# DIEBACK REVIEW 1982



TASK FORCE REPORT

Internal use only - contents subject to further review

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FORESTS DEPARTMENT, S.H.Q., NOVEMBER 1982

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#### INTRODUCTION

The Conservator initiated a review of dieback policy, a Task Force was nominated and guidelines for conducting the review were distributed on 27 July, 1982.

A comprehensive report by nineteen groups of experts was prepared and distributed during August. A seminar was planned for late September and the Task Force distributed a discussion paper outlining major needs, conflicts and uncertainties and evaluating some policy options. Thirty officers attended the seminar and a report was distributed in October. This report contained suggested policies for four major areas:

Mapping
Priorities
Access and Quarantine
Forest Management

At all stages, the Task Force has maintained a close liaison with the Policy Review Group, Regions and Divisions.

The Task Force has prepared policies for evaluation by the Policy Review Group, whose function is to make recommendations to the Conservator. Policies have been amended, as required by the Policy Review Group.

This Task Force Report collates relevant material for submission to the Conservator and to the Policy Review Group.

Dieback Review Task Force 23.11.82

### TASK FORCE REPORT

- 1. PROCEDURE
- 2. DEVELOPMENT OF POLICIES
- 3. IMPLEMENTATION
- 4. APPENDICES

#### PROCEDURES

#### INITIATION

The Conservator indicated his intention to instigate a review of dieback policy during the latter half of 1982. The last major review of dieback commenced in November 1973. Since then many developments have occurred, e.g., in research, in operational practices, in the interpretation and mapping of dieback, in the establishment of quarantine and in the needs of industry. A review of the current situation and an evaluation of policy options was desirable. The objective of this review was to propose forest management policies and practices so that:

- (a) Forest operations are carried out hygienically, so that the disease is not spread into areas as yet unaffected.
- (b) In areas free of the disease or those where the impact of the disease is minor the natural resistance can be increased.
- (c) Where needed, areas affected by the disease can be rehabilitated.
- (d) The forest ecosystem can be productively managed in the long term.

#### TERMS OF REFERENCE

(a) Review all factors and activities which affect or can be affected by dieback, especially -

forest operations - logging, mining etc.

forest protection - fire, disease control, catchments management information - photo interpretation, mapping research

quarantine and hygiene

public and industrial requirements - log supplies, recreation communication lines - roads, pipelines, conveyors

- (b) Identify areas of uncertainty, conflict or where adjustments between competing demands will be necessary.
- (c) Prepare alternative policy options for evaluation by the Policy Review Group and the Conservator.

(d) Recommend methods of implementing the selected options, especially -

> legislation education and training publicity and extension control systems structures.

#### PROCEDURE

The dieback problem is an example of a typical, complex, interfunctional system. Resolution involves a number of clearly defined stages -

- \* data collection provided by groups of experts
- \* preparation of alternative options Dieback
  Review Task Force
- \* evaluation of feasible alternatives Policy
  Review Group
- \* selection of preferred options Conservator
- \* recommendations for changes in policy Conservator to Minister
- \* acceptance of new policy Cabinet
- \* implementation Forests Department

All complex biological problems involve elements of risk and uncertainty. Periodic reviews will be necessary. Because the task is complex and will involve many Departmental officers, a suitable organisational structure is necessary for success.

#### STRUCTURE

To produce a review which is effective there is need for clarity in the structures used, the objectives at each stage, the task and role of each group and the timetabling needs. A Dieback Review Task Force of four officers (Messrs Havel (Chairman), Grace, Peet and Batini) was nominated to co-ordinate this review. Three of these officers were members of the 1973 Task Force.

Responsibilities for each group are shown below:

Departmental Experts

- \* Provide data inputs to D.R.T.F.
- \* Interact with D.R.T.F.
- \* Evaluate draft policy options.

# Dieback Review Task Force (D.R.T.F.)

- \* Evaluates submissions from Departmental experts
- \* Prepares and examines alternative policy options
- \* Recommends preferred alternatives to P.R.G.
- \* Co-ordinates the review providing liaison and executive staff functions (Mr. Batini).

## Policy Review Group (P.R.G.)

- \* Evaluates policy alternatives offered by D.R.T.F.
- \* Selects feasible options.
- \* Recommends to Conservator

#### Conservator

- \* Evaluates recommendations from P.R.G. and D.R.T.F.
- \* Advises Minister of selected policies or policy alternatives.
- \* Liaises with Industry and Government departments regarding policy proposals.

#### DEVELOPMENT OF POLICIES

#### FOREST MANAGEMENT

This field is broad and policies could be developed for each land use category, or by forest type, or by the susceptibility of each site-vegetation type to the disease.

The Task Force has decided to adopt a systematic approach based on the following factors:

The OPERATION being contemplated.

The DEGREE OF HYGIENE which is specified.

The FOREST TYPE.

The likely IMPACT of P. cinnamomi on the forest type.

The specified LAND USE.

The CONSEQUENCES of impact on land use.

For this discussion impact may be defined as follows, and relates to the terminal effects of the disease:

few understorey species killed - low impact

many understorey species killed, some dead jarrah trees

moderate impact

many understorey species killed, many jarrah deaths, graveyards

high impact

Using these criteria, an operation (e.g. logging), which has a high risk of introducing P. cinnamomi (in winter, no hygiene,), into a site where the impact on the forest would be high (Gunapin surface), in a critical land use category (buffer for Flora, Fauna, Landscape MPA), would have serious consequences, and should therefore be avoided.

These criteria can be applied to any operation, forest type, and land use category. Considerations of risk, impact and consequences will lead to a decision to accept, reject or to modify the proposed activity.

#### POLICY PROPOSED:

BEFORE FOREST OPERATIONS ARE PERMITTED, THE FOLLOWING FACTORS MUST BE EVALUATED:

TYPE OF OPERATION

DEGREE OF HYGIENE

RISK OF INTRODUCING P. CINNAMOMI

FOREST TYPE

LIKELY IMPACT

LAND USE, AND

CONSEQUENCES OF IMPACT ON LAND USE

Access to areas of forest will be required and control of this aspect is important.

#### POLICY PROPOSED:

VEHICULAR ACCESS TO AREAS OF FOREST WILL BE PERMITTED ONLY WHERE HYGIENE CONDITIONS ARE PRESCRIBED. THE DEGREE OF CONTROL EXERCISED WILL BE RELATED TO THE DEGREE OF RISK OF INTRODUCING THE DISEASE AND THE MAGNITUDE OF THE CONSEQUENCES.

#### POLICY PROPOSED:

VEHICULAR ACCESS TO AREAS OF SUSCEPTIBLE FOREST WILL BE PERMITTED ONLY WHERE RELIABLE DIEBACK MAPS ARE AVAILABLE, WHERE AND WHEN THE RISK OF DISEASE INTRODUCTION IS LOW, AND WHERE CONSEQUENCES OF INFECTION ARE ACCEPTABLE.

Initially, major, new operational proposals arising from Chiefs of Division or Regions will be evaluated by Protection Branch and submitted by COD of Protection to the Policy Review Group for a decision.

#### POLICY PROPOSED:

ONCE THE FACTORS HAVE BEEN EVALUATED, A DECISION TO ACCEPT, REJECT OR MODIFY THE PROPOSED ACTIVITY CAN BE MADE.

Major, new decisions will initially be referred to the Policy Review Group. Once precedents have been set the responsibility for approval will be progressively transferred to COD Protection, Regional Superintendents and O.I.Cs. Divisions.

#### POLICY PROPOSED:

ONCE A DECISION TO PROCEED WITH AN OPERATION IS MADE, EXISTING GUIDELINES AND PRESCRIPTIONS WILL BE USED, OR NEW GUIDELINES WILL BE PREPARED. THE DIEBACK HYGIENE GUIDE CONTAINED IN JARRAH 81 WILL BE USED IN PLANNING THE OPERATION.

#### ACCESS

There is ample evidence to demonstrate that the disease can be spread by activities in the forest, as well as by natural means. Some control over access is available because of quarantine (Forest Diseases Regulations). Additional control is obtained by specifying access routes, coupes etc. and through negotiations with interested parties. Some access to the forest is difficult, if not impossible to control. Most access is by road, and road closure is an effective mechanism for control.

#### POLICY PROPOSED:

THE OPERATIONS DIVISION WILL DETERMINE A PROCEDURE FOR DEFINING A BASIC ROAD NETWORK, WHEREVER POSSIBLE BASED ON EXISTING ROADS, WHICH MINIMISE DISEASE SPREAD. DEADLINES FOR DIVISIONS WILL BE SET.

This road system will need to cater for approved needs (access to P.P., roads for fire control etc.). Where possible, roads low in the profile should be preferred. However, new road construction should be reduced to the absolute minimum. Substantial, additional spread of disease along major forest roads constructed many years ago is unlikely, and these roads could be retained.

#### POLICY PROPOSED:

ALL OTHER ROADS SHOULD BE ACTIVELY CLOSED TO ACCESS.

Active closure would involve ripping, seeding, and planting of trees and understorey for distances of up to 50 metres. Closures with signs or logs are considered to be inadequate. Ditches are considered to be unsafe and banks unsightly.

#### POLICY PROPOSED:

WHERE NEW ROADS ARE ESSENTIAL, THESE MUST BE LOCATED AND CONSTRUCTED SO AS TO MINIMISE THE RISK OF DISEASE INTRODUCTION OR THE IMPACT OF ADDITIONAL SPREAD.

These roads will generally be located lower in the profile but not so low as to cause problems of stability or damage to the environment. Care should be taken not to deliberately spread the disease during construction. In the longer term however, we must accept the risk that disease may be introduced along the full length of all major forest roads. The design and location of cut-offs and culverts is therefore of great significance.

#### POLICY PROPOSED:

THERE WILL BE GREATER FLEXIBILITY IN APPLYING HYGIENE MEASURES, E.G. HYGIENE GRADING AND GRAVELLING ON MAJOR FOREST AND LOCAL AUTHORITY ROADS AND HIGHWAYS WILL ONLY BE IMPLEMENTED WHERE THERE ARE SIGNIFICANT AREAS OF DIEBACK-FREE FOREST INTERSECTED BY THE ROAD.

#### FOREST DISEASE RISK AREAS

Amendments to the Forests Act (77 of 1974) allowed for the proclamation of forest disease areas or forest disease risk areas to "control and eradicate such forest diseases as are detected in such areas". The Forest Diseases Regulations 1975 provided a means to control vehicular access to these areas and suitable penalties for breaches of the Act.

Substantial areas of State forest were proclaimed as disease risk areas in 1976 and 1977 and placed in "quarantine". The purpose of this was to allow symptoms of disease to express themselves, to control spread of disease whilst symptoms were developing, to develop techniques for mapping the disease and to allow time for research developments to occur.

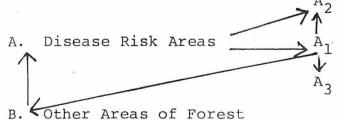
In the past 6 years symptoms have had time to be expressed, control over access by major users has been achieved, techniques for mapping and hygiene management have been refined and our research knowledge has improved.

In the proclaimed Disease Risk Areas, access to natural resources has been severely constrained. There is mounting pressure for access into these areas for poles, sawlogs and mineral exploration. Experimental logging trials have been conducted in quarantine at Dwellingup (commenced 1980) and at Nannup (1982).

Sawlog resources within areas currently in quarantine are required in 1984 (Southern Region), 1985 (Central Region) and 1985 (Northern Region). Lead time to enable adequate planning, road construction and stabilisation, is at least 18 months.

The anticipated pole shortfall is about 17000 poles and planning to extract these from areas currently in quarantine has commenced. In a number of these areas, dieback-free plans produced by 70 mm photography are available. It is apparent that a review of the existing policy on access to resources in areas proclaimed as Disease Risk is warranted. However some cutting of poles in quarantine has commenced.

Areas of forest, where the risk of disease introduction is high and the consequences of disease introduction are serious, should be retained as Disease Risk Areas, in quarantine, in the long term. Other parts of the forest, after a period of "quarantine" to allow for symptom expression and mapping, may then be assigned to limited access and be available for resource use.



Long Term Quarantine (high risk, high consequences)
Short Term Quarantine (for mapping purposes)
Limited Access Disease Risk Area

#### Disease Risk Areas

A, Short Term Quarantine

These are areas of low or medium consequences, where the location of the disease is not accurately known.

Short term quarantine is for mapping purposes, to determine whether an area should go into categories  $A_2$ ,  $A_3$  or B.

 $\Lambda_{2}$  Long Term Quarantine

These are areas of high risk or high consequences where exclusion of the disease is essential and where continued capability for mapping the disease is necessary.

Λ<sub>3</sub> Limited Access Disease Risk Areas

Areas available for operations (e.g. logging, mining, exploration), once mapped for disease occurrence, and where disease risk legislation is still applicable.

B Other Areas of Forest

Areas which are not considered to be at risk, e.g. tuart, karri, wandoo forests and some softwood plantations.

Areas of jarrah forest where the disease risk is considered to be low, e.g. red loams on Murray and Helena landforms.

Forest disease areas.

Areas where disease risk legislation does not apply (Eastern Goldfields).

#### POLICY PROPOSED:

STATE FORESTS SHOULD BE CATEGORISED ACCORDING TO THE FOLLOWING CLASSES -

- A DISEASE RISK AREAS
- B OTHER AREAS OF FOREST

WITHIN THE DISEASE RISK AREAS, FOUR CLASSES SHOULD BE DELINEATED -

- Λ<sub>1</sub> SHORT TERM QUARANTINE (TEMPORARY CLASS)
- A, LONG TERM QUARANTINE
- $\Lambda_3$  LIMITED ACCESS DISEASE RISK AREAS, OR
- B OTHER AREAS OF FOREST

#### POLICY PROPOSED:

WHERE THERE IS A DEMONSTRATED NEED, ACCESS TO RESOURCES WITHIN LIMITED ACCESS DISEASE RISK AREAS WILL BE PERMITTED.

Resource use must be planned so as to minimise the introduction or artificial spread of the disease. Strict control of each operation will be necessary and the results should be monitored both in the short and long term.

#### POLICY PROPOSED:

ACCESS TO RESOURCES WITHIN DISEASE RISK AREAS WILL BE ALLOWED UNDER PERMIT WHERE ACCEPTABLE DIEBACK-FREE MAPS ARE AVAILABLE AND SUBJECT TO THE MOST UP-TO-DATE HYGIENE CONDITIONS.

#### POLICY PROPOSED:

FOR MONITORING PURPOSES, SELECTED AREAS WILL BE SUITABLY ASSESSED AT REGULAR INTERVALS TO MONITOR THE EFFECTS OF THE OPERATION ON THE INTRODUCTION, THE RATE OF SPREAD AND THE INTENSIFICATION OF THE DISEASE.

It may be desirable to expand the area currently proclaimed as Disease Risk, to include further areas of State forest or other public lands and to exclude some areas where the risk of disease is no longer recognised.

#### POLICY PROPOSED:

THE BOUNDARIES OF EXISTING DISEASE RISK AREAS SHOULD BE REVIEWED PERIODICALLY AND CONSIDERATION GIVEN TO INCLUDING OR EXCLUDING CERTAIN AREAS.

#### MAPPING

The dieback review has highlighted the need to reduce the amount of 70 mm interpretation to about 60 000 ha per year.

The current procedure is to delineate the extent of the disease by mapping the location of dead indicator species. Indicator species deaths can be mapped from 70 mm photography and from ground surveys, but the former is preferred. The dieback-free maps which are produced do not indicate the severity of the disease in terms of impact on the jarrah forest. Black and white 1:25000 and 1:50000 or 70 mm photographs can be used to do this. A considerable area of forest has already been mapped from 70 mm photographs.

#### POLICY PROPOSED:

RESOURCE USE SHOULD BE ENCOURAGED IN AREAS WHEN DIEBACK-FREE MAPS PRODUCED FROM 70 MM PHOTOGRAPHS ARE AVAILABLE, AND WHERE THE CONSEQUENCES OF INTRODUCING THE DISEASE ARE LOW.

#### POLICY PROPOSED:

PRIORITIES FOR FUTURE INTERPRETATION AND MAPPING SHOULD BE BASED ON THE NEEDS OF INDUSTRY AND FOREST USERS, CONCENTRATING PRIMARILY BUT NOT EXCLUSIVELY, ON JARRAH FOREST AREAS INSIDE OUARANTINE.

Maps developed from 70mm photographs are too limited for purposes of resource inventory. Dieback distribution as mapped from 1:50000 black and white photographs should be quite adequate for this task. When 70 mm dieback-free maps are not available, alternative methods of delineating the extent of the disease need to be used. These include ground survey, black and white photographs or the 1976 dieback plans based on the 1:50000 photographs.

Delineating the extent of infection is only a first step in the process. Much additional information is required before an operation can proceed. Examples of data needed include: forest type, impact on the jarrah forest, site susceptibility, access roads, mini-catchments, wash-down points, coupe boundaries, etc. The data required and the types of maps needed have not been clearly identified as yet. This aspect requires further action and development. At present, it is considered that three types of map may be necessary -

dieback location map
hygiene or management map
operations map

#### POLICY PROPOSED:

MAPPING REQUIREMENTS URGENTLY NEED TO BE SPECIFIED BY A SELECTED GROUP OF EXPERTS.

A major need which is recognised, is to be able to consistently and cheaply delineate high impact, susceptible sites, from low impact, tolerant and resistant site types in the jarrah forest. Additional research is required and the 70 mm photographs could be a useful tool. The I & P interpreters have gained valuable experience in recognising the symptoms of the disease and its expression, in a range of field situations. Their extensive knowledge should be collated and recorded.

#### POLICY PROPOSED:

THE DEFINITION OF SITE SUSCEPTIBILITY BY 70 MM PHOTOS OR OTHER MEANS SHOULD BE ENCOURAGED AND GIVEN PRIORITY.

#### POLICY PROPOSED:

THE RESPECTIVE PRIORITIES BETWEEN PRODUCTION AND PROJECT WORK BY I & P INTERPRETERS SHOULD BE ALTERED. PROJECT STUDIES OF RATE OF SPREAD, INTENSIFICATION, METHOD OF NATURAL SPREAD AND SYMPTOMOLOGY SHOULD BE ENCOURAGED AND GIVEN HIGHER PRIORITY.

In some sites, the field expression of the disease is subtle. Errors in recognising and in plotting the dieback boundaries could easily occur. The I & P interpreters are the most experienced and conversant persons within the cell they have interpreted. Boundaries marked by them would be most cost-

effective. Training of Divisional staff could be included if these worked in conjunction with I & P.

In some cases there will be no need to mark the actual dieback boundary, as roads, tracks or survey lines may suffice as the management boundary.

#### POLICY PROPOSED:

WHERE NECESSARY, THE DIEBACK BOUNDARIES BE MARKED BY I & P INTERPRETERS WORKING IN CONJUNCTION WITH DIVISIONAL OFFICERS.

#### PRIORITIES

#### POLICY PROPOSED:

THE FORESTS DEPARTMENT SHOULD GIVE PRIORITY TO DIEBACK CONTROL AND ACTIVITIES RELATED TO DIEBACK, TO A LEVEL COMPARABLE TO THAT GIVEN TO FIRE PROTECTION.

#### POLICY PROPOSED:

IF ADDITIONAL RESOURCES CANNOT BE OBTAINED, RESOURCES WITHIN THE FORESTS DEPARTMENT SHOULD BE REDIRECTED TO ACHIEVE THE OBJECTIVE ABOVE.

#### POLICY PROPOSED:

IN SETTING PRIORITIES, THE AIM SHOULD BE TO ENCOURAGE ASPECTS WHICH MAY LEAD TO A SOLUTION, RATHER THAN TO ASPECTS WHICH MAINTAIN THE EXISTING CONDITION, E.G. PROVIDING BASIC, LONGTERM SOLUTIONS, RATHER THAN MEETING A SHORT-TERM, LOCALISED NEED.

#### POLICY PROPOSED:

HIGHER PRIORITY BE GIVEN TO COLLATING AND SYSTEMATISING POLICIES, RESEARCH AND OTHER DATA INTO A BODY OF KNOWLEDGE. THIS MUST THEN BE DISSEMINATED TO OPERATIONAL DIVISIONS FOR IMPLEMENTATION IN THE FIELD.

#### 4. IMPLEMENTATION

#### FUTURE ACTION

Once the proposed policies have been accepted, implementation of these policies will be required. This will include several major aspects:

- \* Legislation there is no apparent need for changes to existing Legislation.
- \* Publicity (internal/external) there is a major need to explain the proposed changes both within and outside of the Department.
- \* Training there is a recognised need for training. Two schools are planned for 1983.
- \* Control Systems, Budgets and Structures there is a need to review Departmental structures, budgets and control systems, and propose changes where necessary.
- \* Terminology, Job Instructions, Manuals, Prescriptions there is a need to integrate current prescriptions, terminology and job instructions into a manual.

Action will be necessary by several branches of the Department, primarily:

Protection Extensions Training Regions I & P Research 4. APPENDICES

### DIEBACK REVIEW 1982 - CHRONOLOGY

DATE	ACTION
11.6.82	TASK FORCE SELECTED
4.6.82	FINAL DRAFT OF PROPOSAL ACCEPTED
i-13.7.82	CONTACT WITH EXPERTS, 6 MEETINGS, 45 EXPERTS
3.7.82	CONSERVATOR'S LETTER (299/82) TO EXPERTS
7-29.7.82	CONTACT WITH EXPERTS, FIELD
1 & 12.8.82	CONTACT WITH EXPERTS, FIELD
7.8.82	DIEBACK TASK FORCE MEETS
1.8.82	EXPERTS' REPORTS RECEIVED
.8.82	EXPERTS' REPORTS PRINTED AND DISTRIBUTED (55 COPIES)
1.9.82	DIEBACK TASK FORCE MEETS
9.82	DIEBACK TASK FORCE MEETS
.9.82	DISCUSSION PAPER FOR SEMINAR DISTRIBUTED
3.9.82	DIEBACK REVIEW SEMINAR, 30 ATTENDED
1.9.82	DIEBACK TASK FORCE MEETS
.10.82	SEMINAR REPORTS DISTRIBUTED (55 COPIES)
1.10.82	POLICY (DRAFT) DISTRIBUTED TO TASK FORCE
1.10.82	DIEBACK TASK FORCE MEETS
.10.82	TASK FORCE POLICIES (DRAFT NO.1) GO TO POLICY REVIEW GROUP
11.82	DIEBACK TASK FORCE MEETS
11.82	DIEBACK TASK FORCE MEETS
11.82	TASK FORCE POLICIES (DRAFT NO.2) GO TO POLICY REVIEW GROUP
11.82	DIEBACK TASK FORCE MEETS
.11.82	DIEBACK TASK FORCE REPORT GOES TO POLICY REVIEW GROUP AND TO CONSERVATOR
TINUOUS	CONTACT WITH REGIONS, O.I.Cs DIVISIONS, INSPECTION OF FIELD OPERATIONS

Logging for poles in the Dwellingup Division

#### POLICIES AS AMENDED BY POLICY REVIEW GROUP

1 A. BEFORE FOREST OPERATIONS ARE PERMITTED, THE FOLLOWING FACTORS MUST BE EVALUATED:

TYPE OF OPERATION

DEGREE OF HYGIENE

RISK OF INTRODUCING P. CINNAMOMI

FOREST TYPE

LIKELY IMPACT

LAND USE, AND

CONSEQUENCES OF IMPACT ON LAND USE.

- 1 B. VEHICULAR ACCESS TO AREAS OF FOREST WILL BE PERMITTED ONLY WHERE HYGIENE CONDITIONS ARE PRESCRIBED. THE DEGREE OF CONTROL EXERCISED WILL BE RELATED TO THE DEGREE OF RISK OF INTRODUCING THE DISEASE AND THE MAGNITUDE OF THE CONSEQUENCES.
- 1 C. VEHICULAR ACCESS WILL BE PERMITTED ONLY WHERE
  RELIABLE DIEBACK MAPS ARE AVAILABLE, WHERE AND WHEN
  THE RISK OF DISEASE INTRODUCTION IS LOW, AND WHERE
  CONSEQUENCES OF INFECTION ARE ACCEPTABLE.
- 1 D. ONCE THE FACTORS HAVE BEEN EVALUATED, A DECISION TO ACCEPT, REJECT OR MODIFY THE PROPOSED ACTIVITY CAN BE MADE.

#### TEST OF POLICIES 1 A TO 1 D

- Removal of 3 to 8 poles ha<sup>-1</sup> Type of Operation
  - Degree of Hygiene Maximum hygiene, e.g.

No new roads constructed Low profile roads and landings Split-phase Dry soil snig and haul Dieback-free map available Clean-down between subcoupes (detailed prescriptions available

Risk of Introducing P. Cinnamomi

Estimated as low.

Forest Type

Healthy, high quality jarrah

forest, few banksias

Likely Impact

Estimated as low.

Land Use

(Catchment Protection/Timber Production)

Not on utilised catchment, but in intermediate salinity

Consequences of Impact on Land Use

Biological consequences estimated as low. May have political repercussions.

- 1 B Conditions fulfilled.
- Conditions fulfilled. 1 C
- The operation should be approved. 1 D

#### POLICIES PROPOSED BY DIEBACK REVIEW TASK FORCE

#### POLICIES AS AMENDED BY POLICY REVIEW GROUP

BEFORE FOREST OPERATIONS ARE PERMITTED, THE FOLLOWING CRITERIA NEED TO BE EVALUATED:

TYPE OF OPERATION
RISK OF INTRODUCING P. CINNAMOMI
FOREST TYPE
LIKELY IMPACT
LAND USE, AND
CONSEQUENCES OF IMPACT ON LAND USE.

ACCESS TO AREAS OF FOREST WILL BE PERMITTED ONLY WHERE HYGIENE CONDITIONS ARE PRESCRIBED. THE DEGREE OF CONTROL EXERCISED WILL BE RELATED TO THE DEGREE OF RISK OF INTRODUCING THE DISEASE AND THE MAGNITUDE OF THE CONSEQUENCES.

ACCESS WILL BE PERMITTED ONLY WHERE RELIABLE DIEBACK MAPS ARE AVAILABLE, WHERE AND WHEN THE RISK OF DISEASE INTRODUCTION IS LOW, AND WHERE CONSEQUENCES OF INFECTION ARE ACCEPTABLE.

ONCE THE CRITERIA ABOVE HAVE BEEN EVALUATED, A DECISION TO ACCEPT, REJECT OR MODIFY THE PROPOSED ACTIVITY CAN BE MADE.

BEFORE FOREST OPERATIONS ARE PERMITTED, THE FOLLOWING FACTORS MUST BE EVALUATED:

TYPE OF OPERATION

DEGREE OF HYGIENE

RISK OF INTRODUCING P. CINNAMOMI

FOREST TYPE

LIKELY IMPACT

LAND USE, AND

CONSEQUENCES OF IMPACT ON LAND USE.

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VEHICULAR ACCESS TO AREAS OF SUSCEPTIBLE FOREST WILL BE PERMITTED ONLY WHERE RELIABLE DIEBACK MAPS ARE AVAILABLE, WHERE AND WHEN THE RISK OF DISEASE INTRODUCTION IS LOW, AND WHERE CONSEQUENCES OF INFECTION ARE ACCEPTABLE.

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