

Export of woodchips from *Eucalyptus globulus* plantations

Bunnings Forest Products Pty Ltd

**Report and recommendations
of the Environmental Protection Authority**

**Environmental Protection Authority
Perth, Western Australia
Bulletin 687
July 1993**

THE PURPOSE OF THIS REPORT

This report contains the Environmental Protection Authority's environmental assessment and recommendations to the Minister for the Environment on the environmental acceptability of the proposal.

Immediately following the release of the report there is a 14-day period when anyone may appeal to the Minister against the Environmental Protection Authority's recommendations.

After the appeal period, and determination of any appeals, the Minister consults with the other relevant ministers and agencies and then issues his decision about whether the proposal may or may not proceed. The Minister also announces the legally binding environmental conditions which might apply to any approval.

APPEALS

If you disagree with any of the contents of the assessment report or recommendations you may appeal in writing to the Minister for the Environment outlining the environmental reasons for your concern and enclosing the appeal fee of \$10.

It is important that you clearly indicate the part of the report you disagree with and the reasons for your concern so that the grounds of your appeal can be properly considered by the Minister for the Environment.

ADDRESS

Hon Minister for the Environment
12th Floor, Dumas House
2 Havelock Street
WEST PERTH WA 6005

CLOSING DATE

Your appeal (with the \$10 fee) must reach the Minister's office no later than 5.00 pm on 23 July 1993.

Environmental Impact Assessment (EIA) Process Timelines in weeks

Date	Timeline commences from receipt of full details of proposal by proponent	Time (weeks)
15 Feb. 1993	Proponent Document Released for Public Comment	
15 Mar. 1993	Public Comment Period Closed	4
23 Mar. 1993	Issues Raised During Public Comment Period Summarised by EPA and Forwarded to the Proponent	1
21 April 1993	Proponent response to the issues raised received	4
2 July 1993	EPA reported to the Minister for the Environment	10

ISSN 1030-0120
ISBN 0 7309 5610 5
Assessment No. 689

Contents

Page

Summary and recommendations	i
1. Introduction.....	1
1.1 Background	1
1.2 Environmental assessment.....	1
2. Environmental issues.....	2
2.1 The need for this assessment.....	2
2.2 Substitution of plantation pulp for native forest resource.....	3
2.3 Remnant vegetation protection	4
2.4 A planning strategy for the location of plantations.....	5
2.5 Other issues	7
3. Recommended environmental conditions	7
Attachment 1. Proponent's environmental commitments	9

Table

1. WACAP proposal - Percentage of woodchips from each source in each time period	3
--	---

Appendices

1. Summary of issues raised in submissions
2. List of those making submissions
3. Proponent's response to issues raised in submissions
4. Environmental conditions set on WACAP proposal

Summary and recommendations

Bunnings Forest Products Pty Ltd plans to harvest and export approximately 163,000 tonnes of *Eucalyptus globulus* woodchips from private plantations over the next five years. A trial shipment of approximately 13,000 tonnes is planned for 1993 with exports rising to 70,000 tonnes per year by 1997.

Bunnings referred the proposal to the Environmental Protection Authority and following discussions the Environmental Protection Authority set the level of assessment as Consultative Environmental Review.

The reasons for setting this formal level of assessment were —

- to consider whether the proposed export of woodchips should be additional to or instead of woodchips from State forest already approved for export;
- to provide advice to the State Government and give it a decision-making role;
- to provide advice requested by the Commonwealth Government on the issuing of an export licence to Bunnings for the proposal; and
- to enable the public to be informed and to have a say.

The Environmental Protection Authority did not decide upon a formal level of assessment to revisit the issue of the environmental acceptability of deriving woodchips from plantations established on cleared agricultural land. The Environmental Protection Authority has previously advised that this is environmentally acceptable and has not changed its position.

The Environmental Protection Authority considers it environmentally preferable if timber derived from plantations can replace (i.e. substitute for) some of that currently derived from old growth State forest. However, in its last detailed assessment the Environmental Protection Authority concluded that the production and export of woodchips derived from State forest was environmentally acceptable, subject to certain conditions (the woodchipping proposals of WA Chip and Pulp assessed by the EPA in Bulletin 329). This finding was reaffirmed in the recent forest review (EPA Bulletin 652).

The Environmental Protection Authority therefore concludes that while there is an environmental preference for plantation derived resource to substitute for that derived from old growth State forest, that issue has already been addressed to the Environmental Protection Authority's satisfaction in the WA Chip and Pulp (WACAP) proposals and it is not appropriate to require substitution in the case of this present proposal. The Environmental Protection Authority therefore concludes that the granting of an export licence for this proposal, additional to the quantities covered by existing licences, is environmentally acceptable.

Recommendation 1

The Environmental Protection Authority recommends that the proposal to export 163,000 tonnes of *Eucalyptus globulus* woodchips from private plantations over the five years from 1993 to 1997 inclusive is environmentally acceptable and could proceed subject to the recommendations and recommended environmental conditions (Section 3) in this report and the proponent's commitments (Attachment 1 to Section 3).

This conclusion is based on a consideration of the proponent's Consultative Environmental Review, submissions received from the public and Government agencies, responses to issues raised in submissions (Appendix 3) and the proponent's commitments.

Nevertheless, in view of its stated preference for substitution the Environmental Protection Authority considers that it should be addressed as part of the next review of woodchipping in State forest. The present operations by WACAP were assessed in 1987 (EPA Bulletin 329). These proposals included the derivation of some woodchips from plantations after 2001 with

attendant reductions in the amount of resource derived from State forest. These operations are due to be reviewed in 1998 (or earlier should the company so desire). The Environmental Protection Authority considers that the issue of substitution should be considered as part of the next review of WACAP proposal.

Recommendation 2

The Environmental Protection Authority recommends that the issue of substitution of plantation woodchip resource for State forest resource be considered in the next review of the WACAP operations currently scheduled for 1998. This consideration should be based on the results of ongoing research into the environmental sustainability of current management practices in the native forests and prevailing social values regarding the uses of forests.

Two other wider environmental issues associated with plantations were of particular concern to the Environmental Protection Authority. These concerns were also raised in public submissions received on the proposal. They relate to the protection of remnant vegetation and the need for a land management strategy to guide the location of plantations.

With regard to the protection of remnant vegetation, the Environmental Protection Authority commends Bunnings for its commitment to "discourage the clearing on private property of remnant stands of native trees worthy of retention". This is consistent with the Environmental Protection Authority's general position (Recommendation 11 in Bulletin 329) that the clearing of native vegetation to establish plantations is environmentally unacceptable.

The wider issue of the protection of remnant vegetation is not directly related to this proposal but was raised in submissions. The Environmental Protection Authority's position, stated in Recommendation 12 of Bulletin 329, is that the State Government should develop a policy for the protection and management of remnant native vegetation on private property.

In view of the existing and likely future pressures for a major expansion of the area devoted to plantations, the Environmental Protection Authority believes there is a need for rural planning authorities to address the likely impacts of plantations. The Environmental Protection Authority considers that the potential environmental, social and economic benefits from further plantation establishment can only be optimised and potential negative impacts minimised by the development of appropriate regional land management strategies and effective co-ordination between government agencies, industry (notably Bunnings) and private land owners.

The Environmental Protection Authority commends the efforts of the South West Development Authority in cooperation with relevant shires in its area in initiating discussion on planning and environmental issues associated with a major increase in the area devoted to plantations.

Recommendation 3

The Environmental Protection Authority recommends that the Government should support and enhance discussion on planning and environmental issues associated with a major increase in the area devoted to plantations and facilitate the development of regional landuse strategies for rural areas to optimise the benefits of future plantations. These strategies should be developed in consultation with local government authorities, land owners and industry

An agreement in principle has recently been reached between the Federal and State governments to remove controls over the export of unprocessed public and private plantation wood subject to the application of a code of practice to protect environmental values. This code of practice is yet to be finalised.

The Environmental Protection Authority expects to be involved in providing advice on the environmental acceptability of this code for Western Australia. Subject to the code being acceptable, it should not be necessary for the Environmental Protection Authority to assess the

environmental acceptability of future plantation based proposals which are consistent with the code unless there are other over-riding environmental concerns.

1. Introduction

Bunnings Forest Products plans to harvest and export approximately 163,000 tonnes of *E. globulus* woodchips from private plantations over the next five years. A trial shipment of approximately 13,000 tonnes is planned for 1993 with exports rising to 70,000 tonnes a year by 1997.

In the 1993 trial, logs will be obtained from nine plantation blocks and transported to WA Chip and Pulp's (WACAP) Diamond Chip Mill to be processed into paper pulp chips. The product will then be hauled to the Bunbury Port by rail and transferred to ship for export using the company's existing facilities at the port site.

Harvested areas will be regenerated from coppice re-growth on the cut stumps and the site fertilized the following winter. The second rotation is planned to be harvested approximately eight years later.

1.1 Background

In 1988 the Environmental Protection Authority assessed and recommended for conditional approval a proposal by WACAP for the export of 750,000 tonnes of woodchips per year from the south western State forests of Western Australia. WACAP and Bunnings Forest Products are subsidiaries of Bunnings Ltd.

The Environmental Protection Authority assessed the WACAP and concluded that it was environmentally acceptable subject to a number of conditions. The Minister for the Environment subsequently approved the proposal (the conditions of the approval are listed in Appendix 4) and an export licence was issued by the Federal Government for a fifteen year period.

There has been a substantial increase in the area of plantations established over the past five years as a result of the WACAP proposal and other initiatives by the Department of Conservation and Land Management and industry (see Section 2.2).

However, the expanded plantation program has raised a number of environmental concerns in the community including questions about the best location for plantations and the expectation that woodchipping will be phased out of native forests (or at least old growth native forests) in the future and the resource replaced with woodchips obtained from plantations.

1.2 Environmental assessment

In October 1991 Bunnings applied to the Commonwealth Department of Primary Industry and Energy (DPIE) for an export licence to export trial shipments of up to 70,000 tonnes of plantation woodchips. DPIE referred the matter to the Commonwealth Department of the Arts, Sport, the Environment, Tourism and Territories (DASETT) for advice on any environmental considerations, and DASETT, under the terms of a State-Commonwealth Memorandum of Understanding sought the advice of the Western Australian Environmental Protection Authority.

The Environmental Protection Authority decided that the proposal should be subject to a Consultative Environmental Review. The reasons for this were questioned during the assessment, and are discussed below. A document was prepared by Bunnings and it was released for a four week public review period in February 1993.

Eleven submissions were received from Government agencies, conservation groups and interested members of the public. Several of the issues raised in submissions related to the general issue of woodchipping in native forests and were either not directly relevant to the

current proposal, or have been the subject of past assessments or ongoing investigations. As such they will not be discussed here.

Issues raised in submissions which were of relevance to the proposal were —

- concern that there was no need for Environmental Impact Assessment of plantation based woodchip proposals;
- the question of whether or not an additional export licence should be issued for this proposal;
- the need for effective protection of remnant vegetation on cleared agricultural land;
- the need for a strategy to address the planning and environmental implications of a major expansion of the area devoted to plantations;
- the potential for *E. globulus* to become a weed;
- road safety and maintenance costs;
- bark disposal at the mill; and
- energy management.

These issues are discussed below.

2. Environmental issues

From its own investigations and the public consultation process the Environmental Protection Authority identified the major issues requiring consideration. These are addressed below.

2.1 The need for Environmental Impact Assessment

Some submissions questioned the need for the formal assessment of proposals where the woodpulp is obtained from plantations grown on previously cleared agricultural land. They stated that environmental impact assessment was an unnecessary burden on industry and represented an additional impediment to the economic development of the industry and nation. They pointed to the recent announcement by the Federal Government of its intent to remove export controls for plantation woodchips. There also appeared to be some confusion in submissions about the powers and responsibilities of State and Federal government agencies and whether or not future proposals would be subjected to environmental impact assessment.

The Environmental Protection Authority has previously concluded "that the chipping of resource derived from plantations established on cleared private property is environmentally acceptable", and this was not the primary focus of the present assessment. Rather, the major point requiring the Environmental Protection Authority's consideration was whether or not there was an environmental justification to require that the proposed woodchips be exported under the existing WACAP export licences (in substitution for some of the resource currently derived from State forest) rather than a new additional licence being issued.

The responsibility for issuing woodchip export licences lies with the Federal Government and is administered by the Department of Primary Industry and Energy under the Export Control Act (1982). It is normal practice for the Federal Government to consult with State agencies when issuing new or reviewing existing licences and advice is often sought on environmental issues.

In the past twelve months an agreement in principle was reached between the Federal and State Governments to remove controls over the export of unprocessed public and private plantation wood, subject to the application of a code of practice to protect environmental values. Work is currently underway to develop the code of practice and it is envisaged that the agreement will be implemented once these codes are finalised. In the meantime, the *status quo* prevails, with the Federal Government still issuing licences for the export

of these woodchips, and seeking the advice of State authorities including the Environmental Protection Authority .

In the event of the export controls being lifted, the Environmental Protection Authority would need to be satisfied that the proposed code is environmentally acceptable in the Western Australian context. This could be achieved by the Environmental Protection Authority being involved in the formulation of the code of practice or by reviewing it once it is completed. Subject to the code being acceptable, it should not be necessary to assess future plantation based proposals which are consistent with the code unless there are other over-riding environmental concerns.

2.2 Substitution of plantation pulp for native forest sources

A number of submissions opposed the issuing of an additional export licence to the proponent on the grounds that plantation woodchips should be substituted for the resource presently obtained from native forest. This is not a matter within the control of the State Government. As previously mentioned, responsibility for the issuing of export woodchip licences lies with the Federal Government.

The Environmental Protection Authority has previously provided advice to the State Government on the environmental acceptability of obtaining woodchips from State Forest in the WACAP assessment. It concluded that the utilization of low grade logs and regrowth thinnings from the multiple use forest was acceptable as long as conservation and amenity values were maintained, and that harvesting operations followed normal prescriptions (WACAP, Recommendations 1 and 2). Qualified support was also given for the use of sawmill residues, native vegetation from private property (see Section 2.3) and material from plantations.

The sources of the woodchips and the harvesting time frames for the WACAP proposal are described in Table 1. This table shows that under the WACAP proposal no woodchips were to be derived from plantations until the year 2001.

Table 1. WACAP proposal - Percentage of woodchips from each source in each time period

WACAP Source of Woodchips	1991 - 1995	1996 - 2000	2001 - 2005
Low grade logs from State forest	66	54	45
Regrowth thinnings in State forest	18	30	27
Saw mill residues	11	11	6
Plantations on private property	0	0	20
Native vegetation on private property	4	4	0

In providing its advice on plantations, the Authority gave qualified support for the establishment of plantations on previously cleared agricultural land. This support recognised the potential environmental advantages from establishing plantations on cleared and degraded land including the opportunity to reduce the pressure on native forests irrespective of the end use of the plantation material (see Section 2.4).

The Environmental Protection Authority observed that the WACAP proposal included some, albeit minimal, substitution of plantation derived resource for resource from old growth State forest after the year 2000, and concluded that the proposals were environmentally acceptable, subject to a number of conditions.

On the issue of substitution the Environmental Protection Authority noted —

"In the long term, there is the opportunity for plantation derived resource to fully supply any woodchip or pulpwood industry in Western Australia. Industry and the State Government should continue to encourage and promote opportunities which could permit this potential to be realised."(EPA Bulletin 329, p27)

The Environmental Protection Authority's position on the issue of substitution has not changed. The Authority believes that it would be desirable to progressively replace the resource currently harvested from the old growth multiple use State forest with plantation derived sources, and that the WACAP operations offer an opportunity to pursue this.

The Authority believes it would be inappropriate to require substitution in the case of the present proposal since it is consistent with the WACAP proposal which Environmental Protection Authority has previously found environmentally acceptable. The Environmental Protection Authority's advice to the Federal Government is that there is no environmental objection to the granting of an export licence for this proposal, additional to the quantities covered by existing licences.

Recommendation 1

The Environmental Protection Authority recommends that the proposal to export 163,000 tonnes of *Eucalyptus globulus* woodchips from private plantations over the five years from 1993 to 1997 inclusive is environmentally acceptable and could proceed subject to the recommendations and recommended environmental conditions (Section 3) in this report and the proponent's commitments (Attachment 1 to Section 3).

This conclusion is based on a consideration of the proponent's Consultative Environmental Review, submissions received from the public and Government agencies, responses to issues raised in submissions (Appendix 3), the proponent's commitments.

Nevertheless, in view of its stated preference for substitution in the longer term, the Environmental Protection Authority will require that issue to be addressed as part of the next review of woodchipping in State forest under the WACAP proposals, currently due in 1998.

Recommendation 2

The Environmental Protection Authority recommends that the issue of substitution of plantation woodchip resource for State forest resource be considered in the next review of the WACAP operations, currently scheduled for 1998. This consideration should be based on the results of ongoing research into the environmental sustainability of current management practices in the native forests and prevailing social values regarding the uses of forests.

2.3 Remnant vegetation protection

The effectiveness of existing controls over the clearing of the remaining vegetation on developed agricultural land was raised in submissions. Additionally, the willingness of the Commissioner for Soil Conservation to seriously address this issue was questioned.

Recommendations 10 and 11 of the Environmental Protection Authority's report on WACAP address this issue;

"The Environmental Protection Authority concludes that clearing of remnant native vegetation on private property for the purpose of producing woodchips is, in general, environmentally unacceptable. The Environmental Protection Authority recommends that this not be permitted except for individual exceptions authorised by the Minister for the Environment." ...and;

"The Environmental Protection Authority concludes that the clearing of remnant native vegetation on private property to establish plantations is, in general, environmentally unacceptable and recommends that it not be permitted except in individual cases by the Minister for the Environment." (EPA Bulletin 329, px)

With respect to the present proposal the Environmental Protection Authority notes the proponent's response to the claims (Appendix 3) and the commitment within the CER to protect remnant vegetation on private land, and is satisfied that the proposal is consistent with existing Environmental Conditions and relevant Government policy.

Some submissions highlighted the need for effective protection of remnant vegetation on agricultural land. The Environmental Protection Authority acknowledges this need.

In the WACAP assessment the environmental conditions were seen by some as potentially providing *de facto* protection for remnant vegetation on private land. The Authority does not consider these project-specific provisions appropriate for the general protection of remnant vegetation.

With regard to the protection of remnant vegetation, the Environmental Protection Authority commends Bunnings for its commitment to "discourage the clearing on private property of remnant stands of native trees worthy of retention". This is consistent with the Environmental Protection Authority's general position (Recommendation 11 in Bulletin 329) that the clearing of native vegetation to establish plantations is environmentally unacceptable.

The wider issue of the protection of remnant vegetation is not directly related to this proposal, but was raised in submissions. The Environmental Protection Authority's position, stated in Recommendation 12 of Bulletin 329, is that the State Government should develop a policy for the protection and management of remnant native vegetation on private property.

2.4 A planning strategy for the location of plantations

The Environmental Protection Authority has previously recognised the potential economic and environmental benefits that may result from the establishment of plantations on degraded land.

"Plantations have generally been regarded as a landuse established to provide an economic return. With careful selection of locations for plantations and appropriate planning, species selection and management, plantations may also be valuable tools to remedy or prevent environmental degradation both within the immediate area of the plantation and off site. Hence plantations can be established purely for economic return, purely for land reclamation purpose (where economic benefit accrues from improvement of the degraded land rather than from the forest products) or a combination of these. Environmental degradation problems that may be reduced or remedied by appropriate establishment of plantations include;

- land affected by salinity, erosion, excessive wind as a result of over clearing;*
- nutrient enrichment as a result of excessive fertiliser application, point sources (e.g. piggeries, abattoirs) and clearing can be reduced by using trees as biological filters (to lower the water table and take up excessive nutrients); and*
- spoil dumps, tailing ponds, excavation sites, waste disposal sites, or other derelict land can be reclaimed by establishing plantations.*

(EPA Bulletin 319, Environmental Guidelines for land use development in South-Western Australia, 1988)

Considerable progress has been made by the Department of Conservation and Land Management (CALM) and industry in expanding the plantation estate on degraded land in recent years. However, this establishment has occurred on an ad hoc basis, in the absence of any strategic land planning framework. It is likely, therefore, that the benefits to the State from these plantations have not been maximised.

The environmental, social and economic benefits from further plantation establishment can only be maximised by the development of regional land management strategies and effective co-ordination between government agencies, industry (notably Bunnings) and private land owners.

Government agencies with an interest in this issue include the Departments of CALM, Agriculture, Resource Development, Regional Development and Land Administration, the Water Authority of Western Australia, the Waterways Commission, the Environmental Protection Authority and importantly, local government authorities.

Regional land management strategies are required to address such issues as the protection of remnant vegetation, the optimum area and location of plantation within catchments, and industry infrastructure requirements. They must also address mechanisms for directing/encouraging the establishment of plantations in areas where the wider benefits are maximised.

Additional environmental issues to be considered during the formulation of strategies include the setting of priorities for the management of salinity, soil conservation, water resources and fire control in individual catchments. Fire control has the potential to be a major issue in the future where plantations are located near State forests or urban areas.

In view of the existing and likely future pressures for a major expansion of the area devoted to plantations, the Authority believes there is a need for rural planning authorities to address the likely impacts of plantations. The South West Development Authority, in cooperation with relevant south-west Shires has already initiated consultations on this matter, and recently held a workshop in Nannup. The Environmental Protection Authority commends this initiative and considers it worthy of support.

The Environmental Protection Authority commends the efforts of the South West Development Authority in cooperation with relevant Shires in its area in initiating discussion on planning and environmental issues associated with a major increase in the area devoted to plantations.

The Environmental Protection Authority considers that the potential environmental, social and economic benefits from further plantation establishment can only be optimised and potential negative impacts minimised by the development of appropriate regional land management strategies and effective co-ordination between government agencies, industry (notably Bunnings) and private land owners.

Recommendation 3

The Environmental Protection Authority recommends that the Government should support and enhance discussion on planning and environmental issues associated with a major increase in the area devoted to plantations and facilitate the development of regional landuse strategies for rural areas to optimise the benefits of future plantations. These strategies should be developed in consultation with local government authorities, land owners and Industry

2.5 Other Issues

Other issues raised during the public review period included concern about *E. globulus* becoming a weed; road safety and maintenance costs; bark disposal at the mill; and energy management. The Environmental Protection Authority notes the thoroughness of the proponent's documentation and considers that these issues were satisfactorily addressed in the CER and the response to submissions. Many of these issues were also addressed in the WACAP assessment.

3. Recommended Environmental Conditions

Based on its assessment of this proposal and recommendations in this report, the Environmental Protection Authority considers that the following Recommended Environmental Conditions are appropriate.

These recommended environmental conditions apply to the proposal to export up to 70,000 tonnes per year of *Eucalyptus globulus* woodchips from private plantations over the five years from 1993 to 1997 inclusive.

1 Proponent Commitments

The proponent has made a number of environmental management commitments in order to protect the environment.

- 1-1 In implementing the proposal, the proponent shall fulfil the commitments (which are not inconsistent with the conditions or procedures contained in this statement) made in the Consultative Environmental Review and in response to issues raised following public submissions. The environmental commitments are consolidated in Attachment 1.

2 Implementation

Changes to the proposal which are not substantial may be carried out with the approval of the Minister for the Environment.

2-1 Subject to these conditions, the manner of detailed implementation of the proposal shall conform in substance with that set out in any designs, specifications, plans or other technical material submitted by the proponent to the Environmental Protection Authority with the proposal. Where, in the course of that detailed implementation, the proponent seeks to change those designs, specifications, plans or other technical material in any way that the Minister for the Environment determines on the advice of the Environmental Protection Authority, is not substantial, those changes may be effected.

3 Proponent

These conditions apply to the nominated proponent.

3-1 No transfer of ownership, control or management of the project which would give rise to a need for the replacement of the proponent shall take place until the Minister for the Environment has advised the proponent that approval has been given for the nomination of a replacement proponent. Any request for the exercise of that power of the Minister shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the project in accordance with the conditions and procedures set out in the statement.

4 Time Limit on Approval

The environmental approval for the proposal is limited.

4-1 If the proponent has not substantially commenced the project within five years of the date of this statement, then the approval to implement the proposal as granted in this statement shall lapse and be void. The Minister for the Environment shall determine any question as to whether the project has been substantially commenced. Any application to extend the period of five years referred to in this condition shall be made before the expiration of that period, to the Minister for the Environment by way of a request for a change in the condition under Section 46 of the Environmental Protection Act. (On expiration of the five year period, further consideration of the proposal can only occur following a new referral to the Environmental Protection Authority.)

5 Compliance Auditing

In order to ensure that environmental conditions and commitments are met, an audit system is required.

5-1 The proponent shall prepare periodic "Progress and Compliance Reports", to help verify the environmental performance of this project, in consultation with the Environmental Protection Authority.

Procedure

The Environmental Protection Authority is responsible for verifying compliance with the conditions contained in this statement, with the exception of conditions stating that the proponent shall meet the requirements of either the Minister for the Environment or any other government agency.

If the Environmental Protection Authority, other government agency or proponent is in dispute concerning compliance with the conditions contained in this statement, that dispute will be determined by the Minister for the Environment.

Attachment 1

Proponent's environmental commitments

Environmental commitments relating to land privately owned by W A Chip and Pulp (WACAP) or Bunnings Forest Products (BFP)

1. BFP will ensure that its operations do not cause land degradation.
2. BFP will continue to manage young regrowing native trees on land purchased by WACAP or BFP, should those trees in BFP's opinion, be of sufficient quality and quantity for retention as future sawlogs and paperwood trees.
3. BFP will develop a code of harvesting practice based on CALM's Code of Logging Practice (1990) and its complementary Manual of Hardwood Specifications (1990) and other similar codes in force in other parts of Australia. This code will include management practices for:-
 - river and stream crossings;
 - road construction;
 - road drainage;
 - log storage and sorting area placement;
 - snig track placement;
 - soil disturbance during wet weather;
 - rehabilitation of log storage and sorting areas;
 - harvesting and planting of steep slopes;
 - maximum utilisation of each tree; and
 - retention of vegetation alongside perennial and other recognised streams.
4. BFP will continue to take reasonable precautions to minimise fire damage by:-
 - consulting with officers of the Bushfires Board;
 - becoming a financial member of the local fire brigade in each area in which BFP has a plantation;
 - liaising with Shire appointed Fire Officers; and
 - maintaining fire fighting equipment.
5. BFP will, in areas where it owns land destined for plantation development, maintain contact with, and where invited join, District Committees set up in Land Conservation Districts nominated under the Soil and Land Conservation Act (1945-82).
6. BFP will continue to establish trial and demonstration plantings aimed at increasing the efficiency of tree establishment, growth and harvesting and will inform other land owners of such improvements.
7. BFP will ensure the genetic diversity and integrity of the tree farms under its supervision by maintaining controls on the use of seed in regeneration.

Environmental commitments relating to land privately owned by others (mainly farmers)

8. BFP will continue to liaise with bodies such as the Western Australian Farmers' Federation (WAFF) to educate and motivate farmers into establishing tree plantations on private property.
9. BFP will develop a 'Code of Harvesting Practice' for contractors harvesting wood from private property, whether from native trees or plantation. Participants in BFP's share farming scheme will be requested to adopt this code. The code will be similar to that being developed on BFP's (WACAP) private land (see Commitment 3 above).
10. BFP supervisors will visit the site of harvesting operations on private property to monitor production.
11. BFP supervisors will administer the code and enforce penalties to the extent of BFP's authority.
12. BFP will reduce paperwood supply quotas of harvesting contractors who do not carry out harvesting operations in an acceptable manner.
13. BFP will engage additional staff as required.
14. BFP will discourage the clearing on private property of remnant stands of native trees worthy of retention.

Note: BFP's other listed commitments relate to safety or compliance with other legislation, so it is not necessary to ensure their compliance under an environmental approval.

Appendix 1

Summary of Submissions

Eleven submissions were received by the Environmental Protection Authority including four from Government Agencies, two each from Conservation groups and private individuals, and one from Industry. A list of the respondents is provided in Appendix 2.

The issues raised and suggested recommendations in individual submissions included;

1. The consultative Environmental Review should not be used to support the proponents application for an export licence. Rather, the purpose of the CER should be to demonstrate that suitable harvesting practices are used on defined areas of existing plantations. If there are other issues to be addressed, they should be the subject of a separate environmental review process to be completed before the planting of any plantations which could be affected by its outcome. Consequently, all references to the effects of growing plantations in the rural environment, or plans for other future plantations should be ignored in the evaluation of this CER.
2. The proponent should not be issued with an additional export woodchip licence on the grounds that all plantation derived woodchips in WA should substitute for, and not be in addition to, woodchips obtained from native forest.
3. The proponent has failed to acknowledge in the document that current government arrangements generally prohibit the removal of remnant vegetation in sound condition for the planting of plantation trees. The proposal also fails to acknowledge that permission is required from the Commissioner of Soils and Land Conservation to purchase timber from private land for woodchips.
4. Proposals for growing eucalyptus on previously cleared agricultural land which will be harvested using accepted forestry practices and transported on routes currently used for heavy haulage should not be subject to environmental impact assessment.
5. In considering alternatives 2A and 2B of the proposal, it is assumed that an export licence is required for eucalyptus grown on previously cleared agricultural land. This assumption is incorrect and the situation requires clarification.
6. Woodchipping threatens endangered species regardless of whether the activity occurs in plantations or elsewhere.
7. The proponent states that plantations of *E. globulus* grow best on land previously cropped or pastured (7.1.1) and that the removal of remnant native vegetation is generally avoided (7.5.4). Yet it admits that herbicides are generally used to "control regrowth" (7.5.1), undertakes to obtain licences to clear any land in declared water catchment areas and for clearing native "trees" (this should read "vegetation") covering an area greater than one hectare, and "will discourage the clearing on private property of remnant stands of native trees worthy of retention" (8).

Furthermore, the statistics of the Department of Agriculture show that approval has been obtained for the clearing of 2855 ha in 1989-90, 1995 ha in 1990-91 and 1411 ha in 1991-92 under the Ministerial conditions imposed on WACAP's woodchip agreement with the State. Based on these figures alone (the figures for 1988-89 are missing), of the total of 9,000 ha of the resource planted to date (1.5), 6261 ha (70%) were planted on land cleared of remnant native vegetation for the purpose of planting *E. globulus*. Thus the proponent's claim that "remnant native vegetation is not at risk by this project" (7.10) is patently untrue.

8. Given the better growth rates and additional economic benefits of integrated tree crops as opposed to plantations, we query the proponent's emphasis on plantations.
9. What is to happen to the bark? The current method of disposal of bark at the Diamond chipmill is by burning, which is wasteful and polluting. From the outset it contravenes what was nominated in the original woodchipping environmental impact statement where an incinerator was proposed. That burning should still continue and even be increased is not acceptable. As the bark contains a significant proportion of the nutrients in trees, it should be returned to the forest floor. The only reason this is not done is that it would cost WACAP money (reference supplied).
10. The proposal is only potentially ecologically sustainable, as evidenced by the impact of energy currently required.
11. The existing rail transport system should be used, whether or not logs are chipped in-forest. Road transport would place unnecessary additional pressures on the road system in terms of increased wear on the roads, traffic volume, noise and air pollution.
12. The use of fertiliser must be used such as to prevent leaching into watercourses and consequent eutrophication of streams and estuaries.
13. The possibility that *E. globulus* could become a weed that invades natural bushland must be fully investigated. If the potential of this happening is real, steps must be taken to prevent it.

Appendix 2

List of those making submissions

Ms J Egan
2 Champion Street
BUNBURY WA 6230

Mr B Mattinson
Integrated Tree Cropping Pty Ltd
GPO Box 1421
ALBANY WA 6330

Mr P B George
PO Box 442
MANJIMUP WA 6258

S Edwards
171 The Strand
BEDFORD WA 6052

Main Roads of WA
Don Aitkin Centre
Waterloo Crescent
East Perth WA 6004

Deputy Commissioner of Soil and Land Conservation
Department of Agriculture
Baron-Hay Court
South Perth WA 6151

Denmark Environment Centre
PO Box 142
DENMARK WA 6333

Conservation council of Western Australia
79 Stirling St
PERTH 7000

Water Authority of WA
PO Box 100
LEEDERVILLE WA 6007

Council for the City of Bunbury
City of Bunbury
PO Box 21
BUNBURY WA 6230

CSIRO
Division of Forestry
Western Australian Forest Research Group
P.O.Private Bag
WEMBLEY WA 6014

Appendix 3

Proponent's response to issues raised in submissions

EXPORT OF WOODCHIPS THROUGH BUNBURY, ASSESSMENT NUMBER 689

PROPONENT'S RESPONSES TO ISSUES RAISED DURING PUBLIC CONSULTATION PROCESS

- 1 Under present arrangements, the Commonwealth Department of Primary Industry and Energy administers the issue of licences for woodchip export projects. A proponent promoting an export woodchip project must first make application to the Commonwealth Department, who, in turn, will refer the matter to the State Environmental Protection Authority for assessment. There is, therefore, an inevitable nexus between a woodchip export licence application and an environmental review at any level.

In the last paragraph of Section 1.1 of the CER, Bunnings Forest Products (BFP) has pointed out that, "it is intended to capitalise on the significant marketing effort involved in establishing paper pulp chip sales between 1993-1997 by having an ongoing programme of plantation development to supply wood fibre resource to export and local markets". The proponent therefore dealt broadly with the environmental impacts of plantation development. However, as stated in Section 1.1 of the CER, "the proposal deals specifically with the issues of plantation harvesting, log transport, chipping and chip transport during the five year period 1993 to 1997.

BFP also views plantations of *E globulus* as an alternative agricultural crop and notes that plantation development has the support of State and Federal governments. The proponent questions the need for a "separate environmental review process" for plantation development when less benign annual cropping, harvesting and export activities are not subject to assessment.

- 2 The environmentally sustainable level of harvesting of native forests in Western Australia has been the subject of numerous enquiries and these are now being reviewed by a further State Government appointed Committee.

BFP, along with other members of the forest industry, sincerely hopes that the findings of this Committee will substantially resolve the issue of allowable cut from State-owned forests and, consequently, the quantity of chip log from this source.

The proponent is firmly of the view that resolution of the native forest issue must be quite separate from the assessment of the environmental impacts of the proposal to export woodchips from plantations of *E globulus*.

- 3 The "Current Government Arrangements" specifically include:-

- a) Country Areas Water Supply Act 1847-1984
 - controlling clearing within water supply zones.
- b) Soil and Land Conservation Act 1945-1982
 - controlling clearing in areas susceptible to land degradation.

Neither Act "generally prohibits" removal of remnant vegetation, but rather imposes conditions on such practice (including proposed plantation establishment) to ensure objectives of both Acts are met.

c) WACAP export licence, Ministerial Conditions

The Ministerial Conditions on the current export licence do not "prohibit" removal of remnant vegetation. Rather they set in place a procedure necessitating Ministerial approval (delegated to the Commissioner of Soils and Land Conservation) for the purchase of wood for woodchipping resulting from the clearing of native vegetation (irrespective of whether plantations are subsequently established or not); and where such approval is received and plantations are established, resulting wood volume is available for woodchipping without further approval.

WACAP has obtained and continues to obtain all necessary approvals for chiplog purchased from Private Property, since the conditions were imposed. The proponent believes CER Section 2.4 acknowledges that approval for harvesting operations is required, and believes that Sections 7.1.4 and 7.2 further acknowledge the role of respective Government Departments and Authorities.

The proponent accepts that Section 2.4, for the purpose of being technically correct, should read:-

" required from the Commissioner of Soils and Land Conservation under the Soil and Land Conservation Act." It is noted that the Act is administered locally by the Department of Agriculture and for practical purposes the section as written in the CER is correct.

4 The proponent agrees with this contention.

5 The requirement for an export licence for woodchips arises from the Export Control Regulations of the Federal Export Control Act (1982). The Regulations provide that a licence is required for the export of unprocessed wood in excess of two tonnes. Woodchips, irrespective of the source of the chip logs, fall within the Regulations' definitions of unprocessed wood.

The proponent notes that in a letter dated 2 March 1993 to the Executive Director of the National Association of Forest Industries, the Prime Minister has given a commitment that the Federal Government "will remove controls over the export of unprocessed public and private plantation wood, subject to the application of codes of practice to protect environmental values". The proponent also notes that the same commitment has been made public in the recently released National Forest Policy Statement (Section 4.2 page 19) which has been endorsed and signed by the Prime Minister and all State Premiers and Territory Chief Ministers.

6 It is the proponent's view that this statement requires clarification. Woodchipping, as such, does not threaten endangered species; rather, it is believed that the submitter of this statement was referring to the harvesting of forests for wood-production, whether sawlog, chip log, veneer log etc.

The Resources Assessment Commission Forest and Timber Inquiry addressed the question of the impacts of wood-production on forest ecology (including species extinction) and concluded that, "there is insufficient evidence to either confirm or refute claims that impacts resulting from wood-production activities are such that current policies allowing the continued use of native forests for wood-production should be changed".

The Consultative Environmental Review emphasises that the plantation proposals are confined to private property and are mostly located on land which has been previously cleared. Clearing of remnant natural vegetation is discouraged.

With these restrictions, plantations as proposed, have the potential to impact positively in the areas of salinity, eutrophication and water and soil conservation. Endangered species dependent largely on natural habitats, are therefore more likely to benefit rather than suffer from this project.

7 The arguments advanced to support this conclusion are defective and the proponent simply makes the following statements of fact:-

- i) Herbicides are used to control regrowth irrespective of whether plantations are being established on re-claimed pasture land or cleared native forest. The term "control regrowth" as stated in the CER refers principally to weed control.
- ii) In his statement of 28 September 1988 approving the continuation of the WACAP woodchipping project, the Minister for Environment imposed, in Conditions 7 and 8, requirements that:

Condition 7

The proponent shall not use wood for woodchipping or obtain woodchips derived from the clearing of remnant native vegetation on private property after the date of this statement, except for individual cases, or in circumstances authorised by the Minister for Environment before clearing commences.

Condition 8

The proponent shall not use wood for woodchipping or obtain woodchips derived from plantations on private property which were established by the clearing (after the date of this statement) of remnant native vegetation, except in individual cases, or in circumstances where clearing was authorised by the Minister for Environment before clearing operations commenced.

- iii) WACAP has obtained all necessary approvals for chip log purchased from private property after the Minister's statement.
- iv) WACAP's private property log royalties have been structured so as to discourage the clearing of privately-owned native forest for cropping or pasture activities and to give an incentive to re-planting with trees.

- v) However, there is no nexus between the Department of Agriculture's approvals for clearing private property for sale of chip log and the planting of E globulus plantations. It is possible that all of the 6,261 hectare cleared over the three years to 1991-92 could have been converted to annual cropping or pasture land applications.
- vi) The conclusion that, "the proponent's claim that remnant native vegetation is not at risk by this project (7.10) is patently untrue", is incorrect.
- vii) Since the date of the imposition of the Minister for Environment's Condition 8, the proponent has planted only a small area of E globulus plantations on private land established by the clearing of remnant native vegetation. (534 hectares of a total plantation estate of 9,000 hectares - 83 hectares only in 1991/92).
- viii) The proponent prefers to clear isolated paddock trees and degraded native vegetation but supports and encourages the retention of worthwhile stands of remnant native vegetation.

8 In a sense, the proponent is already practicing integrated tree cropping as average plantation size is less than 80 hectares and, although intensely planted, plantations are most often interwoven with other farming activities on a larger parcel of land and/or regions.

The proponent is supportive of integrated tree crops as a complementary technique but believes that the economics of planting, silvicultural management and forest harvesting will generally favour the more intensive planting of trees.

9 The proponent, as Manager of WACAP, is continuing to focus on the issue of disposal of bark at the Diamond chip mill. BFP accepts that, as a general principle, it is desirable to return the nutrients in bark to the forest floor. However, to assist the State in achieving its objectives of utilising as much as possible of the resource generated from harvesting of managed native forests, the proponent has installed a small log chipping line at its chip mill. The resource which is processed at the plant now varies in diameter from 50mm to 2 metres and it is simply not technically possible at present to de-bark such a variable resource in the forest.

The proponent continues to invest in research into alternative applications for bark and, in 1992, spend in excess of \$30,000 on a pre-feasibility study investigating utilisation of the bark as an energy source for power co-generation.

In Section 5.5 of the CER, the proponent has stated that "felling, docking, trimming and a proportion of de-barking will be performed by a mechanical harvester". Early trials indicate that no further de-barking will be required at the chip mill and it is intended to leave the residue material in the plantation.

10 The proponent has noted the thirteen guiding principles of ecologically sustainable development adopted by the Resources Assessment Commission (Forest and Timber Inquiry Final Report - Volume 1 March 1992 - page 109) and considers that establishment of plantations on reclaimed pasture land meets or exceeds most of the relevant principals.

- 11 The proponent agrees to a large degree with this contention but notes that the geographic spread of a distributed in-forest chipping operation and specific circumstances will necessitate some road haulage to trunk rail routes.
- 12 The Consultative Environmental Review describes how plantations of *E globulus* are expected to alleviate land degradation by decreasing steam and soil salinity, by reducing waterlogging, and by reducing soil erosion. These improvements result from the plantations' capacity to lower water tables and reduce the duration of surface and shallow sub surface water movement. Plantations use a much higher proportion of the natural rainfall than the agricultural systems they will replace. The consequent reduced entry of soluble salts into streamflow is confidently expected to improve its quality.

The fertiliser requirement of *E globulus* plantations is much less than that of the agricultural regimes they will replace.

Fertiliser is applied to individual trees at the time of planting to increase survival and early growth, and may be required later to maintain growth, although current research suggests not in the first rotation. Leaching of fertiliser into streamflow would indicate that excess amounts had been applied, more than the crop and the soil had the capacity to absorb. Field trials, designed to indicate optimum as well as maximum rates, determine the amount of fertiliser to be used in operations. There is no point in using excess fertiliser.

- 13 The CER (Section 7.15) explains that *E globulus* regenerates only from seed, which is soft coated and not long lasting in the ground. There is little chance that its germination in undisturbed bushland will ever be successful enough to threaten to become a weed.

E globulus is the most widely planted of eucalypts the world over. In Western Australia it has been widely planted on farmland, around homesteads, and in forest regions over many years. Given so much opportunity to become a weed, any proclivity to do so would have been manifest by now. No such evidence is known to the proponent.

Plantations of *E globulus* hardly begin to produce seed by the rotation age of ten years. Short rotation management restricts its capacity to regenerate, to the extent that seed collection for raising nursery stock can potentially be a problem.

Appendix 4

Environmental conditions set on WACAP proposal



MINISTER FOR ENVIRONMENT

STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED (PURSUANT TO THE PROVISIONS OF THE ENVIRONMENTAL PROTECTION ACT 1986)

THE WEST AUSTRALIAN WOODCHIP INDUSTRY

WA CHIP AND PULP CO. PTY. LTD.

This proposal may be implemented subject to the following conditions:

- 1 The proponent shall adhere to the proposal as assessed by the Environmental Protection Authority and shall fulfil the commitments made in the Supplement to the Environmental Review and Management Programme for the proposal (copy of commitments attached).
- 2 The volume of chip log production from old growth Forest within State Forest described in the Timber Production Strategy shall be strictly observed by not exceeding the following amounts:

1988 - 1990	-	583,000 cubic metres
1991 - 1995	-	553,000 cubic metres
1996 - 1998	-	442,000 cubic metres
- 3 No logging shall occur in existing Road, River and Stream Zones until the Department of Conservation and Land Management has developed, in consultation with the public, a detail proposal for those zones and the Environmental Protection Authority has assessed and accepted the proposal.
- 4 (1) The Department of Conservation and Land Management (as part of the review and development of a detail proposal for Road, River and Stream Zones required in condition 3), shall identify within old growth State Forest:
 - . additional areas of high value old growth forest meriting special treatment in the sense that they should be managed and harvested flexibly rather than be subject to broad-scale clearfelling; and

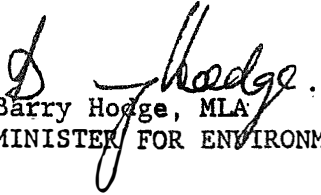
Published On

2 8 SEP 1988

areas which should be excluded from harvesting to protect their exceptional scenic, faunal, and other amenity values.

- (2) Within the constraints imposed by the Timber Production Strategy on the volume of sawlog timber, the Department of Conservation and Land Management shall prepare and implement a scheme of management for these special areas.
- 5 Any proposal to harvest wood from the salt risk zones of the Central and Northern Forest Regions, by more intensive methods than selection cut harvesting shall be referred to the Authority for assessment.
- 6 Marri resource in the salt-risk zones of the Southern Forest Region shall not be supplied to WACAP until an Environment Management Programme for these zones has been prepared to the satisfaction of the Environmental Protection Authority. The Management Programme shall give prior details of salt risk areas to be harvested, harvesting methods and safeguards to be applied, monitoring techniques proposed and feed-back mechanisms which would be used to modify management, if salt impacts were found.
- 7 The proponent shall not use wood for woodchipping or obtain woodchips derived from the clearing of remnant native vegetation on private property after the date of this statement, except for individual cases, or in circumstances authorised by the Minister for Environment before clearing commences.
- 8 The proponent shall not use wood for woodchipping or obtain woodchips derived from plantations on private property which were established by the clearing (after the date of this Statement) of remnant native vegetation, except in individual cases, or in circumstances where clearing was authorised by the Minister for Environment before clearing operations commenced.
- 9 Approvals, including the Forest Produce Licence or log sale agreements, for the proponents' woodchip operations based on State Forest resource, shall be linked specifically to the duration of the Timber Production Strategy and Forest Region Management Plans. Approvals issued to the proponent shall be reviewed no later than at the expiry of the present Management Plans (presently planned for February 1998).
- 10 The proponent shall, in consultation with the Department of Conservation and Land Management, contribute to and or participate in monitoring and management with respect to the environmental impact of this proposal to the satisfaction of the Minister for Environment. The detailed objectives and priorities for research into this monitoring and management shall be determined by the Steering Committee for Research and Land Use and Water Supply, following wide consultation including the public.
- 11 The proponent and the Department of Conservation and Land Management shall report to the Environmental Protection Authority briefly annually and comprehensively after each five year period (1993 and thereafter) on the monitoring and management of the environmental impacts of the proposal.

- 12 The conditions contained in this Statement shall be implemented forthwith.
- 13 These conditions apply to the use of wood for woodchips from the State Forest in the North, Central and Southern Forest Regions.


Barry Hodge, MLA
MINISTER FOR ENVIRONMENT
28 SEP 1988

ENVIRONMENTAL PROTECTION ACT 1986

(SECTION 18(1))

DELEGATION (No. 2)

Pursuant to Section 18 of the Environmental Protection Act 1986, I, Barry James Hodge, Minister for Environment, hereby delegate as follows -

Person to whom delegation applies:

This delegation is made to the person for the time being holding or acting in the office as The Commissioner of Soil Conservation appointed under section 7 of the Soil and Land Conservation Act 1945 (as amended).

Powers and Duties delegated:

- (1) Power to authorize W.A. Chip and Pulp Company Pty Ltd to use wood for woodchipping or obtain woodchips derived from the clearing of remnant native vegetation on private property as provided for in Condition 7 of the Minister for Environment's Statement of 28 September 1988 issued pursuant to section 45(7) of the Environmental Protection Act 1986 that the woodchipping proposal by W.A. Chip and Pulp Company Pty Ltd may be implemented.
- (2) Power to authorize W.A. Chip and Pulp Company Pty Ltd to use wood for woodchipping or obtain woodchips derived from tree plantations established by clearing of remnant native vegetation subsequent to 28 September 1988 as provided for in Condition 8 of the Minister for Environment's Statement of 28 September 1988 issued pursuant to section 45(7) of the Environmental Protection Act 1986 that the woodchipping proposal by W.A. Chip and Pulp Company Pty Ltd may be implemented.

Provided that the person to whom this delegation applies:

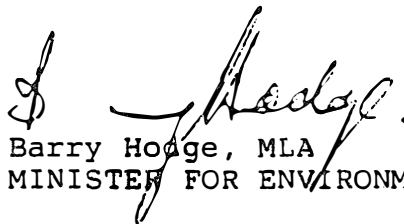
- (a) when giving a permit to clear land, and including permission to clear land to meet the requirements of the Soil and Land Conservation Act, shall ensure that not less than twenty percent of the total area proposed for clearing, remains uncleared;
- (b) has regard to the conservation of flora and fauna and protection of landscape amenity values of the (not less than) twenty percent area;

- (c) may require the (not less than) twenty percent area to be properly fenced and protected from degradation including grazing; and

- (d) may exercise discretion in ensuring that not less than twenty percent of the area applied for, remains uncleared provided that the location, area and purpose of each exemption is available as public information.

Dated this sixteenth

day of January 1989


Barry Hodge, MLA
MINISTER FOR ENVIRONMENT

LIST OF COMMITMENTS MADE BY WA CHIP AND PULP CO PTY LTD
IN THE SUPPLEMENT TO THE ERMP

WACAP'S COMMITMENT TO THE SOCIAL ENVIRONMENT

- o WACAP makes a firm commitment to continue supplying the world's paper industry with this specialised resource.
- o WACAP is committed to maintain and strengthen its contributions to the Regional, State and Australian economies.
- o WACAP is committed to expanding its role in supporting the people of Australia, particularly those in the south-west region.

WACAP'S COMMITMENT TO THE NATURAL ENVIRONMENT

- o WACAP sees its role as including the task of educating the general public that its operations are carried out within a framework of environmentally protective regulations and practices. These are based on continuing scientific research into the environmental effects of modern forest management.
- o WACAP accepts a responsibility to continue to utilise the natural paperwood resource obtained from forest residue left behind from harvesting of sawable timber in the south-west forests, and to ensure that its activities and operations within the broader context are consistent with genuine conservation of that resource in terms of the definition of conservation referred to in Section 7.1, with respect to protection and enhancement of the forest environment.

WACAP Environmental Commitments in State Forests

- o WACAP will observe all controls and operating conditions imposed on it through the published codes, Acts and licences listed above.
- o WACAP will require that all its harvesting contractors engaged to harvest logs and deliver them to the Diamond Mill be familiar with the contents of CALM's management policies and regulations, and agree to abide by them.
- o WACAP will report to CALM any incidences of malpractice that come to its attention. Penalties for breaches of regulations will be the responsibility of CALM.

- o WACAP will monitor the effectiveness of the various management procedures and will, if necessary, make recommendations to CALM, the EPA or other relevant bodies, to further improve and strengthen the effectiveness of these documents in achieving their goals.
- o WACAP will support the education and instruction of all forest workers in appropriate levels of conservation knowledge and skills.

Conservation of Ecological Values

- o WACAP will comply and co-operate with all authorities under the W.A. Government and will abide by the newly promulgated Timber Strategy and Regional Management Plans and any documents relating to them.
- o WACAP will respect the annual harvest quotas from State forest established by CALM on the basis of sustainable yield.
- o WACAP will respect the boundaries of the various kinds of forest areas (such as State Forest, Timber Reserves, National Parks, Nature Reserves and Conservation Parks) as demarcated by CALM or other government departments.
- o WACAP will ensure that any permitted tree harvesting is confined within the boundaries laid down by CALM.
- o WACAP will adhere to CALM's directions with respect to harvesting operations for subsequent optimal forest re-growth.
- o WACAP will avoid any forest practices contrary to sound forest development as specified by CALM.

Water Quality

- o WACAP will continue its co-operative and cordial relations with the appropriate authorities - CALM and the Water Authority of Western Australia.
- o WACAP will continue its corporate membership of the WAWA's Water Quality Research Committee initiated in 1986, or any replacement or similar committee.

- o WACAP will remain buffer zones demarcated by CALM
- o WACAP will observe proper management in all phases of operation to avoid excessive movement of soil (refer to section 7.3.1.8).
- o WACAP will continue to be responsible for the construction and maintenance of the primary log haul routes, giving due consideration to factors such as:
 - topography,
 - drainage pattern,
 - slope,
 - erosion hazard,
 - dieback hygiene, and
 - safety
- o WACAP will continue to minimize soil erosion on road-ways in winter conditions by:
 - sealing major log road surfaces in susceptible flat areas, and
 - spreading ground cover on susceptible drainage gullies beside roads.
- o WACAP will continue to direct main road runoff into forest area to allow settlement of any dust or gravel carried by the water.
- o WACAP will continue to co-operate with CALM and all other relevant authorities in preventing and controlling bush fires. This will help minimise the turbidity of streams that can occur when wild-fires destroy vegetation and expose soils to erosion through wind and rain (refer to section 7.3.1.4).
- o WACAP will continue to recycle mill process water to the furthest practicable extent
- o WACAP will continue to contain liquid outflow in storage dams.
- o WACAP will continue to ensure that periodic excess water discharge into nearby waterways is carried out in accordance with the provisions of the Effluent Disposal Licence granted by the Environmental Protection Authority of Western Australia.
- o WACAP will monitor potential leachates from the paperwood stockpile and take corrective action to mitigate water quality impact if required (refer to section 7.3.1.11).

Protection of Forest Productivity

- o WACAP will promote overall forest productivity by adhering to the recommended silvicultural management programme laid down by CALM.
- o WACAP will minimise the erosion of forest soils by avoiding excessive movement of soil during harvesting and road construction (refer to section 7.3.1.8).
- o WACAP will continue to coordinate the rehabilitation of compacted soil on behalf of the timber industry, by:
 - ripping landings and major snig tracks to a depth of approximately 0.5m,
 - arranging the bulldozer and driver,
 - servicing the machine, and
 - programming the sequence of operations.
- o WACAP will employ forest hygiene procedures as recommended by CALM to minimise spread of diseases, weeds or pests.
- o WACAP will monitor to avoid damage to retained trees during harvesting.
- o WACAP will report known incidences of contractors violating the terms of the Code of Logging Practice, although the imposition of penalties will be the responsibility of CALM.
- o WACAP will make recommendations to CALM for improvements which will lead to protection of forest productivity.

Fire Prevention and Control

- o WACAP will retain appropriate buffers, as demarcated by CALM.
- o WACAP will maintain constant vigilance for wildfire outbreaks, and alert appropriate authorities.
- o WACAP will train company personnel in fire-fighting procedures and provide fire-fighting equipment in emergencies.

- o WACAP will respect the boundaries of forest reserves of all kinds as determined by CALM, including
 - road reserves,
 - river and stream reserves,
 - National Parks, and
 - other classes of reserve.

Genetic Diversity

WACAP is committed to co-operating with CALM in maintaining genetic diversity of the State forests. CALM is responsible for this through utilisation of seed trees, control of seed collection and planting, through its system of reserves and through its wood production and silvicultural practices.

Landscape Values

- o WACAP will retain appropriate buffer zones where required by CALM.
- o WACAP will plan haulage road placement taking into consideration the visual aspects of the road (See section 7.3.1.9).
- o WACAP will apply prescribed remedial treatments to aid forest regrowth.

Soil Protection

- o WACAP will respect "Special Care Zones" comprising all slopes greater than 20 degrees or slopes exceeding 15 degrees if they border on recognised water courses.
- o WACAP will restrict harvesting activities in these zones to a narrow range of soil moisture conditions.
- o WACAP will minimise machine movements.
- o WACAP will avoid downhill snigging and scrub-rolling except where this is impractical.
- o WACAP will complete soil rehabilitation prior to the first winter after regeneration burning.

- o WACAP will locate log landing and loading areas more than 50m from recognised water courses, except where this is impractical.
- o WACAP will lay snig tracks parallel to recognised water courses except where this is impractical, and will not cross them unless unavoidable.
- o WACAP will not allow logging roads to enter stream reserves except where this is impractical and approved by CALM, in which case bridges or culverts will be installed.
- o WACAP will apply stabilising treatments to minimise erosion of sites which may be at risk (those close to water courses), such as spreading bark on disturbed areas, and installing silt traps.
- o WACAP will install cross drains across snig tracks and roads at the completion of harvesting, in accordance with the Industry Control Specifications.
- o WACAP will strive to minimise soil disturbance and will observe the specifications designed for this purpose, including cessation of activities during or immediately following heavy rain.
- o WACAP will ensure that contractors involved in falling and snigging trees in areas designated by CALM continue to obey the rules laid down by CALM in the Code of Hardwood Logging Practice.

Haulage Roads

- o WACAP will prepare plans for its haulage roads constructed by WACAP contractors with a view to safeguarding many factors, including:
 - public safety,
 - erosion avoidance, and
 - noise reduction.
- o WACAP will submit these plans to CALM for approval at least 2 months prior to clearing for in-coupe roads, and at least 3 months prior to clearing for major roads. These plans will show:
 - proposed road alignments or alternatives,
 - the differentiation between new clearing and upgrading of existing roads,
 - proposals for creek or river crossings,
 - location of proposed gravel pits with details of quantities to be extracted.

- o WACAP will mark the route in the field at least 6 weeks prior to clearing, following approval of these preliminary plans.
- o WACAP will locate the roads based on consideration of various factors, including:
 - disease,
 - erosion,
 - sedimentation,
 - safety, and
 - visual amenity.
- o WACAP will observe CALM's specifications which include maximum clearing widths of 12m for major roads and 8m for in-coupe roads.
- o WACAP will observe the detailed specifications for minimisation of erosion (see Section 7.3.1.8) and for installation of drains and silt traps to control runoff and sedimentation from roads and borrow pits.
- o WACAP will maintain these roads by:
 - clearing culverts and silt traps, and
 - slashing scrub to maintain visibility.
- o WACAP will minimise inconvenience and risks to other users of the forest by:
 - utilising the private timber road system to the maximum extent possible,
 - monitoring traffic control, and
 - installing hazard warning signs for the protection of the public.

Recreation

- o WACAP will have regard for landscaping and visual amenity (section 7.3.1.7),
- o WACAP will use private forest roads as much as possible to separate industrial traffic from tourist traffic.
- o WACAP will contribute to maintaining ecological values (section 7.3.1.1),
- o WACAP will provide and maintain appropriate safety direction and information signs.
- o WACAP will contribute to enhancing water quality (section 7.3.1.2),

- o WACAP will contribute to the optimal growth of new forests (section 7.3.1.3),
- o WACAP will co-operate in preventing and controlling wildfires (section 7.3.1.4), and
- o WACAP will contribute to conserving the flora and fauna of the region (section 7.3.1.5) including genetic diversity (section 7.3.1.6)
- o WACAP will continue to encourage the public to inspect its facilities at the Diamond Mill, which is a popular local tourist attraction in its own right.

Mill and Port Operations

- o WACAP will continue to recycle liquid outflow to the maximum extent possible.
- o WACAP will carry out discharge of excess quantities, when necessary, in accordance with the terms of the Effluent Disposal Licence issued by the Environmental Protection Authority.
- o WACAP will minimise water quality impact in the unlikely event that leachate is detected from the paperwood stockpile.
- o WACAP will continue to comply with applicable noise regulations.
- o WACAP will continue to require employees exposed to potentially damaging noise levels to use hearing protection equipment.

Utilisation Standards

- o WACAP will prevent logs or parts of logs being processed into paperwood, if they could be commercially utilised as sawn timber.
- o WACAP will ensure that contractors on-site in forest coupes accurately separate logs into piles of either sawlogs or paperwood logs, according to the criteria laid down by CALM.
- o WACAP will encourage sawmillers to reclaim logs from paperwood log piles in the forest landings, for production into sawn timber.

- o WACAP will co-operate with CALM officers to ensure that paperwood logs delivered to the Diamond Mill are indeed below sawlog quality. WACAP will set aside any logs which WACAP consider to have saw milling potential for inspection by CALM officers and sawmillers.
- o WACAP will utilise the new process developed at its own initiative which recovers sections of paperwood logs that contain potential "saw-wood", and will make this available to CALM at regular intervals, for auction to saw millers.
- o WACAP will monitor the performance of its machinery to ensure that recovery of products is maximised.
- o WACAP will continue its policy of full public disclosure of the log selection and utilisation procedures laid down by CALM. Public tours showing all aspects of the operation are available.
- o WACAP will encourage all workers in the forest to take instruction on maximum utilisation procedures and will support such instruction.

WACAP Environmental Commitments on Private Property Owned by WACAP

- o WACAP will comply with the requirements of the Country Areas Water Supply Act (1947-78) by:
 - obtaining licences to clear any land in declared water catchment areas,
 - abiding by the conditions of any licence, and
 - maintaining the trees in a responsible and professional manner.
- o WACAP will comply with the Soil and Land Conservation Act (1945-82) by:
 - obtaining licences for clearing native trees covering an area greater than 1 hectare,
 - complying with the conditions of these licences,
 - ensuring that its operations, even if not restricted by a licence, do not cause land degradation.
- o WACAP will comply with the Bush Fires Act (1954-79) by:
 - establishing firebreaks on external boundaries of at least the minimum width as specified in each Shire,
 - establishing internal subdivision firebreaks as specified by the relevant Shire,
 - obtaining necessary permits to light fires for whatever reason, and
 - obeying the instructions of any duly authorised officer in the case of a bush fire.

- o WACAP will continue to manage young regrowing native trees on land purchased by WACAP, should those trees, in WACAP's opinion, be of sufficient quality and quantity for retention as future sawlogs and paperwood trees.
- o WACAP will develop a code of harvesting practice based on CALM's Code of Hardwood Logging Practice and its complementary Manual of Hardwood Logging Specifications and other similar codes in force in other parts of Australia. This code will include management practices for:
 - river and stream crossings,
 - road construction,
 - road drainage,
 - log storage and sorting area placement,
 - snig track placement,
 - soil disturbance during wet weather,
 - rehabilitation of log storage and sorting areas,
 - harvesting of steep slopes,
 - maximum utilisation of each tree, and
 - retention of vegetation alongside perennial and other recognised streams.
- o WACAP will ensure the maximum commercial utilisation of each tree by:
 - selling all sawlogs produced to sawmillers, be they general purpose or salvage quality,
 - holding auctions of any logs which WACAP considers to have sawlog potential but which are not taken by sawmillers from the land,
 - segregating the classes of logs at the storage and sorting areas so that accidental inclusions of sawlogs into paperwood is either nil or minimal, and
 - checking and segregating possible sawlogs or saw-wood sections after delivery to the Diamond Mill.
- o WACAP will ensure that its contractors conduct their business in a safe manner, whether they be conducting harvesting, routine management, or planting activities. Where there are potential hazards, contractors will be required to place notices of such where the public may be endangered (ie: signs warning of trucks entering the public road from private property).
- o WACAP will continue to take reasonable precautions to minimise fire damage by:
 - discussing with officers of the Bush Fires Board,
 - becoming financial members of the local fire brigade in each area where WACAP has a plantation,
 - liaising with Shire appointed fire officers, and
 - maintaining fire fighting equipment in its own right.

- o WACAP will continue to establish trial and demonstration plantings aimed at increasing the efficiency of tree establishment, growth and harvesting and will inform other landowners of such improvements.
- o WACAP will ensure the genetic diversity and integrity of the tree farms under its supervision by maintaining controls on the use of seed in regeneration.

WACAP Environmental Commitments on Private Property Owned by Others,
Mainly Farmers

- o WACAP will continue to liaise with bodies such as the Western Australian Farmer's Federation (WAFF) to educate and motivate farmers into establishing tree plantations on private property.
- o WACAP will develop a "Code of Harvesting Practice" for contractors harvesting wood from private property where the subsequent land use is tree farming, and will request that participants of WACAP's various Tree Farming Incentive Schemes adopt this code. The code will be similar to that being developed on WACAP's private land, based on CALM's Code of Hardwood Logging Practice and its complementary Manual of Hardwood Logging Specifications and other similar codes in force in other parts of Australia. The code will include management practices for:
 - river and stream crossings,
 - road construction,
 - road drainage,
 - log storage and sorting area placement,
 - snig track placement,
 - soil disturbance during wet weather,
 - rehabilitation of log storage and sorting areas,
 - harvesting of steep slopes,
 - maximum utilisation of each tree, and
 - retention of vegetation alongside perennial and other recognised streams.
- o WACAP's supervisors will visit the site of harvesting operations on private property to monitor production.
- o WACAP's supervisors will administer the code and enforce penalties to the extent of WACAP's authority.
- o WACAP will reduce paperwood supply quotas of harvesting contractors who do not carry out the harvesting operation in an acceptable manner.

- o WACAP will engage additional qualified staff as required.
- o WACAP will continue to rigorously enforce safety rules and regulations covering private harvesting operations and road rules, including the compulsory wearing of:
 - hard hats,
 - safety boots, and
 - hearing protection.
- o WACAP's supervisors will impose any penalties which are legally enforceable by WACAP along the lines of:
 - initial warnings,
 - suspensions, or
 - life time bans from working as a supplier to WACAP.
- o WACAP will continue to support afforestation of previously cleared land and reforestation of newly harvested areas, through differential incentive payments and technical assistance to landholders.
- o WACAP will not accept paperwood logs from private land unless the landholder demonstrates that the necessary Government permits-to-clear have been obtained.
- o WACAP will not solicit logs from private sources and will continue to pay only modest stumpage rates for the paperwood which it purchases from landowners clearing for agricultural purposes, thus minimising the incentive for the private landowner to clear native forest for agricultural purposes.
- o WACAP will continue to reduce air pollution and convert a residue product into a marketable resource, by encouraging private landowners to salvage cleared timber which would otherwise be burnt (once a decision to clear land has been made by the private landowner).
- o WACAP will further offset the impact of pasture clearing by establishing a minimum of 5ha of tree plantation for every 1000 tonnes of paperwood it receives from private property, including WACAP-owned land. These tree plantations will be established either on WACAP-owned land, or on other private land through one of its private Forestry Incentive Schemes.

ARCHAEOLOGICAL AND ETHNOGRAPHIC SITES

- o WACAP will take measures to inform all personnel associated with the woodchipping activities of their obligations under the Act.
- o WACAP will modify its operations in accordance with CALM directions, if necessary, to avoid damage to Aboriginal sites.

RESEARCH

- o WACAP commits to continuing either sponsorship or self-conducted research aimed at, among other things:
 - improved tree establishment procedures,
 - improved tree protection procedures,
 - improved tree growth,
 - improved utilisation of timber produced,
 - improved harvesting techniques,
 - new products manufactured from trees,
 - new manufacturing processes,
 - establishing new markets for products,
 - maintaining existing markets for products, and
 - adjusting current practices if better management techniques are identified and quantified.
- o WACAP will encourage and agitate for more research effort by CALM into improving the growth, health and quality for sawlog and paperwood use of CALM's native trees and production forests.