

Reports on appeals against EPA Bulletin 652 -
(Proposals to amend the 1987 Forest Management Plans
and Timber Strategy and proposals to meet
Environmental Conditions on the Regional Plans and the
WACAP ERMP (Department of Conservation and Land
Management)

**Report under Section 106(a) of
the Environmental Protection Act**

**Chief Executive Officer
Environmental Protection Authority**

Report under Section 106(a) of the Environmental Protection Act on appeals against the Environmental Protection Authority's Report and recommendations on

**Proposals to amend the 1987 Forest Management Plans and Timber Strategy
and proposals to meet Environmental Conditions on the Regional Plans and the
WACAP ERMP (EPA Bulletin 652 - Assessment 658)**

Proponent: Department of Conservation and Land Management

Introduction

In view of the complexity of the issues raised in the appeals, and the involvement of Justice Barnett as the Appeals Committee we considered it would be helpful to employ a different, more explanatory format of appeals reporting, and to provide some general introductory contextual comments. Also, we are appreciative of the opportunity already offered by Justice Barnett to meet with officers and hopefully with the Authority itself to further clarify the intent of the Authority in respect to issues raised in appeals.

This assessment involved the running in parallel of the environmental assessment process and the planning processes required under the CALM Act. As a result, the Authority did not have the usual level of control over all of the documentation and consequently CALM's documents are less focussed on the environmental implications of the proposals and are not subject to the normal rigour of external scrutiny before publication.

The CALM documents covered a huge range of topics and it was obvious from the public responses that many of the key issues were leading to confusion. The Authority's and the TAP's response to the uncertainty which this generated was firstly to attempt to provide extra and clearer information to the public. Secondly to highlight areas of uncertainty (e.g. salinity, dieback, fauna habitat provision) and recommend caution. In response to appeals in these areas the Authority has acknowledged the level of uncertainty by suggesting that the Minister "Consider" the appeal, rather than specifically recommending that it be upheld or dismissed.

Further, there are some appeals which address questions of values. Under CALM's proposed management of the so-called 'multiple use forest' timber production is the primary objective. Although some conservation values can be sustained across the multiple use forest while some proportion is subjected to logging in any one year, the fact that it is all eventually to be logged determines that it will be different in some important environmental respects from unlogged forest. The question of the extent to which these "unlogged" environmental values should be protected outside the reserved conservation estate is a value judgement which must be considered before some of the specific questions can be answered. There is a clear difference in value judgement between those who seek to maintain and optimise production outside of conservation areas, and those who wish to retain and optimise those values of old forests outside reserves. It is very difficult for the Authority to be unilateral arbiters in this issue.

Reading the appeals has highlighted two other matters of significance:

- the Authority's recommendations should be seen in their textual context in the body of the Report, not just in the summary, which is necessarily brief and overlooks some points of concern to appellants which are addressed in the text; and
- all submissions were given exhaustive consideration; each was read several times, the issues raised were summarised in detail and referred to CALM. CALM's detailed responses were published as an appendix to the Authority's report, and the Authority gave detailed consideration to the issues raised and CALM's responses in its assessment of CALM's proposals (indeed some important changes to the proposals were proposed in response to the issues raised in submissions).

**Report under Section 106(a) of the Environmental Protection Act
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Report and recommendations on**

**Proposals to amend the 1987 Forest Management Plans and Timber Strategy
and proposals to meet Environmental Conditions on the Regional Plans and the
WACAP ERMP (EPA Bulletin 652 - Assessment 658)**

Proponent: Department of Conservation and Land Management

Appeal No 187

**Appellant: Bridgetown-Greenbushes Friends of the Forest
PO Box 461, Bridgetown WA 6255**

Ground	Response	Recommend
1.1 The karri forest cut is to be increased by one third, from 1500ha to 2000ha.	The EPA assessed a management strategy for the karri forest which provided for smaller coupes, expanded conservation and other protected areas, commitment to a range of rotation lengths and a total saw log yield consistent with present levels.	
1.2 This will give a rotation length of 45 years.	Presumably the appellant has derived this figure by dividing the cut of 2000ha/year into the area of the karri forest. The actual rotation length is not determined solely by the present annual cutting rate, and depends on long term management objectives. There is no blanket prescription proposed with regard to rotation length. CALM explains on p19 of the proposals document that most of the karri forest will be managed to a rotation length of 100 years. Under the conditions set on any approval of the proposal CALM will be required to implement the proposed rotation lengths.	Dismiss
1.3 The proposals will dramatically increase timber extraction from a forest ecosystem already under threat from clearing, mining, logging, dieback and insect attack.	In the past large quantities of 'waste' were left on the forest floor because of a lack of markets. CALM's previous inventory took no account of these 'waste' timber products. The proposals dramatically increase the inventory account of the amount which could be removed, subject to markets. The Authority has recommended caution in implementation of the proposals. Mining, logging, dieback and insect attack impact on the forest	Dismiss
1.4 CALM assumes that "regrowth will occur quickly enough to prevent significant long term increases in salinity"	Yes they do. They cite the conclusions of the Land and Water Research Steering Committee (proposals document pages 16,17). The Authority has recommended ongoing monitoring and adaptive management, and specific, more stringent, management procedures for catchments with a high risk of salinity.	
1.5 CALM has carried out no monitoring of salinity effects, nor does it propose it in the future.	The research referred to above included monitoring of the salinity impacts of logging practices similar to those proposed by CALM. It was carried out in consultation with the Water Authority of Western Australia. The Authority has made recommendations regarding the need for ongoing monitoring of salinity impacts.	

<p>1.6 The risk of spread of dieback has not decreased but areas previously quarantined are to be logged year round.</p>	<p>The Authority considers that CALM should not be free to relax its dieback hygiene procedures for its own operations unilaterally. Any change to these procedures should involve public scrutiny in view of the risks involved and the substantial constraints that those procedures have imposed on other users of the forest and the public. The Authority considers that CALM's management of the forest should explicitly build in contingencies to avoid the need for logging and other dieback threatening activities under wet conditions. CALM should be required to ensure that i) the same rules regarding dieback hygiene procedures are applied to all operations in the forest occurring under moist soil conditions, and ii) any change to its dieback hygiene procedures is subject to public scrutiny.</p>	<p>Consider</p>
<p>1.7 CALM's jarrah inventory has not been available to the EPA, the TAP or the public.</p>	<p>CALM has produced publications describing the methodology of its inventory. Consultant Dr Ken Shepherd advised the EPA (Appendix 4 page 28) that "we must accept the calculation of allowable cut as it would be impossible, without very considerable resources, to check this figure."</p>	
<p>1.8 The EPA seems blind to the likely environmental effects of CALM's 1992 proposals on the 'production forests'.</p>	<p>The Authority has given detailed consideration to the environmental effects of CALM's proposals and made a general recommendation of the precautionary approach as well as specific recommendations regarding possible salinity impacts, dieback control measures, habitat tree provisions, fire management and independently supervised ongoing monitoring and research.</p>	<p>Dismiss</p>
<p>1.9 The proposals should be reassessed in five years, not ten.</p>	<p>The Authority has recommended monitoring and adaptive management which means that CALM would be expected to review its implementation of the strategy on an on-going basis and adapt it in response to monitoring results. The Authority has further recommended that the FMRC should report on the results of monitoring and research after five years.</p>	
<p>2. The 'improved protection of conservation values'(p iv) is to be restricted to conservation reserves.</p>	<p>This is not so. The provision of stream reserves throughout the forest , the phased logging proposals and the Authority's recommendations on habitat tree provision and salinity will ensure 'improved protection of conservation values' throughout the forest.</p>	

<p>3. The proposed stream reserve minimum widths are too narrow; the minimum should be 50m as recommended by CALM's scientists.</p>	<p>Stream reserves serve two primary functions - water quality protection/aquatic ecosystem maintenance and the provision of wildlife habitat/corridors. With regard to the first, in addition to these stream zones CALM has proposed a form of phased logging. In high salt risk catchments the EPA on advice from the Water Authority of WA has recommended wider stream zones (50m minimum) and the concentration of the area retained under phased logging in the lower part of the catchment. The Authority is satisfied that these constraints are likely to be adequate to protect water quality, but has also recommended monitoring and adaptive management.</p> <p>In association with CALM's proposals for phased logging, and the EPA's recommended minimum dimensions of the areas retained, protection of these areas from thinning and better provision for habitat trees the proposed widths, with the adoption of ecological boundaries.</p> <p>The Authority has also recommended that the effectiveness of these zones be monitored. The appropriate minimum width will depend on the ecological objectives for these zones. As these have not yet been defined by CALM on a regional basis it is not possible to determine the adequacy of the proposed minima. The Authority has recommended the application of the proposed prescription as trial with monitoring and adaptive management. It would be possible to further require that CALM identify the faunal/floral conservation objectives of the stream reserves on a regional basis and use these to determine the appropriate minimum stream reserve widths. Many of these reserves will be significantly wider than the 20m minimum. The actual width of corridors should be adjusted according to specific sites, functional objectives and ecological boundaries as proposed by CALM.</p>	
<p>5. The provision for the protection of areas "important to people for many different reasons" should apply for the jarrah forest too (e.g. Hester block).</p>	<p>Recommendation 5 addresses a similar concern with regard to the karri forest. The Authority recognises the parallels between that requirement and the appellant's request for some provision for the protection of special areas of jarrah forest.</p>	<p>Consider</p>
<p>6.1 "drastic increases in wood extraction"... "ease the pressure on the already overcut forest"</p>	<p>See response to 1.3 above.</p>	

<p>6.2 All remaining unlogged forest and all old growth forest of high conservation value should be retained.</p>	<p>The response to this depends on ones value system. Some conservation values can only be protected in reserves. To protect these values requires an adequate representation in the reserved conservation estate. The EPA endorses CALM's proposed additions to the conservation estate. In the multiple use forest under CALM's proposed management, timber is the primary objective and it takes precedence when areas are harvested. Although some conservation values can be sustained across the multiple use forest while a proportion is subjected to logging in any one year, the fact that it is all eventually to be logged determines that it will be different in some important environmental respects from unlogged forest. To protect these values requires that there are adequate controls on forest management activities. The Authority has made several recommendation with regard to the protection of conservation values in multiple use forest, in addition to the CALM/AHC understanding on the protection of heritage values in multiple use forest.</p>	
<p>6.3 CALM should take account of local concerns about loss of mature and mixed aged forest.</p>	<p>See answer to 5. above.</p>	<p>See 5 above</p>
<p>7.1 EPA writes off all old growth forest outside present conservation reserves.</p>	<p>To the extent that 'old growth' implies 'minimal disturbance by man' this is true by definition in 'multiple use forest', however the Authority considers that significant old growth values can also be represented in old regrowth stands in the multiple use forest. The complex of attributes which make up 'old growth forest' include some which can only be represented in undisturbed forest and some which can be represented in old regrowth forest. CALM's proposals include allowing some areas of multiple use forest to grow on to ecological maturity (i.e. with old growth values) and have sufficient flexibility to allow this provision to be increased in the future if required. (See also response to 6.2 above)</p>	<p>Consider</p>
<p>7.2 In view of the uncertainties about removing all the biomass, the proposals are environmentally unsound.</p>	<p>Decisions about any ecosystem are necessarily taken without absolute certainty because of the complex, dynamic nature of the systems involved. The EPA has made the judgement that the levels of uncertainty regarding the ecological implications of CALM's proposals are such as to justify cautious implementation with monitoring and adaptive management, and that decisions are based on the best, rigorous scientific advice, appraised by the proposed independent committee.</p>	<p>Dismiss</p>
<p>9. The trial implementation should be reported on after five years, not ten.</p>	<p>See response to 1.9 above.</p>	<p>See 1.9 above</p>

10. Recommendations 10 and 11 need to be strengthened.	The grounds for this assertion are not stated, so it is impossible to say how the recommendations might be strengthened to meet the appellant's objectives..	
12.1 Research which shows adverse effects of frequent burning on numbers of individuals and species of both plants and invertebrate fauna has been ignored.	The EPA and the TAP considered the research referred to and concluded that there was a need for further research of the ecological effects of CALM's fire management practices. The appeal should be dismissed, but the Forest Monitoring and Research Committee should be required to give priority to a few key subject areas of which fire ecology should be one. The Committee should report on results in these key areas within five years.	Dismiss
12.2 There should be a big reduction in the area of forest subjected to prescribed fuel reduction burning and in the frequency of burns, especially in the spring.	The EPA was aware of an apparent difference between the public perception and CALM's actual practice of prescribed burning. It therefore recommended that CALM be required to report on such factors as the area burnt, frequency, intensity and season on a regional basis, each year in its annual report. This information is currently not publicly available. On the basis of the information provided by CALM on the area, frequency and intensity of burns the Authority did not consider that a recommendation of a lesser frequency/intensity could be justified. However, the EPA and the TAP considered the available research and concluded that there was a need for further research of the ecological effects of CALM's fire management practices. The Forest Monitoring and Research Committee should be required to give priority to this research.	Dismiss
13. Recommendation 13 should be applied to all the salt risk areas.	The Authority was advised by the Water Authority of WA that the constraints outlined in Recommendation 10 were adequate for the control of salinity impacts in all but the highest risk catchments. The constraints proposed in Recommendation 13 were those which the Water Authority considered necessary, on the basis of research, to provide adequate protection in these high risk catchments.	Dismiss
14.1 The Forest Monitoring and Research Committee should include a Representative of the Conservation Council	The Authority's intention was that the FMRC be a body of expert scientists, but that the Committee "should actively promote the participation of and draw expertise from other government agencies, tertiary institutions, public organisations and individuals."	

<p>14.2 The FMRC should report directly to the Minister</p>	<p>The Authority considers that the FMRC should be appointed by and report to the Authority, and that its reports should be publicly available. This is because the Authority's processes always involve a high degree of public exposure which may not be the case with reports to the Minister. However, the Authority would subsequently report to the Minister on the matters raised in the Committee's report. This report should also be made public. It would also be helpful for the Minister to receive advice (which is subsequently made public) on the practical implications of the Committee's report from the Lands and Forests Commission.</p>	<p>Dismiss</p>
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**Proposals to amend the 1987 Forest Management Plans and Timber Strategy
and proposals to meet Environmental Conditions on the Regional Plans and the
WACAP ERMP (EPA Bulletin 652 - Assessment 658)**

Proponent: Department of Conservation and Land Management

Appeal No 188

**Appellant: Peter Hird, Dennis Flockton, Kathleen Flockton & Beth Gwynne
21 Loftie Street, Bridgetown WA 6255**

Ground	Response	Recommend
1. Catchment areas and water courses should be planted for permanent not temporary reasons thus ensuring a safer future for wildlife, drinking water and biodiversity.	This appears to relate to the rehabilitation of cleared land (see below).	
2. The risks to salinity levels increasing after the proposed clearfelling of jarrah is very real, and not enough knowledge is available to safely insure against it.	The Authority has made recommendations based on research and monitoring by the Water Authority of WA in cooperation with CALM. This research indicates that salinity is likely to be an environmental problem in certain high risk catchments, and the Authority has recommended special constraints on logging in these catchments to ensure that there are no significant environmental salinity impacts.	Dismiss
3. In the Bridgetown area salinity is getting worse, yet CALM proposes felling regrowth all around in the next ten years.	Where salinity is a problem in substantially cleared catchments a total catchment approach is needed to address the issue. To simply constrain the activities on the forested areas and not the agricultural areas is inadequate. A range of measures is needed, and the approach must be community based to be successful. Obviously CALM should be one of the participants in this process. CALM has proposed a community consultation programme for the management of forest around Bridgetown.	
4. Why is there no mention of jarrah plantations? Why is there no link with Landcare? Why aren't marginal farms replanted? This report lacks the scope of a holistic approach.	This assessment of CALM's proposals relates to the management of the State forests in the Swan, Central and Southern Regions. It does not relate to plantations or cleared farming land.	

<p>5. Why are dieback areas now open to logging but not open to general use? Are timber companies treated preferentially? If so, why?</p>	<p>The Authority expressed concern about relaxation of dieback hygiene in wet seasons.</p>	<p>Consider</p>
<p>6. Poisoning non-timber trees is unacceptable. It creates a plantation effect, destroying the balances between components of the forest which is detrimental to forest health for many years to come.</p>	<p>The Authority agrees that the thinning operations carried out as part of the jarrah silviculture will produce a forest in which the ages of trees and tree forms are more uniform within treated areas. The available evidence does not indicate that this structural change will be "detrimental to the health of the forest", but the Authority has acknowledged that the question of the long term community acceptance of the restructured forest remains to be answered. It is partly for this reason that the Authority has recommended implementation as a trial only, with monitoring and adaptive management.</p>	<p>Consider</p>
<p>7. CALM should prepare an economic statement of the costs and benefits of logging.</p>	<p>This issue, while important, is not an environmental issue.</p>	<p>Dismiss</p>
<p>8. Large areas of undisturbed forests are needed for real conservation. Corridors 100m wide will not.</p>	<p>The Authority agrees with the need for large areas of undisturbed forest and this is provided for in the reserve system including CALM's substantial proposed additions. The Authority examined the issue of corridor width in detail and concluded that the appropriate width for a corridor will depend on the objectives - the width of a corridor for invertebrates could be quite narrow, but the width needed for a highly mobile mammal would be much wider. The actual width of corridors should be adjusted according to specific sites, functional objectives and ecological boundaries. The conditions should reflect this.</p>	<p>Consider</p>
<p>9. Public participation is essential. Forests are worth more to tourism (unlogged) than if logged for timber.</p>	<p>The Authority agrees with the need for public participation. Submissions conveyed the perception that CALM could do this better. With regard to CALM's fire management activities the Authority has recommended more effective public reporting by CALM. The forests are managed for multiple uses. The balance between those uses is a matter for the Government to decide.</p>	<p>Consider</p>
<p>10. Logging of Hester block is inappropriate.</p>	<p>As noted above, CALM has proposed a community consultation programme for the management of forest around Bridgetown, including Hester block.</p>	

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WACAP ERMP (EPA Bulletin 652 - Assessment 658)**

Proponent: Department of Conservation and Land Management

Appeal No 189

**Appellant: Conservation Council of Western Australia Inc
79 Stirling Street, Perth WA 6000**

Ground	Response	Recommend
1.1 No notice was taken of submissions	This is not so. All submissions were read in detail several times during the assessment. Issues raised in submissions were summarised by the EPA and referred to CALM. CALM responded, and the EPA & TAP considered both the submissions and CALM's responses. The Report necessarily highlights only the major issues, but all others were considered.	Dismiss
1.2 There will be no old growth karri left outside reserves	To the extent that 'old growth' implies 'minimal disturbance by man' this is true by definition in 'multiple use forest'. The complex of attributes which make up 'old growth forest' include some which can only be represented in undisturbed forest and some which can be represented in old regrowth forest. The importance of this depends on one's value system.	
2. The 10 year trial period for the jarrah silviculture is too long and there is sufficient evidence of risk and damage (from dieback, salinity and removal of old trees) for the proposals to be rejected outright. CALM has a poor record for monitoring and meeting conditions.	The Authority has recommended monitoring and adaptive management which means that CALM would be expected to review its implementation of the strategy on an on-going basis and adapt it in response to monitoring results. The Authority has further recommended that the FMRC should report on the results of monitoring and research after five years.	
3. There is insufficient public information to determine whether the proposed conservation reserves are adequate.	The Authority is satisfied that CALM's proposals meet the Authority's requirements for reservation of forest expressed through the work of the Conservation Through Reserves Committee and subsequent assessments of CALM Forest Management Proposals. The criteria-based CALM/AHC proposals increase the reservation of old growth forest significantly beyond that originally envisaged by the EPA. CALM has advised that all the supporting mapping will be publicly available.	Dismiss

<p>4. Stream reserves should be 50m either side of first, second and third order streams as recommended by CALM's scientists.</p>	<p>Stream reserves serve two primary functions - water quality protection/aquatic ecosystem maintenance and the provision of wildlife habitat/corridors.</p> <p>With regard to the first, in addition to these stream zones CALM has proposed a form of phased logging. In high salt risk catchments the EPA on advice from the Water Authority of WA has recommended wider stream zones (50m minimum) and the concentration of the area retained under phased logging in the lower part of the catchment. The Authority is satisfied that these constraints are likely to be adequate to protect water quality, but has also recommended monitoring and adaptive management.</p> <p>In association with CALM's proposals for phased logging, and the EPA's recommended minimum dimensions of the areas retained, protection of these areas from thinning and better provision for habitat trees the proposed widths, with the adoption of ecological boundaries.</p> <p>The Authority has also recommended that the effectiveness of these zones be monitored. The appropriate minimum width will depend on the ecological objectives for these zones. As these have not yet been defined by CALM on a regional basis it is not possible to determine the adequacy of the proposed minima. The Authority has recommended the application of the proposed prescription as trial with monitoring and adaptive management. It would be possible to further require that CALM identify the faunal/floral conservation objectives of the stream reserves on a regional basis and use these to determine the appropriate minimum stream reserve widths. Many of these reserves will be significantly wider than the 20m minimum. The actual width of corridors should be adjusted according to specific sites, functional objectives and ecological boundaries as proposed by CALM.</p>	
<p>6.1 Recommendation 5 does not satisfy WACAP condition 4. CALM should be required to meet this condition in full.</p>	<p>The Authority considers that the Minister should set a condition based on Recommendation 5 (in EPA Bulletin 652), and that this condition should supersede WACAP condition 4. (This may require an amendment of the WACAP conditions under Section 46 of the Environmental Protection Act)</p>	<p>Dismiss</p>
<p>6.2 There has been no public input into deciding which areas are protected</p>	<p>Agree, however, Recommendation 5 states that the areas should be identified "with the benefit of public involvement"</p>	<p>Dismiss</p>
<p>6.3 CALM proposes to clearfell these areas</p>	<p>CALM proposes that these areas "will be excluded from harvesting and regeneration and from yield calculations"(proposals document p19)</p>	<p>Dismiss</p>

<p>6.4 All unlogged forest and other old growth should be protected in conservation reserves</p>	<p>The response to this depends on one's value system. Some conservation values can only be protected in reserves. To protect these values requires an adequate representation in the reserved conservation estate. The EPA endorses CALM's proposed additions to the conservation estate. In the multiple use forest under CALM's proposed management, timber is the primary objective and it takes precedence when areas are harvested. Although some conservation values can be sustained across the multiple use forest while a proportion is subjected to logging in any one year, the fact that it is all eventually to be logged determines that it will be different in some important environmental respects from unlogged forest. To protect these values requires that there are adequate controls on forest management activities. The Authority has made several recommendation with regard to the protection of conservation values in multiple use forest, in addition to the CALM/AHC understanding on the protection of heritage values in multiple use forest.</p>	<p>Dismiss</p>
<p>7. The increased volume of timber proposed to be extracted from the jarrah forest is environmentally unacceptable.</p>	<p>The environmental impacts of CALM's jarrah forest management proposals are not solely related to the quantity of wood removed from any given area. The Authority has addressed itself to the impacts, rather than the quantity of wood. Nevertheless, the Authority expressed its caution over the proposed increase in the removal of biomass by recommending that any major proposal for the removal of 'other jarrah logs' (not presently utilised) should be referred to the Authority for further consideration of its environmental impacts.</p>	<p>Dismiss</p>
<p>8.1 The public has not had an opportunity to comment on CALM's proposal to clearfell jarrah. (EPA questions whether the community will accept a 'significantly restructured forest')</p>	<p>CALM's proposals have been publicly reviewed. CALM has not described them as clearfelling presumably because they include the retention of habitat trees, the coupes are smaller than in normal clearfelling, and the regeneration is from lignotubers rather than a fired seedbed. This is one of the reasons why the EPA has recommended the implementation of the proposals as a trial, with the results available for public information.</p>	<p>Consider</p>
<p>8.2 There is widespread evidence that cutover jarrah is not regrowing. To reduce it to 10 or even 15 m³/ha will push the ecosystem beyond the limits of recovery and survival</p>	<p>EPA is not aware of this 'widespread evidence'. The proposed thinning minima of 10 and 15 m³/ha are based on CALM's research results. EPA recommends (Rec 9) that their implementation be subject to monitoring and adaptive management.</p>	
<p>9. The additional safeguards in Rec 10 are insufficient. The risk of increased salinity is too high.</p>	<p>The provisions of Rec 10 are based on research by the Water Authority of WA in conjunction with CALM over a number of years, and are consistent with the Water Authority's advice.</p>	

10. It is unacceptable for CALM to judge how many habitat trees are sufficient.	The Authority considered the available evidence was insufficient to clearly indicate the number of habitat trees which would be required, but that it tended to indicate that three trees per hectare were insufficient.	
11. The public has not had an opportunity to comment on the relaxation of CALM's hygiene prescriptions.	CALM should not be free to relax its dieback hygiene procedures for its own operations unilaterally. Any change to these procedures should involve public scrutiny in view of the risks involved and the substantial constraints that those procedures have imposed on other users of the forest and the public. CALM's management of the forest should explicitly build in contingencies to avoid the need for logging and other dieback threatening activities under wet conditions.	Consider
12. CALM burns too much, too often and at the worst possible time of year (spring), with unacceptable ecological consequences.	The EPA was aware of an apparent difference between the public perception and CALM's actual practice of prescribed burning. It therefore recommended that CALM be required to report on such factors as the area burnt, frequency, intensity and season on a regional basis, each year in its annual report. This information is currently not publicly available. The EPA and the TAP considered the available research and concluded that there was a need for further research of the ecological effects of CALM's fire management practices. The Forest Monitoring and Research Committee should be required to give priority to this research.	Consider
13. The additional safeguards in Rec 13 are insufficient. The risk of increased salinity is too high.	The provisions of Rec 13 are based on research by the Water Authority of WA in conjunction with CALM over a number of years, and are consistent with the Water Authority's advice.	Dismiss
14.1 The Forest Monitoring and Research Committee should include a Representative of the Conservation Council	The Authority's intention was that the FMRC be a body of expert scientists, but that the Committee "should actively promote the participation of and draw expertise from other government agencies, tertiary institutions, public organisations and individuals."	Dismiss
14.2 The FMRC should report directly to the Minister	The Authority considers that the FMRC should be appointed by and report to the Authority, and that its reports should be publicly available. This is because the Authority's processes always involve a high degree of public exposure which may not be the case with reports to the Minister. However, the Authority would subsequently report to the Minister on the matters raised in the Committee's report. This report should also be made public. It would also be helpful for the Minister to receive advice (which is subsequently made public) on the practical implications of the Committee's report from the Lands and Forests Commission.	Dismiss

15.1 CALM should make regular public reports as required by condition 6 of the 1987 Management Plans		Uphold
15.2 These plans should not extend beyond 1997		

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Proponent: Department of Conservation and Land Management

Appeal No 191

**Appellant: South-West Forests Defence Foundation Inc
PO Box 203, Nedlands WA 6009**

Ground	Response	Recommend
1.1 CALM proposes a massive increase in the volume of wood available for extraction	The EPA assessed a management strategy for the karri forest which provided for smaller coupes, expanded conservation and other protected areas, commitment to a range of rotation lengths and a total saw log yield consistent with present levels.	Dismiss
1.2 The cut should be reduced to take account of local concern about loss of forest.	Recommendation 5 addresses this concern with regard to the karri forest. The Authority recognises the parallels between that requirement and the possible need for some similar provision for the protection of special areas of jarrah forest.	Consider
1.3 All unlogged forest and other old growth should be protected in conservation reserves	The response to this depends on one's value system. Some conservation values can only be protected in reserves. To protect these values requires an adequate representation in the reserved conservation estate. The EPA endorses CALM's proposed additions to the conservation estate. In the multiple use forest under CALM's proposed management, timber is the primary objective and it takes precedence when areas are harvested. Although some conservation values can be sustained across the multiple use forest while a proportion is subjected to logging in any one year, the fact that it is all eventually to be logged determines that it will be different in some important environmental respects from unlogged forest. To protect these values requires that there are adequate controls on forest management activities. The Authority has made several recommendation with regard to the protection of conservation values in multiple use forest, in addition to the CALM/AHC understanding on the protection of heritage values in multiple use forest.	
1.4 The Jarrah forest inventory must be made public.	CALM has produced publications describing the methodology of its inventory and has indicated to the Authority that the information in the inventory would be made publicly available, subject to resources.	Consider

2. Winter logging should be discontinued (in disease-free and disease-risk areas of all forest types). Strict hygiene control measures must be introduced and enforced.	The Authority expressed concern about relaxation of dieback hygiene in wet seasons.	Consider
3. The Authority has ignored the risk of increased salinity following logging. There should be no intensification of logging in the high salt-risk areas.	The Authority has made recommendations based on research and monitoring by the Water Authority of WA in cooperation with CALM. This research indicates that salinity is likely to be an environmental problem in certain high risk catchments, and the Authority has recommended special constraints on logging in these catchments to ensure that there are no significant environmental salinity impacts.	Dismiss
4. The EPA has paid insufficient attention to the need for habitat trees. To maintain habitat trees and prevent the extinction of hollow-dependent species, intensified logging of the jarrah forest must not be permitted.	The Authority considered the available evidence was insufficient to clearly indicate the number of habitat trees which would be required, but that it tended to indicate that three trees per hectare were insufficient. For the longer term, the FMRC should give priority to research into this matter.	Consider
5.1 EPA has approved a one third increase in the area of karri forest felled annually.	The EPA assessed a management strategy for the karri forest which provided for smaller coupes, expanded conservation and other protected areas, commitment to a range of rotation lengths and a total saw log yield consistent with present levels.	
5.2 The cut should be reduced to take account of local concern about loss of forest.	See response to 1.2 above.	Uphold
5.3 All unlogged forest and other old growth should be protected in conservation reserves	See response to 1.3 above.	Dismiss

<p>6.1 Stream reserves should be at least 50m on either side of all first, second and third order streams.</p>	<p>Stream reserves serve two primary functions - water quality protection/aquatic ecosystem maintenance and the provision of wildlife habitat/corridors. With regard to the first, in addition to these stream zones CALM has proposed a form of phased logging. In high salt risk catchments the EPA on advice from the Water Authority of WA has recommended wider stream zones (50m minimum) and the concentration of the area retained under phased logging in the lower part of the catchment. The Authority is satisfied that these constraints are likely to be adequate to protect water quality, but has also recommended monitoring and adaptive management.</p> <p>In association with CALM's proposals for phased logging, and the EPA's recommended minimum dimensions of the areas retained, protection of these areas from thinning and better provision for habitat trees the proposed widths, with the adoption of ecological boundaries.</p> <p>The Authority has also recommended that the effectiveness of these zones be monitored. The appropriate minimum width will depend on the ecological objectives for these zones. As these have not yet been defined by CALM on a regional basis it is not possible to determine the adequacy of the proposed minima. The Authority has recommended the application of the proposed prescription as trial with monitoring and adaptive management. It would be possible to further require that CALM identify the faunal/floral conservation objectives of the stream reserves on a regional basis and use these to determine the appropriate minimum stream reserve widths. Many of these reserves will be significantly wider than the 20m minimum. The actual width of corridors should be adjusted according to specific sites, functional objectives and ecological boundaries as proposed by CALM.</p>	
<p>6.2 Road reserves should not be reduced until they have been fully assessed for their ecological values.</p>	<p>The principal management objective for road reserves is visual resource management, and that essential ecological functions which they may perform are in addition to those adequately provided by other means.</p>	<p>Dismiss</p>
<p>6.3 All remaining unlogged forest and old-growth forest of high conservation value within existing road reserves should be protected in secure reserves.</p>	<p>See answer to 1.3 above.</p>	<p>Dismiss</p>

<p>7 There should be a big reduction in the area of forest subjected to prescribed fuel reduction burning and in the frequency of burns, especially spring burns.</p>	<p>The EPA was aware of an apparent difference between the public perception and CALM's actual practice of prescribed burning. It therefore recommended that CALM be required to report on such factors as the area burnt, frequency, intensity and season on a regional basis, each year in its annual report. This information is currently not publicly available. On the basis of the information provided by CALM on the area, frequency and intensity of burns the Authority did not consider that a recommendation of a lesser frequency/intensity could be justified. However, the EPA and the TAP considered the available research and concluded that there was a need for further research of the ecological effects of CALM's fire management practices. The Forest Monitoring and Research Committee should be required to give priority to this research.</p>	<p>Dismiss</p>
<p>8.1 The Forest Monitoring and Research Committee should include a Representative of the Conservation Council</p>	<p>The Authority's intention was that the FMRC be a body of expert scientists, but that the Committee "should actively promote the participation of and draw expertise from other government agencies, tertiary institutions, public organisations and individuals."</p>	
<p>8.2 The FMRC should report directly to the Minister</p>	<p>The Authority considers that the FMRC should be appointed by and report to the Authority, and that its reports should be publicly available. This is because the Authority's processes always involve a high degree of public exposure which may not be the case with reports to the Minister. However, the Authority would subsequently report to the Minister on the matters raised in the Committee's report. This report should also be made public. It would also be helpful for the Minister to receive advice (which is subsequently made public) on the practical implications of the Committee's report from the Lands and Forests Commission.</p>	<p>Dismiss</p>
<p>9. The proposals should be reassessed in five years, not ten.</p>	<p>The Authority has recommended monitoring and adaptive management which means that CALM would be expected to review its implementation of the strategy on an on-going basis and adapt it in response to monitoring results. The Authority has further recommended that the FMRC should report on the results of monitoring and research after five years.</p>	

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**Proposals to amend the 1987 Forest Management Plans and Timber Strategy
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WACAP ERMP (EPA Bulletin 652 - Assessment 658)**

Proponent: Department of Conservation and Land Management

Appeal No 192

**Appellant: K M Trayler and Dr J M Davis
School of Biological and Environmental Sciences
Murdoch University, Murdoch WA 6150**

Ground	Response	Recommend
1. CALM's stream zone widths are too narrow to control sedimentation - Clinnick's research is misquoted as relating to Australian streams.	The Authority acknowledged that the proposal was based on limited research and therefore recommended monitoring and adaptive management. However, on the basis of advice from the TAP (p4) it was concluded that the widths were likely to be adequate for the control of sedimentation.	Dismiss
2., 3. CALM's report did not take into account the data of Grows and Davis 1991 which found 100m wide buffers ameliorated clearfelling impacts on water quality and macroinvertebrates. Recher et al (1980) concluded that 40m buffer zones either side of a stream was a minimum requirement for forest avifauna.	Submissions drew the Authority's attention to the work of Grows and Davis. The TAP advised (p5) that macroinvertebrate impacts were only likely to be short term and localised. Species were adapted to seasonal dessication and would be likely to rapidly recolonise from adjacent areas following temporary localised impacts. The 40m width referred to by Recher et al is of a similar magnitude to the widths proposed by CALM. However, the Authority has also recommended that the effectiveness of these zones be monitored, and that in high salt risk catchments the zones be at least 50m wide on either side of the stream. The actual width of corridors should be adjusted according to specific sites, functional objectives and ecological boundaries, as proposed by CALM.	Dismiss
4. The precautionary approach for the karri forest needs definition.	Agree. CALM has suggested in discussions following the release of the EPA's report that the definitions spelled out for the jarrah forest could also be applied to the karri forest (with the exception to the reference to a trial). The EPA agrees that this would be acceptable. This would mean that the karri and karri marri forest too should be implemented "in accordance with the recommendations in this (the EPA's) report and the application of the following general principles: i) a precautionary approach; ii) adaptive and flexible management practices based on research and monitoring of operations; and iii) no commitment of all the wood resource in the long term."	Uphold

<p>5. The 30m wide strips should be implemented as an interim approach pending the results of experimental investigation comparing the effectiveness of buffer zones of different widths on WA streams.</p>	<p>The Authority has recommended that the proposal be implemented as a trial, and has listed a number of areas of research which the FMRC could pursue.</p>	<p>Consider</p>
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**Proposals to amend the 1987 Forest Management Plans and Timber Strategy
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Proponent: Department of Conservation and Land Management

Appeal No 193

**Appellant: Forest Industries Federation of Western Australia
103 Colin Street, West Perth WA 6005**

Ground	Response	Recommend
1.1 Recommending a precautionary approach is superfluous. CALM detailed such an approach in its proposals.	The Authority acknowledges that CALM has been undertaking its operations with some level of research and monitoring, however, in view of the major changes and ecological uncertainties in the proposed jarrah silviculture, the Authority considers that research and monitoring in some areas needs to be more closely linked with operations and the principles of adaptive management applied.	Dismiss
1.2.1 Calling the implementation of the proposals for the jarrah and jarrah-marri forest a "trial" is superfluous as they will be reassessed in ten years time any way.	The Authority disagrees, the implementation is being treated as research in view of the uncertainties mentioned above. It is important that the proposals be applied over a representative range of sites and that the intensity of monitoring be appropriate to a trial implementation. Also, it is important that the proposed levels of timber extraction should not be seen as indicative of the amounts likely to be available in the longer term.	Dismiss
1.2.2 Monitoring should consider the economic impact of the proposals on wood production and whether any additional cost that may be revealed is justified by the environmental gain.	Economic monitoring is not an environmental issue. However, the Authority agrees that decisions by Government about trade-offs between economic and environmental benefits should be adequately informed.	Dismiss

<p>1.3 There is no reason not to commit the sustainable volume of wood resource from production forest.</p>	<p>The major problem is the uncertainty in the predictions of environmentally sustainable yield. If the jarrah silviculture is to be implemented as a trial, using adaptive management which takes account of the results of monitoring and research, the Authority considers it inappropriate to commit <u>all</u> of the estimated volume when management changes in response to monitoring and research results of the trial may subsequently reduce the volume available. Also, timber production from the natural forest is subject to natural variability through time from many diverse factors (weather, disease, insects, past management etc.). Further, under CALM's proposals the forest is to be managed for multiple uses, not solely for timber production. For all these reasons it is important that there should be no commitment of all the wood resource in the long term.</p>	<p>Dismiss</p>
<p>5.1,2,3 CALM's proposal refers to 'mature karri', not 'outstanding old growth karri', and their purpose is as 'patches of mature habitat'.</p>	<p>The reference to 'outstanding old growth karri' relates to WACAP (1987) environmental condition 4(1), which CALM is seeking to satisfy by its proposals.</p>	<p>Dismiss</p>
<p>5.4 Old growth forest social values include the production of timber.</p>	<p>The Authority acknowledges that timber production is one of the values of multiple use forest. The Recommendation refers to the whole range of social values other than timber production and could be appropriately qualified.</p>	<p>Uphold</p>
<p>6. Recommendation 6 is meaningless because the proposals can only be applied for the life of the management plans (10 years).</p>	<p>The Recommendation appears to have been misunderstood. It was intended to ensure that any long term planning (beyond ten years) did not assume that the sustainable yield estimates in the amended Timber Strategy would necessarily be available in the longer term, particularly as the available information suggests that present cutting rates are relatively high in terms of the averages implied by the proposed rotation lengths. For this reason, timber supply contracts which can have a life of up to 15 years (i.e. beyond the life of the present plans) need to be appropriately constrained.</p>	<p>Dismiss</p>

<p>7.1,2 There is no environmental reason to place controls on the volumes of each log class. Restrictions to current classes will inhibit efficient use of the wood resource.</p>	<p>Agree. The intent was to ensure that commercial commitments were consistent with the precautionary approach recommended by the Authority and that the total resource is not overcommitted nor committed for an excessively long time as either of these would reduce needed flexibility to respond to unforeseen circumstances given the level of uncertainty in the management of this natural resource. It was not the intention of the EPA to discourage improved utilisation and value adding of the individual components of the resource. However, in recognition of the precautionary approach (see 1.3) the Authority considers that CALM should not be free to exchange timber from one class to another and thereby exceed the estimated class volumes without being required to demonstrate that sufficient flexibility is being maintained. This is consistent with the requirement to implement the project 'as proposed'. In that context it should be clear from any conditions set that the amounts of timber indicated by CALM for extraction are maxima, and that the conditions in no way <u>require</u> CALM to extract any or all of the timber proposed.</p>	<p>Dismiss</p>
<p>7.3 The possibility of increased supply or changes to make wood production more economically efficient should also be recognised.</p>	<p>It is true that further refinement of CALM's timber inventory could identify a greater volume of timber available for harvesting in the future. The Authority was concerned that the social dislocation and economic implications to industry of <u>unplanned</u> adaption to a possible reduction in wood supply could lead to an unwillingness to respond to genuine environmental concerns. The adjustments implied by an increase in wood supply are likely to be more readily accommodated with less social and economic disruption.</p>	<p>Dismiss</p>
<p>7.4</p>	<p>See 1.2.1 above</p>	<p>Dismiss</p>
<p>8.1 The classes of logs were not identified by the inventory but were arbitrarily set to reflect current economic and technological capabilities.</p>	<p>See 7.1,2 above.</p>	<p>Dismiss</p>
<p>8.2 Residues were previously identified for commercial exploitation in the 1987 Timber Strategy.</p>	<p>The residues were identified, but commercial exploitation was not proposed. Indeed, the text referred to the lack of a market.</p>	<p>Dismiss</p>
<p>8.3 The production of these logs is part of the proposals found environmentally acceptable in Rec 1.</p>	<p>Rec 1 refers to the proposals being environmentally acceptable, subject to the recommendations in this report - of which Rec 8 is one.</p>	<p>Dismiss</p>

8.4 The requirement to refer is a substantial disincentive to industry attempting to utilise these resources.	The requirement to refer does not imply that the referral will be formally assessed. If the environmental impacts of the proposal can be shown to be insignificant, no assessment may be required. The advice of the Forest Monitoring and Research Committee will guide the Authority in determining the need for assessment.	Dismiss
9. Reject recommendation 9 on the grounds given for 1, 6 and 7 above.	Disagree (see responses to 1, 6 & 7)	Dismiss
10.1 Recommendation 10 would increase the untreated portion of second order catchments to 40 to 50% compared to CALM's recommendation of 30%.	This appears to be an appeal against the recommendation that the 30% of catchment to be retained be in addition to stream reserves and diverse ecotype areas. The Authority based this part of the recommendation on its understanding that this was consistent with CALM's proposal. In the proposals document (p14, Table 7) CALM refers to 30% of forest to be "retained uncut" for at least 10 years, implying that it was forest that <u>would</u> ultimately be cut. This clearly excludes the stream zones and diverse ecotype areas which CALM has committed not to cut.	Dismiss
10.2 The harvesting cost would increase dramatically.	This is not an environmental ground for rejecting the Authority's recommendation.	Dismiss
10.3 The EPA has not provided any justification for modifying CALM's recommendations.	See 10.1 above	Dismiss
14.1 The existing institutional arrangements can be managed to achieve the objectives listed.	The Forest Monitoring and Research Committee would be and be publicly perceived to be independent of CALM.	Dismiss
14.2 The proposal is an unnecessary cost burden on the industry.	The Authority considered the listed research as essential to answering key questions about the ongoing environmental acceptability of the timber harvesting proposals. Their costs should be borne by the users of the timber (consistent with the 'user pays' principle). CALM is already undertaking some of the relevant research.	Dismiss

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Proponent: Department of Conservation and Land Management

Appeal No 194

**Appellant: Dr Malcolm C Hay
37 Colin Street, West Perth WA 6005**

Ground	Response	Recommend
1. Two weeks is inadequate for the community to respond on such an important issue.	CALM's proposals were released initially for public comment for eight weeks earlier this year. The Minister subsequently extended this period by a further four weeks. This report is the EPA's advice to the Minister about those proposals, and takes into account many issues raised by the public in submissions. The two week appeal period on the EPA's report is specified in the Environmental Protection Act and in view of the previous opportunity for submissions on CALM's proposals, it is adequate.	Dismiss
2. The TAP report pleads caution. Why isn't the scientific evidence being acknowledged in the decision making process.	The Authority has acknowledged the need for caution by recommending the application of a 'precautionary approach' (involving adaptive and flexible management practices based on research and monitoring, trial implementation of the proposals for the jarrah forest and no long term commitment of all the wood resource). In addition the Authority has recommended a number of specific constraints on CALM's operations and recommended the establishment of an independent committee to oversee and report on the research and monitoring of the environmental impacts of CALM's proposals.	Consider
3. The amount of timber being harvested is to be doubled. Taking more timber that is actually maturing is like mining the forest and denies the rights of our descendants.	It is the amount of harvested timber identified as potentially useable which has doubled, not the amount harvested. That is, CALM now proposes to sell smaller logs and 'waste' previously left on the forest floor. This is not mining, and this improved utilisation is consistent with the principles of ESD.	Dismiss

<p>4.1 What is the justification for clearfelling the jarrah forest?</p>	<p>CALM advises that the substantial removal of the overstorey is necessary to ensure adequate regeneration of the forest following harvesting. The EPA has recommended that its cautious implementation as a trial could be environmentally acceptable, with monitoring and research and the retention of sufficient flexibility to reduce the intensity of operations during or after the trial period if environmental monitoring results showed this to be appropriate.</p>	<p>Dismiss</p>
<p>4.2 To claim that there has been a public review of CALM's proposals is completely false.</p>	<p>CALM's proposals document included as an appendix the proposed new jarrah silviculture with its 'gap creation' - a process which the EPA described in its report as 'not unlike clearfelling'. As noted above, the proposals document was available for public review for twelve weeks. However, it is clear from submissions and appeals that the public had considerable difficulty understanding the environmental implications of CALM's proposals, based on CALM's documentation.</p>	<p>Consider</p>
<p>4.3 The massive increase in the extent and intensity of logging will lead to salinity, dieback, loss of species, a complete immature forest and loss of all old growth forest outside conservation reserves.</p>	<p>There is no 'massive increase in the volume of wood available for extraction'. The change is a change in accounting which has led to a much more complete assessment of the total amount which can be extracted. In the past large quantities of 'waste' were left on the forest floor because of a lack of markets. CALM's previous inventory took no account of these 'waste' timber products. The proposals dramatically increase the inventory account of the amount which could be removed, subject to markets. Nevertheless, the Authority has recommended caution in implementation of the proposals, and has made a number of recommendations to ensure the acceptability of CALM's proposals.</p>	<p>Consider</p>
<p>4.4 CALM and the EPA have ignored virtually every recommendation made by the public. The public review process is a sham.</p>	<p>This is not so, indeed the EPA takes the strongest exception to this attack on the public review process. Issues raised in submissions were summarised by the EPA and referred to CALM. CALM responded, and the EPA & TAP considered both the submissions and CALM's responses. The Report necessarily highlights only the major issues, but all others were considered. The Western Australian public environmental review process, which is at the world forefront, is intended to inform the public about proposals, to enable them to raise issues of concern and to see the responses which the EPA and the proponent make to those issues. It is not intended to be a public decisionmaking process, the decision rests with the Minister, based on the EPA's independent advice.</p>	<p>Dismiss</p>

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Proponent: Department of Conservation and Land Management

Appeal No 195

Appellant: Dr Paul Wheatley

24 Nelson Street, Bridgetown WA 6255

Ground	Response	Recommend
1.1 Overlooking available scientific evidence that levels of cut are ecologically unsustainable.	The Authority studied the available scientific evidence with the assistance of the TAP and concluded that the proposals could be ecologically sustainable, subject to the Authority's recommendations, including the need for flexibility referred to by the appellant.	Dismiss
1.2 The 10 year trial period for the jarrah silviculture is too long	The Authority has recommended monitoring and adaptive management which means that CALM would be expected to review its implementation of the strategy on an on-going basis and adapt it in response to monitoring results. The Authority has further recommended that the FMRC should report on the results of monitoring and research after five years. In view of this and in the context of a forest much of which is to be managed on a rotation length of over 100 years, the ten year trial period is appropriate.	Dismiss
1.3 The consideration of wood production levels should be part of this review.	The wood production levels proposed in the revised Timber Strategy <u>were</u> reviewed by the Authority.	Dismiss
2.1 CALM states in Appendix 1 page 40 that the pristine nature of forests (i.e. undisturbed by man) "is not of ecological significance".	This is not an appeal against the Authority's report and recommendations but against a claim made by CALM.	
2.2 CALM states in Appendix 3 page 3 that "It is not the intention of the CALM/AHC agreement to 'protect' old growth values outside reserves".	The Authority agrees with the appellant that this statement is incorrect. It is also not the view of the AHC. In a letter to the Authority the AHC's Executive Director stated "that part of the agreement included the development of guidelines for the protection of national estate guidelines outside the nature conservation reserves". The purpose of managing some of the multiple use forest to a rotation length of 120-240 years is clearly to protect some old growth values on an ongoing basis, as acknowledged by CALM later in the response quoted by the appellant. This is not an appeal against the Authority's report and recommendations.	Dismiss

2.3 Jarrah and karri clearfelling requiring subsequent thinning etc. is no longer natural forest; it is more like a plantation.	This is a statement of values, it is not a ground for appeal against the Authority's report and recommendations..	
2.4 The Summary page iv discussion of road river and stream zones makes no mention of wilderness values as having a priority.	Many values relevant to wilderness are referred to by CALM in its discussion of defining scenic quality (DMS p 151), however, the provision for the protection of wilderness values rests primarily in the conservation estate rather than the road, river and stream zones.	Dismiss
3.1 Grave concerns about proposed logging in Hester block.	CALM's response " CALM acknowledges the value of Hester and will consult with Bridgetown community about its management, particularly logging." is considered adequate.	Consider

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Proponent: Department of Conservation and Land Management

Appeal No 199

**Appellant: Coalition for Denmark's Environment
PO Box 77, Denmark WA 6333**

Ground	Response	Recommend
1. The EPA has dismissed almost all the expert independent advice of its TAP in favour of CALM's explanations.	This unsupported claim is refuted. The Authority considered the TAP's advice in all areas. On nutrients and Old growth forest the TAP did not raise any major concerns. In regard to dieback the Authority endorsed the need for CALM to develop an alternative strategy to avoid logging in wet summers. With regard to salinity, stream reserves and habitat trees the Authority's recommendations were based on the TAP's advice, and the Authority recommended more research into fire management. The Authority also followed the TAP's general recommendation of a cautious approach.	Dismiss
2. There is sufficient evidence for the EPA to have rejected CALM's proposals as environmentally unacceptable.	The Authority considered the substantial information provided in public submissions and studied the available scientific evidence with the assistance of the TAP and concluded that, although there was reason for caution, the proposals could be implemented, subject to the Authority's recommendations.	
3. The EPA has confirmed that 'multiple use' forest is in fact for the single use of wood production. This is a new management policy and, as such the EPA should have required CALM to resubmit its proposals to the public, with this policy clearly spelled out.	In the multiple use forest under CALM's proposed management, timber is the primary objective and it takes precedence when areas are harvested. Although some conservation values can be sustained across the multiple use forest while a small proportion is subjected to logging in any one year, the fact that it is all eventually to be logged determines that it will be different in some important environmental respects from unlogged forest. To protect these values requires that there are adequate controls on forest management activities. The Authority has made several recommendation with regard to the protection of conservation values in multiple use forest, in addition to the CALM/AHC understanding on the protection of heritage values in multiple use forest. CALM does not propose to manage the forest only for wood production, and the EPA has explicitly recognised other management objectives in its recommendations.	Dismiss

4. The EPA does not address CALM's breaches of environmental conditions.	This report is of CALM's proposals for its management of the forest. Matters of compliance with environmental conditions are dealt with through another process under Section 48 of the Environmental Protection Act.	Dismiss
5. CALM's claim that only 60-80% of an area is burnt during a prescribed burn is misleading. Invariably 100% of some different vegetation/habitat types are burnt. EPA's recommendation on prescribed burning is unacceptable.	The Authority acknowledges that the principle of mosaic burning may not adequately ensure the protection of fire-prone vegetation/habitat types. For this reason it is important that "different burn regimes may be applied over time on the same area" as CALM claims, but the application of these different regimes needs to be directed by research. It is for this reason that fire management is one of the priority research areas for attention by the Forest Monitoring and Research Committee.	Dismiss
6. Historically the jarrah forest has <u>not</u> been treated conservatively, CALM states that only 15% of the jarrah forest remains unlogged. So the conclusion that the jarrah forest can withstand a 10 year trial is wrong.	The Authority has recommended monitoring and adaptive management which means that CALM would be expected to review its implementation of the strategy on an on-going basis and adapt it in response to monitoring results. The Authority has further recommended that the FMRC should report on the results of monitoring and research after five years. In view of this and in the context of a forest much of which is to be managed on a rotation length of over 100 years, the ten year trial period is appropriate.	Consider

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Proponent: Department of Conservation and Land Management

Appeal No 201

Appellant: Mr J McMahon

56 Stock Road, Attadale WA 6156

Ground	Response	Recommend
1. Proposed Mt Roe National Park should not be 'locked up'. There is no evidence given that the conservation values sought cannot be achieved in a reserve managed for multiple purposes.	The Authority has recommended that CALM's proposal for the creation of the Mt Roe National Park be implemented. Some 'multiple' uses are compatible with the conservation objectives of the national park. CALM should determine and manage such activities.	Dismiss
2. The proposed 'diverse ecosystem areas' do not need 'protection from physical disturbance'.	CALM proposes that these areas be protected from physical disturbance associated with logging and other forest operations. These areas generally do not have timber production values.	Dismiss
3. There is no programme for implementation.	CALM can be expected to develop the programme for implementation once its proposals have been endorsed by Government.	Dismiss
4. The CALM/AHC agreement is not relevant to Bulletin 652.	The Authority disagrees. The management of the multiple use forest to protect National Estate values, especially old growth, is an important aspect of CALM's overall proposals.	Dismiss
5. The diverse ecosystem areas have not been identified.	Recommendation 4 covers this.	Dismiss
6. The new reserves and protected areas will have a substantial negative impact on rural communities and the WA economy by preventing renewable resource industries access to these large areas which are already under CALM's management.	These reserves are part of a total forest management package, and their economic impact should not be assessed in isolation from the rest of the package.	Dismiss

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Proponent: Department of Conservation and Land Management

Appeal No 202

Appellant: Forest Field Officers Association

C/- Dept of CALM, Jarrahdale WA 6203

Ground	Response	Recommend
1. Monadnocks Conservation Park should not become a national park because it lacks high conservation value.	High conservation value is not the only, or even a necessary prerequisite for a National Park. For example, two of the State's most used national parks, Yanchep and John Forest, have areas which have been substantially modified for recreation. Nevertheless, an area should not become a national park unless it has the appropriate values, which would usually include conservation value. CALM's proposals go beyond the Authority's System 6 recommendation. The Authority endorsed in general CALM's proposals for additional reservation, but did not determine its position with regard to each area proposed, accepting that any adjustments could be made in the final management plans approved by the Minister. The decision whether or not this area should be a national park is one for the Government to take, on appropriate advice. The EPA supports its implementation.	Dismiss
2. Gibbs block should not become a conservation park as its conservation value has been substantially degraded by logging and the vegetation complex it is proposed to secure no longer exists.	The Authority took CALM's proposal for Gibbs block on face value as being worthy for conservation. Accordingly, Gibbs block should be set aside for conservation unless, in the process of normal review the claims by the appellant are proven, in which case an equivalent area of land elsewhere should be set aside to protect the relevant conservation values.	Consider

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Proponent: Department of Conservation and Land Management

Appeal No 203

**Appellant: Busselton Peace and Environment Group
89 Kent Street, Busselton WA 6280**

Ground	Response	Recommend
1. The EPA has failed to take account of the findings of researchers, including its own Technical Advisory Panel.	The Authority considered the substantial information provided in public submissions and studied the available scientific evidence with the assistance of the TAP and concluded that the proposals could be ecologically sustainable, subject to the Authority's recommendations. Specifically, the Authority considered the TAP's advice in all areas. On nutrients and Old growth forest the TAP did not raise any major concerns. In regard to dieback the Authority endorsed the need for CALM to develop an alternative strategy to avoid logging in wet summers. With regard to salinity, stream reserves and habitat trees the Authority's recommendations were based on the TAP's advice, and the Authority recommended more research into fire management. The Authority also followed the TAP's general recommendation of a cautious approach.	Dismiss
2. EPA has failed to consider that CALM's response to issues is often inadequate and contradictory.	The Authority considered CALM's responses very carefully.	Dismiss
3. The EPA has failed to take into account the concerns raised in our submission.	This is not so. Issues raised in submissions were summarised by the EPA and referred to CALM. CALM responded, and the EPA & TAP considered both the submissions and CALM's responses. The EPA and the TAP also met with representatives of the conservation movement to discuss a range of issues including those raised in submissions. The EPA's Report necessarily highlights only the major issues, but all others were considered.	Dismiss
4. The report makes a mockery of the public participation process.	This statement is of great concern. The Authority champions the public's right to know and to be heard, but accepts that the decisionmaking role should rest with the Minister, informed by a range of inputs, including the Authority's public, independent advice.	Dismiss

**Report under Section 106(a) of the Environmental Protection Act
on appeals against the Environmental Protection Authority's
Report and recommendations on**

**Proposals to amend the 1987 Forest Management Plans and Timber Strategy
and proposals to meet Environmental Conditions on the Regional Plans and the
WACAP ERMP (EPA Bulletin 652 - Assessment 658)**

Proponent: Department of Conservation and Land Management

Appeal No 204

**Appellant: Chamber of Commerce and Industry of Western Australia
190 Hay Street, East Perth WA 6004**

Ground	Response	Recommend
1. Social impact issues should not be part of an environmental impact assessment.	The Authority disagrees. The Environmental Protection Act defines the environment to include "living things, their physical, biological and social surroundings, and interactions between all of these". This proposal clearly impacts on some of the social values people derive from the forest and consideration of these is essential to the assessment. Nevertheless, the Authority is aware that some social impact issues are not covered by the above definition, and determines on a case by case basis those issues which must be addressed, and those which can be left for other processes (e.g. Aboriginal heritage)	Dismiss
2. Recommendation 7 should not place limitations on the individual classes of timber products. It works against efficient resource use, and has no environmental justification.	Agree. The intent was to ensure that commercial commitments were consistent with the precautionary approach recommended by the Authority and that the total resource is not overcommitted nor committed for an excessively long time as either of these would reduce needed flexibility to respond to unforeseen circumstances given the level of uncertainty in the management of this natural resource. It was not the intention of the EPA to discourage improved utilisation and value adding of the individual components of the resource. However, in recognition of the precautionary approach (see 1.3) the Authority considers that CALM should not be free to exchange timber from one class to another and thereby exceed the estimated class volumes without being required to demonstrate that sufficient flexibility is being maintained. This is consistent with the requirement to implement the project 'as proposed'. In that context it should be clear from any conditions set that the amounts of timber indicated by CALM for extraction are maxima, and that the conditions in no way <u>require</u> CALM to extract any or all of the timber proposed.	Dismiss

<p>3 Recommendation 12, second dot point requiring CALM to better inform the public on its fire management should not be part of environmental conditions. (see 1 above)</p>	<p>The highly public nature of the environmental assessment process gives a clear focus to the principle of the public's right to know which underlies the whole of the Environmental Protection Act. Where the public is justifiably concerned about an environmental issue, it is the clear role of the Authority to make recommendations about both the management of the issue, and the informing of the public, so they may know what is being done to manage the issue. This recommendation was partly in response to concerns expressed in submissions.</p>	<p>Dismiss</p>
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**Report under Section 106(a) of the Environmental Protection Act
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**Proposals to amend the 1987 Forest Management Plans and Timber Strategy
and proposals to meet Environmental Conditions on the Regional Plans and the
WACAP ERMP (EPA Bulletin 652 - Assessment 658)**

Proponent: Department of Conservation and Land Management

Appeal No 205

**Appellant: Andrew George Thomson, Richard Chandler and Tony Paynton
28 Tralee Way, Waterford WA 6152**

**This appears to be an earlier draft of Appeal No 191 except for the additional
handwritten page signed by Andrew George Thomson, Richard Chandler and
Tony Paynton regarding Recommendation 12 which is addressed below.**

Ground	Response	Recommend
<p>1. CALM's fire management practice leaves a lot to be desired. There are too many hot fires damaging trees. CALM should be required to keep accurate records of the fires they light, including date and time of fire, maximum temperature, humidity, wind speed and direction, fire forecast for that day, previous weather conditions and previous burn.</p>	<p>These basic parameters should be part of CALM's fire management record. However, they are at a level of detail inappropriate for an environmental condition of approval. They should be conveyed to CALM as part of the compliance audit procedures.</p>	

**Report under Section 106(a) of the Environmental Protection Act
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**Proposals to amend the 1987 Forest Management Plans and Timber Strategy
and proposals to meet Environmental Conditions on the Regional Plans and the
WACAP ERMP (EPA Bulletin 652 - Assessment 658)**

Proponent: Department of Conservation and Land Management

Appeal No 206

Appellant: Institute of Foresters of Australia (WA Division)

PO Box 187, Como WA 6152

Ground	Response	Recommend
1. It is wrong to imply (Page ii para 3) that the eastern and central jarrah forest had less logging in the past because of environmental concerns.	The logging in these areas was constrained by dieback and salinity concerns. However, this does not have a direct bearing on any of the EPA's recommendations.	Dismiss
2. It is wrong to imply (Page ii para 4) that selection cutting of the jarrah forest is the only harvesting treatment used since the 1930s.	The statement does not exclude the possibility that there was some use of other treatments, but correctly identifies selection cutting as the principal method of timber harvesting. It is true that some relatively small (marketable) trees were extracted as part of the selection cutting process.	Dismiss
3. It is wrong to imply (Page ii para 4) that clearfelling was not used before the last 20 years.	The statement does not imply that clearfelling was not used prior to the last 20 years.	Dismiss
4. It is wrong to imply (Page ii para 4) that the decision not to clearfell jarrah was based on a fear of not being able to subsequently thin the stand.	The statement does not imply this.	Dismiss

<p>5.1 It is wrong to say (Page ii para 4) that gap creation is similar to clearfelling.</p>	<p>The appellant obviously does not appreciate the community's perceptions with regard to this matter (as demonstrated in submissions). To the community the fact that both treatments result in the removal of the great majority of the overstorey from a significant area of the forest means that their gross physical effects look similar at the human scale. The fact that the area in question may be no larger than 10 hectares and has some habitat trees retained does not appear to change this perception significantly. There is a continuum of possible treatments from light selection cutting to large scale clearfelling. The public perception is clearly that in terms of gross impact, gap creation is closer to clearfelling than selection cutting. The EPA has not redefined the accepted meaning of clearfelling but identified that the definition accepted by the public is different from the definition applied by foresters.</p>	<p>Dismiss</p>
<p>5.2 It is wrong to say (Page ii para 4) that gap creation imposes a long term <u>requirement</u> for ongoing thinning. It provides the <u>opportunity</u> to thin regrowth which a silviculture which does not ensure regeneration would not provide.</p>	<p>Gap creation introduces thinning into the management regime. Whether it is seen as a requirement or as an opportunity is a matter of perception.</p>	<p>Dismiss</p>
<p>6. It is wrong to infer (Page ii para 6) that quarantine was set up to <u>protect</u> the forest from logging. It was set up to provide time to allow disease expression and accurate mapping and thus <u>enable</u> better managed logging.</p>	<p>The quarantine system excluded logging.</p>	<p>Dismiss</p>
<p>7. It is wrong to say (Page iii para 2) that application of the proposed silviculture will lead to a 'radical restructure' of the forest.</p>	<p>Application of the proposed silviculture will lead to a change in the age structure of the multiple use forest. The mean age of the forest will be younger and there will be fewer age groups represented (especially the older age groups). The forest will look different, with trees of more uniform size and fewer misshapen trees in treated areas. There will also be a change in the pattern of logging impacts relative to selection cut. Areas of up to ten hectares will now be impacted by the removal of virtually all the overstorey whereas with selection cutting this was not the case. In all these respects the changes are significant and appropriately described as 'radical'.</p>	<p>Dismiss</p>

<p>8. It is not possible to use an operation to 'enhance' an 'objective'. Recommendation 3 should be reworded to allow thinning 'in a manner consistent with visual quality objectives'.</p>	<p>This raises two issues. Firstly, the intent of the Recommendation was to ensure that thinning was consistent with the enhancement of visual <u>amenity</u>, which is the primary management <u>objective</u> of these road zones ("To provide vistas of undisturbed forest for tourists travelling on major roads.") Secondly, the implications of the use of the word 'thinning' need to be understood. CALM has proposed 'thinning' in these zones. In the glossary of the proposals document CALM defines thinning as "a felling made in an immature stand <u>for the purpose of improving the growth of trees that remain</u> without permanently breaking the canopy and encouraging regeneration." It is possible to conceive of a need to <u>thin</u> in these zones with the objective of <u>enhancing</u> the visual amenity (because bigger trees look nicer). If the recommendation were worded as suggested by the appellant it would imply that the trees were not being removed to enhance the visual amenity of the road zones. One may then ask why they are being removed, since CALM states that 'no logging of mature forests will take place' in these areas so there is no <u>silvicultural</u> need to thin them to produce bigger trees for later logging. If CALM were simply wishing to remove the trees and not thereby enhance the visual amenity of the zones, that removal should not be referred to as thinning but as selection cutting. Since CALM has proposed thinning, the Authority accepts that the only objective of the thinning can be the enhancement of the visual amenity of the zones.</p>	<p>Reword recommendation</p>
<p>9.1 Recommendation 5 should not require these areas to be identified within three years but progressively as public concerns become apparent.</p>	<p>Disagree. Rec 5 follows from WACAP condition 4 which has yet to be met. It is important that a defined timetable be placed on the identification of these areas. CALM has the tools and the expertise, and the Authority is sure the three year time period is adequate.</p>	<p>Dismiss</p>
<p>9.2 Recommendation 5 should not imply that timber production is not a social value.</p>	<p>The Authority acknowledges that timber production is one of the values of multiple use forest. The Recommendation refers to the whole range of social values other than timber production and could be appropriately qualified.</p>	<p>Uphold</p>

<p>10. Recommendation 7 should not inhibit the State's efforts to add value to log products by upgrading them to higher value categories. There is no different environmental impact.</p>	<p>Agree. The intent was to ensure that commercial commitments were consistent with the precautionary approach recommended by the Authority and that the total resource is not overcommitted nor committed for an excessively long time as either of these would reduce needed flexibility to respond to unforeseen circumstances given the level of uncertainty in the management of this natural resource. It was not the intention of the EPA to discourage improved utilisation and value adding of the individual components of the resource. However, in recognition of the precautionary approach (see 1.3) the Authority considers that CALM should not be free to exchange timber from one class to another and thereby exceed the estimated class volumes without being required to demonstrate that sufficient flexibility is being maintained.</p> <p>This is consistent with the requirement to implement the project 'as proposed'. In that context it should be clear from any conditions set that the amounts of timber indicated by CALM for extraction are maxima, and that the conditions in no way <u>require</u> CALM to extract any or all of the timber proposed.</p>	<p>Dismiss</p>
<p>11.1 The negative connotations implied by the Authority (Page 46 para 6) are inappropriate. The proposals are consistent with ESD and intergenerational equity.</p>	<p>The words used do not have a negative connotation, they are merely descriptive, identifying that the proposed silviculture is more intensive than the selection cut practices previously used. This increased intensity is not necessarily 'bad', but it does imply a different range of impacts. About some of these the Authority concluded on the advice of the TAP and other sources that there was sufficient uncertainty to justify the implementation of the proposal as a trial. This response to uncertainty is environmentally, socially and economically responsible, and entirely consistent with the concepts of ESD and intergenerational equity.</p>	<p>Dismiss</p>
<p>11.2 The treatment will not generate more wood per hectare. Due to more markets more may be removed from the forest.</p>	<p>The treatment is intended to result in the removal of more biomass per hectare, and this has environmental implications. Also, there is a silvicultural objective to encourage more growth per hectare as part of the treatment.</p>	<p>Dismiss</p>
<p>12.1 Recommendation 11 should specify how many habitat trees are 'sufficient'.</p>	<p>The Authority considered the available evidence was insufficient to clearly indicate the number of habitat trees which would be required, but that it tended to indicate that three trees per hectare were insufficient. In the interim, the Minister should determine the appropriate number of habitat trees on the advice of the EPA and CALM. For the longer term, the FMRC should give priority to research into this matter.</p>	<p>Uphold</p>

<p>12.2 Recommendation 11 requires that the <u>original</u> habitat trees retain their function throughout the lifecycle of the forest. This is impractical and unnecessary.</p>	<p>This was not the intention of the recommendation. The intention is that some of the selected trees are not now habitat trees but that they are selected to provide that function at some time in the future. The Authority recognised that trees selected for their habitat value may not survive the perhaps 100 years until the appropriate habitat characteristics are developed within the regrowth forest. For example, the habitat trees will be mature, possibly damaged and more vulnerable to basal attrition, fire, disease and windthrow. It is necessary, therefore to ensure that trees are retained in addition to those presently with habitat values to ensure the ongoing provision of these values in the forest. (Refer to TAP report)</p>	<p>Dismiss</p>
<p>13. Recommendation 11 should not restrict the reduction of <i>Banksia grandis</i> population densities to high dieback risk sites as this would constrain the 'shelterwood' treatment on areas with inadequate lignotubers.</p>	<p>In addition to the proposals for dieback, CALM's silvicultural prescription for the jarrah forest specifically targets <i>B grandis</i> for removal under thinning, shelterwood and gap creation. The Authority is not aware of any research that has demonstrated the environmental implications of this deliberate <i>B grandis</i> population reduction programme and has therefore, as part of its precautionary approach, recommended that the programme be constrained and the implications further assessed. The Authority's recommendation may well constrain the application of the shelterwood programme.</p>	<p>Dismiss</p>
<p>14. There is no need at all for old growth forest outside the conservation reserves and other protected areas. To suggest that there should be shows EPA has not understood CALM's proposal. EPA clearly does not appreciate that it is necessary to plan forest management holistically.</p>	<p>The EPA disagrees. Significant old growth values can be and are represented in multiple use forest and indeed that is the intent of the CALM/AHC agreement. In a letter to the Authority the AHC's Executive Director stated "that part of the agreement included the development of guidelines for the protection of national estate values outside the nature conservation reserves". This recognises that the protection of these values (including old growth) outside reserves is a fundamental principle of the agreement. Also, CALM's proposals to manage a significant proportion of the karri forest on a 250 year rotation length have the clear objective of allowing old growth values to be represented in the multiple use forest.</p>	<p>Dismiss</p>

**Report under Section 106(a) of the Environmental Protection Act
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Report and recommendations on**

**Proposals to amend the 1987 Forest Management Plans and Timber Strategy
and proposals to meet Environmental Conditions on the Regional Plans and the
WACAP ERMP (EPA Bulletin 652 - Assessment 658)**

Proponent: Department of Conservation and Land Management

Appeal No 207

Appellant: Senator Christabel Chamarette

Suite 1, 111 Colin Street, West Perth WA 6005

Ground	Response	Recommend
1. Disagree with the EPA's approval for a massive increase in the volume of wood available for extraction. The allowable cut for jarrah as proposed in the 1987 Timber Strategy must not be exceeded.	There is no 'massive increase in the volume of wood available for extraction'. The change is a change in accounting which has led to a much more complete assessment of the total amount which can be extracted. In the past large quantities of 'waste' were left on the forest floor because of a lack of markets. CALM's previous inventory took no account of these 'waste' timber products. The proposals dramatically increase the inventory account of the amount which could be removed, subject to markets. Nevertheless, the Authority has recommended caution in implementation of the proposals, and has made a number of recommendations to ensure the acceptability of CALM's proposals.	Dismiss
2. The cut should be reduced to take account of local concern about loss of forest.	Recommendation 5 addresses this concern with regard to the karri forest. The Authority recognises the parallels between that requirement and the possible need for some similar provision for the protection of special areas of jarrah forest.	Consider

<p>3. All remaining unlogged forest and all old growth forest of high conservation value should be protected in conservation reserves</p>	<p>To ensure conservation objectives are met the Authority does not consider it necessary that all forest with conservation values be placed in reserves. Some conservation values can only be protected in reserves. To protect these values requires an adequate representation in the reserved conservation estate. The EPA endorses CALM's proposed additions to the conservation estate. In the multiple use forest under CALM's proposed management, timber is the primary objective and it takes precedence when areas are harvested. Although some conservation values can be sustained across the multiple use forest while a small proportion is subjected to logging in any one year, the fact that it is all eventually to be logged determines that it will be different in some important environmental respects from unlogged forest. To protect these values requires that there are adequate controls on forest management activities. The Authority has made several recommendation with regard to the protection of conservation values in multiple use forest, in addition to the CALM/AHC understanding on the protection of heritage values in multiple use forest.</p>	<p>Dismiss</p>
<p>4. The EPA has paid insufficient attention to the need for habitat trees. The number of habitat trees to be maintained should be based on the full range of bird, mammal and other species which go to make up the ecosystem of a forest.</p>	<p>The EPA agreed that the provision of habitat trees should be adequate to meet the needs of the whole forest ecosystem, jointly with the system of reserves, stream zones etc. which also provide habitat. The Authority considered the available evidence was insufficient to clearly indicate the number of habitat trees which would be required, but that it tended to indicate that three trees per hectare were insufficient. In the interim, the Minister should determine the appropriate number of habitat trees on the advice of the EPA and CALM. For the longer term, the FMRC should give priority to research into this matter.</p>	<p>Consider</p>
<p>5. Concern about a perceived dichotomy between the reports and EPA's recommendations.</p>	<p>The appellant does not indicate which 'reports' are referred to. It may be that the reports referred to are those of the TAP and Dr Ken Shepherd. The Authority has given detailed consideration to these reports and is not aware of any dichotomy.</p>	<p>Dismiss</p>
<p>6. CALM and the EPA appear to have totally ignored the public submissions.</p>	<p>This is not so. Issues raised in submissions were summarised by the EPA and referred to CALM. CALM responded, and the EPA & TAP considered both the submissions and CALM's responses. CALM's responses represent one of the most detailed responses to public submissions ever published by the EPA. The Report necessarily highlights only the major issues, but all others were considered.</p>	<p>Dismiss</p>

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**Proposals to amend the 1987 Forest Management Plans and Timber Strategy
and proposals to meet Environmental Conditions on the Regional Plans and the
WACAP ERMP (EPA Bulletin 652 - Assessment 658)**

Proponent: Department of Conservation and Land Management

Appeal No 209

**Appellant: Australian Conservation Foundation
79 Stirling Street, Perth WA 6000**

Ground	Response	Recommend
1.1 CALM has presented inadequate scientific evidence in its documents which the EPA has not challenged in any depth.	In addition to the information supplied by CALM, the Authority examined a range of scientific and technical information relating to the CALM proposals. It was neither appropriate or practical for this information to be reproduced in the CALM documents or the Authority's report. Nevertheless, the Authority acknowledged uncertainties and the need for further information when it recommended the establishment of the FMRC and listed areas needing further research.	Consider
1.2 There is a dichotomy between the TAP report and EPA's recommendations.	This is not true. The Authority considered the TAP's advice in all areas. On nutrients and Old growth forest the TAP did not raise any major concerns. In regard to dieback the Authority endorsed the need for CALM to develop an alternative strategy to avoid logging in wet summers. With regard to salinity, stream reserves and habitat trees the Authority's recommendations were based on the TAP's advice, and the Authority recommended more research into fire management. The Authority also followed the TAP's general recommendation of a cautious approach.	Dismiss
2.1 The allowable cut for jarrah in the 1987 Timber Strategy must not be exceeded.	The environmental impacts of CALM's jarrah forest management proposals are not solely related to the volume of wood removed from any given area. The Authority has addressed itself to the impacts, rather than the quantity of wood, and concluded that the proposals could be implemented as a trial for the next ten years. In the past large quantities of 'waste' were left on the forest floor because of a lack of markets. CALM's previous inventory took no account of these 'waste' timber products. The proposals dramatically increase the inventory account of the amount which could be removed, subject to markets. Nevertheless, the Authority expressed its caution over the proposed increase in the removal of biomass by recommending that any major proposal for the removal of 'other jarrah logs' (not presently utilised) should be referred to the Authority for further consideration of its environmental impacts.	

<p>2.2 The jarrah cut should be reduced to retain all remaining unlogged native forest of high conservation value and all old growth forest.</p>	<p>The response to this depends on one's value system. Some conservation values can only be protected in reserves. To protect these values requires an adequate representation in the reserved conservation estate. The EPA endorses CALM's proposed additions to the conservation estate. In the multiple use forest under CALM's proposed management, timber is the primary objective and it takes precedence when areas are harvested. Although some conservation values can be sustained across the multiple use forest while a proportion is subjected to logging in any one year, the fact that it is all eventually to be logged determines that it will be different in some important environmental respects from unlogged forest. To protect these values requires that there are adequate controls on forest management activities. The Authority has made several recommendation with regard to the protection of conservation values in multiple use forest, in addition to the CALM/AHC understanding on the protection of heritage values in multiple use forest.</p>	<p>Dismiss</p>
<p>3.1 No logging should be permitted in disease risk areas in winter months.</p>	<p>The Authority does not agree. There are some situations where winter logging can be safely undertaken, for example where the extent of the disease is accurately mapped and effective hygiene procedures are in place. The Authority considers that CALM should not be free to relax its dieback hygiene procedures for its own operations unilaterally. Any change to these procedures should involve public scrutiny in view of the risks involved and the substantial constraints that those procedures have imposed on other users of the forest and the public. The Authority considers that CALM's management of the forest should explicitly build in contingencies to avoid the need for logging and other dieback threatening activities under wet conditions. CALM should be required to ensure that i) the same rules regarding dieback hygiene procedures are applied to all operations in the forest occurring under moist soil conditions, and ii) any change to its dieback hygiene procedures is subject to public scrutiny.</p>	<p>Consider</p>
<p>3.2 There should be further research on canopy reduction and litter layer removal and its relationship to the spread and virility of <i>P. cinnamomi</i>.</p>	<p>This is one of the issues listed for the attention of the FMRC on p52 of the Authority's report.</p>	<p>Consider</p>
<p>3.3 There should be more research on the reduction of <i>B grandis</i> in dieback areas before any reduction proceeds.</p>	<p>This is one of the issues listed for the attention of the FMRC on p52 of the Authority's report. However, the Authority does not consider it necessary that this research should precede a limited implementation of the proposed reduction in <i>B grandis</i> populations in disease risk areas because of its large population and competitive nature.</p>	<p>Dismiss</p>

<p>4. There should not be any intensification of logging in high salt risk areas.</p>	<p>The Authority has made recommendations based on research and monitoring by the Water Authority of WA in cooperation with CALM. This research indicates that salinity is likely to be an environmental problem in certain high risk catchments. The Authority has recommended special constraints on logging in these catchments to ensure that there are no significant environmental salinity impacts and monitoring and adaptive management of all logging in these areas.</p>	<p>Dismiss</p>
<p>5. Buffers at least 50m should be retained on all first, second and third order streams.</p>	<p>Stream reserves serve two primary functions - water quality protection/aquatic ecosystem maintenance and the provision of wildlife habitat/corridors. With regard to the first, in addition to these stream zones CALM has proposed a form of phased logging. In high salt risk catchments the EPA on advice from the Water Authority of WA has recommended wider stream zones (50m minimum) and the concentration of the area retained under phased logging in the lower part of the catchment. The Authority is satisfied that these constraints are likely to be adequate to protect water quality, but has also recommended monitoring and adaptive management.</p> <p>With regard to the second the Authority is satisfied that in association with CALM's proposals for phased logging, and the EPA's recommendations for minimum dimensions of the areas retained, protection of these areas from thinning and better provision for habitat trees the proposed widths, with the adoption of ecological boundaries, are adequate.</p> <p>The Authority has also recommended that the effectiveness of these zones be monitored.</p> <p>The appropriate minimum width will depend on the ecological objectives for these zones. As these have not yet been defined by CALM on a regional basis it is not possible to determine the adequacy of the proposed minima. The Authority has recommended the application of the proposed prescription as a ten year trial with monitoring and adaptive management. It would be possible to further require that CALM identify the faunal/floral conservation objectives of the stream reserves on a regional basis and use these to determine the appropriate minimum stream reserve widths. Many of these reserves will be significantly wider than the 20m minimum. The actual width of corridors should be adjusted according to specific sites, functional objectives and ecological boundaries as proposed by CALM.</p>	<p>Dismiss</p>

<p>6.1 There should be a reduction in the area, intensity and frequency of burns (especially spring burns).</p>	<p>The EPA was aware of an apparent difference between the public perception and CALM's actual practice of prescribed burning. It therefore recommended that CALM be required to report on such factors as the area burnt, frequency, intensity and season on a regional basis, each year in its annual report. This information is currently not publicly available. On the basis of the information provided by CALM on the area, frequency and intensity of burns the Authority did not consider that a recommendation of a lesser frequency/intensity could be justified. However, the EPA and the TAP considered the available research and concluded that there was a need for further research of the ecological effects of CALM's fire management practices. The Forest Monitoring and Research Committee should be required to give priority to this research.</p>	<p>Consider</p>
<p>6.2 An independent fire management committee should be set up to assess the impact of CALM's fire management practices on forest ecology and wood production. The committee should report directly to the Minister, and have representation from the voluntary conservation movement.</p>	<p>The EPA and the TAP considered the available research and concluded that there was a need for further research of the ecological effects of CALM's fire management practices. The Forest Monitoring and Research Committee should be required to give priority to a few key subject areas of which fire ecology should be one.</p>	<p>Dismiss</p>
<p>7. The allowable cut for karri should not exceed the 1987 Timber Strategy. All remaining unlogged forest of high conservation value and all old growth forest must be retained free from logging.</p>	<p>See response to 2.2</p>	<p>Dismiss</p>
<p>8.1 The FMRC should have representatives from the Conservation Council and the ACF.</p>	<p>The Authority's intention was that the FMRC be a body of eminent scientists, but that the Committee "should actively promote the participation of and draw expertise from other government agencies, tertiary institutions, public organisations and individuals."</p>	<p>Consider</p>

<p>8.2 The FMRC should report directly to the Minister.</p>	<p>The Authority considers that the FMRC should be appointed by and report to the Authority, and that its reports should be publicly available. This is because the Authority's processes always involve a high degree of public exposure which may not be the case with reports to the Minister. However, the Authority would subsequently report to the Minister on the matters raised in the Committee's report. This report should also be made public. It would also be helpful for the Minister to receive advice (which is subsequently made public) on the practical implications of the Committee's report from the Lands and Forests Commission.</p>	<p>Dismiss</p>
<p>9. EPA has not heeded the opinions and concerns of the public in their submissions.</p>	<p>This is not so. Issues raised in submissions were summarised by the EPA and referred to CALM. CALM responded, and the EPA & TAP considered both the submissions and CALM's responses. The EPA and the TAP also met with representatives of the conservation movement to discuss a range of issues including those raised in submissions. The EPA's Report necessarily highlights only the major issues, but all others were considered.</p>	<p>Dismiss</p>

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**Proposals to amend the 1987 Forest Management Plans and Timber Strategy
and proposals to meet Environmental Conditions on the Regional Plans and the
WACAP ERMP (EPA Bulletin 652 - Assessment 658)**

Proponent: Department of Conservation and Land Management

Appeal No 210

Appellant: Susan Hill

27 Frankel Street, Bunbury WA 6230

Ground	Response	Recommend
1.1 The jarrah cut should be reduced to take account of local concern about loss of forest.	Recommendation 5 addresses a similar concern with regard to the karri forest. The Authority recognises the parallels between that requirement and the appellant's request for some provision for the protection of special areas of jarrah forest.	Consider
1.2 All remaining unlogged forest and all old growth forest of high conservation value should be protected in conservation reserves	The response to this depends on one's value system. Some conservation values can only be protected in reserves. To protect these values requires an adequate representation in the reserved conservation estate. The EPA endorses CALM's proposed additions to the conservation estate. In the multiple use forest under CALM's proposed management, timber is the primary objective and it takes precedence when areas are harvested. Although some conservation values can be sustained across the multiple use forest while a proportion is subjected to logging in any one year, the fact that it is all eventually to be logged determines that it will be different in some important environmental respects from unlogged forest. To protect these values requires that there are adequate controls on forest management activities. The Authority has made several recommendation with regard to the protection of conservation values in multiple use forest, in addition to the CALM/AHC understanding on the protection of heritage values in multiple use forest.	
2. CALM's dieback containment policy should be adhered to and the TAP warnings should be noted and winter logging discontinued in disease risk areas of all forest types.	CALM should not be free to relax its dieback hygiene procedures for its own operations unilaterally. Any change to these procedures should involve public scrutiny in view of the risks involved and the substantial constraints that those procedures have imposed on other users of the forest and the public. Management of the forest should explicitly build in contingencies to avoid the need for logging and other dieback threatening activities under wet conditions.	Consider

<p>3. Stream reserves should be at least 50m on either side of all first, second and third order streams.</p>	<p>Stream reserves serve two primary functions - water quality protection/aquatic ecosystem maintenance and the provision of wildlife habitat/corridors. With regard to the first, in addition to these stream zones CALM has proposed a form of phased logging. In high salt risk catchments the EPA on advice from the Water Authority of WA has recommended wider stream zones (50m minimum) and the concentration of the area retained under phased logging in the lower part of the catchment. The Authority is satisfied that these constraints are likely to be adequate to protect water quality, but has also recommended monitoring and adaptive management.</p> <p>In association with CALM's proposals for phased logging, and the EPA's recommended minimum dimensions of the areas retained, protection of these areas from thinning and better provision for habitat trees the proposed widths, with the adoption of ecological boundaries.</p> <p>The Authority has also recommended that the effectiveness of these zones be monitored. The appropriate minimum width will depend on the ecological objectives for these zones. As these have not yet been defined by CALM on a regional basis it is not possible to determine the adequacy of the proposed minima. The Authority has recommended the application of the proposed prescription as trial with monitoring and adaptive management. It would be possible to further require that CALM identify the faunal/floral conservation objectives of the stream reserves on a regional basis and use these to determine the appropriate minimum stream reserve widths. Many of these reserves will be significantly wider than the 20m minimum. The actual width of corridors should be adjusted according to specific sites, functional objectives and ecological boundaries as proposed by CALM.</p>	
<p>4 There should be a big reduction in the area of forest subjected to prescribed fuel reduction burning and in the frequency of burns, especially spring burns.</p>	<p>The EPA was aware of an apparent difference between the public perception and CALM's actual practice of prescribed burning. It therefore recommended that CALM be required to report on such factors as the area burnt, frequency, intensity and season on a regional basis, each year in its annual report. This information is currently not publicly available. On the basis of the information provided by CALM on the area, frequency and intensity of burns the Authority did not consider that a recommendation of a lesser frequency/intensity could be justified. However, the EPA and the TAP considered the available research and concluded that there was a need for further research of the ecological effects of CALM's fire management practices. The Forest Monitoring and Research Committee should be required to give priority to this research.</p>	<p>Consider</p>

<p>5. There should be a further review of CALM's forest management and timber strategy in 1997 (not 2002).</p>	<p>The Authority has recommended monitoring and adaptive management which means that CALM would be expected to review its implementation of the strategy on an on-going basis and adapt it in response to monitoring results. The Authority has further recommended that the FMRC should report on the results of monitoring and research after five years. The importance of this depends on one's value system.</p>	
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**Report under Section 106(a) of the Environmental Protection Act
on appeals against the Environmental Protection Authority's
Report and recommendations on**

**Proposals to amend the 1987 Forest Management Plans and Timber Strategy
and proposals to meet Environmental Conditions on the Regional Plans and the
WACAP ERMP (EPA Bulletin 652 - Assessment 658)**

Proponent: Department of Conservation and Land Management

Appeal No 211

**Appellants: Trudy Tranter, Cameron Daly, Linton Hodsdon, Marina Davies,
Donna Davies, Helen Parker, Mandy Butcher, Wendy Brown, Ruth Lawrence,
Jane Roberts, Leanne Sutton, Ross Darglish and Shelley Cullen**

C/- 280 Railway Terrace, Margaret River WA 6285

Ground	Response	Recommend
1. To accept the proposals brings unacceptable risks of salinity, land degradation, spread of Phytophthora dieback, species/habitat loss, extinction and the survival of diverse local ecosystems into perpetuity.	The Authority has considered all of these issues in detail and concluded that there are uncertainties associated with them. The Authority has therefore recommended caution in the implementation of the proposals, including trial implementation of the jarrah silviculture, monitoring and adaptive management and no long term commitment of the whole resource. Special precautions have been recommended for high salt risk areas. The Authority has concluded that the proposals would be environmentally acceptable subject to these recommendations.	Consider
2. The proposals do not adequately address the needs of users other than the silvicultural industries.	The proposals are for the management of the multiple use forest and the reserve system for a wide range of uses. However, the Authority has not addressed itself to the adequacy of the provisions for forest uses other than environmental/conservation. The balance between forest uses is a matter for the Government to determine, on the advice of a range of inputs including CALM and the EPA.	Consider

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**Proposals to amend the 1987 Forest Management Plans and Timber Strategy
and proposals to meet Environmental Conditions on the Regional Plans and the
WACAP ERMP (EPA Bulletin 652 - Assessment 658)**

Proponent: Department of Conservation and Land Management

Appeal No 212

Appellant: Julia Boniface

PO Box 10, Nannup WA 6275

Ground	Response	Recommend
1. CALM has supplied insufficient information. EPA is right to recommend caution, but CALM should supply the information before approval of the proposals is given.	Some of the information can only be supplied by that trial, and the Authority has recommended constraints and precautions for the proposed implementation.	
2. The ten year trial period is too long - the Forest Management Strategy should be reassessed after five years. A lot of irreversible environmental damage can occur in ten years.	The Authority has recommended monitoring and adaptive management which means that CALM would be expected to review its implementation of the strategy on an on-going basis and adapt it in response to monitoring results. The Authority has further recommended that the FMRC should report on the results of monitoring and research after five years. The importance of this depends on one's value system.	
3.1 The Forest Monitoring and Research Committee should be set up immediately.	The FMRC should be set up as soon as possible. The wording "within 12 months" was intended to convey this urgency, and does not preclude its immediate establishment.	Consider
3.2 The FMRC should provide EPA with detailed assessments concerning the impact of the Forest Management Strategy every year rather than every five years.	The assessment of longer term trends may not be possible over such a short term.	Consider
3.3 The FMRC's reports to EPA should be made available to the public.	The Authority agreed. Recommendation 14 provides for this.	Consider

<p>4. The apparent inconsistencies in CALM's estimates of the amounts of timber to be harvested are disturbing.</p>	<p>In the past large quantities of 'waste' were left on the forest floor because of a lack of markets. CALM's previous inventory took no account of these 'waste' timber products. The proposals dramatically increase the inventory account of the amount which could be removed, subject to markets. Nevertheless, the Authority has recommended caution in implementation of the proposals, and has made a number of recommendations to constrain the removal of additional material and to ensure the acceptability of CALM's proposals. Also, the Authority is concerned at the evident difficulty the public had in understanding CALM's proposals.</p>	<p>Dismiss</p>
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WACAP ERMP (EPA Bulletin 652 - Assessment 658)**

Proponent: Department of Conservation and Land Management

Appeal No 213

**Appellant: Forest Protection Society Limited
PO Box 254, West Perth WA 6005**

Ground	Response	Recommend
1. Recommendation 5 should not imply that timber production is not a social value.	The Authority acknowledged that timber production is one of the values of multiple use forest. The Recommendation refers to the whole range of social values other than timber production and could be appropriately qualified.	Uphold
2. The social and cultural significance of old growth forest to forest communities in terms of timber production has not been adequately considered.	CALM in reaching its agreement with the AHC took consideration of these values. The Authority has observed (Bulletin 652, p vi) that "In most of the multiple use forest, timber production is the primary objective."	Dismiss