

Victor I.P. Eddy B.Sc. (For). MIFA.

SUBMISSION TO NATURAL RESOURCES COMMISSION
ON TERMS OF REFERENCE FOR RED GUM FORESTS

I write this submission as a forester with 25 years experience of river red gum forest management.

It is my opinion that you cannot properly manage or conserve river red gum forests without a good understanding of: (i) river red gum growth habits; (ii) river and water management and behaviour; (iii) natural and invasive biodiversity; (iv) indigenous heritage; and (v) regional river red gum history.

You need to be very honest and clear with your intentions under the documented “terms of reference” as opposed to any tacit terms that may underlie, or be intended to override, them. If the intention is to reinstate an ecosystem that existed pre-1800 development, there are several significant hurdles to be overcome. If the intention is to maintain a healthy and biodiverse forest/woodland the principal difficulties are: (a) separating the practical from the theoretical ability of achieving that aim; (b) determining the necessary compromises where species needs conflict; and (c) determining a level of disturbance to allow natural selection and be acceptable to the wider community.

It is also my opinion that if the health and vigour of forest biodiversity is the primary objective of river red gum management, the other expectations of the varied community interests can be adequately met in the process.

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To reinstate the pre-1800 woodlands would require the reintroduction of the tribal aboriginal. Unfortunately the tribal aboriginal is the most significant extinction from these forests. We may have a fair idea of what they used to do, but the knowledge of the how, when, and why

is lost and will need to be re-learned from scratch. At best we may only simulate what we think was done and in a manner acceptable to critical observers.

Eucalyptus camaldulensis is by nature a tenacious and invasive species. So regardless of which conservation aim is chosen, unless active management is employed these forests will evolve as they have never done before. These forests have always been subjected to the hand of man.

The pre-1800 river red gum environment involved relatively frequent fires. Exclusion of all but occasional fire in the last 150 years has created a situation where the build up of fine and coarse fuel levels, above and below the soil's surface, will cause fire that is very damaging to the current forest stand. To return to what was, needs the on ground fuel level to be kept to a minimum and not at the high levels some claim to be necessary for biodiversity. I seriously doubt, given the current community attitude to forest fire, that it would accept the frequency and timing of fire needed to reinstate its use as before.

So what practical means are available to maintain a stand structure that would simulate our perception of the natural? We can manage stand density and biodiversity by purposeful thinning. But, do we thin to waste at the taxpayer's expense, or do we take advantage of industry to thin and market the product while paying the State for the privilege?

Past State Forest management may not have been perfect, but it has demonstrated an ability to be active, reactive, and interactive. As our knowledge of species and ecology improves management has adapted to make use of that knowledge. It is just unfortunate that there are those who would give the community to believe that those who have done a good job can no longer be trusted and that trust should now be placed in those with theory but no practical experience.

Due in part to Government expectations for profit from existing markets, and in part to fear of public objection to the initial appearance of silvicultural treatment, most of our public river red gum forests have been allowed to become too dense. This is evidenced by the extent of dead and dying trees caused by the current flood drought that is now in its 16th year.

State Forest management has a demonstrated ability to integrate forest conservation with utilisation. In the Central Murray State Forest management was endorsed as 'wise use' by

both the NSW and Federal Environment Departments for these State Forests to achieve Ramsar listing.

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A few points about river red gum:

1. The river red gum forests involved in this assessment occur where rainfall is less than 600mm per annum. Most other timber producing forests need 700mm+.
2. It occurs on floodplains. Thus it is producing timber on land that is subject to little land use competition. Those land managers who have tried have generally found that if you clear river red gum and don't keep the land ploughed, the red gum forest takes it back. (Yanga Station cleared a few stunted red gums from 6ha to establish an irrigation tail-water reuse plantation. A levee bank was constructed to control the tail-water, the site ripped and ploughed, watered and planted with river red gum seedlings. We then had to rotary hoe between the planted rows to control the wheat-field natural regeneration of river red gum)
3. River red gum timber is durability class 2. It is a principal durable timber in the Victorian market place. National Park dedication of native forest lands has severely depleted the availability of durable timbers. If a timber has natural durability it should be favoured for those purposes that take advantage of that durability. Commercial timber plantations are not producing durable timbers. Pine can be made durable by impregnation with toxic chemicals which contaminate treatment sites and present problems of disposal at the end of service life. *E.globulus*, *E.niten*, *E.grandis*, and *E.dunnii* are not durables and their heartwood does not treat readily or effectively.
4. River red gum is a very little player in the national timber market but it does play a very valuable role in its niche.

The recent investigation of river red gum forests on public lands in Victoria was carried out by the Victorian Environment Assessment Council (VEAC). The prime purpose for this investigation in their terms of reference was for the future conservation of river red gum. VEAC produced a discussion paper of over four hundred pages for public comment. This was the sort of paper that administrators use to bury facts that don't suit their intended course of action. They rely on their audience not to read the lengthy document thoroughly. With

ecological health a central issue, the forests in the best ecological condition received a brief mention on page 51. Each of the forests named to be in “best ecological condition” owed that condition to State Forest management. None are long standing National Park. VEAC subsequently went to great length to sanitise their recommendation that 90% of the State Forests be changed to Park management.

River red gum railway sleepers

Opponents to the commercial use of this species sneer at its use for railway sleepers. As a timber, red gum is naturally superior to that used in the millions of new “ties” still being laid annually in USA railways. Bad publicity aimed at timber sleepers in Australia in recent years has far more to do with lack of track maintenance than the ability of timber to do the job.

In the carbon equation: a kilometre track laid on timber sleepers can be attributed with 613tonnes of carbon storage (equivalent to 2249tonnes CO₂) in the forest and in the timber in service. Meanwhile the equivalent concrete sleepers are responsible for an emission of 79tonnes of carbon (289tonnes CO₂) every replacement cycle.

The pro concrete lobby claims a 60year life for concrete sleepers in service, compared to only 20 for timber. This would appear to be a maximum for concrete and the minimum for timber. Most timber sleeper maintenance replacement used to be based on a rule of thumb “replace one in five every five years”. To date concrete sleepers are yet to be in service for 60years and already large numbers have had to be replaced at about 30 years.

Indigenous involvement in management

By all means involve the descendants of the original inhabitants, but do it with caution.

Today there appears to be two basic groups of these people. Firstly there are a few who have the task of making their living off the land. All be it by modern rather than traditional means. The second and more vocal/active are those who see the future management of river red gum forests as an opportunity to gain and exercise a position of power in the community.

My view is that the first group have the care of their forest more at heart and are endeavouring to learn how to do it best. Unfortunately this group appears more naïve when it

comes to community politics. The second group is often manipulated by outside activists and have little practical appreciation of how to manage for the best outcome.

As a District Forester with the Forestry Commission I experienced a situation where 400 ha was required to be excluded from a harvesting operation to protect a sand dune of 16ha in its context. This dune was suspected of being a burial site. The anomaly of this request was that the dune was within 50metres of the edge of the exclusion on one side and 2000m on the other. The requirement was not negotiable. This type of action may be used as a de facto means of creating, or extending, conservation reserve status with a negative impact on cooperative relationships. Elsewhere, and on private land, I have found those with links to the forest perfectly satisfied as long as a relic is protected undamaged with a surrounding buffer of no more than 10m.

Background

In 2005 The Royal Society of Victoria held a two day conference on river red gum forestry. Papers on the various aspects of river red gum ecology, management and use were presented by the best forest and environmental scientists The Society could gather. At the end of the two days the strongest argument to favour National Park tenure for river red gum forests over State Forest was that National Parks receive more State funding per hectare than State Forests. However on the grounds that National Parks are perceived to be the 'corner stone' of the State's conservation, the popular opinion was that their forests should be protected with National Park tenure.

I raised the problem that forest density may restrict biodiversity and disadvantage some key species. The CEO of VEAC indicated that was not a problem as the recently created 'box-ironbark' National Parks were already recognised as needing thinning and thinning trials had already commenced. In truth what has happened to date is negligible.

Since popular support for National Park over State Forest is almost entirely on the grounds of excluding the felling of trees, What ambitious Park manager would put his/her career on the line by recommending forest thinning at an effective level? Also there is a real problem of selling forest product from a National Park. Hence any cultural work must be done at pure cost to the Park Service and done to waste. In a forest this results in a massive increase in forest fire fuel loads, unless the debris is selectively and carefully removed to an outside dump site by contract at cost to the Park.

Accusations by the NSW National Parks Association (NPA) that harvesting (forest thinning) has been illegal due to its threat to the Superb Parrot have no proven basis. A study funded by the Environment Australia in 1985-86 found that the real threat to this species' survival was foraging habitat. I believe the results of that study have yet to be published and thus not generally known. However each Forests NSW licenced harvesting operation has also been licenced by NPWS as not presenting a threat to any species scheduled under the *Threatened Species Conservation Act 1979*. Thus the NPA is advocating that river red gum State Forests be given to the Department that currently authorises the harvesting which the NPA claims to be illegal.

At the beginning of the VEAC investigation the NPA launched their red gum web site. That site included a photo album that knowingly made false accusations of illegal actions by Forest Services. One accused Forests NSW of harvesting within 20m of the Murray River. The photographed site had been examined by NSW NPWS and no breach found and the NPA knew this. A second photo claimed the Victorian Service was allowing aboriginal scarred trees to be felled. This photo was of a fire scar at the base of a tree and the supplier of the photo was fully aware of this.

In closing, sooner or later we must acknowledge that timber and wood based products come from a renewable and environmentally friendly resource. About 100 years ago the State saw a need to set aside forest resources to ensure a continuing supply of timber for its community. Those forests were primarily managed for timber production. In hindsight that management has generally maintained a quality of biodiversity often proclaimed to be a best example.

Softwood timber for framing and cabinet work was very limited from our native forests. Hence pine plantations were established. Plantations are expensive to establish and maintain and hence must be intensive on a short rotation. Recent hardwood plantations are also intensive short rotation. Plantations require substantial inputs and biodiversity is not encouraged. Plantations of native species should not be allowed to mature to look natural or harbour charismatic native species, for if they do they are at grave risk of having harvest restrictions imposed.

I am often asked why we have not been establishing river red gum plantations to supply the industry's needs.

- I. If you have to purchase water and irrigate, trees will never pay the rent.**
- II. In 250-600mm rainfall if you don't irrigate your seedlings they won't survive.**
- III. If the soil is moist enough from rain or river and red gum seed is naturally available you will get more than enough natural regeneration.**
- IV. Almost all of the suitable flood prone land is already natural red gum forest.**
- V. If you are buying water for your trees, when irrigation water is in limited supply, as at present, are you going to water the crop that gives you income this year, or a tree crop that might give an income in 10 to 20 years time?**
- VI. Numerous woodlots were planted in the Riverina in the last 20 years, none are yet yielding timber and few are surviving the current drought.**
- VII. Why plant an intensive high risk forest crop when an extensive, low intensity, and biodiverse native forest can do the the job at least as well?**
- VIII. So much bad advice has been given by extension officers, that should know better, and so many forestry investments have failed over the years. It must be only the most dedicated or entrepreneurial who persist. More is the pity.**

Victor I.P. Eddy