

**Appendix B Report on vegetation on inland alternatives
(via the Summerland Way)**

This Appendix contains the following information:

*A copy of the report, **Vegetation issues on Two Corridor Options Involving the Summerland Way and Connection back to the Pacific Highway**, Ecos Environmental Pty Ltd (Dr Andrew Benwell), April 2006*

**VEGETATION ISSUES ON TWO CORRIDOR OPTIONS INVOLVING THE
SUMMERLAND WAY AND CONNECTION BACK TO THE PACIFIC
HIGHWAY**

Prepared for

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by

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INTRODUCTION

Two alternative inland corridors involving the Summerland Way have been suggested as alternative inland corridors for that section of the Pacific Highway from Wells Crossing to Tyagarah. These are Inland Corridor A (Don Page suggested corridor, with refinement) and Inland Corridor B (CARS suggested corridor, with refinement).

A desktop and brief field vegetation assessment has been undertaken for these alternative inland corridors. For the purpose of identifying vegetation issues the Inland Corridor A is divided into 11 sections between Clarenza (south of Grafton) and the Pacific Highway west of Byron Bay. The Inland Corridor B is an alternative corridor to the Inland Corridor A between Casino and the Pacific Highway and is divided into five sections. The Inland Corridor B makes a closer approach to Casino then follows a more northerly route to the coast and tends to be further from existing main roads and population.

The description of vegetation below refers to the immediate surroundings of the existing Summerland Way and the projected routes from Casino north, as indicated on the aerial photograph overlay supplied by the RTA.

INLAND CORRIDOR A.

A Clarenza to Clarence River Crossing at Southgate

Terrain: Ridge of flat topped, sedimentary hills above the Clarence River floodplain

Vegetation: Cleared farmland and fairly extensive stands of Spotted Gum, Grey Box and Forest Red Gum open forest and woodland between the Pacific Highway and Lake Road approaching the Clarence River.

Endangered Ecological Communities: Small remnants of 'Subtropical Coastal Floodplain Forest' and 'Swamp Sclerophyll Forest on Coastal Floodplain' toward Lake Road.

Threatened Plant Species/Populations: There is potential habitat for the Endangered Grafton population of Snow Bush (*Cryptandra longistaminea*) in the Four Mile Lane area.

Koala Habitat: Wildlife Atlas contains 2 Koala records from this section. Forest Red Gum, a primary browse species, is common in the area of Merton Mews Estate and Four Mile Lane.

Comment: At the southern end of this section the Inland Corridor A option appears to be east of Four Mile Lane and intersects several remnant forest blocks between the Pacific Highway junction and Lake Road (Swan Creek). Shifting the route further to the east would reduce clearing within remnant forest blocks and may reduce impact on Koala habitat. A more detailed study of the local Koala population including the home range of

individuals within this area would facilitate more precise planning to reduce impacts on the Koala. There would also be a reduction in vegetation clearing and potential impact on EECs (e.g. Subtropical Coastal Floodplain Forest) toward Lake Road.

B Southgate River Crossing to Junction Hill/Copmanhurst Turn-off

Terrain: Clarence River floodplain and higher terraces.

Vegetation: The great majority of this section traverses cleared farmland. Alummy Creek is a significant permanent wetland habitat. Floodplain depressions in the vicinity of Alummy Creek on cleared pastureland contain transitory wetland habitat. A rare lowland rainforest remnant occurs on the Grafton Agricultural Research Station Forest.

Endangered Ecological Communities: Freshwater Wetland.

The lowland rainforest remnant on the Grafton Agricultural Research Station Forest does not represent the EEC 'Lowland Rainforest on Floodplain', but does represent 'Lowland Rainforest of the North Coast and Sydney Basin Bioregions', which is subject to a preliminary determination by the Scientific Committee.

Threatened Plant Species/Populations: Brush Sauropus (*Sauropus microcladus*) (Endangered) is reported from the rainforest remnant on the Grafton Agricultural Research Station Forest (Mr Fig Forest, pers. comm.).

Koala Habitat: No Wildlife Atlas records and little potential habitat.

Comment: The proposed route appears to cut the southwestern corner of Grafton Agricultural Research Station and impact on a rare lowland rainforest remnant known to contain a threatened plant species. Inspection of this area indicated it would be possible shift the alignment slightly west to avoid the rainforest remnant. The road would then encroach on housing at Junction Hill/Koolkan. It may be preferable to move the route to the eastern side east of the Research Station and Trenayr Dam on Bunyip Creek, but this would increase impact on remnant forest blocks immediately to the north.

C Copmanhurst Turn-off to Gurrangang Crown Reserve

Terrain: Gently undulating hills on sedimentary terrain.

Vegetation: mainly Spotted Gum-Ironbark forest, some bands of Forest Red Gum along drainage lines.

Endangered Ecological Communities: narrow bands of 'Subtropical Coastal Floodplain Forest' along drainage lines.

Threatened Plant Species/Populations: *Cyperus aquatilis* (Endangered) has been recorded from Gurrangang Crown Reserve. This section contains potential habitat for other Threatened species including *Polygala linariifolia* (Endangered) and *Grevillea*

masonii (Endangered). Gurrangang Crown Reserve contains several other rare species currently not listed as Threatened.

Koala Habitat: Wildlife Atlas contains 1 Koala record from the northern end of Gurrangang Crown Reserve.

Comment: Significant forest clearing to widen the Summerland Way may be necessary in this section. There is already a cleared corridor of rural residential allotments adjoining the existing road, but presumably this would be avoided. By following the existing highway as shown, fragmentation of forest habitat in the surrounding landscape would be minimised.

D Gurrangang Crown Reserve to Lawrence Road

Terrain: Gently undulating hills on sedimentary terrain.

Vegetation: Spotted Gum-Ironbark forest and bands of Forest Red Gum along drainage lines.

Endangered Ecological Communities: Narrow bands of 'Subtropical Coastal Floodplain Forest' along drainage lines.

Threatened Plant Species/Populations: This section contains potential habitat for the Threatened species *Polygala linariifolia* (Endangered) and *Grevillea masonii* (Endangered). There is a record of the latter species on Lawrence Road about 1km from the Summerland Way.

Koala Habitat: Wildlife Atlas contains 5 Koala records from this section.

Comment: The route follows the existing Summerland Way corridor and thereby minimises fragmentation of forest habitat in the surrounding landscape.

E Lawrence Road to Myall Creek (Whiporie town)

Terrain: Gently to moderately undulating hills on sedimentary terrain.

Vegetation: Mainly Spotted Gum-Ironbark forest, some Forest Red Gum along drainage lines and Slash Pine Plantation in Banyabba State Forest.

Endangered Ecological Communities: Narrow bands of 'Subtropical Coastal Floodplain Forest' along drainage lines.

Threatened Plant Species/Populations: This section contains potential habitat for the Threatened species *Cyperus aquatilis* (Endangered), *Polygala linariifolia* (Endangered) and *Grevillea masonii* (Endangered).

Koala Habitat: Wildlife Atlas contains 3 records of Koala from this section.

Comment: The route follows the existing Summerland Way corridor, which minimises fragmentation of forest habitat in the surrounding landscape.

F Myall Creek (Whiporie) to Myrtle Creek

Terrain: Gently undulating hills and flats on sedimentary terrain.

Vegetation: Slash Pine Plantation in Whiporie State Forest and extensive Forest Red Gum flats with gentle Spotted Gum rises to the north in Myrtle State Forest.

Endangered Ecological Communities: An extensive area of 'Subtropical Coastal Floodplain Forest' in Myrtle State Forest, mostly extending into the road reserve.

Threatened Plant Species/Populations: This section contains potential habitat for the Threatened species *Cyperus aquatilis* (Endangered), *Polygala linearifolia* (Endangered), *Grevillea masonii* (Endangered).

Koala Habitat: There are no Wildlife Atlas records of Koala east in this section, which may be related to lower soil fertility. This is indicated by the higher frequency of Narrow-leaved Red Gum and Orange Gum, and lower frequency Forest Red Gum in 'Subtropical Coastal Floodplain Forest'.

Comment: Significant forest clearing parallel with the Summerland Way would be necessary in this section, as the road reserve is forested. By following the existing highway as shown, fragmentation of surrounding forest habitat would be minimised.

G Myrtle Creek to Leeville (junction with the Inland Corridor B)

Terrain: Gently to moderately undulating hills and flats on sedimentary terrain.

Vegetation: Extensive Red Gum woodland flats and Spotted Gum open forest on rises.

Endangered Ecological Communities: extensive areas of 'Subtropical Coastal Floodplain Forest' in Braemar and Ellangowan State Forests and on private property between Braemar State Forest and Leeville.

Threatened Plant Species/Populations: Slaty Red Gum (*Eucalyptus glaucina*) (Vulnerable) is common in this section and sometimes co-dominant on flats and low rises. Small-leaved Paperbark (*Melaleuca irbyana*) (Endangered) is known to occur on the edge of the Summerland Way at the northern end of Braemar State Forest. This section also contains potential habitat for *Polygala linearifolia* (Endangered) and *Hedyotis galioides* (Endangered).

Koala Habitat: Wildlife Atlas contains 2 records of Koala from this section. There is a large amount of good quality Koala habitat in Braemer and Ellangowan State Forests.

Comment: The proposal would entail significant clearing of 'Subtropical Coastal Lowland Forest' occurring in the road reserve of the Summerland Way. By following the existing road, fragmentation of surrounding forest habitat is minimised. It would be difficult to avoid clearing fairly large numbers of Slaty Red Gum. Small-leaved Paperbark can probably be avoided, as it is rare and limited to one or a few sites.

H Leeville (junction with the Inland Corridor B) to the Richmond River

Terrain: Approximately 10km of floodplain and flats.

Vegetation: Mosaic of cleared pastureland and remnant Forest Red Gum woodland. A band of lowland gallery rainforest (Blackbean-Silky Oak association) occurs along Shannon Brook east of Leeville

Endangered Ecological Communities: Forest remnants on the floodplain generally represent 'Subtropical Coastal Floodplain Forest'. The gallery rainforest along Shannon Brook is equivalent to 'Lowland Rainforest on Floodplain'.

Threatened Plant Species/Populations: Slaty Red Gum (*Eucalyptus glaucina*) (Vulnerable) occurs in this section.

Koala Habitat: Wildlife Atlas contains no records of Koala from this section, which may be related to the lack of survey work on private property. There is a moderate amount of good quality, potential habitat on the southern edge of the Richmond floodplain.

I Richmond River to Tuncester

Terrain: This section includes floodplain and flats north of the Richmond River, the steep range separating the Richmond floodplain from the Back Creek Valley. The steep range that the proposed route crosses is a substantial barrier consisting of a series of parallel ranges and creeks trending east-west, including upper Pelican Creek and Meldrum' Creek east of Naughton's Gap. The ranges have a basalt capping overlying sedimentary strata.

Vegetation: The great majority of the floodplain is cleared agricultural land. Narrow bands of lowland gallery rainforest (Blackbean-Silky Oak association) occur along much of the Richmond River. There are also small remnants of Black Paperbark (*Melaleuca bracteata*) swamp sclerophyll, Forest Red Gum-Swamp Box (*Lophostemon suaveolens*) woodland (one large block) and Swamp oak and Paperbark swamp sclerophyll on the Richmond floodplain in the vicinity of the proposed route. The range supports a mixed forest generally equivalent to Forest Type 65 (Forest Red Gum-Grey Gum/Grey Ironbark-Rough-barked Apple) (FCNSW 1989), which is widespread in the region. Lowland subtropical rainforest may occur in some gullies, particularly on protected southern aspects.

Endangered Ecological Communities: 'Lowland Subtropical Rainforest on Floodplain' (Blackbean-Silky Oak association), 'Subtropical Coastal Floodplain Forest' (Forest Red Gum and Swamp Box), 'Swamp Sclerophyll Forest on Coastal Floodplains' ().

Threatened Plant Species/Populations: The Threatened swamp grass *Arthraxon hispidus* is likely to occur in this section.

Koala Habitat: Wildlife Atlas contains 2 records of Koala from the eastern end of this section, which may again be due to lack of survey work on private property. There is a moderate amount of good quality, potential habitat in the Back Creek Valley.

J Tuncester to Bex Hill (Lismore Bypass)

Terrain: This section crosses several large valleys and steep sided, flat-topped interfluves to the north of Lismore. Stream valleys include Leycester Creek, Terania Creek, Boorie Creek and Cooper's Creek. These valleys dissect the southern plateau of the Mt Warning volcanic shield.

Vegetation: The great majority of this section is cleared agricultural land or Camphor Laurel dominated forest regrowth. There may be some very small rainforest remnants, particularly on the steep side interfluves. (This area forms the southwestern edge of the former Big Scrub rainforest.)

Endangered Ecological Communities: Rainforest remnants would represent 'Lowland Rainforest of the North Coast and Sydney Basin Bioregions', which is currently subject to a preliminary determination by the Scientific Committee.

Threatened Plant Species/Populations: Threatened rainforest plants may occur in small patches of remnant vegetation or as isolated paddock trees, including Thorny Desmodium (*Desmodium acanthocladum*), Fragrant Myrtle (*Austromyrtus fragrantissima*), Brush Sauropus (*Sauropus microcladus*), Tarennia (*Tarennia cameronii*) and Arrow-head Vine (*Tinospora tinosporoides*).

Koala Habitat: Wildlife Atlas contains 3 records of Koala from this section.

Comment: Camphor Laurel forest represents a pioneer stage in the regrowth of rainforest on cleared and abandoned agricultural land. Although dominated by an exotic species, this type of forest has important habitat value for rainforest pigeons, including the Threatened Rose-crowned Fruit Dove.

K Bex Hill to Possum Creek (between Bangalow and Byron Bay)

Terrain: This section follows the lower slopes of the Byron Creek valley from near Bex Hill east to Bangalow in basaltic terrain.

Vegetation: The great majority of this section is cleared agricultural land or forest regrowth dominated by Camphor Laurel. There are small rainforest remnants and remnant rainforest trees growing in paddocks or amongst camphor laurel regrowth. (This area forms part of the core of the former Big Scrub rainforest.)

Endangered Ecological Communities: Rainforest remnants represent 'Lowland Rainforest of the North Coast and Sydney Basin Bioregions', which is currently subject to a preliminary determination by the Scientific Committee.

Threatened Plant Species/Populations: Threatened plants may occur in small patches of remnant rainforest vegetation or as isolated paddock trees. Species potentially occurring along the corridor include Coolmon Tree (*Syzygium moorei*), Ball Nut (*Floydia praealta*), Thorny Desmodium (*Desmodium acanthocladum*), Red Lily Pilly (*Syzygium hodgkinsoniae*), Issoglossa (*Issoglossa eranthemoides*) and Arrow-head Vine (*Tinospora tinosporoides*).

Koala Habitat: There are no Wildlife Atlas records of Koala from this section.

Comment: Camphor Laurel forest represents a pioneer stage in the regrowth of rainforest on cleared and abandoned agricultural land. Although dominated by an exotic species, this type of forest has important habitat value for rainforest pigeons, including the Threatened Rose-crowned Fruit Dove.

INLAND CORRIDOR B.

Note A-G above under Inland Corridor A is also common to this section.

A Boomoodeerie (south of Casino) to the Richmond River

Terrain: Floodplain and flats.

Vegetation: Cleared pastureland and some Forest Red Gum woodland. Wetland on "Horseshoe Lagoon" (degraded).

Endangered Ecological Communities: Forest remnants on the floodplain would generally represent 'Subtropical Coastal Floodplain Forest'.

Threatened Plant Species/Populations: possibly some Slaty Red Gum (*Eucalyptus glaucina*) (Vulnerable).

Koala Habitat: Wildlife Atlas contains no records of Koala from this section.

B Richmond River to Naughtons Gap

Terrain: This section includes floodplain and flats north of the Richmond River and the range separating the Richmond floodplain from the Back Creek Valley, which runs east to Lismore.

Vegetation: The great majority of the floodplain is cleared agricultural land. There are small remnants Forest Red Gum-Swamp Box (*Lophostemon suaveolens*) woodland and Swamp oak and Paperbark swamp sclerophyll on the Richmond floodplain in the vicinity of the proposed route. The range supports a mixed forest generally equivalent to Forest Type 65 (Forest Red Gum-Grey Gum/Grey Ironbark-Rough-barked Apple) (FCNSW 1989), which is widespread in the region. Lowland subtropical rainforest may occur in some gullies, particularly on protected southern aspects.

Endangered Ecological Communities: 'Lowland Subtropical Rainforest on Floodplain' (Blackbean-Silky Oak association), 'Subtropical Coastal Floodplain Forest' (Forest Red Gum and Swamp Box) and 'Swamp Sclerophyll Forest on Coastal Floodplains' (Swamp Oak and Broad-leaved Paperbark).

Threatened Plant Species/Populations: The Threatened swamp grass *Arthraxon hispidus* could occur in this section.

Koala Habitat: Wildlife Atlas contains no records of Koala from this section, which may be related to lack of survey work on private property.

C Naughtons Gap to Terania Creek (north of Lismore)

Terrain: This section descends the Naughtons Gap range and follows the Back Creek valley to west of Lismore, then bypasses Lismore to the north via Leicester Creek and Terania Creek.

Vegetation: The great majority of this section is cleared agricultural land or Camphor Laurel dominated forest regrowth. There is some Forest Red Gum woodland in the Back Creek valley west of Lismore. There may be some small rainforest remnants between Leicester Creek and Terania Creek.

Endangered Ecological Communities: Small remnants of 'Subtropical Coastal Floodplain Forest' and possibly some very small rainforest remnants representing 'Lowland Rainforest of the North Coast and Sydney Basin Bioregions' (preliminary determination by the Scientific Committee).

Threatened Plant Species/Populations: Threatened species may occur in small patches of remnant rainforest vegetation or as isolated paddock trees. Potentially occurring species include Thorny Desmodium (*Desmodium acanthocladum*), Fragrant Myrtle (*Austromyrtus fragrantissima*), Brush Sauropus (*Sauropus microcladus*), Tarenna (*Tarenna cameronii*) and Arrow-head Vine (*Tinospora tinosporoides*).

Koala Habitat: Wildlife Atlas contains 1 record of Koala from this section.

D Terania Creek (north of Lismore) to Corndale (north)

Terrain: This section crosses several large valleys and steep sided, flat-topped interfluves northeast of Lismore. Stream valleys Terania Creek, Blake Creek, Booerie Creek and Numulgi Creek.

Vegetation: The great majority of this section is cleared agricultural land or Camphor Laurel dominated forest regrowth. There may be some very small rainforest remnants, particularly on the steep side interfluves. (This area forms the southwestern edge of the former Big Scrub rainforest.)

Endangered Ecological Communities: Rainforest remnants would represent 'Lowland Rainforest of the North Coast and Sydney Basin Bioregions', which is currently subject to a preliminary determination by the Scientific Committee.

Threatened Plant Species/Populations: Threatened rainforest plants may occur in small patches of remnant vegetation or as isolated paddock trees, including Thorny Desmodium (*Desmodium acanthocladum*), Fragrant Myrtle (*Austromyrtus fragrantissima*), Brush Sauropus (*Sauropus microcladus*), Tarenna (*Tarenna cameronii*) and Arrow-head Vine (*Tinospora tinosporoides*).

Koala Habitat: Wildlife Atlas contains 3 records of Koala from this section.

Camphor Laurel forest represents a pioneer stage in the regrowth of rainforest on cleared and abandoned agricultural land. Although dominated by an exotic species, this type of forest has important habitat value for rainforest pigeons, including the Threatened Rose-crowned Fruit Dove.

E Corndale (north) to Coorabell

Terrain: This section crosses strongly dissected terrain of the former Big Scrub southeast of Nightcap National Park. The route crosses the major valleys of Coopers Creek and Wilsons Creek (the latter in the vicinity of Rous Water's old Federal Dam proposal).

Vegetation: This section comprises a mosaic of cleared agricultural and horticultural land, Camphor Laurel dominated forest regrowth and rainforest and wet sclerophyll remnants.

Endangered Ecological Communities: Rainforest remnants would represent 'Lowland Rainforest of the North Coast and Sydney Basin Bioregions', which is currently subject to a preliminary determination by the Scientific Committee.

Threatened Plant Species/Populations: A high number of Threatened rainforest plants potentially occur in this section including Coolmon Tree (*Syzygium moorei*), Ball Nut (*Floydia praealta*), Rough-shelled Bush Nut (*Macadamia tetraphylla*), Red Lily Pilly (*Syzygium hodgkinsoniae*), Corynocarpus (*Corynocarpus rupestris*), Hairy Quandong (*Elaeocarpus williamsianus*), Thorny Desmodium (*Desmodium acanthocladum*) and Arrow-head Vine (*Tinospora tinosporoides*)

Koala Habitat: There are no Wildlife Atlas records of Koala from this section.

Camphor Laurel forest represents a pioneer stage in the regrowth of rainforest on cleared and abandoned agricultural land. Although dominated by an exotic species, this type of forest has important habitat value for rainforest pigeons, including the Threatened Rose-crowned Fruit Dove.

SUMMARY IN REGARDS TO BOTH CORRIDORS.

The southern half of the Inland Corridors traverses the Clarence River floodplain and low sedimentary rises that extend north along the existing Summerland Way and reach a maximum elevation of 112 metres in Banyabba State Forest south of Whiporie. From this point the route descends over another series of low sedimentary rises and flats to reach the edge of the Richmond River floodplain at Leeville and Ellangowan. The highway proposal follows the existing Summerland Way from north of Grafton (Junction Hill) to south of Casino (Leeville). Clearing would be required within the road reserve, (which is often forested) and to some degree outside the road reserve. The extent of clearing would depend on the alignment and associated service roads.

The Clarence River floodplain (~10km wide at the crossing point) is almost totally cleared. Patches of wetland habitat remain and rare stands of the EECs 'Subtropical Coastal Floodplain Forest' and 'Lowland Rainforest' (preliminary listing) are present. North of the Clarence floodplain along the Summerland Way the route traverses 50-60km of largely forested country. In this section the proposal adjoins five State Forests (Banyabba, Whiporie, Myrtle, Ellangowan and Braemar) which support similar vegetation consisting of Spotted Gum-Ironbark forests on rises and Red Gum woodlands in low lying areas. Native forest comprises approximately 75% of the land cover and forms by far the largest tract of productive lowland forest remaining on the North Coast north of the Clarence River. The ecosystems found in large National Parks east of the Summerland Way adjacent to the Pacific Highway and west of the Summerland Way generally occur mainly on infertile substrates such as sandstone and coastal sands.

Two Crown Reserves adjoin the Summerland Way - Corymbia and Gurrang. There are no adjoining National Parks apart from a very small boundary with Fortis Creek National Park.

Along the Summerland Way south of Whiporie township, EECs comprise only a small percentage of the forest vegetation. To the north of Whiporie, about 50% of the forest vegetation consists of the EEC 'Subtropical Coastal Floodplain Forest'. The characteristic trees of this ecosystem are Red Gum (mainly Forest Red Gum but also Narrow-leaved Red Gum and Orange Gum), Grey Ironbark, Pink Bloodwood and Swamp Box.

The Richmond River floodplain like the Clarence is largely cleared. It contains remnant patches of the EECs 'Subtropical Coastal Floodplain Forest', 'Freshwater Wetland' and 'Lowland Rainforest on Floodplain'. Shannon Brook east of Leeville, where the Inland Corridor A and Inland Corridor B options diverge, supports one of the best examples of gallery rainforest (Blackbean-Silky Oak association) seen by the author. Inland Corridor A appears to impact on this system while Inland Corridor B avoids it (by leaving the Summerland Way closer to Casino).

North of Casino, both corridors impact on the range of hills dividing the Richmond River floodplain from the Back Creek valley west of Lismore. Inland Corridor A crosses the

range further to the east, which has a less fragmenting effect on the forest ecosystems of the range and lowland remnants in the Back Creek valley.

In the corridors north of Lismore, the landscape in this section is largely cleared and remnant native vegetation is rare, therefore the level of ecological impact would be relatively low, although there may be significant local impacts on remnant threatened plant populations. East of Corndale (northeast of Lismore), Inland Corridor A and Inland Corridor B follow different routes. Inland Corridor A follows the Byron Creek valley downslope of the existing Lismore-Bangalow Road. The landscape in this section is also largely cleared and the level of ecological impact relatively low. The Inland Corridor B route from Corndale east follows a more northerly route where it crosses a mosaic of pastureland, Macadamia orchards, Camphor regrowth and remnant patches of native vegetation closer to the southern margin of Nightcap National Park. There is a higher frequency of native forest remnants compared to Inland Corridor A east of Corndale and therefore there would be a greater probability of impacting Threatened plant species. At least 20 species of Threatened plants could occur through this section (see Table 1).

CONCLUSIONS.

- The greatest impact on native vegetation would be in the productive lowland forests along the Summerland Way between Grafton and Casino, which represent by far the largest area of productive lowland ecosystem remaining on the upper North Coast.
- The main EEC affected by the proposal is 'Subtropical Coastal Floodplain Forest'. Also, small remnants of the EECs 'Subtropical Rainforest on Floodplain', 'Lowland Rainforest' (preliminary listing), 'Freshwater Wetland' and 'Swamp Sclerophyll Forest' could be affected.
- Extensive clearing of the EEC 'Subtropical Coastal Floodplain Forest' (as well as Spotted Gum-Ironbark forest) would be required within the Road Reserve along the Summerland Way between Whiporie and Leeville.
- A large population of the threatened species Slaty Red Gum (*Eucalyptus glaucina*) occurs in the Road Reserve between Myrtle State Forest and Leeville.
- At least 30 threatened plant species potentially occur in vegetation types intersected by Inland Corridor A and Inland Corridor B. Generally these are likely to occur in small populations.
- The invasive roadside grass Pigeon Grass or Setaria (*Setaria sphacelata*), which is prevalent closer to the coast, appears to be absent from the Summerland Way.
- A more easterly crossing of the range of hills dividing the Back Creek Valley (west of Lismore) from the Richmond floodplain (Inland Corridor A) would have a less fragmenting effect on the range ecosystem.

- Between Casino and the coast, Inland Corridor A has a lower ecological impact than Inland Corridor B in terms of forest clearing, potential impact on Threatened plant populations and fragmentation of the Back Creek Range.
- There are a significant number of Koala records from the proposed road corridor, particularly the Summerland Way, and a large amount of poorly surveyed, good quality Koala habitat exists close to the proposal. The increased threat of road strike due to greater traffic volume and the barrier represented by a widened road would be central management issues for this species.

Table 1: Threatened plants potentially present in habitats on the proposed Inland Corridor A and Inland Corridor B.

Grafton to Casino		TSC Act	EPBC Act
<i>Acacia ruppia</i>	Rupp's Wattle	E	E
<i>Eucalyptus glaucina</i>	Slaty Red Gum	V	V
<i>Eucalyptus tetrapleura</i>	Square-fruited Ironbark	E	V
<i>Geodorum densiflorum</i>	Geodorum Orchid	E	-
<i>Grevillea masonii</i>	Mason's Grevillea	E	E
<i>Melaleuca irbyana</i>	Small-leaved Paperbark	E	-
<i>Oberonia titania</i>	Oberonia Orchid	V	-
<i>Oldenlandia galioides</i>	A herb	E	-
<i>Phyllanthus microcladus</i>	Brush Sauropus	E	-
<i>Polygala linariifolia</i>	A herb	E	-
Casino to Byron Bay			
<i>Amorphospermum whitei</i>	Rusty Plum	V	V
<i>Arthraxon hispidus</i>	Arthraxon	V	V
<i>Austromyrtus fragrantissima</i>	Fragrant Myrtle	E	E
<i>Corchorus cunninghamii</i>	Corchorus	E	E
<i>Davidsonia johnsonii</i>	Smooth-leaved Davidsonia	E	E
<i>Desmodium acanthocladum</i>	Spiny Desmodium	V	V
<i>Diploglottis campbellii</i>	Small-leaved Tamarind	E	E
<i>Elaeocarpus williamsianus</i>	Hairy Quandong	E	E
<i>Floydia praealta</i>	Ball Nut	V	V
<i>Hickesbeachia pinnatifolia</i>	Red Bopple Nut	V	V
<i>Issoglossa eranthemoides</i>	Issoglossa	E	E
<i>Macadamia tetraphylla</i>	Rough-shelled Bush Nut	V	V
<i>Marsdenia longiloba</i>	Slender Marsdenia	E	V
<i>Maundia triglochinosoides</i>	Maundia	V	-
<i>Rapanea richmondiana</i>	Richmond River Rapanea	E	E
<i>Senna acclinus</i>	Brush Senna	V	-
<i>Syzygium moorei</i>	Coolamon Tree	V	V
<i>Syzygium hodgkinsoniae</i>	Red Lily Pilly	V	V
<i>Tarenna cameronii</i>	Tarenna	E	-
<i>Tinospora tinosporoides</i>	Arrow-head Vine	V	V