



12 October 2012

Director
NSW Department of Planning and Infrastructure
GPO Box 39
Sydney NSW 2001

Ref Number 10_0235

Dear Director

Re: Objection to the proposed Macquarie River to Orange Pipeline / Orange Drought Relief Connection, following exhibition of the Environmental Assessment on the Department of Planning website during September & October 2012.

Submission 2 – Failure of the project proponent to undertake an adequate assessment of Terrestrial Ecology

I am writing to directly object to the proposed Macquarie River Water Pipeline from the Macquarie River to Orange, and to highlight substantial inadequacies in the projects Environmental Assessment, in particular, the assessment of the projects impacts on Terrestrial Ecology.

As a resident of Orange, I appreciate being invited to comment on the project, but I have such serious concerns about the Environmental Assessment conducted by the project proponent that I cannot support the project going ahead in its current alignment. In my judgement, the proponents assessment of terrestrial fauna is highly inadequate and is of an extremely poor standard, and inappropriate for a project of this nature.

Furthermore, it is my judgment that this project will have an unacceptable level of adverse impact on threatened flora and fauna, including many species listed as threatened under the NSW Threatened Species Conservation Act (TSC 1995) and Commonwealth Environment Protection and Biodiversity Conservation Act (EPBC 1999) despite the Environmental Assessment claiming impacts will be minimal. In particular, I am very concerned that this project will result in “Permanent removal of native vegetation and fauna habitat during construction, including removal of Box Gum Woodland threatened ecological community and habitats for threatened species”.

After reviewing the Environmental Assessment, I have concerns about the adequacy of the assessment regarding terrestrial fauna, and I have concerns regarding the route of the proposed pipeline and impacts on terrestrial fauna (in the current alignment), as follows:

1. **The exact route to the Macquarie River has not yet been fully determined.**
Therefore the Environmental Assessment has been developed and presented to

the NSW Government and Commonwealth Government prematurely. It is therefore unable to identify the full range of impacts of the project on Terrestrial Fauna and should be withdrawn from the Department of Planning until such time as a route is determined and an Environmental Assessment (including Terrestrial Fauna) is conducted on that route. Alternatively, the project proponent should conduct and present a series of Environmental Assessments on all proposed route options to the Macquarie River for consideration by the Dept of Planning and Infrastructure.

2. **Current proposed route will permanently damage threatened ecological communities (TEC).** The project area encompasses at least 74 hectares where terrestrial fauna could be adversely affected. The proponent states that 3 Threatened Ecological Communities (listed under NSW and Commonwealth legislation) in the study area would be adversely impacted on (ie, Blakely's Red Gum, Yellow Box Woodland, Shrubby White Box), with permanent loss of 7.77 hectares of TEC, disturbance of 12.8 hectares of TEC, and modification/disturbance of 2.26 hectares of TEC. **This is unacceptable and an alternative route must be selected if this project is to be approved.**
3. **Threatened Species at serious risk.** The proponent states that at least 31 threatened and 7 migratory fauna species will be adversely impacted by the project, and the proponent has not undertaken a rigorous Survey and Assessment process so this figure is expected to be a very conservative estimate. This is unacceptable in this current day, where we have a clear mandate to protect threatened species and mitigate all actions that place habitats at risk. An alternative route is required to prevent these impacts from occurring.
4. **Native Vegetation clearing is excessive.** The proponent states that the current route will cause clearing of native vegetation and direct habitat loss and modification. This includes 19.5 hectares of native vegetation. This is unacceptable. **The project proponent must identify an alternative route to prevent these impacts from occurring.** If an alternative route cannot be identified that prevents this clearing of native vegetation, then this project SHOULD NOT BE APPROVED by NSW Government. Offsetting via tree planting does not constitute habitat replacement and should not be used to legitimise excessive clearing of native vegetation.
5. **NSW Government Guidelines for Threatened Species assessments ignored.** The proponent has failed to adequately adopt the recommended guiding principles of the NSW Government Guidelines for Threatened Species Assessments 2005 (DEC and DPI), namely: "protect areas of high conservation value" and "prevent the extinction of threatened species". The proponent has developed a project proposal that will adversely affect high conservation ecosystems, and contribute to further decline of threatened species and essential habitat for threatened species, including Superb Parrots. The proponent MUST NOT be given approval for the project in its current form whereby the project will impact heavily on threatened species. The project proponent MUST ensure there are no impacts to threatened species in this project, and MUST be held accountable if this is not implemented (if approved). **The Proponent must prepare and submit a modified application where impacts are totally reduced, and prepare Species Impacts**

Statements (SIS) for the Director-General of National Parks and Wildlife and NSW Minister for the Environment.

6. **The Project Proponent has failed to implement the NSW Government 9-Step process for Threatened Biodiversity Survey and Assessment – Guidelines for Developments and Activities (Nov 2004) DEC.** The proponent has failed to adequately implement the 9-step process as part of the Survey and Assessment requirements of NSW Governments Assessment of Significance – In particular, Steps 1, 3, 4, 5 and 6 including stages of ‘Assessment’, ‘Field surveys’, ‘Evaluation of impacts’, and ‘Avoidance/offset’ (**See Appendix 1 – Summary of inadequacies**). Therefore, the proponent has failed to accurately assess the impacts of the project on Terrestrial Fauna. **Proponent to withdraw original application, implement NSW based survey guidelines for threatened biodiversity, and resubmit an Environmental Assessment to NSW Department of Planning and Infrastructure, and NSW Minister for the Environment.**
7. **Terrestrial Fauna Assessment inadequate.** The proponent has implemented a highly inadequate terrestrial fauna assessment process leading to gross underestimate of the native fauna species impacts, very limited capacity to detect threatened species throughout the project area, and very limited capacity to implement measures to prevent impacts if the project were to proceed. **The proponent must to withdraw their original application, implement NSW based survey guidelines for threatened biodiversity, and resubmit an Environmental Assessment to NSW Department of Planning and Infrastructure, and NSW Minister for the Environment**
8. **Matters of National Environmental Significance impacted.** The project is considered likely to result in a significant impact to one or more Matters of National Environmental Significance (MNES), and the project was declared a Controlled Action under the EPBC Act on 22 December 2011 by Commonwealth Environment Minister. The project causes unacceptable significant impacts on State and Nationally listed Threatened Species and Ecological Communities, and Migratory Species, and the project proponent has not adequately adopted the Commonwealth Guidelines - Survey Guidelines for Nationally Threatened Species therefore is unable to accurately assess the full extent of the projects impacts on nationally declared threatened fauna species. (**See Appendix 2 – Summary of inadequacies**). **Proponent to withdraw original application, and must realign the project easement to completely eliminate adverse impacts on these Matters of National Environmental Significance.**
9. **Threatened Native Fauna at unacceptable risk** - The proponent estimates that 31 threatened and 7 migratory fauna species will be adversely impacted on by the project – and 22 species require further assessment of impacts due to potential for loss of breeding and foraging habitat, namely Booroolong Frog, Brown Treecreeper, Diamond Firetail, Regent Honeyeater, Scarlet Robin, Little Lorikeet, Swift Parrot, Turquoise Parrot, Superb Parrot, Barking Owl, Powerful Owl, Spotted-tailed Quoll, Yellow-bellied Sheathail Bat, Koala, Grey-headed Flying-fox, Eastern False Pipistrelle, Large-eared Pied Bat, Eastern Bent-wing-bat, Southern Myotis, Greater Long-eared Bat, Little Whip Snake and Pink-tailed Worm-lizard. **The proponent must withdraw original application, and must realign the project easement to completely eliminate adverse impacts on these**

Threatened Species. Separate Species Impacts Statements (SIS) must be undertaken to demonstrate that the project WILL NOT adversely impact on these species.

- 10. Nationally listed threatened species under serious threat.** Four endangered EPBC-listed fauna species have potential habitat within the study area: Booroolong Frog, Regent Honeyeater, Swift Parrot and Spotted-tailed Quoll. Each of these species has either breeding or foraging resources within the study area which may be impacted by the project. Seven vulnerable EPBC Act-listed fauna species have potential habitat within the study area: Grey-headed Flying-fox, Superb Parrot, Australian Painted Snipe, Large-eared Pied Bat, Greater Long-eared Bat, Koala and Pink-tailed Worm-lizard. One vulnerable species, Superb Parrot, is considered likely to be subject to a significant impact through the loss and/or direct disturbance of many potential breeding hollows and 51.09 ha of important foraging habitat for an important population of this species.

Proponent must withdraw original application, and must realign the project easement to completely eliminate adverse impacts on these Threatened Species and the Habitats they require. Separate Species Impacts Statements (SIS) must be undertaken to demonstrate that the project WILL NOT adversely impacts these species.

- 11. Lack of sufficient fauna protection capacity and failure to follow Australian Pipeline Industry Association Code of Environmental Practices (Onshore Pipelines) regarding native fauna (March 2009).** The proponent has failed to demonstrate they have the capacity to implement suitable fauna mitigation methods before, during and after project construction evidenced by lack of a Fauna Management Plan, lack of adoption of the Australian Pipeline Industry Association Code of Environmental Practices (Onshore Pipelines) (March 2009), lack of awareness of the issue involved with fauna entrapment in pipeline trenches, lack of information presented about managing livestock and native fauna simultaneously on traversed properties, lack of dedicated fauna surveying methods, absence of a native fauna surveillance system, and substandard fauna surveys as part of this Assessment. **Project proponent must submit a full Fauna Management Plan consistent with the Australian Pipeline Industry Association Code of Environmental Practices (Onshore Pipelines) (March 2009) before this Application is considered further. With adverse impacts expected to at least 31 Threatened Species countless non-threatened native animals, the proponent MUST develop suitable management plans (by suitably qualified expertise) prior to project approval.**

- 12. Lack of detail regarding where the project easement would be narrowed to retain biodiversity.** The proponent states that they will narrow the project easement to retain biodiversity values, but fails to directly indicate where this will occur therefore the Dept of Planning cannot know whether the proponent has the capacity to fulfil this commitment. **Project proponent must clarify exactly where the project easement will be narrowed for biodiversity retention – and supply that information to NSW Dept of Planning and Infrastructure prior to approval.**

- 13. Proponent fails to clarify how fauna will be safely rescued during clearing of native vegetation.** The proponent has stated that fauna will be rescued during

tree felling, however they have not proposed a method in which this can be done safely for fauna or people involved. Without knowing how this would be possible, the Dept of Planning cannot know whether the proponent has the capacity to fulfill this commitment. A more realistic method of trapping prior to land clearing, however this has not been detailed either. **Project proponent must clarify exactly how this will take place – and supply that information to NSW Dept of Planning and Infrastructure prior to approval.**

14. **No commitment to Biodiversity Offset Strategies presented.** The proponent has failed to demonstrate a commitment to proposed Biodiversity Offset Strategies (as a condition of Part 3A projects under EP&A Act), how they would be implemented and where that would take place. The proponent claims that existing Council land will be considered as an offset, however fails to detail where that land resides, how much land this will be, and what actions it will take to ensure it is protected and managed appropriately into the future. If the land cleared is a Threatened Community, then the land dedicated to biodiversity offsetting must be of high conservation value. If this is the case, it should already be protected under the Orange Local Environment Plans 2012. Therefore the proposal does not constitute a genuine biodiversity offset. Pursuant with the Director-Generals requirements for offset strategies to be used, such as Biodiversity Offset Strategy to the satisfaction of SEWPaC, Dept of Planning and Infrastructure, and the NSW Office of Environment and Heritage - **The project proponent must submit a full and detailed Biodiversity Offset Strategy to relevant approving agencies prior to Dept of Planning approval.**
15. **Absence of a Rehabilitation Plan.** The proponent states that areas disturbed will be reinstated with the rehabilitation plan, but does not describe how this would occur, or provide an adequate professional rehabilitation plan. Approval should not be granted to this project without a rehabilitation plan. The Dept of Planning cannot be sure the proponent has the capacity and commitment to adequate rehabilitation unless this plan is presented. **Project proponent must clarify exactly how this will take place – and supply a detailed Rehabilitation Plan to the NSW Dept of Planning and Infrastructure for assessment prior to approval.**
16. **Absence of a Monitoring Plan.** The proponent states that monitoring of rehabilitated areas would be undertaken in accordance with the requirements of the rehabilitation plan. However, there is no such Plan detailed in the documents. **Project proponent must clarify exactly how this will take place – and supply a detailed Monitoring Plan to the NSW Dept of Planning and Infrastructure for assessment prior to approval.**
17. **Absence of Ecological Monitoring framework.** The proponent fails to clarify how 'ecological monitoring' will be undertaken during the project. They indicate that their ecological monitoring will cover rescue of native wildlife during tree felling. This action is actually "fauna rescue" at the project clearing stage. In order to undertake ecological monitoring to reduce risks of the project impacting on native fauna, the proponent must develop a structured survey/surveillance plan across the full easement (37km) that covers all stages (pre-construction, construction and rehabilitation). This will need to include non-invasive survey methodologies for native fauna (such as remote camera surveillance) stratified for habitat types, for at least 10 years post construction. **Project proponent must**

clarify exactly how ecological monitoring will take place – and supply a detailed ‘Fauna Survey and Surveillance Plan’ to the NSW Dept of Planning and Infrastructure for assessment prior to approval.

18. **Proponent has stated they rely on volunteer organisations.** The proponent has stated they would rely on volunteer organizations such as WIRES to assist with wildlife injuries and rehabilitation. As WIRES is a volunteer organization, dependent on donations, and it lacks the resources to be able to handle large volumes of native fauna expected to be injured in the current project. This is a highly unacceptable proposal. **The Proponent must establish and fund a 24-hour veterinary centre & wildlife rehabilitation shelter for injured wildlife on the project, to be located close to the project and near Orange – Proponent to fund the service for the Central West region beyond the term of the project.**
19. **Easement near Macquarie River excessively wide.** The proponent states that the easement will be as wide as 60m in the area close to the off-take point of the Macquarie River. This width is highly unsuitable due to the volume of native vegetation that would have to be cleared in this area, the role that native vegetation plays in soil and hillside stability, and the impact of this large gap on arboreal species requiring connectivity between trees to survive, and the high conservation value of the native vegetation at this location. **Proponent must find an alternative access point to the river, in order to reduce impact on native vegetation, retain slope stability, reduce fragmentation of existing woodland habitat, and reduce risk of landslips. These actions all adversely impact on terrestrial fauna.**
20. **Construction poses serious risks to native fauna.** The proponent has failed to recognize the significant impact that the construction phase can have on native fauna, particularly fencing, vehicle movements and open trenches. The proponent has not adequately stated how they would mitigate impacts to native fauna. **The Proponent must develop and present a Fauna Management Plan (for the entire project detailing pre-construction, construction and post-construction/ rehabilitation activities that will protect native fauna across the project term) to the NSW Dept of Planning prior to project approval**
21. **Absence of Fauna Impact Mitigation information.** The proponent has stated that they have adopted a range of mitigation measures to reduce adverse impacts on terrestrial fauna, but have failed to detail what these measures are. **The Proponent must develop and present a Fauna Management Plan (as above) to the NSW Dept of Planning prior to project approval, detailing where and what mitigation measures will be used.**
22. **No evidence of capacity to mitigate fauna impacts.** The proponent has failed to present evidence they have the capacity to implement suitable fauna impact mitigation strategies evidenced by lack of awareness of species occurring in the project corridor and adjacent environments. **The Proponent must develop and present a Fauna Management Plan (as above) to the NSW Dept of Planning prior to project approval, detailing where and what mitigation measures will be used.**
23. **Superb Parrots adversely impacted on.** The proponent states that the project is expected to have significant adverse impacts on the Superb Parrot (which is a listed threatened species under the NSW TSC Act and Commonwealth EPBC Act).

The Proponent must develop and present a Species Impact Statement and accompanying Superb Parrot Management Plan for the region (in collaboration with agencies such as OEH and Central West CMA) to ensure the project does not adversely impact on Superb Parrots, and that they have capacity to protect this species in the region beyond the term of the project.

24. Community consultation severely lacking. I am also extremely concerned that the proponent has prepared the Environmental Assessment without sufficient consultation with local community groups, landholders, landholder groups, users of the Macquarie River, communities societies such as field naturalists, the general public of Orange and surrounding townships. The proponent has formed a small number of committee's but has failed to make a genuine attempt to engage with the community regarding fauna related issues on this project. This poor standard of community engagement is less than satisfactory.

Thank you for the opportunity to comment on the Environmental Assessment document, and for considering the interests and values of relevant stakeholders in this extremely important issue.

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Appendix 1. Summary of the inadequacies of the Proponent in assessing the impacts of the project on terrestrial ecology against NSW Government Threatened Biodiversity Survey and Assessment – Guidelines for Developments and Activities.

NSW Government Threatened Biodiversity Survey and Assessment – Guidelines for Developments and Activities (Nov 2004) DEC.	
Requirements of the NSW guidelines	Inadequacies of the proponents assessment of Terrestrial Ecology
Step 1 – Identify key attributes of the proposal.	<ul style="list-style-type: none"> - Proponent has not determined the exact route to the Macquarie River and is therefore completely incapable of assessing the impacts of the project on terrestrial ecology. - Proponent has failed to undertake adequate site visits to all properties connected with the project easement, with many properties containing fauna habitat un-visited, and is therefore unable to describe all habitats in the project area. - Proponent has failed to consult local authorities on threatened biodiversity including landholders, field naturalist societies and local ecological expertise. - Proponent has failed to adequately identify animal habitats in the project area, and adjacent to the project area, with limited data from NSW Government databases, and other sources (including interest groups and community – as per NSW guidelines pp40) landholders and local field ecologists and expertise (such as Societies and fauna ecologists), extremely inadequate field surveys, and limited technical expertise involved – therefore have overlooked the significance of habitats along the project easement. There is poor recognition of the connectivity between habitats that will be fragmented by this project. - Proponent has failed to adequately evaluate existing data on threatened species records for the project area – Many threatened species records are of migrating species that utilize a broad range of habitats throughout the project area.
Step 3 – Set Technical Objectives Recognize and deal with potential constraints	<ul style="list-style-type: none"> - Proponent has failed to adequately consider the constraints in assessing fauna and has failed to adopt a suitable survey and assessment method to permit detection of cryptic and elusive species (by nature threatened species are often difficult to detect), failed to consider any disturbances prior to their surveys, failed to survey across seasons, failed to survey across the 18 significant vegetation categories in the area, failed to survey on all landholder properties, failed to include suitable local field expertise/personnel, failed to achieve an adequate survey effort, and failed to consider local weather patterns in their surveys. - Proponent has failed to adopt the precautionary principle stating that <i>“if there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation”</i>
Step 4 – Conduct preliminary assessment and field work. Investigator to consult stakeholders, assemble and evaluate existing information,	<ul style="list-style-type: none"> - Proponent has failed to adequately conduct field assessments with poor survey design, stratification, sampling design. - Proponent has failed to adequately implement survey methods for all threatened taxa known to the region, with highly inadequate survey effort (intensity) and extremely poor survey timing. Proponent has undertaken much less than is required to detect threatened species in the project area. - Proponent has failed to undertake adequate field surveys throughout the project area, including

and plan the technical objectives of the survey, the stratification and sampling design, data analysis, methods, survey methods, survey intensity and timetable	<ul style="list-style-type: none"> i) Highly inadequate sampling design (stratification, sampling and replication) as follows: <ul style="list-style-type: none"> o poorly stratified surveys resulting in many habitats being un-surveyed o poorly replicated surveys within each habitat type, resulting in low likelihood of detecting cryptic or elusive species o Highly inadequate amount of time spent by the proponent on site. ii) Very poor sampling design: <ul style="list-style-type: none"> o inadequately placed survey sites resulting in failure to survey all known habitats o Poorly timed surveys failing to cover all seasons of the year thereby failing to detect any migratory species or species with limited spatial/temporal range iii) Poor sampling methods: <ul style="list-style-type: none"> o Failure to adopt a range of survey methods in all areas. While the proponent used a range of survey methods (e.g. spotlighting, Elliot trapping etc), it was rare for many different techniques to be used at any single sampling site, thereby confounding the sampling method and their ability to detect species. iv) Extremely poor sampling effort: <ul style="list-style-type: none"> o The proponent has undertaken far less than is required with respect to sampling effort to detect threatened terrestrial fauna, and measure with accuracy their habitat, foraging, breeding, denning, migratory and territorial requirements. v) Failure to undertake an exhaustive search of existing databases as demonstrated by the presence of Squirrel Gliders in Orange region, but failure of proponent to detect records in NSW Atlas of Wildlife. vi) Failure of proponent to adopt a systematic survey methods recommended by NSW Guidelines for field surveys and stratification across the 18 major vegetation classes (with appropriate sampling within each of the 18 classes) vii) Failure to recognize the shortcomings of their surveys, and likelihood of other threatened species being present in the study area. For example, absence of a species from survey data does not necessarily mean it does not inhabit the survey area. viii) Failure to follow the NSW guidelines regarding surveys timing and survey effort. The proponent undertook surveys on 11 days in total and there were 5 days where rainfall was recorded. The NSW Guidelines recommend against sampling on rain-affected days, as it biases survey results. Therefore the proponent surveyed on 6 suitable survey days. ix) Failure of the proponent to follow NSW Guidelines to survey across seasons. The proponent only surveys for 11 nights in Summer and 2 nights in early Autumn.
Step 4 continued (Amphibians)	<p>Specific NSW Guidelines not followed</p> <ul style="list-style-type: none"> - Amphibians: Proponent did not survey for at least 1 hour for frogs in all of the 18 significant vegetation communities in the project area. - Proponent failed to follow guidelines for surveying over 2 nights (minimum) per stratification unit (e.g. per 18 vegetation

	<p>classes)</p> <ul style="list-style-type: none"> - Proponent failed to adopt all recommended methods for amphibian surveys including daytime searches, call playback, night watercourse searches, and night habitat searches in all 18 significant vegetation classes. - Proponent failed to survey for frog species over all seasons. - The proponent failed to adequately survey a representative proportion of the project area, and searched a total of 490 meters of project easement for frogs, representing 1.3% of the entire project area. This is an inadequate proportion of the total project area.
Step 4 continued (Reptiles)	<p>Specific NSW Guidelines not followed</p> <ul style="list-style-type: none"> - Reptiles: Proponent did not implement a range of survey techniques to detect reptiles in each of the significant vegetation classes, such as pitfall trapping, active searches and spotlighting on foot. - Proponent searched 339 meters of project easement for reptiles, representing 0.9% of the entire project area. This is an inadequate proportion of the total project area - Proponent failed to adequately undertake trapping surveys for Turtles in any water bodies in the project easement. - Proponent failed to undertake dedicated reptile surveys at night for nocturnal species - Proponent failed to state whether they conducted surveys over more than 1 day, thereby failing to follow the NSW Guidelines - Proponent failed to undertake 2 days of 30-minute searches for reptiles in each habitat type, failed to undertake 24 days of trapping with pitfall traps, and failed to undertake 30-minute searches with spotlights in all 18 habitats throughout the project area as a minimum standard for surveys. - The proponent failed to adequately survey a representative proportion of the project area, and covered a total of 339 meters of project easement, representing 0.9% of the total project area. This is highly inadequate.
Step 4 continued (Diurnal birds)	<p>Specific NSW Guidelines not followed</p> <ul style="list-style-type: none"> - Diurnal birds: Proponent failed to adopt NSW guidelines for undertaking 20-minute or 3 x 60 min area searches and point count methods. The proponent surveyed 39 sites, over 6 hours, equating to an average of 9 minutes per site, which is significantly less the recommended 3 x 60 minutes searches per site. - Proponent failed to adequately describe the exact locations and sites surveyed in the project area limiting their ability to draw conclusions of species occurrences. - The proponent failed to adequately survey a representative proportion of the project area, and covered a total of 3.7 km of project easement. This is highly inadequate survey effort. - The proponent failed to survey across all of the 18 major vegetation classes. This is a major shortcoming of the survey design, with limited capacity to detect occurrence of many diurnal bird species.
Step 4 continued (Nocturnal birds)	<p>Specific NSW Guidelines not followed</p> <ul style="list-style-type: none"> - Nocturnal birds: Proponent failed to adequately survey all major vegetation classes of the project area. - Proponent failed to survey across multiple sessions for target species thereby significantly reducing ability to detect any

	<p>nocturnal bird species such as Owls.</p> <ul style="list-style-type: none"> - Proponent failed to follow guidelines for 5 visits per site for Powerful Owl and Barking Owl, and failed to follow guidelines for 8 visits for Masked Owl so are unable to assess whether this species is present. - The proponent spent 4.33 hours searching for owls, and failed to adequately survey the entire project area. Therefore the proponent is unable to assign confidence to its conclusions regarding nocturnal birds.
<p>Step 4 continued (Mammals – excluding bats)</p>	<p>Specific NSW Guidelines not followed</p> <ul style="list-style-type: none"> - Mammals (excluding bats): Proponent failed to adequately sample project area with 3 sites for ground mammals (with less than 5 traps per Elliot traps per site/night) and 5 sites (with less than 10 traps per site/night) for arboreal mammals across the entire 37 km project area. This is extremely inadequate sampling design. - Proponent failed to follow guidelines for sampling with Elliot traps equivalent to at least 100 trap nights per stratification unit (per 18 significant vegetation classes). - Proponent failed to adequately survey all major vegetation classes of the project area. - Proponent failed to sample across seasons and trapped in December 2011 only - Proponent failed to employ a range of trapping methods recommended in NSW Guidelines, and failed to use Hair Tubes, Wire Cage Trapping, Pitfall trapping, sand plots, or dedicated surveys for tracks/scats and scratches throughout a representative proportion of habitats and vegetation classes. This is a major shortcoming of their sampling design. - Proponent used remote camera trapping with limited success due to poor sampling design – with 1 camera used at 7 sites for 4 nights across the entire project area. This is extremely inadequate survey effort. - Proponent adopted Stag Watches at 2 sites only throughout the entire 37 km project area – this is extremely low survey effort. - The proponent undertook spotlight surveys on foot at 3 sites, and in a vehicle at 3 sites. The proponent failed to replicate all surveys, and failed to follow the NSW guidelines for at least 2 searches per site. - Proponent failed to use minimum wattage spotlight during vehicle spotlight surveys (NSW Guidelines state 100 watt for vehicle surveys), therefore the proponent used inappropriate equipment.
<p>Step 4 continued (Mammals –bats)</p>	<p>Specific NSW Guidelines not followed</p> <ul style="list-style-type: none"> - Mammals (bats): Proponent failed to undertake sufficient survey effort for micro-bats using Harp Traps with only 4 sites trapped for 2 nights using 1 trap each. A total of 4 traps were used. This is extremely inadequate survey effort across a 37km project area. - Proponent failed to use mist netting – as recommended by NSW guidelines for bats. - All trapping resulted in 1 bat species being detected, but this is likely due to inadequate sampling rather than absence of bat species in the project area. - Anabat ultrasonic recording was also undertaken poorly. 8 sites were selected and 1 recorder was placed at each site for 2 nights only. This is highly inadequate search effort for a 37 km project easement.

	<ul style="list-style-type: none"> - The proponent failed to survey all major vegetation classes. This is highly inadequate.
Step 5 – Assess nature and impact of the proposal. Investigator to assess the nature of the proposal and likely effect on threatened biodiversity	<ul style="list-style-type: none"> - Proponent has failed to adequately assess the nature and impact of the proposal on threatened fauna, as a consequence of extremely poor surveys and limited capacity to detect threatened taxa. Therefore proponent has not modified the project in any way because they have not searched for threatened species - Failure to address cumulative impacts of the project such as cumulative effects of habitat fragmentation from a 37km long cleared easement - Failure of the proponent to address threats. The proponent has not adequately addressed the fact that removal of hollow-bearing trees is a Key Threatening Process in NSW, and the project will remove a large number of hollow-bearing trees.
Step 6 – Evaluate significance. Investigator to conduct an Assessment of Significance to decide whether a significant effect on threatened biodiversity is likely	<ul style="list-style-type: none"> - Proponent is incapable of accurately evaluating the significance of the project with the current data gathered by the proponents contractors, therefore is unable to adequately provide an Assessment of Significance to decide whether a significant effect of threatened biodiversity is likely. - Proponent has failed to identify potential impacts of the project, such as severity of the fragmentation of existing habitat through clearing of 7.8 hectares of endangered woodlands and a total of 19.5 hectares of native vegetation across a linear 37 km easement representing 74 hectares - Proponent contradicts themselves by stating the “it was concluded that a significant impact to the Superb Parrot was likely to occur based on the removal of limiting resources for a key source population of this species” after stating the “Assessments of Significance concluded that the project would be unlikely to result in a significant impact to the majority of threatened fauna”. The impact on local Superb Parrots could be significant.

Appendix 2. Summary of the inadequacies of the Proponent in assessing the impacts of the project on terrestrial ecology against Australian Government Survey Guidelines for Threatened species.

Australian Government Survey Guidelines for Australia's Threatened Birds, Mammals, Bats, Frogs and Reptiles – Guidelines for detecting species listed as threatened under the EPBC Act 1999	
Requirements of the Commonwealth guidelines	Inadequacies of the proponents assessment of Terrestrial Ecology
Australian Painted Snipe - Commonwealth guidelines requires 10 hours over 5 days targeted stationary searches and 10 hours over 3 days land-based areas searches or line transects	Proponent failed to undertake sufficient surveys to detect this species consistent with National guidelines.
Swift parrot - Commonwealth guidelines requires 20 hours over 8 days area searches or transect surveys and 20 hours over 8 days targeted surveys	Proponent failed to undertake sufficient surveys to detect this species consistent with National guidelines.
Regent Honeyeater - Commonwealth guidelines requires 20 hours over 10 days area searches and 20 hours over 5 days targeted searches	Proponent failed to undertake sufficient surveys to detect this species consistent with National guidelines
Superb Parrot - Commonwealth guidelines requires 12 hours over 4 days area searches or transect surveys and 12 hours over 4 days targeted surveys	Proponent failed to undertake sufficient surveys to detect this species consistent with National guidelines
Long-nosed Potoroo - Reported to occur in central NSW. Commonwealth guidelines recommends daytime searches, scat collection, sand plotting, baited camera traps.	Proponent failed to undertake dedicated surveys to detect this species consistent with National guidelines. Likelihood of occurrence is unknown. Survey effort limited in proponents surveys.
Smoky Mouse - Reported to occur in Jenolan Caves region, NSW. Commonwealth guidelines recommends daytime searches, scat collection, hair tube sampling, trapping and roadkill surveys.	Proponent failed to undertake dedicated surveys to detect this species consistent with National guidelines. Likelihood of occurrence is unknown. Survey effort limited in proponents surveys.
Spotted-tailed Quoll - Reported to occur in central tablelands region in historical records. Commonwealth guidelines recommends daytime searches, daytime searches for latrines, hair tube sampling, scat collection, remote cameras.	Proponent failed to undertake sufficient dedicated surveys to detect this species consistent with National guidelines. High likelihood of occurrence. Survey effort limited in proponents surveys.
Booroolong frog - Reported to occur in Macquarie River region, Central Tablelands CMA regions. Commonwealth guidelines recommends larvae surveys, call surveys, nocturnal surveys, diurnal searches along rocky streams over four nights over a transect of 200 in stream. Avoid rainfall	Proponent failed to undertake sufficient dedicated surveys to detect this species consistent with National guidelines.

events.	
Yellow-spotted Tree frog – <i>Litoria castanea</i> . Reported to occur in Orange and athirst region historically. Commonwealth guidelines recommends call detection, call playback, spotlight surveys, accompanied by habitat assessment. Four nights surveys required with dip netting and trapping in large ponds, streams, agricultural ponds and wetlands.	Proponent failed to undertake sufficient dedicated surveys to detect this species consistent with National guidelines. Likelihood of occurrence is unknown.
Green or warty swamp frog – <i>Litoria raniformis</i> . Commonwealth guidelines recommends call detection, call playback, spotlight surveys, accompanied by habitat assessment. Two nights surveys required, covering range of stream conditions, billabongs, farm ponds and dams, swamps and irrigation channels.	Proponent failed to undertake sufficient dedicated surveys to detect this species consistent with National guidelines. Likelihood of occurrence is unknown.
Large-eared pied bat - Commonwealth guidelines recommends combination of methods including 16 detector nights (minimum 4 nights) using unattended bat detectors, 6 detector hours of attended bat detectors (minimum 3 nights) and 16 Harp trap nights (4 nights minimum), over a 50 hectare area.	Proponent undertook Ultrasonic recorders at 8 trap nights at 4 sites over 2 nights, and harp trapping on 2 consecutive nights at 4 sites. Proponent failed to undertake sufficient dedicated surveys to detect this species consistent with National guidelines.
Grey-headed Flying Fox - Commonwealth guidelines recommends daytime field surveys for camps, surveying of vegetation communities and food plants, night time surveys.	Proponent failed to undertake sufficient dedicated surveys to detect this species consistent with National guidelines. Grey-headed flying foxes have been recorded in Orange over many recent years, and are known to forage far and wide. Failure to detect this species during surveys do not indicate the species is absent. The species has exhibited significant migrating patterns into and out of Orange LGA.
Pink-tailed worm lizard – <i>Aprasia parapulchella</i> – recorded east of Orange, known to occur in Box woodlands. Commonwealth guidelines recommends rock turning, 150-200 rocks, spring and early summer surveys, in suitable Box woodland habitat.	Proponent failed to undertake sufficient dedicated surveys to detect this species consistent with National guidelines. Likelihood of occurrence is unknown. Proponent undertook rock rolling surveys in project area, covering a total of 339 meters of the 37Km easement. This search effort is inadequate for detecting this species.