

Roads and Traffic Authority

Pacific Highway Upgrade -
Oxley Highway to Kempsey
Flora and Fauna Working Paper

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5. Assessment of significance of impacts

5.1 Assessments of significance under Part 3A of the EP&A Act

The removal and/or disturbance of vegetation and habitats as a result of the Proposal has the potential to affect an array of threatened species that have been recorded or have the potential to occur in the study area. A number of endangered ecological communities would also be impacted. An assessment of the potential significance of impacts on these threatened species and ecological communities has been prepared in accordance with the assessment criteria identified in the Guidelines for Threatened Species Assessment under Part 3A of the EP&A Act (DECC and DPI 2005). The assessment is presented in **Appendix I** and a summary of results is provided in **Table 5-1**.

Based on the assessments undertaken, the Proposal is not considered likely to result in impacts of a magnitude that would cause a local population of threatened flora or fauna or a local occurrence of an endangered ecological community to become extinct. The significance assessments have concluded that there is unlikely to be a significant impact on threatened species or ecological communities provided that proposed mitigation and management measures are developed and implemented. Appropriate mitigation would be particularly important to minimise impacts on local populations of the koala, green-thighed frog and giant-barred frog, which have been identified as species' particularly vulnerable to potential impacts associated with the Proposal.

5.2 Assessments of significance under the EPBC Act

The Proposal would not impact any world heritage places, national heritage places, Ramsar wetlands, commonwealth marine areas and would not involve any nuclear actions.

No threatened ecological communities listed under the EPBC Act were found to occur in the Proposal area, and therefore none would be impacted by the Proposal.

An assessment of the potential significance of impacts of the Proposal on threatened and migratory species listed under the EPBC Act has been prepared in accordance with the significance criteria in the Administrative Guidelines for the Act (Department of Environment and Heritage 2006). The assessment is presented **Appendix J** and a summary of results is provided in **Table 5-1**.

The Proposal incorporates measures to minimise the clearing of vegetation, loss of habitat and drainage and sedimentation controls to manage runoff during both the construction and operation phases. On the basis of the assessments undertaken (**Appendix J**), it is concluded that the Proposal would not result in a significant impact on any matter of national environmental significance under the EPBC Act, including threatened and migratory species. Accordingly, the Proposal has not been referred to the Commonwealth Department of the Environment, Water, Heritage and the Arts.

Table 5-1 Summary of significance assessments for endangered ecological communities, threatened and migratory species

Common name Scientific name	TSC Act status	EPBC Act status	Recorded/ predicted/ to occur	Summary of assessment of significance	Likely significant impact
Endangered ecological communities					
Swamp Sclerophyll Forest	EEC		Recorded	No regional effects Remaining areas large enough to continue as functioning ecosystems	No
Swamp Oak Floodplain Forest	EEC		Recorded	No regional effects Remaining areas large enough to continue as functioning ecosystems.	No
Subtropical Coastal Floodplain Forest	EEC		Recorded	No regional effects Remaining areas large enough to continue as functioning ecosystems.	No
Freshwater Wetlands	EEC		Recorded	No regional effects Remaining areas large enough to continue as functioning ecosystems.	No
Threatened flora					
scented acronychia <i>Acronychia littoralis</i>	Endangered	Endangered	Predicted	Unlikely to remove, fragment, displace or disturb local population No risk of extinction	No
hairy-joint grass <i>Arthraxon hispidus</i>	Vulnerable	Vulnerable	Predicted	Unlikely to remove, fragment, displace or disturb local population No risk of extinction	No
biconvex paperbark <i>Melaleuca biconvexa</i>	Vulnerable	Vulnerable	Predicted	Unlikely to remove, fragment, displace or disturb local population No risk of extinction	No
maundia <i>Maundia triglochinosides</i>	Vulnerable		Predicted	Unlikely to remove, fragment, displace or disturb local population No risk of extinction	No
swamp orchid <i>Phaius tancarvilleae</i>	Endangered	Endangered	Predicted	Unlikely to remove, fragment, displace or disturb local population No risk of extinction	No
southern swamp orchid <i>Phaius australis</i>	Endangered	Endangered	Predicted	Unlikely to remove, fragment, displace or disturb local population No risk of extinction	No

Common name Scientific name	TSC Act status	EPBC Act status	Recorded/ predicted/ to occur	Summary of assessment of significance	Likely significant impact
milky silkpod <i>Parsonsia dorrigoensis</i>	Vulnerable	Endangered	Predicted	Unlikely to remove, fragment, displace or disturb local population No risk of extinction	No
Threatened fauna					
Australasian bittern <i>Botaurus poiciloptilus</i>	Vulnerable		Predicted	Unlikely to displace local population	No
Australian painted snipe <i>Rostratula benghalensis</i>	Vulnerable	Vulnerable	Predicted	Unlikely to displace local population	No
barking owl <i>Ninox connivens</i>	Vulnerable		Predicted	Unlikely to displace local population	No
barred cuckoo- shrike <i>Coracina lineata</i>	Vulnerable		Predicted	Unlikely to disrupt breeding cycle	No
black bittern <i>Ixobrychus flavicollis</i>	Vulnerable		Predicted	Unlikely to displace local population	No
black-necked stork <i>Ephippiorhynchus asiaticus</i>	Endangered		Recorded	Unlikely to displace local population	No
brush-tailed phascogale <i>Phascogale tapoatafa</i>	Vulnerable		Predicted	Mitigation measures would ameliorate impacts	No
comb-crested jacana <i>Irediparra gallinacea</i>	Vulnerable		Predicted	Unlikely to displace local population	No
common planigale <i>Planigale maculata</i>	Vulnerable		Predicted	Mitigation measures would ameliorate impacts	No
eastern bent-wing bat <i>Miniopterus schreibersii oceanensis</i>	Vulnerable		Recorded	No suitable breeding habitat in study area	No
eastern chestnut mouse <i>Pseudomys gracilicaudatus</i>	Vulnerable		Predicted	Mitigation measures would ameliorate impacts	No
eastern false pipestrelle <i>Falsistrellus tasmaniensis</i>	Vulnerable		Recorded	Unlikely to displace local population	No
eastern freetail-bat <i>Micronomus norfolkensis</i>	Vulnerable		Recorded	Unlikely to displace local population Unlikely to disadvantage foraging	No

Common name Scientific name	TSC Act status	EPBC Act status	Recorded/ predicted/ to occur	Summary of assessment of significance	Likely significant impact
giant barred frog <i>Mixophyes iteratus</i>	Endangered	Endangered	Recorded	Unlikely to displace local population	No
giant dragonfly <i>Petalura gigantea</i>	Endangered		Predicted	Mitigation measures would ameliorate impacts	No
glossy black-cockatoo <i>Calyptorhynchus lathami</i>	Vulnerable		Recorded	No nest trees recorded in the study area	No
golden-tipped bat <i>Kerivoula papuensis</i>	Vulnerable		Predicted	Potential habitat degraded in the study area	No
grass owl <i>Tyto capensis</i>	Vulnerable		Predicted	Unlikely to displace local population	No
greater broad-nosed bat <i>Scoteanax rueppellii</i>	Vulnerable		Recorded	Unlikely to displace local population Unlikely to disadvantage foraging	No
green and golden bell frog <i>Litoria aurea</i>	Endangered	Vulnerable	Predicted	Unlikely to occur in study area Unlikely to affect lifecycle	No
green-thighed frog <i>Litoris brevipalmata</i>	Vulnerable		Recorded	Mitigation measures would ameliorate impacts	No
grey-crowned babbler <i>Pomatostomas temporalis</i>	Vulnerable		Predicted	Unlikely to occur in study area Unlikely to affect lifecycle	No
grey-headed flying-fox <i>Pteropus poliocephalus</i>	Vulnerable	Vulnerable	Recorded	Unlikely to displace local population Unlikely to disrupt breeding cycle or roosting behaviour	No
koala <i>Phascolarctos cinereus</i>	Vulnerable		Recorded	Unlikely to disrupt breeding cycle	No
large-eared pied bat <i>Chalinolobus dwyeri</i>	Vulnerable	Vulnerable	Predicted	No suitable breeding habitat	No
long-nosed potoroo <i>Potorous tridactylus</i>	Vulnerable	Vulnerable	Predicted	Unlikely to occur in study area Unlikely to affect lifecycle	No
little bent-wing bat <i>Miniopterus australis</i>	Vulnerable		Recorded	No suitable breeding habitat	No
masked owl <i>Tyto novaehollandiae</i>	Vulnerable		Recorded	Unlikely to displace local population	No

Common name Scientific name	TSC Act status	EPBC Act status	Recorded/ predicted/ to occur	Summary of assessment of significance	Likely significant impact
osprey <i>Pandion haliaetus</i>	Vulnerable		Recorded	Unlikely to affect foraging habitat	No
pale-headed snake <i>Hoplocephalus bitorquatus</i>	Vulnerable		Predicted	Unlikely to affect lifecycle	No
powerful owl <i>Ninox strenua</i>	Vulnerable		Predicted	Unlikely to displace local population	No
regent honeyeater <i>Xanthomyza phrygia</i>	Endangered	Endangered Migratory	Predicted	Unlikely to affect lifecycle	No
rose-crowned fruit-dove <i>Ptilinopus regina</i>	Vulnerable		Recorded	Opportunistic visitor to study area	No
sooty owl <i>Tyto tenebricosa</i>	Vulnerable		Recorded	Unlikely to displace local population	No
southern myotis <i>Myotis macropus</i>	Vulnerable		Recorded	Unlikely to affect foraging activity Unlikely to lead to extinction of local population	No
spotted-tailed quoll <i>Dasyurus maculatus</i>	Vulnerable	Endangered	Predicted	Unlikely for optimal denning habitat to occur	No
square-tailed kite <i>Lophoictinia isura</i>	Vulnerable		Recorded	Unlikely to displace local population No nests observed in study area	No
Stephen's banded snake <i>Hoplocephalus stephensii</i>	Vulnerable		Predicted	Unlikely to occur in study area Unlikely to affect lifecycle	No
stuttering frog <i>Mixophyes balbus</i>	Endangered	Vulnerable	Predicted	Unlikely to displace local population	No
squirrel glider <i>Petaurus norfolcensis</i>	Vulnerable		Predicted	Mitigation measures would ameliorate impacts	No
superb fruit-dove <i>Ptilinopus superbus</i>	Vulnerable		Predicted	Opportunistic visitor to study area	No
swift parrot <i>Lathamus discolor</i>	Endangered	Endangered Migratory	Predicted	Unlikely to affect lifecycle	No
wallum froglet <i>Crinia tinnula</i>	Vulnerable		Predicted	Mitigation measures would ameliorate impacts	No
wompoo fruit-dove <i>Ptilinopus magnificus</i>	Vulnerable		Predicted	Unlikely to affect lifecycle	No

Common name Scientific name	TSC Act status	EPBC Act status	Recorded/ predicted to occur	Summary of assessment of significance	Likely significant impact
yellow-bellied glider <i>Petaurus australis</i>	Vulnerable		Recorded	Mitigation measures would ameliorate impacts	No
yellow-bellied sheath-tail bat <i>Saccolaimus flaviventris</i>	Vulnerable		Predicted	Unlikely to displace local population Unlikely to disadvantage foraging	No
Migratory species					
Australian painted snipe <i>Rostratula australis</i>		Migratory	Predicted	Opportunistic visitor to study area No core habitat within study area	No
osprey <i>Pandion haliaetus</i>	Vulnerable	Migratory	No	Unlikely to affect foraging habitat	No
cattle egret <i>Egretta alba</i>		Migratory	No	Opportunistic visitor to study area No core habitat within study area	No
black-faced monarch <i>Monarcha melanopsis</i>		Migratory	Recorded	Opportunistic visitor to study area No core habitat within study area	No
cattle egret <i>Ardea ibis</i>		Migratory	Recorded	Opportunistic visitor to study area No core habitat within study area	No
fork-tailed swift <i>Apus pacificus</i>		Migratory	Predicted	Opportunistic visitor to study area No core habitat within study area	No
great egret <i>Ardea alba</i>		Migratory	Predicted	Opportunistic visitor to study area No core habitat within study area	No
Latham's snipe <i>Gallinago hardwickii</i>		Migratory	Recorded	Opportunistic visitor to study area No core habitat within study area	No
osprey <i>Pandion haliaetus</i>	Vulnerable	Migratory	Recorded	No nest sites observed or known to occur Unlikely to affect foraging habitat	No
rainbow bee-eater <i>Merops ornatus</i>		Migratory	Predicted	Opportunistic visitor to study area No core habitat within study area	No
regent honeyeater <i>Xanthomyza phrygia</i>	Endangered	Endangered Migratory	Predicted	Unlikely to affect lifecycle	No

Common name Scientific name	TSC Act status	EPBC Act status	Recorded/ predicted to occur	Summary of assessment of significance	Likely significant impact
rufous fantail <i>Rhipidura rufifrons</i>		Migratory	Recorded	Opportunistic visitor to study area No core habitat within study area	No
satin flycatcher <i>Myiagra cyanoleuca</i>		Migratory	Recorded	Opportunistic visitor to study area No core habitat within study area	No
spectacled monarch <i>Monarcha trivirgatus</i>		Migratory	Predicted	Opportunistic visitor to study area No core habitat within study area	No
swift parrot <i>Lathamus discolor</i>	Endangered	Endangered Migratory	Predicted	Unlikely to affect lifecycle	No
white-bellied sea- eagle <i>Haliaeetus leucogaster</i>		Migratory	Recorded	Opportunistic visitor to study area No core habitat within study area	No
white-throated needletail <i>Hirundapus caudacutus</i>		Migratory	Recorded	Opportunistic visitor to study area No core habitat within study area	No

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