

Eucalyptus camaldulensis
**NSW RED GUM
FOREST ACTION INC.**

P.O. Box 290, Newcastle 2300.

19th October 2009

○ **Forest Assessment**

Natural Resources Commission

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Response to Preliminary Assessment Report: Riverina Bioregion Regional Forest Assessment, River Red Gums and Woodland Forests.

Preliminary Comment.

This is the latest in a series of recent assessments of the Riverina Red Gum forests. It is appalling that these assessments are so belated, that they are all so manifestly inadequate, and that this process is only occurring because of the persistence of environment groups over some years in the face of intractable authority.

It is over 20 years since cases brought in the NSW Land and Environment Court established the legal obligation to conduct comprehensive EIS for operations in state forests. Failure of Forests NSW (FNSW) to do so in the Riverina, has been subject of complaint for many years, as has the severe impacts of operations over all this time in the absence of appropriate environmental protection prescriptions. Determined action over the past two years by the National Parks Association (NPA) supported by other environment groups led to a so-called "EIS" which even FNSW acknowledged did not meet legal requirements. Likewise, requirements of the EPBC Act have not been met...

Major issues are the impacts of operations both for timber product and for residue, especially firewood, together with the impacts of other activities, especially grazing, the impacts of such activities specifically on national values, and the lack of reservation of river red gum forests and woodlands in National Park Estate. These issues have not been addressed in this Preliminary Report.

We do not consider the first term of reference to the NRC has been adequately addressed.

It is vital the Final Report address these issues as the basis for recommendations to Government, including especially that large new National Parks be created, protecting the great majority of these forests, as has been enacted in Victoria. We note the Commission has limited time available to it. We submit that the most comprehensive Report by the National Parks Association of NSW (NPA

2008) constitutes a sound basis for such recommendations, insofar as values, impacts and reservation status issues are authoritatively addressed, with support by expert field work commissioned for the purpose.

However, we are pleased to see in this Preliminary Report that:

- The true number of jobs in the logging industry has finally been revealed as much smaller than previously claimed – only 157 full-time jobs reported after surveying the majority of timber businesses (including jobs on freehold land and in Victoria).
- The scale of the threat posed by river regulation and climate change has been reiterated – in areas such as Koondrook and Werai State Forests, close to 90% of trees are stressed or dying and vast areas of River Red Gum are predicted to die.
- A rigorous attempt has been made to quantify future water availability scenarios and the impacts of those on Red Gum health.
- The water-related decline in the timber industry has been exposed – even if no National Parks were created, the volume of timber available will be dramatically reduced due to water stress.

Significant Environmental Impacts.

In response to proceedings brought by the National Parks Association (NPA) in September 2007, because of the failure to comply with Part 5 EPA requirements, FNSW denied operations were having a significant affect on the environment, and in February 2008 the Minister asserted this explicitly. However, FNSW then evidently determined operations *were* having a significant affect on the environment, and undertook to prepare an EIS and also a Preliminary Assessment under part 3A of the Act. Meanwhile operations which are illegal under State and Federal law continue.

In August 2008 the Department of Environment and Heritage conducted an assessment concluding that operations, especially patch clearfelling, was very significantly impacting Ramsar wetlands in River Red Gum forests.

The Commission of course is aware of this history which should not need to be detailed or referenced here. The point is the failure in this Preliminary Assessment Report (PAR) to make any assessment whatsoever of the significance of the environmental impacts of forestry operations, on these stressed and dying forests, is a glaring omission which must be addressed in the final report.

The Commission has simply used cut-and -paste from FNSW (2008) describing their so-called Ecologically Sustainable Forest Management (ESFM) Framework, management zoning and silvicultural systems (most notably, Australian Group Selection), and management prescriptions. The comprehensive Report by the National Parks Association (NPA 2008) to the Commonwealth regarding EPBC Act matters of National Significance, is nowhere cited or even mentioned in this Preliminary Assessment. That Report cites assessments and authorities regarding impacts, in some detail. We refer the Commission most particularly, to that Report, which we cite extensively in this response.

NPA (2008) find that

“ River Red Gum logging and associated activities are likely to have a significant impact on matters of National Environmental Significance because of intensity, their magnitude, their frequency, the extreme sensitivity and high conservation value of the environment in which they are occurring, the large geographic area affected annually and over time, the high cumulative impact in the context of

other sources of impact (climate change, drought, invasive species, previous logging, land-clearing and fragmentation), the low level of confidence with which the impacts are understood, and the context in which they occur of a heavily cleared and highly fragmented landscape with very low levels of reservation.”

This conclusion is strongly supported by expert advice received previously by NPA about the likely impacts of River Red Gum logging – each expert concluded that River Red Gum logging is likely to have a significant environmental impact.

NPA (2008) further conclude that

“The measures put in place by FNSW to avoid or mitigate impacts are inadequate to prevent such impacts, and their effectiveness is uncertain and not scientifically established. Most notably, habitat retention requirements, riparian habitat protection, and threatened species prescriptions are all inferior to those used in other parts of NSW or in River Red Gum habitats in Victoria, and are demonstrably inadequate to prevent irreversible environmental impacts.”

NPA (2008) estimate that approximately 19,780 hectares of declared Ramsar wetlands and 9,296 hectares of Superb Parrot breeding habitat have been logged illegally by FNSW. This is due to FNSW failure to refer the matter of River Red Gum logging to the Federal Government immediately after the commencement of the EPBC Act, or to refer the matter immediately after the designation of the Central Murray State Forest Ramsar site. (NPA 2008).

Sustained Yield.

It is not acceptable for the Commission to uncritically repeat in their “assessment” FNSW claims that operations are sustainable. The PAR document states for example that

“harvesting occurs within externally verified sustainable forest management framework”, that

“data collected during and following harvesting assists in refining and developing future timber yield estimates”, that

“management prescriptions have been designed to maintain forest structural diversity to retain and enhance flora and fauna habitat, protect and maintain soil and water quality, while providing a sustainable timber supply”;

and the document repeats statements implying the forest management zoning system results in conservation areas “based on nationally agreed reserve criteria.”

All this is absolute nonsense.

Estimates of sustained yield have always been a token, “dodgy” and sometimes dishonest, exercise, not intended to determine yield allocations. Current sustained yield figures for high quality sawlogs in the Murray and Mildura Management Areas remain unchanged since prescribed in the Management Plans in 1985 and 1986 respectively. The Mildura Management Plan (1982) stated that “management on a sustainable yield basis will require reductions in yields which may prove inadequate to support a viable sawmilling industry” and accordingly continued to prescribe allocations well above sustained yield. FNSW have not reviewed the 1980s sustainable yield estimates for the Riverina, except for Murrumbidgee M.A., where they determined that the yield should be reduced by 50%, but decided not to do so, and still have not done so!

VEAC (2008) estimated that sustainable yield would fall to 71% of current levels primarily because of lower growth rates caused by reduced forest flooding in recent years.

Despite the severe impacts of drought, overall volume of timber extracted from NSW Red Gum forests has actually increased over the last decade, because of significant increases in residue volumes. NPA contend that logging in the Murray and Mildura Management Areas (including the major Central Murray area where the bulk of timber comes from and which is almost entirely Ramsar listed wetlands) is grossly unsustainable.

Management Zones.

In their ESFM report, FNSW (2008) state that the 25% of all Riverina Crown-timber lands are protected from logging in Forest Management Zones. However analysis by NPA (2008) reveals that in fact, only 15% of River Red Gum (15,439 hectares) on Crown-timber lands is excluded from harvesting in Forests Management Zones 1, 2 or 3A. The area of River Red Gum that is excluded from logging by FNSW thus amounts to only 3.2% of the pre-1750 distribution.

Patch Clear-Felling.

The Commission repeats uncritically and without consideration of impacts, the FNSW rationale for use of Australian Group Selection (AGS), or patch-clearfelling.

NPA (2008) cite field inspections in the Riverina indicating that patch-clearfelling

“is disproportionately targeted towards the highest conservation value areas close to major rivers because these are also the most productive for timber. Such riparian areas are recognised as being important in the provision of high quality habitat, refuges and corridors for many elements of biodiversity (VEAC 2006). Patch-clearfelling in these areas is expected to have a substantial impact on the environment.”

Attiwill et al. (1996) found that creation of gaps greater than 40m in diameter would lead to the decline of hollow dependent fauna and declines in overall species richness in a northern NSW study.

Botanist Doug Frood found the likely long-term ecological impacts of patch-clearfelling or 'Australian Group Selection' include soil compaction, larger bare areas (and potential direct loss of significant flora), and increased vulnerability to invasions from competitive weeds. (NPA 2008)

Thinning.

The Preliminary Report repeats claims by FNSW that thinning improves tree health by reducing water stress. This is completely unsubstantiated and there is no evidence in support - in fact there is substantial evidence against it. For example, the only available piece of evidence, contained in the River Red Gum Environmental Impact Statement released in June, shows that there is no relationship between tree health and basal area. Therefore, regardless of how heavily stocked stands are, they are all showing signs of severe stress. All observational evidence also tells against it - State Forest areas that have been logged and thinned intensively are in very poor health. It is abundantly clear that the only solution to tree stress is increased flooding, and that it is utterly perverse to suggest that logging, an activity that results in dramatic tree mortality, can improve tree health. We are thoroughly opposed to any form of so-called ecological thinning unless it were first supported by extensive, rigorous scientific trials conducted by an independent body, and it was thoroughly severed from any commercial considerations.

Inadequate Prescriptions.

Spark (2007) conducted fauna surveys in active logging compartments in the Riverina Red Gum State Forests and inspected a number of recently logged areas. He states that:

“The logging is resulting in the loss of hollow-bearing trees, mature trees and over-mature trees, and dead-standing stags, both in the short and longer terms. Inspection of debris from previous logging events highlighted the cumulative impact of successive logging events. Large trees are being destroyed by logging in each successive logging event, but the interval between events is inadequate to enable those trees to be replaced. At the same time, the mature tree resource which is needed to recruit hollow-bearing trees in the future, is also being severely impacted..... If these logging practices continue, it is predicted that the large hollow resource will be almost completely depleted in the medium term and will not be replaced for more than 100 years.”

The general retention requirement is two habitat and two recruitment trees per hectare, and 5 habitat and 5 recruitment in a 30m strip adjacent to riparian exclusion zones.

Experts consider these conditions to be inadequate. Milledge (2007) advises that:

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“Prescriptions claimed to reduce the loss of critical habitat attributes including the retention of Habitat Trees, stags, logs and coarse woody debris (Forests NSW 2006a, b; 2007a, b) are not based on levels likely to sustain dependent fauna, are subject to a range of operational loopholes that render them ineffective, and do not appear to be adequately implemented.

For example, the prescribed Habitat Tree retention density (which does not directly specify retention of hollow-bearing trees) of 2 Habitat Trees and 2 recruit Habitat Trees per ha, appears insufficient to sustain hollow-using fauna in Riverina River Red Gum forests and woodlands.

These forests and woodlands support a higher diversity and density of hollow-using vertebrates than most other forest types in New South Wales, yet Habitat Tree retention rates of between 4 and 6 trees per ha apply in most other regions (Gibbons and Lindenmayer 2002).”

Gilmore (2007) also considers the tree retention rates inadequate, stating that:

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“...Red Gum tree retention rates in the approved harvest plans of 2 habitat trees per hectare are substantially weaker than those used in northern NSW and other areas with Integrated Forestry Operations Approvals in place. This deficiency is magnified by the fact that unlogged River Red Gum stands contain a greater number of hollows per hectare than most coastal forest types. The durability of River Red Gum wood results in hollows surviving longer than hollows of most other species (Newton-John 1992).”

“The tree retention requirements in the approved harvest plans are in my opinion not adequate to prevent the long-term decline of habitat resources such as roosting and nesting sites, food supplies and foraging sites, nor the appropriate spacing of those resources to enable economic utilization by individuals or social groups of each of the threatened species. Consequently I conclude the management plans are not adequate to prevent further population declines in threatened species, including the Barking Owl, Masked Owl, Yellow-bellied Sheathtail Bat, Large-footed Myotis, Spotted-tailed Quoll and Brush-tailed Phascogale.”

After conducting a detailed review of the literature in relation to forestry operations and bat species in River Red Gum forests, Parnaby concludes that, *“current retention rates in NSW red gum forest have a clear potential for serious adverse impacts on bat populations, whether they be common and widespread species or threatened fauna”*. Particularly important in this conclusion was work by Lumsden et al (2002), who after conducting studies of hollow utilisation by bat species in River Red Gum forests in Victoria, stated that, *“A harvesting episode which reduced density to 4 hollow-bearing trees per ha could have a major impact on the viability of a local population.”* Given that the s120 licence conditions for FNSW require only 2 habitat trees per hectare across the great

majority of the forest estate, the potential for impacts on bat species must be considered substantial.

FNSW also set a diameter cutting limit of 1.5m diameter at breast height – which means that no tree above that size is available for logging. However, in his study of provision of habitat hollows by River Red Gum in Barmah Forest, Newton John found that the ‘most abundant hollow providers’ were trees between 100cm diameter at breast height and 130cm diameter at breast height, and in Victoria all trees greater than 1m diameter at breast height are protected from logging due to their habitat value. (NPA 2008)

Pre-logging Survey and Assessment.

NPA (2008) state that

“The impacts of River Red Gum logging and associated activities are very poorly understood. There has never been any systematic assessment of impact on biodiversity or hydrology. There has been no Environmental Impact Assessment under NSW laws, despite this being required by the NSW *Environmental Planning and Assessment Act 1979*. There has not been any regional forest assessment process nor any western regional assessment process that meets the requirements of the NSW *Forestry and National Parks Estate Act 1998*. River Red Gum forests are the only major forested region in NSW that has not been subject to such an assessment.

“Logging in River Red Gum forests is not preceded by routine surveys for all threatened species. Surveys are required by qualified biologists for only two species (Superb Parrot and Regent Parrot) (DECC 2004). This represents a far inferior level of survey effort to that required in all other forestry regions in NSW. There has only ever been one substantive survey that targeted all threatened species in Red Gum Crown-timber lands (Webster, Leslie and Belcher 2003) – however, that was conducted in 1994 and was still extremely limited in terms of survey intensity and effort given the size of the area under consideration. Many new threatened species have been listed since that survey.

“In relation to Barking Owls, David Milledge reviewed the pre-logging assessments conducted by Forests NSW for a number of River Red Gum compartments in 2007, and concluded that:

“The Forests NSW pre-logging assessments for the compartments listed.....lack contextual analysis, ignoring the apparent significance of the area for a remnant population of the Barking Owl. Such populations in the region now appear to be confined to a scattering of River Red Gum refuges that exist as islands in an agricultural landscape.

The lack of pre-logging surveys for Barking Owls in and adjacent to the above compartments is in my opinion unacceptable for a species that is obviously in serious decline and is so poorly catered for by the inadequate regional reserve system”.

Industry Economics

The Commission's assessment of social and economic values is to be completed in the Final Report which will include a Regional Impact Analysis. This Preliminary Report presents data supplied by FNSW and the industry. The Commission must take account of all costs and subsidies to independently assess relative public benefit of alternative recommendations under consideration. A study by Economists at Large (River Red Gum Forestry in the New South Wales Riverina: Seeing the Value for the Trees, August 2008) found that FNSW costs may be under-estimated by up to 88%, and that operations appear to be running at a loss. They comment that

“The closure of the loss-making, under-priced RRG forest will result in a price increase for RRG timber as underpriced timber is removed from the market decreasing overall supply. This will allow

private growers to invest with greater certainty of higher prices. All other things being equal, the closure of RRG public forestry would, ironically, be likely to lead to an expansion of private investment in timber production in the Riverina region.”

The study concludes that

“FNSW has effectively privatised the profits (such as they are) from the sale of timber and ‘given’ them to the timber industry, whilst the losses and the risks have been socialised and given to the NSW taxpayer”, and that the creation of large new National Parks would produce “better economic and social outcomes for the region, whilst protecting the ecological integrity of the forests.”

Trashing the Forests.

Very significant additional impacts result from other activities which are both ubiquitous and intensive – namely, commercial residue harvesting (including especially firewood), domestic firewood collection, grazing (conducted over 72% of the total forest estate) and recreation. Such impacts are the greater because virtually unregulated.

The Victorian Environmental Assessment Council (VEAC) investigated such impacts for their *River Red Gum Forests Investigation* (Papers 2006, 2007, and Report 2008). Their findings as cited in the NPA Report are relevant to NSW State Forests:

VEAC (2006) found that grazing can, “*potentially lead to pugging, selective plant removal, weed invasion, soil compaction, erosion and increased sediment in rivers and streams*” and that “*the selective nature of grazing has the potential to significantly change the biodiversity of an area*”. VEAC refer to other studies which have found that increased grazing, “*reduces the ecological condition of riparian habitat and results in the loss of bird, frog and plant diversity in river red gum habitats*”. Continuous and intensive grazing is expected to cause “*significant loss of habitat value through species selectivity, changes to vegetation structure and impacts on habitat values*”.

VEAC (2007) identified off-track fourwheel-driving, trail-bike riding and dispersed camping as having a substantial environmental impact, for the following reasons:

“...in some popular camping areas.....the current rate of use of firewood is unsustainable, with firewood becoming very scarce. Roadsides along Yarrowonga have been stripped of their fallen timber, affecting flora and fauna that require the fallen timber for habitat. It is not only the small, easily handled wood that is taken. Some campers attach very large logs their four-wheel drives and drag them through the forest causing soil disturbance and erosion”.

The lack of formed campsites with facilities in most State Forests means that human waste and rubbish is frequently left spread around the forest. This results in substantial pollution with potentially significant impacts on water quality during inundation. Wildfires escaping from campfires also represents a substantial risk (VEAC 2007).

In relation to four-wheel driving, VEAC (2007) notes that: “*This often results in roads and tracks being badly damaged with rutting, potholes and corrugations....Road damage also leads to erosion, damage to vegetation and water pollution*”. Perhaps the biggest impact of four-wheel driving arises from off-track driving, which destroys sensitive vegetation.

And in regard to trail-bike riding, VEAC (2007) notes that in some NSW State Forests in the past:

“Inappropriate use of bikes was degrading vegetation on sandhills and in the forest, and spreading weeds such as spiny burr grass. Bikes often cause noise pollution and disturb wildlife. Some bike

riders cause damage to Indigenous heritage areas as they use midden and burial sites as ramps from which to jump”.

This impact has been confirmed by field inspections cited in NPA, (2008) which indicate substantial degradation of important, high conservation sandhills by trial-bike riding that is currently occurring.

We cite this detail, from the VEAC and NPA Reports, because altogether what emerges overwhelmingly, is a shameful lack of appreciation of these forests and wetlands. These forests are being trashed for predominantly low value product.

The Victorian assessment resulted in 90% of its red gum state forests being removed from production and large new National Parks being declared. We consider an adequate assessment of values and impacts of NSW red gum forests would conclude a similar decision ought to be made in NSW.

New River Red Gum National Parks

Extracts from the NPA (2008):

“River Red Gum forests have only 3.8% of their original (pre-1750) distribution reserved in National Parks. As a vulnerable ecosystem experiencing severe decline, NSW Government policies (such as the National Forest Policy Statement) should require that 60% of its distribution is protected. Biodiversity experts recently identified more than 80% of all River Red Gum forests as high conservation value areas or Indicative Key Areas for conservation in the Riverina bioregion (Todd and McDonnell 2003).

As noted by Gilmore (2007), “*Red Gum forest stands contain essential habitat elements required by threatened species, such as Squirrel Glider, Barking Owl and Brown Treecreeper. Essential habitat elements include tree hollows, nectar flows associated with large trees, multiple vegetation strata including Silver Wattle (Acacia dealbata) in higher site quality areas and the close proximity of intermittent and permanent surface water*”.

These include iconic species (listed under either State or Federal Acts) such as the Barking Owl, Koala, Squirrel Glider, Southern Bell Frog, Superb Parrot and Regent Parrot (Todd & McDonnell 2003; Webster, Leslie & Belcher 2003). Red Gum forests play a major role in native fish migration, spawning and recruitment during flood events and provide habitat for 4 globally threatened fish species (RIS 2002). They also represent a vital drought and climate change refuge for animal species as moist riverine forests in a semi-arid environment (Law & Anderson 1999, Frood 2007).

Riparian Red Gum forests have been identified as a refuge for a suite of woodland birds known to be declining in the region and throughout NSW, and as vital to the long-term conservation of most bat species in the Riverina because they represent a mesic environment in such a predominantly semi-arid landscape (Jansen and Robertson 2001, Lumsden and Bennett 1995, Law and Anderson 1999, Parnaby 2006). They contain the highest diversity of bird and bat species of any ecosystem in the Riverina region. Large areas of River Red Gum forests (including the Millewa/Moira block and the Murrumbidgee State Forests) have recently been identified as Important Bird Areas by Birds Australia on the basis of their global significance.

The River Red Gum State Forests include riparian vegetation that is vital to the conservation of aquatic and terrestrial biodiversity, and to the maintenance of water quality and river health. As noted by the Cotton Research and Development Corporation (CRDC 2003), “*riparian land often supports a greater diversity of plants and animals than non-riparian land...Many native plants and*

animals are found only, or mainly, in riparian lands, and this makes these areas essential to animals for all or part of their life cycle. Riparian land also provides a refuge for native plants and animals in times of drought and fire....”

River Red Gum Crown-timber lands are the last major areas of vegetation left between the Great Dividing Range and South Australia. A virtually unbroken belt extends not only along the Murray River, but also along the lower reaches of the Lachlan and Murrumbidgee Rivers and the entire Edwards River. Together these are the best landscape-wide stands of vegetation remaining in south-western NSW. They are vital as corridors for movement of fauna to enable species to adapt to human-induced climate change.

In summary, River Red Gum Crown-timber represent an extraordinarily high quality environment, that contains numerous important conservation values, and which is extremely sensitive to disturbance and perturbation due to the severe stress and decline that is already occurring.....

The existing level of reservation in the Riverina bioregion within NSW is extremely poor, with only 1.9% of the bioregion protected in National Parks and Nature Reserves in NSW. This compares with at least 15% reservation in coastal bioregions. The Murray Fans subregion, where most of the River Red Gum State Forests are located, has 0% in reserves and there is only a single tiny National Parks reserve along the entire length of the Murray River in NSW.

The Riverina bioregion has been recognised by both the National Land and Water Resources Audit and the National Reserve System report as one of the highest priority bioregions for consolidating the protected area system in Australia (NLWRA 2002, NRMCC 2005).

At least 16, and possibly up to 26, fauna species are believed to have become extinct in the region and an additional five bird species have been reduced to rare vagrants that no longer breed in the region (Todd and McDonnell 2003). At least 63 fauna species (Todd & McDonnell 2003) and 28 plant species (Forward 2003) are at risk of extinction in the region, and are listed as endangered or vulnerable by the NSW *Threatened Species Conservation Act* 1995. A further 20 plant species are thought to be listed on the database of Rare or Threatened Plants of Australia (Forward 2003). At least 51 terrestrial ecosystems are considered threatened in the Riverina bioregion as a whole (NLWRA 2002).” - NPA (2008).

We ask you to also take proper consideration of the international obligations on the NSW Government in relation to the health of the Central Murray Ramsar site, which includes the Millewa, Koondrook-Perricoota and Werai blocks of forest. Those obligations require the NSW Government to prevent any deterioration in the ecological condition of the site. These responsibilities have not been met under the current management regime by Forests NSW. We believe the only way for them to be met is to reserve the site in its entirety in new National Parks.

NSW Forest Red Gum Action Inc. in concert with the National Parks Association of NSW, the Nature Conservation Council of NSW, and other environment groups, considers that:

The Riverina Bioregional Forest Assessment of River Red Gums and Woodland Forests is totally inadequate for the following reasons:

- A scientific assessment of the conservation values of River Red Gum forests in the study area has not been conducted.
- There is no consideration of the national reserve criteria or how they will be met.
- The impact of logging on ecosystems has not been considered.
- CSIRO findings, that large protected areas are vital to the survival of species in a warming

world, have been ignored.

- Refugia, corridors and linking habitats in the region have not been identified
- The report fails to address the legal requirements of that EPBC Act 1999

The NRC must recommend:

1. Extensive new Red Gum National Parks because:
 - Red Gum is a vulnerable ecosystem that needs a 60% reservation target
 - Red Gum forests are vital refuges for plants and animals in a rapidly warming world
 - National Parks are crucial to ecosystem resilience
2. Aboriginal ownership of new National Parks wherever sought by Traditional Owners
3. Much improved environmental water flows to ensure the health of Red Gum into the future
4. A fair restructure package for individuals and businesses affected by the changes.

Barrie Griffiths, for

NSW Red Gum Forest Action Inc.

“Large new National Parks should be created along the Murray River to protect these forests for future generations. This should be supported by a generous restructure package for the timber industry. The Traditional Owners in the area I visited, the Yorta Yorta Nation, are calling for an Aboriginal-owned National Park in the Millewa forest. This would adjoin the new Barmah National Park in Victoria, creating a continuous protected area on Yorta Yorta country. This would be a marvellous outcome, for the environment, the economy and the community”

- Former Premier Bob Carr, May 2009.

References.

Major Reference:

NPA (2008) The impacts of River Red Gum logging and associated activities in NSW on matters of National Environmental Significance. Carmel Flint and Georgina Woods, National Parks Association of NSW, August 2008.

Attiwill, P., Burgman, M., and Smith, A. (1996) ‘Gaps and Clusters silviculture: How well does it balance wood production and biodiversity conservation?’ *A report by the Review Panel to the Ministerial Committee established to review the Principles and Application of the Gaps and Clusters Technique*. Unpublished report.

Carr, Bob Media Release May 9th 2009.

Cotton Research and Development Corporation 2003. *Managing riparian lands in the cotton industry*. Narrabri.

FNSW, 2008. *ESFM Plan: Western Region*. Forests NSW.

Frood, Doug. July 2007. Sworn September 2007. Affidavit in the Land and Environment Court of New South Wales. For the National Parks Association of NSW.

Gilmore, Alexander. Sworn 10th August 2007. Affidavit in the Land and Environment Court of New South Wales. For the National Parks Association of NSW.

Law, B. and J. Anderson (1999). A survey for the South Myotis *Myotis macropus* (Vespertilionidae) and other bat species in River Red Gum *Eucalyptus camaldulensis* forests of the Murray River, New South Wales. *Australian Zoologist* 31: 166-174.

Lumsden, L.F. and Bennett, A.F. 1995. Bats of a semi-arid environment in south-eastern Australia: biogeography, ecology and conservation. *Wildlife Research* 22, 217-40.

Milledge, David 2007. Sworn 30th August 2007. Affidavit in the Land and Environment Court of New South Wales. For the National Parks Association of NSW.

National Land and Water Resources Audit 2002. *Australian Terrestrial Biodiversity Assessment*. Commonwealth of Australia.

Natural Resource Management Ministerial Council, 2005. *Directions for the National Reserve System – a partnership approach*. Australian Government, Department of the Environment and Heritage, Canberra, ACT.

Newton-John, J. 1992. Arboreal habitat hollows in River Red Gum (*E. camaldulensis*) in the Barmah Forest. Hons. Thesis, Department of Forestry, Melbourne University.

Parnaby, Harry. (2006). An assessment of the potential for adverse impacts from forestry operations on bat species on public land in the Riverina bioregion, NSW. Unpublished report to the NSW National Parks Association.

Spark, Phil. (2007). Murray Red Gum Forests Survey Report. Unpublished report to the NSW National Parks Association.

Todd, M.K. and McDonnell, R. (2003) - *Riverina Biodiversity Assessment Project*. Unpublished report produced by the NSW National Parks and Wildlife Service, Riverina as part of the NSW BiThe Preliminary Report repeats claims by FNSW that thinning improves tree health by reducing water stress. This is completely unsubstantiated and there is no evidence in support - in fact there is substantial evidence against it. For example, the only available piece of evidence, contained in the River Red Gum Environmental Impact Statement released in June, shows that there is no relationship between tree health and basal area. Therefore, regardless of how heavily stocked stands are, they are all showing signs of severe stress. All observational evidence also tells against it - State Forest areas that have been logged and thinned intensively are in very poor health. It is abundantly clear that the only solution to tree stress is increased flooding, and that it is utterly perverse to suggest that logging, an activity that results in dramatic tree mortality, can improve tree health. We are thoroughly opposed to any form of so-called ecological thinning unless it were first supported by extensive, rigorous scientific trials conducted by an independent body, and it was thoroughly severed from any commercial considerations. odiversity Strategy.

VEAC 2008. River Red Gum Forests Investigation: Final Report. 8 Nicholson Street, East Melbourne 3002, July 2008. www.veac.vic.gov.au

VEAC 2007. *River Red Gum Forests Investigation: Draft Proposals Paper for Public Comment*. 8 Nicholson Street, East Melbourne 3002, July 2008. www.veac.vic.gov.au

VEAC 2006. *River Red Gum Forests Investigation: Discussion Paper*. 8 Nicholson Street, East Melbourne 3002, July 2008. www.veac.vic.gov.au

