

PROPOSED ROAD REHABILITATION**CH5350 to CH6550****COOLANGATTA ROAD, COOLANGATTA****1. PROPOSED ACTIVITY****1.1 Description**

The proposed development is the rehabilitation of Coolangatta Road from Chainage (CH) 5350 to CH6550 measured from the Wharf Road intersection, Berry (Figure 1 below)

The proposed rehabilitation would include (refer also to Appendix A for detailed plans):

- vegetation clearing including approximately 67 trees (minimum 1.5 metres from the edge of the travel lanes)
- extension, alteration and/or replacement of a number of culverts and associated headwalls
- road widening to approximately 8.4 to 8.6 metres including shoulders
- ripping of existing pavement and stabilisation of the existing base material
- raising the existing pavement by placement of additional 200 millimetres of base course
- bitumen sealing
- construction of new earthen road-side drainage swales
- line-marking of the centre line and edge lines
- re-instalment of guide posts and signage
- installation and maintenance of erosion and sediment controls during construction.

The proposed activity also includes a number of environmental safeguards and impact mitigation measures listed in Section 1.3 of this report.

Shoalhaven City Council (SCC) is the proponent and the determining authority under Part 5 of the EP&A Act. The environmental assessment of the proposed activity and associated environmental impacts has been undertaken in the context of Clause 228 of the *Environmental Planning and Assessment Regulation 2000*. In doing so, this Review of Environmental Factors (REF) helps to fulfil the requirements of Section 111 of the Act that SCC examine and take into account to the fullest extent possible, all matters affecting or likely to affect the environment by reason of the activity.

Figure 1 Location of the proposed activity



1.2 Purpose

The upgrade has been funded under the Local Road Repair Program (Road to Recovery) in order to improve safety for road users, motorists and cyclists by widening and strengthening the existing narrow sealed road.

1.3 Environmental safeguards and measures to minimise impacts

- The following community notifications shall be undertaken:
 - A media release shall be prepared and submitted with the release information uploaded onto Council's internet site. The media release shall inform of Council's intention, start date of the works, existence of unsealed surfaces and of possible delays to traffic.
 - Variable message boards shall be installed on Wharf Road, Berry and Coolangatta Road, west of the Bolong Road intersection to inform motorists of the works and potential traffic delays.

- Residents adjacent to the road works would be notified of the actual start date and provided with contact details of the SCC Project Manager and the Contractor.
- The following procedures shall be followed to minimise harm to any fauna residing in the potential hollow-bearing tree
 - Suitably qualified and NSW *National Parks and Wildlife Act 1974* licenced wildlife handlers (e.g. Wildlife Rescue South Coast ph:0418 427 214) shall be onsite during the removal of the HBT (or hollow limbs) to rescue any fauna.
 - An elevated work platform shall be utilised to inspect each hollow for residing fauna. Each hollow shall be inspected visually with the aid of torch and/or inspection camera if available.
 - In consultation with the wildlife handler, the contractor shall prepare a plan specified to the circumstance of the tree and hollow. Generally:
 - if the full hollow cannot be fully searched and confirmed not to contain any fauna, the hollow section can be removed up to the solid section of the limb
 - if the full hollow could not be fully inspected (e.g. a bend in the limb preventing visual inspection) the visible section of the hollow can be cut to allow further inspection of the hollow. Repeat this process until the whole limb or hollow section is searched. It is important to note that when the hollow limb is cut, it is only to be cut where it can be determined that there is no chance an animal could be residing in that section. Stuffing of the limb just past the cut point may be considered to prevent fauna movement during chainsaw cutting operations.
 - If fauna are found to be residing in the hollow, a management strategy shall be prepared by the wildlife carer in collaboration with the tree removal contractor. This would be dependent on the species present. Generally:
 - tree frogs or small reptiles can be caught and relocated immediately outside the development area into a suitable shelter site (such as hollow log or tussock)
 - nocturnal possums and gliders can be removed from their hollows and placed into cloth pouches and taken into care until suitable release into a nest box or similar.
 - A record shall be kept of any animals removed from the tree (*i.e.* species and numbers)

- In the event that additional trees (that are not already marked for removal) require removal, the tree shall be the subject of a separate environmental assessment by the Assets and Works Environmental Operations Officer (Geoff Young ph: 4429 3399) with adjoining residents informed.
- The newly constructed road-side table drains shall be stabilised as works progress and ground cover restored e.g. hydro-mulch, seeding, placement of jute mesh or similar erosion control product.
- A bush regeneration program designed and implemented by SCC's Bushcare Coordinator shall be commenced immediately after works and include the treatment of noxious weeds, the initial treatment of environmental weeds, and the planting (and subsequent maintenance) of native tree and shrub species known to occur at the site.

1.4 Limitations

The assessment component of this REF has been informed by:

- database searches (NSW Wildlife Atlas, SCC's GIS Enquiry, Aboriginal Heritage Information Management System)
- targeted surveys for Yellow-bellied Glider and Glossy Black-cockatoo feed trees
- Previous flora, fauna and Aboriginal heritage studies including:
 - Eco Logical 2011 *Coolangatta Road Stage 2 Mains Upsizing – Rapid Ecological Due Diligence Assessment*
 - Niche Environmental and Heritage 2016 *Flora and Fauna Impact Assessment: Coolangatta Road and Bolong Road Water Main and Road upgrade.*
 - Niche Environmental and Heritage 2016 *Coolangatta and Bolong Road Water Main and Road Upgrade – Aboriginal Objects Due Diligence Assessment.*

No other formal fauna surveys (spotlighting, call playback, trapping, anabat etc) were conducted as part of this assessment. The habitat assessment, literature search and targeted surveys as described above was considered an appropriate survey effort considering the scale of the proposal.

2. EXISTING ENVIRONMENT

The proposed activity would be undertaken within the road reserve of Coolangatta Road. The majority of works would be undertaken on the existing pavement areas and immediate road verges. The road traverses through grazing lands and rural residential areas.

The topography of the area is mostly flat to undulating with the geology of the area consisting of Quaternary alluvium.

Vegetation on the road verge and road-site consists mainly of native trees over a mostly exotic understorey. Trees include Forest Red Gum *Eucalyptus tereticornis*, Thin-leaved Stringybark *E.eugenoides*, Grey Ironbark *E.paniculata*, and Rough Barked Apple *Angophora floribunda*. Mid storey species predominantly comprise Black Sheoak *Allocasuarina littoralis*, Swamp Oak *Casuarina glauca*, White Sally *Acacia floribunda*, Black Wattle *Acacia mearnsii*, Dwarf Cherry *Exocarpus strictus*, and Two-veined Hickory *A.binervata*. The understorey and groundlayer were mostly dominated by exotic grasses such as Kikuyu *Pennisetum clandestinum* and Annual Veldtgrass *Ehrharta longifolia*, however natives such as Bracken *Pteridium esculentum*, Dusky Coral Pea *Kennedia rubicunda*, Hardenbergia *violacea*, *Glycine clandestina*, Mat-rush *Lomandra longifolia* are also present alongside the weeds Lantana *Lantana camara* and Blackberry *Rubus fruticosus*. Photos of the road-side vegetation are provided below.

Previous ecological studies conducted by Eco Logical (2011) did not identify any endangered ecological communities or threatened flora and fauna. Eco Logical concluded that the terrestrial and aquatic habitats along the roadside were, for the most part, “heavily modified, in poor condition, structurally simplistic and isolated from higher quality habitats”.

There are records of the threatened Green and Golden Bell Frog *Litoria aurea* within one kilometre of the proposed works and in the nearby Coomonderry Swamp which would be the breeding location for the species in the area.

Approximately four of the 67 trees to be removed may contain hollows, these have been marked with white paint (“HO”) and flagged with yellow flagging tape (Photo 1). These trees will require special consideration and removal of any resident wildlife prior to their removal.

For the purposes of this assessment, the site of the proposed works:

- is not mapped as having the potential for acid sulfate soils
- is not mapped as being potentially contaminated
- is above the 1:100 year floodline

- is not mapped as an area to which *State Environmental Planning Policy No.14 Coastal Wetlands* applies
- is not mapped as having coastal hazards
- is not known to contain Aboriginal places or objects.

An assessment on the impact of the proposal on the environment is provided in Section 7 of this REF. Traffic disruptions and the tree removal and subsequent potential impact to native fauna and amenity appear to be the more significant issues.



Photo 1: Two of the potentially hollow-bearing trees.



Photo 2: Road-side trees along Coolangatta Road – many of which are proposed to be removed.



Photo 3: Road-side trees along Coolangatta Road – many of which are proposed to be removed.

3. PERMISSIBILITY

Section 76 (Development that does not need consent) of the EP&A Act states that:

“If an environmental planning instrument provides that specified development may be carried out without the need for development consent, a person may carry the development out, in accordance with the instrument, on land to which the provision applies.”

In this regard, clause 94 of the *State Environmental Planning Policy (Infrastructure) 2007* (Infrastructure SEPP) states that *“development for the purpose of road or road infrastructure facilities may be carried out by or on behalf of a public authority without [development] consent on any land”*. As the proposal does not require development consent, and as it constitutes an ‘activity’ for the purposes of Section 110 of the EP&A Act, being carried out by (or on behalf of) a public authority, environmental assessment under Part 5 of the EP&A Act is required. This REF provides this assessment.

The NSW *Roads Act 1993* also provides for this work to be undertaken by SCC, *i.e.*

- Section 71 allows a roads authority to undertake work on a public road for which it is the roads authority
- Section 88 allows a roads authority to remove or lop any tree or other vegetation that is on or overhanging a public road if, in its opinion, it is necessary to do so for the purpose of carrying out road work or removing a traffic hazard.
- Section 94 allows a roads authority to carryout drainage work in or on any land in the vicinity of the public road.

The proposed activity is permissible under other relevant environmental legislation (Table 1 below).

Table 1 Summary of legislation and permissibility

NSW State Legislation	
<i>Environmental Planning and Assessment Act 1979 (EP&A Act)</i>	
Permissible <input checked="" type="checkbox"/>	Not permissible <input type="checkbox"/>
Justification: The Infrastructure SEPP provides for this work to be undertaken without development consent. In circumstances where development consent is not required, the environmental assessment provisions outlined in Part 5 of the Act are required to be complied with. This REF fulfils this requirement.	
<i>State Environmental Planning Policy No.14 – Coastal Wetlands</i>	
Permissible <input checked="" type="checkbox"/>	Not permissible <input type="checkbox"/>
Justification: The area is not mapped as an area covered by this policy.	

State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011	
Permissible	√ Not permissible <input type="checkbox"/>
Justification: All works would be conducted outside the designated Sydney drinking water catchment. As such, this instrument does not apply.	
State Environmental Planning Policy No.44 – Koala Habitat Protection	
Permissible	√ Not permissible <input type="checkbox"/>
Justification: This SEPP applies only to Part 4 (EP&A Act) development consent applications in areas of “core koala habitat” and “potential koala habitat” persists. The proposed activity does not require development consent nor does it affect land comprising koala habitat (as defined under the SEPP).	
Shoalhaven Local Environmental Plan 2014 (SLEP)	
Permissible	√ Not permissible <input type="checkbox"/>
Justification: Clause 7.12 of the SLEP provides for the proposed activity to be undertaken without development consent. In circumstances where development consent is not required, the environmental assessment provisions outlined in Part 5 of the Act are required to be complied with. This REF fulfils this requirement.	
Protection of the Environment Operations Act 1997 (POEO Act)	
Permissible	√ Not permissible <input type="checkbox"/>
Justification: The proposed activity does not constitute scheduled development work or scheduled activities as listed in Schedule 1 of the Act. The proposed activity therefore does not require an environmental protection licence.	
Threatened Species Conservation Act 1995 (TSC Act)	
Permissible	√ Not permissible <input type="checkbox"/>
Justification: The proposed activity is unlikely to have a significant impact on species and communities listed in the schedules of the Act (refer to Section 7.2). A licence to harm, pick, etc, is not required.	
Fisheries Management Act 1994	
Permissible	√ Not permissible <input type="checkbox"/>
Justification: The proposed activity: <ul style="list-style-type: none"> would not affect declared aquatic reserves (Part 7, Division 2 of the Act) 	

- does not involve dredging or reclamation works in 'key fish habitat' as identified by the consent authority (Part 7, Division 3)
- would not impact mangroves and marine vegetation (Part 7, Division 4)
- would not involve disturbance to gravel beds where salmon or trout spawn (s.208 of the Act)
- does not involve the release of live fish (Part 7, Division 7)
- does not involve the construction of dams and weirs (s.218)
- would not result in the blocking of the passage of fish (s.219)
- would not impact declared threatened species of endangered ecological communities (Part 7A)
- does not constitute a declared key threatening process (Part 7A)
- would not use explosives in a watercourse (Clauses 70 and 71 of the *Fisheries Management (General) Regulation 2010*).

A licence is therefore not required.

Heritage Act 1977

Permissible Not permissible

Justification:

- The proposed activity would not disturb an item of state heritage significance.
- The Act also provides statutory protection to relics, archaeological deposits, artefacts or deposits. Section 139 to 146 of the Act require that excavation that is likely to contain, or is believed may contain, archaeological relics is undertaken in accordance with an excavation permit issued by the Heritage Council. The Act defines an archaeological relic as "*any deposit, artefact, object or material evidence that:*
 - a) *relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement; or*
 - b) *is of state and local heritage significance*"

As the site has little to no archaeological potential, a permit is not required.

National Parks and Wildlife Act 1974 (NP&W Act)

Permissible Not permissible

Justification:

- The Act provides the basis for the legal protection and management of Aboriginal sites in NSW. Under Sections 86 and 90 of the Act it is an offence to disturb an Aboriginal object or knowingly destroy or damage, or cause the destruction or damage to, an Aboriginal object or place, except in accordance with a permit of consent under section 87 and 90 of the Act.
- The *National Parks and Wildlife Act 1974* provides that a person who exercises due diligence in determining that their actions will not harm Aboriginal objects has a defence against prosecution for the strict liability offence if they later unknowingly

harm an object without an Aboriginal Heritage Impact Permit (AHIP). The Due Diligence Code of Practice was followed for the proposed activity (refer to Section 4.1). The results of the process indicated that the proposed activity can proceed with caution without applying for an AHIP as the proposed activity is unlikely to disturb an Aboriginal object or place .

- Part 8A of the Act lists offences relating to harming or picking threatened species or damaging their habitat. However it is a defence to a prosecution for an offence under this Part if the work was essential for the carrying out of an activity by a determining authority with the meaning of Part 5 of the NSW *Environmental Planning and Assessment Act 1979* if the determining authority has complied with that part. Although the development is unlikely to harm threatened species or endangered ecological communities, the activity is considered permissible as this REF has been prepared and determined in accordance with Part 5 of the EP&A Act.

Roads Act 1993

Permissible Not permissible

Justification:

- Under Section 71, a “*Roads authority may carry out road work on any public road for which it is the roads authority and on any land under its control*”. Shoalhaven City Council is the roads authority for Coolangatta Road.
- Section 88 allows a roads authority to remove or lop any tree or other vegetation that is on or overhanging a public road if, in its opinion, it is necessary to do so for the purpose of carrying out road work or removing a traffic hazard.
- Section 94 allows a roads authority to carryout drainage work in or on any land in the vicinity of the public road.
- Coolangatta Road is not a ‘classified road’ to which Section 75 of the Act applies (*Public authorities to notify RMS of proposal to carry out major road work*).

Native Vegetation Act 2003

Permissible Not permissible

Justification:

The Act does not apply to “*any clearing that is, or is part of, an activity carried out by a determining authority within the meaning of Part 5 of the EPA Act if the determining authority has complied with that Part*”. As the SCC will comply with Part 5 (Environmental Assessment) of the EP&A Act, the proposed activity is legislatively excluded from the provisions of the *Native Vegetation Act 2003*.

Water Management Act 2000	
Permissible <input checked="" type="checkbox"/>	Not permissible <input type="checkbox"/>
<p>Justification:</p> <ul style="list-style-type: none"> Local councils are exempt from s.91E(1) of the Act in relation to all controlled activities that they carry out in, on or under waterfront land (by virtue of clause 38 of the <i>Water Management (General) Regulation 2011</i>). The proposal would not interfere with the aquifer and therefore an interference licence is not required (s.91F) 	
Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EP&BC Act)	
Permissible <input checked="" type="checkbox"/>	Not permissible <input type="checkbox"/>
<p>Justification:</p> <p>The proposed activity would not be undertaken on Commonwealth land and no matters of National Environmental Significance (MNES) are likely to be significantly impacted by the proposed activity . The proposed activity is therefore not a controlled action and does not require commonwealth referral.</p> <p><i>Also, as Coolangatta Road was constructed prior to the commencement of the Act (16th July 2000) the proposed activity should also be exempted from the Act through Section 43B (Actions which are lawful continuations of use of land etc). Section 43B provides that approval is not required for an action that is a lawful continuation of a use of land, sea or seabed that was occurring immediately before the commencement of the Act.</i></p>	

4. HERITAGE ISSUES

4.1 Indigenous

Under Section 86 of the NSW *National Parks and Wildlife Act 1974* (NPW Act) it is an offence to disturb, damage, or destroy any Aboriginal object without an Aboriginal Heritage Impact Permit (AHIP). The Act, however, provides that if a person who exercises 'due diligence' in determining that their actions will not harm Aboriginal objects has a defence against prosecution if they later unknowingly harm and object without an AHIP (Section 87(2) of the Act). To effect this, the NSW Department of Environment, Climate Change and Water have prepared the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (hereafter referred to as the 'Due Diligence Guidelines') to assist individuals and organisations to exercise due diligence when carrying out activities that may harm Aboriginal objects and to determine whether they should apply for an AHIP.

In accordance with the Due Diligence Guidelines (DECCW 2010), a search on the Aboriginal Heritage Information Management System (AHIMS) indicated that no Aboriginal heritage sites were known for the vicinity of the site (Appendix B).

The proposed activity site could also be described as 'disturbed land' as defined by the Due Diligence Guidelines, *i.e.*:

"Land is disturbed if it has been the subject of a human activity that has changed the land's surface, being changes that remain clear and observable. Examples include ploughing, construction of rural infrastructure (such as dams and fences), construction of roads, trails and tracks (including fire trails and tracks and walking tracks), clearing vegetation, construction of buildings and the erection of other structures, construction or installation of utilities and other similar services (such as stormwater drainage and other similar infrastructure) and construction of earthworks."

The proposed activity is considered within "disturbed land" as it has been subject to human activity through agricultural activities, public road construction and maintenance, stormwater drainage works, and installation of electricity infrastructure, water and telecommunications services.

As there are no recorded or visible Aboriginal sites and as the proposed activity is on disturbed land, the Due Diligence Guidelines requires no further assessment as it is reasonable to conclude that there is a low probability of objects occurring in the area.

4.2 Non-Indigenous

The proposed road works would not come within proximity to items of local heritage significance or any items on the state heritage list or listed in the Shoalhaven Local Environmental Plan.

5. CONSULTATION WITH GOVERNMENT AGENCIES

Consultation requirements specified in Part 2 Division 1 of the Infrastructure SEPP do not apply as the proposed activity:

- would not impact local heritage items
- would not be undertaken adjacent to a marine park declared under the *Marine Parks Act 1997*
- would not be undertaken adjacent to land reserved under the *National Parks and Wildlife Act 1974*
- would not be undertaken adjacent to an aquatic reserve declared under the *Fisheries Management Act 1994*
- would not be undertaken in the foreshore area within the meaning of the *Sydney Harbour Foreshore Authority Act 1998*
- does not comprise a fixed or floating structure in or over navigable waters.

Consultation with government agencies is, therefore, not required under the Infrastructure SEPP.

Coolangatta Road is not a 'classified road' to which Section 75 of the Act applies (*i.e. Public authorities to notify RMS of proposal to carry out major road work*).

6. COMMUNITY ENGAGEMENT

As a result of the substantial tree clearing component, the proposed activity would be regarded as “Local Area / High Impact” within SCC’s Community Engagement Policy. Direct communication in the form of targeted mail or email has been utilised to inform the following people / entities of the project:

- Berry Forum
- Shoalhaven Heads Forum
- Residents along the road subject to the works

The Berry Forum responded in favour of the upgrade (D16/368551). A response from the Shoalhaven Heads Forum was not received.

A number of residents responded including:

- one who was interested in the wood from the tree removal operations
- one who said that the works were long overdue
- one who was concerned of the traffic implications if the works were scheduled during the summer school holidays
- A couple of land owners who were very concerned about the loss of trees fronting their property as well as damage to property entrances.

Council staff (Steve Barry and Geoff Young) met with concerned residents on site on the 10th January 2017. Council staff advised that:

- the trees marked with pink tape and yellow tape were considered the minimum to be removed
- the trees marked with yellow tape and white painted ‘H’s were trees that may contain hollows and fauna removal activities would take place prior to their removal.
- there may be additional trees removed if problems with construction occur
- the clearance used from the edge of bitumen (1.5 metres) is far less than what would be required in full reconstruction was being undertaken.

The issues raised by the residents were

- loss of mature trees from the roadside
- reduced visual and noise screening
- weed incursion and spread during and after works
- possibility of shifting the road north (to lessen the impact on trees on the southern side of the road).

Residents also requested consideration of a box culvert instead of the pipe proposed to be fully replaced in order to facilitate the movement of turtles to and from Coomonderry Swamp. This has subsequently been included as an option in the construction tender.

After the meeting further correspondence was received from the residents whose road frontage would be most affected by tree removal. In this regard, they have:

- advised Geoff Young and Steve Barry that they will be contacting the Mayor and some Councillors requesting reconsideration of the project scope
- sent a letter to the mayor (refer to D17/29939)
- sent correspondence to the (acting) General Manager, Ben Stewart (refer to D17/29950).

The correspondence was clearly against the tree removal, e.g.:

“This beautiful and irreplaceable wildlife corridor is now under threat from Coolangatta Road widening work scheduled for February / May 2017. The great majority of the estimated 85 trees scheduled for removal are very large mature trees and include at least 4 large trees with hollow containing nesting gliders and other animals...”

“The destruction of these large trees effectively removes most of the upper canopy of the corridor, leaving behind only small trees and shrubs which currently form a thin lower understorey.”

“The corridor is uniquely positioned adjacent to Coomonderry Swamp Nature Reserve, Seven Mile National Park, Coolangatta Road and Coolangatta Mountain and is not the only remaining mature tree corridor on the western side of Coolangatta Road.”

“The removal of the current mature trees and the widening of the road will therefore result in the loss of an important and irreplaceable wildlife corridor and effectively mitigate the major tree planting on the eastern side.”

“The National Trust has classified the Berry Landscape as a conservation area and the destruction of this beautiful and irreplaceable wildlife corridor will not only substantially depreciate landscape values, but significantly detract from the rural ambiance and scenic amenity enjoyed by both affected landowners and tourists travelling through to Shoalhaven Heads.”

The tree removal component of the proposed work therefore remains contentious and opposition to it from affected residents and land owners remains strong.

7. ASSESSMENT OF LIKELY ENVIRONMENTAL IMPACTS

In circumstances where development consent is not required, the environmental assessment provisions outlined in Part 5 (Environmental Assessment) of the EP&A Act are required to be complied with. Part 5 requires Council to examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the activity. As a minimum, the matters listed in Section 111 and Section 5A of the Act and clause 228(2) of the Regulations must be addressed.

7.1 Section 111 matters of consideration

Table 2: Section 111 (EP&A Act) matters of consideration

Matter to be considered	Comments
Any conservation agreement entered into under the <i>National Parks and Wildlife Act 1974</i> and applying to the whole or part of the land to which the activity relates, and any plan of management adopted under that Act for the conservation area to which the agreement relates.	The SCC GIS Enquiry has been examined and there are no conservation agreements applying to the lands affected by the proposed activity.
Any joint management agreement entered into under the <i>Threatened Species Conservation Act 1995</i> .	The SCC GIS Enquiry has been examined and there are no joint management agreements applying to the lands affected by the proposed activity.
Any biobanking agreement entered into under the <i>Threatened Species Conservation Act 1995</i> that applies to the whole or part of the land to which the activity relates	The SCC GIS Enquiry has been examined and there are no biobanking agreements applying to the lands affected by the proposed activity.
Any wilderness area (within the meaning of the <i>Wilderness Act 1987</i>) in the locality in which the activity is intended to be carried on.	There are no declared wilderness areas in the vicinity of the proposed activity.
Critical habitat.	The OEH website was searched for critical habitat in the Register of Critical Habitat kept by the Director General of the Department of

Matter to be considered	Comments
	<p>Environment and Climate Change. As of July 2014, critical habitat has been declared for:</p> <ul style="list-style-type: none"> • Gould’s Petrel • Little penguin population in Sydney’s North Harbour • Mitchell’s Rainforest Snail in Stotts Island Nature Reserve • Wollemi Pine <p>As these areas do not lie within the area affected by the proposed activity, the proposed activity would not have an adverse effect on critical habitat.</p>
<p>In the case of threatened species, populations and ecological communities, and their habitats, whether there is likely to be a significant effect on those species, populations or ecological communities, or those habitats.</p>	<p>The 7-part test of significance (see Section 7.2 below) concludes that a significant effect is considered unlikely for any threatened species or ecological communities.</p> <p>A significant effect is not considered likely for any threatened populations due to the absence of such items in the area affected by the proposed activity.</p>
<p>Any other protected fauna or protected native plants within the meaning of the <i>National Parks and Wildlife Act 1974</i>.</p>	<p>All native fauna in NSW is protected. The potential impact on fauna habitat is, however, considered to be insignificant as the activity is unlikely to endanger, displace or disturb fauna or significantly exacerbate barriers to their movement. Measure would be in place to remove fauna residing in hollows.</p> <p>There are no protected native plants (as listed in Schedule 13 of the Act) in the area affected by the proposed activity.</p> <p>The 7-part test of significance (see Section 7.2 below) conducted for the proposed activity concludes that a significant effect is unlikely for threatened flora and fauna.</p>

7.2 “7-part test” - Section 5A of the EP&A Act 1979

Section 5A of the EP&A Act identifies a number of factors that must be taken into account to determine whether there is likely to be a significant effect on threatened species, populations or ecological communities, or their habitats. These factors, commonly called “7-part test”, must be taken into account when addressing Section 111 (EP&A Act) factors listed above.

The species and communities that have been deemed to potentially occur in the vicinity (ten kilometres) of the proposed activity and therefore requiring assessment are (refer to Table 3 p.34):

- Green and Golden Bell Frog *Litoria aurea*
- Spotted Harrier *Circus assimilis*
- Little Eagle *Hieraaetus morphnoides*
- Gang-gang Cockatoo *Callocephalon fimbriatum*
- Glossy Black-cockatoo *Calyptorhynchus lathami*
- Little Lorikeet *Glossopsitta pusilla*
- Swift Parrot *Lathamus discolor*
- Powerful Owl *Ninox strenua*
- Masked Owl *Tyto tenebricosa*
- Regent Honeyeater *Xanthomyza phrygia*
- Varied Sittella *Daphoenositta chrysoptera*
- Scarlet Robin *Petroica boobang*
- Spotted-tail Quoll *Dasyurus maculatus*
- Grey-headed Flying-fox *Pteropus poliocephalus*
- Yellow-bellied Sheath-tailed Bat *Saccolaimus flaviventris*
- Eastern Freetail-bat *Mormopterus norfolkensis*
- Greater Broad-nosed Bat *Scoteanax rueppellii*

No endangered populations, ecological communities, or species listed under the schedules of the NSW *Fisheries Management Act 1994* are expected to occur at the site.

Part 1 In the case of a threatened species, where the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is to be placed at risk of extinction.

Green and Golden Bell Frog (GGBF)

The GGBF inhabits marshes, dams, stream-sides, drainage channels, particularly those containing bulrushes *Typha spp.*, reeds *Phragmites* and/or spike-rushes *Eleocharis spp.* Optimal habitat includes water-bodies that are unshaded, free of predatory fish such as Plague Minnow *Gambusia holbrooki*, having a grassy area nearby and diurnal sheltering sites available.

GGBF has been recorded extensively in the locality (32 records with 10km²), several of which are relatively recent, *i.e.* 2014, 2015 and 2016 (Niche 2016).

Habitat for GGBF in the area that would be affected by the activity is considered generally marginal, present only in the form of a number of roadside drains and culverts. These represent foraging and dispersal habitat for the species only.

It is reasonable to assume that the portion of the specified open drains that would be affected by the proposed activity could, at times, contain GGBF individuals or at least potential habitat. Regardless, the proposed activity is unlikely to have an adverse effect on the lifecycle of the species such that a viable local population of the species is to be placed at risk of extinction for the following reasons:

- GGBF is not actually known to occur in the subject drains. The subject drains only contains suitable refuge, foraging and dispersal habitat.
- The quality of habitat that would be removed is poor and is unlikely to be utilised by GGBF except to disperse and low-level forage. The area that would be removed is insignificant in comparison to the dispersal and foraging habitat available to any GGBF in this location.
- The drains do not represent breeding habitat for the species and therefore the proposed activity would not affect the GGBF's ability to breed.
- The proposed activity would not alter the current hydrological conditions experienced in the drainage channels and within Coomonderry Swamp
- Potential foraging and shelter habitat would temporarily be removed as part of the proposed activity however as the potential habitat occurs along an existing roadside it is not likely to exacerbate fragmentation of habitat. The habitat (open drain) would, in the long-term, would return after construction works.

Although the presence of this species in the locality is possible from time to time, *e.g.*, if it were dispersing through the drainage channels or seeking refuge, the site is not considered useful or important for the species and a species impact statement for this part for this species is therefore not required.

Spotted Harrier

The Spotted Harrier occurs throughout the Australian mainland, except in densely forested or wooded habitats of the coast, escarpment and ranges. Individuals disperse widely in NSW and comprise a single population (OEH 2012).

The species occurs in grassy open woodland including Acacia and mallee remnants, inland riparian woodland, grassland and shrub steppe. It is found most commonly in native grassland, but also occurs in agricultural land, foraging over open habitats including edges of inland wetlands (OEH 2012). It builds a stick nest in a tree and lays eggs in spring (or sometimes autumn) with young remaining in the nest for several months.

Although the species has been recorded within ten kilometres of the proposed activity and the site comprises suitable habitat, the proposed work is not likely to have an adverse effect on the lifecycle of the species such that a viable local population is likely to be placed at risk of extinction for the following reasons:

- A population is not known for the area – only a single record of the species within ten kilometres of Coolangatta Road.
- The area that would be affected by the proposed activity does not contain a nest that could be used by the species.
- As the species occurs as a single population over NSW, the area affected by the proposal is considered insignificant.
- The species is highly mobile and has a large home range. The loss of road-side vegetation would be insignificant to their survival needs.

The presence of this far-ranging species in the locality is possible from time to time, *e.g.*, if it were to fly over, hunt or rest briefly at the site. The site, however, is not considered useful or important and this species would likely vacate the area when works commence and be out of harm's way. A species impact statement for this part for this species is therefore not required.

Little Eagle

The Little Eagle occupies eucalypt forest, woodland or open woodland. The species nests in tall living trees where pairs build a large stick nest in winter. Two or three eggs are laid in spring with young fledging in early summer.

Although the species has been recorded within ten kilometres of the proposed activity and the site comprises suitable habitat, the proposed work is not likely to have an adverse effect on the lifecycle of the species such that a viable local population is likely to be placed at risk of extinction for the following reasons:

- A population is not known for the area – only two records of the species within ten kilometres of Coolangatta Road.
- The area that would be affected by the proposed activity does not contain a nest that could be used by the species.
- The species is highly mobile and has a large home range. The loss of roadside vegetation would be insignificant to their survival needs.

The presence of this far-ranging species in the locality is possible from time to time, *e.g.*, if it were to fly over, hunt or rest briefly at the site. The site, however, is not considered useful or important and this species would likely vacate the area when works commence and be out of harm's way. A species impact statement for this part for this species is therefore not required.

Powerful Owl

The Powerful Owl is endemic to eastern and south-eastern Australia, mainly on the coastal side of the Great Dividing Range from Mackay to south-western Victoria. In NSW, it is widely distributed throughout the eastern forest from the coast inland to tablelands, with scattered records on the western slopes and plains (OEH 2014).

The Powerful Owl inhabits a range of vegetation types, from woodland and open sclerophyll forest to tall open wet forest and rainforest. The Powerful Owl requires large tracts of forest or woodland habitat but can occur in fragmented landscapes as well. The species breeds and hunts in open or closed sclerophyll forest or woodlands and occasionally hunts in open habitats including roadsides.

The main prey items are medium-sized arboreal marsupials, particularly the Greater Glider, Common Ringtail Possum and Sugar Glider. Flying-foxes are also important prey in some areas and birds can comprise about 10 – 50% of the diet depending on the availability of preferred mammal prey (OEH 2014). As most prey species require hollows and shrub layer, these are important habitat components for the owl.

Pairs of Powerful Owls demonstrate high fidelity to a large territory, the size of which varies with habitat quality and thus prey densities. In good habitats a mere 400 hectares can support a pair, however, where hollow trees and prey have been depleted, up to 4,000 hectares may be needed (OEH 2014g). Powerful Owls are monogamous and mate for life. Nesting occurs from late autumn to mid-winter.

Although known to have been sighted within ten kilometres of the site, the proposed activity is not likely to have an adverse effect on the lifecycle of these species such that a viable local population is likely to be placed at risk of extinction for the following reasons:

- No populations are actually known to occur, and there are no records of the species on the subject land.

- There would be no removal of hollow-bearing trees that are likely to provide nesting/breeding/ roosting sites for the species.
- The area does not contain resources critical for the species for food, shelter, or breeding.
- The area that would be affected by the proposed activity, *i.e.* less than one hectare, is insignificant to the area of available habitat in the immediate vicinity of the site.
- The area that would be affected by the proposed activity is located immediately adjacent to a busy road. The location is therefore not prime habitat and is already affected by edge effects (traffic, noise, light).
- The area would only provide marginal foraging habitat only.

The presence of this far-ranging and widely distributed species in the locality is possible from time to time, *e.g.*, if it were to fly over, forage or rest briefly at the site. The site, however, is not considered useful or important and this species would not likely be in the area when works commence as there are no roosting trees. A species impact statement for this part for this species is therefore not required.

Masked Owl

The Masked Owl lives in eucalypt forests and woodlands from the coast, where it is most abundant, to the western plains. Inland records for this species are sparse but, overall, records fall within approximately 90% of NSW, excluding the most arid north-western corner (DEC 2006).

The species' habitat in woodland and dry forests appears to have been greatly reduced or fragmented by clearing for agriculture and urban development resulting in widespread local extinctions.

Habitat for the Masked Owl is widespread throughout the dry eucalypt forest of the tablelands, western slopes and undulating wet-dry forests of the coast. Optimal habitat includes an open understorey and a mosaic of sparse (grassy) and dense (shrubby) ground cover on gentle terrain (DEC 2006). It is a specialist predator of terrestrial mammals, particularly native rodents. The diet is supplemented by bandicoots, arboreal mammals (*e.g.* Sugar Glider, Common Ringtail Possum), and some birds (DEC 2006).

Nesting occurs in old hollow-bearing eucalypts in a variety of topographic positions, with hollows greater than 40 centimetres wide and greater than 100 centimetres deep.

Although the species has been recorded within ten kilometres of the site and the site contains suitable, albeit poor quality habitat, the activity is unlikely to have an adverse effect on the life cycle of the species such that a viable population of the species would be placed at risk of extinction for the following reasons:

- No populations are actually known to at the site of the proposed activity – only one record within ten kilometres of the area
- There would be no removal of hollow-bearing trees which could provide nesting/breeding/ roosting sites for the species.
- The area that would be affected by the activity does not contain resources critical for the species for food, shelter, or breeding.
- The area that would be affected by the proposed activity is located immediately adjacent to a busy road. The location is therefore not prime habitat and is already affected by edge effects (traffic, noise, light).

The presence of this far-ranging and widely distributed species in the locality is possible from time to time, e.g., if it were to fly over, forage or rest briefly at the site. The site, however, is not considered useful or important and the species would not likely be in the area when works commence as there are no suitable roosting trees. A species impact statement for this part for this species is therefore not required.

Glossy Black-cockatoo

The Glossy Black-cockatoo inhabits open forest and woodlands of the coast and the Great Dividing Range where stands of Sheoak occur, including Black Sheoak *Allocasuarina littoralis*.

The species feeds almost exclusively on the seeds of sheoak (*Casuarina* and *Allocasuarina*) shredding the cones with its massive bill and depositing chewed cones underneath the feeding tree. The chewed cones usually remain on the ground for several weeks to months and are a clear indication that the stand of sheoak is an important foraging habitat for the species.

The species is dependent on large hollow-bearing eucalypts for nest sites. A single egg is laid in autumn or winter. The incubation period is one month and the nestling period is three months (NSW Scientific Committee 2008).

The Glossy Black-cockatoo is highly mobile and able to disperse widely – up to 60 kilometres (NSW Scientific Committee 2008). Habitat fragmentation however may mean that it is energetically inefficient to commute long distances between feeding patches (NSW Scientific Committee 2008).

Although known to occur within ten kilometres of Coolangatta Road, the proposed activity is not likely to have an adverse effect on the lifecycle of the species such that a viable local population is likely to be placed at risk of extinction for the following reasons:

- A population is not known for the area and no records of the species exist in the area of the proposed activity.
- There would be no trees removed that could compromise a potential nesting tree.

- There is no sign of use by the species within the stands of Black Sheoak within the proposed activity location (*i.e.* there are no chewed cones underneath the sheoaks).

The presence of this far-ranging species in the locality is possible from time to time, *e.g.*, if it were to fly over or rest briefly at the site. The site, however, is not considered useful or important and this species would likely vacate the area when works commence and be out of harm's way. As a result, a species impact statement for this part for this species is not required.

Gang-gang Cockatoo

The Gang-gang Cockatoo inhabits open forests and woodlands with an acacia understorey. In summer it lives in moist highland forest types, and in winter it moves to more open types at lower elevations. This species requires tree hollows for nesting and sometimes for roosting. Eucalypt trees and acacia shrubs are used for foraging.

The species nests in hollows in the trunks, limbs or dead spouts of tall living trees especially eucalypts, often near water (NSW Scientific Committee 2008b).

Although the species has been recorded with ten kilometres of the site and the environment supports potential habitat, the proposed work is not likely to have an adverse effect on the lifecycle of the species such that a viable local population is likely to be placed at risk of extinction for the following reasons:

- A viable population is not known for the area; there are only isolated records within ten kilometres of the road.
- The proposed activity would not remove any features that could comprise a nest site.
- The area that would be affected by the proposal is insignificant in comparison to habitat available to the species in surrounding areas.
- Procedures would be in place to minimise harm to any individuals that may be residing in the hollow-bearing tree proposed to be removed (refer to Section 1.3)

The presence of this far-ranging and widely distributed species in the locality is possible from time to time, *e.g.* if it were to fly over or rest briefly at the site. The site, however, is not considered useful or important and this species would likely vacate the area when works commence and be out of harm's way. A species impact statement for this part for this species is therefore not required.

Regent Honeyeater

Within NSW, breeding sub-populations are fragmented and now occur mainly around the Capetree Valley in central-eastern NSW and the Bundarra-Barraba region in northern inland NSW. Minor and sporadic breeding occurs in other areas such as Warrumbungle

National Park, Pilliga forests, Mudgee-Wollar region, and the Hunter and Clarence Valleys (NSW Scientific Committee 2010). The proposed activity is not within any of these areas.

The Regent Honeyeater inhabits eucalypt open forests and woodlands, predominantly box-ironbark types, but also Spotted Gum and Swamp Mahogany on the coast (NSW Scientific Committee 2010). The proposed activity would be in potential habitat for the species.

The species is capable of dispersing more than 530 kilometres and therefore are highly mobile and not sensitive to minor disturbances to habitat.

Although the species has been recorded with five kilometres of the site of the proposed activity and that the environment support potential (albeit low quality) habitat, the proposed activity is not likely to have an adverse effect on the lifecycle of the species such that a viable local population is likely to be placed at risk of extinction for the following reasons:

- The area is not a known breeding location for the species.
- A viable population is not known for the area – only two isolated records within four kilometres from the site.
- The species is highly mobile. The loss of vegetation along Coolangatta Road would be inconsequential to the species' use of the area.

As a result, a species impact statement for this part for this species is not warranted.

Varied Sittella

The Varied Sittella is sedentary and inhabits eucalypt forests and woodlands, especially those containing rough-barked species and mature smooth-barked gums with dead branches. The species builds a cup-shaped nest of plant fibres and cobwebs in an upright fork high in the living tree canopy.

The species' decline has been attributed to declining habitat cover and quality. Its sedentary nature makes clearing of vegetation a potential barrier to movement. Survival and population viability are sensitive to habitat isolation, reduced patch size and habitat simplification, including reductions in tree species diversity, tree canopy cover, shrub cover, ground cover, logs, fallen branches and litter.

Although the species has been recorded within ten kilometres of the site of the proposed activity and that the environment support potential habitat, the proposed activity is not likely to have an adverse effect on the lifecycle of the species such that a viable local population is likely to be placed at risk of extinction for the following reasons:

- A viable population is not known for the area; there is only four individual isolated records within 10 kilometres of the road.

- The area that would be affected by the proposal is insignificant in comparison to habitat available to the species in surrounding areas.
- The loss of vegetation along Coolangatta Road would be inconsequential to the species' use of the area.

As a result, a species impact statement for this part for this species is not warranted.

Scarlet Robin

The Scarlet Robin is found from south-east Queensland to south-east South Australia and also in Tasmania and south-west Western Australia.

The species typically lives in dry eucalypt forests and woodlands with open and grassy understorey with few scattered shrubs. Abundant logs and fallen timber are important components of its habitat. The location of the proposed works comprise suitable, albeit low quality, habitat for this species.

Although known to have been sighted within ten kilometres of the location of the proposed activity, the proposed activity is not likely to have an adverse effect on the lifecycle of these species such that a viable local population is likely to be placed at risk of extinction for the following reasons:

- No populations are actually known to occur near the site – only one record within 10 kilometres of the road
- The records of the species in the area are more than 30 years old. There are no recent records of the species.
- The area does not contain resources critical for any of the species for food, shelter, or breeding.
- The road and construction works would not impact on the species ability to forage for food, hunt and breed.
- The area affected by the proposed activity is insignificant to area of available habitat in the immediate vicinity of the site.

The presence of this far-ranging and widely dispersed species in the locality is possible from time to time, e.g., if it were to fly over or rest briefly at the site. The site, however, is not considered useful or important and this species would likely vacate the area as works commence and be out of harm's way. A species impact statement for this part for this species is, therefore, not required.

Spotted-tailed Quoll

The range of the Spotted-tailed Quoll has contracted considerably since European settlement. Records are generally confined to within 200 kilometres of the coast and range from the Queensland border to Kosciuszko National Park (DoE 2014).

The species has been recorded across a range of habitat types, including rainforest, open forest, woodland, coastal heath and inland riparian forest, from the sub-alpine zone to the coast (OEH 2014b).

Individual animals use hollow-bearing trees, fallen logs, small caves, rocky outcrops and rock-cliff faces as den sites. It is mostly nocturnal, although it will hunt during the day. It is a generalist predator with a preference for medium-sized (500 grams to five kilograms) mammals. The main prey items include: Ringtail Possum, Common Brushtail Possum, Greater Glider and Rabbit. It also eats carrion including road kill.

Females occupy home ranges up to 750 hectares and males up to 3,500 hectares.

Although the species has been recorded within five kilometres of the site and the site contains suitable (albeit low quality) habitat, the activity is unlikely to have an adverse effect on the lifecycle of the species such that a viable local population of the species would be placed at risk of extinction for the following reasons:

- A local population is not known for the site; there is only potential habitat and one record of the species within ten kilometres of Coolangatta Road.
- The area that would be affected by the proposed activity does not contain hollow-bearing trees or logs, small caves, rocky outcrops and rock-cliff faces that could be used as den sites.
- The area affected by the proposed activity is insignificant to area of available habitat in the immediate vicinity of the site.

Removal of less than one hectare of low quality habitat is considered insignificant to comparison to the amount of potential higher quality habitat available in immediate vicinity of Coolangatta Road. A species impact statement for this Part for this species is therefore not required.

Grey-headed Flying-fox

Grey-headed Flying-foxes roost in large aggregations in the exposed branches of canopy trees. The location of camps is generally stable through time (DECCW 2009). Camps provide resting habitat, sites of social interactions and refuge for animals during significant phases of their annual cycles such as birth, lactation and conception (DECCW 2009).

Although the species has been recorded within ten kilometres of Coolangatta Road:

- there are no camps currently or historically recorded nearby
- the closest known camp is many kilometres away in the Bomaderry Creek (North Nowra/Bomaderry) area
- the species has not actually been recorded in the subject land

- at a local scale, the species has been recorded over a wide area surrounding the Bomaderry Creek camp. Nationally, it occurs within the coastal belt from Rockhampton in central Queensland to Melbourne in Victoria (and sometimes South Australia). The loss of a small number of trees that are not breeding or roosting habitat would be inconsequential to the species.

The presence of these far-ranging and far-foraging species in the subject land is possible from time to time, e.g. if they were to fly over, rest briefly or forage for food at the site. The site, however, is not considered useful or important and this species would likely vacate the area as works commence and be out of harm's way. A species impact statement for this part for this species is, therefore, not required.

Yellow-bellied Sheath-tailed Bat and Greater Broad-nosed Bat

The subject land comprises suitable habitat for the above listed species. Each has also been recorded within ten kilometres of the site, although in very small numbers (one and three respectively).

The species are known to roost in tree hollows but some individuals may also roost under bark or in man-made structures. The Greater Broad-nosed Bat produces young in January in suitable hollow-bearing trees where females congregate (maternity sites). Works are unlikely to occur during this period.

Although the bats may use the area from time to time, the proposed activity is not likely to have an adverse effect on the lifecycle of the species such that a viable local population is likely to be placed at risk of extinction for the following reasons:

- No hollow-bearing trees that could provide roosting sites or camp or maternity sites would be removed.
- The bats have been recorded over a wide area throughout the Shoalhaven Heads / Coolangatta area. The impact resulting in the loss of trees and vegetation is unlikely to have a significant impact to these wide ranging and mobile species. This amount of disturbance is considered insignificant in comparison to the amount of potential habitat available in the immediate vicinity of the site.
- The widened Coolangatta Road would not impact on the species ability to forage for food, hunt and breed.

The presence of these far-ranging species in the road reserve is possible from time to time, e.g., if they were to fly over, rest briefly or forage for food at the site. The site, however, is not considered useful or important or critical to the survival of the species and, because of the lack of suitable roosting trees, are unlikely to be present during construction works.

As a result of the above assessment, a species impact statement for this Part for these species is not required.

Part 2 In the case of an endangered population, whether the action is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction

The only endangered populations listed on Part 2 of Schedule 1 of the NSW *Threatened Species Conservation Act 1995* and Part 2 of Schedule 4 of the *Fisheries Management Act 1994* that occur with the Shoalhaven Local Government Area are the:

- Eucalyptus langleyi population north of the Shoalhaven River in the Shoalhaven local government area.
- Greater Glider population in the Seven Mile Beach National Park area

These areas are outside the area affected by the proposed activity. The proposed activity, therefore, would not have an adverse effect on the life cycle of a species that constitutes an endangered population.

Part 3 In the case of an endangered ecological community, whether the action proposed:

I. Is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or

II. Is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.

Based on the species recorded on site (Niche 2016) the forest covering the subject land is not a community listed as an endangered ecological community (EEC) within the schedules of the NSW *Threatened Species Conservation Act 1995*. The proposed activity would therefore not impact any EEC and a species impact statement is not required for this part.

Part 4 In relation to the habitat of a threatened species, population or ecological community:

I. The extent to which habitat is likely to be removed or modified as a result of the action proposed, and

II. Whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action, and

III. The importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality.

The area affected by the proposed activity:

- does not support a local population of any threatened species and does not comprise an EEC
- provides only low quality marginal habitat for many of the assessed fauna species e.g. Grey-headed Flying-fox, Spotted-tailed Quoll, Regent Honeyeater, Glossy Black-cockatoo, Powerful Owl, Spotted Harrier, and the Green and Golder Bell Frog.
- is insignificant in area in comparison to the extent of habitat available in the immediate vicinity
- is not important to the long-term survival of the species as the affected area does not contain breeding habitat or critical and restricted food resources
- is already disturbed by installation of services and historical use as road construction, road-side drainage, utilities and stormwater drainage. The potential for viable threatened species populations in the subject land is low.
- already fragmented and disturbed through the immediate presence of Coolangatta Road and surrounding rural landscape and the proposed activity would not significantly exacerbate the fragmentation of the community already caused by these features.

As many of the assessed threatened species are highly mobile (e.g. Gang Gang Cockatoo, Square-tailed Kite, Regent Honeyeater and Grey-headed Flying-fox), the small decrease in bushland should be inconsequential to their foraging abilities.

As a result of the above assessment, a species impact statement for this part is not required.

Part 5 Whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly).

No critical habitat has been declared in the City of Shoalhaven. As a result, the proposed activity would have no effect on critical habitat. A species impact statement is therefore not required for this part.

Part 6 Whether the action proposed is consistent with the objectives of a recovery plan or threat abatement plan.

Of the above listed threatened species, recovery plans have only been prepared and finalised for the Large Forest Owls (Powerful Owl and Masked). The proposed activity is not inconsistent with the recovery plan as:

- the proposed activity would not impact the National Parks and Wildlife Service's (NPWS) and the Department of Primary Industries' (DPI) ability to assess the distribution and amount of high quality habitat for each owl species across public

and private lands to get an estimate of the number and proportion of occupied territories of each species – Objective 1 and associated actions

- the proposed activity would not impact the NPWS's and DPI's ability to monitor trends in population parameters across the range of the three species and across different land tenures and disturbance histories – Objective 2 and associated actions
- the proposed activity would not impact the NPWS's and DPI's ability to assess the implementation and effectiveness of forest management prescriptions designed to mitigate the impact of timber-harvesting operations on the species – Objective 3 and associated actions
- this REF provides an impact assessment – Objective 4
- the proposed activity would not impact NPWS's ability to undertake initiatives to minimise further loss and fragmentation by protection and more informed management of significant owl habitat – Objective 5 and associated actions
- the proposed activity would not impact research into the species – Objective 6 and associated actions
- the proposed activity would not impede NPWS's ability to increase community awareness of the species – Objective 7 and associated actions
- the proposed activity would not impede NPWS's ability to implement the recovery plan – Objective 8 and associated actions.

A species impact statement is therefore not required for this part for these species.

The only Threat Abatement Plans that have been finalised are: Bitou Bush and Boneseed, Predation by Red Fox, and Predation by *Gambusia holbrooki*. These are unrelated to the proposed activity. A species impact statement is therefore not required for this part.

Part 7 Whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.

The only key threatening processes listed under the NSW *Threatened Species Conservation Act 1995* or the *Fisheries Management Act 1994* considered relevant to the proposed activity is *Clearing of Native Vegetation*. The impact of the proposal, however, is not considered to be significant as it is unlikely to lead to:

- the destruction of habitat resulting in the loss of local populations of individual species
- fragmentation

- expansion of dryland salinity
- riparian zone degradation
- increased greenhouse emissions
- increased habitat for invasive species
- significant loss of leaf litter layer
- loss or disruption of ecological function
- changes to soil biota outside the development footprint.

As a consequence, the proposal is considered not likely to result in the operation of, or significantly increase the impact of this particular key threatening process and a species impact statement is not required for this part.

Table 3 List of species and endangered populations occurring within 10 kilometres of the proposed activity (Bionet accessed 11/1/2017)

Species / EECs	No. of records	Assessment – likelihood of occurrence
Green and Golden Bell Frog <i>Litoria aurea</i>	32	Possible. The culverts and associated drainage lines may represent foraging, refuge and dispersal habitat.
Blue-billed Duck <i>Oxyura australis</i>	4	Unlikely. The species prefers deep water in large permanent wetlands with dense aquatic vegetation (e.g. Coomonderry Swamp). There is no such habitat within the proposed activity site.
Shy Albatross <i>Thalassarche cauta</i>	1	Unlikely. The species is a pelagic or ocean-going species inhabiting subantarctic and subtropical marine waters, spending the majority of its time at sea. There is no such habitat within the proposed activity site.
Australasian Bittern <i>Botaurus poiciloptilus</i>	2	Unlikely. The species favours permanent freshwater wetlands. There is no such habitat on the proposed development site or in the vicinity of the proposed development site.
Black-necked Stork <i>Ephippiorhynchus asiaticus</i>	19	Unlikely. The species favours permanent freshwater wetlands. There is no such habitat on the proposed development site or in the vicinity of the proposed development site .

Species / EECs	No. of records	Assessment – likelihood of occurrence
Spotted Harrier <i>Circus assimilis</i>	1	Possible. The species has been recorded within ten kilometres of the proposed development and the site comprises suitable habitat.
White-bellied Sea-Eagle <i>Haliaeetus leucogaster</i>	18	Unlikely. The species is found in coastal habitats especially those close to the sea-shore and around terrestrial wetlands in tropical and temperate regions of mainland Australia and its offshore islands. The habitats occupied by the species are characterised by the presence of large areas of open water. There is no such habitat on the proposed development site or in the vicinity of the proposed activity site.
Little Eagle <i>Hieraaetus morphoides</i>	2	Possible. The species has been recorded within ten kilometres of the proposed development and the site comprises suitable habitat.
Eastern Osprey <i>Pandion cristatus</i>	9	Unlikely. The species favours coastal areas, especially the mouths of large rivers, lagoons and lakes. There is no such habitat on the proposed development site or in the vicinity of the proposed activity site.
Bush Stone-curlew <i>Burhinus grallarius</i>	1	Unlikely.

Species / EECs	No. of records	Assessment – likelihood of occurrence
		The species inhabits open forests and woodlands with a sparse grassy groundlayer and fallen timber. There is no such habitat on the proposed development site or in the vicinity of the proposed activity site.
Beach Stone-curlew <i>Esacus magnirostris</i>	3	Unlikely. The species is found exclusively along the coast, on a wide range of beaches, islands, reefs and in estuaries, and may often be seen at the edges of or near mangroves. There is no such habitat on the proposed development site or in the vicinity of the proposed activity site.
Sooty Oystercatcher <i>Haematopus fuliginosus</i>	26	Unlikely. The species favours rocky headlands, rocky shelves, exposed reefs with rock pools, beaches and muddy estuaries. There is no such habitat on the proposed development site or in the vicinity of the proposed activity site.
Pied Oystercatcher <i>Haematopus longirostris</i>	125	Unlikely. The species favours intertidal flats of inlets and bays, open beaches and sandbanks. There is no such habitat on the proposed development site or in the vicinity of the proposed activity site.
Greater Sand-plover <i>Charadrius leschenaultia</i>	15	Unlikely. The species occurs mainly on sheltered sandy, shelly or muddy beaches or estuaries with large intertidal mudflats or sandbanks. There is no such habitat on the proposed development site or in the vicinity of the proposed activity site.
Lesser Sand-plover <i>Charadrius mongolus</i>	72	Unlikely.

Species / EECs	No. of records	Assessment – likelihood of occurrence
		The species favours the beaches of sheltered bays, harbours and estuaries with large intertidal sandflats or mudflats. There is no such habitat on the proposed development site or in the vicinity of the proposed activity site.
Hooded Plover <i>Thinornis rubricollis</i>	2	Unlikely. In south-eastern Australia, Hooded Plovers prefer sandy ocean beaches, especially those that are broad and flat, with a wide wave-wash zone for feeding, much beachcast seaweed, and backed by sparsely vegetated sand dunes for shelter and nesting. There is no such habitat on the proposed development site or in the vicinity of the proposed activity site.
Sanderling <i>Calidris alba</i>	24	Unlikely. The species is generally found in coastal areas on low beaches or firm sand, near reefs and inlets, along tidal mudflats and bare open coastal lagoons. There is no such habitat on the proposed development site or in the vicinity of the proposed activity site.
Curlew Sandpiper <i>Calidris ferruginea</i>	47	Unlikely. The species generally occupies littoral and estuarine habitats and in NSW its mainly found in intertidal mudflats of sheltered coasts. There is no such habitat on the proposed development site or in the vicinity of the proposed activity site.
Great Knot <i>Calidris tenuirostris</i>	30	Unlikely. In NSW, this species has been recorded at scattered sites along the coast to Narooma. It occurs within sheltered, coastal habitats containing large, intertidal mudflats or sand flats, including inlets, bays, harbours, estuaries and lagoons. There is no such habitat on the proposed development site or in the vicinity of the proposed activity site.

Species / EECs	No. of records	Assessment – likelihood of occurrence
Broad-billed Sandpiper <i>Limicola falcinellus</i>	5	<p>Unlikely.</p> <p>The species breeds in northern Siberia before migrating southwards in winter to Australia. In Australia, the species overwinter on the northern coast, particularly in the north-west, with birds located only occasionally on the southern coast. In NSW, the main site for the species is the Hunter estuary, with birds occasionally reaching the Shoalhaven estuary.</p> <p>The species favour sheltered parts of the coast such as estuarine sandflats and mudflats, harbours, embayments, lagoons, saltmarshes and reefs as feeding and roosting habitat. There is no such habitat on the proposed development site or in the vicinity of the proposed activity site.</p>
Black-tailed Godwit <i>Limosa limosa</i>	31	<p>Unlikely.</p> <p>The species is usually found in sheltered bays, estuaries and lagoons with large intertidal mudflats and/or sandflats. There is no such habitat on the proposed development site or in the vicinity of the proposed activity site.</p>
Terek Sanpiper <i>Xenus cinerus</i>	10	<p>Unlikely.</p> <p>The species inhabits mudbanks and sandbanks located near mangroves. There is no such habitat on the proposed development site or in the vicinity of the proposed activity site.</p>
Little Tern <i>Sternula albifrons</i>	78	<p>Unlikely.</p> <p>The species almost exclusively inhabits coastal sheltered environments, nesting in small, scattered colonies in low dunes or on sandy beaches. There is no such habitat on the proposed development site or in the vicinity of the proposed activity site.</p>

Species / EECs	No. of records	Assessment – likelihood of occurrence
Gang-gang Cockatoo <i>Callocephalon fimbriatum</i>	5	Possible. The species has been recorded within ten kilometres of the proposed development and the site comprises suitable habitat.
Glossy Black-cockatoo <i>Calyptorhynchus lathami</i>	7	Possible. The species has been recorded within ten kilometres of the proposed development and the site comprises suitable habitat.
Little Lorikeet <i>Glossopsitta pusilla</i>	3	Possible. The species has been recorded within ten kilometres of the proposed development and the site comprises suitable habitat.
Swift Parrot <i>Lathamus discolor</i>	2	Possible. The species has been recorded within ten kilometres of the proposed development and the site comprises suitable habitat.
Orange-bellied Parrot <i>Neophema chrysogaster</i>	2	Unlikely. On the mainland, the species spends winter mostly within three kilometres of the coast in sheltered coastal habitats including bays, lagoons, estuaries, coastal dunes and saltmarshes. The species also inhabits small islands and peninsulas and occasionally saltworks and golfcourses. Birds forage in low samphire herbland or taller coastal shrubland. There is no such habitat on the proposed development site or in the vicinity of the proposed development site.

Species / EECs	No. of records	Assessment – likelihood of occurrence
Eastern Ground Parrot <i>Pezoporus wallicus wallicus</i>	1	Unlikely. The species occurs in high rainfall coastal and near coastal low heathlands and sedgeland, generally below one metre. There is no such habitat on the proposed development site or in the vicinity of the proposed activity site.
Powerful Owl <i>Ninox strenua</i>	4	Possible. The species has been recorded within ten kilometres of the proposed development and the site comprises suitable habitat.
Masked Owl <i>Tyto novaehollandiae</i>	1	Possible. The species has been recorded within ten kilometres of the proposed development and the site comprises suitable habitat.
Regent Honeyeater <i>Anthochaera Phrygia</i>	2	Possible. The species has been recorded within ten kilometres of the proposed development and the site comprises suitable habitat.
White-fronted Chat <i>Epthianura albifrons</i>	14	Unlikely. The species is prefers wetland areas or in damp open habitats (OEH 2014g). There is no such habitat on the proposed development site or in the vicinity of the proposed development site.
Varied Sittella <i>Daphoenositta chrysoptera</i>	4	Possible. The species has been recorded within ten kilometres of the proposed development and the site comprises suitable habitat.

Species / EECs	No. of records	Assessment – likelihood of occurrence
Olive Whistler <i>Pachycephala olivacea</i>	1	Unlikely. The species generally inhabits wet forests above 500 metres.
Scarlet Robin <i>Petroica boobang</i>	1	Possible. The species has been recorded within ten kilometres of the proposed development and the site comprises suitable habitat.
Spotted-tailed Quoll <i>Dasyurus maculatus</i>	1	Possible. The species has been recorded within ten kilometres of the proposed development and the site comprises suitable habitat.
Eastern Quoll <i>Dasyurus viverrinus</i>	1	Unlikely. There has been no verified sightings of this species since 1963.
Long-nosed Potoroo <i>Potorous tridactylus</i>	1	Unlikely. The species inhabits coastal heath and wet and dry sclerophyll forests. Requires relatively thick groundcover where the soil is light and sandy. There is no such habitat on the proposed development site or in the vicinity of the proposed development site
Yellow-bellied Glider <i>Petaurus australis</i>	1	Unlikely - The species occurs in tall mature eucalypt forest generally in areas with high rainfall and nutrient rich soils (OEH 2014). There is no such habitat on the proposed development site or in the vicinity of the proposed development site.

Species / EECs	No. of records	Assessment – likelihood of occurrence
Grey-headed Flying-fox <i>Pteropus poliocephalus</i>	6	Possible. The species has been recorded within ten kilometres of the proposed development and the site comprises suitable habitat.
Yellow-bellied Sheath-tail-bat <i>Saccolaimus flaviventris</i>	1	Possible. The species has been recorded within ten kilometres of the proposed development and the site comprises suitable habitat.
Greater Broad-nosed Bat <i>Scoteanax rueppellii</i>	3	Possible. The species has been recorded within ten kilometres of the proposed development and the site comprises suitable habitat.
Bristly Shield Fern <i>Lastreopsis hispida</i>	1	Unlikely. The species grows in humus-rich soils in wet forest and rainforest gullies. The proposed activity site does not contain such habitat.
Sand Spurge <i>Chamaesyce psammogeton</i>	1	Unlikely. The species grows on dunes and sea strandlines and exposed headlands. The proposed activity site does not contain such habitat.
<i>Solanum celatum</i>	1	Unlikely. The species grows in rainforest clearings or in wet sclerophyll forests (OEH 2014d). There is no such habitat on the proposed activity site or in the vicinity of the proposed activity site.

Species / EECs	No. of records	Assessment – likelihood of occurrence
		Not found during site surveys.
<i>Greater Glider Petauroides Volans in the Seven Mile Beach National Park</i>	9	No. The site is not within or adjacent to the Seven Mile Beach National Park.

7.3 Clause 228 matters of consideration

Clause 228(2) of the *Environmental Planning and Assessment Regulation 2000* lists the factors to be taken into account when consideration is being given to the likely impact of an activity on the environment under Part 5 of the EP&A Act. The following assessment deals with each of the factors in relation to the proposed activity.

Table 4 Clause 228 (EP&A Regulation) matters

DOES THE PROPOSAL:	ASSESSMENT	REASON
<p>a) Have any environmental impact on a community?</p>	<p>Short-term may be low adverse but long-term positive.</p> <p>Some community members (adjacent residents) may be adversely affected.</p>	<p>The proposed activity would temporarily impact the community due to traffic disruptions and delays during the construction works. In the longer-term, however, the community would be provided with an improved and safer road.</p> <p>A number of residents have expressed opposition to the proposal on the grounds of reduced visual screening, amenity and increased traffic noise.</p> <p>The proposed activity would not have any impact on other community services and infrastructure such as power, water, waste water, waste management, educational, medical or social services.</p>
<p>b) Cause any transformation of a locality?</p>	<p>low adverse</p>	<p>The locality that would be affected by the proposed activity is a local road and road-side within a rural setting. The locality would remain the same.</p> <p>The amenity of the road caused by the large trees and bushland on the western side of the road may be affected by the works as many of the larger trees occur on the edge of the road and would be removed.</p>
<p>c) Have any environmental impact on the ecosystem of the locality?</p>	<p>medium adverse</p>	<p>The proposed activity would result in the removal of approximately 67 trees and result in an increase of the existing discontinuity of potential habitat caused by Coolangatta Road. However:</p>

DOES THE PROPOSAL:	ASSESSMENT	REASON
		<ul style="list-style-type: none"> • The seven-part test of significance provided in Section 7.2 concludes that the proposed activity would not have a significant impact upon endangered ecological communities or threatened fauna or flora. • No hollow-bearing trees or food resources critical to a particular species would be removed. • The ecosystem is disturbed being impacted by previous disturbances such as the construction and maintenance of the road and stormwater drainage systems. • Faunal habitat values are negligible (<i>i.e.</i> there are no hollow-bearing trees, waterways, food resources critical for particular species, rock outcrops, etc). • The proposal would not significantly exacerbate the discontinuity of ecosystems caused by the existing Coolangatta Road.
<p>d) Cause a diminution of the aesthetic, recreational, scientific or other environmental quality or value of a locality?</p>	<p>Medium adverse</p>	<p>The locality affected by the proposed activity is a local road and roadside within a rural and rural-residential setting. The locality would remain unchanged.</p> <p>The site of the proposed activity has very little recreational or scientific value. It has no access to any viewing or recreational nodes. The proposed activity would therefore not cause significant diminution of these values</p> <p>The proposal would result in the removal of approximately 67 trees, many of which are large and forming a natural bushland road-side corridor. Removal of many of the larger trees may reduce the aesthetic value of this section of Coolangatta Road. This view</p>

DOES THE PROPOSAL:	ASSESSMENT	REASON
		has been expressed by a number of adjacent residents.
<p>e) Have any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific, or social significance or other special value for present or future generations?</p>	negligible	<p>The site of the proposed activity has no significant aesthetic, architectural, cultural, historical, scientific or social values. As such, the proposed activity would have no impact on these items.</p> <p>There are no items in the vicinity of the work site on the State Heritage Register or the Shoalhaven LEP.</p> <p>The site is not within an Aboriginal Place declared under the <i>National Parks and Wildlife Act 1974</i>.</p> <p>There are no recorded Aboriginal objects in the area that would be affected by the proposal. There is also a low probability of Aboriginal objects occurring in the area (refer to Section 4.1).</p>
<p>f) Have any impact on the habitat of protected fauna (within the meaning of the National Parks & Wildlife Act 1974)?</p>	Medium adverse	<p>The proposed activity would result in the removal of approximately 67 trees as well as shrubs and saplings. This will reduce habitat for protected fauna (which in NSW is all native fauna)</p> <p>The seven-part test of significance, provided in Section 7.2 above, concludes that the proposed activity would not have a significant impact upon threatened fauna. Faunal habitat values are low and therefore the potential impact is considered to be low.</p> <p>There are no waterways, food resources critical to a particular species, rock outcrops, termite mounds, feed trees etc adversely affected by the proposed activity.</p>

DOES THE PROPOSAL:	ASSESSMENT	REASON
		<p>The proposed activity would not significantly exacerbate the existing disconnectivity caused by Coolangatta Road. Nor would it likely to increase the volume of traffic utilising that road that could contribute to increased road kill.</p>
<p>g) Cause any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air?</p>	<p>negligible</p>	<p>There are no species likely to rely on the site of the proposed works to the extent that modification would put them further in danger.</p>
<p>h) Have any long term effects on the environment?</p>	<p>negligible</p>	<p>Hydrology should be unaffected as the proposal would not change the amount of flow into the existing system and Coomonderry Swamp.</p> <p>The works would be relatively short term and the noise generated will occur during normal working hours.</p> <p>In the long-term, the construction area will stabilise, sealed and revegetated and long term effects are considered unlikely.</p> <p>The proposed activity would not use hazardous substances or use or generate chemicals which may build up residues in the environment.</p>
<p>i) Cause any degradation of the quality of the environment?</p>	<p>Medium adverse</p>	<p>The proposal would substantially reduce the amount of vegetation in the road corridor.</p> <p>The environmental safeguards (Section 1.3) to be undertaken would minimise impacts and risks to the quality of the environment.</p> <p>The proposal would not intentionally introduce noxious weeds, vermin, or</p>

DOES THE PROPOSAL:	ASSESSMENT	REASON
		feral animals into the area or contaminate the soil.
j) Cause any risk to the safety of the environment?	Positive	<p>The proposed activity is designed to reduce the risk to motorists and cyclists using this road by addressing current road safety issues, <i>i.e.</i> road-side hazards, narrow lanes, little to no road shoulders, and sightline deficiencies.</p> <p>The proposed activity would not involve hazardous wastes and would not lead to increased bushfire or landslip risks.</p> <p>The activity is not going to adversely affect flood of tidal regimes, or exacerbate flooding risks.</p>
k) Cause any reduction in the range of beneficial uses of the environment?	Positive	The proposed activity would improve the site's use as a local road by addressing current road safety issues, <i>i.e.</i> , narrow lanes, little to no road shoulders, large trees and non-frangible vegetation in proximity to the carriageway
l) Cause any pollution of the environment?	Low adverse	<p>The proposal would involve a temporary and local increase in noise during the construction phase due to the use of earth-moving machinery. However this would not affect any sensitive receivers such as schools, childcare centres and hospitals.</p> <p>The proposal may involve the use of vibration rollers which could lead to off-site vibration. There are however no houses, structures, gas lines, etc in the vicinity of the site that would be impacted by vibration.</p> <p>The proposal does not involve the use, storage or transportation of hazardous substances or the use or generation of chemicals which may build up residues in the environment.</p>

DOES THE PROPOSAL:	ASSESSMENT	REASON
		The site is not mapped as having potential for acid sulphate soils. The activity is therefore not expected to result in the oxidation of acid sulphate soils and subsequent leaching back into the waterways.
m) Have any environmental problems associated with the disposal of waste?	Negligible	The waste that would be generated by the activity (soil) can be re-used as Virgin Excavated Natural Material or in accordance with resource recovery exemptions or taken to a licensed waste facility. There would be no acid sulfate soils, trackable waste, hazardous waste, liquid waste, or restricted solid waste as described in the NSW <i>Protection of the Environment Operations Act 1997</i> .
n) Cause any increased demands on resources (natural or otherwise) which are, or are likely to become, in short supply?	Negligible	The amount of resources that would be used are not considered significant and would not increase demands on current resources such that they would become in short supply.
o) Have any cumulative environmental effect with other existing or likely future activities?	Negligible	The assessed low adverse or negligible impacts of the proposal are not likely to interact.
p) Any impact on coastal processes and coastal hazards, including those under projected climate change conditions	Negligible	The proposed activity would not be influenced by the tide. The proposed activity would have no effect on coastal processes including those projected under climate change conditions.

8. SIGNIFICANCE EVALUATION

The proposed activity would have a number of environmental effects described and evaluated in Section 7 of this environmental assessment. The clearing of vegetation, including approximately 67 trees which may adversely impact:

- fauna habitat
- visual amenity
- noise levels experienced by resident to the west of the clearing
- screening to and from the road to residences west of the area affected by the clearing works.

There would also be a short-term increase in noise and traffic delays during construction. The effect of this has, however, been assessed as of low significance and a normal part of all road rehabilitation projects. The clearing of approximately 67 trees could however be considered more than a negligible or low potential environmental impact particularly given negative response to the project from adjacent land owners/residents (refer to Section 6).

When deciding if the impacts of an activity are likely to significantly affect the environment and therefore require an environmental impact statement (EIS), the type, degree, and range of the impact must be considered on its merits (DUAP 1996). If an impact is extensive in terms of spatial or time dimensions and intensity and severity, there is potentially a high risk to the environment and an EIS should be prepared (DUAP 1996).

Although the clearing of the 67 trees (and shrubs) would have an adverse environmental impact, this impact is considered 'not significant' for the following reasons:

- The impact is considered acceptable considering the nature and purpose of the impact and the human safety benefits the activity would provide, *i.e.*, the proposal aims to improve road safety for motorists and cyclists.
- All practical efforts have been undertaken to reduce the impact on road-side vegetation during the design phase, with the design representing the minimal clearances that can be achieved whilst improving road safety in a cost-effective manner.
- The road-side in the location of the tree removal would still be predominantly bushland and form a wildlife corridor, albeit much reduced quality.
- The proposed activity appears to have the support of the broader community.
- The impact would not result in a threat to the health and safety of individuals of the community.
- The trees are not threatened species and there are no threatened plants known for the site.

- There are no populations of threatened fauna species expected to occur in the affected areas. The drainage channels represent only low quality foraging and dispersal habitat for the GGBF. Breeding habitat would be unaffected and in the long-term dispersal abilities would be unaffected.
- The works do not impact endangered ecological communities
- A number of measures would be implemented to mitigate potential impacts to fauna and reduce the amount of tree loss.
- Only four potential hollow-bearing tree would be removed and substantial procedures would be in place to minimise harm to any resident fauna (refer to Section 1.3).
- All other impacts are considered to have low, negligible or positive effects.
- No food resources critical to the survival of a particular species would be removed.
- No critical breeding habitat would be removed.
- The proposed work would not affect environmentally sensitive / significant areas such as areas with salinity problems, acid sulfate, sodic or highly permeable soils, subsidence or slip areas, erosion prone areas, areas with slopes of greater than 18 degrees, waterbodies, riparian areas, wetlands, or coastal dune systems (DUAP 1996).
- Bush regeneration works would be undertaken in the remaining road reserve to improve the quality of the remnant which would include weed removal and tree planting in appropriate locations.

The liability implications for Council by not undertaking the works and establish minimum clearance zones should also be considered.

This evaluation has been undertaken in accordance with the document "*Is an EIS required? Best Practice Guidelines for Part 5 of the Environmental Planning and Assessment Act 1979*" (DUAP 1996). The evaluation of 'not significant' determines that an environmental impact statement and/or species impact statement is not required.

9. DETERMINATION

This Review of Environmental Factors has assessed the likely environmental impacts, in the context of Part 5 of the *Environmental Planning and Assessment Act 1979*, of a proposal by Shoalhaven City Council for the rehabilitation of Coolangatta Road from Chainage (CH) 5350 to CH6550 measured from the Wharf Road intersection, Berry.

Shoalhaven City Council has considered the potential environmental effects of the proposal and the effectiveness and feasibility of measures for reducing or preventing detrimental effects. It is determined that:

1. The proposed safeguards identified in the report (Section 1.3) shall be adopted and implemented.
2. It is unlikely that there will be any significant environmental impact as a result of the proposed work and, as a result, an Environmental Impact Statement is not required.
3. The proposed activity is not likely to significantly affect threatened species, populations or ecological communities, or their habitats and a Species Impact Statement is not required.
4. No additional NSW statutory approvals, licences, and permits are required.
5. The proposed activity is not a 'controlled action' for the purposes of the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* and refer to the Commonwealth Minister is not required.

Ben Stewart
Director Assets and Works Group
Shoalhaven City Council

Date:

The REF has been prepared by: Geoff Young

Position: Environmental Operations Officer

Date:

10. REFERENCES

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<http://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10207>