

*Second Submission to the
Victorian Environmental Assessment Council*

Angahook – Otway Investigation

*Submission regarding Discussion Paper and
Otway National Park Boundaries*

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***Presented by the
Otway Ranges Environment Network***

c/- Apollo Bay Post Office, Vic 3233
ph: 03 5237 7439 or 0429 149 472

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1 Introduction

The following is the second submission to VEAC from the Otway Ranges Environment Network (OREN) which nominates areas of State Forest to be included in an expanded Otway National Park and Otway reserve system.

The first OREN submission to VEAC provided details of issues to be considered in determining an expanded Otway National Park and Otway reserve system but did not nominate specific areas.

The aim of this submission is to provide more specific detail on areas of State Forest that need to be protected for their nature conservation values, water values and tourism and educational values. There are also additional issues raised in the appendices of this submission.

For more detailed information on issues related to this submission see OREN's first VEAC submission and the OREN web site at www.oren.org.au.

1.1 OREN vision for the Otway public land reserve system

Overall, OREN believes that almost all public land currently zoned as state forest in the Otways merits inclusion within an expanded Otways National Park. The map on page 5 (Figure 1) shows OREN's preferred reserve system for the Otways. Crosshatched areas indicate public land that is currently not included in a reserve but which OREN believes must be included as national park or other dedicated reserve. OREN believes that the Angahook-Lorne State Park and Carlisle State Park should continue to be managed as reserve but included in the expanded national park. (Hence these areas are not cross hatched in Figure 1).

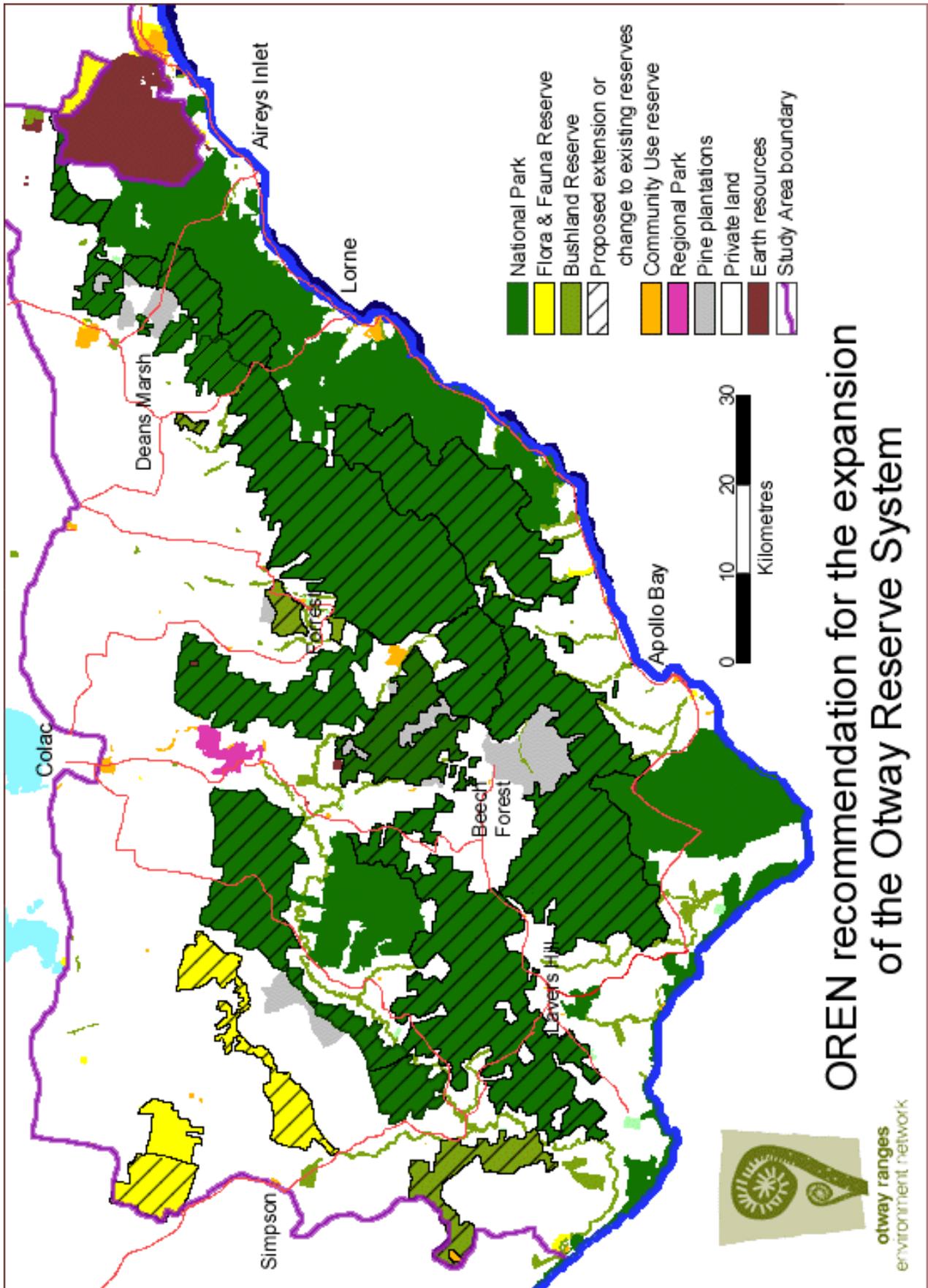


Figure 1: OREN recommendation for the expansion of the Otways Reserve System

1.2 Design of National Park

The following addresses issues raised in chapter 6 of the VEAC Discussion Paper.

OREN believes a large consolidated national park that protects all remaining large blocks of existing public land is merited for the Otways. Logical boundaries should be based on whole catchments as a first principle; followed by boundaries that are limited by the extent of public land. Such an approach would include areas already disturbed by past clearfell logging. Given the Park is to be in existence forever into the future, over time with additional community input, degraded logged areas can be restored and slowly regenerated back into forests. (The current Otway National Park had one third of its area clearfell logged before logging ended.)

OREN totally rejects the first approach in the Discussion Paper; ie. "A National park Formed by Separate Blocks" (page102). Such an approach will result in a failed opportunity to protect remaining diverse natural ecosystems and landscapes. The second option detailed in the Discussion Paper, to include large blocks linked by corridors, is in some cases unavoidable given only narrow corridors of public land currently exist. However narrow corridors though public land must be avoided and represent wasted opportunity.

OREN views the current CAR reserve system with its informal SPZ and SMZ reserves as inadequate and the product of past political manipulation by the woodchip industry and forestry bureaucrats who seemingly drove the RFA process (also see section 7 of OREN's first submission to VEAC). The failure in the RFA process with its informal reserves system was democratically rejected by the Victorian voters when the state government promoted a new policy for the Otways during the last state election. However the values recognised and protected within individual informal reserves should be carried on, and these areas included in an expanded National Park. The VEAC assessment should look at the overall landscape aspects of the Otways with the view to protect whole ecological systems and natural landscapes on public land.

2 Overall Otway Landscape Issues

2.1 Nature Conservation and Natural Landscapes

In a broad context, the Otways is an isolated patch of native vegetation that is now an ecological island. To the south is the Southern Ocean. To the north, east and west are expanses of created pasture devoid of natural ecosystems.

At a landscape level, the Otways is a precious island of nature within Western Victoria. There is now little room for further compromise on this remnant. For this reason alone, OREN believes all the public land in the Otway with native forests, heathland, coastal plant communities or other native vegetation should be included in an expanded national park. For more specific information, see Section 5 (Nature Conservation) and Section 9 (Otway Natural Landscapes) of OREN's first VEAC submission.

The Otways is the closest significant area of diverse natural landscapes close to large urban communities such as Geelong, Ballarat, Warrnambool and Western Suburbs of Melbourne. Given that natural landscapes are now rare in Western Victoria, it is socially responsible to protect all the public land in the entire Otways. 60% of the 6 million tourists that visit the Otway region each year are from Melbourne "getting away" from their urban environment, the Otways contain important natural landscapes from a community point of view.

The VEAC study area includes three major bio-regions (VEAC Discussion Paper Map 5) which include the Otway Ranges, Otway Plain and Warrnambool Plain. Of these three distinct landscapes the Warrnambool Plain and Otway Plain have already been extensively cleared and only remnant areas remain that must be protected. **The Otways Ranges bio-region is largely intact and on public land. There now exists a fantastic opportunity to protect the whole Otway Ranges bio-region inside a single national park.**

2.2 Large blocks of public land.

Given that national parks must be a certain size and incorporate large continuous tracts of public land where possible, the following observations are made.

Overall the Otways can be classified into four major blocks of public land which are surrounded by smaller blocks of public located to the north and west. Nearly all public land blocks in the Otways are connected to each other via public land corridors with the exception of two areas (Jancourt and Tomahawk) out to the west. A relatively small number of very small fragmented public land blocks are in the north east of the VEAC Study area.

The four main bodies of Otways public land are:

1. Angahook- Lorne State Park surrounded by the South Eastern, Barwon and Boonah state forests. This includes an area of at least 65,000 ha and is by far the largest single tract of public land in the Otways. (Note: does not include the Alcoa Lease that adds a further 7000 ha of important heathlands ecosystems.)
2. Otway National Park surrounded by the Aire state forest and West Barham Catchment, forms the next single largest single block of public land at about 24,000 ha.
3. The Western Otways state forest joined to the Carlisle State Park via a few large links of public land makes up third area of about 20,000 ha. This area of public land is entirely on the Northern Slopes of the main Otway ridge and is only connected to the south of the ridge by a small link near Browntown track.
4. The East Barham River, Wild Dog creek and the Head of the Aire River in combination with the Olangolah Flora and Flora reserve, West Gellibrand catchment and Lardners state forest, make up an area of about 14,000 ha. This block of public land is critical in linking together all other major blocks of public land within the Otways.

These four large blocks contain about 80% of the public land in the Otways under investigation by VEAC and meet size requirements for national park selection. The new expanded Otways national park should include all large blocks of public land.

2.3 Domestic Water Supply Catchments

As specified in Section 3 of OREN's first submission to VEAC, all public land that makes up domestic water supply catchments in the Otways must be included within Special Water Supply Reserves where water production is the primary use of the land. These Special Water Supply Reserves should be incorporated within the expanded Otways National Park so all other values can also be managed and protected. Where appropriate, tourism that does not put water quality or quantity at risk could still continue within catchments. For example the tourism activities that are currently allowed at Lake Elizabeth in the East Barwon catchment are an example of appropriate tourism infrastructure within Otway water supply catchments.

2.4 Wildlife Corridors

Where public land corridors link large areas of native forest, these wildlife corridors must be all protected. See Appendix C for list of wildlife corridors.

2.5 Otway ecosystems

The Otways contains a wide variety of ecosystems from Mountain forests on the main Otway ridge, large cool temperate rainforest communities in the Aire Catchments, through to foot hill forests and the Anglesea heathlands, coastal heathlands and Carlisle heathlands. Within these ecosystems live endangered species. To guard against climatic change, bushfires and disease every attempt possible must be made to incorporate all these different ecosystems into one national park that will represent and protect the full complement of Otways environments. For further details see OREN's first VEAC submission.

2.6 Consolidate land management issues

The public land in the Otways should be managed by one organisation, Parks Victoria. This would ensure a continuity of management for the natural values, fire prevention, and infrastructure development and maintenance. Where applicable, domestic water catchments would be jointly managed with the appropriate water authority (South West Water or Barwon Water).

2.7 Geological and Geomorphic sites of significance

Public land that incorporates geological and geomorphological sites of significance's outline by Neville Rosengren(1984) should be placed into legislated nature conservation reserves. This will not only protect such sites but their preservation in a natural state will benefit in educational and scientific understanding of the Otways.

2.8 Historic Cultural Sites

The Otways has a rich history associated with logging since European settlement. Many historic sawmills and tramway ruins are dotted throughout public land on the main Otway range. The 1997 LCC Historic Places Final Recommendations has listed these sites and recommended that many of them be formally placed within legislated conservation reserves. There is an opportunity to include almost all these historic sites into One national Park which will greatly help with preservation and education.

2.9 Democratic Processes and Government policy.

The following addresses issues raised in the start of Appendix A of the VEAC Discussion paper.

As mentioned in section 2 of OREN's first VEAC submission, the decision to create an expanded Otways national park was put to the Victorian people during the 2002 State election and received huge

endorsement through democratic processes. Considering this, the government's Otway policy provides for a minimum target to be reached. The key components of the policy are:

“Labor will create a single national park, extending from Anglesea to Cape Otways following the Great Ocean Road on the Eastern Side of the range. This will protect key areas of the Otways including some of Victoria's most striking waterfalls and rainforest areas.”

Note: This is also acknowledged in Appendix 1 of the VEAC Discussion Paper.

That bare minimum (for which OREN believe is not enough), is for the expanded national park to include all public land from Anglesea to Cape Otways to the south and east of the main Otway ridge. This would include the existing Otway National Park and Angahook Lorne State Park. Important rainforest areas would include all rainforest sites of significant. The reference to “striking waterfalls” includes Sabine Falls, Wye Rivers falls and numerous waterfalls in the headwaters of the Cumberland river.

The areas of state forest that would need to be included in the new national park under this policy include the headwaters of the following rivers and creeks.

- ?? Anglesea River
- ?? Painkalac Creek
- ?? Grassy Creek
- ?? St Georges River
- ?? Cumberland River
- ?? Separation Creek
- ?? Wye River
- ?? Kennett River
- ?? Grey River
- ?? Carisbrooke River
- ?? Nettle Creek and Sugar loaf branch.
- ?? Smythe Creek
- ?? Skenes Creek (Small isolated block of state forest only)
- ?? Wilddog Creek
- ?? East Barham River
- ?? West Barham River
- ?? Aire river catchment

(Note: This is list of major creeks and rivers only.)

2.10 Existing Formal Park and Reserve System

The exiting formal reserves system in the Otways protects a divers range of values but in a fragmented arrangement. These reserves are not linked together with a formal or informal reserve system. Reserves are made up of some forests but largely incorporate coastal ecosystems, heathlands and some mountain forests. These formal reserves include:

- ?? Otway National Park
- ?? West Gellibrand Bushland reserve
- ?? Olangolah Flora and Faun reserve
- ?? Anaghook-Lorne State Park
- ?? Carsiles State Park
- ?? Melba Gully State Park
- ?? Crinoline Creek Flora and Faun Reserve
- ?? Scenic Reserves
- ?? Education Reserves
- ?? Coastal Reserves (Kennett River and Wye River.)

When considering the total areas these existing reserves make up, they do not have much productive forests from a logging point of view. Hence the existing reserve system is a consequence of past government policies to allow clearfell logging and woodchipping to occur in the Otways. (Even when Otways National Park was created, the logging industry insisted logging continue until it was all extracted). Hence the politics of logging has influenced what is a reserve and what is state forest for a long time.

However now, for the first time since European settlement, objective decisions can be made based on all forest values without the logging factor compromising outcomes given it is now state government policy to phase out logging on or before 2008.

The existing formal reserves system in the Otways needs to be incorporated into a single Otways National Park.

OREN is concerned that several decades after the 1978 LCC final recommendations for Corangamite were made, some of the most significant mountain forest reserves have not been formally placed into legislated reserves. This includes the Olangolah Flora and Fauna reserve and Redwater creek Flora and Fauna reserves. OREN has news clipping evidence that the logging industry as recently as 1991 actively campaigned to get access into some of these areas.

The government must act ASAP to legally implement a formal reserve system recommended by VEAC within two years of recommendation being made.

2.11 Heritage and Representative Rivers

Within the VEAC Otways study area, the 1991 LCC Rivers and Streams Special Investigation recommended the Aire River as a Heritage River and the Tomahawk creek (or Kenney Creek) and Gellibrand River as representative rivers. Given that a government assessment has already occurred to recognise the values of these rivers, every effort should be made to include all public land that makes up the rivers catchment and frontages within a legislated reserve.

For the Gellibrand river, only a fragmented section of the river frontage is included on public land. OREN has estimated in total this public land river frontage adds up to less than 25 kilometres. Every effort should be made to protect these sections of public land in permanent reserves. For location of public land river frontage for the Gellibrand river, see Appendix B.

See section 3.10 and 3.14 of this submission for discussion about the Aire River and Tomahawk Creek respectively.

3 Reasons to change Otway State Forest into legislated reserves.

Otway State Forest areas that need to be placed into legislated reserves can best be summarised using the zoning system that was used by the Land Conservation Council *Final Recommendations for the Corangamite Area, 1978(E1 – E12)* and carried is over onto Map A of the VEAC Discussion Paper.

3.1 Boonah State Forest (E1)

The Boonah state forest includes public land on both the north and south side of the main Otway Ridge. Most of the Boonah state forest east of the Lorne-Deans March Road was burnt in the 1983 Ash Wednesday fires. As a result, state forest available for logging has not been targeted except for a small amount of salvage logging that occurred after the fires. When logging has occurred in the Boonah state forest, it has come into conflict with the local community who favours preservation of the environment. (See Pennyroyal Creek below).

Section 3.1.1 and 3.1.2 detail reasons why *all the Boonah State forest should be included within an expanded Otways National Park.*

3.1.1 Boonah state forest south of main Otway ridge

Headwaters of two major south flowing rivers are currently not protected in existing parks. They include:

- ?? *Painkalac Creek* is the domestic water supply for Aireys Inlet. About 2,080 ha section of the headwaters of this catchments is state forest. Overall most of the catchment is natural vegetation from mountain forests to unusual box iron bark forests and heathlands. This catchment is recovering from the 1983 bushfires.
- ?? *Grass Creek* catchment is entirely forested public land . This catchment is very large and contains very high natural landscape values such as waterfalls, gorges and mountain forests. An old coal mine and abandoned machinery within the headwaters have high historical value. The catchment is still recovering from the 1983 bushfires. Vehicle access into this catchment is restricted to catchment boundaries only. SPZ7077 (105 ha) provides habitat for the Spot Tailed Quoll.

The lower reaches of these catchments have been included within the Angahook Lorne State Park and have national estate listing. As raised in section 10.2 of the first OREN submission to VEAC, if the lower reaches of these catchments have such high conservation value then it is reasonable to assume the upper regions of these same catchments (which were not examined for National Estate values) also contain outstanding natural values and are worthy of inclusion into an expanded Otway National Park.

National and State park boundaries should follow catchment boundaries. However it is the view of OREN that this principle was compromised when the State Park boundaries were first drawn to allow logging to proceed. However now that logging is to end and government policy to protect the east face of the Otways, all these south flowing catchments should be completely incorporated within national park.

3.1.2 Boonah state forest north of main Otway Ridge

All rivers that run north of the ridge run into the Barwon River. These are:

- ?? *Pennyroyal creek* catchment is part of the Geelong domestic water supply. All the headwaters of this catchment is state forest (2,100 ha). This substantial forested area has a diverse range of ecosystems from foothill forests to wet mountain forests. The scenic Pennyroyal falls, Dunce track and Pennyroyal track are used by locals and tourists. Many people rely on natural environment to attract tourists to stay in B&B or cottages. Community-driven protests against logging at Dunce

Track in early 2002 resulted in a lot of community support for a national park in the region. The area also contains some old sawmills which contain historical and cultural value.

- ?? *Deans Marsh Creek.* The substantial headwaters of this creek are all public land with mountain forest in a very natural condition. This forest has very high scenic value for people driving on the Lorne - Deans Marsh road. Spectacular views of the wild untamed Otways can be seen from various vantage points before and after the road enters the Otway State Forest. There are also historic abandoned coal mines in the headwaters of this catchment with considerable historic importance. The area also has very high flora and fauna values.
- ?? *Retreat Creek (South west branch).* This river is severely degraded by agricultural development and pine plantations except for public land that includes most of the south west branch headwaters. This sub-catchment is the most north-easterly stand of mountain forest (wet sclerophyll forest) in the Otways. It contains a lot of mature old growth hollow-bearing trees and associated nesting birds and arboreal mammals. Given the environmental devastation of pine plantation development in much of the headwaters of Retreat creek, this area should be regarded as a trade-off for past land clearing for pine plantation development and preserved.



Wet Forest at Retreat Creek

- ?? *Wormbete State Forest* is assumed to be all three "Forest Areas" (F) shown on VEAC map A. This area was to be kept as forest as recommended by the 1978 LCC Corangamite study (area G1) as a trade-off to allow pine plantations to be established on public land nearby. This plantation never occurred but other existing plantations have compromised the natural environment in this area. Hence all this area, including land that was never developed for pine plantation, should be incorporated into an expanded Otway National Park. There are rare forest communities in this part of the Otways including grassy woodlands, located in the smallest "Forest Area" fragmented of public land on White Bear Spur Track. (See 1:25,000 map of Boonah for location).



Rare Grassy woodland on White Bear Spur Track

?? *Anglesea Headwaters state forest* forms the upper-most headwaters of the Anglesea river which is a south flowing river. The Anglesea river is located almost entirely within the Alcoa Lease land and Angahook-Lorne State Park. The majority of this forest areas is seldom visited with very little road access. It is in a very natural and undisturbed state with trail bike riders preferring to ride in the State Park. This “Unclassified” dry forest contains heath that is a part of the existing Anglesea heathlands. The Anglesea heath contains a quarter of all Victorian species, is one of the most diverse plant communities in Australia and is listed on the National Estate. Incorporating the Anglesea Headwaters state forest into an expanded Otways National Park will help consolidate a north buffer between existing agricultural land and the main Anglesea Heath. Including the Anglesea Headwaters state forest is also consistent with State government policy to include public land on the east side of the main Otway Range.

3.2 Barwon (Geelong Water) Catchment. (E2) (17,000 ha)

This part of the Otways includes the following streams that make up a critical part of the Geelong's domestic water supply catchment.

- ?? West Barwon
- ?? East Barwon(includes King Creek)
- ?? Callahan Creek (Includes Seymour Creek, Mackie Creek, Callahan South Branch, Callahan North Branch, Dewing Creek and Den Creek.)
- ?? Gosling Creek
- ?? Mathews Creek

About 60-70% of Geelong's and Bellarine Peninsulas domestic water supply comes from this catchment. Hence over 200,000 people and associated industries depend on this catchment for water. For more information see Section 3 of OREN first submission to VEAC.

Over the past eight years there has been a strong campaign by residents of Geelong (based on water issues) to end logging in Geelong's Otway water catchments; and the whole areas protected within a national park.

These catchment also include the high nature conservation values listed below. **Given the importance of water harvested from these catchments and nature conservation values, it is a paramount that the Barwon Catchment be included within a expanded Otways National Park.**

See also Appendix E of OREN's first submission to VEAC.

3.2.1 West Barwon (5,100 ha)

- ?? West Barwon Dam is located within this catchment and is a critical part of the domestic water system. A 200 metre buffer around the edge of the dam is already an informal reserve to protect reservoir water quality.
- ?? Forested land to the West of the dam is owned by Barwon Water. This land has mature forest for which Barwon Water has had a no logging policy for many years. This land is of high conservation value and should also be included in the National Park, and managed in a similar way to Melbourne's close water catchments.
- ?? Overall most of the catchment is public land and forested. Some sub-catchments have had a history of recent clearfell logging. However a large sub-catchment to the east has not been clearfell logged before. Recent plans to construct logging roads and open up this natural catchment have been shelved (Coldwater Creek Road was planned but never built.)
- ?? The catchment contains a diverse range of ecosystems from mountain ash, mountain mixed species Grey Gum and manna gum forests to name a few.
- ?? There is a significant amount of cool temperate rainforest in the Catchment which is rare on the northern slopes of the Otways.
- ?? The catchment is of great historical significance, with the remains of tramways, tunnels and sawmills that operated about a hundred years ago. These sites were recognised as needing preservation by the 1997 LCC Historic Places Investigation which recommended 100 metre logging exclusion zones. OREN believes whole catchment protection is warranted to protect these historic features.
- ?? The West Barwon catchment forms a public land link with the Olangolah Flora and Fauna reserve and Barongarook State forest.
- ?? A swamp (small wetland) in the north west corner of the catchment is recognised as a geological and geomorphic site of regional significance. Recommendations to exclude logging have resulted

in the area being placed in a small informal reserve.

- ?? Forest protests have occurred a numerous locations within the catchment. This includes Kaangalang road, and the West Barwon road. OREN was successful in campaigning to stop the construction of a new logging road, Clearwater road.

3.2.2 East Barwon (includes King Creek)

- ?? Lake Elizabeth and 1,300ha of headwaters are listed on the Heritage Register as an areas of National Estate. See Section 10.4 and 10.5 of OREN's first submission to VEAC.
- ?? East Barwon has a lot of mature old growth forest that have extremely high habitat value.
- ?? The East Barwon is a landslide prone area that needs to be protected from earth moving activities that could trigger more mass soil movement events. Landslides have occurred to make Lake Elizabeth and on Bowman spur. The Bowman Spur landslide occurred before European settlement and is a regional site of geological significance.
- ?? King Creek has high habitat values that were recognised with the creation of informal SPZ reserves during the RFA process. An SMZ also exists in recognition of tiger quolls and powerful owls in the area.
- ?? An historic sawmill (B43) in the King Creek headwaters was recommended as a legislated reserve by the LCC 1997 *Historic Places* Final Recommendations.

3.2.3 Callahans Creek (Includes Seymour Creek, Mackie Creek, Callahan South Branch, Callahan North Branch).

- ?? This catchment has significant numbers of veteran trees and old growth forest. Forest protests regarding old-growth logging at Middle Spur in 2000 resulted in logging operations being moved to a different area. Significant old growth forest is also found in Mackie Creek.
- ?? Callahans North Branch has a large informal reserve SPZ7071 to protect powerful owls in the region.
- ?? the most easterly stand of cool temperate rainforest found on the northern side of the Otways is found in Mackie Creek. This small community is very isolated from the rest of the Otway rainforests.
- ?? North Callahans Branch contains some very historic early tramways and sawmills. These were recommended for inclusion within legislated reserves by the LCC 1997 *Historic Places* Final Recommendations.
- ?? Other historic logging infrastructure, found in other parts of the Callahans catchment, were recommended for protection within legislated reserves by the LCC 1997 *Historic Places* Final Recommendations.

3.2.4 Dewing Creek, Gosling Creek, Mathews Creek

- ?? These catchments have a lot of old growth (veteran tree) mountain forest that was never logged. It has great habitat values. Informal reserves SPZ7074 and SPZ 7073 were created in the RFA process to protect habitat for major predatory birds such as the masked owl and powerful owl in this area. The fact these birds survive here is due to the presence of many hollow bearing trees and associated prey species. Map 6 of the VEAC Discussion paper also shows areas of old growth forest in these catchments. (These are also SPZ informal reserves).

?? The area has one historic sawmill site.

3.3 South-Eastern Otway State Forest (E3)

The south eastern Otway State Forests contains about 13,300 ha of mostly mountain forests. This area contains the headwaters of a lot of well known south flowing rivers that flow under the Great Ocean Road. They include:

- ?? St Georges River
- ?? Cumberland River
- ?? Separation Creek
- ?? Wye River
- ?? Kennett River
- ?? Grey River
- ?? Carisbrooke River
- ?? Nettle Creek (Sugar loaf branch)
- ?? Smythe Creek

Popular tourist towns are named after these rivers such as Wye River and Kennett River. The Cumberland river camping ground is very popular and the “Cumberland” hotel and convention s centre in Lorne is named after the river..

These rivers run wild and untamed. The headwaters are almost entirely on public land and in a very natural condition. Geologically these catchment are still a mystery with many unnamed waterfalls, gorges and cliffs.

Spectacular old growth forest and veteran trees make an ideal environment for the Tiger Quolls, Powerful owls and Masked owls. Many informal SPZ and SMZ reserves were created during the RFA process to protect these species. The forests of the South East Otways state forest are the most protected from human impacts in so far as they are buffered on all sides. The Barwon state forest acts as a buffer to the north and forests to the East and West also provides large buffers This is an important consideration for populations of Tiger Quolls and predatory birds that range over large areas and need to stay within forests and away from agricultural land that may be subject to 1080 fox poisoning. Such relative isolation offers many ecological benefits.

Small pockets of Cool Temperate Rainforest exist in this part of the Otways with myrtle beech and slender tree ferns.

Native fish populations are healthy within the south flowing stream however endangered fish include the Australian Grayling and Tasmanian Mud fish. An interesting aspect is all native fish in these rivers have a marine phase to their life. No purely fresh water native naturally exist in these streams. This is in contrast to the Aire, Barwon and Gellibrand rivers that have fresh water only native fish.

Overall these catchments “have it all” and should have a long time ago, been preserved in a National Park.

3.3.1 St Georges River

- ?? The St Georges River catchment is the domestic water supply for Lorne. Lorne is a large tourism town with a smaller full time population but large tourism population. Reliable water taken from this catchment is critical to maintain the health of the town and its economy. .
- ?? About 308 ha of the catchment is an informal reserve, SPZ7075, that protects old-growth forest habitat for the masked owl and Cool Temperate Rainforest.
- ?? There are many unmapped waterfalls in the upper reaches of this catchment.
- ?? Aesthetic landscape values of the headwaters of St Georges are important. Each New Years Eve, the Rock above the Falls concert is held on private land in the headwaters of this catchment. This sees an influx of over 10,000 people come to hear top music acts play in an outdoor environment that uses the scenery of the headwaters of the St -Georges catchment as a backdrop.
- ?? One of the first sawmills and tramways built in the Otways is located in this catchment. Remains of old steel rail can still be found in the creek. This sites was recognised as needing preservation by

the 1997 LCC Historic Places Investigation which recommended 100 metre logging exclusion zones. OREN believes whole catchment protection is warranted to protect these historic features.

3.3.2 Cumberland River.

The Cumberland River was determined to be the most natural river in Western Victoria during *the LCC Rivers and Stream Special Investigation*. The entire catchment, including headwaters, is public forested land. The Cumberland has the largest catchment of all the rivers in the south east Otways. The river is in a high rainfall area. Water is pure as it enters the sea all year round. This special quality makes this river stand out from all others in the Otways. The fact that the water is pure at the mouth, says a lot about the condition of the catchment.

The river and its total environment must be preserved within an expanded national park. This includes restrictions on water diversion to Lorne or any other town in the future.

For further information and detail about the Cumberland see *Appendix N* of first OREN submission to VEAC.

The Cumberland is made up of three sub-catchments.

3.3.2.1 Garvey Creek

- ?? Very deep valley that provides shelter to Cool Temperate Rainforest and slender tree ferns. This area is recognised and protected within an informal SPZ reserve.
- ?? Steep valleys have protected spectacular patches of old growth forest from past logging. The high habitat values of this forest resulted in the entire Garvey Creek state forest being incorporated within a SMZ for tiger quolls
- ?? The catchment includes cascades and other unnamed and unmapped waterfalls.

3.3.2.2 Cumberland North Branch

- ?? Contains huge trees, cool temperate rainforest and amazing habitat. Like Garvey creek, tiger quoll SPZ and SMZ informal reserves have been created to protect habitat for the Tiger Quoll.
- ?? Major waterfalls such as Yannathan falls (10m) and Upper Cumberland falls (30m) exist along with small gorges.
- ?? Cool temperate rainforest grows around and downstream from Yannathan falls. This rainforest is within an informal SPZ reserve.
- ?? An historic sawmill exists in this area.

Upper Cumberland – North Branch



3.3.2.3 Cumberland River South Branch

- ?? What makes this sub-catchment stand out is the many water falls. These include Brunswick falls (15m), Galliebaranda falls (4m), Amphitheatre falls (8m), Allambeebeek falls(10m) and Staircase falls (9m) to name a few.
- ?? This part of the Otways has been subject to more intense levels of clearfell logging but still retains outstanding nature values. There are many stands of old growth in this part of the Otways that have been protected within informal SPZ reserves that contribute to the overall habitat of the tiger quoll.
- ?? Small patches of Cool Temperate rainforest grow in this sub-catchment.

3.3.3 Wye River and Separation Creek

- ?? All the Wye River and Separation creek catchments are on public land except the low reaches at the townships of Wye river and Separation Creek. This catchment has very high natural landscape values.
- ?? The spectacular and seldom visited Wye river gorge and waterfalls are located in the headwaters of this catchment. A feature of the Wye river gorge is a narrow cataract which the Wye river has carved out over millions of years.
- ?? This catchment consists of extremely high natural landscape values. Like the Cumberland, the area has old growth forest, cool temperate rainforest and veteran trees that are suitable habitat for the Tiger Quoll and Masked Owl. This was recognised in the RFA process by the creation of informal SMZ7081, SPZ7065 and SPZ7068 reserves that include almost all the forested public land that makes up the headwaters of Wye river.
- ?? The headwaters of Separation creek have been put into a large informal reserve (SPZ7082) to protect old growth forest, cool temperate rainforest and spot tailed quoll habitat. Additionally SMZ7081 includes part of the Separation creek headwaters.
- ?? The lower reaches of Wye river are home to the Tasmania Mudfish which now only exist in a few locations on mainland Australia. This fish is listed as threatened by the Flora and Fauna Guarantee Act.
- ?? Recent community opposition to logging in the Wye river catchment was expressed by local residents in 2000 during community based protests and petitions.

3.3.4 Kennett River

- ?? All of Kennett river catchment, except the lowest reaches, are public land and have very high natural landscape values.
- ?? Kennett river has old growth forest that has been incorporated into SPZ7065 and makes up habitat for the spot tail quoll, masked owl and powerful owl. The presence of these species indicates a lot of mature hollow bearing trees that support the prey these species depend on.

3.3.5 Grey River

- ?? The entire Grey river catchment is on public land and has very high landscape values.
- ?? Natural values include old growth forest, Cool Temperate rainforest and associated records of Tiger Quolls and Powerful owls in the area.
- ?? Recent research has shown very good populations of native fish (climbing galaxias) exist in this catchment. (See Ecology of Freshwater Fish. 1998 pp 95-100)

3.3.6 Carisbrook River and Nettle Creek (inc Sugar loaf branch)

- ?? This catchment contains some outstanding old growth forest and cool temperate rainforest. Most of the western side of the catchment is within an SMZ to protect tiger quoll habitat.
- ?? Sugar loaf creek sub-catchment is all within Tiger Quoll SPZ due to a high old growth forest values.
- ?? Nettle Creek is all with SMZ and SPZ informal reserves except for the lower section that was logged in early 1970's
- ?? Historic sawmills have been recommended for inclusion within a reserve by 1997 LCC *Historic Places* report.

3.3.7 Smythe River

- ?? This catchment has been made regionally famous due community opposition to proposed logging near Sabine Falls. The Sabine Falls Scenic reserve and nearby associated old growth forest are of high cultural and aesthetic value. (See Appendix M of OREN's first submission to VEAC)
- ?? There are countless unnamed water falls in the headwaters of Sabine Creek. Recent media attention was drawn to a new waterfall found in the areas. (See Age 27th October 2003)
- ?? Forest in the headwaters of Smythe creek form an important wildlife corridor to Wild Dog Creek and the Barham State forest.
- ?? The lower reaches of public land accessed by Kinclad Road have extremely high scenic value for tourists and local residents driving on the cleared agricultural sections of Sunnyside road .
- ?? A large part of this catchment is within informal SMZ and SPZ reserves to help protect Tiger Quoll habitat. The whole catchment has high habitat value.

3.4 Barham State Forest (7,800 ha) (E4)

South flowing rivers currently not in parks include:

- ?? Wilddog Creek
- ?? East Barham River
- ?? West Barham River

This area also includes state forest that is known as the “Head of the Aire River”.

All these catchments contain Cool Temperate rainforest which are sites of regional significance. The headwaters of Wilddog Creek and the Barham river are very deep valleys that are an ideal environment for slender tree ferns to grow; these are common along creeks. A huge informal SMZ and SPZ tiger quoll reserve exists in the East Barham River. Overall the nature conservation values of the forests are extremely high.

The area being close to the Great Ocean Road has high aesthetic and scenic values which has been recognised by every government assessment ever conducted in the area.

Local community opposition to logging and a desire to see the area protected has been consistent and strong for over a decade. See Appendix J & K of OREN’s first submission to VEAC.

The Barham state forest will be critical in linking up the Otways into a continuous National Park.

3.4.1 Wild Dog Creek

- ?? One of the outstanding qualities of the public forest in this catchment is it has never been clearfell logging. The public land in the headwaters of this catchment is in an extremely natural condition.
- ?? There are a number of waterfalls including Wild Dog Falls.
- ?? There is considerable old growth forest and veteran trees.
- ?? Wild Dog ridge line is very scenic. See Section 4.7 of first OREN VEAC submission.
- ?? This area is linked by public land back to Sabine Falls and South East Otways.
- ?? Also see Appendix J of first OREN VEAC submission
- ?? Historic sawmill recommended for inclusion with a reserve by 1997 LCC Historic Places report.
- ?? An old landslide is located at the end of Wild Dog Ridge and is Geological Site of state significance.

3.4.2 East Barham River

(Includes East Branch creek, Falls Creek, Seaview Creek and an unnamed creek west of Riley’s Ridge.)

- ?? East Branch creek is within a Rainforest Site of Regional Significance.
- ?? This area is very steep and prone to landslides. See *Clearfell Logging in the Otways Forested Catchments. Water Yield and Water Quality Issues.*, Version 2, March 2001 which was submitted as a part of OREN’s first submission to VEAC.
- ?? Parts of this catchment have high visual value for tourists driving along Turtons Track and Forrest - Skenes Creek road.
- ?? Mariners Falls is an important existing tourist destination on Falls creek.
- ?? This catchment will become a part of the Apollo Bay domestic water supply catchment, increasing its overall importance to the local community and tourism industry.
- ?? Falls creek, Seaveiw creek and unnamed Riley’s Ridge Creek are all within Tiger Quoll SMZ and SPZ informal reserves.

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- ?? Tiger Quolls have been recently found in this catchment. See 6.7 of OREN's first submission to VEAC.
 - ?? Riley's Ridge forest is an important wildlife corridor and has high scenic value for tourists driving the Great Ocean Road. This was also the scene of forest protests in 1999/2000. See Appendix K or OREN's first submission to VEAC.
 - ?? The unnamed river west of Riley's Ridge has at least two large waterfalls and a narrow unnamed gorge.



Riley's Ridge (background)

3.4.3 West Barham Catchment

(E4) (1,300 ha approx)

- ?? The West Barham has historically been the domestic water supply to Apollo Bay. This fact and the nature conservation values of the catchment led to many forest protests against logging back in 1980's. As a result a moratorium on logging was put in place back in 1987 no logging has occurred in this catchment for over 15 years. The area has been a defacto reserve since the moratorium.
- ?? Binns Road that runs to the West of the catchment is highly scenic and used by a lot of tourists.
- ?? The Great Ocean Road has lookouts that look up the southern end of the catchment. This road also passes through forest of high scenic value at the southern end of the catchment.
- ?? The catchment has one of the only stands of pre-European old growth ash forest in the Otways. These are located in the Big Trees Reserve.
- ?? There is a Rainforest Site of State Significance on public land in the south west corner of the catchment.
- ?? Overall the catchment has very high nature conservation values.

3.5 Aire State Forest (9,800 ha) (E5)

This part of the Otways has some spectacular forests in one of the highest rainfall areas of Victoria. The area predominantly includes the Aire river below the Aire Valley licensed pine plantations. This magnificent area includes the following state forest sub-catchments:

- ?? Clearwater Creek
- ?? Redwater Creek
- ?? Youngs Creek
- ?? Ciancio Creek
- ?? Batemans Ridge Creek
- ?? Ford River East Branch
- ?? Holywater Creek

There has been ongoing community campaign to protect rainforest of the Aire catchment. For more information see Appendix C of first OREN VEAC submission.

The Aire state forest abuts the Otway National Park to the south and if joined to the park along with the West Barham, will create a large 24,000 ha consolidated block of national park.

Recommendation E5 of the *1978 LCC Final Recommendation for Corangamite Areas* stated that that the Aire river and its major tributaries should be placed within legislated reserves. Since 1978 only the Aire river corridor and Redwater creek have been placed within legislated reserves. Major tributaries that were recommended but have not been placed into legislated reserves include Clearwater creek, Ciancio Creek, Young's Creek and Batemans Ridge creek.

For more information on LCC recommendations with respect to the Aire Catchment see Appendix O of first OREN VEAC submission.

Given the past LCC recognition of values, additional values recognised since 1978 and proximity to the existing Otways National Park, all the Aire State Forest should become a part of an expanded Otways National Park.

3.5.1 Nature Conservation of the Aire Forest

Main nature conservation values of the Aire State forest are:

- ?? Largest concentration of Cool Temperate Rainforest in the Otways. The Aire has three Rainforest Sites Of Significance (RSOS) that include Redwater Creek State RSOS, Aire Youngs Creek National RSOS and Clearwater Creek State RSOS. Some of Redwater creek RSOS has already been made into a conservation reserve. (See Section 8 of OREN's first submission to VEAC.)
- ?? Some informal reserves called "Rainforest conservation areas" under the Otway Forest Management Plan have been created to protect core rainforest areas. These areas combined cover more than 1500ha and include SPZ7038, SPZ7039 and SPZ7040. These also protect powerful owl, masked owl, and tiger quoll habitat.
- ?? Slender Tree Ferns (See section 6.9 of OREN's first submission to VEAC)
- ?? Aire Heritage River. (See section 11.2 of OREN's first submission to VEAC)
- ?? High Natural Landscape Value (See section 9 of OREN's first submission to VEAC)
- ?? Aire river waterfalls and gorge is a Geological Site of State Significance. This section of the Aire river helped earn the Heritage river status.
- ?? An number of informal SPZ(7033 – 7037) reserves making up 585 ha exist in the Holywater Creek area. These were created to protect Cool Temperate Rainforest, heathland communities, and habitat for Powerful Owl.

?? The LCC *1997 Historic Places Final Recommendation* identifies a few important historic sawmill sites that were recommended for inclusion within legislated reserves.

?? The endangered Tasmanian Mud fish has recently been found in the Aire river.



Cool Temperate Rainforest

3.5.2 Tourism Values of the Aire Forests

The Aire state forest is an existing tourist drawcard with future economic potential. Main highlights include:

- ?? Triplet Falls scenic reserve and existing tourism facilities.
- ?? Beauchamp's Falls walk and scenic reserve
- ?? Little Aire Falls scenic reserve. This areas has been assessed by Connell Wagner in 2001 and was selected as an appropriate area to construct new walking tracks. The Triplet Falls management plan contains details of walks to these falls.
- ?? Hopetoun falls reserve (Start of Aire Heritage corridor).
- ?? Aire Crossing is a popular 4WD camping ground. (Note: It may be in breach of Heritage Rivers Legislation to have a camping ground at this point). Spectacular old growth ash forests are found by this river.
- ?? Great forest drives along Halls Ridge/Aire Cross Road, Young Creeks road and No.9 Ridge Road.
- ?? The latest tourism drawcard is the privately developed Skywalk located on private land near Triplet falls.

3.5.3 Former Victree Blocks

These are a number of former Victree blocks of land that are now public land and should be included within an expanded national park. . Issues with these blocks include

-
- ?? Two blocks within the centre of Aire State forest have been completely clearfell logged before being acquired by the state. However, their strategic importance in consolidating the whole Aire forest into a single tract of public land are important. With rehabilitation, over time the forests on these blocks will return. One block on Halls Ridge road is of strategic importance to the Aire River heritage corridor.
 - ?? Another block at Triplet Falls is cleared land. It has been cited in various reports as a place where car parks and tourism facilities can be constructed for Triplet falls without the need to clear existing forest.
 - ?? Another block west of Wait while Road, has mature blackwood forests and will help consolidate the small wedge of existing public land to the north.

3.6 Sheeppark Creek State Forest (E6) - Western Gellibrand Escarpment.

This area makes up a track of public land which forms an escarpment that follows the western bank of the Gellibrand river for approximately 17 km. All of the escarpment falls within the Warrnambool domestic water supply catchment . The public land is made up of:

- ?? Sheeppark Creek Forest (1,700 ha) (See below)
- ?? Gellibrand River Bushland Reserve (1,300 ha) (Wiridjil Bushland Reserve). This includes river frontage to Gellibrand river (see Appendix B) and forms a public land link to Crinoline Creek Flora and Fauna Reserve
- ?? Unidentified area of public land on a hill that was marked for pine development but was never cleared. This land is a critical forested link to join up with the Wonga forest area.

The top of the escarpment ranges from about 240-200 metres above sea level. Average rise from the Gellibrand river flats is about 200 metres.

There are very narrow sections of public land in the Gellibrand escarpment, located at the northern end. The north end of the Wiridjil Bushland Reserve is very narrow, only about 100-200 metres. However significant escarpment forest is on private land , particularly in the northern end. This means there is a continuous strip of native vegetation that is at least 1.5 km for the whole length of the escarpment. However at the point where the Western Gellibrand Escarpment joins the Wonga forest, a private pine plantation has reduced the native vegetation link to about 200 metres.

This area is a remnant of the recent Heytesbury Land Settlement Scheme. (See Appendix A for more details.)

The entire Western Gellibrand Escarpment needs to be protected as a part of an expanded Otways National Park for the following reasons.

3.6.1 Domestic Water Supply Catchment

All the escarpment falls within the Warrnambool domestic water supply catchment .

3.6.2 Wildlife Corridor

The Western Gellibrand Escarpment provides a link of public native vegetation from Wonga state forest to the Crinoline Creek Flora and Fauna Reserve and Sheeppark Creek state forest.

3.6.3 Sheeppark Creek State Forest E6 (Size 1,700 ha)

This is a small sub-catchment (4 X 5 km in size) of the Gellibrand river in still essentially a rare example of a natural landscape in good ecological condition (See Section 9 of OREN's first submission to VEAC). Almost the entire Sheeppark catchment is still public land and forested. (Except for approximately 250 ha of cleared agriculture land on the West Branch of Sheeppark creek.).

Logging disturbance has been low with one clearfell coupe on King Track in 1993 and some thinning coupes. There is also a disused quarry.

Sheeppark Creek state forest has significant sections of public land frontage to the Gellibrand River (approximately 4-5 km) which is generally rare. (See Appendix B)

There are several sites of Geological Significance within the Sheeppark Creek state forest. The most significant geological site is the Gellibrand River George and confined flood plain which is a State Site of Significance.

3.7 Kennedys Creek State Forest (E7)

This area of forested public land (2,500 ha) is made up of two distinct geological areas joined by a 200 metre wide strip of public land. They are Bryant Creek and Ferguson Hill (See below). Kennedys Creek state forest is a semi-isolated tract of natural vegetation that is still linked to the Western Otway state forests via public land on the Gellibrand river.

These forests are a rare naturally vegetated area of public land located in the Warrnambool bioregion. Kennedys Creek state forest was spared from being cleared during the Heytesbury Land Settlement Scheme and is now an important island of native vegetation in a 'sea' of dairy farms (See Appendix A.)

Given the near total extermination of native vegetation on farms developed as a part of the recent Heytesbury Land Settlement Scheme, ***all remnant bushland that makes up the Kennedy Creek State forest must be made a Bushland reserve to protect remnant bushland values.***

3.7.1 Bryant Creek Forest area

- ?? Public land is at the lower end of Bryant creek (comes off Ferguson Hill) which consists of a deep valley compared to surrounding country.
- ?? There has been little recent logging within this area.
- ?? The Bryant Creek Forest area has significant Gellibrand river frontage (approx 2km) which is rare (See Appendix B).
- ?? Significant areas of heathland are classified as SPZ (7026-7030), with the largest being 137 ha.

3.7.2 Ferguson Hill

- ?? The public land on Ferguson hill is approximately 200 metres above sea level and has scenic landscape values for the local community. Kennedys Creek divides the forested ridge line from the Gellibrand Escarpment.
- ?? Ferguson Hill is the headwaters of many streams that include Cooriemungle, Latrobe, Bryant and Kennedy Creek tributary.
- ?? There is a small public land stream frontage to Kennedy's Creek. (1-2 km)
- ?? The forest on Ferguson Hill has recently been subjected to heavy clearfell logging.



Kennedys Creek state forest

3.8 Jancourt State Forest (E8)

Jancourt State Forest (1,900 ha) and Carpendeit Flora and Fauna reserve (1,300 ha) make up a 3,200 ha block of forest that is isolated from rest of Otways. The nearest public forested land is at Tomahawk creek, 6km away, over cleared farm land.

Jancourt forest is a rare naturally vegetated area of public land located in the Warrnambool bioregion. The Jancourt state forest was recognised in the 1978 LCC Corangamite study as being a remnant of the original Heytesbury Land clearing scheme where 42,500 ha was cleared for agriculture between 1956 and 1971 (See Appendix A).

The fact the forest is remnant resulted in almost half of the Jancourt state forest being placed into SPZ7001 and SPZ7002 during the RFA process due to threatened flora and fauna values. About a 1000 ha is available for logging and has been subjected to intensive thinning operations over the past decade. Fortunately no clearfell logging has yet occurred.

Given this is a recognised fragment of forest left over from the Heytesbury land clearing scheme, **all the Jancourt state forest should be incorporated within Carpendeit Flora and Fauna Reserve** to create a single large 3,200 ha reserve. Protecting the Jancourt state forest will also provide additional buffering to protect the Carpendeit Reserve which only has a 100 metre buffer on its western edge from the state forest.



Jancourt state forest

3.9 Tomahawk Creek Escarpment

There is an 18km long (approx) strip of public forested land that follows an escarpment to the west of Tomahawk creek. (Note: The creek becomes Kennedys Creek where Tomahawk Creek Road crosses and Danger Creek joins in.)

Public land along Tomahawk creek is located in the Warrnambool bioregion.

Key components of the Tomahawk Creek Escarpment are:

- ?? Tomahawk Creek unclassified forest at the north.
- ?? Tomahawk Creek state forest area (G1). SPZ 7003 (563 ha) includes some of G1 area. The rest of G1 is listed as state forest but is surrounded by farm land. The only public access is by foot along creek.
- ?? Tomahawk Creek Bushland Reserve and Reference Area (1,840 ha)

The width of this public land is as narrow as 100 - 400 metres for approximately 8km in the middle section. Public land is 3-4 km at its widest points at the north and south ends.

Tomahawk Creek Escarpment is fragmented from the rest of the Otway forests, but has small native forest links through private land to the Wonga State Forest.

All public land that makes up the Tomahawk Creek Escarpment should be incorporated into a new Tomahawk Creek flora and fauna reserve for the following reasons:

- ?? The public land and associated natural vegetation has been retained along the river for approximately 18 km and provides habitat for indigenous aquatic life and native birds. The river is free of dams and other obstructions that would impede its flow. This natural river environment was recognised in the 1991 LCC *Rivers And Streams Special Investigation*, where Tomahawk creek (or Kennedy Creek) was given representative river status (C14).
- ?? As recommended by the 1978 LCC Corangamite study, area G1 should be left as a reserve. This area was to remain natural as a trade off to allow pine plantations to be established on public land nearby.
- ?? Wetlands exist at the river along area G1. Access is off Coradjil Road.
- ?? A number of Geological and Geomorphological Sites of Significance exist along Tomahawk creek of regional and local significance.
- ?? The whole Tomahawk Creek Escarpment forested area was originally to be cleared during the Heytesbury land settlement scheme but was spared for environmental reasons such as minimising erosion hazards (See Appendix A).



Tomahawk Creek state forest

3.10 Wonga State Forest (E9)

The total Wonga state forest(9500 ha?) is approximately a 7 X 12 km rectangular block of forested public land running East to West that is free of agricultural and urban development.

The entire Wonga State Forest should be included within a expanded National Park for the following reasons:

3.10.1 Cultural values. (Former Military Training Ground.)

Wonga was once a 9,500 ha proclaimed military training area, which lapsed in 1991-1992. This gives the area has some cultural value. The fact it was a military training ground may have been the reason it was spared from being cleared during the Heytesbury land development program. (See Appendix A).

3.10.2 Flora and Fauna values

The West RFA process made about half of the Wonga state forest into a combination of SPZ (2,200 ha) and SMZ (964 ha) informal reserves to protect the extremely high flora and fauna values of the area. This includes the tiger quoll for which the SMZ was created.

3.10.3 Domestic Water Supply Catchment (Gellibrand)

A significant part of the Wonga state forest is also a part of the Gellibrand domestic water supply catchment.

This includes:

- ?? Yahoo Creek (North and South Branches)
- ?? Gum Gully Creek.
- ?? Unnamed creek west of Gum Gully Creek .

The absence of farms and urban development in the Wonga forest means the quality of water that leaves the Wonga forest is high. This is an important consideration given that 44% of the Gellibrand catchment is developed land for plantations or agriculture. (See Appendix F,G,H of OREN's first submission to VEAC).

3.10.4 Other catchment values

The headwaters of Tomahawk creek (including Murree creek branch) start at the intersection of Carlisle Colac Road and White Peg Road. The river then flows to the north west corner of the Wonga State Forest. Tomahawk creek was recognised in the 1991 LCC *Rivers And Streams Special Investigation*, as a representative river status (C14) and includes a five kilometre stretch of river frontage in the north west corner of the Wonga state forest.

3.10.5 Wildlife corridors

The Wonga state forest forms an important block of public land that could easily be totally fragmented. Important wildlife corridors include:

- ?? Carlisle State Park to the south over the Gellibrand river.
- ?? Western Gellibrand Escarpment at south west corner.

There are also corridors of native vegetation on private land that link to the Wonga state forest. These include:

- ?? East link on Yahoo Creek north branch to Kawarren Regional Park through private land.
- ?? West Link To Tomahawk Creek Escarpment through private land.

3.10.6 Gum Gully Creek natural landscape

This small catchment of approximately 2000 ha is almost entirely within public land except last one kilometre that goes through private pine plantation. There is no agriculture or urban development with a very low level of past clearfell logging history. Significantly, SPZ 7005 (1017 ha) makes up about half of the gum creek catchment and creates wildlife corridor link to Carlisle State Park and SMZ 7008, SPZ 7009 and SPZ 7004..

The catchment is essentially a rare example of a natural landscape in good ecological condition (See Section 9 of OREN's first submission to VEAC).



Above and below: Gum Creek. These photos were taken within 100 metres of each other and show the diversity in the area.



3.11 Barongarook State Forest (E10)

The Barongarook state forest is large track of public land that is still unclassified public land. *The rare nature conservation and catchment values of the Barongarook State Forest are extremely high and warrant the entire area be included within an expanded Otways National Park* for the following reasons:

3.11.1 Domestic Water Supply Catchment (Gellibrand)

Most of the Porcupine creek is located within the Barongarook State Forest and is an important tributary of the Gellibrand river and Warrnambool domestic water supply. The headwaters of Porcupine Creek start in high rainfall mountain forest which are mostly forested public land with little past clearfell logging history.

Also Ten Mile Creek which mainly incorporates the Kawarren Regional Park and a small proportion of the Barongarook state forest.

3.11.2 Porcupine Creek wetland

Inland wetlands on public land in the Otways are rare, however the largest and most intact inland wetland is found mostly on public land on Porcupine creek within the Barongarook state forest. The actual size of the swamp, estimated from 1:25000 maps, is at least 100ha.

The actual wetland is already included within SPZ7051. Most of the wetland headwaters are located in mountain forest on public land that has only a limited past history of clearfell logging. This means the natural hydrological process of the swamp are relatively unaltered by European settlement.

Access into this swamp is extremely limited with no tracks or roads going into or near the swamp. The only access has been to walk downstream from Pipeline track. OREN has come to the conclusion that no-one goes to the swamp and little research has been done.

Part of the swamp to the west is a Geological Site of Regional Significance. (See Rosengren 1984)



Porcupine Creek wetland

3.11.3 Flora and Fauna values

The northern section of Barongarook State forest contains main rare Ecological Vegetation Classes (EVC) for which many which have already been incorporated into informal reserves. The Otway Forest Management Plan (Statement of Resources Uses and Values) acknowledged the floristic values of Barongarook are sites of significance.

SPZ7054 contains several rare flora communities including old growth riparian scrub and healthy woodland. SPZ7054 is a 866ha area that includes three small tributaries off Boundary creek. Most of Boundary creek catchment is cleared agricultural land except for these small sections within SPZ7054.

There are a number of SPZ that make up a total area of about 2400 ha within the Barongarook State forest. These SPZ's were created mainly to protect to protect threatened flora but also protect the tiger quoll and powerful owl habitat.

3.11.4 Wildlife corridors

The Barongarook state forest forms is an important block of public land that could easily be totally fragmented. Important wildlife corridors link to:

- ?? Kawarren Regional Park
- ?? Upper Gellibrand river and Lardners creek via a forested corridor that is aptly named Bridge Track. This public land forested link has not had any recent logging.
- ?? West Barwon catchment; however this link has been subject to some recent clearfell logging.

3.12 Lardner Creek State Forest (E11)

This part of the Otways (4,000 ha) is completely within the Gellibrand domestic water supply catchment. It contains mountain forest within a high rainfall area of the Otways.

Lardners Creek state forest is made up of public land that incorporates the following components:

- ?? Forest Areas
- ?? Former Victree Blocks
- ?? Lardners Creek East & West Branch
- ?? Asplin Creek
- ?? Barramunga Creek
- ?? Olangolah creek
- ?? Gellibrand River

Native forest within Lardners Creek and Asplin creek are almost divided into two by the Webster's Hill Pine Plantation. Although these areas are quite fragmented by past logging and pine plantation, it makes up important link of public land to the Barongarook state forest and has high scenic value.

All the Lardners state forest should be incorporated within an expanded Otways National Park.

3.12.1 High scenic value

The Lardners state forest is very centrally located within the Otways. Its position means it is accessible to tourists that are already using Turtons track, Triplet Falls and the new privately owned Skywalk. So far absolutely no effort has being made to promote some of the tourism potential of this area.

Highlights include:

- ?? The section of Lardners Track that follows the Gellibrand River is a wonderful forest drive of majestic giant manna gum trees. There are already existing camping grounds in this area.
- ?? Barramunga education reserve is a fantastic mountain forest reserve that tourists drive through when they visit Stevenson's falls.
- ?? Asplin Track is an overgrown road that forms a walking track through magnificent mountain forest.

3.12.2 Flora and Fauna Values

About 540 ha of state forest are located within informal reserves SPZ (7047, 7048). These reserves protect heathlands and wet mountain forests.

SPZ7048 is also a Forest Area or G1 recommendation under the 1978 LCC Corangamite final recommendations. (See *Wormbete state forest* page 11 above.)

Endangered species found within this part of the Otways include:

- ?? Slender Tree ferns
- ?? Old Growth
- ?? Cool Temperate Rainforest

3.12.3 Asplin Creek (3000 ha approx)

Asplin Creek catchment was, until recently, one of the least disturbed catchments in this area with only Websters Hill pine in headwaters. However until logging is phased out, clearfell logging is being concentrated within this area. Asplin Track, is overgrown (at the moment) but is an excellent walking track. SPZ 7047 (264 ha), includes very attractive forest along the Gellibrand river.

3.12.4 Wildlife Corridors

Lardners state forest forms an important wildlife corridor of public land to the Barongarook state forest. The main links are:

?? A narrow strip of public land located at Bridge Track links Barongarook state forest to Lardners state forest.

?? The Western edge of the West Gellibrand catchment links Lardners and Barongarook state forest to the rest of the public land base in the Otways.

A corridor of mature wet forest to the east of the Lardners state forest links the Barramunga Education reserve (135 ha) to the rest of the Otways public land base.

Rivers that pass through this public land wedge include:

?? Gellibrand River (overflow West Gellibrand catchment)

?? Olangolah Creek (overflow Olangolah catchment)

?? Barramunga Creek.

3.12.5 Former Victree blocks

A number former Victree blocks of land are now public land within the Lardner's state forest. These blocks fill a few holes within the public land landscape. This land should be incorporated within the Otways National Park.

3.12.6 Historic Sites

A number of historic sawmills exist out to the West of the Lardners state forest. The 1997 LCC Historic Places recommendations for South Western Victoria have recommended these sites be placed within legislated reserves.

3.13 Western Otways state forest (E12)

This significant part of the Otways is over 12,000 ha in size and contains a huge variety of ecosystems and landscapes. ***It is critically important to combine the Western Otways state forest and existing State Parks and flora reserves into an expanded Otways National Park*** for the following reasons.

3.13.1 Domestic Water Supply Catchment (Gellibrand)

A large proportion of the western Otways state forest is the Gellibrand (Warrnambool) water supply catchment. It includes the highest rainfall on the main Otway ridge at Weeaproinah.

Rivers that form the catchment and flow into the Gellibrand include:

- ?? Carlisle River (includes Camp creek)
- ?? Arkins Creek
- ?? Leahy Creek
- ?? Sandy Creek (Crinoline creek joins in from south).
- ?? Chapple Creek (North and south branches)
- ?? Skinner Creek

For more information on the Gellibrand catchment see Appendix F,G,H of OREN's first submission to VEAC.

3.13.2 Other catchment values.

Two other creeks that do not contribute to the Warrnambool water supply but still flow into the Gellibrand river include:

- ?? Arkinson Creek
- ?? Nariel Creek

These two creeks are mostly incorporated within the informal reserve SPZ 7032 which is a part of the Carlisle Heathlands (see below). These creeks have high natural landscape values with less than 20% of their catchment disturbed by agricultural and plantation development.

3.13.3 Tourism Potential

The tourism town of Lavers Hill is located on the eastern edge of the West Otways state forest. From Lavers Hill, tourists driving the Great Ocean Road are close to many scenic forest areas that have great potential to be developed into forest-based tourism attractions. These include:

- ?? Glasgow Falls scenic reserve (Old growth forest).
- ?? Morris Track (Potential scenic drive to Glasgow falls).
- ?? Link Track wildlife corridor and natural landscape.
- ?? Cobden – Lavers Hill road is an extremely scenic forest drive.

3.13.4 Camp Creek forest

This section of the Otways contains a concentration of specific values.

- ?? The RFA incorporated the west side of Camp creek into a number of SPZ(7015,7016) and SMZ7017 informal reserves to protect cool temperate rainforest and the spot tailed quoll.
- ?? The area contains a very historic sawmill and switch back tramway which was one of the last tramways to operate in the Otways. Remains of the tramway are still in good condition. The LCC 1997 Historic Places Study final recommended this entire site be included within a legislated reserve.
- ?? A geomorphological site of state significance exists in a tributary of Camp creek which is entirely within state forest. This site is nominated as a reference catchment where minimum disturbance

has occurred and natural drainage basin development can be studied in an area that has one of the highest rainfalls in Victoria. Recommendations include no disturbance to this site.

3.13.5 Arkins Creek Catchment

The Arkins Creek Catchment is an important natural landscape in the Otways that must be protected. See Appendix 1 of OREN's first submission to VEAC.

A number of blocks of land which were formerly privately owned, are located within the headwaters of the Arkins creek that is now fully owned by South West Water (SWW). One such block is located to the North of the weirs in the catchment. This land is either mature forest of excellent biological value, or land that had old dairy farms that have been bought back by SWW and are being revegetated with forest. (This may be one of the only areas in the Otways where land that was dairy farm pasture is being regenerated back into forests complete with original ecosystems.) All this land should be incorporated into a National Park managed jointly with SWW.

3.13.6 Flora and Fauna Values

The following endangered species and plant communities exist in the Western Otways:

- ?? Slender tree ferns
- ?? Old growth forest
- ?? Cool Temperate Rainforest
- ?? Spot Tailed Quoll

See sections 6 and 8 of OREN's first submission to VEAC.

3.13.7 Carlisle Heathlands. (Ground Parrot habitat)

The Western Otway state forest contain a significant area of heathland vegetation known as the Carlisle heathlands. Heathlands are very important and contain diverse flora communities. Most of the Carlisle heathlands are already within formal and informal reserves. These include:

- ?? Carlisle State Park which contains about a third of the Carlisle heathlands
- ?? Crinoline Creek Flora and Fauna reserve (1890) ha approximately 80% heathland,
- ?? SPZ 7020 (655ha)
- ?? SPZ 7032 (2731 ha)
- ?? SPZ 7031 (212ha) + Yuulong forest

The most significant component of the heathlands is the wet heath which is home to the endangered Ground Parrot and other vulnerable species (including the Bog Sun orchid). Additionally, the 1976 LCC *Report on the Corangamite Study* area found that the Carlisle heathlands represent by far the largest remnant of shining peppermint heathland woodland in Victoria.

Section 6.1.2 of the Otway Forest Management Plan also acknowledges the importance of wet heathland and healthy woodland and requires that all such areas should be reserved for their high flora and fauna values.

According to the Carlisle State Park Management Plan (1998), only 1350 ha of wet heath is protected within the Carlisle State Park with another 520 ha of wet heath found within the Crinoline Creek Flora and Fauna reserve. The largest wet heath area is approximately 2000 ha and occurs near Devondale within SPZ7032. Also SPZ 7020 contains some wet heath.

The Carlisle State Park Management Plan states that, in isolation, wet heath within the Carlisle State Park is not enough to ensure the survival of the ground parrot and other vulnerable species. The plan says in section 7.2.1,

"In isolation, the Park is too small to ensure the long-term maintenance of some of its most significant natural values (including its Ground Parrot population). Indeed, the most important areas of Ground Parrot habitat in the Carlisle Heathlands may be in the Devondale area to the south-west of the park

Conservation of these significant park values depends on appropriate management of other parts of the Carlisle Heathlands.”

Carlisle State Park Management Plan goes on to form “Management strategies” for all the Carlisle heathlands with the aim of maintaining their nature conservation values. Hence two thirds of the Carlisle heathlands, located within State forest and flora reserves, are required by the Carlisle State Park Management Plan to be managed as defacto extensions to the Carlisle State Park.

This formulates the basis for the argument that all the Carlisle should be joined together to form one interconnected heathland reserve to be incorporated within an expanded Otways National Park.

The ground parrot exists only in isolated places within Victoria. The nearest colonies to the Otways are hundreds of kilometres away are Near Portland to the west, Wilson Promontory and Mallacoota to the east. This makes the Otway ground parrot habitat very important on a landscape level.

Given the ground parrot is reputedly in decline in the Otways, consolidation of its entire habitat into one reserve will greatly help with efforts to identify and preserve remaining birds and work on recovery programs that may involve reintroduction and recolonisation of areas.



Heathland at Devondale

3.13.8 Geological Sites of Significance

Several important Geological Sites of Significance are located within the West Otways state forest. These sites were identified by Rosengren (1984) and include:

- ?? Perched lakes located within SPZ7020. These are of state significance. (7.8a and 7.8b Rosengren ref.)
- ?? Carlisle river tributaries – reference catchments located in the headwaters of Carlisle River. These are of state significance. (8.10a and 8.10b Rosengren ref.)
- ?? Glasgow falls fossil site of state significance. (15.2 Rosengren ref.)

3.13.9 Charlies Creek State Forest

Although there is not an areas nominated as the Charlies Creek State Forest in previous government planning processes including the VEAC discussion paper, OREN believes this area should be named separately. Two blocks make up the area. One 539 ha block is linked to the western Otways via SPZ 7013. This block is entirely within SPZ7014 and represents the only significant reserve of public land on Charlies creek. The area has very mature mountain forests that provide habitat for the spot tailed

quoll. Another smaller 120 ha block of public is separated from SPZ7014 by only a 100 meters. Ecologically these two blocks and joined by forest on private land.

3.13.10 Wildlife Corridors.

The Western Otways contains distinct components of public land that are connected by public land wildlife corridors. In particular, the Carlisle State Park to the north is connected to the West Otway state forest via a series of important wildlife corridors that include:

- ?? Link Track which links the Carlisle State Park to Arkins Creek and Aire forest in totally intact forested link. (See appendix L of first OREN VEAC submission).
- ?? SMZ 7017 (402ha) links to Arkins Creek via ex-Victree land. This has been heavily logged in some parts.
- ?? SMZ 7013 (283 ha) links to a block of state forest in Charlies Creek (East of Carlisle State Park) which is totally incorporated within SPZ 7014 (539 ha).

Additionally there is the opportunity to increase the size and effectiveness of corridors by incorporating land that was previously owned by Victree



Manna gum forest at Link Track

3.13.11 Former Victree Blocks

Several former Victree blocks of land that are now public property will improve existing public land wildlife corridors and other forest values. These include:

- ?? Charlies creek block located next to SMZ(7013) will increase the size of this public land wildlife corridor to Charlies Creek State forest (See 2.18.9 above).
- ?? Delaney track block located next to SMZ(7017). These Victree blocks will help protect values associated with Camp creek (See 3.18.4 above). Also significant river frontage along the Carlisle river will be protect.

-
- ?? Several former Victree blocks (4 total) located in a cluster will help create a wildlife corridor to a small fragmented area of state forest located at Crows. This is an opportunity to consolidate the public land located at Crows into the larger Western Otways State forest.
 - ?? Converting former Victree blocks of land on Egans Track will help protect the Arkins creek catchment.

3.14 Other Small isolated State forest areas

Other small isolated patches of state forest that should be protected include:

- ?? *Skenes Creek State forest* which has high scenic value for people driving along the Skenes Creek Forrest Road. This is the only public land in the Skenes Creek catchment. This area should be included within an expanded Otways national Park.
- ?? *Yaughar State Forest* that has 144 ha of SPZ(7055 and 7056) that protect rare foothill vegetation of the Otway Plain bio-region. This small state forest should be placed into a bushland reserve.
- ?? *Pennyroyal Forest* is a rare floristic community within the Otway Plain bio-region which should be protected within a bushland reserve.

3.15 Melba Gully State Park

OREN believes the Melba Gully State Park should remain as a State Park. However this State Park should be made larger by taking advantage of a former Victree block of land to the south of the existing park to consolidate the Beauty Spot Scenic reserve and Aire Bushland Reserve into a larger single Melba Gully State Park.

3.16 Public Land within the West Gellibrand and Olangolah Catchments

These extremely important public land areas are a part of the Colac domestic water supply catchment. Overflow from the West Gellibrand and Olangolah dam forms part of the Warrnambool domestic water supply.

The West Gellibrand is made up of 1000 ha of public land owned by Barwon water which has extensive natural vegetation. Another 400ha is State forest within an informal SPZ reserve. The Gellibrand River Land Use Determination excludes logging from this area.

Olangolah is recognised as one of the most natural landscape in the Otways. Both catchments combined make up an important wildlife corridor that connect up the east and west Otways.

The nature conservation values of these catchments are high. Within these catchments are old forest that when combined make up over 3000 ha of wild country that act as a minim wilderness in the Otways. A National and Regional Rainforest Site of Significance exist in this area. Turtons track is one of the premier tourist forest drives in Victoria. **These entire catchments must be included within an expanded Otways National Park.**

Appendix A - Remnant bushland of the Heytesbury Forest

A number of state forest areas are remnant blocks of forest known as the Heytesbury forests. The Heytesbury forest was destroyed as a part of the Heytesbury Land Settlement Scheme which involved the clearing of 43,500 ha by the government to establish mainly dairy farms. Land clearing occurred between 1957 and 1970.

The 1976 LCC *Report of the Corangamite Study Area* (page 225), acknowledged that only a few remnants of the once extensive Heytesbury forests now remain. This report describes these remnant of natural vegetation as “*a relic of the once vast Heytesbury forest*”.

The 1976 LCC report also provides a map titled “*Public Land and Descriptive Blocks*” which provides location of the Heytesbury Block (8). Within the Heytesbury Block are shown small state forest “relics” that once made up the extensive Heytesbury forests.

These areas include.

- ?? Jancourt State Forest and Carpendeit Flora and Faun Reserve
- ?? Tomahawk Creek State Forest and Bushland reserve
- ?? Kennedys Creek State Forest
- ?? Sheeppark Creek State Forest and Wiridjil Bushland Reserve
- ?? Wonga State Forest.

Land clearing caused impacts that were not known until after the event. Tunnel erosion was a big problem with trees pushed into water courses, accelerating erosion. Clearing water courses and then straightening creeks increased water flow and caused severe erosion as in Scotts creek. The States Rivers and Water Supply Commission insisted that a buffer of natural forest be left along major water courses, and this is why forest still remains along Tomahawk Creek.

See page 96, Heytesbury: Once in a Lifetime. Hec Fisher.

Additionally some country was too steep to be cleared with chain and ball bulldozers as the ball and chain combination did not work on steep slopes.

According to Hec Fisher (employee of the Soldier Settlement Commission) in his book, *Heytesbury: Once in a Lifetime*, at the time of clearing, on paper there were no blocks of trees to be spared. It was only during the clearing process that plans were amended for forest to be left at Tomahawk Creek and Bryant Creek in the Kennedys Creek state forest.

See page 22, Heytesbury: Once in a Lifetime. Hec Fisher.

The Jancourt Forests are the main example of Heytesbury forest targeted for clearing that was spared despite being suitable for clearing. This is recognised in the 1978 LCC recommendation E8.

All public land that contains natural vegetation that is remnant of the once vast Heytesbury forests should now be preserved in a combination of National Parks, Flora and Fauns reserves and bushland reserves.

Appendix B – Gellibrand River Frontage

This table lists locations and approximate lengths of public land river frontage on both sides of

Area	Description	Length (m)	South, East Bank	North, West Bank	Com
Olangolah/West Gellibrand	Headwaters of river	4000	Reserve	Reserve	Main
Lardners/Sayers Track	Upper Reaches	3000	State Forest	State Forest	All pt Below Rese
Lardners/Sayers Track	Sayers Track Section	500	State Forest	Private	SPZ
Lardners/Sayers Track	Bridge Track Section	1800	State Forest	State Forest	Very
Lardners/Sayers Track	Lardners Track	3000	State Forest	Private	Very
Gellibrand Bushland Reserve	Ridge Rd	500	Private	Reserve	
Wonga Forest	Greens Rd	500	Private	State Forest	
Carlisle State Park	Link to Wonga	800	Reserve	Reserve	
Carlisle State Park	Downstream	1000	Reserve	Private	
Gellibrand Escarpment	Crinoline Creek	1200	Reserve/Private	Reserve	
Sheepyard Creek	Westwicks Rd	2000	Private	State Forest	
Sheepyard Creek	King Track (Start)	2000	Private	State Forest	
Sheepyard Creek	Downstream	300	Private	State Forest	
Bryant Creek	Gellibrand River Rd	2000	Private	State Forest	
Wangerrip Reserve	Joins Nariel Ck	500	Reserve	Private	
Yuulong	Swamp Section	1500	State Forest	Private	
		24600			

Appendix C – List of Wildlife Corridors

This table lists major native vegetation wildlife corridors in the Otways. It includes corridors that go through both private and public land. The corridor must be made up of two parts to make a link. Hence Part A and Part B denote the two sections of land with native vegetation that are joined up.

No.	Part A	Part B	Part A Status	Part B Status
1	Olangolah	West Barwon	Reserve	State Forest
2	Sabine	Wilddog	State Forest	State Forest
3	Rileys Ridge/East Barham	Rileys Ridge/West Barham	State Forest	State Forest
4	West Gellibrand	Lardners/Sayers Tk	Reserve	State Forest
5	Arkins Creek	Browntown Tk	Reserve	State Forest
6	Yuulong forest	Bryant Ck	Private	Private
7	Link Track	Carlisle State Park	State Forest	Reserve
8	Old Victree/Bon Accord	Carlisle State Park	State Forest	Reserve
9	Crinoline Creek	Gellibrand Escarpment	Reserve	Reserve
10	Carlisle State Park	Wonga Forest	Reserve	State Forest
11	Carlisle State Park	Charlies Creek	State Forest	State Forest
12	Bridge Track/Lardners	Bridge Track/Upper Gelli	State Forest	State Forest
13	Kawarren Regional Park	Upper Gellibrand	Reserve	State Forest
14	Kawarren Regional Park	Wonga Forest	Reserve	Private
15	Upper Gellibrand	West Barwon	State Forest	State Forest
16	Wonga Forest	Gellibrand Escarpment	State Forest	Public Land
17	Wonga Forest	Tomahawk Creek	Private	Private
18	Sheepyard Ck	Westwicks Rd	State Forest	Private
19	Sheepyard Ck	King Track (Start)	State Forest	Private
20	Bryant Ck	Ferguson Hill	State Forest	State Forest
21	Nariel Creek	Boulevard Rd Creek(?)	Private	Private

References

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- ?? *Policy Statement. Forests and National Parks. Labor's plan to ensure Victorian's forests are here to stay. Nov 2002.*
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- ?? *Report on the Corangamite Study Area. LCC May 1976.*
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- ?? *Otway Forest Management Plan. Statement of Resources, Uses and Values. April 1990.*
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- ?? *Distribution of Freshwater Fish in the Otway Region, South West Victoria. J.D. Koehn & W.G. O'Connor. 1990.*
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- ?? *Flora and Fauna Guarantee Act 1988. Various Nominations.*
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