



# **TEMPLATE ENVIRONMENTAL ASSESSMENT**

**Appendix 9 to OEMP  
Trimming of Overhanging Branches at the  
Brunswick Heads Nature Reserve**

**FOR THE  
  
BRUNSWICK HEADS TO YELGUN  
PACIFIC HIGHWAY UPGRADE PROJECT**

**CLIENT: NSW ROADS AND TRAFFIC AUTHORITY**



**Declaration**

This Environmental Assessment provides a true and fair review of the proposed activity in relation to its effects on the environment. It addresses to the fullest extent possible all matters affecting or likely to affect the environment as a result of the proposed activity.

Name: .....

Signed: .....

Designation: .....

Date: .....

I have examined this Environmental Assessment and the certification and accept the Environmental Assessment on behalf of the RTA.

Name: .....

Signed: .....

Designation: .....

Date: .....

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# 1 The Proposal

## 1.1 Description of proposal

The RTA has contracted Abigroup Contractors Pty Ltd to undertake the design, construction and ten year maintenance of the Brunswick Heads to Yelgun Pacific Highway Upgrade. The upgrade is 8.7 kilometres in length. At its southern extent, the project includes the duplication of the existing Brunswick Heads Bypass and crossing of the Brunswick River to the east of the existing Brunswick River Bridge. The upgrade then generally is constructed to the west of the existing Pacific Highway, connecting to an existing section of upgraded road north of Stock Route Road at Yelgun.

As part of this Pacific Highway upgrade project it is proposed to trim the branches of trees which are located both adjacent to and within the Brunswick Heads Nature Reserve (BHNR) where they overhang the new road reserve. The proximity of the main alignment of the new Pacific Highway to the BHNR, will result in these overhanging branches being at or near road level. Such trimming is considered necessary to provide safe clearance for vehicles driving on the highway carriage.

It is therefore proposed to trim overhanging branches from two distinct areas next to the Brunswick Heads Nature Reserve:-

Area 1:- West of the Pacific Highway

Area 2:- East of the Pacific Highway.

This activity will be undertaken from within the road reserve, and planned in such a way that the tree limbs fall into the road reserve.

The following work sequence is proposed:

1. Consultant botanist or arborist to pre-inspect the site to examine the trees and determine, where possible, any appropriate control measures which may be used to mitigate impacts on flora.
2. Toolbox train field staff undertaking works on the environmental sensitivity of the area, including BHNR and location of Threatened Species.
3. Limit access to the BHNR.
4. Plan the trimming operation on each tree, so that limbs do not fall into the Nature Reserve.
5. Trim the branches. Trimming is to be undertaken by an arborist and in accordance with the *Australian Standard 4373 - Pruning of amenity trees (1996)*.

## **2 Statutory Position**

This proposal would be assessed by DEC under the *EP&A Act* and the *National Parks and Wildlife Regulation 2002*.

The EP&A Act specifies that a public authority is required to consider the environmental impacts of its activities. Under s 111 of the EP&A Act the authority must take into account all matters affecting or likely to affect the environment as a result of the proposal.

### **2.1 Description of the zoning applying to the proposal**

Trees to be trimmed are located both within the BHNR and Road Reserve. Their location (as in where the tree trunk originates) is listed in Attachments A and B.

### **2.2 Any other relevant matters**

None known.

### **2.3 Confirmation that the proposal is subject to Environmental Impact Assessment under the EP&A Act.**

#### **2.3.1 Confirmation statement**

It has been determined by Department of Environment and Climate Change, Parks and Wildlife Division and Conservation Planning Unit that:-

1. approval under the *Environmental Planning and Assessment Act 1979* (EP&A Act), in the form of determination of an REF, is required; and
2. approval of the Parks and Wildlife Division Regional Manager is required for works undertaken in DECC estate under the *National Parks and Wildlife Regulation 2002*.

The proposed activity is the trimming of trees which overhang a road reserve associated with the operation of the Pacific Highway. The land is Zoned 8A National Park in the Byron LEP 1988..

The proposed activity is permitted in Zone 8A under the Byron LEP without development consent for any purpose authorised under the National Parks and Wildlife Act, or any purpose ordinarily incidental or ancillary to such a purpose.

Further, *State Environmental Planning Policy No 4 – Development Without Consent and Miscellaneous Exempt and Complying Development* removes the requirement to obtain any consent under all clauses of Byron LEP. Accordingly, the proposed works is an activity that must be assessed and determined under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

### **3 Need for the Proposal**

Trimming of trees is required to ensure the safety of motorists in providing a clear and unimpeded carriageway.

### **4 Background to the Proposal**

Abigroup Contractors Pty Ltd has been engaged by the NSW RTA to design, construct and maintain the Pacific Highway Upgrade Project from Brunswick Heads to Yelgun.

To undertake maintenance work tree trimming work close to the boundary, overhanging trees will need to be trimmed.

### **5 Existing Environment**

The existing environment is the main carriageway for the new Pacific Highway. The trees overhanging this area come from both the road reserve and the Brunswick Heads Nature Reserve.

### **6 Environmental Assessment**

#### **6.1 Traffic and transport**

The proposal would not change traffic arrangements, however once complete, the project will increase safety for motorists.

#### **6.2 Noise**

Tree trimming shall be carried out with use of chainsaw. All works shall be conducted during normal construction hours and will be of short duration only.

### **6.3 Air quality**

There is considered to be no impact on air quality.

### **6.4 Indigenous and Non-indigenous heritage**

An aboriginal midden is located within the BHNR. There are expected to be no impacts at all upon this site from trimming of the overhanging branches.

### **6.5 Visual quality**

There will be no loss of visual amenity from this branch trimming works, and as much as possible vegetation will be retained. Trimming will lessen the risk of branches falling onto the Pacific Highway, and will provide a clear and safe thoroughfare for all motorists.

Additionally it is considered that overall damage and stress to the trees will be reduced if trimming occurs (as compared to damage without trimming).

### **6.6 Social impacts**

Residents are located across the Pacific Highway, near Rajah Road. They will not be directly affected by the trimming of the branches. The trees within the Nature Reserve will always remain. Only the overhanging branches will be removed.

### **6.7 Geology and soils**

There shall be no disturbance to soils.

### **6.8 Water quality and hydrology**

There shall be no disturbance to water quality from tree trimming operations.

### **6.9 Flora and fauna**

Trees which require trimming have been identified. Threatened Species will also require trimming.

One is the White Yiel Yiel - *Grevillea hilliana*. White Yiel Yiel is listed as endangered in the *Threatened Species Conservation Act 1995*.

White Yiel Yiel is found on the north coast of NSW and in Queensland, north of Brunswick Heads. The only populations currently known in NSW are near Brunswick Heads and on the slopes of Mt Chincogan in Byron Shire and, in Tweed Shire in remnant patches of habitat. White Yiel Yiel's essential habitat is subtropical rainforest or regrowth rainforest.

Trimming works would involve trimming three branches of the White Yiel Yiel.

The other threatened plant which requires trimming is an *Acacia bakeri* (Marblewood). *Acacia bakeri* is listed as vulnerable under the Threatened Species Conservation Act 1995. It is found in north-east NSW and south-east Qld and is located north from Mullumbimby.

Trimming works would involve trimming one branch of the *Acacia bakeri*.

## 6.10 Weed Management

Weed material from this tree trimming activity will be carted to a waste management facility for containment.

## 7 Mitigation Measures

Factor	Mitigation Measure
Community	Nil
Safety	The activity will be overseen by the Safety Officer and safety mitigation measures recorded in the Job Safety Analysis (JSA) card for the activity.
Biodiversity	Only necessary branches shall be trimmed. A qualified arborist shall be used for trimming works.
Noise	Normal construction work hours would undertaken
Erosion and Sedimentation	There will be no disturbance to soils. Access shall be from road reserve only.
Air Quality	Not applicable.
Traffic	Traffic arrangements will not be affected, however safety to motorists will be improved.

## 8 Environmental Assessment

### 8.1 Clause 228 Checklist

Clause 228 of the EP&A Regulation lists the factors that an authority must take into account when examining the impact of its activity on the environment. Table 1 presents these factors and summarises the findings of the Environmental Assessment.

**Table 1: Clause 228 Checklist**

Factor	Conclusion
(a) any environmental impact on a community	Impacts to the community will be minimal because the work is adjacent to a major highway.
b) any transformation of a locality	Transformation to the locality will involve removal of overhanging branches. To minimise any potential impacts, surrounding vegetation located within the Nature Reserve shall remain.
(c) any environmental impact on the ecosystems of the locality	Impact is considered to be minimal. The construction of the original project included a significant revegetation program involving both native plants and Threatened flora Species.
(d) any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality	There is a potential for a slight reduction in aesthetic quality. In order to limit this only necessary branches shall be trimmed. It is considered that appropriately managed trimming of the branches by a qualified arborist will, in comparison to direct damage to branches by vehicular movements, reduce the potential for ecosystem and environmental damage.
(e) 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>BHNR is considered significant for various reasons, including:-</p> <ul style="list-style-type: none"> <li>• the use of the reserve for migratory birds from both northern and southern parts of the east coast of Australia;</li> <li>• the presence of aboriginal middens;</li> <li>• various threatened flora species which can be found in the reserve.</li> </ul> <p>Trees to be trimmed include a mix of those located in the road reserve and those in the BHNR itself. Of those located in the BHNR, there are threatened species, and an 8-part test assessment has been undertaken.</p>
(f) any impact on the habitat of protected fauna (within the meaning of the National Parks and Wildlife Act 1974),	No impact. No habitat trees have been previously identified, however the arborist would check all trees prior to trimming.
(g) any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air	No. Refer to assessment attached.
(h) any long-term effects on the environment	There would be none.

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Factor	Conclusion
(i) any degradation of the quality of the environment	No
(j) any risk to the safety of the environment	No
(k) any reduction in the range of beneficial uses of the environment	No
(l) any pollution of the environment	Minor potential for noise pollution, however works will only be carried out in approved construction hours.
(m) any environmental problems associated with the disposal of waste	No
(n) any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply	No
(o) any cumulative environmental effect with other existing or likely future activities	No

## Attachment A

**Table 1:- Trees located on the western side of the Highway** overhanging the road alignment which are either within or adjacent to the BHNr (trees identified by Andrew Benwell on 13 February 2006). Listed from south to north.

Tree (species)	Common name	Threatened Species?	Situated in	Trimming Required
<i>Flindersia bennettiana</i>	Bennetts Ash	No	Road reserve	Trim a branch.
<i>Acacia melanoxylon</i>	Sally Wattle	No	BHNr	Very tall mature tree with dead branches. Some dead branches have already fallen. Cut main overhanging branch.
<i>Grevillea hilliana</i>	White Yiel Yiel	Yes – listed as endangered	BHNr	Two dead branches and two live branches overhanging. Keep any seed and suitable cutting material (ie recent growth) for propagation purposes.
<i>Guioa semiglauca</i>	Guioa	No	Road reserve	Tree not looking healthy. The crown of the tree will be removed, above the barrier fence.
<i>Cryptocarya triplinervis</i>	Three Veined Laurel	No	Road reserve	The crown to be removed. Cut high up, near the bend in the trunk.
<i>Syzygium francisii</i>	Giant Water Gum	No	Road reserve	Three main overhanging branches, higher up.
<i>Diospyros fasciculosa</i>	Grey Ebony	No	Road reserve	Cut four minor branches. Collect the seed.
<i>Grevillea hilliana</i>	White Yiel Yiel	Yes – listed as	BHNr	Tree is thick with native vines. Use rope to tie back the overhanging branch so that young fruits can be left to mature and seed collected.

		endangered		Base of tree inside Nature Reserve by 0.3m.
<i>Casuarina glauca</i>	Casuarina	No	Road reserve	Two trees together. Cut the first tree overhanging the fence plus small branch of remaining tree.
<i>Casuarina glauca</i>	Casuarina	No	BHNR	Vine curtain over this dead tree – leaning over the road. Cut as high as possible. Dispose of weed vines (Twin-leaf Vine) offsite.
<i>Jagera pseudorhus var pseudorhus</i>	Foambark	No	BHNR	Cut three main overhanging branches.
<i>Cinnamomum camphora</i>	Camphor Laurel	No	BHNR	Cut multiple overhanging branches.
<i>Erythrina X sykesii</i>	Camphor Laurel	No	Road reserve	Cut two main limbs with branches leaning over the road. Dispose of prunings offsite.

## Attachment B

**Table 2:- Trees located on the eastern side of the Highway** overhanging the road alignment which are within the BHNR (trees identified by Andrew Benwell on 20 February 2006). Listed from south to north.

Tree (species name)	Common name	Threatened Species?	Situated in	Trimming Required
<i>Lophostemon confertus</i>	Brushbox	No	BHNR	Common native. Cut one main overhanging branch.
<i>Archontophoenix cunninghamidna</i>	Bangalow palms	No	BHNR	Only a few leaves will require trimming on two palms.
<i>Maclura cochinchinensis</i>	Native cockspur vine	No	BHNR	This vine is growing on the Hoop Pines. Trim a dozen minor branches overhanging the barrier fence.
<i>Ipomea sp.</i>	Morning glory	No - weed	BHNR	This weed is growing on the hoop pines.
<i>Araucaria cunninghamii</i>	Hoop pines	No	BHNR	The two hoop pines directly adjacent to the fauna fence are only saplings. Only 2-3 branches which will require trimming from each tree.
	Riberry	No	BHNR	Two riberry trees require trimming of one-two branches each.
<i>Acacia bakeri</i>	Marblewood	Yes – listed as vulnerable	BHNR	Only, if absolutely necessary will the <i>Acacia bakeri</i> require trimming. Any noted seed will be collected and prunings will be collected from the branch for propagation purposes.
<i>Bridelia</i>	Bridelia tree	No	BHNR	One branch requires trimming.

<i>Ficus macrophylla</i>	Moreton Bay Fig	No	BHNR	There is one large limb on the Moreton Bay Fig which appears to be directly underneath a proposed pile location. Cut the one limb, plus minor trimming of sub-branches around it.
<i>Parsonsia straminea</i>	Silk-pod vine on Moreton Bay Fig	No	BHNR	This vine is common and is located on the Fig. The only vine to be trimmed will be that removed when the fig is trimmed.

## Attachment C

Addendum to Environmental Assessment for Tree Trimming

Seven-Part Test (TSC Act 1995 & 2002)

The Threatened Species Conservation Act 1995 (NSW) (TSC) amends section 5A of the Environmental Planning and Assessment Act 1979 by including seven factors (a) to (g), which must be considered when determining “whether there is likely to be a significant effect on threatened species, populations or ecological communities, or their habitats”. If a significant impact is considered likely then a Species Impact Statement is required. The factors to be taken into account when making this assessment were revised from eight to seven points of consideration in the Threatened Species Conservation Amendment Bill 2002.

1. Seven-Part Test for Grevillea hilliana.

**(a) in the case of a threatened species, whether 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 likely to be placed at risk of extinction,**

There are two *Grevillea hilliana* to be impacted by the tree trimming proposal. On one plant there are two dead branches and two live branches to be trimmed, and the other plant will have its overhanging branch tied back (refer to REF Table 1).

The purpose of trimming the one tree in accordance with the Australian Standard is that the tree will be left in a healthy condition, and is a preventative procedure.

Once the branch is trimmed, it will be taken to a local native nursery for propagation by cuttings. If the propagation is successful it will support the native plant propagation process for the landscaping of the project as a whole.

The second tree won't be trimmed but will have its branch gently pulled back out of the way during the construction activity. In both cases the trees would remain alive and healthy, and the trimming would not affect the life cycle of the trees.

**(b) in the case of an endangered population, whether the action proposed 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 subject population of *Grevillea hilliana* is not listed as an endangered population, therefore this factor does not apply.

**(c) 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**

The threatened species under consideration is not an EEC therefore this factor does not apply.

**(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,**

The threatened species under consideration is not an EEC, therefore this factor does not apply.

**(d) 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**

The proposal will not affect, remove or modify the habitat of the threatened species. Only a small part of its canopy will be trimmed.

**(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**

The proposal will not affect, fragment or isolate the habitat of the threatened species. Only a part of its canopy will be trimmed.

**(e) whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly),**

No critical habitat will be affected by proposal.

**(f) whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan,**

There is no formal recovery plan or threat abatement plan for the *Grevillea hilliana*. The proposal is not inconsistent with the Byron Coast Group of Nature Reserves Plan of Management (Feb 1998).

**(g) 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.**

Clearing of native vegetation represents a listed key threatening process, however, the proposal does not constitute complete tree clearing. The proposal only involves trimming a few designated branches.

Clearing has been excluded from the immediate site by way of a protective barrier fencing and an environmental management system for the project.

#### **Seven-Part Test Conclusion**

The Proposal is not considered to represent a significant impact on *Grevillea hilliana*. A Species Impact Statement is therefore not required.

#### 2. Seven-Part Test (TSC Act 1995 & 2002) for *Acacia bakeri*.

**(a) in the case of a threatened species, whether 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 likely to be placed at risk of extinction,**

There is one plant that may require a branch trimmed (refer to REF Table 2).

Assuming that the branch will need to be trimmed, the purpose of the trimming is to leave the tree in a healthy condition. The trimming operation would be undertaken in accordance with the Australian Standard and would not affect the life cycle of the tree.

Once the branch is trimmed, it will be taken to a local native nursery for propagation by cuttings. If the propagation is successful it will support the native plant propagation process for the project as a whole. For this reason the proposal has a net positive impact on the life cycle of the threatened species.

**(b) in the case of an endangered population, whether the action proposed 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 subject population of *Acacia bakeri* is not listed as an Endangered population, therefore this factor does not apply.

**(c) 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**

A threatened species is under consideration, not an EEC, therefore this factor does not apply.

**(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,**

A threatened species is under consideration, not an EEC, therefore this factor does not apply.

**(d) 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**

The proposal will not affect, remove or modify the habitat of the threatened species. Only one branch of its canopy may be trimmed leaving the rest of the tree and surrounds intact.

**(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**

The proposal will not affect, fragment or isolate the habitat of the threatened species. Only a small part of its canopy may be trimmed.

**(e) whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly),**

No critical habitat will be affected by proposal.

**(f) whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan,**

There is no formal recovery plan for the *Acacia bakeri*. However there is a designated area set aside for the reintroduction of *Acacia bakeri* seedlings associated with the *Brunswick Heads to Yelgun Pacific Highway Translocation Plan (Addendum 3)*.

The collection, propagation of cuttings and re-establishment on site of the *Acacia bakeri* is consistent with this Translocation Plan.

**(g) 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.**

Clearing of native vegetation represents a listed key threatening process, however, the proposal does not constitute complete tree clearing. The proposal only involves light trimming.

Full clearing has been excluded from the immediate site of the tree by way of a protective barrier fencing and an environmental management system for the project.

### **Seven-Part Test Conclusion**

The Proposal is not considered to represent a significant impact on *Acacia bakeri*. A Species Impact Statement is therefore not required.