the surveys have been more comprehensive, more threatened species would have been observed. It is pleasing that, at least, these species were 'assumed to be present'.

In respect of limiting habitat, however, we are confident that habitat to be removed *is very likely* to be limiting for at least some of these species, particularly hooded robin. Indeed in many cases, the habitat of concern is the only ribbon of suitable vegetation in the area for these species. One only has to look at the photos in the Biosis Report (Appendix F) for evidence of that.

It is acknowledged that the project designers have tried to minimise the impact of vegetation loss; however, in many places it has been admitted that this is just not possible. Furthermore, the idea that species can simply relocate to 'contiguous' habitat is flawed. Even if the habitat is suitable, which in this case it frequently is not, there is competition in the adjacent habitat preventing easy dispersion. If one looks at the actual Part 3A assessments, one can see where the consultants have gone wrong. They have assumed that, because there are two large reserves in the area: Mullion Conservation Area and Girralang Nature Reserve, that there is suitable habitat for these open woodland species. But most of these species prefer more open areas ie those areas now generally occupied by agricultural areas and are unlikely to find suitable habitat within the reserves. That is one of the main reasons why they are rare and why projects like this will make them rarer.

4.3 Loss of hollow-bearing trees: Key threatening processes

The proposal will result in a loss of permanent fauna habitat, mature trees with hollows, perhaps up to 250. The EA recognises that loss of hollows is a KTP (Key Threatening Process) under Schedule 3 of the TSC act (NSW Scientific Committee 2007), so an accurate picture is obviously needed of the precise number of hollow-bearing trees to be lost before an assessment of significance can be made.

Perhaps more important, the route has altered since this calculation, so even if the prediction was clear, it can no longer be considered accurate.

It should also be noted that, as no tree with a potential height greater than 5m can be planted in the easement, which may be as much as 20 m wide, this follows that there will be a permanent loss of hollows along the easement.

4.4 Biodiversity Offset strategies

The EA proposes to offset the 'unavoidable residual impacts' of the project through biodiversity offsets, including the possibility of biobanking. The guidelines for these, which would be prepared in consultation with state and federal authorities, are quite comprehensive. However, broad guidelines are not sufficient for the public

to comment on ie they lack precision as to how well they will actually 'maintain or improve biodiversity values' as promised.

We argue that this objective will be virtually impossible to achieve for the following reason: it will be very difficult to find an appropriate offset for this as this community occurs only on the lower, more fertile parts of the landscape, most of which has been converted to agriculture. Many of these trees are very old, probably dating even before European settlement. The time needed to create a tree community where 50 % of the trees contain hollows is very long – 70 years for small hollows and over 220 for large hollows (NSW Environment and Heritage). So any offsets will not 'maintain or improve the biodiversity values' in our lifetime if at all.

5 Injury to fauna during pipeline construction

The parts of the EA that consider risk to fauna during and after construction of the pipeline lack sufficient detail for comment. For example, the EA (S7.2.2 Pipeline Construction) provides a sentence regarding the minimisation of risk to animal life of falling in an uncovered trench by backfilling and/or fencing off at the end of the day. This sentence does not provide sufficient detail for a critique to be made in respect of risk of injury or death of by-catch. There are many species that are likely to fall in the trench, for which a normal stock fence would not be adequate. For example, it has been shown that many frogs and reptiles get caught in pipeline trenches (Doody et al 2003). It is essential, therefore, that the trench is inspected each morning by a qualified wildlife ecologist, who can not only identify and record the species caught, but also relocate the animal or organise for its care if injured.

The cost of veterinary treatment and care should be met by the proponent. The EA makes the assumption that ongoing care of an injured animal can be provided by WIRES. However, there needs to be an awareness that reliance on volunteer support, such as that provided by WIRES (Wildlife, Information and Rescue Service) is not acceptable. This service is already stretched to the limit and the members pay for almost all their own animal housing, medicine and feed themselves.

It should be noted that the NSW Office of Water Rural Landholder Sub Forum has prepared a draft wildlife protocol for this purpose. It is acknowledged that this was not available at the time of the preparation of the EA, but the final document should be implemented should be project be approved.

This protocol provides a series of activities and conditions for managing and reducing risks to native fauna through appropriate mitigation strategies. It was prepared in alignment with the Code of Environmental Practice: Onshore Pipelines (The Australian Pipeline Industry 2009) and other scientific papers, particularly

Doody et al (2003). It provides a code of practice for the following and it is highly recommended that it should be used in the development of the Environment Management Plan:

1. Pre-construction activities along the pipeline route
2. Construction stages of the Macquarie River Water Pipeline
3. Post construction / project rehabilitation and monitoring along the pipeline route.

It should be noted that a further one is planned for management or livestock.

Conclusion

The EA states that: *The main potential impacts of the project on terrestrial ecology would occur during the construction phase as a result of the clearing of vegetation and direct habitat loss and modification. Direct impacts have been avoided to a large extent by careful alignment of the project corridor (as described in chapter 8). This has included, where possible, making use of existing road reserves and cleared land, avoiding large stands of vegetation, and the use of existing access tracks during construction and operation. Avoidance of the requirement to clear native vegetation as far as possible has significantly reduced the potential for adverse impacts of the project on biodiversity values.*

Our Society disagrees with this statement. Careful alignment of the project corridor may have been the aim, but it is no longer the reality and there is no certainty even now of the project's precise locality. Making use of existing road reserves only avoids environmental damage if the pipeline goes right under the road (as is clearly envisaged by the BIOSIS report), but again is clearly not going to happen.

For this reason and those explained above, our Society objects to this proposal. It suggests the government should put forward a regional strategy for long-term water use based on the sustainable use of dam or ground water and avoids short-term solutions which would lead to unsustainable use of river water and loss of critically endangered habitat.

Recommendations

Preferably, the project should be abandoned in favour of a long-term, regional solution, such as that afforded by Burrendong Dam.

Failing that, the society recommends that:

- Prior to approval, the EA should provide evidence of how, in terms of federally-threatened species, it meets the survey protocols recommended by DoSEWPaC.
- The pipeline should be routed to ensure that no EECs are destroyed, using the centre of the road or cleared land as necessary.
- Any biodiversity offsets should be made available for public scrutiny prior to approval.
- The EA should ensure that species impact statements are provided for all listed species found or predicted to be impacted by the project.
- A much more thorough evaluation of alternatives is undertaken, with consideration of utilising an above-ground pipeline to Burrendong Dam
- The following document is used to prepare Environmental Management Plans: *Protocol For Fauna Protection On The Macquarie River Pipeline To Suma Park Dam, Orange NSW*. For further information on this document, please contact the chair: Graeme Egglestone: geg88281@bigpond.net.au



John Austin

President

Date: 15th October

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