

FOREST PRACTICES UNIT



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Introduction

The forest industry is a vital part of the Tasmanian economy. Approximately one in seven Tasmanians depend on it for a living.

Forest activities, like farming or tourism, have an impact on the environment.

The purpose of the Forest Practices Legislation is to ensure that this impact is environmentally and socially acceptable at an operational level and to ensure or encourage the proper reforestation of harvested or previously cleared areas on State Forest and private property.

The Forest Practices Act is but one facet of the total management of Crown forests. Over a quarter of Tasmania is already reserved in one form or another including large areas of forest. These areas include many representative plant and animal communities. Mechanisms exist for additional reservations in production forests where such communities are under represented elsewhere.

The Act is based on the reasonable assumptions that with a soundly based publicly reviewable code of practices, a commitment by all sections of the industry to implement such a Code, proper training and education and a cost effective enforcement mechanism, most forest values and benefits are renewable and can be maintained in production forests in the long run. Other benefits will be maintained in the reserve system.

The Forestry Commission is charged with the implementation of the Act on private property and State Forest. The Forest Practices Unit of the Commission deals with the forest practices aspects of the legislation.

The main relevant aspects of the legislation provide for:

- A periodically reviewed Forest Practices Code.
- Timber Harvesting Plans, required for most commercial timber harvesting operations on private property and State forest (including roading, logging and reforestation where applicable). A Plan's provisions must follow the Code.
- Three Year Plans showing location and transport routes of private property operations.
- Forest Practices Officers to administer the process.
- Enforcement provisions for making good unacceptable damage.
- A Forest Practices Tribunal.

This annual review focuses on achievements and problems encountered during the year in implementing the legislation and provides relevant statistics. It is also required for reporting to the Private Forestry Council, the Department of Primary Industry & Energy (Canberra) and the Forestry Commission.

Steady progress has been made. Some problems identified previously have been resolved. Others remain, particularly the under funding for monitoring and enforcement on private property operations. The continuing transfer of production forests to other uses also puts more pressure on the remaining forests where timber harvesting is permitted.

Bert Witte
Chief Forest Practices Officer
December 1991

Highlights of the year

Review of the Forest Practices Code

- The review of the Forest Practices Code was again taken up in 1991 following the completion of the Forest and Forest Industry Strategy. A revised code should be issued in 1991/92.

Monitoring

- A major survey monitoring the application of forest practices was again completed by four senior technical field staff covering a random sample of about 13 per cent of all operations on Crown lands and private property. Generally, improvements continue to be made.

Timber Harvesting Plans

- Some 603 Timber Harvesting Plans were approved this year by Forest Practices Officers relating to commercial timber harvesting operations and reforestation on private property and State forest.

Forest Practices Officers

- Nineteen suitably qualified Forest Practices Officers were appointed after additional intensive training.

Forest Practices Specialists (Fauna, Flora, Archaeology, Geomorphology)

Some 50 per cent of specialists' time has been spent on forest practices related research or on the supervision of such research. Part of this research is funded by the Tasmanian Forest Research Council and supervised by the Division of Silvicultural Research and Development. Additionally, a number of forest practices related research projects have been funded by the National Estate Grants Programme, the National Soil Conservation Programme and the Australian National Parks and Wildlife Service. Research is generally directed towards testing or improving the effectiveness of Forest Practices Code provisions.

Resource Manuals

- Archaeology and flora (Nature Conservation Region No. 7) manuals have been printed and widely distributed. The manuals explain and expand on the prescriptions of the Forest Practices Code and assist forest officers and planners in applying the Code in the field. A plantation handbook was prepared by the Division of Silvicultural Research and Development. A soils manual is in preparation.

Steep Country Logging

- A panel of scientists and other persons under the Chairmanship of Dr T Madden produced a report on steep country logging including recommendations for inclusion in a revised Forest Practices Code.

Plantations

- Some companies have made substantial progress in developing and applying new plantation site preparation technologies.

Independent Private Property Operation

- A report by B. Manning covering a survey of and recommendations on the implementation of forest practices on 'independent' and private property operations was presented for consideration to the Commission and the Forests and Forest Industry Council.

Summary of Main Aspects Requiring Attention

- **Implementation of the Forest Practices Act/Code**

Implementation is below reasonable standards on many 'independent' private property operations (not supplying pulpwood to the major companies).

- **Agreement between industry and government on how approval, inspection, training and enforcement for non-pulpwood company private property operations will be funded must be finalised. While this is outstanding, difficulty in raising the standards of many of these private property operations will be experienced.**

Repeated minor breaches also still occur too frequently on State forest and private property operations.

- **Enforcement**

The difficulty, delays and costs of dealing with major breaches of the Forest Practices Act through the court system became obvious. How to effectively deal with repeated minor breaches by some contractors or operators also remains a problem. The introduction of additional training and registration of operators and contractors and a demerit point system along Victorian lines is being investigated as an effective alternative or addition.

- **Private Landowners Responsibilities**

Some non-industrial private forest owners actively encourage the clearing of stream side resources after logging. There is an urgent need for a complimentary agricultural code of practices.

Amendments to the Forest Practices Act to make landowners at least share the responsibility for abiding by the Forest Practices Code should be considered.

- **Local Government - planning schemes**

It appears there is no uniformity in the restrictions imposed on forest activities in some recent local government planning schemes. Rather than use the Forest Practices Code (amended if need be) as the basis for forest activities many municipalities appear to want to draw up their own provisions, often varying considerably between adjoining municipalities. Such different provisions are likely

to cause considerable confusion to contractors and the public alike. The policies proposed by at least one municipality could potentially close down much of the forest industry in this state if implemented state wide.

- **Requirement for Timber Harvesting Plans (THP)**
 - Whether a THP is required or not depends at present on how much the receiver of the timber processes each year in the mill. It might be better to base the requirement for THPs on actual volume cut in the bush in a particular operation with a lower limit below which THPs are not required or can be dealt with in a simplified way.
 - Extending THP requirements to include all timber harvested in log form (e.g. commercial firewood operators not presently covered by the Forest Practices Act).

Other matters to be addressed:

- Better integration of some special values in production forestry (largely a problem of funding).
- Potential erosion problems on steeper areas considered for windrowing and cultivation for plantation forestry.
- Steep country logging (inclusion of the Madden Report recommendations in the Forest Practices Code).
- Lack of satisfactory regeneration or sufficient protection of regeneration on a number of small private property blocks.

1. Forest Practices Legislation

- There were no amendments made to the Forest Practices Act 1985, nor were any regulations proclaimed during the financial year.
- Some aspects of the Act and regulations are under review. They include:
 - providing for shared and increased land owner responsibility for the implementation of forest practices on his/her own land. (Private property owners have little responsibility in this regard at present).
 - Timber Harvesting Plan requirements to relate to actual volume cut (rather than on what is processed by the receiver of the timber as is the case at present).
 - Changing present provisions relating to rules of evidence and proof of major breaches of the Act.
 - introduction of registration of bush operators followed by the introduction of a penalty point system.
 - Extending THP requirements to include all timber harvested in log form (e.g. commercial firewood contractors are exempt at present).
- Rare or endangered species protection on private property forests is also being considered under separate legislation.

2. Private Timber Reserves

- Dealt with by the Private Forestry Division.

3. Timber Harvesting Plans

- 3.1 The Act requires that, with minor exceptions, all commercial timber harvesting operations on private property and Crown land be subject to approved Timber Harvesting Plans. The provisions in the THP must be in accordance with the Forest Practices Code. The Plan is signed by the main parties involved. This provides an opportunity for the parties to know what is required before operations start. Harvesting includes roading, logging and reforestation where applicable.

3.2 Statistics

THPs approved 1990-91

	Roads Only	Hardwood PP SF	CL	Softwoods PP SF	CL	Total	%	89/90 %
By industry FPOs	29	156	24	26	9	244	41	44
By FC FPOs	23	60	189	19	49	340	56	53
By Consulting FPOs	-	19	-	-	-	19	3	3
Total	52	235	213	45	58	603	100	100
<i>Percent</i>	<i>9</i>	<i>39</i>	<i>35</i>	<i>7</i>	<i>10</i>	<i>100</i>		
<i>(Percent 89/90)</i>	<i>10</i>	<i>40</i>	<i>30</i>	<i>7</i>	<i>13</i>	<i>100</i>		

Percentage of Operations by Harvesting Method, Future Land use and Tenure (Eucalypt forests only)

Future land use	Clearfelling				Non- clearfelling in native forest(1)	Total
	Sown NF regeneration	eucalypt	Plantation eucalypt / pine	Clearing for agriculture		
Crown lands	34%	12%		5%	49%	100%
Private Property	14%	20%		3% 20%	43%	100%

(1) regrowth retention, shelterwood, selective logging etc)

PP=private property SF=State forest CL=Crown land NF=native forest

3.3 Preparation and Implementation

Further progress was made during the year. Aspects requiring attention are:

3.3.1 Standards of preparation

- Presentation of THPs is generally fair to good for plans prepared by forestry consultants, Forestry Commission or industry staff.
- The THP format is being reviewed.

3.3.2 Input in preparation

- Contractors

The contractor is largely responsible for the provisions of the THP being carried out. It is therefore essential that the contractor has sufficient input in the preparation of relevant sections of the THP and/or is thoroughly familiar and agrees with its provisions. As some THPs are drawn up well in advance of operations and

and before the contractor is known, there has been a tendency for a lack of contractor involvement with consequent poor results in implementation.

- **Operators**

The THP is often put into effect by field operators in the absence of the contractor. It follows that the operators need to know basic Forest Practices Code requirements and what is set forth in the THP so far as it affects them. At times, operators are not sufficiently aware of the THP requirements, cannot follow the THP or do not have a copy of the THP on the job to refer to. Department of Labour and Industry Registration of operators will be a legal requirement as of January 1992. Forest practices competency should be tied to the certificate of operational and safety competency issued by the Forests and Forest Industry Training Board.

- **Thoroughness of preparation**

The THP is the key to achieving sound forest practices. A good plan may take time to prepare. Senior staff should ensure that sufficient time of field staff is made available for proper THP preparation.

- **Consultation**

More emphasis is still required on local government consultation before THPs are approved.

3.3.3 Approval and Inspection

- **State forest**

On State forest, Forestry Commission Forest Practices Officers approve THPs and inspect THP operations. On the whole, basic Forest Practices Code requirements are reasonably well adhered to although further improvements are still needed and problem areas still exist (see section on Forest Practices Code).

Minor breaches still occur too often particularly with some contractors with large quotas.

- **Industrial Freehold**

The comment next above applies to industrial freehold or private property operators supplying pulpwood to the major companies which have Forest Practices Officers on their staff as well. These companies accept responsibility for approving THPs and inspecting operations; commitment varies between companies and individuals.

- **Independent operations**

Although some independent operations are conducted very well and following repeated complaints about some 'independent' private property operations, the Forestry Commission seconded Senior Technical Forester B. Manning to report on these matters. His report confirmed there were major problems in this segment of the industry (independent private property sawmills, pallet mills, satellite chippers, industrial fuel wood users etc). The report made a number of recommendations most of which, with modifications, were accepted by the Forest Practices Taskforce and presented to the Forestry Commission and Forest and Forest Industry Council.

The major recommendations have been dealt with earlier in this Review. The volumes affected by these operations are probably of the order of 10-15% of the total State cut but they appear to have a disproportionate adverse effect as they generally occur on private blocks within the more settled areas of the State.

A main recommendation flowing from the report is the **need for the appointment of three experienced Forest Practices Officer (one in each region) for an initial period of one year to deal with Forest Practices for 'independent' operations, and possibly monitor other operations. Agreement has yet to be reached on funding.**

4. Three Year Plans

- The Forest Practices Act 1985 provides for the production of three year plans for private property operations showing their location and the carting routes for the timber produced. Such plans are to be produced by companies harvesting or causing to be harvested more than 100 000t in the preceding year. Hence, all operations from which pulpwood is supplied to these companies should appear on a three year plan including most operations on private property and State forest.
- By collating the private property cut and carting routes with those on State forest, a comprehensive picture of logging operations in the State should be obtained.
- Three year plans produced by the relevant companies are collated by the Commission. Standard 1:100 000 scale computer maps showing the location of operations are produced on the G.I.S. as well computer printouts showing volumes and carting routes.
- The three year plan process needs to be re-evaluated. One major difficulty has been the lack of resources security making any forward planning of doubtful value. Also the smaller independent operators are not included in the plans but appear to present local government with the bulk of perceived problems (e.g. access to council roads). The collation takes much time and it is believed local government has made little use of the plans.

5. Forest Practices Code

5.1 Baseline Survey - Monitoring Surveys

- A pre-Code survey of logging operations mainly on State forest was carried out before the Code came into effect.
- Follow up surveys were carried out in 1988-89 and 1989-90 and 1990-91 by Forestry Commission Senior Technical Foresters seconded from the three regions and covering Crown and private forests. Their services are greatly appreciated.
- See Section 9.2 for details.

5.2 Main Aspects Requiring Attention

• Plantations

The increasing area, particularly of private land, being put under plantation creates

a potential for environmental problems generally not encountered in less intensive forestry, mainly because:

- Increased competition for private land tends to force plantations onto steeper slopes and/or more marginal soils.
- Shorter rotations, windrowing and complete cultivation on steeper slopes and marginal soils may create more erosion problems unless suitable measures are taken to combat them.
- The requirements for fertilizers, herbicides, insecticides and browsing animal control in this capital-intensive area of forestry needs to be carefully controlled.
- These aspects will be more fully dealt with in the revised Code. Considerable progress has already been made in site preparation techniques and some excellent operations by some major companies are to be commended. The Forestry Commission plantation handbook issued this year provides a valuable guide to plantation establishment.

- **Steep Country Logging**

Cable logging featured prominently in the media. A Technical Working Group under the chairmanship of Dr. J. Madden of the University of Tasmania was set up by the Minister for Forests.

The main findings of the Group were:

- There is no evidence to indicate that, responsibly used, cable logging is not a viable option.
- Because of its potentially low soil impact, cable logging should be preferred over logging with ground based equipment in many situations.
- While some minor landslips have occurred, there was no evidence of broad scale erosion, although the potential exists.
- Logging across streamside reserves had generally not been successful.
- Rapid regeneration or ground cover is required. This was not always the case.
- Cable logging is basically a clear felling system. It should not be used if partial logging is essential for regeneration.
- Visual impact needs to be considered carefully and the Forestry Commission visual management system applied.
- The flora and fauna provisions in the Code for wildlife priority areas, wildlife habitat strips coupled to dispersed logging smaller coupes, streamside reserve retention etc plus the Recommended Areas for Protection (RAPs), other reserves and the large areas reserved in National Parks and the like (over a quarter of Tasmania) should provide for the maintenance of biodiversity in this State.

The main recommendations were:

- The appointment of a soil scientist to the Forest Practices Unit.
- The appointment of an independent Soils Advisory Group consisting of soil scientists from the University of Tasmania, CSIRO, Department of Primary Industry, Department of the Environment and Resources and the Forestry Commission.
- Adoption of interim slope limits for inclusion in the Forest Practices Code with any logging above these limits being subject to approval from a soil expert.
- Additional research.

The recommendations were largely adopted by the Forests and Forest Industry Council, the Forestry Commission and the Minister for Forests. Most will be included in the revised Forest Practices Code.

Other aspects

- **Poor regeneration** in some of the more marginal non-industrial private property areas being logged or lack of subsequent protection of young regeneration against grazing or fires by some non-industrial landowners.
- Increased funding required for **maintenance of established road networks** (cleaning of culverts, table drains, etc). Failure to maintain these road networks properly may cause blockages and consequent erosion or landslide problems.
- Most of the forest industry still has a holiday shut down in the driest part of the year. Stockpiling to any extent is the exception rather than the rule. **Suitable wet weather areas** are becoming scarcer and the loss of State forest to other land tenures has reduced the alternatives available.
- Applying the **visual management system** to private property and particularly to smaller private property blocks is difficult. Many landowners have different views on landscape management from the general community or neighbours. Where reforestation is to take place, many private landowners consider logging as a temporary change in the landscape only, similar to agricultural cropping.
- Lack of a basic **code of agricultural (or mining) practices** similar to the Forest Practices Code to ensure protection of streamside reserves after completion of timber harvesting operations.

5.3 Review

The Forest Practices Act makes provisions for the review of the Forest Practices Code. An amended draft code was issued in 1989. It is expected to be finalised in 1991/92.

6. Forest Practices Tribunal

- There were no appeals to the Tribunal in 1990/91.

7. Staff

7.1 Forest Practices Officers

- Nineteen Forest Practices Officers were appointed in 1990-91 after further training. Seven Forest Practices Officers retired or resigned. Category and source of Forest Practices Officer as at 30th June 1991 are shown below.

	As at 30.6.90	Left/ Retired during year ¹	Changed Inspecting to Planning	New Appointments	As at 30.6.91
FPO(Planning)					
-Industry	20	-1	+2	+7	27
-Independent Consultants	5	-1	-	-	4
-FC	35	-1	+5	+2	41
	60	-3	+7	+9	73
FPO (Inspecting)					
-Industry	29 ²	-2	-2	+7	31
-Independent Consultants	-	-	-	-	-
-FC	37	-2	-5	+3	33
	66	54	-7	+10	65
TOTAL	126	7	0	+19	138

² Corrected figure from 1989/90.

¹Mr. S. Worley was incorrectly listed as retired in 1989/90.

Left or Retired:

Forestry Commission:	L. Snodgrass, G. Williams, R. Dowling
Industry:	C. Reid, R. Barrett, K. Gillard
Consulting:	A. Castley

The services of these officers have been greatly appreciated.

7.2 Forest Practices Unit Staff as at 31/6/90

Bert Witte	BSc(For),Dip.For.	Chief Forest Practices Officer
Paul Wilkinson	B.Nat.Res.	Environmental Officer
Sheryl Wolfe		Clerk/Typist, Registrar for the Forest Practices Tribunal
Kevin Kiernan	PhD Geomorphology	Geomorphologist
Fred Duncan	BSc	Botanist
Anne McConnell	B.Sc(Geol,Anthrop.) M.Sc.(Geology)	Archaeologist
Robert Taylor	PhD Zoology	Zoologist
Rolan Eberhard	BA	Technical Officer, temporary, geomorphology

Senior Technical Forester Bill Manning was seconded to the FPU during the year.

8. Forest Practices Training, Education

8.1 Forest Practices Officer

- Training courses were held in 1989-90 and appointments made in 1990/91 for 19 FPO's, planning and inspecting.
- The pre-requisite qualifications are: **Forest Practices Officer (Planning)**-a degree in forestry or equivalent academic qualifications or demonstrated personal expertise together with at least five years practical field forestry in planning and supervision of operations. **Forest Practice Officers (Inspecting)**-a tertiary qualification or equivalent technical expertise and at least five years experience in supervising forest operations. In addition, staff nominated for FPO's attend a training course consisting of a number of formal teaching sessions, field trips and practical exercises in various parts of the State.
- Additional training sessions have been organised by the Forest Practices Specialists in archaeology, botany and wildlife management.
- A refresher course of two days duration was attended by some 50 FPO's.

8.2 Other FC and Company Staff

- In house training has been done by most Commission districts and major companies.

8.3 Contractors

- Training of company contractors is a responsibility of the companies concerned. Intensity of training has varied between companies.
- A number of meetings with contractors organised by the pulpwood companies were attended by FPU staff.
- The problem with 'independent' contractors remains until the responsibility for approving, inspection and training in this area has been settled. Recommendations in this respect have been made to the Forests and Forest Industry Council and the Commission.

8.4 Operators

Operator training appears to remain a weak link in improving forest practices.

- The registration of bush operators by January 1992 is a Department of Labour and Industry requirement. Operators will be examined on safety and operational competence and issued with a certificate of competency by the Forests and Forest Industry Training Board. A proposal to make forest practices part of operators' training and certification is still being considered.
- Generally, Forestry Commission operators are trained by Forestry Commission FPOs and contractors.
- Reaching 'independent' operators is still a major problem.
- Some Forestry Commission districts run open forest practices field days to which company staff, contractors and operators are invited.
- See also 10.2

9. Monitoring and Enforcement

9.1 Field Visits

- During the year a considerable number of requests were received for interpretation of and problems with implementing the Code. Some 52 visits to various operations in the State were made by the Chief Forest Practices Officer and/or the Environmental Officer as per the table below:

1989-90 Forest Practices Visits

State Forest	Hardwood	Pine	Total
Smithton District	2		2
Burnie District	2		2
Devonport District	3	1	4
Launceston/Deloraine District	5		5
Scottsdale District	1	1	2
Fingal District	2	1	3
Triabunna District	1		1
Geeveston District	2		2
Queenstown District	1		1
Norfolk District	3	1	4
Total	22	4	26

1989-90 Forest Practices Visits (continued)

Private Property	Hardwood	Pine	Total
ANM	1	1	2
APM	1		1
TPFH	1		1
APPM (Tamar)	3		3
Forest Resources	3		3
APPM (Burnie)	1		1
Consulting FPOs	2		2
Independent Operators:			
Devonport	1		1
Norfolk	1		1
Deloraine/Launceston	4		4
Burnie	2		2
Fingal	1		1
Smithton	3		3
Total	24	1	25
Grand total	47	5	52

9.2 Monitoring of Standards

- In 1984 a survey of the implementation of the then Forestry Commission environmental guidelines on State forest was carried out.
- Following the introduction of the Forest Practices Code in late 1987 on private property and State forest, surveys were carried out in 1988/89, 1989/90, 1990/91.
- These surveys covered a random sample of approximately 15% of the timber harvesting operations taking place on private property and State forest (although 'independent' private property has been under represented).
- The 1990/91 survey was carried out by Senior Technical Foresters J. Cunningham, G. Richardson, G. Siely and R. Smith; all seconded from Forestry Commission field administration staff. Their efforts have been greatly appreciated.
- Results from the surveys have become important in improving forest practices as:
 - Both good examples and problem areas shown up in operations visited are discussed in detail with the relevant district staff and/or companies to effect future improvements.
 - A questionnaire for each operation provides a basis to measure progress in implementation of the Forest Practices Code in subsequent years.
 - Some of the key questions are shown below and are plotted in Tables 1, 2 and 3. A rating of 1 to 5 is given to each question.

Key Survey Questions

Road Construction

1. Is drainage diverted 50m before stream crossing?
2. Is culvert size and spacing correct?

Harvesting

3. 15 years between aggregates?
4. One year between coupes?

Snig Tracks

5. Are stream crossings minimised?
6. Were temporary log crossings used?
7. Have snig tracks been drained?
8. Is grip spacing as per Code/THP?
9. Is grip spacing adequate (no erosion)?

Landings

10. Are landings on elevated areas?
11. Are landings >40m from streamside reserves?
12. Do snig tracks approach landings from below?
13. Are landings corded (wet landings)?
14. Minimal rutting and erosion of landings?
15. Have landings been drained?
16. Has water flowing towards landings been diverted?
17. Has rubbish been removed?

Streamside Reserves

18. Is retained vegetation intact?
19. Has equipment been excluded from streamside reserves?
20. No evidence of sediment in streams?

Conclusions

- Forest practices have steadily improved over the sampling period (Table 1).
- Improvement in implementation is tending to plateau out.
- State forest operations generally score better than private operations (Tables 2 and 3, following page). Private operations combine industrial freehold and a small sample of independent operations.
- The application of the Forest Practices Code is still variable, considerable room for improvement exists and a continued effort is required to achieve a good level of forest practices.
- Results from questions 3 and 13 have gone against the general trend (table 1).
 - Question 3 relates to the dispersal of aggregates. Since the '89 draft Forest

Practices code emphasis has been placed more on dispersed c than dispersed aggregates. Also dispersed aggregates are not applicable to private property and the table incorporates results private property and State forest.

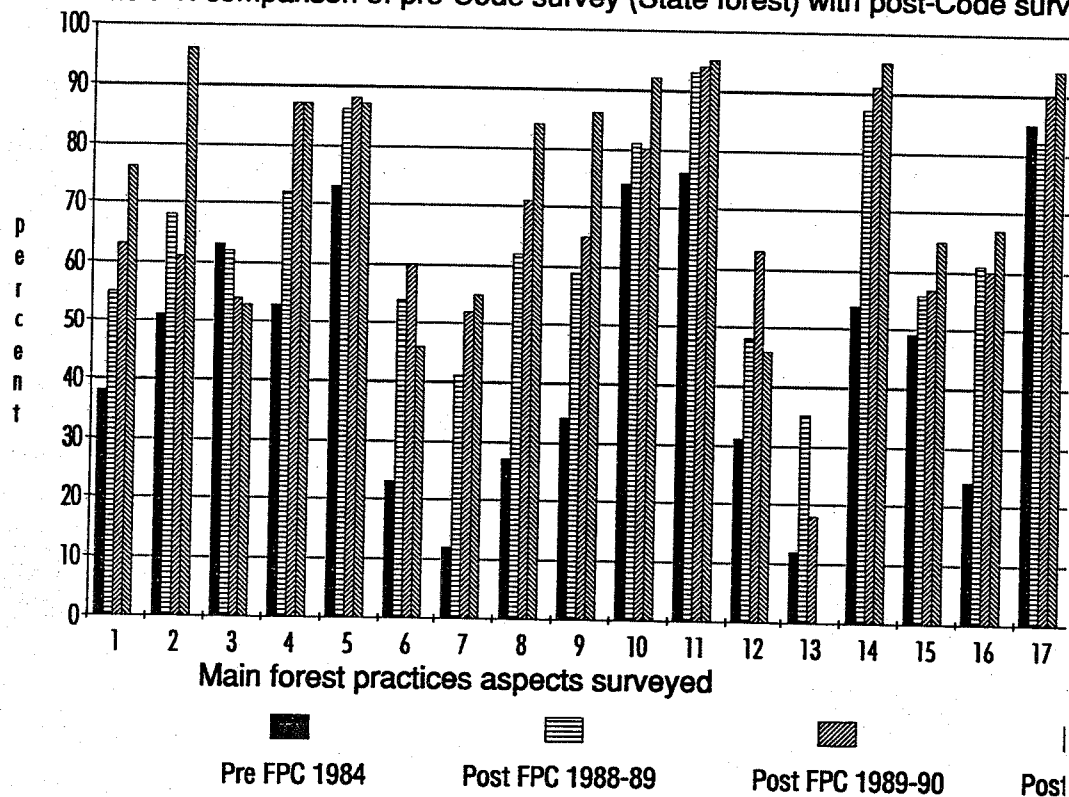
- Question 13 relates to the cording of landings. Cording of landi often replaced with bark pads.

Both questions will be reviewed in subsequent surveys.

PAGE

The following table gives an indication of progress made.

Table 1: comparison of pre-Code survey (State forest) with post-Code surv



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The following table gives an indication of progress made:

Table 1: Comparison of pre-Code survey (State forest) with post-Code surveys (State forest and private property). Shows percentage of operations where selected listed key forest practices aspects were well implemented).

Table 2: Comparison of Forest Practices Code application on privately owned forests and State forest during 1988/89. Shows percentage of operations surveyed where listed forest practices were well implemented.

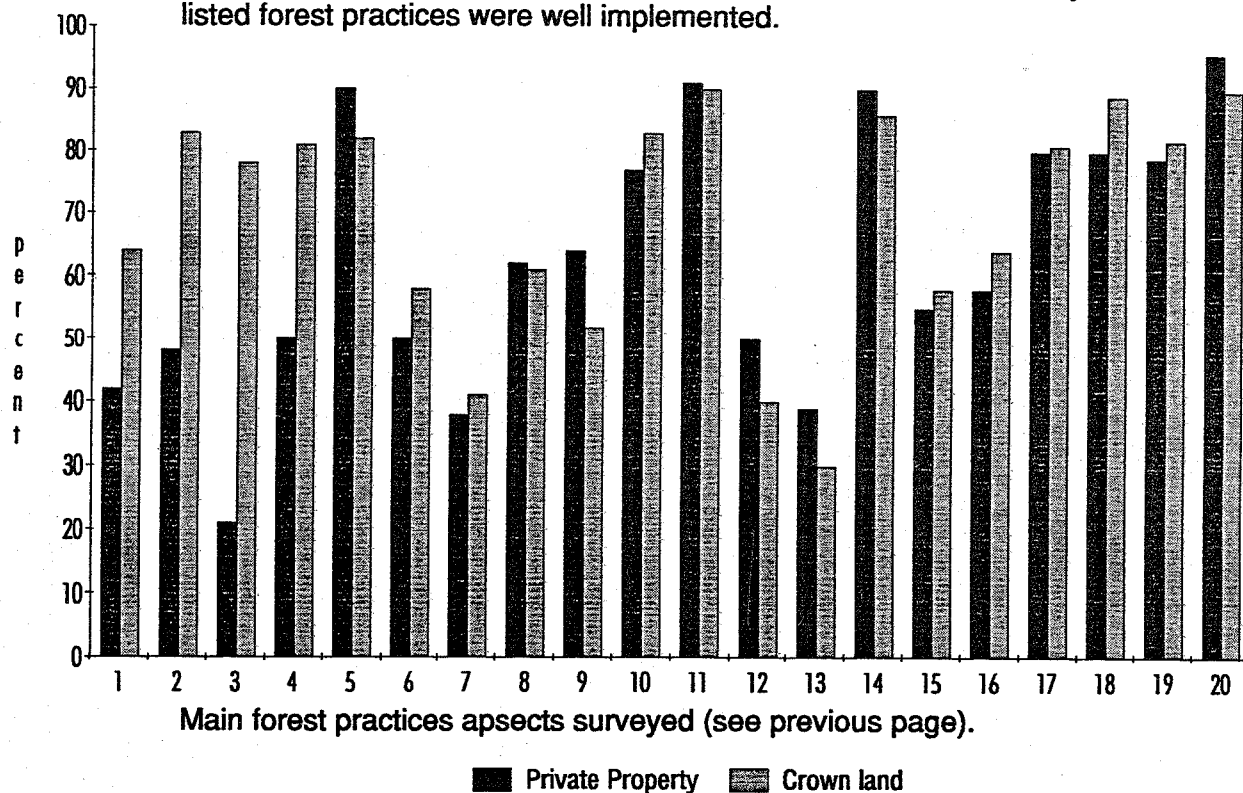
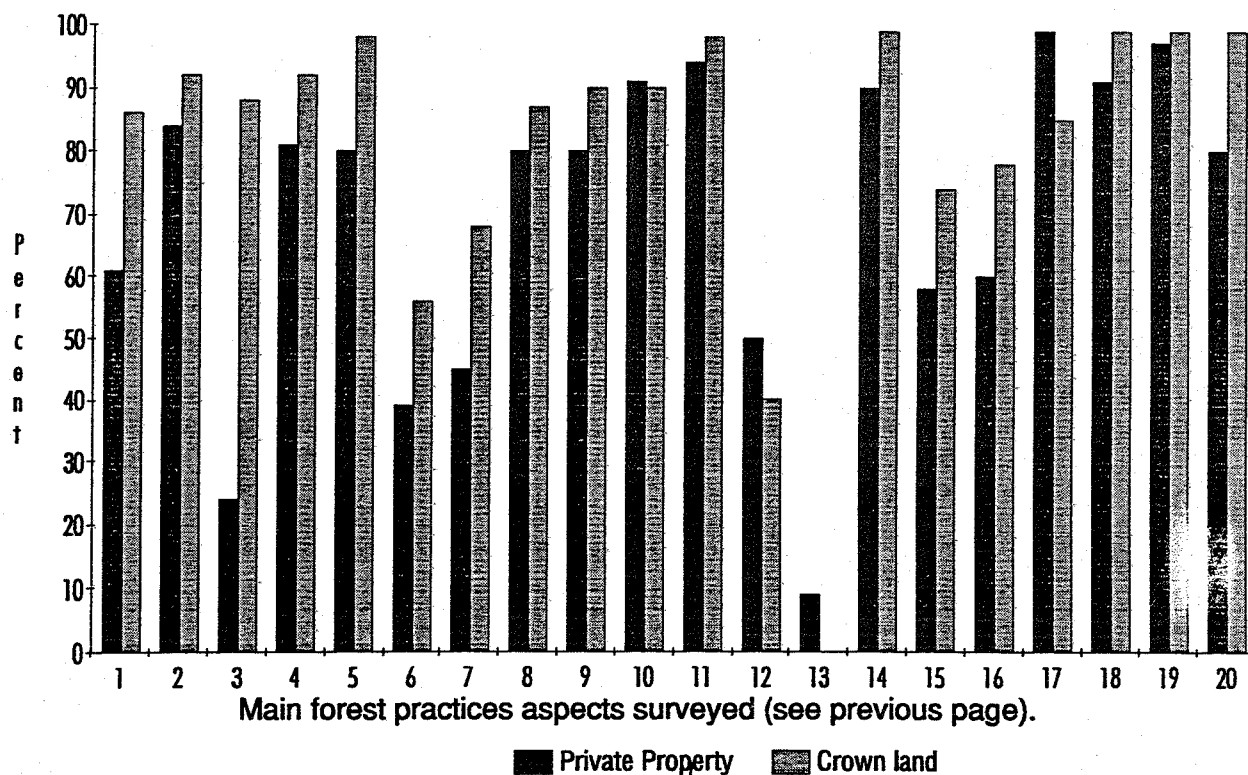


Table 3: Comparison of Forest Practices Code application on privately owned forests and State forest during 1990/91. Shows percentage of operations surveyed where listed forest practices were well implemented.



9.3 Investigation of Public Concerns/Enquiries

Some seventy three enquiries/concerns about forest practices were received from adjoining landowners, the general public, local government, forest industry or Forestry Commission staff and were investigated. The enquiries related to operations on the following tenures:

	No.	%
State Forest	19	26
Company Freehold	5	7
Other Private Property	47	64
Other Government Departments	2	3
Total:	73	100

The enquiries, concerns or complaints generally related to the following:

- A number were based on a misreading or lack of knowledge of the Forest Practices Legislation or Code. The provisions were explained.
- A considerable number related to clearfelling and/or logging of old growth. It appears there is a (carefully nurtured) popular perception that there is something inherently 'wrong' with clearfelling and the creation of even aged forests despite the fact that this is the natural condition of many, if not most, natural temperate forests. Relevant basic principles of the Forest Practices Code accept that clearfelling in the right forest conditions is a sound environmental approach and this was explained.
- Criticism of the Forest Practices Code and its implementation was frequently received from people with a non-rural background who have moved to rural areas and enclaves. At times the criticism has been justified, but often it appears to be based more on the belief that the status quo needs to be maintained, despite the fact that the forests have had a long history of wood production, rather than on practices which violate the Code. Any temporary disturbance in a limited area appears unacceptable in their view.
- A considerable number of concerns raised related to minor breaches on private property and State forests. Such breaches were discussed with operators to try and prevent future occurrences and/or warnings were given. It is difficult to deal with such minor breaches under the present Act.
- Some complaints related to serious second time breaches. They resulted or will result in complaints being laid with the Department of Public Prosecution. (See Section 9.4)

Numerous enquiries about the Forest Practices Act/Code were received from mainland organisations and departments and from overseas including ACT, Queensland, New Zealand, Victoria, New Guinea, Northern Territory, NSW, Sri Lanka, Fiji, the Solomon Islands and Sweden.

9.4 Prosecutions

The emphasis for achieving improvements in forest practices needs to remain on education, training, co-operation and fostering commitment to sound forest practices. Without commitment forest practices will not continue to improve.

However, formal legal complaints are laid with the Department of Public Prosecution when substantial deliberate breaches knowingly committed (and potentially provable in court) occur after fair warning.

- Formal complaints with the DPP were laid in four cases. One was withdrawn after legal advice.
- One complaint laid in 1989 was finally heard in '91 after several adjournments. The defendant pleaded guilty and was fined \$2,500. Other complaints will be heard in 1991/92.
- The delays in the court system and the difficulty of providing proof 'beyond all reasonable doubt' make the process costly and cumbersome to all parties.
- An alternative - the training and registration of all operators and contractors and a demerit point system along Victorian lines - is being investigated.

10. Forest Practices Specialists

10.1 Works division

The work of the specialists in 1989-90 was divided (approximately 50:50) between forest practices and research. Research is supervised by the Commission's Division of Silvicultural Research and Development and the Tasmanian Forest Research Council. (See also the Division of Silviculture's Annual Report).

10.2 Training

Training input was provided by the specialists as follows:

	F.P.O Refresher Course	General Courses for F.C. & Industry	Local Courses for F.C. & Industry
Flora	Resource Manual use	Koonya five day botany Integration with production forestry (three courses)	Whole farm planning course (Midlands) Instructions at three landcare courses Review of botanical training for trainee technical foresters
Fauna	Resource Manual use	F.C. trainee technical forester training	Fauna management seminar

F & FIC working group (fauna conservation on private property)

Geomorphology

Resource Manual use

Cave management.

Archaeology

Resource Manual use

4 day State wide course on Cultural Heritage Management, field surveys and site recording techniques.

T.F.R.C seminar

APPM (Tamar) Cultural Heritage Management Seminar

Fingal District Cultural Heritage Management Seminar

10.3 Resource Manuals

- The Forest Practices Code sets out the principles and basic approaches to forest practices. The Resource Manual provide background and further details to aid Forest Practices Officers and other planning staff. The manuals are in various stages of completion.

Fauna
Geomorphology
Archaeology
Botany

Printed and distributed previously
Printed and distributed previously
Printed and distributed in 1990/91

(Native Conservation Region 7) Printed and distributed in 1990/91

A Soils Resource Manual is in preparation. A draft Fauna Technical Conservation Manual was completed.

10.4 Surveys and Inspections

Flora	Fauna	Geomorphology	Archaeology ¹
Western Creek (thinning coupe)	Ellendale (eagles nest)	Weilangta (landslip avoidance)	Wilmot Esperance (forest drive)
Bruny Island (thinning coupe) Salmon River 2x	Urana (wildlife priority area)	Mt Cripps (cave inventory)	Perth Nursery Seven Mile Beach
Blue Tiers 2x	Silver Plains	Upper Scamander	Liffey
Teepookana	Swan River	Mole Creek	Russell (charcoal burner)
Mt Foster (R.A.P.)	(W.P.A.) Frankford	Gunn's Plains Lune River	Bruny Island
Dukes Marsh		Branchs Creek 2x	Star of West Mine

Mt Douglas (R.A.P.)	(river bank erosion, landslide)	Star of East Mine Lefroy Mining
Pepper Creek (R.A.P.)	Chudleigh	Back Creek Mining Gipps Creek
Hellyer 19/20 (supervision)	(slide) Caveside 2x	Mining Banca Mining
Arve 31A (supervision)	Dazzler Range Silver Plains	Diddleum Plains (mill)
Swanport 28A (supervision)	Florentine Valley (land slide & karst)	Laughing Jack Lagoon
Broad Marsh Area (supervision)	Blue Hill	Dilger (Hut & Mill)
Green Tier Creek Silver Plains	Arm River	Oldina Plantation Lapoinya Plntn. Dip River (engraving) Mersey (Lt 209D) Warners Track

¹ Additional surveys carried out by Forestry Commission or industry staff (T. Scott, A.P.M., S. Docking A.P.P.M., E Pettett, J. Hawkes, P. Blake, F.C.) and consulting archaeologist J. Craib (A.P.P.M.)

10.5 Input to Management Plans, Reviews, National Estate, Reports etc.

Flora	Fauna	Geomorphology	Archaeology
Great Western Tiers Management Statement	ditto	ditto	ditto
Steep country harvesting W.G.	ditto	ditto	ditto
Review of Resource section & D.P.I.E - report to Resource As'mnt. Commission	ditto	ditto	ditto
Buckland military training area	ditto	ditto	ditto
Forest & Forest Industry strategy	ditto	Groesus Cave Management Plan Wargata Mina Management Plan Caveside State forest	Dry's Bluff Forest Reserve Winterbrook Forest Reserve
Tooms Lake Conservation Area	Tasman	Welcome Stranger Management Plan	Quamby Bluff Forest Reserve
Mt Victoria Forest Reserve	Meander Forest Res.	Silver Plains	
Tooms Lake National Estate		FP Code review	Liffey Forest Reserve
Douglas Apsley National Park	Liffey Forest Reserve	Lune River (N.Est) Hastings (N.Est)	Meander Forest Reserve

Flora	Fauna	Geomorphology	Archaeology
Western Tasmania National Extension area	Navarra Plains		
Dismal Swamp		(National Estate)	Mt. Victoria Forest Reserve
South Esk Headwaters National Estate	Quamby Forest Reserve	Lake Ina (National Estate) Guelph River	Broad Management area
Review of R.A.P.s	Dry's Bluff Forest Reserve Tasmanian World Heritage Area	(Nat. Estate)	Surrey Hills block Probation stations study Trees on the land study Management of wood production forest. North Wedge Block Management priority classification.

10.6 Research

The following Forest practices related research projects are in progress or have been completed.

Project	Personnel	Funding
Botany		
Predictive modelling of species distribution	K. Williams	TFRC & FC
Distribution of <i>Nothofagus gunnii</i>	D.I. Robertson & Fred Duncan	NRCP
Teepokana Huon pine Distribution	J. Jarman G Kantvilas	FC
Swamp forest floristic study	J Pannell	DPIE
Rainforest relicts study	M. Neyland	NRCP
Wildlife habitat strip study	F.Duncan M. Browne	FC
Rainforest regeneration in mixed forest	G.Jordon, C.Patmore S.Luttrell, F.Duncan	FC
Archaeology		
Eastern Tasmanian sandstone shelter project (Aboriginal shelters)	Betty Ross	TFRC

Project	Personnel	Funding
Historic inventory project (compiling a list of all known historic sites in wood production forests)	NW Lindy Scripps NE Denise Gaughwin	NEG
Temma chert survey	Ian Thomas	FC
Teepookana Aboriginal & historic site survey	David Bannear	DLPW & FC
Fauna		
The value of wildlife corridors in production forests	R. Taylor	TFRC & FC
Comparison of effectiveness of habitat trees as isolates or in clumps.	R. Taylor, Murray Hassler Brett Warren	M.A.Ingram Trust & FC
Effect of road design on mortality of birds and platypus	R. Taylor	FC
Diet of the Tasmanian bettong	R. Taylor	FC
Influence of insect abundance and composition on bat communities	R. Taylor	FC
Bird succession in regrowth forest.	R. Taylor, B. Browne	FC
Geomorphology		
Impact of logging on limestone caves, landslide inventory.	Rolan Eberhard	Aust. NPWS
- Tasmanian Karst Atlas	Kevin Kiernan	FC
- Hastings Creekton	Kevin Kiernan	TFRC
- Smithton	Phil Jackson	TFRC
- Tim Shea	Dane Henrikson	TFRC
- Florentine Valley	Matte Herne	TFRC
- Mill Creek	Rolan Eberhard	TFRC
- Loongana	Northern Caverneers Inc.	TFRC
Erosion of dolerite soils	Kevin Kiernan, Bryan Campbell	TFRC

FC=Forestry Commission NRCP=National Rainforest Conservation Programme FRC=Forest Research Council
DPIE=Department of Primary Industry and Environment DLPW=Department of Parks, Wildlife and Heritage Aust.
NPWS=Australian National Parks and Wildlife Service

Division of Silvicultural Research and Development

Much forest practices related research is performed or supervised by the Forestry Commission's Division of Silvicultural Research and Development or by Forestry Commission staff in association with other bodies and persons with funding from a wide variety of sources. (see Annual Report, Division of Silvicultural Research and Development 1990/91). Selected areas of particular relevance to forest practices are:

- analysis of reservation status of Tasmanian forests and the examination of reservation needs.
- rare species modelling
- silvicultural systems in wet eucalyptus forests
- high altitude forests (logging and regeneration techniques)
- grassy black peppermint forest
- blackwood silviculture
- effects of forest harvesting on soils
- hydrology: quantifying changes in water quality following forestry operations
- capability classification of forest soils
- control of browsing animals

11. Publications

Forest Practices Unit:

Forest Botany Manual (NRC7) F. Duncan

Forest Archaeology Manual A. McConnell

Research:

(See also Annual Report, Division of Silvicultural Research and Development)

Selected publications of particular relevance are:

Publication	Title	Author
Native Forest Silvicultural Bulletin No. 2	High altitude eucalypt forests	M. Battaglia (1990)
Native Forest Silvicultural Bulletin No. 4	High altitude <i>Eucalyptus pauciflora</i> and forests	M. Battaglia (1990)

Publication	Title	Author
National Rainforest Conservation Program Report No. 2	Myrtle wilt	J.M. Packham (1991)
Private Forestry Council	Managing your dry forests	S. Orr (1991)
<i>Tasforests</i>	A guide to the distribution of <i>phytophthora cinnamoni</i>	F.D. Podger, C.R. Palzer T.Wardlaw
<i>Tasforests</i>	Biological conservation in Tasmania's production forests	K. Williams, F. Duncan, R. Taylor

12. Expenditure

	\$	%
Forestry Commission		
Forest Practices Unit	360,000	
Temporary officer (independent private property operations)	45,000	
Annual monitoring of private property and State forest	14,000	
<i>Total Forestry Commission</i>	<i>419,000</i>	<i>76</i>
Industry		
Industry contribution to specialists through the Tasmanian Forest Research Council		
<i>Total industry</i>	<i>130,000</i>	<i>24</i>
Total	549,000	100

Costs incurred by Forest Practices Officers or other staff in approving Timber Harvesting plans, supervising or inspecting operations or in training have not been included. They are probably of the order of \$1.4 million per year. However, much of these costs would have been incurred as normal part of the costs of forest management irrespective of the Forest Practices Act.

Although competing demands for limited funds are recognised, funding of effective enforcement of forest practices on independent operations and of monitoring current operations on other private property has been under funded and needs to be addressed. The incorporation of cultural heritage and geomorphology in production forestry also appears to be underfunded, particularly in view of the limited data base available for these special values.