



2018-19 ANNUAL REPORT

FOREST PRACTICES AUTHORITY



FPA

Forest Practices Authority
Annual Report
2018–19



A report on the operations of the Forest Practices Authority to the
Minister for Resources, to be laid before
each house of parliament as required under
s. 4C, 4E, 4X and 4ZA of the *Forest Practices Act 1985*

The Annual Report of the Forest Practices Authority

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Cover image: vegetation mosaic on Flinders Island with *Atherosperma moschatum* (sassafras) leaves by Fred Duncan

Abbreviations and acronyms

ARC	Australian Research Council
CFPO	Chief Forest Practices Officer
DPIPWE	Department of Primary Industries, Parks, Water and Environment
DSG	Department of State Growth (created in 2014, incorporating the Department of Infrastructure, Energy and Resources and the Department of Economic Development, Tourism and the Arts)
EPBCA	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
FIAT	Forest Industries Association of Tasmania
FPA	Forest Practices Authority
FPAC	Forest Practices Advisory Council
FPO	Forest Practices Officer
FPP	forest practices plan
FT	Forestry Tasmania (on 1 July 2017 FT became Sustainable Timber Tasmania)
PTPZ land	Permanent Timber Production Zone Land
PTR	private timber reserve
RFA	Regional Forest Agreement
STT	Sustainable Timber Tasmania (formerly Forestry Tasmania)
TFA	Threatened Fauna Adviser
TFGA	Tasmanian Farmers and Graziers Association
TGD	Tasmanian Geoconservation Database
TPA	Threatened Plant Adviser
The Act	<i>The Forest Practices Act 1985</i>
The Code	<i>The Forest Practices Code</i>
UTas	University of Tasmania
VMA	Vegetation management agreement

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The Tasmanian forest practices system

The Forest Practices Authority (FPA) is the independent statutory body established by the Parliament of Tasmania under the *Forest Practices Act 1985* (the Act) to regulate forest practices in Tasmania. The forest practices system applies to forest practices that are undertaken on both public (mainly Permanent Timber Production Zone [PTPZ] land) and private land.

The Tasmanian forest practices system operates primarily through the Act and the associated *Forest Practices Code* (the Code). The system also takes account of other legislation and policies, including the Tasmanian Regional Forest Agreement 1997 and the Permanent Native Forest Estate Policy.

The system is based on a co-regulatory approach, combining self-management by the industry and independent monitoring and enforcement by the FPA. Forest Practices Officers (FPOs) are employed within the industry and trained and authorised by the FPA to plan, supervise, monitor and report on forest practices.

FPA staff provide advice on regulatory and technical matters, including requirements to manage natural and cultural values. The FPA also monitors forest practices to ensure that standards are being met. Corrective action is taken where required and penalties are imposed for serious breaches.

The forest practices system aims to foster cooperation amongst all stakeholders, including the government, landowners, the forest industry and the broader community. There is an emphasis on planning, training, education and continuous improvement.

Forest practices, defined by the [Forest Practices Act](#), are:

- harvesting native forests and plantations
- establishing native forests and plantations
- clearing and converting forests and threatened non-forest native vegetation communities
- constructing roads and quarries for the above purposes
- harvesting treeferns.



FPA Graduate Analyst Campbell Whiteley helps to survey a gully erosion feature on a plantation coupe located on a large landslide at Bream Creek.

The objective of the Tasmanian forest practices system is set down in Schedule 7 of the Act:

The objective of the State's forest practices system is to achieve sustainable management of Crown and private forests with due care for the environment and taking into account social, economic and environmental outcomes while delivering, in a way that is as far as possible self-funding–

(a) an emphasis on self-regulation; and

(b) planning before forest operations; and

(c) delegated and decentralized approvals for forest practices plans and other forest practices matters; and

(d) a forest practices code which provides practical standards for forest management,

timber harvesting and other forest operations; and

(e) an emphasis on consultation and education; and

(ea) an emphasis on research, review and continuing improvement; and

(eb) the conservation of threatened native vegetation communities; and

(f) provision for the rehabilitation of land in cases where the forest practices code is contravened; and

(g) an independent appeal process; and

(h) through the declaration of private timber reserves – a means by which private land holders are able to ensure the security of their forest resources.



The Forest Practices Awards are awarded by the Board of the FPA and publicly acknowledge people working in forestry in Tasmania who consistently display excellence in applying the forest practices system in their particular work. From left: Peter Volker (CFPO), Sue Baker, Michael Casey, Joan Rylah MP, Erik Martin, Leanne Chappell, Tony Stonjek, Toni Ogilvie, Andrew Plank, Phil Bell and Vanessa Thompson.

The year in brief 2018–19

- The level of forestry activities for 2018–19, as reported through the forest practices system, has continued the trend in recovery from 2016–17, although at a slightly lower level than last year.
- FPA specialists provided advice on natural and cultural values in response to 367 notifications (352 last year) lodged by FPOs. The FPA’s specialists collaborated with other experts from government agencies and universities to develop advice and carry out research, monitoring and other activities.
- 564 forest practices plans (FPPs) were certified by the FPA (607 plans last year), totalling 29 869 ha (32 936 ha last year) on public and private land. The number of plans certified were 116 for native forest harvesting and reforestation (111 last year), 343 for plantation operations (368 last year), 13 for afforestation on cleared land (22 last year), 6 for quarries (5 last year) and 86 for roads (101 last year).
- FPPs were certified for the following:
 - 62 hectares of new plantations on previously cleared land (173 last year) and 48 hectares of new plantations on cleared native forest sites (72 hectares last year)
 - the conversion of 2949 hectares (2856 hectares last year) of plantations to non-forest use, primarily agriculture
 - the conversion of 530 hectares (524 hectares last year) of native forest to other uses, resulted in a decrease of 0.02 per cent in the area of Tasmania’s native forest during 2018–19 (not including clearance for dams).
- The cumulative decrease (including clearance for dams) in the area of Tasmania’s native forest between 1996 and June 2019 is 159 053 hectares (158 425 last year) or 5.0 per cent of the estimated 1996 native forest estate.
- The net effect of FPPs for clearing and new plantings of forest in Tasmania in 2018–19 was an overall decrease in the total area of forest by 3348 hectares during the year (last year there was a decrease of 3135 hectares).
- The annual assessment of 47 FPPs conducted by the FPA found that the implementation and effectiveness of FPPs across assessment categories, applicant groups and all land tenures continues to be satisfactory.
- Five (four last year) prescribed fines totalling \$103 000 (\$23 000 last year) were received by the FPA for offences under the Act.
- There were no new prosecutions (none last year) under the Act.
- The FPA raised \$926 000 from sales of goods and services (\$915 000 last year) which met its statutory requirement for self-funding.



Report of the Chair, Forest Practices Authority

On behalf of the Board of the Forest Practices Authority (FPA), I am pleased, as Chair, to present the Annual Report for 2018–19.

Regulatory systems maintain their effectiveness and acceptability through appropriately responding to the changing facts and circumstances of the sectors in which the system operates and wider community interests.

During 2018–19, the Board of the Authority was involved in regulatory and administrative changes to legislation, reviewing the Code, consideration of the socio-economic aspects of decision making, reviewing and changing the specialist materials that inform decision making, and updating the procedure to be followed should it become necessary to review the quality of decision making by FPOs.

The report from the Chief Forest Practices Officer provides details on these developments.

It is still not appreciated that the forest practices system not only operates to provide appropriate regulatory practices for commercial forestry. It also operates to provide appropriate practices in relation to the removal of trees, whether those trees be listed threatened vegetation communities, or the clearance of trees for whatever purpose, with the most frequent current purpose being the clearance of land for agriculture or domestic purposes.

The commercial forest sector has been subject to regulatory forest practices controls for many years and maintains a positive approach to compliance with the requirements of the system. The complexity of decision making in relation to the removal of trees for other purposes, whilst providing reasonable protection for the environment, presents ongoing decision-making challenges for FPOs, FPA specialists, the CFPO and the Board.

Some landowners clear trees from their land without seeking advice on whether any regulatory controls exist and/or without seeking the necessary approvals required by the forest practices system. This invariably results in detailed compliance investigations by FPA staff, the presentation of evidence, and enforcement decision making by the Board, with the most common outcome being a financial penalty.

The Board appreciates the fact that the Government has adopted a range of measures for the protection of the now critically endangered swift parrot. While these measures are welcome, establishing appropriate prescriptions to protect the nesting and foraging habitat of the swift parrot continues to be a matter which requires the active involvement of forest planners, managers and species specialists.

The Board continues to be well advised and supported in its regulatory work by the dedicated work in the field by FPOs and the highly knowledgeable specialist and operational staff of the FPA.



The FPA runs Forest Practices Officer Refresher Courses every two years to keep FPOs' skills and knowledge current. Pictured are the FPOs on the southern course in September 2018, along with some FPA staff.

The Board again acknowledges the significant expertise, commitment and decision making demonstrated by operational FPOs and the ongoing essential advice in all aspects of forest practices provided by specialist FPA staff in the fields of soil and water, biodiversity and heritage.

The commitment of key forest sector stakeholders to the ongoing stewardship of the system through membership and advice from the Forest Practices Advisory Council (FPAC) and the Forest Practices Officers Reference Group is also acknowledged, together with individual stakeholder contributions to the review of the Code.

The Board thanks the Chief Forest Practices Officer, Peter Volker for his leadership of the FPO and specialist staff, and Hans Drielsma, for his leadership of FPAC.

The Board membership remained unchanged in the current year. All members of the Board participate in the three Board Subcommittees that provide advice to the Board on Compliance, Audit and Risk and a recently established Finance Subcommittee. My thanks to the Board Directors for their engaged commitment to the work of the Board and their support for the field and office staff, the CFPO and me in my role as Chair.

Forest practices plans

Under s. 4E(1)(b) of the Act, the FPA reports that the implementation and effectiveness of FPPs across assessment categories, applicant groups, land tenures, forest types and reforestation types continues to be satisfactory. The performance achieved under assessed

operational FPPs and assessed swift parrot habitat FPPs is indicative of satisfactory overall performance; although performance will require ongoing monitoring.

During 2019–20 the FPA will ensure continual improvement in performance outcomes by focussing on key areas identified in 2018–19 (see Tables 1.8.3 to 1.8.8) as requiring continuous improvement, including: procedural issues; clearance and conversion of native forest by independent applicants operating on independent freehold land; reforestation; biodiversity (retention of wildlife habitat clumps); and cultural heritage (post-operation surveys). The FPA will also ensure that quarrying operations (including rehabilitation) and industrial applicants not included in the 2018–19 assessment program are adequately represented in the 2019–20 program.

Permanent native forest estate

The FPA reports, under s. 4C(fa) of the Act, that Tasmania’s native forest estate has been maintained in accordance with the Tasmanian Government Policy on the Maintenance of a Permanent Native Forest Estate. The area of native forest as at 30 June 2019 was equivalent to 95.1 per cent of the native forest area that existed in 1996.

Self-regulation

The FPA reports that, in accordance with s. 4E(1)(a) of the Act, a high level of self-regulation has been achieved on public and private land that is subject to operations. The independent private forestry sector generally has a reduced capacity for self-regulation compared with larger forestry companies. The FPA is working towards better communications, training and education for this sector and the contractors that service it.

The FPA is pleased to report that high levels of compliance with FPPs have been sustained across all applicant groups. The FPA will continue to pursue applicants who have not lodged final compliance reports by the due date based on assessment of risk. In 2018–19 this was aided by an automatically generated email reminder sent to applicants 30 days prior to expiry. Ensuring financial compliance reports are returned will remain a priority for the FPA.

Funding

In accordance with s. 4E(1)(a) of the Act, the FPA reports that the forest practices system satisfied the principle of self-funding in 2018–19.

The independent regulatory functions of the FPA were funded by the income received under s. 44 of the Act in 2018–19.

John Ramsay
Chair, Board of the Forest Practices Authority



Report of the Chief Forest Practices Officer

The success of the forest practices system is due to the support of all the stakeholders including parliament, government departments, local government, forest industry, landowners, environmental and other forest interest groups, forestry contractors, FPOs and FPA staff. This was exemplified by the excellent participation of stakeholders in the review of the Code and input into the *Forest Practices Amendment Bill 2018*.

The Code review kicked off with the establishment of working groups to review each section of the Code. The working groups drew on a cross-section of stakeholders including academics, managers, FPOs, on-ground operators and special interest groups. The general premise behind the review was that the Code is in relatively good shape and that some sections needed to be updated to bring it into line with contemporary technology and knowledge. During the review process, many opportunities were afforded to stakeholders to comment. The public consultation process is underway. It is hoped that the Code will be available for release in late 2019 or early 2020. I acknowledge the excellent work of the Code Review Coordinator, Ann La Sala, who has led the review process.



Is it a swamp or is it a lake? The definitions in the 2015 edition of the Forest Practices Code are ambiguous, and the draft new Code includes new definitions.

The *Forest Practices Amendment Bill 2018* was introduced to parliament by Minister Sarah Courtney in November 2018. It was pleasing to hear of the widespread support for the forest

practices system during the debate of the second reading in the House of Assembly. The Bill also received considerable support in the Legislative Council. The amendments to the Bill clear up some administrative matters associated with implementation of the forest practices system. Included in the amendment is the ability for FPP applicants to transfer responsibilities to another person and for the FPA to require rehabilitation works to be undertaken where a third party is affected by illegal activity on their land. [It was passed unopposed in both Houses and was proclaimed on 7 October 2019.] I acknowledge the assistance of the Resources Policy group within Department of State Growth (DSG), Minister for Resources and staff and the Office of Parliamentary Counsel in progressing the Bill from concept to reality.

The FPA considered changes to planning tools and agreements with other state government bodies to ensure the efficient administration of regulations associated with forest practices. The Threatened Fauna Adviser was amended, consistent with the agreed procedures between FPA and DPIPWE. Examples of amendments included removal of the Flinders Island wombat, following its delisting from the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* in February, and changes to the Simons stag beetle recommendations. The Biodiversity Values Database is being upgraded and a Threatened Plant Adviser is under development. Both these planning tools will have better online capability and user friendliness.



Angela Gardner, Biodiversity Program Project Officer, in northern Tasmania field-testing the modelling behind the new Threatened Plant Adviser.

The FPA adopted a Threatened Native Vegetation Community Significance Framework to assess any applications for clearing and conversion of such communities. The Board decided that any applications for clearing and conversion of threatened native vegetation communities under section 19 (1AA) of the Act, should be considered by the Board itself. A number of issues involving clearing and conversion on King and Flinders Islands were identified. The FPA spent time on both islands undertaking investigations and working with the local community and councils to better inform landowners of their rights and responsibilities under the forest practices system.

A socio-economic advisory working group was established to provide guidance to the FPA's Resource and Environmental Economist on priorities for assessing socio-economic impacts of environmental decision making. A work program was endorsed by a Steering Committee and a graduate economist was employed through the DSG's Graduate Officer Program. This will build capacity in the field of resource economics in the State. A key report on *Assessment of the expected economic and social impacts of provisions for swift parrot protection in Tasmanian forestry operations* was presented to the FPA Board and a summary is being prepared for public distribution. This report also led to the development of stop work protocols when swift parrots are observed nesting or foraging in an active harvesting operation. The economic costs of stopping work are high, so the FPA has undertaken to respond to any sightings in a timely manner to minimise disruption to contractors.

The FPA engaged Techsafe Aviation to conduct an independent review of the aerial eagle nest check program from a safety and operational perspective. An *Eagle Nest Search Safety Management Plan* was implemented, which resulted in the use of rotary wing aircraft for the program. While costs have increased the safety and efficiency of the task have improved.

When the Meander Dam was inundated many years ago, money was set aside to provide an offset for a *Eucalyptus ovata* community that was lost. This year the FPA commenced negotiations with a landowner in the Meander Valley to place a conservation covenant over approximately 40 ha of high quality *E. ovata*. The intended outcome will keep the financial and conservation benefits in the Meander Valley and demonstrates the value of waiting for an appropriate opportunity to arise to provide a like-for-like offset in the same bioregion.

The Disciplinary Procedure for FPOs was revised with input from the FPAC and the FPO Reference Group. The new procedure provides a clearer approach to natural justice. The amendment to the Act will give the FPA a power to develop a Code of Conduct for FPOs.

The FPA's Compliance team were busy throughout the year. While fines totalling \$103 000 were issued by the Board, the primary approach is to stop environmental harm before it occurs. Training and education of contractors and landowners is a key focus for the team. The annual audit program continues to reinforce the high level of compliance for those operating within the forest practices system and is reported in detail elsewhere in this report.

The Compliance Manager, Stephen Walker, and I both undertook Certificate IV training in Government Investigations (Regulatory Compliance) which has assisted us in bringing some additional rigour to investigations and reporting to the Board.

Training programs throughout the year were well attended by FPOs and personnel not directly involved in the forest practices system. These included Threatened Flora Field Days, Masked Owl Habitat Management Course and Aboriginal Cultural Heritage. Compulsory FPO Refresher Courses were held in Hobart, Launceston and Devonport. The contribution of the Surveyor-General and staff as well as registered surveyor Alan Dodds in explaining the complexities of boundary identification is appreciated. Training and Skills Development Service (Tasmania) provided financial support to reduce costs for course participation and assisted the FPA to build capacity for those working in natural resource management,

including forestry. The FPA is also working with 26Ten and TasTAFE to develop on-the-job training programs for forest contractors. Twelve new FPOs were authorised throughout the year.



The FPA's Peter McIntosh and Peter Volker (standing) guide FPOs working on a planning exercise during the Hobart FPO Refresher Course in August 2018.

The FPA continues to deliver a high-quality research and advisory program in the fields of biodiversity, earth sciences and cultural heritage with the socio-economic program providing a new perspective. The annual research and monitoring update was well-attended by stakeholders in government industry and ENGOs. FPA staff also presented their work at conferences, in peer-reviewed scientific journals and technical reports. The work is described elsewhere in this report.

I take this opportunity to acknowledge the contribution of Dr Sarah Munks who resigned in June after 26 years with the FPA, culminating in holding the position of Biodiversity Program Manager for the past decade. Sarah has made a fantastic contribution to the understanding of the effects of forest operations on biodiversity and the best ways to mitigate those effects. Her leadership of the biodiversity team has been exceptional and their ongoing capacity to provide pragmatic and timely advice as well as conduct high quality research is testament to her. I hope she will continue to be active in the system and the Tasmanian science community for many years to come.

After the devastating fires in the summer of 2019, the FPA worked closely with forest owners to ensure any forest operations were able to proceed without undue delay. FPA staff made field visits with forest companies and contractors to provide advice on the best way to harvest burnt timber and provide protection for the environment, particularly where soil and water may be impacted.

FPA staff were invited by auditors for voluntary forestry certification bodies such as FSC and Responsible Wood to provide input to various audit programs for a number of certified companies. The robustness and thoroughness of the forest practices system was evident in these audits and the nature of questions being asked of our staff.

It is important to celebrate success and the FPA Awards recognised the contributions of people working within the forest practices system. They reflect the values of teamwork, respect, integrity and excellence. I thank the Hon. Joan Rylah MP for presenting the Awards on behalf of the Minister for Resources and congratulate the winners and nominees.

The administrative support provided by the DSG is of the highest standard. FPA staff have embraced the White Ribbon program offered by the Department. Staff have also participated in training which has assisted in understanding of communication styles within the team. Angela Gardner has been appointed to the State Growth Equity and Inclusion Working Group. The flexible working arrangements offered by the department have been a tremendous support for individuals to cope with family bereavement, parenting and mental health wellbeing.

The FPA Board, FPAC and the FPO Reference Group have provided tremendous support to me in the administration of the forest practices system. I also value the advice and support of all the FPA staff and contractors. We are a small but effective and efficient team. Congratulations to FPA Chair, John Ramsay, on the awarding of a Member (AM) in the General Division of the Order of Australia for significant service to public administration in Tasmania, announced in the 2019 Queen's Birthday Honours by the Governor-General.

I have also enjoyed support from the Ministers (Courtney and Barnett), Ministerial staff, and politicians in both Houses and many State servants. The widespread support provides the Tasmanian community with confidence that the forest practices system provides reasonable protection to the environment and ensures sustainable forest management is being achieved.

FPOs are a key element of the forest practices system and they are important, not just for their work in the forests, but for providing information and suggestions for improvement. I thank the forest industry for its support of and commitment to the forest practices system. The system is set up for continuous improvement and I believe the many activities described above provide evidence that is the case.

Peter Volker
Chief Forest Practices Officer

1 Independent regulation functions report

1.1 *Forest Practices Act 1985*

There were no changes to the Act or the Forest Practices Regulations 2017 during 2018–19. [A range of amendments to the Act were proclaimed on 7 October 2019.]

1.2 *Forest Practices Code*

The issue, purpose, amendment and objection to amendment of the Code is dealt with in Part IV of the Act.

The Code is designed to provide practical prescriptions that can be implemented in the field when people are conducting forest practices including: building roads and bridges; operating quarries associated with forest practices; harvesting timber; conservation of natural and cultural values; and establishing and maintaining forests.

Previous versions of the Code have been issued in 1987, 1993 and 2000. The Code is legally enforceable under the Act for both public and private forests. The current version of the Code took effect from 1 July 2015. That version incorporated a ‘Guiding Policy for the Operation of the Forest Practices Code’, but no changes were made to operational prescriptions within the body of the Code.

The Code can be downloaded from the [FPA website](#).

A review of the Code commenced in 2018. A Code Review Coordinator has been engaged to implement the review process. A steering committee was established consisting of the FPA and FPAC Chairs, Chief Forest Practices Officer and Code Review Co-ordinator. Working groups, drawn from a range of stakeholders, were established to review each section of the Code with a view to making the Code more contemporary. The statutory public comment period will take place in the second half of 2019 and it is anticipated the new Code will be ready for release in early 2020.

1.3 *Forest practices plans*

Certified FPPs are required for all forest practices on public and private land, other than for exemptions prescribed in the Forest Practices Regulations 2017 which are available from the [Tasmanian Legislation website](#). The publication, ‘*A guide to planning approvals for forestry in Tasmania*’ (available on the [FPA website](#)) provides further information on the regulations and the process of preparing an FPP.

FPPs provide a definition and summary of the operation. They also include prescriptions for the management of natural and cultural values, planned harvest systems and reforestation.

Most forest owners engage a planner to prepare their FPP, identifying the natural and cultural values that may require management in the forest operation. The FPA’s planning tools and specialists provide advice which sometimes involves field visits and liaison with

other experts. The application for an FPP is made to the FPA, and may be certified, amended – or refused where the proposed operations do not comply with the Code. The FPA has delegated powers to some FPOs to consider applications for certification of FPPs.

Forestry operations may also need approval from local government, if required under the relevant planning scheme if the land is not a private timber reserve (PTR) or PTPZ land.

1.3.1 Details of forest practices plans certified in 2018–19

Table 1.3.1 Number of FPPs certified in 2018–19 by type and applicant for public land¹ and private property

Applicant	Quarry plans		Roading plans		Harvesting plans (including reforestation where appropriate)				Afforestation plans on cleared land		Total	%
	Public	Private	Public	Private	Native forest		Plantations		Public	Private		
					Public	Private	Public	Private				
Govt (local, state, federal), schools, GBEs etc	0	0	1	0	0	0	0	0	0	0	1	0.2
Independent	0	1	0	1	0	39	1	60	0	4	106	18.8
Industrial ²	5	0	4	36	0	10	104	157	6	3	325	57.6
Sustainable Timber Tasmania ²	0	0	44	0	67	0	21	0	0	0	132	23.4
Total	5	1	49	37	67	49	126	217	6	7	564	
%	0.9	0.2	8.7	6.6	11.8	8.7	22.3	38.5	1.1	1.2		

¹ Public land includes PTPZ land (known as State forest up to November 2013)

² Plantations previously owned by STT and purchased by Reliance Forest Fibre in 2017, are classified as Industrial Applicants.



FPPs include prescriptions developed to manage special values, such as this sinkhole which STT FPO Toni Ogilvie is assessing at Christmas Hills south of Smithton.

Table 1.3.2 Native forests: area (hectares) of operations covered by FPPs certified in 2018–19 by harvesting method, future land use and tenure

Tenure	Partial logging ¹	Native forest restoration on cleared land	Clearfelling followed by:				Total ³
			Regeneration by seeding	Plantation		Non-forest landuse ^{2, 3}	
				Eucalypt	Pine		
Public land ⁴	3 683	7	2 107	0	0	44	5 841
Private property	2 347	0	1	4	40	424	2 816
Total	6 030	7	2 108	4	44	468	8 661

1 Thinning, retention of advanced growth, aggregated retention, seed trees, or shelterwood, group or single tree selection.

2 Clearing on public land included clearing for quarries (2.9 ha) and road construction (41.3 ha). Clearing on private land included conversion to agriculture and irrigation infrastructure (420.8 ha) and road construction (3.2 ha).

3 Losses resulting from dam works permits issued under the *Water Management Act 1999* (13.23 hectares of native forest in 2018–19) are not covered by FPPs and are not therefore included in this table, but are included under the data for the Permanent Forest Estate in section 1.9 and Appendix 4 of this report.

4 Public land includes PTPZ land (known as State forest up to November 2013).

Table 1.3.3 Plantations: area (hectares) of operations covered by FPPs certified in 2018–19 by harvesting method, future land use and tenure

Tenure	Existing Plantations				New plantations on cleared land	Total ²
	Thinning	Clearfelling followed by:				
		Plantation	Native forest ¹	Non-forest use ²		
Public land ³	3 109	3 398	17	42	3	6 568
Private land	1 683	9 911	80	2 907	60	14 640
Total	4 792	13 309	97	2 949	62	21 208

1 Largely from the rehabilitation of streamside reserves in pine plantations which were established prior to the Code.

2 Losses resulting from dam works permits issued under the *Water Management Act 1999* (4.04 hectares of plantation in 2018–10) are not covered by FPPs and are not therefore included in this table.

3 Public land includes PTPZ land (known as State forest up to November 2013).



Loading plantation logs during a Forico operation. This year saw a drop in new plantations on previously cleared land (62 hectares this year and 173 last year) and in new plantations on cleared native forest sites (48 hectares this year and 72 hectares last year).

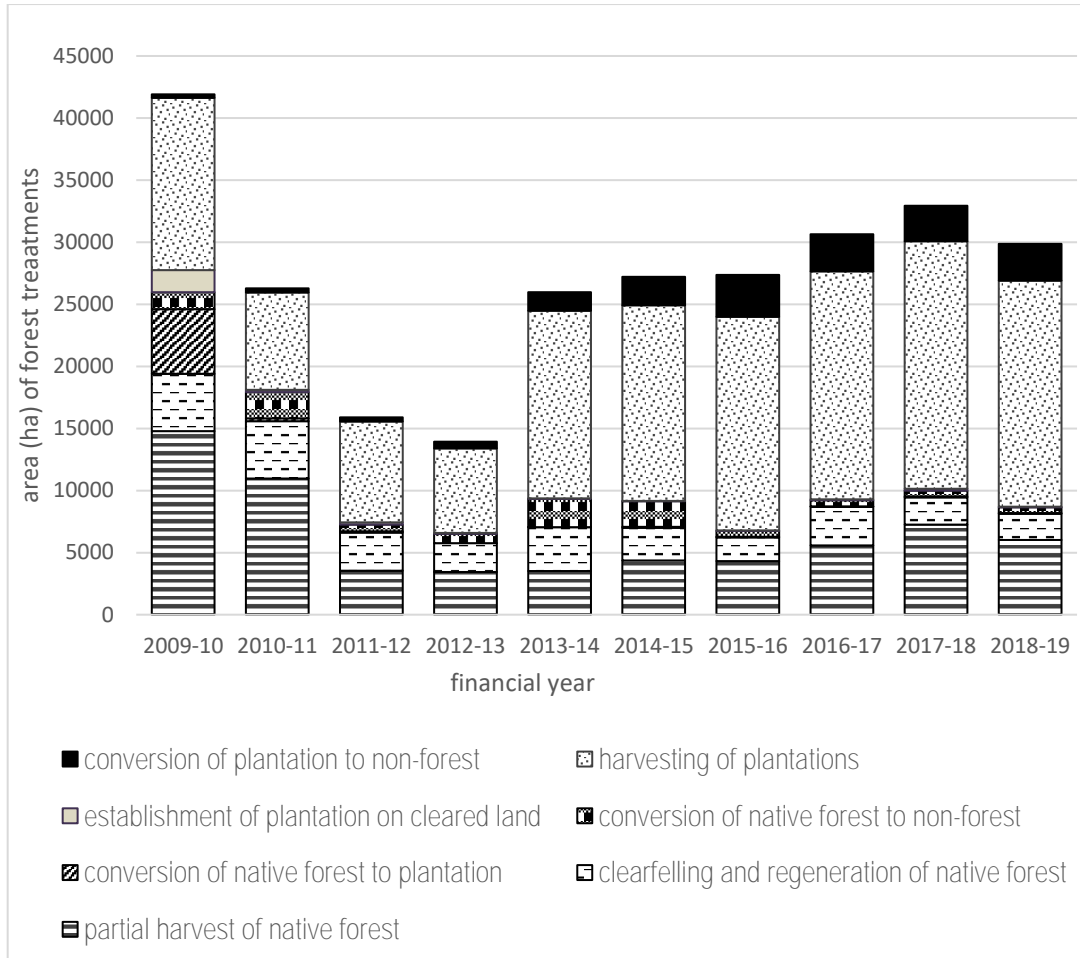


Figure 1.3.1 Area of forest by various treatments from 2009–2019

1.3.2 Treefern harvesting

The harvesting of treeferns (*Dicksonia antarctica*) is regulated under the Act. Treefern harvesting for export must be conducted in accordance with the Treefern Management Plan which has been approved by the Commonwealth.

Under the Act, all treeferns must have tags issued by the FPA affixed to their stems prior to removal from a harvesting area. These tags must remain on the stems at all times to ensure that the origin of treeferns can be tracked to approved harvesting areas. Table 1.3.4 provides details on the harvesting of treeferns in 2017–18 and 2018–19. Revenue from the sale of treefern tags (see section 4 of this report) is used to fund regulatory activities and research into the long-term sustainability of treefern harvesting.

Table 1.3.4 The number of certified FPPs which included treefern harvesting prescriptions and the number of treefern tags issued

Financial year	Number of certified FPPs including treefern harvesting prescription		Number of treefern tags issued ¹	
	2017–18	2018–19	2017–18 ²	2018–19 ³
Number	12	17	25 300	14 656

¹ Treefern tags are issued in advance of harvesting

² Made up of 9600 tags issued for stems less than 30 cm length and 15 700 issued for stems greater than 30 cm length. Note that this figure has been amended since the 2017–18 FPA Annual Report

³ Made up of 2417 tags issued for stems less than 30 cm length and 12 239 issued for stems greater than 30 cm length

1.4 Three-year plans

The Act (Part III, Division 2) provides for lodgement with the FPA of three-year plans for operations showing the location of each operation, the volume to be harvested, the carting routes to be used and reforestation measures that are proposed. Such plans are required from companies that have harvested, or caused to be harvested, more than 100 000 tonnes of timber in the preceding year. Summaries of the plans are sent to relevant local government authorities as a basis for consultation on the location of planned harvesting.

Industry representatives convene regional meetings with representatives of local government each autumn to facilitate discussion regarding cartage routes and expected tonnages, and any other matters of concern to local government.

The FPA reports that the requirement to lodge three-year plans was met in 2018–19. Three-year plans have been lodged with the FPA by Sustainable Timber Tasmania (STT), PF Olsen, Forico, Norske Skog (Australia), SFM, AKS Forest Management and Timberlands Pacific.

1.5 Statutory reports

1.5.1 *State of the forests Tasmania* report

The FPA is required under s. 4Z of the Act to produce a report every five years on the state of the forests. The FPA, in collaboration with other governmental agencies, compiles a report on the sustainability indicators that have been agreed between the Tasmanian and Australian governments under the Montreal Process Criteria and Indicators Framework. This report forms the basis of the *State of the forests Tasmania* report. The latest report was completed in 2017 and covers the period 2011–16. It was tabled in both houses of the Tasmanian parliament in November 2017. The report and the illustrated booklet are available from the [FPA website](#). The next report is due in 2022.

1.5.2 Forest practices report

The FPA is required under s. 4ZA of the Act to review the operation of the forest practices system, including the provisions and operation of the Code, and to provide a report every five years. The last report was published in the [FPA's annual report for 2016–17](#) which was

tabled in both houses of the Tasmanian parliament in November 2017. The next report is due in 2022.

1.6 Private timber reserves

PTRs were created by the Tasmanian Parliament in 1985 to enable landowners to have their land dedicated for long-term forest management. The legislation provides that forestry activities on the land are subject to a single, consistent, state-wide system of planning and regulation through the Act. PTR applications during 2018–19 are summarised below.

Table 1.6.1 Number of PTRs 2018–19, and progressive total

	1 July 2018– 30 June 2019	Progressive total to 30 June 2019 ¹
Applications approved by FPA	23 ¹	2085
PTRs revoked	40	461

¹ The progressive total contains adjustments to figures in previous periods. Progressive totals are adjusted primarily because original applications to declare areas as PTRs have in some cases been followed in later years by an application to revoke part or all of the area declared as a PTR.

Revocations of PTRs exceeded the number of new approvals, continuing the trend that first emerged in 2012, due to landowners deciding to convert plantation land back to agricultural use and place some areas of native forest under conservation covenants. The area of PTRs in the progressive total was 439 107 hectares, an increase of 1673 hectares from 2017–18.

1.7 Vegetation management agreements

Under s. 4(g)(ii) of the Forest Practices Regulations 2017, an FPP is not required for...

‘the harvesting of timber or the clearing of trees, or the clearance and conversion of a threatened native vegetation community, with the consent of the owner of the land, carried out in accordance with –

(ii) a vegetation management agreement of a kind that the Authority has approved in writing for the purposes of this paragraph;’

A vegetation management agreement (VMA) is defined in the regulations as *‘an agreement that an owner of land enters into with an instrumentality or agency of the Crown for the purposes of managing native vegetation on that land.’*

The FPA recognised a total of 12 current VMAs in the 2018–19 year. These VMAs cover a range of intended purposes, such as weed and pine wilding control on public and private land, clearance for tracks in National Parks, managing offset areas and small-scale clearing associated with hydroelectric stations.

1.8 Monitoring of compliance

Monitoring of compliance is carried out at three levels under the forest practices system:

- Routine monitoring of operations by FPOs trained and appointed by the FPA and employed by forest managers. This level of monitoring is often undertaken as part of formal environmental management systems and forest certification, which also involve third-party audits.
- Formal reporting on compliance under s. 25A of the Act (see section 1.7.1 below). This is required for all FPPs and is usually done by qualified FPOs.
- Independent monitoring of a representative sample of FPPs in accordance with s. 4E(1)(b) of the Act (see section 1.7.2 below). This is performed annually by the FPA.

The FPA's monitoring and assessment protocols and investigation and enforcement protocols can be found on the [FPA website](#).

1.8.1 Compliance reports

The Act requires a compliance report to be lodged with the FPA within 30 days of the completion of each discrete phase of operation prescribed within an FPP and a final compliance report to be lodged with the FPA within 30 days of the expiry of the plan. These reports must be lodged by the person who applied for the plan (i.e. the Applicant). The FPA requires these reports to be verified by an FPO and to provide statements within one of the following categories:

- FPP fully complied with:
 - Fully complied with – this means that all provisions of the plan were fully complied with.
- FPP not fully complied with:
 - No further action recommended – generally the operation was changed in a manner that did not result in any long-term environmental harm; e.g. the stocking standard in a plantation was below the target specified in the FPP, but still adequate to meet stocking standards.
 - Matter resolved through corrective action – generally the FPO undertaking the compliance check has detected non-compliance and has issued a notice under the Act to require corrective action to ensure compliance with the plan, e.g. improved regeneration treatments or stabilising disused access tracks. Follow-up monitoring is undertaken by the FPO and a final report provided to the FPA.
 - Further investigation required – generally a non-compliance issue has occurred that requires further investigation and action by the FPA, e.g. environmental harm has occurred or a required corrective action has not been undertaken.
- FPP operations did not commence.

If compliance reports are not lodged on time, the FPA may issue the applicant of the plan with a notice under s. 41 of the Act to require the lodgement of the report. Failure to comply

with a notice under the Act can result in the FPA undertaking compliance checks at a cost to the applicant or legal proceedings, consistent with the FPA’s *Investigation and enforcement protocols*, which can be downloaded from the [FPA website](#).

Table 1.8.1 below summarises the status of final compliance reports by applicant. For the period of reporting, 1107 reports from 1340 FPPs were lodged, of which 35 FPPs had one or more non-compliant phases, with only five FPPs requiring corrective action or further investigation.

Table 1.8.1 Final compliance reports due for lodgement with the FPA as at 30 June 2019¹

Applicant	Reports Due			Compliance (for reports lodged)				
	Lodged	Not Lodged	Total	No Activity	Fully Complied With	Not fully complied with		
						No Further Action	Corrective Action	Further Investigation
Industrial	571	59	630	24	532	12	0	3
Sustainable Timber Tasmania	466	0	466	39	414	13	0	0
Independent	68	173	241	3	60	3	0	2
Govt (local, state, federal), schools, other GBEs etc	2	1	3	0	0	2	0	0
Total	1 107	233	1 340	66	1 006	30	0	5

1 Reported as at 30 June 2019 for FPPs expired between 1 June 2018 and 30 May 2019 to allow for 30-day notification period allowed by the Act.

2 Reporting for plantations sold by STT to Reliance Forest Fibre Pty Ltd on 99 year lease and managed by AKS Solutions are included in the Industrial applicant category from 2018–19.

The FPA is pleased to report that high levels of compliance with FPPs have been sustained across all applicant groups. The FPA will continue to pursue applicants who have not lodged final compliance reports by the due date based on assessment of risk. In 2018–19 this was aided by an automatically generated email reminder sent to applicants 30 days prior to expiry. Ensuring financial compliance reports are returned will remain a priority for the FPA.

1.8.2 Independent assessment of forest practices plans

The annual assessment program is the means by which the FPA meets its statutory obligations under s. 4E(1)(b) of the Act which states that the FPA must, at least once each financial year, ‘*assess the implementation and effectiveness of a representative sample of forest practices plans*’.

To this end, the FPA conducts systematic assessments of FPPs to evaluate performance against the requirements of the Act and the Code.

The FPA’s *Monitoring and assessment protocols* can be viewed on the [FPA website](#). The protocols have been developed in line with the Australian Standard AS/NZS ISO 19011:2003: *Guidelines for quality and/or environmental management systems auditing*. In line with ISO 19011, the protocols are periodically reviewed to identify areas of improvement.

The formal assessment process is based on a stratified random sample of certified FPPs selected from the FPA’s FPP database. The 2018–19 assessment program selected certified FPPs at various stages of completion in the three years prior to 1 July 2018.

The 2018–19 program assessed 47 FPPs covering:

- Forest planning and operational practices under the Act, including roading, harvesting, reforestation, non-commercial clearing and tree fern harvesting.
- Industrial, STT and Independent FPP applicants.
- Specific areas targeted for assessment in 2018–19:
 - Native forest clearance and conversion by independent landowners.
 - Native forest swift parrot habitat.
 - Operational FPPs where harvesting, reforestation and/or tree fern harvesting were known to be active at the time of assessment.
- FPPs prepared by a range of FPOs who had certified plans during the nominated period; a total of 27 certifying FPOs were assessed during the 2018–19 program.

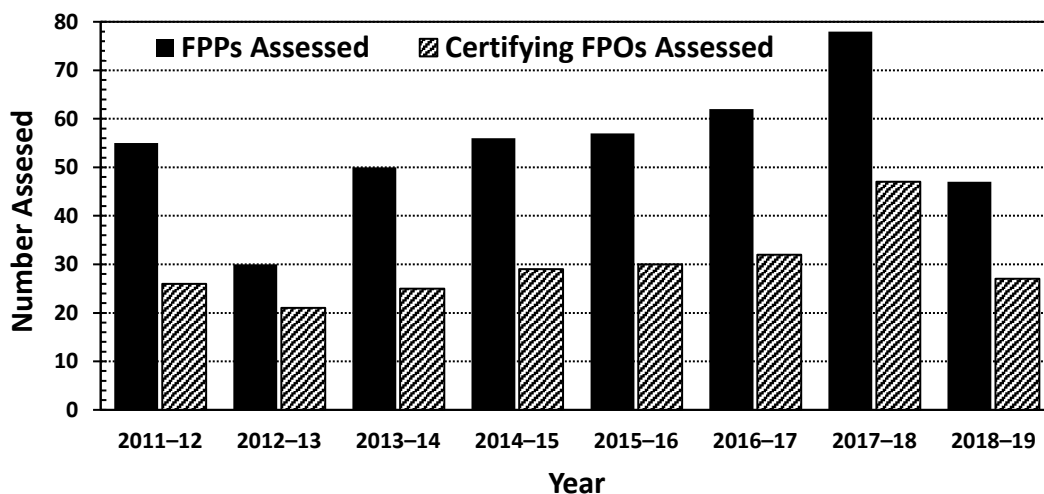
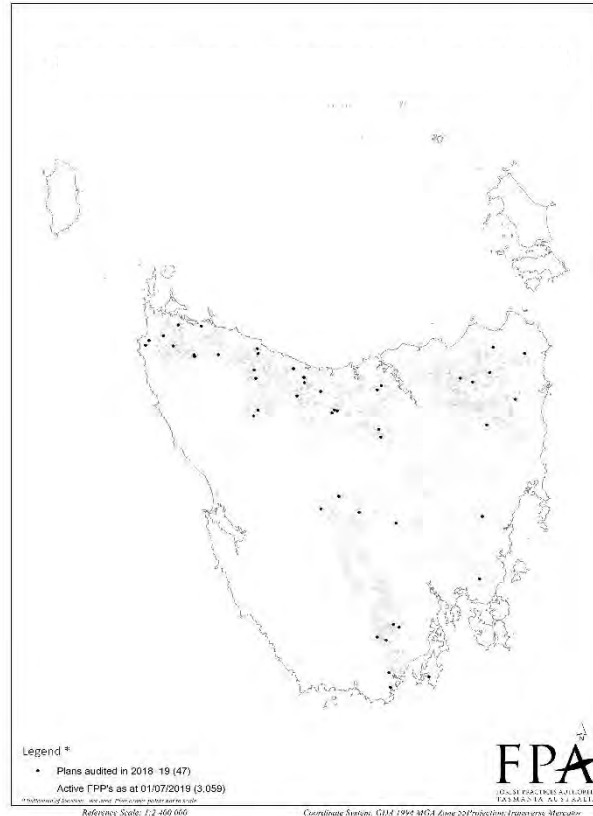


Figure 1.8.1 Numbers of FPPs and Certifying FPOs assessed (2011–12 to 2018–19)

Assessments determine the quality of planning, implementation and reporting against prescriptions within each FPP and the Code.

The 2018–19 assessments were based on questions concerning 11 categories covering 87 standards defined in the Code. Assessment was based on a performance rating which included the percentage of FPP questions rated as sound, below sound and not acceptable (Appendix 3). This performance rating provides a measure of performance against the standards set by the FPA.

Potential breaches of the Act and/or the Code identified through the assessment program are independently investigated by the FPA and subject to enforcement actions as detailed in section 1.10 of this report.



Map 1.8.1 Distribution of sampled FPPs (2018–19) against FPPs current as at 1 July 2019

Note: dots are indicative of FPP location rather than the area covered by the FPP

Fifteen assessors were used during the 2018–19 program:

- Mr Stephen Walker, the FPA’s Manager Compliance, is a warranted FPO, a certified Lead Environmental Auditor and a Registered Professional Forester, with over 30 years’ experience in forest management and forest assessment in the Asia-Pacific Region. Mr Walker had primary responsibility for ensuring the efficient and effective conduct and conclusion of the annual program, in accordance with the assessment scope and plan as developed under the FPA’s *Monitoring and assessment protocols*.
- Mr James Fergusson, FPA Forest Practices Advisor, is a warranted FPO with over 30 years’ experience in forestry in Tasmania, including significant expertise in the planning and certification of FPPs.
- Mr Michael Rawlings, FPA Forest Practices Advisor, is a warranted FPO with over 30 years’ experience in forestry in Tasmania, including significant expertise in contract harvesting and training and assessment.
- Independent forestry consultants (warranted FPOs) with experience in forestry in Tasmania, including planning, certification, supervision and assessment:
 - Mr Justin Baily
 - Ms Janet Morley

- Mr Rob Scott
- Mr Jason Smith
- Mr David Tucker
- Mr Brett Warren

- FPA managers and specialist staff:
 - Dr Peter Volker, Chief Forest Practices Officer
 - Ms Anne Chuter, Acting Manager, Biodiversity
 - Ms Kirsty Kay, Ecologist, Biodiversity
 - Ms Dydee Mann, Ecologist, Biodiversity
 - Mr Stephen Casey, Consultant Ecologist, Biodiversity
 - Dr Adrian Slee, Scientific Officer, Earth Sciences and Cultural Heritage

1.8.2.1 Summary of results

A total of 2669 individual forest planning and operations questions were assessed across the 47 FPPs. The coverage of the various facets of forest operations assessed across tenures is provided in Table 1.8.2.

Assessment was based on a performance rating which included the percentage of FPP questions rated as (3) sound, (2) below sound or (1) unacceptable (Appendix 3). The percentage of questions rated 'sound' provides an effective measure of performance against the standards set by the FPA.

The overall performance rating for 2018–19 compared with that achieved in the previous seven assessment periods is shown in Figure 1.8.2. The performance ratings achieved in 2018–19, broken up by each assessment category, are summarised in Table 1.8.3 and performance by individual assessment rating is shown in Appendix 3. The performance ratings by tenure, applicant groups, forest types, reforestation types and key areas targeted for assessment in 2018–19, are shown in Tables 1.8.4 to 1.8.8.



FPA Compliance Program's James Fergusson (left) carrying out a compliance assessment with the harvesting contractor (centre) and STT's Forest Supervisor and Forest Practices Officer (right).

Table 1.8.2 Coverage of the 47 FPP assessments across tenures (2018–19)

	Tenure			
	PTPZ land	Industrial freehold land	Independent freehold land	Total
No. of assessments	29	5	13	47
No. of certifying FPOs assessed ¹	17	3	10	27
Discrete operational phases (DOPs) ²				
Roading	12	1	2	15
Timber Harvesting	31	5	13	49
Reforestation ³	25	5	5	35
Non-commercial clearing	1			1
Treefern Harvesting	3			3
Forest type				
Softwood plantation	8		1	9
Hardwood plantation	4	5	6	15
Native forest – clearfelled	8		6	14
Native forest – partial logging	9			9
Reforestation type ⁴				
Softwood plantation	8			8
Hardwood plantation	4	5	3	12
Native forest	17		1	18
Conversion – non-forest			9	9

¹ Three FPOs were assessed in more than one tenure category.

² An FPP may be managed in sections over a period of time, causing multiple DOPs, or an operation may be suspended/restarted. A DOP report is required when there is likely to be a period of inactivity.

³ Includes some native forest partial harvest operations.

⁴ Includes thinning operations.

Performance rating by assessment category

Table 1.8.3 Percentage of performance rating recorded for all individual questions scored for each operation by assessment category in 2018–19

Assessment category	Performance rating (%)			
	Unacceptable	Below sound	Sound	Total
Procedural issues	5.4	5.2	89.5	100
Roading (including quarrying)	0.0	0.9	99.1	100
Harvesting	1.4	3.6	95.0	100
Reforestation	3.8	3.1	93.1	100
Soils	1.3	2.0	96.7	100
Water quality and flows	0.0	1.2	98.8	100
Biodiversity	1.4	5.2	93.4	100
Landscape	0.0	0.6	99.4	100
Cultural heritage	0.6	8.0	91.3	100
Geoscience	0.0	0.5	99.5	100
Fuels, rubbish and emissions	0.0	0.0	100.0	100
Overall	1.8	3.7	94.5	100

Overall performance trend 2011–12 to 2018–19

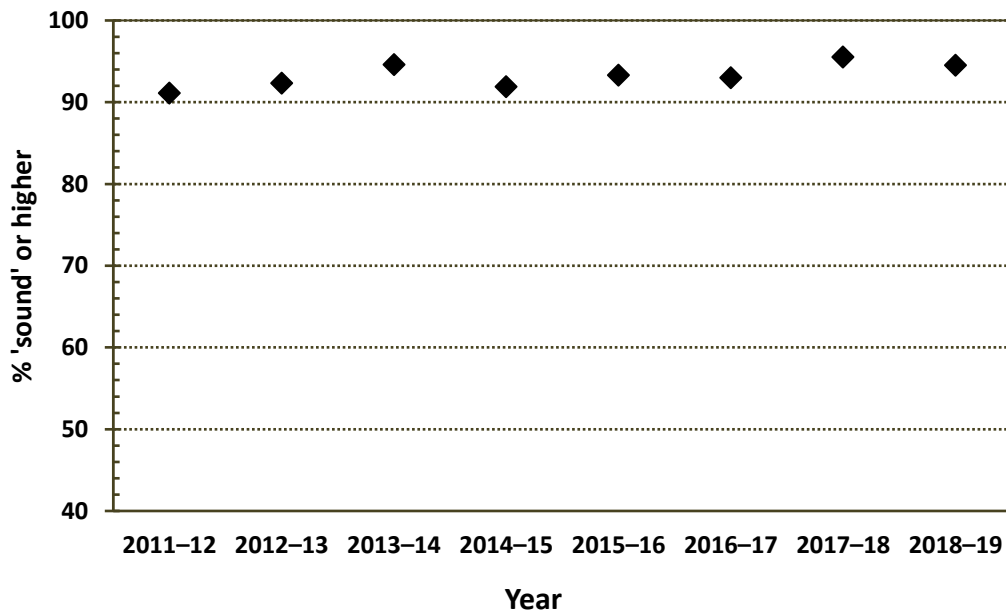


Figure 1.8.2 Percentage of performance rating sound or higher (2011–12 to 2018–19)

Performance rating by tenure

Table 1.8.4 provides a summary of results by the various tenures that were included in the sample of FPPs in 2018–19.

Table 1.8.4 Percentage of performance rating recorded for all individual questions scored for each operation by tenure in 2018–19

Tenure	Performance rating (%)			
	Unacceptable	Below Sound	Sound	Total
PTPZ land	1.6	3.0	95.4	100
Industrial freehold land	1.4	2.1	96.5	100
Independent freehold land	2.3	6.0	91.7	100
Overall	1.8	3.7	94.5	100

Performance rating by applicant group

Table 1.8.5 provides a summary of results by the various applicant groups that were included in the sample of FPPs in 2018–19.

Table 1.8.5 Percentage of performance rating recorded for all individual questions scored for each operation by applicant group in 2018–19

Applicant	Performance rating (%)			
	Unacceptable	Below Sound	Sound	Total
Industrial	1.8	3.0	95.2	100
Sustainable Timber Tasmania	1.4	2.8	95.8	100
Independent	2.7	8.3	89.1	100
Overall	1.8	3.7	94.5	100

Performance rating by forest type



The 2018–19 program assessed 47 FPPs covering a range of operations, such as this one with Timberlands Pacific on a plantation coupe. See Appendix 3 for the results.

Table 1.8.6 provides a summary of results by the various forest types that were included in the sample of FPPs in 2018–19.

Table 1.8.6 Percentage of performance rating recorded for all individual questions scored for each operation by forest type in 2018–19

Forest type	Performance rating (%)			
	Unacceptable	Below Sound	Sound	Total
Softwood Plantation	2.1	3.6	94.3	100
Hardwood Plantation	1.6	2.6	95.8	100
Native Forest – Clear Felled	1.3	5.8	92.9	100
Native Forest – Partial Logging	2.2	2.8	95.0	100
Overall	1.8	3.7	94.5	100

Performance rating by reforestation type

Table 1.8.7 provides a summary of results by the various reforestation types that were included in the sample of FPPs in 2018–19.

Table 1.8.7 Percentage of performance rating recorded for all individual questions scored for each operation by reforestation type in 2018–19

Reforestation type	Performance rating (%)			
	Unacceptable	Below Sound	Sound	Total
Softwood Plantation	2.1	3.6	94.3	100
Hardwood Plantation	1.1	2.5	96.5	100
Native Forest	1.6	3.0	95.5	100
Conversion – non-forest	2.8	7.2	90.0	100
Overall	1.8	3.7	94.5	100



The FPA’s annual assessment of FPP compliance looks at water quality and flow, amongst a long list of assessments. This photo of a stream with clear water was taken on a Forico assessment below a harvest and site preparation operation.

Performance rating by target area

Table 1.8.8 provides a summary of results by key areas targeted in the sample of FPPs in 2018–19.

Table 1.8.8 Percentage of performance rating recorded for all individual questions scored for each operation by key areas targeted in 2018–19 assessment

Target area (FPP Sample)	Performance rating (%)			
	Unacceptable	Below Sound	Sound	Total
Operational (9) ¹	1.8	2.7	95.6	100
Swift Parrot Habitat (5) ²	1.5	3.4	95.1	100
Clearance and Conversion (6) ³	2.3	9.5	88.2	100
Overall Assessment (47)	1.8	3.7	94.5	100

¹ Five STT FPPs (native forest) and four Industrial applicant FPPs (plantation) – operations active at time of assessment.

² Four STT FPPs (native forest – partial harvest) and one independent FPP (native forest – clearance and conversion).

³ Native forest FPPs where clearance and conversion undertaken by independent applicants on independent land tenure.

1.8.2.2 Comments on standards achieved

Under s. 4E(1)(b) of the Act, the FPA reports that the implementation and effectiveness of FPPs across assessment categories, applicant groups, land tenures, forest types and reforestation types continues to be satisfactory. The performance achieved under assessed operational FPPs and assessed swift parrot habitat FPPs is indicative of satisfactory overall performance; although performance will require ongoing monitoring. The performance of clearance and conversion activities being undertaken in native forest by independent applicants operating on independent land, is below that expected by the FPA. The FPA reports that this aspect of the forest practices system warrants a comprehensive assessment in 2019–20 to identify any procedures requiring improvement.

During 2019–20 the FPA will ensure continual improvement in performance outcomes by focussing on key areas identified in 2018–19 (see Tables 1.8.3 to 1.8.8) as requiring continuous improvement, including: procedural issues; clearance and conversion of native forest by independent applicants operating on independent freehold land; reforestation; biodiversity (retention of wildlife habitat clumps); and cultural heritage (post-operation surveys). The FPA will also ensure that quarrying operations (including rehabilitation) and industrial applicants not included in the 2018–19 assessment program are adequately represented in the 2019–20 program.

1.9 Monitoring of the permanent native forest estate

The FPA is required to implement and report on the maintenance of the permanent native forest estate under s. 4C of the Act and following the [Policy for Maintenance of a Permanent Native Forest Estate](#) (also known as the Permanent Native Forest Estate (PNFE) Policy) current at the time. The most recent version of the PNFE Policy came into force on 1 July 2017. The following comments relate to the implementation of the 2017 policy.

Note that the FPA does not regulate, monitor or keep records of clearance and conversion of native forest under the *Land Use Planning and Approvals Act 1993* or the *Environmental Management and Pollution Control Act 1994*.

Appendix 4 provides details of the policy and the data for all of the forest communities within Tasmania's bioregions.

- The rate of conversion of native forest in 2018–19 was comparable to the previous year (see Figure 1.9.1). Approximately 530 hectares of native forest was converted to other land use (mainly for agriculture). This figure includes clearance of native forest for dams. The areas of highest native forest conversion were in the Woolnorth (202.5 ha) and Ben Lomond (125.5 ha) bioregions.
- Overall, the state-wide reduction in the native forest estate over the period 1996–2019 amounts to approximately 159 053 hectares (5.0 per cent of the estimated 1996 native forest estate) as a result of conversion, mainly for plantations or agriculture – see Table 1.9.1.
- The proportion of native forest conversion by bioregion varies from 12 per cent (Woolnorth bioregion) to 0.2 per cent (Furneaux bioregion).
- Approximately 2.2 hectares of threatened forest communities were cleared and converted in 2018–19. The reasons for conversion of threatened forest communities were road construction and agricultural use (construction of a pivot irrigation system).
- The PNFE Policy originally set a bioregional threshold for all communities to be maintained at no less than 50 per cent retention of the 1996 area. Concern raised by the FPA about a concentration of conversion in a small number of communities resulted in the government amending the policy to increase the bioregional threshold for all communities to 75 per cent in December 2009. The community and the state-wide thresholds were removed in the 2017 revision of the policy.
- The 2017 policy states that broadscale clearance and conversion of native forest is not permitted, except for a number of defined activities including (but not limited to): agricultural clearing, construction of new significant infrastructure and to facilitate development demonstrating a substantial public benefit.
- Although the community thresholds were removed from the 2017 revision of the policy, the FPA continues to report on forest cover loss through FPPs. Table 1.9.2 shows that 17 bioregional communities are below the 75 per cent threshold as a result of clearance and conversion activity.
- Two communities currently have less than 2000 hectares within a bioregion as a result of clearance and conversion since 1996. These are *Eucalyptus regnans* forest

in Woolnorth (down to 1706 hectares from 2632 hectares) and *E. viminalis* / *E. ovata* / *E. amygdalina* / *E. obliqua* damp sclerophyll forest in Ben Lomond (down to 1166 hectares from 2091 hectares). This does not include communities that were rare with less than 2000 hectares mapped in 1996.

- Since 2011 most clearance and conversion of native forest has been for agriculture and other non-forest use and very little is for plantation establishment. The certification of FPPs for conversion of native forest to plantations virtually ceased on PTPZ land in 2007 – see Figure 1.9.1.

The 2017 PNFE Policy has removed the requirement to maintain bioregional thresholds. In addition, a moratorium on clearing and conversion of native vegetation on King Island was also removed.

Proposals for clearance and conversion of threatened native vegetation communities (forest and non-forest) must satisfy one of four requirements in s. 19(1AA) of the Act.

Threatened native non-forest vegetation communities do not form part of the permanent native forest estate but any clearance or conversion of them has been subject to regulation under the Act since 2007.

The FPA reports, under s. 4C(fa) of the Act, that Tasmania’s native forest estate has been maintained in accordance with the Tasmanian Government Policy on the Maintenance of a Permanent Native Forest Estate. The area of native forest as at 30 June 2019 was equivalent to 95 per cent of the native forest area that existed in 1996.

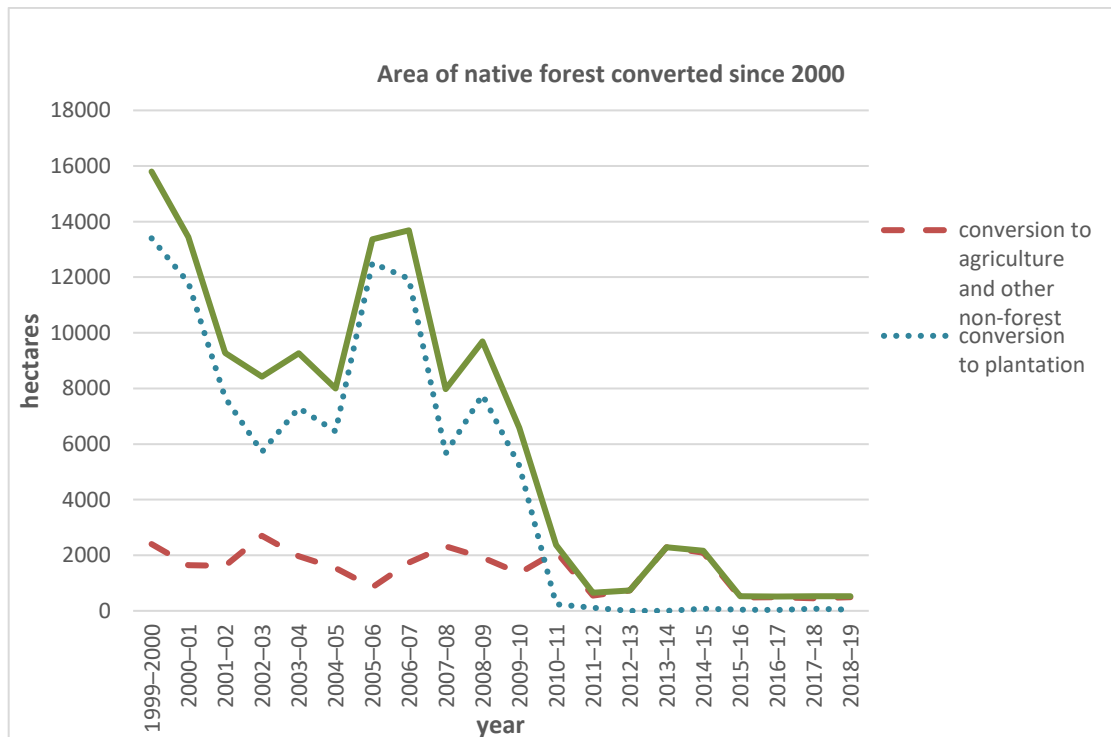


Figure 1.9.1 Area of native forest converted since 2000

Table 1.9.1 Loss of native forest in Tasmania and Tasmanian bioregions, relative to the 1996 estimated extent (as revised in the 2002 *State of the forests Tasmania* report dataset)

Bioregion	2017–18	2018–19
	Total % decrease of native forest since 1996 (at 30/06/18)	Total % decrease of native forest since 1996 (at 30/06/19)
Woolnorth	11.9	12.0
Ben Lomond	9.5	9.5
D’Entrecasteaux	5.3	5.3
Central Highlands	4.6	4.6
Midlands	3.5	3.6
Freycinet	2.6	2.7
West and South-west	0.7	0.7
Furneaux	0.2	0.2
State total	4.9	5.0

Table 1.9.2 The number of forest communities with a reduction in bioregional area of more than 10 per cent and 25 per cent relative to their 1996 estimated extent (based on the 2002 *State of the forests Tasmania* report dataset)

Bioregion	Number of communities	Number of communities with substantial reduction in area since 1996	
		Total >10%	Total >25%
Woolnorth	35	13	2
Ben Lomond	28	11	9
D’Entrecasteaux	28	2	0
Central Highlands	34	6	4
Midlands	30	6	1
Freycinet	33	2	1
West and South-west	23	1	0
Furneaux	6	0	0
State total		41	17



Eucalyptus viminalis wet forest in the Mole Creek Karst National Park in northern Tasmania. This community is a threatened native vegetation community in Tasmania and has been nominated for listing under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999. It is also at risk from ginger tree syndrome which causes die back in white gums.

1.10 Enforcement

1.10.1 Investigations

The FPA investigates all complaints relating to alleged breaches of the Act and the Code. Investigations are undertaken directly by FPA compliance staff, with assistance of FPA specialists when required, or by FPOs. Reports and recommendations are reviewed by the Chief Forest Practices Officer, and when appropriate by the Board of the FPA against the FPA's [Investigation and enforcement protocols](#). Investigations may also be undertaken in cooperation with other government agencies and Tasmania Police.

Formal legal actions arising as a consequence of serious breaches identified during investigations are undertaken in consultation with the Director of Public Prosecutions.

The FPA dealt with 38 investigations in 2018–19. Of the investigations, three were conducted on PTPZ land, seven on industrial private property, two on Crown land, and 26 on independent private property. Outcomes of 17 finalised investigations are detailed in Table 1.10.1. Of the 21 investigations current at 30 June 2019, four of these were finalised in the first quarter of the 2019–20 reporting period.

Table 1.10.1 Outcomes of completed investigations

Outcome	2017–18 ¹		2018–19 ¹	
	Count	Percentage	Count	Percentage
No breach	2	20%	3	18%
Notice issued to require corrective action or provide advice for opportunity for improvement	2	20%	8	47%
Penalty imposed by the FPA	4	40%	4	24%
Matters resolved by the courts	0	0%	1	6%
Apparent breach but insufficient evidence or out of time to proceed with legal action	2	20%	1	6%
Total completed investigations	10	100%	17	100%
Investigations in progress at 30 June	24		21	
Total investigations (completed and in progress)	34		38	

¹ Includes matters carried over from previous years.

1.10.2 Notices and prosecutions

The forest practices system is designed to achieve high environmental standards, with an emphasis on planning, training and education. Where issues arise, the FPA prefers that they are dealt with through early detection and corrective action. Corrective action may involve remedial action, as well as reviewing and improving systems to ensure that similar issues do not arise in the future.

Education is considered critical in ensuring that individuals, companies and agencies understand their responsibilities under the Act. Consequently, where issues arise through a lack of knowledge, the FPA prefers to address the issue by educating the responsible person to prevent similar issues arising in the future.

Where issues arise that generally reflect inadequate systems or insufficient care, or in cases of repeat offences, penalties are appropriate to reinforce the due diligence that all parties must apply when undertaking activities identified under the Act.

Legal enforcement may be undertaken in several ways:

- FPOs may give verbal or written notification (under s. 41(1)) in order to request the responsible person to comply with the Act, Code or an FPP. Where this notice is not complied with, an FPO may issue a second notice in writing (under s. 41(2)) to direct the person to cease operations and carry out any work required to ameliorate any damage incurred as a result of the breach. Failure to comply with an s. 41(2) notice is a breach under the Act and can lead to prosecution.
- The FPA may prosecute (lay a complaint) for failure to have operations covered by a certified FPP (s. 17), trading in treeferns without approval (s. 18B), failing to comply with a certified FPP (s. 21) or for failing to lodge a compliance report (s. 25A).
- The FPA may offer a prescribed fine as an alternative to prosecution (s. 47B).

Table 1.10.2 Legal enforcement 2012–13 to 2018–19

	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19
Formal notices issued by FPOs ¹	9	5	2	0	10	9	7
Fines imposed	5	7	3	6	3	4	5 ²
Complaints laid	1	0	0	0	1	0	0

¹ Refers to written notices and does not include verbal notices given by an FPO under s. 41 of the Act. The figures reported do not include notices issued with respect to overdue compliance reports or notices issued by FPA compliance staff conducting investigations.

² Five fines were imposed across four investigations.

Under s. 47B of the Act, if the FPA is satisfied that an offence has been committed, it may, on payment of a prescribed fine by the alleged offender, cause any proceedings in respect of the alleged offence to be waived or discontinued. In 2018–19 a total of \$103 000 of s. 47B fines under five actions were settled as follows:

- Landowner R Daniels paid a fine of \$84 000 for causing the clearing of trees over approximately 20 ha of *Eucalyptus tenuiramis* forest and woodland on sediments (a threatened native vegetation community) without a certified FPP, near Ouse.
- Landowner J Aitken paid a fine of \$4000 for causing the clearing of trees over approximately 6.4 ha of land, including the clearing of trees from approximately 0.08 ha of land in a Class 3 streamside reserve, without a certified FPP, near Hellyer.
- Landowner G Bryant paid a fine of \$3000 for causing the clearing of trees without a certified FPP, near Cressy.
- Landowners B Young and D Young paid a fine of \$10 000 for causing the clearing of trees over approximately 4.06 ha of land, including approximately 0.9 ha of *Eucalyptus amygdalina* inland forest and woodland on Cainozoic deposits (a threatened native vegetation community), without a certified FPP, near Carrick.
- Contractor D Buttery paid a fine of \$2000 for causing the clearing of trees without a certified FPP, near Carrick.

Additional actions:

- A landowner agreed to make good damage done following the unauthorised clearing of trees over approximately 1.05 ha of land, including 0.036 ha of *Eucalyptus ovata* forest and woodland (a threatened native vegetation community), near Nubeena.
- A forest manager agreed to make good damage done following the unauthorised clearing of trees over approximately 0.89 ha of *Eucalyptus ovata* forest and woodland (a threatened native vegetation community), near Nunamara.

Prosecution

- Landowner K Blair was found guilty in the Launceston Magistrates Court on four charges of contravening the provisions of an FPP on a property located near Scottsdale, contrary to Section 21(1)(a) of the Act. Mr Blair was fined \$2000 on each charge – a total of \$8000 – and ordered to pay court costs of \$66.36 (total of \$8066.36).
- No new complaints were laid in 2018–19.

1.11 Self-regulation

The Tasmanian forest practices system is based on a co-regulatory approach, involving self-regulation by the industry with independent monitoring and enforcement carried out by the FPA. The objectives of the forest practices system are outlined in Schedule 7 of the Act and are listed in the section on the forest practices system at the beginning of this report. Self-regulation is implemented through the following processes within the forest practices system:

- **Preparation of FPPs:** Section 18 of the Act provides that any person may prepare an FPP. The larger companies and STT generally employ staff to meet their own requirements for the preparation of plans. Consultants generally service smaller companies and private landowners. In practice most FPPs are prepared by trained FPOs or people under the supervision of a trained FPO.
- **Certification of FPPs:** FPP applications are considered for certification, refusal or amendment by accredited FPOs who hold delegated powers from the FPA according to s. 43 of the Act. These FPOs are known as FPO (Planning) and are required to have pre-requisite knowledge, training and experience and are appointed by the FPA after passing the FPO Training Course. Certification of FPPs is where an FPO signs off that the FPP has been prepared in accordance with the requirements of the Act, the Code and other relevant legislation, policies and FPA administrative instructions. See Table 1.3.1 for summary of FPPs certified in 2018–19.
- **Monitoring and inspection of forest practices:** Forest practices are supervised by FPOs. FPOs (Inspecting) and (Planning) have the power to issue notices under s. 41 of the Act in order to ensure that operations comply with the Act or with the provisions of a certified FPP.
- **Reporting on compliance under s. 25A of the Act:** The responsible person for a certified FPP must lodge an interim compliance report with the FPA within 30 days of the completion of each discrete operational phase of the forest practices authorised to be carried out under the plan. A final compliance report is due within 30 days after the expiration of the plan. Compliance reports must be signed by an FPO. The FPA may also request progress reports under s. 25B of the Act.

The FPA reports that, in accordance with s. 4E(1)(a) of the Act, a high level of self-regulation has been achieved on public and private land that is subject to operations. The independent private forestry sector generally has a reduced capacity for self-regulation compared with larger forestry companies. The FPA is working towards better communications, training and education for this sector and the contractors that service it.

2 Research and Advisory Program report

2.1 Biodiversity Program

Advice

Table 2.1.1 Biodiversity Program notifications in 2018–19

	PTPZ land	Private	Total
Office assessment and advice provided	45 (32)	46 (60)	91 (92)
Field assessment and advice provided (not clearance and conversion)	10 (17 ¹)	14 (45 ¹)	24 (62 ¹)
Field assessment and advice provided (clearance and conversion operations)	0	36	36
Total notifications	55 (49)	96 (105)	151 (154)

¹ This figure includes conversion and non-conversion assessments (figures for these operations have not been split before). This data is derived from the notification system database and staff estimates. The figures in brackets are the number of notifications received in 2017–18.

The Biodiversity Program staff responded to approximately 151 requests for advice on biodiversity issues from FPOs and other forest planners as part of FPP development, received through the online notification system between 1 July 2018 and 30 June 2019. Of these, approximately two-thirds (96 notifications) were for private land (including large freehold estates), with the remainder for PTPZ land (Table 2.1.1). The number of notifications for biodiversity advice in 2018–19 was almost identical to the number received in 2017–18 (154).

Field assessments were undertaken for 40 per cent of notifications. The proportion of notifications that required a field assessment has remained about the same for the past few years with the vast majority of surveys being undertaken for notifications on private land. Notifications for clearance and conversion of native vegetation for agricultural developments on private land took up a substantial amount of FPA ecologist time and constituted almost two thirds of all field assessments. The purpose of these field assessments was primarily to assist planners with native vegetation mapping, identification of threatened species sites and habitat, and provide specialist input into the highest priority values.

A new raptor notification system was set up this year that provides an avenue for FPOs to seek advice specifically relating to threatened raptor species and managing their nests. This advice is generally needed for work that is not associated with planning for FPPs, but is related to forestry activities with the potential to impact on these birds and their habitats. Biodiversity Program staff responded to a total of 69 requests for advice on raptors in the raptor notification database between 6 July 2018 (when the database was initiated) and 30 June 2019. In addition to formal notifications, the Biodiversity Program responded to a substantial number of requests for raptor and general biodiversity advice via phone and email.

A large amount of field time was spent on proposed agricultural development operations on King Island. These notifications were very time consuming due to the remote location and the complex issues. Most notifications on King Island involve threatened species (including two high profile threatened native birds), issues with interpretation of vegetation as forest or scrub, and identification of threatened native vegetation communities.

Mountain bike tracks, irrigation pipelines and salvage harvesting operations following the January 2019 bushfires also made up a significant component of the advisory time, as well as general interpretation of policy and advice for proposals for clearance and conversion.

For native forestry operations, FPA Ecologists spent considerable time working on habitat identification and management advice for proposed plans in swift parrot and masked owl habitat.

Other biodiversity issues requiring specialist advice included habitat assessments for giant freshwater crayfish, Marrawah and chaostola skipper, as well as forest practices (including bushfire salvage harvesting and carting) around eagle nests.

Biodiversity Program staff provided specialist input to FPA compliance investigations in 2018–19 on mainland Tasmania and King Island, mainly in relation to threatened species and threatened native vegetation communities.



FPA Ecologists were consulted about salvage harvesting after the 2019 bushfires.

2.1.1 Planning tools and guideline development

Development and maintenance activities in 2018–19 for planning tools available for use by FPOs, delivered through the [FPA services](#) section of the FPA website, included:

- [Biodiversity Values Database \(BVD\)](#): Species range boundaries and habitat descriptions continued to be updated by DPIPWE and FPA in 2018–19 as new information became available. Any updates made were recorded in a database for compliance purposes. Updates were approved for a suite of species range boundaries including the grey goshawk, Marrawah skipper, forty-spotted pardalote, chaostola skipper, Miena jewel beetle, southern hairy red snail, Weldborough forest weevil, St Columba Falls caddisfly, Tussock skink and keeled snail. The endorsed habitat descriptions and survey guidelines for threatened plants were incorporated into the BVD and are now provided as part of the output. FPA staff have been working closely with a consultant to refresh the BVD and provide a more user-friendly interface that incorporates an interactive map with spatial layers from The

List, the Tasmanian Government’s online mapping service. The updated BVD has been available as a test version on the FPA website and, following a review and feedback process, will be rolled out in 2019–20.



FPA Ecologist Dydee Mann working on the new more user-friendly Biodiversity Values Database.

- [Threatened Plant Adviser](#) (TPA): FPA ecologists continued work on the development of the TPA in 2018–19. The TPA is a planning tool that will provide advice on the management of threatened flora species within areas covered by the forest practices system. In 2018–19 the project team completed a draft TPA and ran a series of workshops with practitioners and specialists. Following the workshops, the participants spent several months reviewing the TPA and have provided valuable feedback to the project team. The TPA is in final draft stage and will go through the endorsement phase in 2019–20 ready for release in 2020.
- **Threatened Flora Habitat Suitability Models:** Further work was done on producing state-wide models of threatened flora habitat suitability. The models can be used to obtain a measure of habitat suitability in a geographical area and therefore allow forest planners to target ‘hotspots’ when undertaking threatened flora surveys. These models will be completed in 2019–20 and will form a new spatial planning tool available on the BVD web map.
- [Threatened Fauna Adviser](#) (TFA): work on maintaining this decision support tool for threatened fauna management continued during 2018–19. The project steering committee met to consider and discuss feedback from forest planners or suggestions for improvements before changes were made, to ensure that any changes were consistent with the endorsement procedures agreed between DPIPW and FPA. Any updates made were recorded in a database for compliance purposes. Pathway and recommendation edits were made for swift parrot and Simons stag beetle. The Flinders Island wombat was removed from the TFA following its delisting from the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.
- [Eagle Nesting Habitat Map](#): Models that sit behind the wedge-tailed eagle potential nesting habitat map were re-run with new data. The outcome of re-modelling will be revised low elevation, high elevation and north-western Tasmania spatial layers, available in formats that can be viewed on Google Earth and used in the field on

tablets and other devices. This will reduce the need for expensive GIS software to view the model.

2.1.2 Policy, reviews and input to strategic planning

Staff were involved in the following strategic planning and review activities:

- **Annual review of the [Agreed procedures](#) between FPA and DPIPWE for the management of threatened species under the forest practices system**

A review of the implementation of the procedures agreed between the Board of the FPA and the Secretary of DPIPWE for the management of threatened species and communities under the forest practices system (section D3.3 of the Code) is in preparation. See the previous reporting period's report in Appendix 1 *Procedures for the management of threatened species under the forest practices system: report on implementation during 2017–18*.

- **Eagle nest prioritisation project**

This project provides a method for identifying 'used' and 'not-used' wedge-tailed eagle nests to support the development of revised management recommendations according to this nest status. A final report has been completed and draft management recommendation developed, both of which are currently under review. Photos of new nests will be analysed where possible throughout the year to validate the model.

- **Threatened species and vegetation community recovery**

- Staff members formed part of the scientific reference group for [TASVEG](#), a comprehensive digital map of Tasmania's vegetation.
- Staff participated in a workshop on the EPBCA assessment of white gum wet forest.
- Staff participated in a workshop on King Island threatened birds, run by BirdLife Australia.

- **Monitoring changes in Tasmania's permanent native forest estate**

Biodiversity Program staff monitored and reported (quarterly) on the changes to the forest estate and extent of forest vegetation communities in 2018–19. The area designated for conversion to other land uses (mainly for agricultural use) in FPPs certified in 2018–19 (530 hectares) was slightly less than 2017-18 (565 hectares). Most conversion occurred in the Ben Lomond and Woolnorth bioregions. (See section 1.9 and Appendix 4 for more details.)

- **[Treefern management plan for the sustainable harvesting, transporting or trading of *Dicksonia antarctica* in Tasmania, 2017](#)**

A review of Australian treefern literature and research, and an MSc project have collected data, and filled/revealed knowledge gaps related to treefern response to silvicultural practices other than clearfell, burn and sow harvesting. The review will be submitted for publication in 2019 and includes Australian data on commercial treefern operations, and present and future treefern population data with a changing climate. These projects will continue to provide important information to

improve the effectiveness and sustainability of treefern management in Tasmanian forests, and to integrate such information and procedures into future revisions of the *Tasmanian treefern management plan*.

2.1.3 Research and monitoring

The Biodiversity Program's staff contributed to 20 FPA research and monitoring projects in 2018–19 and six FPA-supported student projects (Table 2.1.2). A more detailed update on these projects is provided in [Monitoring the effectiveness of the biodiversity provisions of the Tasmanian Forest Practices Code 2018–19 summary report](#) (see reference list).

The Biodiversity Manager, Research Biologist and Acting Research Biologist coordinated the research and monitoring activities in 2018–19. Any new projects initiated in 2018–19 were consistent with the priorities for effectiveness monitoring identified in the [2012 review](#). The business plan for these projects was reviewed and updated to assist with project planning and budgeting in 2016. Funding for these projects came from a variety of external funding sources including industry stakeholders. Forico, Timberlands, STT, Private Forests Tasmania, Norske Skog and SFM Environmental Solutions all contributed to a successful application to Forest and Wood Products Australia Ltd for funding of the project '*Demonstrating stewardship of the environment and ecologically sustainable forestry: Monitoring the effectiveness of the Tasmanian Forest Practices Code for biodiversity*'. This multifaceted project involves collaboration with external researchers, students and research institutions.

Co-supervision of higher degree students by FPA staff affiliated with the School of Natural Sciences and the Centre for Forest Value, UTas, continued in 2018–19 (Tables 2.1.2 and 2.1.3). The students included James Pay (eagle breeding behaviour, PhD, UTas), Tim Garvey (threatened frogs, PhD, Deakin University), Alyce Hennesey (bats and remnants, honours, UTas), Suzi Stiso (bat ecology, PhD, UTas) and Adam Cisterne (masked owls, PhD, ANU).

The research work was communicated to different audiences at a number of events throughout the year. FPA Biodiversity Program staff presented work at the Australasian Wildlife Management Society Conference in December 2018 (see conference presentations). The annual FPA Research Update event was delivered for stakeholders in September 2018. The key outcomes relating to management were communicated to practitioners through *Forest Practices News* articles, presentations and field days (see training section 2.4 in this report). The Acting Research Biologist also gave a presentation to third-year UTas students on managing biodiversity in areas outside of reserves.

Some staff time was allocated to drafting and reviewing scientific papers from completed projects in 2018–19. Staff were co-authors or supervisors on three publications in scientific journals. Other publications included three newsletter articles, eight presentations at two conferences and one PhD thesis.

Other research and monitoring activities by FPA staff included obtaining and renewing data licence permits, renewing scientific collection permits and animal ethics applications.

Table 2.1.2 Biodiversity research projects that were current in the 2018–19 reporting period, with summary of activities undertaken (further information is provided in [Monitoring the effectiveness of the biodiversity provisions of the Tasmanian Forest Practices Code 2018–19 summary report](#))

Project title	Activities during 2018–19
Monitoring the timing of the wedge-tailed eagle breeding season	Annual nest monitoring surveys were completed in November 2018. However, due to financial constraints only a single survey was done. There was insufficient data to confidently assess the timing of the breeding season. Instead a range of information sources were used to estimate the timing of the breeding season. The future of this work is under review.
Eagle nest prioritisation project	This project was initiated in 2015–16. Data analysis was completed and a draft report is being reviewed.
Testing the effectiveness of selected actions to mitigate the impact of forest practices on the wedge-tailed eagle	The aim of this project, initiated in 2018–19, is to assess whether the exclusion zones are effective in reducing disturbance to breeding eagles at the end of the season. Cameras were deployed during the 2018–19 breeding season, but due to a variety of issues only 2 cameras were deployed and only a few days of data was collected from one of these cameras. The plans for this research for the 2019–20 breeding seasons are under review.
Modelling eagle habitat	The original FPA Eagle Nesting Habitat Model has been reviewed, and extra modelling done in response to reviewers' comments. This manuscript will be re-submitted for publication in 2019–20.
Assessing goshawk habitat	The FPA are in the initial stages of conducting a pilot study tracking grey goshawk in southern Tasmania. Input into this project is being given by the Research Biologist, the Raptor Specialist and a consultant FPA ecologist.
Survival of trees in wildlife habitat clumps	The scientific paper was published in <i>Forest Ecology and Management</i> in 2018–19. See reference list in Appendix 1.
Testing the accuracy of the Mature Habitat Availability Map for predicting hollow availability in wet forest	The scientific paper was published in <i>Ecological Management and Restoration</i> in 2018–19. See reference list in Appendix 1.
Managing devil dens	The aim of this study which started in 2014 is to identify and determine long-term use of den sites in plantations. Post-harvesting camera monitoring of the dens continued in 2018–19. The number of monitoring sites were expanded to capture native revegetation sites within a plantation estate.
How effective are management actions for the Skemps snail?	The aim of this project was to assess the effectiveness of management for this species. Data analyses and preparation of a manuscript are expected to be completed in 2019–20.
How effective are management actions for the keeled snail?	Data analyses are complete and a scientific publication has been drafted. This manuscript will be submitted for publication in 2019–20.

Impact of fire and habitat disturbance on the threatened chaostola skipper and Tasmanian hairstreak butterfly	The annual 2018–19 survey was conducted to assess the re-establishment or re-colonisation of the burnt areas by chaostola skipper. Surveys for the Tasmanian hairstreak butterfly are planned for spring 2019.
Headwater stream management and water quality	This study started in 2017–18. The aim is to test the effectiveness of the Class 4 Stream guidelines in reducing sediment input to sub-catchments that support the giant freshwater crayfish. A trial of sampling methods was conducted. Study sites are currently being reviewed and sampling is expected to commence in spring 2019.
Using eDNA techniques to detect giant freshwater crayfish	This project started in 2018 and is attempting to develop a genetic assay that can be used to detect <i>Astacopsis gouldi</i> from environmental DNA (eDNA) water samples. Most samples have been collected and are being processed. This project is a collaboration with UTas and the University of Canberra.
Monitoring effects of long-term forest management on the Vulnerable shrub <i>Hibbertia calycina</i>	This project which started in 2016 aims to evaluate the degree to which past implemented management strategies e.g. reservation and <i>Phytophthora cinnamomi</i> management zones, have been effective for the management of the species. Surveys were carried out in 2018–19 and results analysed. A manuscript has been prepared and will be submitted for publication in 2019–20.
Response of <i>Pterostylis atriola</i> (snug greenhood) to forestry disturbance in Tasmania	This project looked at the response of <i>Pterostylis atriola</i> to forestry-related disturbance events. Surveys were completed in 2018–19 and the results written up for publication. This paper will be submitted in 2019–20.
Tree fern ecology	A manuscript reviewing the ecology of tree ferns in Australia has been drafted and will be submitted for publication in 2019–20. This paper will include details of the modelling done to estimate the distribution of the tree ferns <i>Dicksonia antarctica</i> and <i>Cyathodes australis</i> in Tasmania.
Modelling flora distributions	Further work was done modelling the threatened flora habitat suitability models. These models will be finalised in 2019. The models produced can be used to obtain a measure of habitat suitability in a geographical area and therefore allow forest planners to target ‘hotspots’ when undertaking threatened flora surveys.
Prioritising flora research	The process for prioritising flora research was initiated and will be completed in the second half of 2019.
Assessing the effectiveness of Vegetation Management Agreements – Flinders Island	A project evaluating the effectiveness of a large VMA on private property on Flinders Island was undertaken. A report has been drafted (Mann & Munks, 2018).

2.1.3.1 Student projects supported by FPA

These projects contribute to the work of the FPA and were either formally co-supervised in 2018–19 by the FPA Biodiversity Manager, Research Biologist or Acting Research Biologist through their adjunct positions with UTas or they received other FPA support. Some have also received advice and support from the FPA’s ecologists.

Table 2.1.3 Student research projects supported by the FPA in 2018–19

Project title	Activities during 2018–19
Behaviour of breeding eagles and the impact of disturbance	Data analysis and thesis writing progressed during 2018–2019. The PhD thesis by James Pay was submitted in August 2019. The FPA Research biologist co-supervised this project and the FPA raptor specialist provided expert advice and assisted with field work.
Threatened frogs in modified landscapes	Deakin University PhD student Tim Garvey completed the second season of fieldwork in 2018–19 and has begun data analysis. Feedback, logistical support and some funding was provided by the FPA.
Ecology of the endangered Tasmanian masked owl	This PhD project by Adam Cisterne (ANU) is co-supervised by the FPA Research Biologist and Ecologist Phil Bell. Due to the fires and other project considerations, field work for the tracking component of this study has been postponed until 2020. Adam has progressed the genetics component of his research and refined study techniques.
The use of wet sclerophyll plantations by bats	This Honours project is assessing how bat activity in plantations changes with distance to edge. This project is being supervised by the FPA Research Biologist and Acting Research Biologist. Field work has been completed.
The health and ecology of bats in plantations	This PhD study is in the early stages of design and is being supervised by the Acting Research Biologist and ex-Manager of Biodiversity.
Effectiveness of wedge-tailed eagle covenants	A Masters project assessing the effectiveness of conservation covenants for eagles was supported by an FPA student research grant and utilised some data on eagle nest activity collected by FPA and the forest industry.



FPA supervised student Alyce Hennessy installing a bat detector.

2.1.4 Special projects

Some staff time was spent on special projects to increase the effectiveness and efficiency of the FPA Biodiversity Program. The special projects are listed below.

2.1.4.1 Threatened Flora Prioritisation Process

The process that prioritises the flora research priorities has been redesigned. When prioritising research for fauna in 2012, each threat to each fauna species was considered separately by the FPA. This was not practical for flora given the large number of threatened plant species. Instead, flora have now been grouped by both threats and management. As part of this process four key research areas were identified that related to more than one species:

- the effectiveness of *Phytophthora cinnamomi* management
- the effectiveness of surveys for identifying threatened plants
- the occurrence of threatened plants in plantations
- the effectiveness of current management for three sites of potential significance for flora (rocky outcrops, swamps and inland *Eucalyptus amygdalina* forest).

This work has resulted in the creation of a database of all forest-dwelling threatened plant species ranked by their research priority. This information will aid in planning future research and management of threatened plants.



Biodiversity Program staff Dydee Mann, Angela Gardner and Anne Chuter conducting threatened flora surveys in the Midlands.

2.1.4.2 Australasian Wildlife Management Conference in Hobart

The FPA Biodiversity Program were heavily involved with organising and presenting at the Australasian Wildlife Management Society conference on 'Integrating wildlife management, nature conservation and production in land, river and seascapes' in Hobart in December 2018. Sarah Munks was the conference convenor and Dydee Mann, Pep Turner and Phil Bell were on the committee. All four gave oral or poster presentations, as well as FPA Ecologists Kirsty Kay, Anne Chuter and Angela Gardner. This conference provided the opportunity to reflect on the theory, principles and approaches that have come out of FPA's work and to explore new challenges and current barriers. From the FPA's point of view, it was a great opportunity to share some of the research into the forest practices system with biologists from across the nation, see practical applications of emerging technology, and explore opportunities for collaboration on future projects.



FPA staff helped organise and presented at the Australasian Wildlife Management Conference in Hobart in December 2018. From Left: Pep Turner, Anne Chuter, Phil Bell and Sarah Munks.

2.1.4.3 Flinders Island module of the *Forest botany manual*

The *Forest botany manual* is a planning tool to assist field workers, particularly FPOs, to identify sites and issues relevant to sustainable management of Tasmania's forest vegetation (plant species and communities) and associated non-forest vegetation. The manual is mainly designed for evaluating areas of native vegetation that are being considered for forestry operations, including clearance and conversion operations. Management of plant species and communities often needs to be considered at a bioregional level, as well as for Tasmania

as a whole. Therefore, the *Forest botany manual* has been divided into regionally based modules, but currently does not include the Furneaux region. Due to the unique nature of the plant species and vegetation communities on Flinders Island, the FPA is preparing a new Flinders Island module to aid in any evaluations of forested areas that may be required by the FPA or FPOs on Flinders Island.

Preparation of the module has involved a literature review and a field survey program completed in November 2018. The field survey program was undertaken by FPA Ecologists Kirsty Kay, Dydee Mann and Angela Gardner and included collecting vegetation structure and species information from representative sample plots within all of the island's forest vegetation types. The completed peer-reviewed module will contain keys to forest and non-forest vegetation, more detailed keys to forest communities, list of threatened species, sites of significance for flora conservation, and other flora issues such as weed and disease management.



FPA Ecologists Kirsty Kay and Dydee Mann surveying forest communities on Flinders Island to develop a Flinders Island Module for the Forest Botany Manual.

2.1.4.4 Eagle aerial activity check program

In September 2018 the FPA commissioned an independent audit of the safety management documentation for the wedge-tailed eagle aerial activity checks. The auditor highlighted key safety issues and recommended a review of the hazards and risk mitigation strategy for this activity. As a result of the independent audit, the FPA used a helicopter to complete the aerial nest activity check program in 2019. The total number of nests flown in 2019 was 376, comprised of 274 nests for the forest industry and 102 nests for consultancies. Of the 376 nests surveyed, 58 were identified as productive (53 with chicks and five with eggs).

2.2 Earth Sciences and Cultural Heritage Program

2.2.1 Advice

Table 2.2.1 Earth Sciences and Cultural Heritage Program notifications in 2018–19.

Figures in brackets are the number of notifications responded to in 2017–18; significant enquiries are included in totals

	PTPZ land	Private forest	Total
Office assessment	64 (59)	117 (102)	181 (161)
Field assessment	17 (14)	18 (22)	35 (36)
Total notifications	81 (73)	135 (124)	216 (197)

There was a 10 per cent increase in notifications received compared to numbers received in 2017–18. Twenty-seven newly found historic sites were added to the Conserve database accessible to FPOs. Seventeen newly found Aboriginal heritage sites were added to the Aboriginal Heritage Register and to the Conserve database.

During the year a management plan for the management of streams and catchments in Timberlands' plantation estate in northeast Tasmania was revised, in consultation with Timberlands foresters, and the new 'agreed procedures' were published (FPA 2019). These standardise prescriptions for native-species revegetation of eroding streams, and streams at risk of eroding.

2.2.2 Research and monitoring

2.2.2.1 Karst

Karst landforms, caused by the dissolution of carbonates by slightly acidic water, are extensive in limestone and dolomite terrain. Forest operations in karst terrain need to be conducted with great care because of the risk of polluting subsurface streams as well as the risk of damaging caves and disturbing important scientific sites and rare fauna. Monitoring has been conducted on the possible effects of pine harvest on sinkhole development in soils overlying limestone in the Florentine Valley. The monitoring found that there was no significant effect of pine harvest on sinkhole deepening – some sinkholes in both harvested and unharvested areas grew in size, probably as a result of collapse of soil into subsurface streams which were proven to flow under the area by dye-tracing experiments. The monitoring undertaken, as well as observations of sinkholes elsewhere, was written up as a paper (submitted to the journal *Australian Forestry*) which includes a section on how the Tasmanian forest practices system manages karst in forests.

Joint research into the rapidly developing sinkholes in the Railton area continued with University of Queensland researchers. Results established that the sinkholes are forming as a result of water table lowering and stream diversion by a deep quarry in the area (Burke 2018). A field day to discuss sinkhole management options, attended by FPA and Forico staff, was conducted on site in May 2019.



University of Queensland Honours student Bianca Burke surveying a cover-collapse sinkhole in the Railton Valley. The deep alluvial sediments are collapsing into a cave system in the underlying limestone.

The Scientific Officer working in the Earth Sciences program documented karst landforms in the dolomite terrain of northwest Tasmania (Sumac and adjacent areas) and prepared a draft scientific report updating the karst extent which includes a section outlining the forest management required to protect karst values.

2.2.2.2 Geoconservation issues

Both earth scientists working at the FPA are members of the Tasmanian Geoconservation Database (TGD) working group which once a year assesses whether newly-described sites should be registered on the state geoconservation database. An aeolian accumulation in forested land close to the Arve River in southern Tasmania, previously listed in the TGD, was dated by Canadian researchers at the University of the Fraser Valley in British Columbia on account of its great depth (>6 m). It was found to range in age from the last glaciation to around 200 000 years ago, making it the oldest aeolian deposit in Tasmania. The deposit indicates a very long period of dry climate in this area, which at present receives more than 100 mm of rainfall annually. During the dry conditions the Arve catchment supplied fine sands which were blown off the Arve floodplain onto the low hills lying to the east. A paper on the dating techniques used was presented at the CANQUA-AMQUA conference in Ottawa in August 2018 and published in the international journal *Quaternary Geochronology* (Neudorf et al. 2019).

Three new sites in forested land were listed on the TGD: basalt volcanic plugs at Stoodley, a Quaternary stratigraphic site near Maydena, and an unusual cave on Fishers Tier, Ben Lomond. Scientifically important geosites like the Arve deposit and those mentioned above do not have legal protection, but foresters are encourage to manage them to conserve their scientific value.



The Maynes Junction TGD site near Maydena is one of the most valuable sites in the forest estate for showing climate change over the last 100 000 years. The two white layers in the photograph are rich in wind-blown quartz sand that accumulated during very dry, windy and cold desert-like conditions. In contrast the brown layers, including the present-day topsoil, accumulated under a wetter climate. The lower pale layer in this photograph was dated 90 000 years before present, and the upper pale layer was dated 20 000 years before present – it accumulated during the coldest period of the last glaciation. Details of this site and many others are listed on the TGD, which is a publicly-accessible resource of geological information, accessible at <https://www.naturalvaluesatlas.tas.gov.au>.

2.2.2.3 Soil carbon



Maintaining carbon in the forested landscape is likely to become an increasingly important management objective for foresters. As native eucalypt forests mature, they are succeeded by rainforest species forming a forest about half the height and containing half the wood volume and carbon of the previous eucalypt-dominated forest.

The photograph shows the last stage of eucalypt dominance in a stand in the Styx valley. Because it was not known whether the loss of ecosystem carbon during the succession process is made up for by an increase in soil carbon the FPA commissioned studies by two students to investigate soil carbon stocks under mature eucalypt and rainforest cover.

The issue of how forests can be managed to maintain or increase carbon in the forest estate is increasingly becoming an important issue. In native forests the main issues affecting above-ground carbon stocks are fires and the succession of ‘wet’ eucalypt-dominated forests

to low-stature rainforests over time. The latter process halves above-ground carbon, but it has never been shown whether an increase in soil carbon during this transition makes up for the above-ground loss. The FPA helped fund two Honours students to look at this issue. James Hardcastle from the University of Queensland compared soil carbon at five site pairs under eucalypts and rainforest, using statistically robust sampling methods; Tobias Klöffel from the Technical University of Munich extended the survey to two more site pairs and also looked at the chemical characteristics of the carbon, to determine its origin (Hardcastle 2018, Klöffel 2019).

Remarkably, mean soil carbon stocks in soils under mature eucalypts (mixed forest) and under rainforest were almost the same – about 200 tonnes per hectare (Klöffel et al. 2019). This means that the above-ground loss of carbon during the eucalypt-rainforest transition approximates to the true loss of carbon during the succession of the eucalypt ecosystem to rainforest. In other words, mature wet eucalypt forests are actually emitting carbon rather than absorbing carbon as the succession progresses. This observation has significant implications for forest management and climate-change mitigation: although reserves may have beneficial effects on biodiversity and soil and water values, setting aside wet eucalypt forest as reserves is not a valid climate-change mitigation policy.



Tobias Klöffel from the University of Munich samples soils for carbon content. Tobias's analyses, together with those of student James Hardcastle (University of Queensland) showed that, on average, there was no difference in soil carbon stocks under rainforest and mixed (mature) eucalypt forest, so that the c. 200 t/ha loss of biomass carbon as the eucalypt forest transitions to rainforest is a true measure of the loss of carbon during this transition.



Because mature wet eucalypt forests are net emitters rather than accumulators of carbon, protecting eucalypt forests in reserves is not an effective climate-change mitigation policy. Creating a mosaic of forests of different ages, approximately mimicking the forest pattern established by Aboriginal land management (burning), while maintaining reserves for biodiversity and soil and water values, is the best way to maintain steady carbon stocks in the landscape as a whole.

Analysis of 3000-year old subsoil carbon using nuclear magnetic resonance techniques in the Munich laboratory shows that rainforest soils retain a chemical signature of past forest fires, showing that soils in wet forests are stable over long periods and well buffered against changes (such as different carbon inputs) from surface vegetation. Fires are likely to have produced a shifting mosaic of rainforest, tall-wet eucalypt forest and regenerating forest in the wetter regions of Tasmania, and this mosaic has been probably partly induced by Aboriginal burning for access and to attract game. Encouraging a similar mosaic of forest ages and forest types in the wetter production forests of Tasmania is likely to maintain Tasmanian forest carbon stocks in the future.

2.2.2.4 Landslides

The Earth Sciences program is continuing research into the landslides which occurred in a harvested Oldina plantation following heavy rainfall in June 2016. Radiocarbon dating of charcoal layers found in the backwalls of several landslides indicate that the Oldina area experienced severe erosion several times both before and after European settlement. The oldest slope instability was dated 30 000 years ago, but there was regular instability on hill slopes (particularly in the steep headwaters of small streams) until about 200 years ago, which may date the land clearance that occurred soon after the arrival of European settlers. The dates obtained indicate that the steep-sided gullies in this area have not developed by slow stream erosion over time, but during repeated catastrophic events, probably heavy rainstorms following fires. The long history of erosion in the Oldina catchments illustrates the importance of establishing wide streamside reserves in this area to prevent future soil loss. Recognising the erosion risk, the forest company involved has adopted a policy of

revegetating all headwater streams to native vegetation, by active seeding and allowing natural regeneration from ground-stored seed.

2.2.2.5 Strahan salvage harvest

Salvage harvesting under the Code permits plantation harvesting, even where technically precluded, if plantation is replaced by native forest thus producing a better environmental outcome than if the area is not harvested. Over several years, pines planted in the Strahan area in the 1980s have been progressively salvage harvested. Some of these pines could only be removed by cable harvest over a Class 2 stream (the Fabritong Rivulet). This harvest was undertaken with strict guidelines being imposed to limit damage to streambanks and siltation of water. Harvest was completed in September 2018. There was localised erosion of riparian areas as a result of the cable harvest, but areas which had been harvested earlier and revegetated showed that exposures of sandy subsoils could be satisfactorily returned to native vegetation.



Salvage harvest of pines near Strahan involved cable harvest of pines over the Fabritong Rivulet, a Class 2 stream. Most pine debris in the rivulet has been removed with an excavator. The riparian zone including eroded areas will be revegetated with native species, which has been shown to be highly effective. It was a condition of salvage harvest that future harvest will avoid the necessity of pulling logs across the Fabritong Rivulet.



2.2.2.6 King Island

Clearing of forest and scrub on King Island for agriculture has highlighted several issues requiring attention. When land is cleared of woody vegetation, debris is piled into windrows and burnt. Because the soils on the low-lying land are peaty, burning on one coupe resulted in the entire peaty topsoil burning through to the water-saturated sands below, creating a long strip of unproductive and erosion-prone land. Another issue is the draining of land during land clearance under an FPP. Drainage on one property may be highly effective in lowering the local water table, but the effect can extend to neighbouring properties, which may be reserves. In addition, the excess (drained) water may end up on a neighbour’s property, increasing his/her drainage problems. A third issue is the poor distinction between swamps and lakes in the 2015 edition of the Code. As the definitions of these water bodies affect machine use and land management decisions, the definitions have been revised to reduce ambiguities, and included in the revised Code currently being prepared.

2.2.3 Commercial consultancies

Two consultancies were undertaken. Five days were spent in Victoria, assessing the cause of erosion in a plantation in response to a neighbour’s complaint to the certifying agency (FSC). Assistance was also provided to Papua New Guinea foresters to complete a *Field guide* (Soil Survey Team, PNG NFI 2019; McIntosh 2019) detailing sampling procedures for soil survey, to write up survey work already completed, and to assist with developing procedures for sampling carbon-rich soils in mangrove swamps.



Deep soils accumulating under mangroves can store up to 1000 tonnes of carbon per hectare. Special techniques had to be developed to sample mangrove swamp soils in the Papua New Guinea soil survey (right). These were documented in an FAO report written by the PNG soil survey team with the assistance of the FPA consultant earth scientist.



Soils on floodplains in Papua New Guinea can store large amounts of carbon in buried topsoils, illustrated by the black organic-rich layer in the middle of this riverbank on the Markham River which flows through Morobe Province. Here the soil survey team of the National Forest Inventory, with the help of local landowners, sample the profile to see how much carbon the soil actually contains.

2.2.4 Aboriginal landscapes

Joint research with the University of Queensland continues at Yellow Marsh (north-western Tasmania) and at Nicholas Marsh (north-eastern Tasmania) to determine the extent of Aboriginal modification of the Tasmanian landscape. The pollen record at Yellow Marsh (Vink 2018) shows an abrupt change from *Poa* grassland and *Asteraceae* to forest vegetation about 12 000 years ago, when the climate became warmer and wetter after the last glaciation. A pollen record in north-eastern Tasmania also showed a long period of eucalypt-dominated forest (Farrell 2018). Although eucalypts may be the natural climax vegetation in north-eastern Tasmania, because the climate is drier there than in the west, the natural climax forest in the north-west is rainforest, and the fact that open eucalypt forests and *Poa* grasslands continue to be present, suggest that fires have influenced the vegetation pattern until quite recent times. The charcoal record confirms an approximately 500-year return interval for larger fires, over many thousands of years. Whether these fires were human-lit or natural cannot be ascertained from the pollen and charcoal study alone, but it is known from early European mapping by Henry Hellyer in 1827 and more recent analysis (Onfray 2012) that extensive areas that ‘should’ be rainforest had been replaced by open eucalypt forest or grasslands by the Aboriginal population when Europeans first arrived in the area.



Thompson's Park, Surrey Hills – a fire-induced area of open eucalypt forest probably first established by Aboriginal burning of rainforest, several thousand years ago.

2.2.5 Historic cultural heritage

When ‘new’ European cultural heritage is found during the preparation of FPPs, sites are mapped and photographs collected so that a record of previous activities in forests and ex-farmland exist.



Left: a photograph of an ancient Fordson tractor in the southern forests; centre and right: remains of a possible miner's camp near Springfield in northwest Tasmania. These artefacts were found by FPOs while planning coupes, and subsequently recorded on the ‘Conserve’ historic database.

2.3 Socio-Economic Program

The FPA Socio-Economic Program is overseen by an intra-governmental steering committee and funded as part of the Forest Industry Growth Strategy. It has been established in response to the need to better understand the full suite of social, economic and environmental considerations required for decision making in forest practices. The objectives of the program are:

- To improve the collection, analysis and consideration of forestry economic and related social data to facilitate greater cost-benefit analysis in environmental decision making within the forest practices system, consistent with the objectives of the Act and the roles and functions of the Forest Practices Authority.
- To consider and inform decision-makers of the potential socio-economic impacts of any proposed new or altered management prescriptions in the forest practices system and facilitate stakeholder engagement.
- To analyse and report on the socio-economic implications of the current management prescriptions, with a view to ensuring that environmental outcomes are delivered in both economically efficient and socially acceptable ways.
- To ensure accurate, up-to-date information is available to the community on the social, economic and environmental value of the industry.

The program activities in 2018–19 have been undertaken in accordance with the endorsed Socio-economic Program plan and are aligned with the key initiatives developed in consultations with industry, academic and government stakeholders (see Figure 2.3.1).

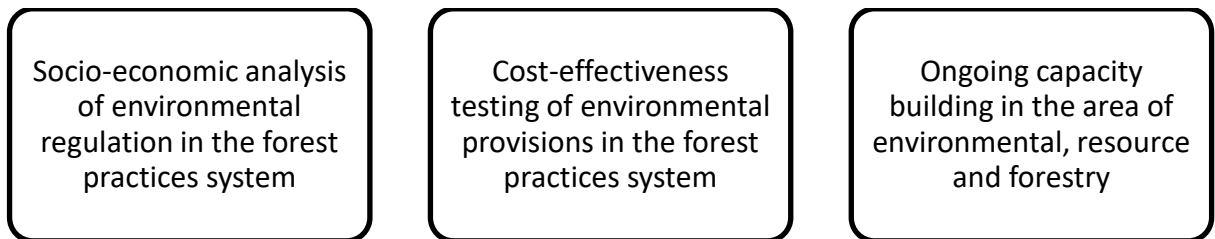


Figure 2.3.1 Key initiatives of the Socio-economic Program

The progress under each initiative is outlined below:

2.3.1 Initiative 1: Socio-economic analysis of environmental regulation in the forest practices system

A significant amount of work has been undertaken to identify priority actions that will examine the costs and benefits of specific elements of (a) the current forest practices system, and (b) any proposed changes to the forest practices system. The key projects that have been active in 2018–19 are listed in Table 2.3.1.

Table 2.3.1 Socio-economic Program projects under initiative 1 that were current in the 2018–19 reporting period, with summary of activities undertaken

Project name	Project description
A socio-economic decision-making framework	The FPA economist has been working with the stakeholders to develop a socio-economic assessment framework, which will enable the Forest Practices Authority (FPA) to assess the full set of environmental, economic and social impacts as part of its decision-making process. The output of this project will form part of the FPA overall assessment process.
Baseline of the cost of compliance with the forest practices system	Significant progress has been made with the development of a baseline, which will enable the FPA and forest owners to accurately assess the current cost of environmental compliance to support decision making on future changes.
Natural capital accounting options scoping	This scoping project is due to be completed by the end of 2019 and is aimed at investigating viability of incorporating natural capital accounting in the State of the Forests reporting system.
Unlocking financial innovation in forest products with natural capital	The FPA (jointly with other industry partners) is contributing to a CSIRO-led, industry-driven National Institute for Forest Products Innovation (NIFPI) project aimed at 'Unlocking financial innovation in forest products with natural capital'.
Willingness to pay for sustainable firewood in Tasmania	The FPA economist is providing co-supervision to a UTAS PhD student, whose project is concerned with the identification of market preferences for sustainable firewood in Tasmania.

2.3.2 Initiative 2: Ongoing social, environmental and cost effectiveness testing of regulatory provisions within the forest practices system

The projects under this initiative are aimed at providing information on the socio-economic impacts of the Code provisions (current and proposed) – examining a range of threatened species-related recommendations to ensure that prescriptions protecting threatened species and other biodiversity values remain robust and effective. Information gathered will ensure a balanced approach between economic cost and effective environmental protection. The list of active projects in 2018–19 is provided in the Table 2.3.2.

Table 2.3.2 Socio-economic Program projects under initiative 2 that were current in the 2018–19 reporting period, with summary of activities undertaken

Project name	Project description
Socio-economic assessment of proposed swift parrot management actions	Socio-economic assessment of the proposed changes to swift parrot management actions was completed in July 2019. The project quantified socio-economic impacts of the proposed actions on both private landowners and the state forest. The results of the assessment were communicated to the FPA Board and the FPAC members and contributed towards an effective decision-making process, which takes into account a full set of environmental, economic and social implications.
Effectiveness testing of the biodiversity provisions of the Tasmanian <i>Forest Practices Code</i> – socio-economic assessment	This project forms part of the broader Forest and Wood Products Australia supported effectiveness monitoring program managed through the FPA and Biodiversity Program in collaboration with other research and industry partners. The socio-economic component of it is underway and will deliver an analysis of forest practices provisions, current, and proposed, that apply to the three iconic threatened species (eagle, masked owl and giant crayfish). It will contribute towards improving socio-economic data that will directly inform decision making and help identify potential cost-saving opportunities that deliver the same (or greater) benefit.
Carting advice review	The results of this project, along with a set of recommendations, were communicated to the FPA Biodiversity Program to help improve effectiveness of the eagle management prescriptions related to carting activities undertaken near eagle nest sites.

2.3.3 Initiative 3: Capacity building within the area of environmental and resource economics

In 2018–19, key capacity and expertise building actions were:

- Establishing and maintaining ongoing collaboration with ARC Centre for Forest Value and Tasmanian School of Business and Economics (TSBE) at UTas.
- Ensuring program relevance through industry engagement on socio-economic issues including participation of stakeholders in working groups for specific projects.
- Three PhD scholarships at TSBE have been offered as part of this initiative. This involved a rigorous selection process with over 80 applications received and shows that there is a high level of student interest in this area of research.

- Through FPA’s participation in the Tasmanian State Service Graduate Program, a Graduate Officer has been employed in the FPA for a period of two years to work in the Socio-economic Program.
- FPA is supporting UTas’ Corporate Internship Program by facilitating a successful placement of an undergraduate business and economic student within the socio-economic program.

2.4 Training and education carried out by the FPA

2.4.1 *Forest Practices News*

One edition of *Forest Practices News* was published by the FPA in 2018–19, and can be found on the [FPA website](#). The newsletter provides a channel for communicating new ideas and developments among those interested in the management of Tasmania’s forests. Emphasis is placed on practical and applied information, particularly on articles supplied by practising FPOs. FPA staff and the Chief Forest Practices Officer contributed 18 articles to *Forest Practices News*. The Publications Officer and the Earth Sciences and Cultural Heritage Manager edit the newsletter.

2.4.2 Forest practices system training

FPA staff ran or contributed to the educational events, courses and symposia listed below.

2.4.2.1 Outside presentation training

FPA staff often give presentations in the forest, which is a very different environment from the traditional classroom. In September, the Biodiversity Program organised training for FPA staff with Peter Grant, an interpretation expert, on how to deliver engaging field-based presentations. The training was based on the principles of thematic communications which aims to bridge the gap between straight facts (knowledge) and desired outcomes (actions based on knowledge).

2.4.2.2 Threatened Flora Course

The Biodiversity Program ran three very successful Threatened Flora Field days in October and November 2018. Each course had 30 to 40 participants from a range of organisations including the forest industry as well as other government agencies and local councils. The field days accessed over 15 sites to show a broad range of species and habitats. Course participants were able to see a large number of threatened plants and discuss impacts and management considerations for activities such as timber harvesting, road construction and planned burning. One of the key outcomes of the field days was an appreciation of the type of habitat that is often occupied by a threatened species, such as rocky areas, grassland and grassy woodlands.



FPA Ecologist Kirsty Kay (third from left) assisting course participants to identify threatened plants at the Tom Gibson Nature Reserve in the Midlands.

2.4.2.3 Masked owl course

The Biodiversity Program ran two one-day masked owl courses in May 2019. In the theory component of the course, species experts gave talks focused on general owl ecology, past and present research, and methods of applying effective management. In the second half of the day participants and presenters visited different forest sites to evaluate significant habitat and potential masked owl hollows. The course was attended by 58 participants (28 in the south and 30 in the north), including FPOs, planners, land managers, local council, and other government agencies as well as researchers and other interested people.

2.4.2.4 Research Update

The FPA's Research Biologist ran the annual FPA Research Update event in September 2018 during which researchers presented information about their projects. The purpose of this annual event is to update stakeholders, industry personnel and other researchers on research that has been conducted in the last financial year that considers the effectiveness of provisions implemented through the forest practices system for the conservation of natural and cultural values.

2.4.3 Forest Practices Officer training

FPOs act as authorised officers of the FPA in the execution of certain sections of the Act and in the interpretation of the Forest Practices Regulations 2017. An important function of the FPA is to train FPOs to ensure that they have the required skills and knowledge to carry out their role prior to appointment as an FPO.

Aspiring FPOs must successfully complete the FPO Training Course coordinated by the FPA, which is generally run every two years. The last FPO Training Course was run in 2017, but the next course has been delayed by one year to 2020 due to insufficient enrolments and the review of the Code.

Although this course is no longer run as a nationally accredited course due to the associated expenses, it is run according to the standards of the nationally accredited course. The Training Coordinator has completed a Certificate IV in Training and Assessment in order to achieve this.

FPO Refresher Courses

The FPA runs a series of regional and compulsory FPO Refresher Courses every two years to ensure that FPOs keep their knowledge of the forest practices system current. The three courses, run in September, October and November 2018, were attended by a total of 163 FPOs or people who have recently completed the FPO Training Course and intend to apply for FPO appointment.

The CFPO and FPA staff updated the FPOs on developments in the system during the morning sessions. As a new initiative, two guest speakers also presented in the morning sessions: Michael Giudici, the Surveyor General, talked about GIS and surveying (Alan Dodds gave this presentation in Devonport); and FPO Andrew Plank talked about NORMAP, Norske Skog's electronic mapping app. The morning session included a briefing on the new electronic version of the section 41(1) form which is issued by FPOs when there is a failure to comply with provisions of a certified FPP. This presentation generated the liveliest discussion on all three courses.

During the afternoon the FPOs were divided into groups to work on an exercise in writing clear FPPs. Most FPOs engaged well with this activity and the exercise produced some useful discussion on how to write better FPPs.

Almost 70 FPOs completed the feedback survey, which is an outstanding response rate. This alone illustrates the level of engagement of FPOs with the FPA, and the feedback itself supports this. Much of the feedback was positive, and all of it constructive. FPOs were particularly appreciative about the inclusion of the guest speakers. Feedback after the Hobart and Launceston courses informed improvements to subsequent courses, particularly tweaking the FPP writing exercise.

3 Administration of forest practices

3.1 The Board of the Forest Practices Authority

The FPA has the statutory responsibility for advancing the state’s forest practices system and fostering a cooperative approach in developing policy and management in forest practices matters. The forest practices system is based upon a co-regulatory approach involving a balance between self-management by industry and independent monitoring by the FPA. The Board of the FPA provides independent advice and statutory reports to the Minister for Resources.

The statutory functions of the Board of the FPA as laid down in s. 4C of the Act are to:

- advise the Minister on forest practices policy in respect of both Crown land and private land
- regularly advise and inform the Minister on its work and activities under the Act
- advise the Minister on the operation and review of the Act
- issue and maintain the Code
- oversee standards for FPPs (FPPs)
- oversee the administration of PTRs by Private Forests Tasmania
- monitor and report to the Minister on harvesting, the clearing of trees and reforestation activity in relation to the maintenance of a permanent forest estate
- implement the state’s Permanent Native Forest Estate Policy
- oversee the training of FPOs
- make a recommendation on the appointment of the Chief Forest Practices Officer and to appoint FPOs
- perform such other functions as are imposed on it by or under this or any other Act
- perform any prescribed functions.



FPA Board member Amy Robertson discusses the changed hydrology at the Railton plantation with Forico staff during a field day looking at sinkhole management.

3.1.1 The directors of the Board of the Forest Practices Authority

The directors of the Board in 2018–19 were as follows:

- Independent Chair, with expertise in public administration, environmental or natural resource management and governance: John Ramsay (appointed 1 July 2015)
- a person with applied knowledge and expertise in environmental or natural resource management: Alex Schaap (appointed 1 July 2015)
- a person with applied knowledge and expertise in sustainable forest management on private land: David Gatenby (appointed 15 December 2015)
- a person with applied knowledge and expertise in sustainable forest management on public land: Amy Robertson (appointed 13 August 2016)
- a person with applied knowledge and expertise in community liaison and local government, from an area in which forestry is a major land use: Cheryl Arnol (appointed 1 July 2015)
- a person with independent expertise in biological science/nature conservation: John Hickey (appointed 1 July 2015)
- the Chief Forest Practices Officer: Peter Volker (appointed as Chief Forest Practices Officer and Director 5 April 2016).



The Board of the FPA: (from left), Alex Schaap, John Hickey, Amy Robertson, John Ramsay (Chair), Cheryl Arnol, David Gatenby, Peter Volker (Chief Forest Practices Officer)

3.1.2 Qualifications, other relevant positions held and declaration of interest by directors

John Ramsay OAM, LLB

- Member – Tasmanian Planning Commission

Alex Schaap BSc (Hons)

- Member - Resource Management and Planning Appeals Tribunal
- Member - Inland Fisheries Advisory Council

David Gatenby

- Director –Tasmanian Heritage Council
- Member – Tasmanian Farmers and Graziers Association (TFGA)
- Landowner including private forests (native forest and plantation)

Cheryl Arnol MAICD

- Councillor - Glamorgan Spring Bay Council
- Member - Australian Institute of Company Directors
- Chair - Glamorgan Spring Bay Council NRM committee

John Hickey BForSci(Hons), MSc, MIFA

- Member - Committee of the Tasmanian Division, Institute of Foresters (Australia)
- Contract to identify research priorities for native forest silviculture for Forests and Wood Products Australia

Amy Robertson BEnvSc(Biodiversity Conservation), DipNatResMgt, MIFA, GAICD

- Owner of land with native forest
- Husband undertakes forest practices work for STT
- Provided FPO course training services to FPA in 2017

Peter Volker BSc(Forestry), GradDipSc(Forestry), MBAP(EnvMgt), PhD, MAICD, FIFA, RPF

- Chief Forest Practices Officer (see section 3.3)

3.1.3 Remuneration

Total remuneration paid to non-executive directors of the FPA falls within the following bands: \$20 000 to \$29 999 (five directors) and \$30 000 to \$39 999 (one director).

The Chief Forest Practices Officer is appointed under an Instrument of Appointment in accordance with the *State Service Act 2000* at Senior Executive Service level SES2.

3.1.4 Activities of the Board of the Forest Practices Authority

The Board had 15 meetings during the year. The Board meeting is summarised in a communique for each meeting which is sent to the Minister, FPAC and posted on the FPA website. Major actions of the Board during the year, which are not discussed elsewhere in this report, included:

- dealing with non-compliance matters
- drafting amendments to the Act
- reviewing the Code
- discussing the new state planning provisions and interaction with the forest practices system
- discussions on management of threatened species under the forest practices system, including with DPIPW and STT on a strategic management plan (PAMA) for swift parrots in the Southern Forests
- briefing on cyber security from DSG
- discussing development of a communications and engagement strategy
- considering applications for clearance and conversion of threatened native vegetation communities under s. 19(1AA) of the Act
- responding to the bushfire emergency as appropriate
- considering challenges facing FPA about clearing activities on Bass Strait Islands
- endorsing a Hobart City Council vegetation management agreement for Queen's Domain
- discussing emerging issues associated with implementation of the Permanent Native Forest Estate Policy
- deciding to limit consideration of applications for clearance and conversion of native forests for agricultural purposes to 40 ha per property per year to a single FPP. Where larger areas are proposed under one plan, applicants will be advised they will need to demonstrate to the Minister a substantial public benefit as part of the application process.

The Board had three standing committees in 2018–19 as follows:

- Audit and Risk Committee – this committee assists the Board in fulfilling its responsibilities in relation to proper financial, compliance and performance management of the FPA. It comprised David Gatenby (Chair), Cheryl Arnol and John Ramsay.
- Work Health and Safety Committee – this committee implements responsibilities in relation to oversight of work health and safety management within the FPA. It comprised all Board members.
- Compliance Committee – this committee engages regularly with the Chief Forest Practices Officer and Compliance Manager to identify and pursue opportunities for improving compliance with sustainable forestry practices in Tasmania both through the actions of the FPA and other agencies. It also reviews investigations conducted by the FPA into alleged breaches to ensure that the required standards of rigour, fairness and consistency are maintained. The committee comprised John Hickey (Chair), Amy Robertson and Alex Schaap.

Table 3.1.1 Attendance of directors of the FPA at meetings and committees

Director	Board meetings attended (15 meetings held in 2018–19)	Other meetings attended/services rendered
John Ramsay (Chair)	13 ¹	Meetings of the FPAC; Audit and Risk Committee
Alex Schaap	15	Compliance Committee
David Gatenby	14	Audit and Risk Committee
Amy Robertson	15	Compliance Committee
Cheryl Arnol	14	Audit and Risk Committee
John Hickey	15	Compliance Committee
Peter Volker	15	Meetings of the FPAC; Day-to-day administration of the forest practices system (see section 3.3 below)

¹ The Board granted John Ramsay leave of absence for the two meetings held in October 2018

3.2 Forest Practices Advisory Council

The functions of the FPAC are to advise the Board of the FPA on reviews of the Act and the Code, financial matters including self-funding and the effectiveness of forest practices administration, operations; and research.

Members of the FPAC in 2018–19 were:

- a person with knowledge or expertise in sustainable forest management (Chair): Dr Hans Drielsma (re-appointed 11 June 2018)
- a person with knowledge of the state’s resource management and planning system in relation to municipal areas in which forestry is a major land use, nominated by the Local Government Association of Tasmania: Shane Wells (appointed 3 April 2017)
- a person with expertise in, and operational experience of, forest harvesting or forest contracting: Neil McCarthy (until 31 July 2018) then Clive Woolridge (appointed 30 October 2018)
- a person with knowledge of the state’s resource management and planning system, nominated by the Secretary of the responsible department in relation to the *Environmental Management and Pollution Control Act 1994*: Wes Ford (appointed 4 September 2015)
- a person with knowledge of administration and legislation in relation to private forests, nominated by Private Forests Tasmania: Penny Wells (appointed 1 August 2018)
- a person with knowledge of administration and legislation in relation to multiple use forests, nominated by the forestry corporation: Suzette Weeding (re-appointed 11 June 2018)

- a person with expertise in, and experience of, forest issues in relation to harvesting and processing, jointly nominated by the Forest Industries Association of Tasmania (FIAT) and the Tasmanian Sawmillers Association: Terry Edwards (until 8 August 2018, then vacant)
- a person with expertise in, and experience of, forest issues in relation to forest conservation: Fred Duncan (re-appointed 11 June 2018)
- a person with expertise in, and experience of, tree growing on private land, jointly nominated by the TFGA and FIAT: Andrew Morgan (until 8 July 2018) then Wayne Johnston (appointed 11 September 2018)

The FPA Board Chair and Chief Forest Practices Officer are invited to attend all FPAC meetings and executive support is provided by the FPA. Five meetings were held during the year. The major issues addressed by the FPAC during the year included:

- an update of the FPA's Investigation and Enforcement Protocols
- an update of the Eagle Management Technical Note
- the eagle nest activity checking program
- proposed amendments to the Act
- review of the Code
- socio-economic factors in the forest practices system and the use of new Government funding
- critically endangered swift parrot and a related Public Authority Management Agreement between STT and DPIPW
- the FPA's financial status
- Council membership
- listing of *Eucalyptus ovata* forest communities under the EPBCA
- forest practices training for contractors
- standard time limits for the duration of FPPs
- clearance and conversion on offshore islands.

3.3 Chief Forest Practices Officer

The Chief Forest Practices Officer is responsible for overseeing the day-to-day administration of the forest practices system and is appointed under s. 4J of the Act as a person who must have:

- extensive expertise in forestry;
- extensive experience in forest operations;
- knowledge of the sustainable management of forests;
- management skills.

Peter Volker has been the Chief Forest Practices Officer since April 2016.

Chief Forest Practices Officer’s qualifications, other relevant positions held, affiliations and declaration of interests:

- Bachelor of Science (Forestry) – *Australian National University* 1981
- Graduate Diploma of Science (Forestry) – *Australian National University* 1989
- Doctor of Philosophy – *University of Tasmania* 2002
- Master of Business Administration (Professional) in Environmental Management – *University of Tasmania* 2012
- Certificate IV in Assessment and Workplace Training 2002
- Certificate IV in Government Investigations (Regulatory Compliance) 2018
- Registered Professional Forester (with specialist expertise in silviculture and forest genetics)
- Fellow of the Institute of Foresters of Australia
- Member of the Commonwealth Forestry Association
- Member of the Australian Institute of Company Directors
- Honorary Research Associate – *University of Tasmania*

Peter Volker has joint ownership of a private property in Tasmania which includes natural forest and plantations.



CFPO Peter Volker (left) with Phil Bell and Joan Rylah MP, who presented the Forest Practices Awards in June 2019. Phil won the award for ‘Excellence in advice and services to forest managers’ for 20 years of biodiversity conservation, including education and training, research, and advising on threatened species management.

3.4 Forest Practices Officers

The FPA appoints FPOs under s. 39 of the Act. An appointed FPO holds a warrant which authorises them as an FPO (Inspecting), but an additional power to certify FPPs may be delegated to FPOs authorised as FPO (Planning).

FPOs are employed by forest companies, STT and Private Forests Tasmania or are engaged as independent consultants to plan, supervise, monitor and report on forest practices and ensure that operations comply with the Act and the Code.

The prerequisite qualification for appointment as an FPO is being deemed competent under the FPO Training Course in addition to relevant forestry experience. More information is available in the *Forest Practice Officer training resource manual* on the [FPA website](#).

A person who wishes to be appointed as an FPO must successfully complete a training course conducted by the FPA (section 2.3.3), which consists of a number of teaching sessions, field trips, and practical exercises in various parts of the state, and a formal examination. The training course covers legislation and implementation of the Code with an emphasis on harvesting, roading and reforestation. Specialist subjects include biodiversity, soils and water, geomorphology, cultural heritage, fire management, compliance and visual landscape. Attendance at periodic refresher courses is compulsory.

During 2018–19, 12 FPOs were appointed by the Board of the FPA. Of these, two were delegated authority to function as FPO (Planning). In addition, two FPO (Inspecting) were delegated authority and changed status to FPO (Planning).

There were 171 active or recently active FPOs, an increase of 10 since last year (Table 3.4.1).



FPOs working on a planning exercise at the Hobart FPO Refresher Course in August 2018. From left: Amy Robertson, Kerri Spicer, Dan Ryan and John Webb.

Table 3.4.1 Forest Practices Officers¹**FPO (Planning)**

	As at 30/6/17	As at 30/6/18	As at 30/6/19
Industry	37	40	39
Independent consultants	23	25	25
Sustainable Timber Tasmania	27	24	26
FPA	2	2	2
Private Forests Tasmania	3	3	3
Other government	1	2	3
Other (currently inactive)	4	0	10
Total FPO (Planning)	97	96	108

FPO (Inspecting)

	As at 30/6/17	As at 30/6/18	As at 30/6/19
Industry	14	18	17
Independent consultants	6	7	6
Sustainable Timber Tasmania	26	31	26
FPA	2	3	3
Private Forests Tasmania	0	0	0
Other government	4	5	5
Other (currently inactive)	1	1	6
Total FPO (Inspecting)	53	65	63
Total (Planning and Inspecting)	150	161	171

¹ These numbers are for active or recently active FPOs.

3.4.1 Forest Practices Officer Reference Group

The Chief Forest Practices Officer established a Forest Practices Officers Reference Group (FPORG) to facilitate direct communication between FPOs and the FPA. The group is independent from the FPA and is a forum for issues that FPOs feel need addressing by the FPA. The group meets periodically and includes FPOs from across the forestry sector. FPA staff also attend if required.

FPORG's objectives are to:

- discuss and exchange ideas on matters relating to the role of FPOs and the operational aspects of the forest practices system (inspecting, planning and implementation)
- review and provide feedback on proposed new FPA initiatives relevant to the work of FPOs (e.g. proposed new planning tools, technical notes, training courses and field days, research and advisory work, monitoring and assessment).

During the year FPORG had input into finalising the disciplinary procedures for FPOs, developing an FPO Code of Conduct, the addition of an FPO on FPAC, continuing professional development for FPOs, the review of the Code, and discussing a peer-review process for independent FPOs.

The Hobart and Launceston FPO Refresher Courses started with an FPORG breakfast which gave FPOs a chance to discuss with FPORG and the CFPO any issues of concern.

3.4.2 Disciplinary action

FPOs are a key part of the forest practices system and the FPA expects FPOs to maintain high standards. During the year the FPA finalised a stand-alone [Procedure for investigating the performance of FPOs](#) following consultation with FPAC and FPORG. During the year there was no disciplinary action taken against FPOs.

3.5 Forest Practices Authority staff

FPA staff are highly qualified and recognised as leaders in their fields of expertise. All specialist staff have higher degree qualifications including eight PhDs. Operational staff are well-qualified with technical training on forestry related disciplines. There is diversity in personnel including gender, age and previous experience.

In accordance with DSG policies, FPA staff are encouraged to have appropriate work-life balance and to adopt the values of teamwork, excellence, integrity and respect. During the year all FPA staff participated in training on these values and White Ribbon workshops.

FPA employees are encouraged to undertake further training appropriate to their work and are also supported to attend and present at conferences and workshops to publicise FPA's work and as part of their continuing professional development. Training was provided to staff on workplace health and safety, first aid and various professional development topics.

Table 3.5.1 Staff attached to the FPA in 2018–19

Name	Qualifications	Position
Dr Peter Volker	BSc (Forestry), GradDipSc (Forestry), MBA(Professional) (Env. Mgt.), PhD	Chief Forest Practices Officer and Director
Angela Gardner	BSc, MSc (Env. Mgt.)	Executive Assistant/ Project Officer (Ecologist)
Ann La Sala (Casual, consultant)	BA (Geography and Environmental Studies)	Coordinator for <i>State of the forests Tasmania 2017</i> report and <i>Forest Practices Code</i> review
Christine Grove	BA (Hons), MSc (Forestry)	Publications Officer and Training Coordinator
Socio-economic		
Dr Elena Tinch	BSc, MSc, PhD	Environmental Economist
Campbell Whiteley	BBus	Graduate Analyst (commenced 12/02/19)

Compliance Program		
Stephen Walker	ADipAppSc (Forestry), BAppSc (Comp), GDipBA, Cert IV (Govt. Investigations) Lead Auditor Certificate	Manager Compliance
James Fergusson	Diploma (Forest growing and forest products)	Forest Practices Advisor
Michael Rawlings	Dip. OHS, Cert. IV (Assessment & Workplace Training), Lead Auditor Certificate	Forest Practices Advisor
Earth Sciences and Cultural Heritage Program		
Dr Peter McIntosh	BSc (Hons), PhD	Manager Earth Sciences and Cultural Heritage
Dr Adrian Slee	BSc (Hons), PhD	Scientific Officer (Earth Sciences)
Biodiversity Program		
Dr Sarah Munks	BSc (Hons), PhD, FAICD	Manager, Biodiversity Program (retired 17/09/19)
Anne Chuter	BSc (Hons)	Scientific Officer (Ecologist) and Acting Manager Biodiversity Program
Dr Amy Koch	BSc (Hons), PhD	Research Biologist
Dydee Mann	BSc (Hons)	Scientific Officer (Ecologist)
Jason Wiersma	BSc (Hons)	Scientific Officer (Biodiversity)
Kirsty Kay	BSc	Scientific Officer (Ecologist)
Dr Phil Bell (part-time contractor)	BSc (Hons), PhD	Ecologist
Dr Perpetua Turner (contractor)	BSc (Hons), PhD	Acting Research Biologist
Stephen Casey (part-time contractor)	BSc (Hons)	Ecologist
Shavawn Donoghue (part-time contractor)	BSc (Geology), GradDip (Hons), PhD	Tree Fern Research Officer (commenced 02/08/18)
Business Support		
Angus MacNeil	BSc (Hons), GAICD	Acting Chief Forest Practices Officer and Business Manager
Adrienne Liddell	Cert IV Small Business Management (NEIS)	Administration Assistant
Julie Walters		GIS Database and Systems Support Officer
Michael Bridge	Adv. Dip. Business Mgt, Dip. Business (Human Resources), Dip. Frontline Mgt	Business Support Officer

3.6 Forest Practices Tribunal

The Forest Practices Tribunal is an independent body established under s. 34 of the Act. The Tribunal's role is to conduct hearings and make determinations with respect to appeals that are lodged under the Act by aggrieved parties. Appeals may be lodged against decisions of the FPA with respect to the following matters:

- An applicant for a PTR may appeal against the refusal of the PTR.
- A prescribed person may appeal against the granting of a PTR.
- An applicant for an FPP may appeal against the refusal, amendment or variation of the plan.
- A person served a notice under s. 41 of the Act may appeal against the notice.
- A person who has lodged a three-year plan may appeal if the FPA varies or refuses the three-year plan.

Members of the tribunal are appointed by the Governor of Tasmania in accordance with s. 34(2) of the Act.

During 2018–19 the Chief Chairperson of the Tribunal was Mr KAM Pitt QC and Deputy Chief Chairperson was Mr Andrew Walker.

Hearings of individual appeals are conducted by a panel of three, comprising the Chief Chairperson or Deputy Chief Chairperson and one member appointed by the Chairman from each of two categories under s. 34(2) of the Act, depending upon the nature of the appeal.

There were no appeals lodged during 2018–19.

The contact details for the Tribunal are as follows: Forest Practices Tribunal, C/- GPO Box 2036, HOBART 7001, Phone: 61656794 Email: rmpat@justice.tas.gov.au

3.7 Public interest disclosures and right to information requests

The *Public Interest Disclosures Act 2002* commenced on 1 January 2004. The FPA has, in accordance with the Act, prepared procedures for information disclosure which are available on the [FPA website](#) or which can be viewed at the FPA's offices during working hours.

There were no right to information requests or public interest disclosures this year.

3.8 Funding

The objective of the Tasmanian forest practices system is to deliver sustainable forest management in a way that is as far as possible self-funding (Schedule 7 of the Act). The Act also provides under s. 44 that certain functions of the FPA will be paid out of money allocated by parliament. Full financial details for 2018–19 are presented in section 4 of this report (financial statements).

3.9 Self-funding of activities conducted by industry

The industry has self-funded the implementation of the Act by providing the following services:

- the employment and training of FPOs and other staff involved in the preparation, certification, monitoring and reporting of FPPs (a conservative estimate of the value is approximately \$10 million per annum)
- training and education of contractors and operators.

A conservative estimate of the value of the industry supporting FPOs in their duties and the training and education of contractors is in the order of \$15 million per annum.

3.9.1 Self-funding of activities conducted by the Forest Practices Authority

The self-funding activities of the FPA are primarily related to the cost of the advice and services provided by FPA staff in relation to the processing of FPP applications (see section 2 of this report and the financial statement). The funding for these activities of the FPA is derived from an application fee for FPPs in accordance with s. 18 of the Act.

In addition to the direct funding of the research and advisory programs, the FPA receives income from research grants and consultancy work.

The FPA also regulates the harvesting of treeferns under a user-pays system. All treeferns must be affixed with a tag issued by the FPA prior to removal from the harvesting area. Revenue collected from the sale of treefern tags is used to cover the cost of regulatory activities and to fund further research into the long-term sustainability of harvesting treeferns. The schedules of fees for FPPs and treefern tags are detailed in the [Forest Practices Regulations 2017](#).

In accordance with s. 4E(1)(a) of the Act, the FPA reports that the forest practices system satisfied the principle of self-funding in 2018–19.

3.9.2 Funding of the Forest Practices Authority from parliament

Section 44 of the Act provides that the costs and expenses incurred for the following activities are to be paid out of monies provided by parliament:

- annual assessment of the forest practices system and FPPs
- preparation of the annual report to parliament under s. 4X
- detection and investigation of breaches of the Act
- laying of complaints and prosecuting offences
- payment of compensation for the refusal of PTRs
- remuneration of the Chief Forest Practices Officer
- administrative support for the Chief Forest Practices Officer
- exercise of the FPA’s powers and functions.

The independent regulatory functions of the FPA were funded by the income received under s. 44 of the Act in 2018–19.

The 2018 State Budget included new initiative funding by the Tasmanian government to assist in implementing the *Strategic Growth Plan for Tasmania’s Forests, Fine Timber and Wood Fibre Industry 2017* (the Growth Plan) developed by the Ministerial Advisory Council on Forestry.

The new initiative funding includes \$500 000 per annum provided to the FPA for four years to improve forestry related socio-economic data and its consideration in decisions related to forest practices regulation.

The funds have been provided to the FPA for two components:

1. Concerns from stakeholders that they are not properly informed in relation to potential socio-economic impacts of any proposed new or altered management prescriptions in the forest practices system, when advice is sought through advisory groups such as the FPAC; and
2. Government and industry desire to understand the cost effectiveness of existing management prescriptions within the forest practices system, with a view to ensuring that good environmental outcomes continue to be delivered in the most cost-effective way.

3.9.3 Register of grants received from industry

Source of funding	Project title	Date funding received	Amount received Aus \$
Forest and Wood Products Australia	Monitoring the effectiveness of the Tasmanian <i>Forest Practices Code</i> for biodiversity	14/3/19	39 092

4 Financial statements for the year ended 30 June 2019

Special Purpose Financial Statements

For the year ended 30 June 2019

FPA

FOREST PRACTICES AUTHORITY
TASMANIA AUSTRALIA

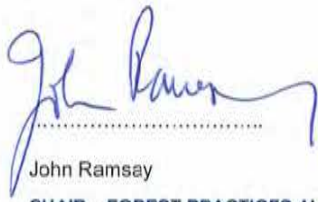


CERTIFICATION OF FINANCIAL STATEMENTS

The accompanying Special Purpose Financial Statements of the Forest Practices Authority are in agreement with the relevant accounts and records and have been prepared in compliance with section 4X of the *Forest Practices Act 1985* to present fairly the financial transactions for the year ended 30 June 2019 and the financial position as at the end of the year.

The Authority has decided it is appropriate to prepare Special Purpose Financial Statements, on the basis outlined in policy note 8.2, because there are no relevant users dependent on general purpose financial information.

At the date of signing, we are not aware of any circumstances which would render the particulars included in the Financial Statements misleading or inaccurate.



John Ramsay

CHAIR – FOREST PRACTICES AUTHORITY

Date 27 September 2019



Peter Volker

CHIEF FOREST PRACTICES OFFICER

Forest Practices Authority
Statement of Comprehensive Income for the year ended
30 June 2019

	Notes	2019 \$'000	2018 \$'000
Continuing operations			
Revenue and other income from transactions			
Grants and Industry contributions	1.1	2,077	1,973
Sales of goods and services	1.2	926	915
Fees and fines		99	39
Interest		64	60
Other revenue		-	24
Total revenue and other income from transactions		3,166	3,011
Expenses from transactions			
Employee benefits	2.1(a)	1,958	1,586
Superannuation	2.1(b)	228	180
Depreciation and amortisation	2.2	3	1
Supplies and consumables:			
Consultants		459	239
Property services		24	29
Communications		22	22
Information technology		66	77
Travel and transport		159	142
Advertising and Promotion		...	2
Operating lease costs		84	81
Audit fees – financial audit		3	3
Audit fees – internal audit		7	-
Other supplies and consumables	2.3	294	298
Other expenses		51	38
Total expenses from transactions		3,358	2,698
Net result from transactions (net operating balance)		(192)	313
Comprehensive result		(192)	313

This Statement of Comprehensive Income should be read in conjunction with the accompanying notes.

Forest Practices Authority
Statement of Financial Position as at 30 June 2019

	Notes	2019 \$'000	2018 \$'000
Assets			
<i>Financial assets</i>			
Cash and deposits	6.1	478	814
Financial Investments		1,750	1,560
Receivables	3.1	52	41
Other financial assets	3.2	96	83
<i>Non-financial assets</i>			
Prepayments		16	8
Plant & equipment	3.3	11	14
Total assets		2,403	2,520
Liabilities			
Payables		35	15
Employee benefits	4.1	407	339
Other liabilities		4	17
Total liabilities		446	371
Net assets		1,957	2,149
Equity			
Accumulated funds		1,957	2,149
Total equity		1,957	2,149

This Statement of Financial Position should be read in conjunction with the accompanying notes.

Forest Practices Authority
Statement of Cash Flows for the year ended 30 June 2019

	Notes	2019 \$'000	2018 \$'000
		Inflows (Outflows)	Inflows (Outflows)
Cash flows from operating activities			
Cash inflows			
Grants and Industry contributions		2,047	1,975
Other cash receipts		1,207	1,083
Total cash inflows		3,254	3,058
Cash outflows			
Employee benefits		(2,165)	(1,839)
Other cash payments		(1,235)	(988)
Total cash outflows		(3,400)	(2,827)
Net cash from operating activities	6.2	(146)	231
Cash flows from investing activities			
Cash inflows			
Proceeds from maturing Term Deposits		1,560	1,700
Total cash inflows		1,560	1,700
Cash outflows			
Investment in long term deposits		(1,750)	(1,560)
Payments for acquisition of non-financial assets		...	(15)
Total cash outflows		(1,750)	(1,575)
Net cash used by investing activities		(190)	(125)
Net increase in cash held and cash equivalents		(336)	356
Cash and deposits at the beginning of the reporting period		814	458
Cash and deposits at the end of the reporting period	6.1	478	814

This Statement of Cash Flows should be read in conjunction with the accompanying notes.

Forest Practices Authority
Statement of Changes in Equity for the year ended 30 June 2019

	Accumulated funds \$'000	Total equity \$'000
Balance as at 1 July 2018	2,149	2,149
Total comprehensive result	(192)	(192)
Balance as at 30 June 2019	1,957	1,957

	Accumulated funds \$'000	Total Equity \$'000
Balance as at 1 July 2017	1,836	1,836
Total comprehensive result	313	313
Balance as at 30 June 2018	2,149	2,149

This Statement of Changes in Equity should be read in conjunction with the accompanying notes.

Note 1 Income from transactions

Income is recognised in the Statement of Comprehensive Income when an increase in future economic benefits related to an increase in an asset or a decrease of a liability has arisen that can be measured reliably.

1.1 Grants

Grants are recognised as revenue when FPA gains control of the underlying assets. Where grants are reciprocal, revenue is recognised as performance occurs under the grant.

Non-reciprocal grants are recognised as revenue when the grant is received or receivable. Conditional grants may be reciprocal or non-reciprocal depending on the terms of the grant.

	2019	2018
	\$'000	\$'000
Grants and industry contributions		
Recurrent grants from the Tasmanian Government	1,503	1,473
Socio-economic Data Project grant	500	500
Other non-government grants	74	...
Total	2,077	1,973

FPA has received an additional grant of \$500,000 per year for a period of four years, to fund projects associated with socioeconomic review.

1.2 Sales of goods and services

Amounts earned in exchange for the provision of goods are recognised when the significant risks and rewards of ownership have been transferred to the buyer. Revenue from the provision of services is recognised in proportion to the stage of completion of the transaction at the reporting date. The stage of completion is assessed by reference to surveys of work performed.

	2019	2018
	\$'000	\$'000
Fern Tree Tag Sales	21	32
Recovery of Training and publication costs	19	41
Plan Fees	782	808
Consultancy fees	101	19
Sales of Services Other	3	15
Total	926	915

Note 2 Expenses from transactions

Expenses are recognised in the Statement of Comprehensive Income when a decrease in future economic benefits related to a decrease in asset or an increase of a liability has arisen that can be measured reliably.

2.1 Employee benefits

Employee benefits include, where applicable, entitlements to wages and salaries, annual leave, sick leave, long service leave, superannuation and any other post-employment benefits.

	2019 \$'000	2018 \$'000
(a) Employee benefits		
Wages and salaries includes Director Fees of \$154,000 (2018 \$154,000)	1,677	1,345
Annual Leave	138	113
Long service leave	53	14
Fringe Benefits Tax	10	11
Other Employee Expenses	80	103
Total Employee benefits	1,958	1,586
(b) Superannuation		
Superannuation	228	180

Superannuation expenses relating to defined benefit schemes relate to payments into the Consolidated Fund. The amount of the payment is based on a department contribution rate determined by the Treasurer, on the advice of the State Actuary. The current department contribution is 12.95 per cent (2018: 12.95 per cent) of salary.

Superannuation expenses relating to defined contribution schemes are paid directly to superannuation funds at a rate of 9.5 per cent (2018: 9.5 per cent) of salary. In addition, departments are also required to pay into the Consolidated Fund a "gap" payment equivalent to 3.45 per cent (2018: 3.45 per cent) of salary in respect of employees who are members of contribution schemes.

(c) Remuneration of key management personnel

2019	Short-term benefits		Long-term benefits		Termination Benefits	Total
	Salary	Other Benefits	Super-annuation	Other Benefits & Long-Service Leave		
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
<i>Key management personnel</i>						
John Ramsay, Chair	39	...	4	...	...	43
Cheryl Arrol, Board Member	23	...	2	...	...	25
John Hickey, Board Member	23	...	2	...	...	25
Alexander Schaap, Board Member	23	...	2	...	...	25
David Gatenby, Board Member	23	...	2	...	...	25
Amy Robertson, Board Member	23	...	2	...	...	25
Peter Volker, Chief Forest Practices Officer	159	12	15	13	...	199
Total	313	12	29	13	...	367

2018	Short-term benefits		Long-term benefits		Termination Benefits	Total
	Salary	Other Benefits	Super-annuation	Other Benefits & Long-Service Leave		
	\$'000	\$'000	\$'000	\$'000		
<i>Key management personnel</i>						
John Ramsay, Chair	39	...	4	...	...	43
Cheryl Arnol, Board Member	23	...	2	...	...	25
John Hickey, Board Member	23	...	2	...	...	25
Alexander Schaap, Board Member	23	...	2	...	...	25
David Gatenby, Board Member	23	...	2	...	...	25
Amy Robertson, Board Member	23	...	2	...	...	25
Peter Volker, Chief Forest Practices Officer	152	19	14	(7)	...	178
Total	306	19	28	(7)	...	346

Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the agency, directly or indirectly, those being the Board of Directors and Chief Forest Practices Officer.

Remuneration during 2018-19 for key personnel is set by the *State Service Act 2000*. Remuneration and other terms of employment are specified in employment contracts. Remuneration includes salary, motor vehicle and other non-monetary benefits. Long-term employee expenses include long service leave and superannuation obligations.

Acting Arrangements

When members of key management personnel are unable to fulfil their duties, consideration is given to appointing other members of senior staff to their position during their period of absence. Individuals are considered members of key management personnel when acting arrangements are for more than a period of one month.

(d) Related party transactions

There are no material related party transactions requiring disclosure.

2.2 Depreciation

All applicable non-financial assets having a limited useful life are systematically depreciated over their useful lives in a manner which reflects the consumption of their service potential.

The following table details the asset lives, and depreciation rates and the methods for the various classes of assets employed in the current and previous reporting periods. Asset useful lives depreciation methods are reviewed annually and adjusted according to the expected rate and/or pattern of consumption, asset condition, and industry best practice. Depreciation methods as detailed below have not changed since the previous reporting period.

Asset	Estimated Useful Life (years)	Depreciation Rate (per annum)	Method
Plant and Equipment	5	20.00%	Straight Line
Computer equipment	3	33.33%	Straight Line

	2019	2018
	\$'000	\$'000
Depreciation	3	1
Total	3	1

2.3 Other supplies and consumables

	2019	2018
	\$'000	\$'000
Printing, publications and training costs	16	21
Contract labour	...	56
Contracted and professional services	109	46
Scientific supplies and services	35	29
Equipment purchases	29	12
Scholarships and grants awarded	7	117
Subscriptions and corporate memberships	50	11
Miscellaneous expenses	48	6
Total	294	298

Note 3 Assets

Assets are recognised in the Statement of Financial Position when it is probable that the future economic benefits will flow to the Authority and the asset has a cost or value that can be measured reliably.

3.1 Receivables

Receivables are recognised at amortised cost, less any impairment losses, however, due to the short settlement period, receivables are not discounted back to their present value. Impairment losses are recognised when there is an indication that there is a measurable decrease in the collectability of receivables.

For trade receivables, the Authority applies a simplified approach in calculating expected credit losses. The Department recognises a loss allowance based on lifetime expected credit losses at each reporting date (of which there were none).

	2019	2018
	\$'000	\$'000
Receivables	52	41
Less: Provision for impairment	...	...
Less: Expected credit loss	...	...
Total	52	41
Sales of goods and services (inclusive of GST)	44	30
GST refund receivable	8	11
Total	52	41
Settled within 12 months	52	41
Total	52	41

3.2 Other financial assets

In 2017-18 investments were initially recorded at fair value. All investments were held to maturity and are measured at amortised cost using the effective interest method less any impairment losses subsequent to initial recognition.

From 2018-19 other financial assets are to be classified and measured at amortised cost. Impairment losses are recorded in the Statement of Comprehensive Income (of which there are none).

	2019 \$'000	2018 \$'000
Accrued revenue	66	68
Accrued interest	30	15
Total	96	83
Settled within 12 months	96	83
Total	96	83

3.3 Plant and equipment

(a) Carrying amount

	2019 \$'000	2018 \$'000
Plant and equipment		
At cost	15	15
Less: Accumulated depreciation	(4)	(1)
Total	11	14

(b) Reconciliation of movements

Reconciliations of the carrying amounts of each class of plant and equipment at the beginning and end of the current and previous financial year are set out below.

	2019 \$'000	2018 \$'000
Carrying amount at 1 July	14	...
Additions	...	15
Less: Annual Depreciation	(3)	(1)
Carrying amount at 30 June	11	14

Note 4 Liabilities

Liabilities are recognised in the Statement of Financial Position when it is probable that an outflow of resources embodying economic benefits will result from the settlement of a present obligation and the amount at which the settlement will take place can be measured reliably.

4.1 Employee benefits

Liabilities for wages and salaries and annual leave are recognised when an employee becomes entitled to receive a benefit. Those liabilities expected to be realised within 12 months are measured as the amount expected to be paid. Other employee entitlements are measured as the present value of the benefit at

30 June 2019, where the impact of discounting is material, and at the amount expected to be paid if discounting is not material.

A liability for long service leave is recognised, and is measured as the present value of expected future payments to be made in respect of services provided by employees up to the reporting date. Expected future payments are discounted using interest rates attaching, as at the reporting date, to Commonwealth Government guaranteed securities with terms to maturity that match, as closely as possible, the estimated future cash outflows.

A liability for on-costs (workers compensation premiums) is recognised and disclosed as part of Other Liabilities. On-costs are not classified as an employee benefit.

	2019 \$'000	2018 \$'000
Accrued salaries	17	15
Annual leave	151	107
Long service leave	239	217
Total	407	339
Settled within 12 months	194	144
Settled in more than 12 months	213	195
Total	407	339

Note 5 Commitments and Contingencies

5.1 Schedule of Commitments

	2019 \$'000	2018 \$'000
By type		
<i>Lease Commitments</i>		
Operating leases	18	145
Total lease commitments	18	145
By maturity		
<i>Operating lease commitments</i>		
One year or less	18	128
From one to five years	...	17
More than five years	...	...
Total operating lease commitments	18	145
Total	18	145

NB: Commitments are shown as GST exclusive.

The Authority has entered into a number of operating lease agreements for property, plant and equipment, where the lessors effectively retain all the risks and benefits incidental to ownership of the items leased. Equal instalments of lease payments are charged to the Statement of Comprehensive Income over the lease term, as this is representative of the pattern of benefits to be derived from the leased property.

The Authority is prohibited by Treasurer's Instruction 502 *Leases* from holding finance leases.

The majority of the Authority's leases are represented by building rental costs and vehicle lease costs. The total lease commitment excludes local government and other executory costs where they are paid directly to a party other than the lessor. These costs are included elsewhere in the Authority's expenditures.

The Authority also has entered into contingent rental arrangements. Contingent rental costs relate to land and building leases, and in the main comprise local government charges and the periodic escalation of leases by the Consumer Price Index. Since Contingent Rentals cannot be reliably determined, they have been excluded in the calculations of Total Lease Commitments.

The Authority does not have any purchase rights flowing from the lease of the land and buildings. Some buildings have renewal options exercisable by the lessee. There are no building leases that have renewal rights exercisable at the sole discretion of the lessor.

The minimum lease payment for vehicles is based on the average age of the vehicle fleet and a standard lease period of 36 months.

5.2 Contingent Assets and Liabilities

Contingent assets and liabilities are not recognised in the Statement of Financial Position due to uncertainty regarding the amount or timing of the underlying claim or obligation.

(a) Quantifiable contingencies

A quantifiable contingent asset is a possible asset that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity.

A quantifiable contingent liability is a possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity; or a present obligation that arises from past events but is not recognised because it is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation.

The Authority has not identified any quantifiable contingent assets or quantifiable contingent liabilities as at 30 June 2019.

(b) Unquantifiable Contingencies

As at 30 June 2019, there were no unquantifiable contingent liabilities.

Note 6 Cash Flow Reconciliation

Cash means notes, coins, any deposits held at call with a bank or financial institution, as well as funds held in the Special Deposits and Trust Fund. Deposits are recognised at amortised cost, being their face value.

6.1 Cash and deposits

Cash and deposits includes the balance of the Special Deposits and Trust Fund Accounts held by the Authority, and other cash held, excluding those accounts which are administered or held in a trustee capacity or agency arrangement.

	2019	2018
	\$'000	\$'000
Special Deposits and Trust Fund balance	53	189
Total Special Deposits and Trust Fund	53	189
Short Term Deposits:		
Tascorp	425	625
Total Short Term Deposits	425	625
Total Cash and deposits	478	814

FPA also holds \$1.75 million (2018 \$1.56 million) in term deposits held for periods greater than three months. These do not meet the classification requirements of Cash under accounting standard AASB 107 and therefore have been excluded from the above balance.

6.2 Reconciliation of Net Result to Net Cash from Operating Activities

	2019 \$'000	2018 \$'000
Net result	(192)	313
Depreciation and amortisation	3	1
Decrease (increase) in Receivables	(11)	(23)
Decrease (increase) in other financial assets	(13)	(11)
Decrease (increase) in other non-financial assets	(8)	3
Increase (decrease) in Employee entitlements	68	(47)
Increase (decrease) in Payables	20	(8)
Increase (decrease) in other liabilities	(13)	3
Net cash from (used by) operating activities	(146)	231

Note 7 Events Occurring After Balance Date

There have been no events subsequent to balance date which would have a material effect on the Authority's Financial Statements as at 30 June 2019.

Note 8 Other Significant Accounting Policies and Judgements

8.1 Objectives and Funding

The Forest Practices Authority (the Authority) is a body corporate, established by the *Forest Practices Act 1985*.

The role of the Forest Practices Authority is to advance the objective of the State's forest practices system and to foster a cooperative approach towards policy development and management. The Authority facilitates self-regulation through the training and oversight of the work done by Forest Practices Officers employed within the forestry sector. This is underpinned by research and advisory services that promote continuing improvement. The Authority also independently monitors, enforces and reports to Parliament on the standards achieved and on the degree of compliance with the Forest Practices Code and *Forest Practices Act 1985*.

The functions of the Authority can be divided into two main areas, namely:

Self-funding Activities

These activities comprise the Research and Advisory program which is funded by fees for forest practices plans. Other revenue received is primarily for Tree Fern Tag sales, the recovery of training and publication costs, consultancies undertaken and grants.

The Authority reports in accordance with Section 4E(1)(a) of the *Forest Practices Act 1985* that the forest practices system in 2018-19 satisfied the principle of self-funding.

Independent Regulation Activities

These activities are primarily supported by State Government funding and relate to administration, independent monitoring and investigations into the standards of planning and implementation of forest practices plans and compliance with the Act. Fines collected by the Authority relate to penalties imposed under s.47B of the *Forest Practices Act 1985*.

In accordance with s.44(1) of the *Forest Practices Act 1985* the Authority reports on the costs and expenses incurred from the funds provided by Parliament.

8.2 Basis of Accounting

As there are no users dependent on a general purpose financial report, the financial statements are therefore a special purpose financial report that has been prepared in order to meet the financial reporting obligations of the Authority.

These Special Purpose Financial Statement have been prepared in accordance with the recognition and measurement requirements specified by the Australian Accounting Standards and Interpretations and the disclosure requirements of:

- AASB 101 'Presentation of Financial Statements'
- AASB 107 'Statement of Cash Flow'
- AASB 108 'Accounting Policies, Changes in Accounting Estimates and Errors'
- AASB 1048 'Interpretation and Application of Standards'
- AASB 13 'Fair Value Measurement' and AASB 116 'Property Plant and Equipment'.

The capacity of the Authority to continue the level of current operations is dependent on the future income which consists of government appropriation, application fees and other sources of income. The substantial in-kind contribution by the forestry sector to support forest practices offices in a co-regulatory environment is also acknowledged.

8.3 Functional and Presentation Currency

These Financial Statements are presented in Australian dollars, which is the Authority's functional currency.

8.4 Rounding

All amounts in the Financial Statements have been rounded to the nearest thousand dollars, unless otherwise stated.

8.5 Taxation

The Authority is exempt from all forms of taxation except Fringe Benefits Tax and the Goods and Services Tax.

8.6 Goods and Services Tax

Revenue, expenses and assets are recognised net of the amount of Goods and Services Tax (GST), except where the GST incurred is not recoverable from the Australian Taxation Office. Receivables and payables are stated inclusive of GST. The net amount recoverable, or payable, to the ATO is recognised as an asset or liability within the Statement of Financial Position.

In the Statement of Cash Flows, the GST component of cash flows arising from operating, investing or financing activities which is recoverable from, or payable to, the Australian Taxation Office is, in accordance with the Australian Accounting Standards, classified as operating cash flows.



Independent Auditor’s Report

To Members of the Forest Practices Authority

Report on the Audit of the Special Purpose Financial Report

Opinion

I have audited the accompanying financial report, being a special purpose financial report of the Forest Practices Authority (the Authority), which comprises the statement of financial position as at 30 June 2019 and the statements of comprehensive income, changes in equity and cash flows for the year then ended, notes to the financial statements including a summary of significant accounting policies and other explanatory information and the statement of certification by the directors.

In my opinion, the financial report presents fairly, in all material respects, the financial position of the Authority as at 30 June 2019, and its financial performance and cash flows for the year then ended in accordance with the financial reporting requirements of Section 4X of the *Forest Practices Act 1985*.

Basis for Opinion

I conducted the audit in accordance with Australian Auditing Standards. My responsibilities under those standards are further described in the Auditor’s Responsibilities for the Audit of the Financial Report section of my report. I am independent of the Authority in accordance with the ethical requirements of the Accounting Professional and Ethical Standards Board’s APES 110 *Code of Ethics for Professional Accountants* (the Code) that are relevant to my audit of the financial report in Australia. I have also fulfilled my other ethical responsibilities in accordance with the Code.

The *Audit Act 2008* further promotes the independence of the Auditor-General. The Auditor-General is the auditor of all Tasmanian public sector entities and can only be removed by Parliament. The Auditor-General may conduct an audit in any way considered appropriate and is not subject to direction by any person about the way in which audit powers are to be exercised. The Auditor-General has for the purposes of conducting an audit, access to all documents and property and can report to Parliament matters which in the Auditor-General’s opinion are significant.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

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Emphasis of Matter - Basis of Accounting

I draw attention to Note 8.2 to the financial report, which describes the basis of accounting. The financial report has been prepared to assist the Authority to meet the financial reporting requirements of the *Forest Practices Act 1985*. As a result, the financial report may not be suitable for another purpose. My opinion is not modified in respect of this matter.

Responsibilities of the Directors for the Financial Report

The directors are responsible for the preparation and fair presentation of the financial report in accordance with the financial reporting requirements of the *Forest Practices Act 1985* and for such internal control as they determine is necessary to enable the preparation and fair presentation of a financial report that is free from material misstatement, whether due to fraud or error.

In preparing the financial report, the directors are responsible for assessing the Authority’s ability to continue as a going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting unless the Authority is to be dissolved by an Act of Parliament, or the directors intend to cease operations, or have no realistic alternative but to do so.

Auditor’s Responsibilities for the Audit of the Financial Report

My objectives are to obtain reasonable assurance about whether the financial report as a whole is free from material misstatement, whether due to fraud or error, and to issue an auditor’s report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the Australian Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of this financial report.

As part of an audit in accordance with the Australian Auditing Standards, I exercise professional judgement and maintain professional scepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the financial report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Authority’s internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors’ use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Authority’s

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ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial report or, if such disclosures are inadequate, to modify my opinion. My conclusion is based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Authority to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial report, including the disclosures, and whether the financial report represents the underlying transactions and events in a manner that achieves fair presentation.

I communicate with the directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.



Rob Luciani
Director Financial Audit Services
Delegate of the Auditor-General

Tasmanian Audit Office

27 September 2019
Hobart

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Appendix 1

Publications, reports and presentations by staff or associates of the FPA

Staff or associates of the FPA are indicated in bold type.

Published journal articles and books

Koch AJ, Chuter A, Barmuta LA, **Turner PAM**, and **Munks SA** 2018, 'Long-term survival of trees retained for hollow-using fauna in partially harvested forest in Tasmania, Australia', *Forest Ecology and Management* 422, 263-272.

Koch, AJ, Webb, M, Cawthen, L, Livingston, D and **Munks, SA** 2018, 'Managing mature forest features: The production, accuracy and ecological relevance of a landscape-scale map,' *Ecological Management & Restoration* 19(3): 247-256. : <http://dx.doi.org/10.1111/emr.12336>

Koch, A and **Munks, S** 2018, 'A proposed strategy for maintaining mature forest habitat in Tasmania's wood production forests,' *Ecological Management & Restoration* 19(3): 239-246. <https://doi.org/10.1111/emr.12337>

Neudorf, CM, Lian, OB, **McIntosh, PD**, Gingerich, TB and Augustinus, PC 2018, 'Investigation into the OSL and TT-OSL age estimates of ancient (>100 ka) Tasmanian aeolian quartz and its utility as a geochronometer for understanding long-term climate-driven landscape change', *Quaternary Geochronology* vol 53, <https://doi.org/10.1016/j.quageo.2019.101005>

Onfray, R. 2012, 'Cultural artefacts or 'neglected old parks': the colonisation of rainforests in north-western Tasmania', pp. 313–336 in BJ Stubbs (ed), *Australia's Ever-changing Forests VI; Proceedings of the Eighth National Conference on Australian Forest History*.

Slee, AJ and Stoios, A 2019, 'An Unusual Polygenetic Cave: Fishers Tier Cave, Ben Lomond; Tasmania', *Journal of the Southern Tasmanian Caverneers, Speleo Spiel* 2019, Issue 430, pp. 23–26.

Newsletter and magazine articles

Chuter, A 2019 'Eagle nest activity checks – an update on the way FPA conducts aerial activity checks', [Forest Practices News, vol 14 no 2, p 23.](#)

Chuter, A 2019, 'Biodiversity Program update', [Forest Practices News, vol 14 no 2, p 11.](#)

Chuter, A 2019, 'Threatened plants jostle for attention at the FPA spring carnival', [Forest Practices News, vol 14 no 2, p 14-15.](#)

Grove, C 2019 'Australasian Wildlife Management Society Conference 2018', [Forest Practices News, vol 14 no 2, p 28.](#)

Grove, C 2019, 'FPA Research Update 2018', [Forest Practices News, vol 14 no 2, p 1-3.](#)

Grove, C 2019, 'FPA Training', [Forest Practices News, vol 14 no 2, p 18-19.](#)

McIntosh, P 2019, 'Out and about with the Earth Sciences and Cultural Heritage Program', [Forest Practices News, vol 14 no 2, p 10.](#)

Rawlings, M 2019, 'Forest practices system training for forest contractors', [Forest Practices News, vol 14 no 2, p 15.](#)

Volker, P 2019, 'Evolution of the forest practices system', [Forest Practices News, vol 14 no 2, p 4.](#)

Walker, S 2019 'Compliance Program – assessment program update', [Forest Practices News, vol 14 no 2, p 24-27.](#)

Ware, T, **Slee, A**, 2019, 'Permian limestone and contact-metamorphosed marble/hornfels in the Nicholls Rivulet Valley', [Forest Practices News, vol 14 no 2, p 12-13.](#)

Reports and technical notes

Chuter, A and Crane A, 2017 *Procedures for the management of threatened species under the forest practices system: Report on implementation during 2017–18*, report to the Board of the FPA and the Secretary of DPIPW, Hobart, Tasmania. [Available on FPA website](#)

Koch, A 2018, *Monitoring the effectiveness of the biodiversity provisions of the Tasmanian Forest Practices Code 2018–19 summary report*, report for the Board of the FPA and the Secretary of the DPIPW, Forest Practices Authority Scientific Report 24, Hobart, Tasmania. [Available on FPA website](#)

Soil Survey Team, Papua New Guinea National Forest Inventory, 2019, 'Field Guide for Sampling and Describing Soils in the Papua New Guinea National Forest Inventory', (P Nimiago, N Sam and P McIntosh, eds), Forest Research Institute, Papua New Guinea Forest Authority, Lae, 47 p.

Consultancy reports

McIntosh, PD 2019, 'PNG National Forest Inventory Soil Survey Final Report: Summary of scientific results', pp. 3–40 in *Narrative and financial report for Part 3 of LoA/RAP/2018/06: Training and assistance on quality control, scientific analysis and report writing of soil survey in PNG's first national forest inventory*, contract report, Forest Practices Authority, Hobart.

Conference presentations, abstracts and posters

Bell, P 2018, 'Butterfly conservation in Tasmania', Australian Entomological Society conference, Alice Springs, September 2018.

Bell, P 2018, 'Options for controlling predation of Ptunarra brown butterflies by introduced European wasps on a plantation estate in north west Tasmania', *Australian Wildlife Management Society conference, Hobart, December 2018.*

Chuter, A, 2018, 'Managing biodiversity across the landscape: an approach developed for the Tasmanian forest practices system', paper presented at the Australasian Wildlife Management Society Conference 2018, Hobart, Tasmania, December 2018.

Gardner, A, 2018, 'A review of wicked problems: managing a threatened bird in Tasmanian production forests', paper presented at the Australasian Wildlife Management Society Conference, Hobart, Tasmania, December 2018.

Kay, K 2018, 'Flinders Island: issues and tools for biodiversity conservation in a multi-use island landscape', Australasian Wildlife Management Society Conference, Hobart, Tasmania, December 2018.

Klöffel, T, McIntosh, P and Müller, C 2019, Comparison of topsoil and subsoil organic matter quality under mixed eucalypt forests and old-growth rainforests in Tasmania. Paper presented at the European Geosciences Union (EGU) conference, Munich, 7-12 April 2019.

MacNeil, A, 2019, 'The Co-ordinated Smoke Management System: A smoke management tool for planned burns in Tasmania', paper presented at an international Workshop on Biomass Smoke in the Human Environment, Melbourne Law School, Carlton, Victoria 17-19 June 2019

Mann, D & Munks, S 2018, 'Research to Regulation: Adaptive management for conservation of wide-ranging threatened forest fauna', Australasian Wildlife Management Society Conference, Hobart, Tasmania, December 2018.

Munks, S, 2018, 'Capacity building in Papua New Guinea: Contributing to the conservation of forest wildlife', paper presented at the Australasian Wildlife Management Society Conference, Hobart, Tasmania, December 2018.

Slee, AJ and McIntosh, PD 2019, 'The geomorphology of landslides triggered by heavy rainfall in June 2016 in northern Tasmania', poster paper, ANZGG conference, Inverloch, Victoria, 4–8 February, 2019.

Turner, P, 2018, 'A tale of two snails', paper presented at the Australasian Wildlife Management Society Conference, Hobart, Tasmania, December 2018.

Theses submitted for projects supported or co-supervised by the FPA staff

Burke, B 2018, 'An investigation of sinkhole formation in Railton, Tasmania', Honours Thesis, University of Queensland.

Farrell, A 2018, 'Late Quaternary environments for the uplands of northeast Tasmania: a new record for the Nicholas Range', Honours Thesis, University of Queensland.

Hardcastle, JL 2019, Changes in carbon and other soil properties with succession of mixed forests to rainforests in Tasmania, Honours thesis, University of Queensland.

Klöffel, T 2019, 'Comparison of soil organic matter quality under wet eucalypt and old-growth rainforests in Tasmania', Masters Thesis, Technical University of Munich.

Pay, J 2019, 'Investigating the conservation requirements of the endangered Tasmanian wedge-tailed eagle (*Aquila audax fleayi*)', PhD thesis, University of Tasmania.

Vink, J 2018, 'Late Glacial to Early Holocene Environments of Yellow Marsh, Surrey Hills in North West Tasmania', Honours Thesis, University of Queensland.

Appendix 2

Major reference documents related to forest practices

General	
Forest Practices Act 1985	1985
Forest Practices Regulations 2017	2017
Forest Practices Code 2015	2015
Forest Practices News	Twice yearly since 1998
A guide to planning approvals for forestry in Tasmania	2006, revised 2007, 2011, 2015, 2016
State of the forests reports	Every five years, latest in 2017
Cultural	
Procedures for managing Aboriginal cultural heritage when preparing FPPs	2015
Procedures for managing historic cultural heritage when preparing FPPs	2015
Visual management topic papers on skyline and roadside management	2006 onwards
Earth sciences	
Atlas of Tasmanian Karst	1995
Basalt talus guidelines and Dolerite talus guidelines	2002
Forest Sinkhole Manual and Forest operations around sinkholes	2002 and 2014
Forest soils fact sheet keys	From 2002
Forest Soils of Tasmania	1996
Guidelines for the protection of class 4 streams	2004, updated 2011
The Strahan guidelines	2017
Biodiversity	
Biodiversity Values Database	1995, 1998, 2000 updated in 2014
Fauna Technical Note series	1996 onwards
Flora Technical Note Series	1996 onwards
Forest Practices Botany Manuals	1991–2005
Permanent Native Forest Estate Policy	1996, revised 2014, 2015 and 2016, 2017
Planning guideline (2008/1) – to avoid the clearance of significant habitat for threatened fauna	2008 onwards
Threatened Fauna Adviser	2014
Habitat Context Assessment Tool	2012
Biodiversity landscape planning guideline	2017
Compliance	
Forest Practices Officer Manual	2015
Investigation and Enforcement Protocols	2016
Monitoring and Assessment Protocols	2009

Appendix 3

Results of the 2018–19 assessment of forest practices plans

The scoring system used for all questions in the assessment of FPPs

Performance Rating	Description	Score
Sound	Addressed all judgment criteria and achieved an acceptable result.	3.0
Below sound	Have not addressed all judgment criteria and/or implemented plan as prescribed, which may result in adverse impact.	2.0
Unacceptable	Non-compliant and has not adequately addressed judgment criteria or achieved an unacceptable result.	1.0
Not assessable	<ul style="list-style-type: none"> • The condition/situation does not occur e.g. high erodibility • Operations have not commenced • Insufficient or no objective evidence to make a judgment 	NA

Procedural issues	Scores				Percentages			
	Unacceptable	Below Sound	Sound	Grand Total	Unacceptable	Below Sound	Sound	Grand Total
1. Has a complete copy of the original FPP and variations been made available to the assessor?	1		46	47	2.1%		97.9%	100.0%
2. Had the FPP and any variations been uploaded to Coverage?	5	2	40	47	10.6%	4.3%	85.1%	100.0%
3. Has the FPP, including variations, been fully signed and dated?	2	7	38	47	4.3%	14.9%	80.9%	100.0%
4. Are the FPP and variations in accordance with the Code?	5	7	34	46	10.9%	15.2%	73.9%	100.0%
5. Were State and local governments consulted, as required, and were resulting management conditions incorporated into the FPP or variation?		2	44	46		4.3%	95.7%	100.0%
6. Was local government notified of the operational start date?		2	44	46		4.3%	95.7%	100.0%
7. Have all adjacent landowners been identified and notified?		1	45	46		2.2%	97.8%	100.0%
8. Does the FPP indicate that a fire management plan was prepared where necessary?			47	47			100.0%	100.0%
9. Have compliance reports on Discrete Operational Phases been completed, where required?	12	2	33	47	25.5%	4.3%	70.2%	100.0%
10. Is the FPP map clear?		1	46	47		2.1%	97.9%	100.0%
Grand Total	25	24	417	466	5.4%	5.2%	89.5%	100.0%

Appendix 3 Results of the 2018–19 assessment of FPPs (continued)

Roading	Scores				Percentages			
	Unacceptable	Below Sound	Sound	Grand Total	Unacceptable	Below Sound	Sound	Grand Total
Planning and location								
11. Have roads been located to minimise soil erosion and stream sedimentation?		1	13	14		7.1%	92.9%	100.0%
12. Where roads are located in proximity to streams, has the potential for stream sedimentation been minimised?			13	13			100.0%	100.0%
13. Where roads are located in areas of high or very high soil erodibility, have precautions to reduce erosion been taken?			1	1			100.0%	100.0%
Road standard								
14. Has the road standard proven adequate to the haulage task, and been sufficiently compacted or continuously repaired to avoid environmental problems?			41	41			100.0%	100.0%
Drainage								
15. Have road drainage measures been effective?		1	40	41		2.4%	97.6%	100.0%
Access Tracks								
16. Have access tracks been suitably located, drained, and stabilised after use?			29	29			100.0%	100.0%
Earthworks								
17. Are cuts and fills balanced and/or spoil disposed of properly?			12	12			100.0%	100.0%
18. Are batter slopes stable?			13	13			100.0%	100.0%
Steep Country								
19. Have Code statements been followed on steep country			1	1			100.0%	100.0%
Clearing								
20. Has clearing width and topsoil stripping been minimised?			14	14			100.0%	100.0%
Crossings								
21. Have new or upgraded stream crossings been suitably located, designed and constructed?			4	4			100.0%	100.0%
22. Have temporary crossings been confined to class 3 and 4 and dry class 2 watercourses and been properly removed and drained or upgraded?			3	3			100.0%	100.0%
Road upgrading and closure								
23. Have all roads and access tracks that are non-conforming or environmentally hazardous been upgraded or closed?			2	2			100.0%	100.0%
Quarries/Borrow Pits								
24. Have quarries and borrow pits been properly located, managed and rehabilitated?								
Road Maintenance								
25. If the operation has been completed, is there evidence of ongoing maintenance of the road system?			37	37			100.0%	100.0%
Grand Total		2	223	225		0.9%	99.1%	100.0%

Appendix 3 Results of the 2018–19 assessment of FPPs (continued)

Harvesting	Scores				Percentages			
	Unacceptable	Below Sound	Sound	Grand Total	Unacceptable	Below Sound	Sound	Grand Total
Extraction design and equipment								
26. Is the extraction design and harvesting equipment consistent with the Code?		3	43	46		6.5%	93.5%	100.0%
Harvesting dispersal and design								
27. Is coupe dispersal consistent with the Code?	1		45	46	2.2%		97.8%	100.0%
Felling								
28. Has the harvesting boundary been clearly marked or defined?		2	41	43		4.7%	95.3%	100.0%
29. Has harvesting been confined within the harvest	2	2	37	41	4.9%	4.9%	90.2%	100.0%
Wet weather limitations								
30. Has harvesting complied with wet weather			40	40			100.0%	100.0%
31. Has cartage complied with wet weather limitations?			4	4			100.0%	100.0%
Snig/Forwarder Tracks								
32. Have snig tracks been located and constructed to minimise environmental harm and enable effective		2	35	37		5.4%	94.6%	100.0%
33. Have snig track location and management effectively minimised damage to retained trees and protected soil and water values?	1		37	38	2.6%		97.4%	100.0%
34. Have snig tracks been restored, including the removal of temporary crossings?		4	34	38		10.5%	89.5%	100.0%
Landings								
35. Are landings (and continuous roadside landings) appropriately located, sized, and constructed?		2	35	37		5.4%	94.6%	100.0%
36. Have landings been properly managed and stabilised?	1	1	35	37	2.7%	2.7%	94.6%	100.0%
Native Forest Streamside Reserves								
37. Is the width of the SSRs and MEZs correct, and is marking correct?		1	20	21		4.8%	95.2%	100.0%
38. Have class 4 streams been upgraded according to Class 4 Guidelines, where necessary?		1	20	21		4.8%	95.2%	100.0%
39. Has felling and machinery avoided unreasonable damage to SSRs and MEZs?	1		18	19	5.3%		94.7%	100.0%
40. Has approved felling in SSRs and MEZs complied with the Code?			10	10			100.0%	100.0%
Plantation Streamside Reserves								
41. Has harvesting of trees in plantation SSRs complied with Code requirements?	1		17	18	5.6%		94.4%	100.0%
Steep Country Harvesting								
42. Have cables been pulled through Class 1, 2, 3 SSR without causing unacceptable damage?								
43. Have potential erosion channels on cabled areas been stabilised?								
Grand Total	7	18	471	496	1.4%	3.6%	95.0%	100.0%

Appendix 3 Results of the 2018–19 assessment of FPPs (continued)

Reforestation	Scores				Percentages			
	Unacceptable	Below Sound	Sound	Grand Total	Unacceptable	Below Sound	Sound	Grand Total
Native Forest Regeneration								
44. Has an appropriate reforestation technique and stocking standard been prescribed?	2		22	24	8.3%		91.7%	100.0%
45. Have fuel reduction, low or high intensity burns, been effectively carried out?		1	4	5		20.0%	80.0%	100.0%
46. Have streamside reserves and MEZs been protected from fire?	1	1	4	6	16.7%	16.7%	66.7%	100.0%
47. Has appropriate seed been selected for native forest regeneration?		1	15	16		6.3%	93.8%	100.0%
48. Has stocking standard as prescribed in the plan been achieved, or is it likely to be achieved?		1	7	8		12.5%	87.5%	100.0%
49. Have trees been effectively protected from grazing and browsing damage?			8	8			100.0%	100.0%
Plantation Development								
50. Has burning been effectively carried out and streamside reserves protected?			3	3			100.0%	100.0%
51. Was soil cultivation carried out in a manner that minimises the risk of unacceptable soil erosion?	2		10	12	16.7%		83.3%	100.0%
52. Has cultivation been excluded from within 2m of the edge of drainage depressions?	1		11	12	8.3%		91.7%	100.0%
53. Have class 1,2,3, and 4 streams and their stream side reserves and/or MEZs been protected?			14	14			100.0%	100.0%
54. Has the specified stocking standard been achieved?			11	11			100.0%	100.0%
55. Have trees been effectively protected from grazing and browsing damage?			7	7			100.0%	100.0%
56. Have firebreaks been located and managed to protect soil, water, and visual values?		1	33	34		2.9%	97.1%	100.0%
Grand Total	6	5	149	160	3.8%	3.1%	93.1%	100.0%

Soils	Scores				Percentages			
	Unacceptable	Below Sound	Sound	Grand Total	Unacceptable	Below Sound	Sound	Grand Total
Soils								
58. Had the soil erodibility rating been correctly determined?	1	3	43	47	2.1%	6.4%	91.5%	100.0%
59. Has land slip potential been correctly determined?			47	47			100.0%	100.0%
60. Has burning intensity been appropriate for soil erodibility and nutrient status of the soils?			9	9			100.0%	100.0%
61. Have coupes with high and very high erodibility soils or with land exceeding the landslide threshold been referred to the FPA for comment?	1		8	9	11.1%		88.9%	100.0%
62. Is there evidence of post-operation accelerated erosion?			41	41			100.0%	100.0%
Grand Total	2	3	148	153	1.3%	2.0%	96.7%	100.0%

Water quality and flows	Scores				Percentages			
	Unacceptable	Below Sound	Sound	Grand Total	Unacceptable	Below Sound	Sound	Grand Total
Water quality and flows								
63. Have all watercourses been identified and correctly classified?		1	45	46		2.2%	97.8%	100.0%
64. Is there evidence of significant post-operation stream erosion?			39	39			100.0%	100.0%
Grand Total		1	84	85		1.2%	98.8%	100.0%

Appendix 3 Results of the 2018–19 assessment of FPPs (continued)

Biodiversity	Scores				Percentages			
	Unacceptable	Below Sound	Sound	Grand Total	Unacceptable	Below Sound	Sound	Grand Total
Flora								
65. Has the flora section of the biodiversity evaluation been completed correctly, including a map detailing the results of the field assessment?		3	44	47		6.4%	93.6%	100.0%
66. Have flora values been referred to FPA Biodiversity section as required?			44	44			100.0%	100.0%
67. Have important flora values and advice been taken into account in the FPP?			44	44			100.0%	100.0%
68. Have the flora prescriptions of the FPP and variations been implemented?			42	42			100.0%	100.0%
Fauna								
69. Has the fauna section of the biodiversity evaluation been completed correctly, including a map detailing the results of the field assessment?		2	45	47		4.3%	95.7%	100.0%
70. Have fauna values been referred to the FPA Biodiversity section as required?	4	1	42	47	8.5%	2.1%	89.4%	100.0%
71. Were prescriptions for threatened species incorporated clearly in FPP text and map?	1	7	39	47	2.1%	14.9%	83.0%	100.0%
72. Have threatened fauna prescriptions, and other fauna provisions (WHS/WHC) in the FPP been implemented?		6	38	44		13.6%	86.4%	100.0%
Grand Total	5	19	338	362	1.4%	5.2%	93.4%	100.0%

Landscape	Scores				Percentages			
	Unacceptable	Below Sound	Sound	Grand Total	Unacceptable	Below Sound	Sound	Grand Total
Landscape								
73. Was the Landscape Management Objective (LMO) assessed correctly?		1	46	47		2.1%	97.9%	100.0%
74. Were the Code provisions included in the FPP?			46	46			100.0%	100.0%
75. Have landscape prescriptions been implemented?			44	44			100.0%	100.0%
76. Was the recommended LMO in the Evaluation Sheet achieved?			42	42			100.0%	100.0%
Grand Total	1	178	179	179	0.6%	99.4%	100.0%	100.0%

Cultural Heritage	Scores				Percentages			
	Unacceptable	Below Sound	Sound	Grand Total	Unacceptable	Below Sound	Sound	Grand Total
Cultural Heritage								
77. Has MDC zoning been complied with on PTPZL land?			43	43			100.0%	100.0%
78. Has the Aboriginal Known Sites Report and Conserve been consulted?		2	45	47		4.3%	95.7%	100.0%
79. Have areas of sensitivity for Aboriginal cultural heritage been identified using the Archaeological Potential Zone maps, or the potential zoning predictive statements?		3	44	47		6.4%	93.6%	100.0%
80. Was specialist advice sought where necessary?			46	46			100.0%	100.0%
81. Has specialist advice and cultural heritage prescriptions been incorporated into the FPP?	1	19	26	46	2.2%	41.3%	56.5%	100.0%
82. Were the FPP prescriptions implemented?		1	41	42		2.4%	97.6%	100.0%
83. Have site recording and management been in accordance with the Aboriginal Relics Act 1975?	1		39	40	2.5%		97.5%	100.0%
Grand Total	2	25	284	311	0.6%	8.0%	91.3%	100.0%

Geoscience	Scores				Percentages			
	Unacceptable	Below Sound	Sound	Grand Total	Unacceptable	Below Sound	Sound	Grand Total
Geoscience								
84. Has the Geoscience evaluation been correctly completed?		1	46	47		2.1%	97.9%	100.0%
85. Has the FPA Geoscientist been consulted, or a consultant engaged as required?			47	47			100.0%	100.0%
86. Have appropriate prescriptions been included in the FPP?			47	47			100.0%	100.0%
87. Have geoscience prescriptions been implemented satisfactorily?			45	45			100.0%	100.0%
Grand Total	1	185	186	186	0.5%	99.5%	100.0%	100.0%

Fuels, rubbish and emissions	Scores				Percentages			
	Unacceptable	Below Sound	Sound	Grand Total	Unacceptable	Below Sound	Sound	Grand Total
Fuels, rubbish and emissions								
5. Fuels, Rubbish and Emissions			46	46	0.0%	0.0%	100.0%	100.0%
Grand Total	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%

Appendix 4 Monitoring of the maintenance of the permanent native forest estate

1 Background

Section 4C(fa) of the Act requires the FPA to monitor and report on the clearing of trees, harvesting and reforestation activity in relation to the maintenance of a permanent native forest estate.

The Permanent Native Forest Estate (PNFE) Policy was established through the Tasmanian Regional Forest Agreement (RFA) and was most recently revised in July 2017. The policy is available on the [DSG's website](#).

The policy aims to maintain a permanent native forest estate by placing limits on conversion of native forest communities to other land uses. The policy does not restrict management activities such as timber harvesting and grazing. Harvesting is permitted in all forest types where the silvicultural system ensures successful regeneration and long-term maintenance of that forest community.

In the 2018–19 financial year the version of the PNFE Policy in place was dated 30 June 2017.

The PNFE Policy dated 30 June 2017 requires the following:

- **State-wide ban on broad scale clearance and conversion** of native forest on public or private land, except for a number of defined activities including (but not limited to): agricultural clearing (where it amounts to less than 40 hectares on a property in a twelve month period), construction of new significant infrastructure, and to facilitate development demonstrating a substantial public benefit.
- **Threatened (rare, vulnerable and endangered) forest communities** (as listed in the *Tasmanian Nature Conservation Act 2002*) are to be regulated in accordance with the Act.

The PNFE Policy is given effect through the FPA's consideration of applications for FPPs under the Act. Planning tools and instructions current in the 2018–19 financial year ensured that any planned forest practices affecting communities with a priority for conservation were referred by FPOs to the Chief Forest Practices Officer. The FPA maintains a database which contains details of all certified FPPs, including (for each FPP) the forest communities in the FPP area and the type of operation affecting each community; this database forms the basis for the FPA's monitoring and reporting on Tasmania's permanent native forest estate.

The extent of forest communities as mapped in 1996 is the benchmark for reporting on the permanent native forest estate. Until 2007, FPA annual reports used the 1996 figures as identified in the Tasmanian RFA (1997) and associated documents. The 1996 mapping was reassessed during preparation of the [State of the forests Tasmania 2002 report](#). For most communities, differences between the 1997 and 2002 figures are minor, with the most substantial differences being an increase in the mapped extent of some rainforest communities in the 2002 assessment. The revised (2002) figures are used in this annual report.

From 1997 to 2006, suitable areas of private land that contain forest communities with a priority for conservation, or other values specified in the RFA, were referred to the Private Forest Reserves Program, DPIPW, so that this program could assess and, if appropriate, negotiate conservation options with the landowner. The Private Forest Reserves Program was replaced by the Australian Government's Forest Conservation Fund from 2006 to 2009. No dedicated forest reserve programs currently exist. However, persons who have an application for an FPP refused or amended because of threatened native vegetation may apply for compensation under the *Nature Conservation Act 2002*.

2 The extent of the permanent native forest estate

The tables below provide the bioregional extent and conversion of forest communities to 30 June 2019. Figures given for the 1996 RFA forest community extent (in hectares) are based on the *State of the forests Tasmania 2002* report revision of the 1996 RFA mapping data. Care is needed in interpreting the data, for the following reasons:

- The figures relate to planned 'forest practices' operations, not all of which will have been completed in the reporting period.
- Areas of forest communities given in FPPs are generally gross areas that may not exclude informal reserves such as streamside reserves or additional areas excluded for the protection of other natural and cultural values or due to operational constraints. The figures relating to the conversion of native forest are therefore likely to be overestimates for some communities.
- Conversion of threatened forest communities was permitted under the 1997 PNFE Policy. The FPA imposed a moratorium on further conversion of threatened communities in 2002, pending a review by the government of its PNFE Policy. The moratoriums were supported by bilateral agreements (signed in May 2003 and May 2005) between the Australian and Tasmanian governments. Under the revised PNFE Policy (2007), the FPA was given discretionary power to allow conversion of threatened communities in exceptional circumstances, where the conversion will not substantially detract from the conservation of that forest community or conservation values within the immediate area. Such clearance, in some cases, has been accompanied by reservation (offsets) of other areas of equal or greater conservation value. The FPA revised its offset policy in 2016–17 to allow more flexibility in offsetting options.
- The proportions of forest communities converted are based on the area of each community as mapped in 1996 (from RFA mapping and revised *State of the forests Tasmania 2002* report mapping, as discussed above). The mapping of forest communities is also subject to other reviews (e.g. through mapping undertaken by DPIPW and the *Sustainability indicators report 2007*). Such revisions have provided more accurate information on the extent and distribution of forest communities, and have assisted the FPA to supply advice for operations affecting threatened forest communities or other communities approaching regional thresholds. Some figures given in previous annual reports have been revised in the light of more accurate information.

- In the 2005–06 reporting period, the Tasmanian and Australian governments approved the reclassification of the RFA community ‘Inland *E. amygdalina* forest’, following a review of this community by the Scientific Advisory Committee to the Private Forest Reserves Program (CARSAG). This community has been replaced by:
 - ‘Inland *E. amygdalina* – *E. viminalis* – *E. pauciflora* forests and woodlands on Cainozoic deposits’
 - ‘*E. amygdalina* forest on mudstone’.

Conversion figures for these communities are given separately in the tables below for this reporting period (2018–19) and the total conversion since the reclassification (i.e. 1996–19) is also given. Historic figures are provided for ‘Inland *E. amygdalina* forest’, but no further changes will be recorded against this community.

- The analyses do not include figures for clearing not associated with harvesting that was conducted before such clearing became subject to regulation in 2002, under the Act. A negligible amount of such clearing would have occurred in more commercial forest types, but may have been significant in some drier forests and woodlands with low timber quality. The analyses also do not include figures for clearing for other land use activities not regulated under the Tasmanian forest practices system (e.g. subdivisions etc.). However, the state totals do include the area cleared as a result of dam works permits issued under the *Water Management Act 1999*.

Woolnorth bioregion as at 30 June 2019

No.	RFA Forest Community	1996 RFA area (ha) (2002 dataset)	2018–19 decrease (ha)	Total decrease 1996–2019 (ha)	% total decrease from 1996 RFA Area (2002 dataset)
1	Coastal <i>E. amygdalina</i> forest	24 646	0.44	990.04	4.0
2	<i>E. amygdalina</i> forest on dolerite	18 134		2365.3	13.0
3 3	Inland <i>E. amygdalina</i> forest	902		121.6	13.5
4 ¹	<i>E. amygdalina</i> forest on sandstone	330		16.5	5.0
5	<i>Allocasuarina verticillata</i> forest	177		9.9	5.6
6 ¹	<i>E. brookeriana</i> wet forest	4439		273.8	6.2
7	<i>Acacia melanoxylon</i> forest on flats	7987	126.2	839	10.5
8	<i>Acacia melanoxylon</i> forest on rises	7852	0.85	278.05	3.5
9 ¹	<i>Banksia serrata</i> woodland	156		0	0.0
10	<i>E. coccifera</i> dry forest	41		1	2.4
12	Dry <i>E. delegatensis</i> forest	3892		52	1.3
13	<i>E. viminalis</i> / <i>E. ovata</i> / <i>E. amygdalina</i> / <i>E. obliqua</i> damp sclerophyll forest	29 915		1927.4	6.4
14	Tall <i>E. delegatensis</i> forest	14 552		2327.9	16.0
16*	<i>E. viminalis</i> and/or <i>E. globulus</i> coastal forest	10		1.4	14.0
19 ¹	King Island <i>E. globulus</i> / <i>E. brookeriana</i> / <i>E. viminalis</i> forest	2411		9	0.4
20	<i>Leptospermum</i> sp. / <i>Melaleuca squarrosa</i> swamp forest	7304	3.9	1810	24.8
21	Callidendrous and thamnisc rainforest on fertile sites	28 659	3	4565.9	15.9
22	Thamnisc rainforest on less fertile sites	25 623		262.5	1.0
23 ¹	<i>Melaleuca ericifolia</i> coastal swamp forest	198		114.9	58.0
25	Dry <i>E. nitida</i> forest	14 012	9	1877.9	13.4
27 ¹	<i>Notelaea ligustrina</i> and/or <i>Pomaderris apetala</i> closed forest	42		3	7.1
28	Tall <i>E. nitida</i> forest	2932	15.4	666	22.7
29	Dry <i>E. obliqua</i> forest	29 106	2.36	4580.06	15.7
30	Tall <i>E. obliqua</i> forest	124 714	36.5	19 781.6	15.9
31 ¹	Shrubby <i>E. ovata</i> – <i>E. viminalis</i> forest	2979		82	2.8
34	<i>E. pauciflora</i> forest on Jurassic dolerite	-		0.5	&
36	<i>E. pauciflora</i> forest on sediments	-		3.4	&
37	<i>E. regnans</i> forest	2632		926.3	35.2
39	<i>E. rodwayi</i> forest	104		3	2.9
41	<i>Acacia dealbata</i> forest	16 450	1	737.8	4.5

No.	RFA Forest Community	1996 RFA area (ha) (2002 dataset)	2018–19 decrease (ha)	Total decrease 1996–2019 (ha)	% total decrease from 1996 RFA Area (2002 dataset)
43	<i>E. subcrenulata</i> forest	125		0	0.0
47	<i>E. viminalis</i> grassy forest/woodland	2905	3.8	70.4	2.4
49 ¹	<i>E. viminalis</i> wet forest	2610		294.6	11.3
50 ¹	King Billy Pine Forest	0		0	0.0
64 ¹ ⌘	Inland <i>E. amygdalina</i> – <i>E. viminalis</i> – <i>E. pauciflora</i> on Cainozoic deposits	-		0	&
65 ¹ ⌘	<i>E. amygdalina</i> forest on mudstone	-		68	&
	TOTAL	375 839	202.5	45 060.8	12.0

¹ Indicates a threatened native vegetation community (rare, vulnerable or endangered).

⌘ During 2005–06, Inland *E. amygdalina* was separated into ‘Inland *E. amygdalina* – *E. viminalis* – *E. pauciflora* on Cainozoic deposits’ and ‘*E. amygdalina* forest on mudstone’, with only the former being considered a threatened forest community.

Anomalies in mapping (shown with an ampersand (&)) are subject to further field verification. Area data may be modified as mapping is refined.

Figures take into account areas that have been cleared and converted as a result of activities covered by the Act and areas approved for conversion by a Dam Works Permit issued under the *Water Management Act 1999*.

Ben Lomond bioregion as at 30 June 2019

No.	RFA Forest Community	1996 RFA area (ha) (2002 dataset)	2018–19 decrease (ha)	Total decrease 1996–2019 (ha)	% total decrease from 1996 RFA Area (2002 dataset)
1	Coastal <i>E. amygdalina</i> forest	133 418	73.8	8704.5	6.5
2	<i>E. amygdalina</i> forest on dolerite	42 456	3.1	1863.3	4.4
3 3	Inland <i>E. amygdalina</i> forest	4567		1187	26.0
4 ¹	<i>E. amygdalina</i> forest on sandstone	1024	0.3	207.8	20.3
5	<i>Allocasuarina verticillata</i> forest	303		1.4	0.5
6 ¹	<i>E. brookeriana</i> wet forest	0		2.3	&
7	<i>Acacia melanoxylon</i> forest on flats	259		20.19	7.8
8	<i>Acacia melanoxylon</i> forest on rises	75		38.2	50.9
10	<i>E. coccifera</i> dry forest	28		0	0.0
12	Dry <i>E. delegatensis</i> forest	29 876	1.8	1782.07	6.0
13	<i>E. viminalis</i> / <i>E. ovata</i> / <i>E. amygdalina</i> / <i>E. obliqua</i> damp sclerophyll forest	2091	0.4	925	44.2
14	Tall <i>E. delegatensis</i> forest	47 552		3106.1	6.5
20	<i>Leptospermum</i> sp. / <i>Melaleuca squarrosa</i> swamp forest	41		39.55	96.5
21	Callidendrous and thamnisc rainforest on fertile sites	25 085		391.98	1.6
23 ¹	<i>Melaleuca ericifolia</i> coastal swamp forest	400		11.4	2.9
27 ¹	<i>Notelaea ligustrina</i> and/or <i>Pomaderris apetala</i> closed forest	20		0	0.0
29	Dry <i>E. obliqua</i> forest	29 573	3.6	10 123	34.2
30	Tall <i>E. obliqua</i> forest	53 509	23.5	7048.93	13.2
31 ¹	Shrubby <i>E. ovata</i> / <i>E. viminalis</i> forest	428		581.37	135.8
36	<i>E. pauciflora</i> forest on sediments	1851		0	0.0
37	<i>E. regnans</i> forest	27 517	3.8	9172.8	33.3
39	<i>E. rodwayi</i> forest	39	2.2	79.2	203.1
40	<i>E. sieberi</i> forest on granite	16 866	0.6	227.9	1.4
41	<i>Acacia dealbata</i> forest	21 434		1529	7.1
42	<i>E. sieberi</i> forest on other substrates	43 278	0.9	267.1	0.6
47	<i>E. viminalis</i> grassy forest/woodland	18 872	7.2	164.2	0.9
49 ¹	<i>E. viminalis</i> wet forest	92		52.12	56.7
64 ¹ 3	Inland <i>E. amygdalina</i> / <i>E. viminalis</i> / <i>E. pauciflora</i> on Cainozoic deposits	-		10.4	&
65 3	<i>E. amygdalina</i> forest on mudstone	-	4.3	212.42	&
	TOTAL	500 654	125.5	47 749.2	9.5

1 Indicates a threatened native vegetation community (rare, vulnerable or endangered).

✂ During 2005–06, Inland *E. amygdalina* was separated into 'Inland *E. amygdalina* – *E. viminalis* – *E. pauciflora* on Cainozoic deposits' and '*E. amygdalina* forest on mudstone', with only the former being considered a threatened forest community.

Anomalies in mapping (shown with an ampersand (&)) are subject to further field verification. Area data may be modified as mapping is refined.

Figures take into account areas that have been cleared and converted as a result of activities covered by the Act and areas approved for conversion by a Dam Works Permit issued under the *Water Management Act 1999*.

Midlands bioregion as at 30 June 2019

No.	RFA Forest Community	1996 RFA area (ha) (2002 dataset)	2018–19 decrease (ha)	Total decrease 1996–2019 (ha)	% total decrease from 1996 RFA Area (2002 dataset)
1	Coastal <i>E. amygdalina</i> dry sclerophyll forest	3250		5	0.2
2	<i>E. amygdalina</i> forest on dolerite	41 279	23.2	1200.2	2.9
3 3	Inland <i>E. amygdalina</i> forest	19 734		664	3.4
4 ¹	<i>E. amygdalina</i> forest on sandstone	3935		74.6	1.9
5	<i>Allocasuarina verticillata</i> forest	269		7.5	2.8
12	Dry <i>E. delegatensis</i> forest	9642		1584.2	16.4
13	<i>E. viminalis</i> / <i>E. ovata</i> / <i>E. amygdalina</i> / <i>E. obliqua</i> damp sclerophyll forest	7608		736.5	9.7
14	Tall <i>E. delegatensis</i> forest	3812		297.5	7.8
16 ¹	<i>E. viminalis</i> and/or <i>E. globulus</i> coastal shrubby forest	70		2	2.9
17 ¹	Grassy <i>E. globulus</i> forest	2805		172.5	6.1
21	Callidendrous and thamnic rainforest on fertile soils	108		0	0.0
22	Thamnic rainforest on less fertile soils	113		0	0.0
24 ¹	<i>E. morrisbyi</i> forest	22		0	0.0
25	Dry <i>E. nitida</i> forest	7		0	0.0
27 ¹	<i>Notelaea ligustrina</i> and/or <i>Pomaderris apetala</i> closed forest	28		8	28.6
29	Dry <i>E. obliqua</i> forest	13 599		1699.6	12.5
30	Tall <i>E. obliqua</i> forest	8315		494.5	5.9
31 ¹	Shrubby <i>E. ovata</i> / <i>E. viminalis</i> forest	2656		40.27	1.5
32	<i>E. pulchella</i> / <i>E. globulus</i> / <i>E. viminalis</i> grassy shrubby forest	28 223		595.5	2.1
34	<i>E. pauciflora</i> forest on Jurassic dolerite	450	1.6	70.6	15.7
36	<i>E. pauciflora</i> forest on sediments	1290		0	0.0
37	<i>E. regnans</i> forest	996		84.2	8.5
38 ¹	<i>E. risdonii</i> forest	375		2	0.5
39	<i>E. rodwayi</i> forest	113		22	19.5
41	<i>Acacia dealbata</i> forest	1911	53.5	162.7	8.5
42	<i>E. sieberi</i> forest on other substrates	0		2.2	&
43	<i>E. subcrenulata</i> forest	10		0	0.0
46 ¹	Inland <i>E. tenuiramis</i> forest	33 913		6.59	0.0
47	<i>E. viminalis</i> grassy forest/woodland	60 259	0.32	470.32	0.8
49 ¹	<i>E. viminalis</i> wet forest	61		9.5	15.6

No.	RFA Forest Community	1996 RFA area (ha) (2002 dataset)	2018–19 decrease (ha)	Total decrease 1996–2019 (ha)	% total decrease from 1996 RFA Area (2002 dataset)
64 ¹ &	Inland <i>E.amygdalina</i> – <i>E. viminalis</i> – <i>E. pauciflora</i> on Cainozoic deposits	-	1.9	7.3	&
65&	<i>E. amygdalina</i> forest on mudstone	-		309.5	&
	TOTAL	244 853	80.5	8728.8	3.6

1 Indicates a threatened native vegetation community (rare, vulnerable or endangered).

& During 2005–06, Inland *E. amygdalina* was separated into ‘Inland *E. amygdalina* – *E. viminalis* – *E. pauciflora* on Cainozoic deposits’ and ‘*E. amygdalina* forest on mudstone’, with only the former being considered a threatened forest community.

Anomalies in mapping (shown with an ampersand (&)) are subject to further field verification. Area data may be modified as mapping is refined.

Figures take into account areas that have been cleared and converted as a result of activities covered by the Act and areas approved for conversion by a Dam Works Permit issued under the *Water Management Act 1999*.

Freycinet bioregion as at 30 June 2019

No.	RFA Forest Community	1996 RFA area (ha) (2002 dataset)	2018–19 decrease (ha)	Total decrease 1996–2019 (ha)	% total decrease from 1996 RFA Area (2002 dataset)
1	Coastal <i>E. amygdalina</i> forest	28 574	2	87	0.3
2	<i>E. amygdalina</i> forest on dolerite	70 401	46.2	1867.3	2.7
3 ³	Inland <i>E. amygdalina</i> forest	568		154	27.1
4 ¹	<i>E. amygdalina</i> forest on sandstone	24 012		314.9	1.3
5	<i>Allocasuarina verticillata</i> forest	391		0	0.0
6 ¹	<i>E. brookeriana</i> wet forest	19		1.2	6.3
10	<i>E. coccifera</i> dry forest	82		1	1.2
11 ¹	<i>Callitris rhomboidea</i> forest	606		0	0.0
12	Dry <i>E. delegatensis</i> forest	66 809		2005.6	3.0
13	<i>E. viminalis</i> / <i>E. ovata</i> / <i>E. amygdalina</i> / <i>E. obliqua</i> damp sclerophyll forest	0		230	&
14	Tall <i>E. delegatensis</i> forest	21 263		262.1	1.2
16 ¹	<i>E. viminalis</i> and/or <i>E. globulus</i> coastal shrubby forest	977		0	0.0
17 ¹	Grassy <i>E. globulus</i> forest	10 842		352.8	3.3
20	<i>Leptospermum</i> species / <i>Melaleuca squarrosa</i> swamp forest	81		7	8.6
21	Callidendrous and thamnisc rainforest on fertile sites	627		0	0.0
27 ¹	<i>Notelaea ligustrina</i> and/or <i>Pomaderris apetala</i> closed forest	21		0	0.0
29	Dry <i>E. obliqua</i> forest	30 256		2475.9	8.2
30	Tall <i>E. obliqua</i> forest	30 511		1494	4.9
31 ¹	Shrubby <i>E. ovata</i> / <i>E. viminalis</i> forest	719		6.9	1.0
32	<i>E. pulchella</i> / <i>E. globulus</i> / <i>E. viminalis</i> grassy shrubby forest	110 203	35	1200.9	1.1
34	<i>E. pauciflora</i> forest on Jurassic dolerite	1274		3.5	0.3
36	<i>E. pauciflora</i> forest on sediments	47		0	0.0
37	<i>E. regnans</i> forest	3280		804.6	24.5
39	<i>E. rodwayi</i> forest	2149		2.5	0.1
40	<i>E. sieberi</i> forest on granite	829		0	0.0
41	<i>Acacia dealbata</i> forest	2079		171.1	8.2
42	<i>E. sieberi</i> forest on other substrates	2986		0	0.0
44	<i>E. tenuiramis</i> forest on granite	2983		4.3	0.1
45	<i>E. tenuiramis</i> forest on dolerite	7514		45.3	0.6
46 ¹	Inland <i>E. tenuiramis</i> forest	2301		4.9	0.2

No.	RFA Forest Community	1996 RFA area (ha) (2002 dataset)	2018–19 decrease (ha)	Total decrease 1996–2019 (ha)	% total decrease from 1996 RFA Area (2002 dataset)
47	<i>E. viminalis</i> grassy forest/woodland	20 908	0.24	264.24	1.3
49 ¹	<i>E. viminalis</i> wet forest	815		0	0.0
64 ¹ &<	Inland <i>E. amygdalina</i> – <i>E. viminalis</i> – <i>E. pauciflora</i> on Cainozoic deposits	-		0	&
65 ¹ &<	<i>E. amygdalina</i> forest on mudstone	-		21.1	&
	TOTAL	444 127	83.4	11 782.1	2.7

¹ Indicates a threatened native vegetation community (rare, vulnerable or endangered).

&< During 2005–06, Inland *E. amygdalina* was separated into ‘Inland *E. amygdalina* – *E. viminalis* – *E. pauciflora* on Cainozoic deposits’ and ‘*E. amygdalina* forest on mudstone’, with only the former being considered a threatened forest community.

Anomalies in mapping (shown with an ampersand (&)) are subject to further field verification. Area data may be modified as mapping is refined.

Figures take into account areas that have been cleared and converted as a result of activities covered by the Act and areas approved for conversion by a Dam Works Permit issued under the *Water Management Act 1999*.

Central Highlands bioregion as at 30 June 2019

No.	RFA Forest Community	1996 RFA area (ha) (2002 dataset)	2018–19 decrease (ha)	Total decrease 1996–2019 (ha)	% total decrease from 1996 RFA Area (2002 dataset)
1	Coastal <i>E. amygdalina</i> dry sclerophyll forest	276		0	0.0
2	<i>E. amygdalina</i> forest on dolerite	5986		1494.1	25.0
4 ¹	<i>E. amygdalina</i> forest on sandstone	49		15	30.6
6 ¹	<i>E. brookeriana</i> wet forest	6		0	0.0
8	<i>Acacia melanoxylon</i> forest on rises	151		18.7	12.4
10	<i>E. coccifera</i> dry forest	49 927		23.5	0.0
12	Dry <i>E. delegatensis</i> forest	165 758		9339.2	5.6
13	<i>E. viminalis</i> / <i>E. ovata</i> / <i>E. amygdalina</i> / <i>E. obliqua</i> damp sclerophyll forest	1093	0.5	108.4	9.9
14	Tall <i>E. delegatensis</i> forest	152 381	1.7	6691.7	4.4
15 ¹	King Billy pine – deciduous beech forest	176		0	0.0
20	<i>Leptospermum sp.</i> / <i>Melaleuca squarrosa</i> swamp forest	388		1	0.3
21	Callidendrous and thamnic rainforest on fertile sites	24 755		2207.4	8.9
22	Thamnic rainforest on less fertile sites	53 914		137.3	0.3
25	Dry <i>E. nitida</i> forest	5501		4	0.1
28	Tall <i>E. nitida</i> forest	1815		0	0.0
29	Dry <i>E. obliqua</i> forest	6626		1875.9	28.3
30	Tall <i>E. obliqua</i> forest	14 125	4.3	1168.8	8.3
31 ¹	Shrubby <i>E. ovata</i> / <i>E. viminalis</i> forest	104		3	2.9
32	<i>E. pulchella</i> / <i>E. globulus</i> / <i>E. viminalis</i> grassy shrubby forest	1750		51	2.9
33 ¹	Pencil pine – deciduous beech forest	176		0	0.0
34	<i>E. pauciflora</i> forest on Jurassic dolerite	17 079		435.8	2.6
35 ¹	Pencil pine forest	314		0	0.0
36	<i>E. pauciflora</i> forest on sediments	13 026		84.7	0.7
37	<i>E. regnans</i> forest	7843		736.54	9.4
39	<i>E. rodwayi</i> forest	6272		965.8	15.4
41	<i>Acacia dealbata</i> forest	7275		326.7	4.5
43	<i>E. subcrenulata</i> forest	3610		3.9	0.1
45	<i>E. tenuiramis</i> forest on dolerite	8		24.7	308.8
46 ¹	Inland <i>E. tenuiramis</i> forest	17 489		27.9	0.2
47	<i>E. viminalis</i> grassy forest / woodland	10 141		260.3	2.6

No.	RFA Forest Community	1996 RFA area (ha) (2002 dataset)	2018–19 decrease (ha)	Total decrease 1996–2019 (ha)	% total decrease from 1996 RFA Area (2002 dataset)
49 ¹	<i>E. viminalis</i> wet forest	593		0	0.0
50 ¹	King Billy pine forest	3568		0	0.0
64 ¹ ⊗	Inland <i>E. amygdalina</i> – <i>E. viminalis</i> – <i>E. pauciflora</i> on Cainozoic deposits	-		0	&
65 ¹ ⊗	<i>E. amygdalina</i> forest on mudstone	-		25	&
	TOTAL	572 175	6.5	26 031.6	4.6

¹ Indicates a threatened native vegetation community (rare, vulnerable or endangered).

⊗ During 2005–06, Inland *E. amygdalina* was separated into ‘Inland *E. amygdalina* – *E. viminalis* – *E. pauciflora* on Cainozoic deposits’ and ‘*E. amygdalina* forest on mudstone’, with only the former being considered a threatened forest community.

Anomalies in mapping (shown with an ampersand (&)) are subject to further field verification. Area data may be modified as mapping is refined.

Figures take into account areas that have been cleared and converted as a result of activities covered by the Act and areas approved for conversion by a Dam Works Permit issued under the *Water Management Act 1999*.

West and Southwest bioregion as at 30 June 2019

No.	RFA Forest Community	1996 RFA area (ha) (2002 dataset)	2018–19 decrease (ha)	Total decrease 1996–2019 (ha)	% total decrease from 1996 RFA Area (2002 dataset)
2	<i>E. amygdalina</i> forest on dolerite	0		2	&
6 ¹	<i>E. brookeriana</i> wet forest	75		0	0.0
7	<i>Acacia melanoxylon</i> forest on flats	744		0	0.0
8	<i>Acacia melanoxylon</i> forest on rises	5074		290	5.7
10	<i>E. coccifera</i> dry forest	600		0	0.0
12	Dry <i>E. delegatensis</i> forest	6148		28	0.5
13	<i>E. viminalis</i> / <i>E. ovata</i> / <i>E. amygdalina</i> / <i>E. obliqua</i> damp sclerophyll forest	0		3	&
14	Tall <i>E. delegatensis</i> forest	21 408		104	0.5
15 ¹	King Billy pine – deciduous beech forest	622		0	0.0
16 ¹	<i>E. viminalis</i> and/or <i>E. globulus</i> coastal shrubby forest	99		0	0.0
18	Huon pine forest	8503		0	0.0
20	<i>Leptospermum</i> sp. / <i>Melaleuca squarrosa</i> swamp forest	9309		431.5	4.6
21	Callidendrous and thamnic rainforest on fertile sites	106 311		321.6	0.3
22	Thamnic rainforest on less fertile sites	275 451		20.2	0.0
25	Dry <i>E. nitida</i> forest	136 768		72	0.1
27 ¹	<i>Notelaea ligustrina</i> and/or <i>Pomaderris apetala</i> closed forest	95		0	0.0
28	Tall <i>E. nitida</i> forest	67 174		326.5	0.5
29	Dry <i>E. obliqua</i> forest	24 924		249	1.0
30	Tall <i>E. obliqua</i> forest	83 500		2431.9	2.9
37	<i>E. regnans</i> forest	12 588		1398.1	11.1
41	<i>Acacia dealbata</i> forest	499		1.8	0.4
43	<i>E. subcrenulata</i> forest	2253		0	0.0
50 ¹	King Billy pine forest	13 907		0	0.0
	TOTAL	776 052	0.0	5679.6	0.7

¹ Indicates a threatened native vegetation community (rare, vulnerable or endangered).

Figures take into account areas that have been cleared and converted as a result of activities covered by the Act and areas approved for conversion by a Dam Works Permit issued under the *Water Management Act 1999*.

D’Entrecasteaux bioregion as at 30 June 2019

No.	RFA Forest Community	1996 RFA area (ha) (2002 dataset)	2018–19 decrease (ha)	Total decrease 1996–2019 (ha)	% total decrease from 1996 RFA Area (2002 dataset)
1	Coastal <i>E. amygdalina</i> forest	61		1.1	1.8
2	<i>E. amygdalina</i> forest on dolerite	219		4.3	2.0
4 ¹	<i>E. amygdalina</i> forest on sandstone	798		6	0.8
10	<i>E. coccifera</i> dry forest	3952		2	0.1
12	Dry <i>E. delegatensis</i> forest	7996		107.2	1.3
14	Tall <i>E. delegatensis</i> forest	24 803	2.77	656.58	2.7
15 ¹	King Billy pine – deciduous beech forest	6		0	0.0
17 ¹	Grassy <i>E. globulus</i> forest	596		61	10.2
18	Huon Pine forest	9		0	0.0
20	<i>Leptospermum</i> sp. / <i>Melaleuca squarrosa</i> swamp forest	1244		10.8	0.9
21	Callidendrous and thamnic rainforest on fertile sites	6889		14.7	0.2
22	Thamnic rainforest on less fertile sites	22 944		3.4	0.0
25	Dry <i>E. nitida</i> forest	3031		28.1	0.9
27 ¹	<i>Notelaea ligustrina</i> and/or <i>Pomaderris apetala</i> closed forest	54		0	0.0
28	Tall <i>E. nitida</i> forest	2402		18.9	0.8
29	Dry <i>E. obliqua</i> forest	29 486	4.38	1055.28	3.6
30	Tall <i>E. obliqua</i> forest	111 866	19.22	7911.41	7.1
31 ¹	Shrubby <i>E. ovata</i> / <i>E. viminalis</i> forest	222		1.2	0.5
32	<i>E. pulchella</i> / <i>E. globulus</i> / <i>E. viminalis</i> grassy shrubby forest	10 905		63.07	0.6
35 ¹	Pencil pine forest	11		0	0.0
37	<i>E. regnans</i> forest	21 388	4.25	3847.63	18.0
41	<i>Acacia dealbata</i> forest	3890	0.6	142.6	3.7
43	<i>E. subcrenulata</i> forest	4238		8.2	0.2
45	<i>E. tenuiramis</i> forest on dolerite	766		0	0.0
46 ¹	Inland <i>E. tenuiramis</i> forest	1042		7.2	0.7
47	<i>E. viminalis</i> grassy forest/woodland	194		0	0.0
50 ¹	King Billy pine forest	2581		0	0.0
65 ³ <	<i>E. amygdalina</i> forest on mudstone	-		5	&
	TOTAL	261 593	31.2	13 955.7	5.3

1 Indicates a threatened native vegetation community (rare, vulnerable or endangered).

< During 2005–06, Inland *E. amygdalina* was separated into ‘Inland *E. amygdalina* – *E. viminalis* – *E. pauciflora* on Cainozoic deposits’ and ‘*E. amygdalina* forest on mudstone’, with only the former being considered a threatened forest community.

Anomalies in mapping (shown with an ampersand (&)) are subject to further field verification. Area data may be modified as mapping is refined.

Figures take into account areas that have been cleared and converted as a result of activities covered by the Act and areas approved for conversion by a Dam Works Permit issued under the *Water Management Act 1999*.

Furneaux bioregion as at 30 June 2019

No.	RFA forest community	1996 RFA area (ha) (2002 dataset)	2018–19 decrease (ha)	Total decrease 1996–2019 (ha)	% total decrease from 1996 RFA Area (2002 dataset)
5	<i>Allocasuarina verticillata</i> forest	142		0	0.0
11 ¹	<i>Callitris rhomboidea</i> forest	120		0	0.0
20	<i>Leptospermum</i> sp. / <i>Melaleuca squarrosa</i> swamp forest	285		0	0.0
23 ¹	<i>Melaleuca ericifolia</i> coastal swamp forest	11		1.7	0.0
26	Furneaux <i>E. nitida</i> forest	29 712		63	0.2
48 ¹	Furneaux <i>E. viminalis</i> forest	135		0	0.0
	TOTAL	30 405	0.0	64.7	0.2

State totals as at 30 June 2019¹

Bioregion and state totals	1996 RFA area (ha) (2002 dataset)	2018–19 decrease (ha)	Total decrease 1996–2019 (ha)	% total decrease from 1996 RFA Area (2002 dataset)
Woolnorth	375 839	202.5	45 060.8	12.0
Ben Lomond	500 654	125.5	47 749.2	9.5
Midlands	244 853	80.5	13 955.7	3.6
Freycinet	444 127	83.4	26 031.6	2.7
Central Highlands	572 175	6.5	8728.8	4.6
West and Southwest	776 052	0.0	11 782.1	0.7
D'Entrecasteaux	261 593	31.2	5679.6	5.3
Furneaux	30 405	0.0	64.7	0.2
State total	3 205 698	529.6	159 052.5	5.0

¹ This table includes the areas cleared as a result of dam works permits issued under the *Water Management Act 1999*.