

Forest Practices News - July 2023 vol 15 no 3 ISSN 1441-1288

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Challenges under a changing climate

Amy Koch, Biodiversity Research Manager, FPA

Our climate is changing, which is going to impact our forests and how we might need to manage them into the future. The FPA has completed a project to understand what changes and challenges we might expect, and what the forest industry can do to adapt.

People talk a lot about global climate change, but what is this likely to mean for Tasmania? Well, Tasmania is getting warmer. As we are in winter, some might think this doesn't sound like such a bad thing, but actually our plants and animals have evolved over a long time to a particular climate, so this is bad news for a lot of species and ecosystems.



Manager, FPA Warmer temperatures could mean our forests dry out, depending on what happens with rainfall. What is likely to happen to our rainfall patterns is unclear. Evidence shows overall annual rainfall may remain similar but rainfall patterns may change considerably. The expectation is we will have longer periods of low rainfall or drought, interspersed with really heavy rainfall events (such as we

rainfall or drought, interspersed with really heavy rainfall events (such as we witnessed in October 2022). The rain is also likely to occur at a slightly different time, so we are expecting drier springs and summers. Warmer temperatures plus drier conditions mean a BIG increase in fire risk and a smaller window for doing planned burns.



Eucalyptus viminalis is particularly susceptible to 'ginger tree syndrome' which can follow extreme heat events. Tree mortality typically follows within 12 months.

Tasmania's independent forest regulator administering the Forest Practices Act • Advising • Researching • Training • Monitoring • Enforcing

Challenges under a changing climate (continued)

To better understand what might happen to our forests under a changing climate and what we might be able to do about it, FPA sent out a survey to a large group of expert scientists asking their informed thoughts on the matter. The results were sobering, with some of the key points outlined below on the page opposite.

These impacts are not just theoretical, they are already being observed in our forests. Our white gums (*Eucalyptus viminalis*) are dying due to 'ginger syndrome', which occurs when the trees get too water-stressed and the hydraulic system 'breaks'. Trees in the Southern forests stop being productive when temperatures get into the high twenties, which has already resulted in a 6–7% decrease in productivity since the 1990s (Wardlaw, 2018). And in 2016 we saw unprecedented areas of rainforest burn.

Luckily, the scientists also had numerous suggestions on how the Tasmanian forest industry could adapt to climate change. This includes adjusting how we manage at a landscape scale, in particular concerning the more resilient older trees. In order to maintain our forests at both the stand and landscape scale, we may need to carefully consider the species and genotypes we're sowing/planting to be confident they're suitable for future climatic conditions. We also need to identify the important values that need extra protection and reconsider how we select areas for retention. Preparing for adverse impacts that we are likely to see in the future is one way we can lessen those negative effects and improve resilience in Tasmania's forests.

To communicate the ideas expressed by the scientists, the FPA released a report summarising the opinions received, which is available on our <u>website</u> (fpa.tas.gov.au/ news).

In addition, we held a themed research update in August 2022, with 17 presentations from an impressive lineup of speakers (recordings available on request). With a full house on the day, as well as a large number of attendees online, it was evident that there is considerable concern about what will happen to our forests in the future.

But we didn't stop there. At the FPA we are really committed to excellent environmental stewardship, so we're keen to put some of the adaptation strategies into practice. The only problem was working out where to put our efforts, as more than 70 recommended actions had been proposed. To narrow down our focus, we held a practitioner workshop where participants identified the actions they were interested in and we had a series of discussions about how we could implement these actions. The engagement at the workshop was fantastic and excellent suggestions were made. I was impressed at the creativity of the thinking and the enthusiasm in the process shown by the participants. The report from this workshop is also available on the FPA website (fpa.tas.gov.au/news)

The next step is to identify actions that the FPA can commit to implementing.

The Tasmanian forest industry potentially has a very important role to play in mitigating climate change. Carbon emissions are the key driver of climate change, and growing trees capture and store carbon. The products produced by the forest industry could be used to replace those derived from fossil fuels.

How we do our forestry will determine the overall carbon benefit because forestry also results in carbon emissions, via the use of vehicles and machinery and from planned burns. Adapting to the challenges of a changing climate is not something the FPA can do alone. It is something that will require consideration and engagement from the entire sector. We all need to think carefully about what is going to happen to our forests and how we manage these risks.

Reference

Wardlaw T (2018) When the forest stopped growing: estimating the impact of the November 2017 heatwave on productivity of Tasmania's tall eucalypt forests, Unpublished report, Forest Knowledge.

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Higher temperatures plus drier conditions mean a significant increase in fire risk for both plantations (above left) and native forest and a smaller window for conducting planned burns (above, right).

Challenges under a changing climate (continued)

Some of the key impacts of climate change on Tasmanian forests, as determined from a survey of experts*

Forest growth and productivity:

- tree growth will decrease in many areas
- drought stress can reduce forest productivity and increase tree mortality
- productivity will decline if the optimum temperature for photosynthesis is exceeded
- the geographic area in which species are best suited to grow is likely to change
- tree mortality is expected to increase (due to drought, fire, heatwaves, and . pathogen outbreaks), but will be species- and location-specific
- there may be changes in timing and efficiency of plant reproduction .
- repeat fires may impact seed production of some species
- there may be lower seedling establishment
- the rate of hybridisation may change among species. 0

Fire:

- increased frequency, intensity, and severity of fire .
- increased frequency and severity of fire can impact forest regeneration and therefore forest type
- production forestry landscapes may be more fire prone. .

Soils:

- greater frequency of extreme rainfall and fire could increase soil erosion, increase soil degradation, and decrease soil nutrients
- changes in soil biota, including mycorrhizal fungi.

Water:

- increased water stress on forests .
- changes in stream flow
- increased stream temperatures.

Biodiversity:

- change in vegetation communities
- loss of habitat for some taxa .
- disturbance will alter species composition
- species will vary in how vulnerable they are to climate change
- loss of ecological function. .

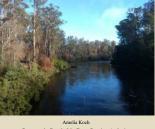
Weeds, pests, and diseases:

potential increase in pest and disease outbreaks.



hese views do not necessarily align with the FPA's views.

Summary of scientific expert feedback on the potential impact of climate change on Tasmania's production forests and potential adaptation strategies Background report



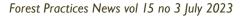
August 2022 FPA Scientific Report 32

The report summarising opinions from experts is available on the FPA's website.





Climate change will bring increased risks of damage from heavy rain (top, photo by Garry Richardson) as well as fire (above). Climate change may impact seedling establishment (left).



Acknowledgment of Country

The FPA acknowledges palawa people as the original owners and continuing custodians of lutruwita/Tasmania and acknowledges their skill and care in managing the land for many thousands of years.

We pay our respects to elders – past and present.

Forest Practices News is produced on the lands of the muwinina people on country around nipaluna.



Photo: Rodney Dillon, Chair of the Aboriginal Heritage Council, explaining how to identify Aboriginal stone artefacts on the FPA Aboriginal Cultural Heritage Course, Bruny Island, May 2022.

Editors' corner

Contributions to Forest Practices News are always welcome. Please include illustrations and a photo of yourself as separate files.

Send contributions to: chris.grove@fpa.tas.gov.au laurel.trebilco@fpa.tas.gov.au **Deadline: 27 October 2023**

Chris Grove and Laurel Trebilco Forest Practices News Editors



In November we farewelled our Chief Forest Practices Officer Peter Volker who led the FPA with vigour, commitment and intelligence for 6 years. Peter is now engaged with a number of exciting projects on the mainland and will continue as a Forest Practices Officer in Tasmania.

We also welcomed our new CFPO Anne Chuter in November. Anne is of course well known to you all and is already engaged with meeting our next raft of organisational and environmental challenges. Anne and the Board will be working on our future 5-year strategy over coming months and we will be looking for your feedback.

Since late last year there has been a buzz about biodiversity and nature protection policy-making, which will impact all of us in the forest sector. Firstly, the Federal Environment Minister announced her response to the pre-covid Samuel Review of the Environment Protection and Biodiversity Conservation Act 1999. Her Nature Protect Plan promises nature repair, stronger environmental laws, a new Federal EPA, more effective regional planning and consultation with business, states and community to achieve these goals. The Minister then sped off to Montreal for COPI5 (the 15th Conference of the Parties to the United Nations Convention on Biological Diversity) and pushed for strong international action on biodiversity protection. The outcomes of this conference were well publicised in our region: 2030 targets set for land and ocean protection, recognition of the need to restore degraded land, inland water and coastal and marine ecosystems, a focus on the Pacific Islands, the role of First Nations and a bilateral agreement with the USA to develop global natural capital accounting standards.

Message from the Chair

Pam Allan

These national and international discussions around biodiversity reinforce current discussion around climate change impacts in the forest industry. They will be a continuing backdrop to the work of forest practices regulators and industry for the remainder of this decade. On a state level, these issues will also be on the radar over the next 18 months as the Tasmanian Planning Commission prepares the first State of the environment in Tasmania report in nearly 15 years. The work we do as foresters and forest regulators will be important inputs into this report and we look forward to the process.





Pam Allan joined a 3-day visit to King Island in March 2023 with FPA staff (Anne Chuter, Kirsty Kay, Chris Grove and Ben Storer) and FPOs Chris Ringk and Steve Martini. The FPA held an open-invitation workshop to explain the forest practices system (above left), visited some private native forest owners and also had a site a the King Island Show. Above right: Pam and Anne select the winners for the FPA competitions run at the King Island Show.

Update from the Chief Forest Practices Officer Anne Chuter



The year is already half way through and I am enjoying all of the opportunities and challenges that come with the role of CFPO. I would like to take this opportunity to thank my predecessor, Peter Volker, once again for his commitment to the forest industry and the FPA.

The FPA has had a busy 2023 so far. Our flagship Forest Practices Officer course is running from June to December. We have a great group of learners attending the course, and I have had the opportunity to meet the group at the first session on the East Coast in June. A handful of brave souls even faced the freezing water in Orford for a morning swim before the learning commenced! The FPO course is designed to mix theory with practical field-based learning and provides learners with opportunities to interact and learn from each other as well as the presenters. I've always really enjoyed presenting at the biodiversity sessions of the FPO course, and I'm looking forward attending many of the other sessions this year. As well as the FPO course, our specialist staff at the FPA will be running workshops and field days throughout the rest of the year. Make sure you check out the FPA's training page for upcoming opportunities.

Other significant pieces of work being undertaken by the FPA this year include developing our Reconciliation Action Plan in partnership with Reconciliation Tasmania, building on the workshop about climate change in Tasmania's production forest held last year, and further developing our communication and engagement strategy with our stakeholders and the Tasmanian community. Training, education and communication are an important part of the FPA's work program and assist with continued effective delivery our compliance and enforcement responsibilities. In the first half of the year the FPA has been focused on engagement with the agricultural

community, particularly on King Island. Earlier this year we attended the King Island show and held a workshop for landowners. These two events provided the FPA with an opportunity to engage with the community, and to communicate the role of the FPA and the forest practices system.

In the second half of this year, the FPA will be undertaking a significant body of work to review and develop our strategy moving forward. This is an important undertaking that will help to focus the FPA on the priorities over the next 3 to 5 years. I look forward to engaging with FPOs, forest companies, government, and other stakeholders as we go through that process. There are many more projects and program work being undertaken by the FPA and our partners over the rest of the year. It would fill up the rest of this newsletter to report on everything, and I thank all the staff at the FPA and our consultants for their commitment and tireless efforts at delivering an ambitious work program! I encourage you to read through the articles in this edition of *Forest Practices News* for a snapshot at what has been going on both within the FPA and within the industry.

Finally, I would like to thank everyone for their support and assistance as I work into the CFPO role, and I am looking forward to catching up with everyone as the year progresses.

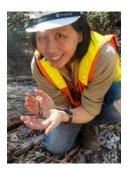




Clockwise from top left: Anne presenting to FPO Training Course in June, with Inland Fisheries and SFM staff in Tyenna in April, and on a visit to Timberlands in March.



Monitoring swifties on PTPZ land



Marie Yee, Senior Conservation Planner, Sustainable Timber Tasmania Andrew Hingston, Honorary Research Associate, UTAS

Swift parrots are listed as critically endangered, with an estimated population of 750 mature individuals. Included in the many compounding threats to swift parrots are the loss of breeding habitat and nest predation by sugar gliders in Tasmania.

The forest practices system provides recommendations to be followed when operating in or near swift parrot habitat. During FPP preparation, planning areas are subject to detailed habitat surveys and assessments. Prescriptions for managing specific types of potential swift parrot habitat are developed using information from the surveys and assessments, resulting in measures such as habitat retention and/or harvesting restrictions.

With such a wide-ranging species, conservation efforts are prioritised to areas with the highest likelihood of supporting swift parrot breeding, namely the core range and swift parrot important breeding areas (SPIBAs). For example, in the Southern forests SPIBA, all high and medium, and the majority (90%) of low density potential breeding habitat (nesting and foraging) is excluded from harvesting. Outside of core range and SPIBAs, a mix of these habitat retention measures is applied depending on regional context. In the Lake Leake SPIBA, additional habitat prescriptions are implemented to retain Brookers gum (Eucalyptus brookeriana) as foraging habitat for swift parrots in this area.

In Spring of 2021, most of the swift parrot population decided to breed in the Southern forests. This gave many eyes and ears an opportunity to see and hear how they were using Permanent Timber Production Zone land (PTPZ land). Included in this monitoring were consultant ornithologist, Andrew Hingston, and STT conservation planner, Marie Yee. Field surveys were conducted from almost 400 monitoring sites between October and February, extending as far south as Recherche Bay and north to the Lonnavale forests (Barnback, Denison and Russell forest blocks) near the Russell River.

In the following spring of 2022, aggregations of swift parrots were expected around Eastern Tiers, Tasman Peninsula and Bruny Island. And again, many eyes and ears were out on PTPZ land, including Marie, Andrew and consultant ornithologist Tim Reid, where we conducted field surveys from around 200 sites across the Eastern Tiers, East Coast including Tasman Peninsula, South Bruny and Southport.

Spring and summer 2021–22 was the first season that STT carried out its own swift parrot field monitoring program. We also trialled acoustic monitoring, with acoustic recorders deployed at 36 sites. Notably, half of these sites were in the Lonnavale forests – an area outside swift parrots' core range that we wanted to better understand in terms of how swift parrots use it. In the following spring and summer



Andrew placing one of 36 acoustic recorders for acoustic monitoring of swift parrots.



of 2022–23, we repeated the monitoring program, which included field surveys across the east coast of Tasmania, and we concentrated our acoustic monitoring in the Eastern Tiers area.

The objectives of our monitoring program are to:

- Identify and better understand where and how swift parrots are using breeding habitat on PTPZ land throughout the breeding season.
- 2. Identify additional areas of highquality habitat (not yet reserved or retained) that are important for breeding (being used this season or have good potential for use).
- Conduct detailed surveys in specific coupes in response to nearby swift parrot sightings.
- 4. Examine whether habitat retention strategies implemented for the swift parrot on PTPZ land are effective – i.e. Is habitat retained in harvested areas being utilised by swift parrots?



Andrew spotting a swift parrot.

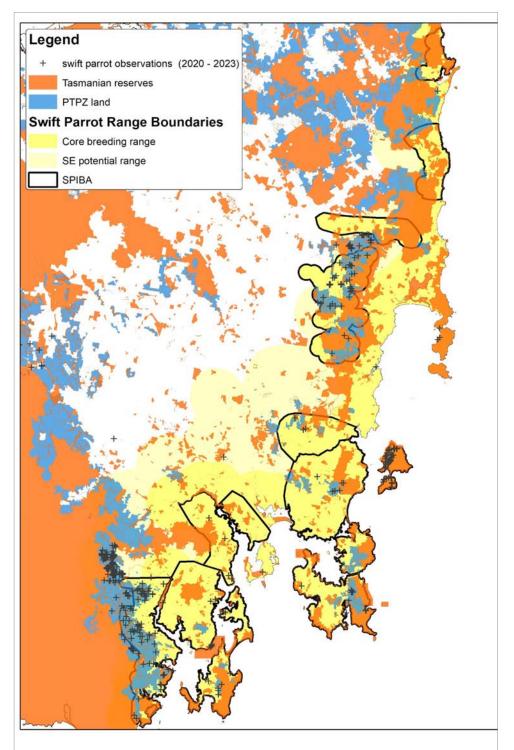
 Investigate the use of acoustic recorders as a remote tool to help measure swift parrot breeding activity and success.

From our annual monitoring program, we are observing first-hand the seasonal behaviour of swift parrots. We are seeing that they are quite social and gregarious at the start of the season while looking for suitable hollows and mating, then largely quiet and cryptic during the egg incubation phase, before regrouping into flocks after the young have fledged. As such, surveys in the October – November period are key to identifying where the birds are settling to breed for the season.

Other observations include:

- Not all early breeding season detections/sightings mean that birds remain and breed at that location throughout the season.
- Swift parrots used, and in some cases successfully bred in (as evidenced by fledglings), habitat retained as part of forest practices or some other broader land management strategy such as PTPZ land swift parrot reserves or special management zones.
- Burnt forest areas, such as those heavily impacted by the 2019 Riveaux Rd fire, still represent important breeding habitat for the swift parrot.
- The observations of fledglings this season indicate that some breeding events were successful despite the presence of sugar gliders in the landscape.
- Acoustic monitoring is proving to be a very useful tool in detecting habitat use, even after the birds have gone 'quiet'; and the acoustic data gives more certainty on how swift parrots are using, or not using, an area.
- Swift parrots were using areas within the Lonnavale forest as well as areas in the Eastern Tiers that are presently not within a SPIBA or core range.

We will continue to monitor swift parrots this 2022–23 season, where the data will provide important information on the long-term occupancy of breeding sites on PTPZ land and the effectiveness



All NVA swift parrot observations recorded from 2020–23, indicating the extensive survey effort on PTPZ land and elsewhere in south-eastern Tasmania.

of our management. It is expected that monitoring priorities will vary each year depending on where swift parrots are likely to breed, the nature of any pressing matters, and the questions that are key to inform management decisions.

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Introduction

The sixth Tasmanian Forest Practices Awards were held in October 2022 in Launceston.

The awards are an initiative of the FPA's Board of Directors.

The Forest Practices Awards publicly acknowledge some of the many people working in forestry in Tasmania who consistently display excellence in applying the forest practices system in their particular work.

This commitment to the ongoing sustainability of Tasmania's forests underpins the industry and is worthy of recognition. It's the high standards achieved by those who implement the forest practices system which help maintain the co-operation and continuous

Forest Practices Awards 2022

Laurel Trebilco, Communication and Training Officer, FPA (right) Chris Grove, Communication and Training Manager, FPA (left)

improvement that is a feature of the Tasmanian forest industry.

The following awards were presented on the day for:

- Preparation of forest practices plans
- Inspection and supervision of forest operations
- Conduct of forest operations to high operational standards
- Innovation in forest practices
- Excellence in community and stakeholder relations in regard to forest practices
- New FPO excellence award.

This year, 7 winners have been acknowledged for excellence in the sustainable management of our forests, joining the 36 previous winners since the inaugural awards in 2007. The following pages celebrate the winners and finalists with some statements from their nominations.



'On behalf of the members of the Board of the Forest Practices Authority, I want to thank all those who work in the forest practices system for the contributions that they make on a daily basis to seek to achieve sustainable management of forests in Tasmania.' Pam Allan, Chair of FPA Board of Directors.



Some of the finalists and winners at the awards ceremony with (clockwise from back left) Dean Williams, then with Sustainable Timber Tasmania; Mike Ross, Indicium Dynamics; Senator the Hon Richard Colbeck; Adrian Smith, JCH Harvest Group; Michael Evans, Forico; Simon McNamara, Forico; Senator the Hon Jonathon Duniam; Peter Volker, then Chief Forest Practices Officer; Pam Allan, Chair of FPA Board of Directors; Adam Crook, Forico; Mark Wapstra, ECOtas; Lauren Carter JCH Harvest Group; Tracey Taylor, Tasmanian Forests and Forest Products Network; Hafwen Pearce, Sustainable Timber Tasmania.

Forest Practices Awards 2022 (continued)

Preparation of forest practices plans: Dion Robertson, Senior Forest Officer (Operational Planning) Sustainable Timber Tasmania

This award is made to Planning Forest Practices officers (FPOs). It is judged on the basis of consistency, clarity, high quality, freedom from errors and innovation or excellence in dealing with complex or challenging issues for one or more plans.

Dion consistently demonstrates a high standard of planning, showing attention to detail in the documentation and assessment of special values, conscientiousness in ensuring all planning processes are completed appropriately, and innovation in proposing solutions to complex planning issues. He contributes time and knowledge to upskilling others in FPP preparation.

The FPA's advisory programs have noted and appreciate his skill and attention to detail. Perhaps most notably, Dion is a leader in the field of swift parrot habitat assessment and planning. As one of the most complicated and difficult planning challenges in the southern forests, this is no mean feat.



Dion did not make it to the awards ceremony but later gave us this photo of him with his award (left) and Dion mapping a stream sinking in tunnel erosion (right).

Inspection and supervision of forest operations: Adam Crook, Native Forest and Fire Management Coordinator, Forico

This award applies to Inspecting FPOs and field supervisors. It is judged for special diligence in the inspection and management of forest practices issues in the forest resulting in the achievement of excellent outcomes.

Adam's career in forest management spans more than two decades and he has been a Forest Practices Officer (Planning) since 2007. His primary role is to undertake maintenance and enhancement activities within the natural forest areas of the Forico resource. This ensures natural values are managed appropriately, whether or not a forest practices plan is required.

He applies his forestry knowledge, experience, planning and communication skills with stakeholders to ensure appropriate prescriptions are in place to deliver positive environmental outcomes aligned to the forest practices system.



Adam's role within the natural forest areas of the Forico resource includes many tasks, such as planting (left) and control burning (right).



Forest Practices Awards 2022 (continued)



Conduct of forest operations to high operational standards: JCH Harvest Group

> This award applies to contractors, business units and FPOs and is judged on the basis of consistently good performance in regard to forest practices.

JCH Harvest Group is a first-generation harvesting business with goals to deliver safe, productive and environmentally conscious harvesting outcomes.

The group, comprising 4 to 5 crews at any given time, upholds high operational standards as they harvest more than 305,000 tonnes per annum.

JCH proactively seeks out better ways of operating, through mapping, reporting, data integration and seeking feedback.

An example of this is steep-slope harvesting and wood extraction that has required the company to develop new strategies through research and international travel, and by reviewing data and the approach taken.

Excellence in community relations in regard to forest practices: Mark Wapstra, Consultant





Mark delivering training on identifying Tasmanian forest plants during FPA-run courses.

This award applies to an FPO, business unit or organisation and seeks to recognise the successful solution, from the point of view of all parties involved, of difficult forest planning or operational issues.

Mark has been described as currently the best overall naturalist in Tasmania. His ecological consulting business provides practical biodiversity management and assistance in navigating the complex Tasmanian forest practices system.

Mark spent II years working for the FPA, culminating in his appointment in 2004 as Senior Ecologist.

He has contributed to good conservation results on both public and private land, and has an impressive track record of community engagement, through publications, training, providing ecological consulting work and more. This award seeks to recognise the development of new tools or methods to improve forest practices, such as new planning tools, innovation in equipment design, improved silvicultural techniques or operational practices that provide improved environmental outcomes.

JCH management has spent 10 years researching and developing best-practice strategies to employ in harvesting on steep slopes. JCH Northeast comprises a crew of specially trained operators and niche equipment that undertakes innovative harvesting practices, totalling in excess of 85,000 tonnes a year from steep slopes.

Machinery has been a key area of practice evolution for JCH. The company's approach is exemplified through:

- ongoing research, development, and trialling of machines
- data collection pre- and post-harvest

Innovation in forest practices: JCH Harvest Group (joint recipient)



An example of the steep slopes that JCH Harvest Group work in.

- significantly less ground disturbance and fewer environmental impacts
- research into soil types and impacts of processes
- adaptive weather prescriptions
- mapping and consultative practice

when planning across all levels within the organisation

• considered acquisition of resource, research into species, topography, and extensive strategic planning.

Innovation in forest practices:

Dean Williams (then Sustainable Timber Tasmania) and Mike Ross (Indicium Dynamics) (joint recipient)

Sustainable Timber Tasmania (STT) is partnering with Indicium Dynamics to develop an Internet of Things (IoT) to provide a vital connection between data and decision makers, presenting relevant data from remote locations in real time to support management decisions.

IoT uses sensors, communications networks, cloud computing, and human interface systems to provide easily accessible, relevant data.

STT is seeing the benefits of this approach though positive social, environmental, and economic outcomes. Examples of this are the Eagle Eye Project, and Automated Fuel Moisture Sensors used in planned burn management.

This technology is adaptive and scalable, making it ideally suited to the dynamic environment of sustainable forest management.



Mike Ross (left) and Dean Williams.

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Forest Practices Awards 2022 (continued)

New FPO excellence: Hafwen Pearce, Sustainable Timber Tasmania



Hafwen discussing planning for biodiversity values with FPA adviser Steve Casey.

Hafwen was appointed as an FPO in 2018 and received her planning delegation in 2019. She has stood out as a particularly conscientious planner since the start of her FPO training, keen to learn and understand the range of issues that may arise when preparing FPPs.

Showing great attention to detail in her work, Hafwen follows planning processes rigorously and makes sound and clearly documented decisions. Not only is she a conscientious planner, she also promotes trust to facilitate strong working relationships. Her approach and experience make her a valued mentor for new FPOs, promoting continuous improvement of planners and the forest practices system.

Hafwen has also contributed her time to delivering FPA training courses. In her engaging presentation style, she is generous with her knowledge, inclusive of all audience members, and acknowledges the important contributions of others. This demonstrates that new FPOs can be authoritative and inspire the next generation of FPOs to achieve high standards.

Hafwen has shown a very high standard of planning and has contributed information helpful to planning challenging coupes in multiple-use areas. She has carefully considered the balance of natural values along with community values and showed a proactive approach and excellent foresight by contacting the FPA Biodiversity Program very early in the planning process for challenging coupes.

She was aware of the sensitive nature of these coupes and that local environment groups would be interested in them. She diligently sought biodiversity advice as well as precautionary advice for the Simsons stag beetle, even though the coupes fall just outside the known and core ranges for this species.

Award finalists

Preparation of FPPs

Dan Ryan

Dan started his forestry career with Forestry Tasmania in 1997. He was appointed as an FPO in September 2001 and became an FPO (Planning) in December 2001. Dan is a respected FPO who has also consistently sought advice on difficult issues such as management of eroding streams and Tasmanian Aboriginal cultural heritage sites. He has applied his professional knowledge to achieve good environmental results.



Simon McNamara

Simon is an FPO who applies a high level of diligence, practicality, and clarity to the FPPs he prepares. Since 2018, Simon has consistently certified more than 30 FPPs per calendar year. He is one of the key FPOs at Forico involved in training and mentoring foresters. Simon provides leadership to the Forico business around engagement with the FPA and other stakeholders to ensure a high standard of forest practices planning.



New FPO Excellence Michael Evans

While Michael has only recently been endorsed as an FPO, he has been involved with the plantation silvicultural operations for over 7 years and is a senior member of the Forico Plantation Operations group. He provides leadership in a range of plantation operations – including forest management and compliance with forest practices. He has also been actively involved with mentoring Forico's cadet and trainee foresters.



Forest Practices Awards 2022 (continued)

Award finalists:

Excellence in Stakeholder Relations: Tracey Taylor, Leader, Workforce Development and Diversity Project

Tracey Taylor worked with the Tasmanian Forests and Forest Products Network (TFFPN) to provide leadership in developing a Forest Industry Diversity Action Plan. This aims to foster a sense of belonging by supporting the current workforce to connect with each other, as well as with people outside the forest industry.

Like the forest practices system, the success of this project is very much dependant on fostering cooperation among stakeholders and it is focused on providing education and training to stakeholders to facilitate ongoing change. A diverse and inclusive forest industry workforce will – by the fact that it is diverse and inclusive – connect more meaningfully with the community, and therefore lead to improved social acceptance of the industry and improved understanding among the community of the importance of the sector.

The Diversity Action Plan has the vision of a GREAT Tasmanian forest industry of choice:

- Growing people
- Respected and respectful
- Equitable and inclusive
- Authentic leadership
- Teamwork and partnerships.



Awards photo gallery



From left: Pam Allan (FPA Board Chair), Lauren Carter (JCH), Tracey Taylor (TFFPN) and Hafwen Pearce (STT).



Fiona Hughes, Trowunna Aboriginal Cultural Services, during her welcome to country.



Adam Crook receiving his award from Pam Allan (FPA Board Chair) and Peter Volker (then CFPO).



From left: Mark Wapstra (ECOtas), Anne Chuter (FPA) and Errol Lohrey (STT).

Welcome and farewell to FPOs



Laurel Trebilco, Communications and Training, Forest Practices Authority

There has been some turnover in FPOs since July 2022, so we thought it would be good to welcome new FPOs and say farewell to people who have resigned as an FPO (in alphabetical order).

Welcome

The following people have been appointed as FPO Inspecting:

- Liam Beattie, Technical Forest Services
- Phil Bell, FPA consultant
- Heath Burn, Sustainable Timber Tasmania
- Steve Casey, FPA consultant
- Matthew Fogarty, Sustainable Timber Tasmania
- David Fulford, Forico
- Mark Pearce, Forico
- Ben Storer, FPA
- Harvey Watson, Sustainable Timber Tasmania

Haydn Ihnen, Sustainable Timber Tasmania, has been appointed as an FPO and delegated additional powers to be an FPO (Planning).



Bruce Hay discussing high-altitude partial harvesting with a group of FPA staff in February 2009.

Farewell

The following people are hanging up their FPO hard hats. The FPA would like to thank each one for their dedication to upholding the forest practices system and we wish them well in their next adventure. Please enjoy their stats and parting thoughts.

Phil Austin – appointed in 1997, was an FPO (Planning)

David Bower – appointed in 2000, was an FPO (Planning)

Currently, I am engaged in the Northwest Transmission Development and Marinus Projects as a consultant/ contractor to TasNetworks.

Darryn Braithwaite – appointed 2018 as an FPO (Inspecting)

I came to Tasmania in late 2015, joining Forico as a harvesting supervisor in the north-east. It didn't take me long to realise what a world-class system of self governance the FPA administers and supports through its specialist staff and I was very fortunate to have completed the FPO course in 2017 through Forico. Moving to new challenges, I became a harvest manager in the softwood production thinning arena for Timberlands, and spent the next 5 years managing their program as well as doing many FPPs to stay ahead of the harvest crews.

The mere fact that there are so many forest workers, at all levels, who are committed to doing the right thing because it's the right thing to do, makes me incredibly proud to have contributed and learnt along the way.

Forestry, as a career, remains a noble choice and is one which can take you to many places around the world. You will always find likeminded people and common ground on which to forge long-lasting professional and personal connections.

I have often remarked that our profession is very large geographically, but is a relatively small family that stays connected and remains passionate about the profession. Forestry in all its forms has faced criticism in the past and this will surely continue in future. Foresters are a tough breed though and I have no doubt that common sense will prevail in the end. Thank you and farewell!

Nick Hall – appointed 2010 as an FPO (Inspecting).

Nicholas worked in forestry in Tasmania for 12 years, with Forestry Tasmania, Gunns and Norske Skog, before working for four years with Vic Forests. He moved to the West Coast Council in September 2022.

Bruce Hay – appointed in 1987, was an FPO (Planning)

On reflection in having had some 53 years associated with the forest industry, I would like to take this opportunity to say that it has been a privilege and honour having had the role of a FPO since 1987. I've worked alongside many past and present dedicated forest contractors, fellow FPOs and FPA staff and specialists, all aiming for excellence in forest practices, and the management and protection of natural values with challenges in a never ending changing forest environment.

The time has come to hang up my forestry boots. All the best for the future ahead.

Shane Popowski – appointed in 2004 as an FPO (Inspecting) and moved to Perth in 2014.

Peter Rowlands – appointed in 1996 as an FPO (Inspecting) and in 1999 as an FPO (Planning) and retired in November 2022. Thanks to the FPA for many years of service to me as an FPO and professional forester.

Scott White – appointed 1989, was FPO (Planning). Retired from Sustainable Timber Tasmania.

FPOs, please remember to let us know your new contact details if you move jobs or retire.

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FPA at AGFEST 2023



Chris Grove, Communications and Training Manager, Forest Practices Authority

FPA took part in AGFEST for the first time from 4 to 6 May 2023, joining the site hosted by the Tasmanian Forest and Forest Products Network, which comprised 3 tents forming a central courtyard. A wide variety of forestry organisations were represented:

- Arbre Forest Hub
- Forest Education Foundation
- Forico
- Indicium Dynamics
- Marsh Insurance
- Midway
- Pentarch
- Private Forests Tasmania
- RAW (Rural Alive and Well)
- Reliance Forest Fibre
- SFM/ActivAcre
- Sustainable Timber Tasmania.

FPA Communications and Training Program staff (Chris Grove and Laurel





Clockwise from above: Romany Brodribb (TFFPN) and Laurel Trebilco (FPA) setting up the site. Activities included Draw the Eagle and Match that Scat. CFPO Anne Chuter joins in the activities. Therese Taylor (TFFPN) and Laurel picking the competition winners.

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Trebilco) attended all 3 days of AGFEST and were joined by CFPO Anne Chuter and FPA Chair Pam Allan for the first day.

FPA hosted a morning tea to welcome all the site sharers and launch the State of the forests Tasmania 2022 booklet. Minister for Resources Felix Ellis was an invited guest and gave a very supportive speech. when requested by Pam...

AGFEST organisers report that 44,000 people came through the gates over the 3 days, and it feels like a large proportion of them came through our tent. FPA staff were kept busy with a constant stream of conversations and around 120 people participating in our games: Match that Scat, Eucaflip ID and Draw the Eagle.

TFFPN reported... 'Visitors to our site commented frequently on how inviting the space was and how engaging and passionate industry representatives were; this is a credit to you all.' FPA staff also had many conversations with fellow site-sharers. Good relationships were forged with many people, providing a solid base for future partnerships across the forest industry.

We hope to see you there next year.

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Indicium Dynamics had an eagle nest and costume - guess who dressed up?









Top: Reini and Andrew

Above: Reini battling against the bark beetle. Andrew shares a personal story of an inspirational mate from Austria, a reminder of the commitment found in forestry around the world and a salutary lesson in the importance of work health and safety. He

submitted this article when he was working

for Sustainable Timber Tasmania.

When asked to write an article on an experience within my time in the forest industry I could write about different technology or methods that I've been lucky enough to witness from around the world but nothing has made more of an impact on me than the people within the forest industry that I have met over the years. The kind of people that live and breathe forestry... people that have a 'Passion for Timber'. They are the kind of people that are first one on the job and last to leave, the kind of people you can always rely on, salt of the earth kind of people.

A passion for timber

Andrew Stoios, Tasmanian Fire Service

I have been lucky enough to meet one such person in my time in the industry and would consider this person one of the 'best blokes' I know.

It began in the Alps of Austria where I was working in the forest industry through summer seasons in an attempt to tie winter seasons together to allow me to further my pursuit of becoming a professional snow skier – turns out you have to be either talented or have a bucket of money to become a pro... I didn't have either!!!

After a number of years working full-time in the forest industry in Austria, I was working on a small-scale cable thinning operation above the Brenner autobahn (a major thoroughfare from Austria to Italy) when a young bloke walked down into the steep cutting where I was working and introduced himself as 'Reini'.

Reini, a teenager at the time, asked if we had any work available and we certainly did with the large amount of windthrow and the ever-increasing bark beetle problem.

He said he had a 'Passion for Timber', he showed eagerness and enthusiasm for what we were doing and an interest in anything to do with tree felling or working in the forest.

It wasn't too long before he began work with our team and quickly became an integral member, and so began our friendship.

Reini was a local farm lad who had dreamed of working in the forest industry since he was a boy. He knew everything about chainsaws and the machinery used to extract and process timber. He studied forestry magazines and the internet religiously for the latest harvesting technologies available.

He was there all day, every day, and despite his commitments at home on the family farm he was at work on time every day. He was someone you could always rely on to work.

On the family farm he would tend to the animals (cows, goats, sheep and pigs) as well as cutting hay in the warmer months. This was still cut by scythe and raked into stockpiles in the steep areas.

In winter, the stock were housed in the stall attached to the family home where they needed feeding and mucking out twice a day.

You will find no dust on Reini as he doesn't sit still long enough for it to gather. In the little spare time that he had, he hired out his farm machinery in the local 'machinery ring' where he would cut and bail hay, cart stock and even harvest and pull small amounts of wood for small local farmers and land owners.

We worked together for several years until I returned home to Tasmania.

After a year or so I received a call from an old work colleague back in Austria letting me know that in two separate logging incidents, a work mate had been killed and that my close mate Reini had been injured.



Reini and Sari (my daughter).

A passion for timber (continued)

He told me that Reini was still in hospital and would probably never walk again. This was a shock as Reini's work was always safe, neat and tidy.

It took time to process that my mate, one of the hardest working and active people I had ever met, was now most likely never going to walk again.

I spoke to Reini as soon as I could. He was upbeat and was positive that he would go through the rehab therapy and be back on his feet in no time.

Unfortunately, positive attitude just wasn't enough to get him back on his feet, but in true Reini fashion he found he can do without his legs and this injury will not hold him back.

Reini has not let this challenge restrain his 'passion for timber'. With his insurance money he made the required adjustments to the family home, purchased a few bits of machinery that help him undertake the day-to-day running of the farm and, wouldn't you know it, some new chainsaws for wood carving and a mobile sawmill to get him back into sawdust.

But wood carving and saw milling just wasn't enough to quench Reini's passion for the forest.

He soon began working again for a local logging contractor on a cable operation operating a Konrad 60 woody processor on a Volvo 18t wheeled excavator base. Reini quickly became renowned within the local region as one of the most productive, tidiest, and best.

At one stage, a renowned Swiss helilogging company tried to 'headhunt' him when he was contracted to them to process trees landed by helicopter from steep slopes above local rail lines. This position would have definitely be a great way for him to see more parts of Europe and great money but it wasn't compatible with managing the family farm.

Reini now works between the Volvo processor in conjunction with a standalone tower yarder and from time to time on a full auto 'Mounty 4000' mobile yarder with attached Woody 60 processor as seen above.



Clockwise from top left: Reini's path to work; Reini on the heli landing; Reini's tidy work.

Reini and I speak on the phone regularly and I always enjoy catching up when I am able to travel to Austria.

In 2018 we were so happy to have Reini finally travel to Tasmania/Australia for our wedding and judging by some of the photos he had a great time!

We may live at other ends of the world, but he is and will remain a mate that I have great respect and admiration for, someone I can always rely on. As you can see by some of the photos, Reini has a couple of tattoos, one of which says... 'Passion for Timber'.



Andrew and Reini in Austria in 2019.

New faces at the FPA



Interviews by Laurel Trebilco, Communications and Training, Forest Practices Authority

Ben Storer, Compliance Officer

Tell us about yourself

I grew up down the Channel in Margate and completed a Bachelor of Natural Area Wilderness Studies with an Honours in Science at UTAS. My first job out of Uni was as a Heritage Research Officer with Heritage Tasmania. I then spent four years with Parks Australia North in Uluru. For the past II years I have worked with Tasmanian Parks and Wildlife as a Ranger.

How have your professional interests and career led you to the FPA?

I worked with Parks in the compliance space as a Tier 3 officer doing joint operations with Fisheries and Tas police. The Compliance Officer role at the FPA is a great fit with my background.

How are you finding your role since you started in October 2022?

I am enjoying learning new things and not knowing all the answers. I was with Parks for so long that it is really refreshing to be learning different systems and mapping technologies but also helping the FPA navigate its new home at NRE Tas. I can tell I have already been spending plenty of time in the field with co-workers because I've picked up Ferg's sayings like 'bear with me a moment'.

What might we find you doing on your weekends?

Changing nappies – kid wrangling. My family and I love surfing the Carlton river mouth near home. Also cycling – I enjoy single-speed gravel grinding and cycle cross racing.

What is your favourite local beverage stop?

Siren's coffee van near Dodges Ferry.



The FPA's Compliance Officer, Ben Storer



The FPA's Business Manager, Pawan Mishra

Pawan Mishra, Business Manager

What first attracted you to the position at FPA?

Over the past 12 years, I've had the opportunity to explore a variety of business-related roles in the Department of Health, Communities Tasmania, and the Tasmanian Museum and Art Gallery. Forestry is a big part of Tasmania's economy; it feels like the perfect industry to get involved and grow with.

Were you always interested in business management?

I initially wanted to become a commercial pilot, but I eventually shifted my focus to business management. It's a field that offers endless opportunities for growth and development, and I'm excited to see where it takes me.

What did you study and where?

I completed my BSc in Visual Communications at a university in Chennai – Madras, India. It covered all streams of media, which was fascinating. After that, I decided to move to Tasmania to further my studies. In 2007, I received my MBA from UTAS. It was an incredible experience, and I learned so much from it.

What are you most looking forward to with this role?

It would be great to alleviate the FPA's budget concerns. I believe that by working together, we can come up with a solution.

If we bumped into you on a weekend, what would we find you doing?

Spending time with my family or in the garden. I enjoy cooking a delicious meal and winding down with a glass or two of my favourite single malt. There's nothing quite like ending the day on a high note!



Luscious Lips: an interesting cave in the Florentine



Adrian Slee, Scientific Officer (Geoscience), FPA

Located in the Lawrence Rivulet catchment, Luscious Lips was first located by FPO Dan Ryan and me during coupe planning, and I further explored the cave in January 2022. The cave is located on the top of a low, bare bedrock hill and features a 0.5 m wide elongated slot entrance. The cave roof is very thin, with the <1 m thick entrance in the roof leading to a large airy chamber; the significant overhang and narrow vertical entrance made it quite a challenge ascending the pitch and moving between the rock lips.

The initial free-hanging pitch is approximately 4–5 m, with a further 3 m pitch to a lower level. The cave features one domed central chamber with several narrow-decorated leads leading off from it, totalling 20+ m of passage. The domed roof is interesting as it has solution pockets in the underside of the roof, suggesting water once filled the cavity.

It is highly decorated, with its most notable feature being a large (>1 m thick) column that extends around 6 m from the ceiling to the base of the lower floor. A column of this size is quite unusual, particularly as the seepage that presumably led to column formation originated from the ground surface barely I m above the cave roof. The lack of source limestone for the column and cave roof solutional patterns all suggest the cave formed during a period of higher water tables and probably when a significantly thicker limestone rock mass lay above the passage. Since the caveformed karst and fluvioglacial processes within the catchment have lowered the limestone bedrock in the area, the regional water table has dropped, resulting in this cave being an old, relict landscape feature.

Other similar, well-decorated old highand-dry caves like this have been observed elsewhere in the Florentine Valley, notably within the Settlement Block. Caves such



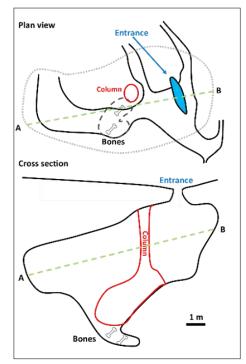
Looking up towards the entrance – the 'Luscious lips' (left). The massive column with the prominent crack (right). Plan and cross section sketch of cave (below).

as Tonsil Hole (reported in *Forest Practices News* vol. 2 no, 1 in 2011) were initially formed by active stream canyon incision and phreatic passage development which ceased a long time ago.

The prominent crack in the column and minor offsets in other formations in the cave also suggest that it may have been disrupted by earthquakes. A fossil bone assemblage is located in the lower level in this cave. The bones appear to be wombat and possibly Tasmanian devil remains. I observed only few animal species within the cave, with very few cave crickets and a notable visual absence of the Tasmanian cave spider Hickmania troglodytes. This follows similar observations for other caves in the Florentine; *H. troglodytes* abundance seems to differ substantially between different caves. Does anyone have an explanation for this? If not, could the variation in *H. troglodytes* abundance relate to the dimensions and or entrances of the caves? Or landscape/forest history? This could be an interesting study for the ecologists out there.

The thin nature of the cave's ceiling highlights the risk associated with machine operations. Management considerations for this cave and others in the area will be finalised when the remainder of the coupe has been surveyed for special values and the harvest operational limitations have been assessed.

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Carnivores are doing OK in production forests

Amy Koch, Biodiversity Research Manager, Forest Practices Authority

Evie Jones is an FPA-supported PhD student studying Tasmanian devils (*Sarcophilus harrisii*) and eastern quolls (*Dasyurus viverrinus*) in production forest landscapes. Her fieldwork involved months of gruelling work setting up cameras and trapping carnivores in freezing Tasmanian weather. But this was all for a good cause given the information she gleaned as a result.

She recently published a paper which shows the results of camera trapping in three different forestry landscapes: one dominated by pine plantations, one by eucalypt plantations and one by native forestry, where partial harvesting methods are predominantly used. The results she found suggest that forestry areas provide valuable habitat for these two carnivorous species.

Evie found the number of both devils and quolls was greater when there was more plantation in the surrounding landscape.

Evie found the number of both devils and quolls was greater when there was more plantation in the surrounding landscape. This could be due to the high density of browsers (e.g. possums and wallabies) that can be found in plantation areas, making easy pickings – especially for the larger devils. The extensive road and track networks in plantation areas may also make it easier for devils to hunt and ambush prey.

When looking only at plantation areas, Evie found that the density of our carnivores is also related to windrows. Devils appear to like bigger windrows in all plantation types, while in hardwood plantations eastern quolls seem to like windrows made with eucalypt plantation slash rather than with native forest debris. Larger windrows may have bigger spaces inside that are suitable for denning by the larger devils, and in fact Evie did find some dens located in the plantation windrows when she radio-tracked devils. The preference by eastern quolls for windrows made with eucalypt plantation may indicate that quolls prefer smaller spaces to den in, which potentially could be to reduce competition with devils.

... the management approach for Tasmanian devils applied under the forest practices system, which focuses on assessing and managing windrows in plantation areas, is on the right track.

The results of Evie's work to date indicate that the management approach for Tasmanian devils applied under the forest practices system, which focuses on assessing and managing windrows in plantation areas, is on the right track.

While Evie collected fewer data on eastern quolls, they were also found in the plantation areas. The definition of potential habitat for eastern quolls in the FPA's Biodiversity Values Database, however, does not currently include plantation areas. The FPA Biodiversity Team will work with the Department of Natural Resources and Environment Tasmania to consider the implications of Evie's research for currently agreed habitat definitions and management for both Tasmanian devils and eastern quolls.

Evie submitted her thesis in May and has submitted for publication several other papers, with the reference for her published paper as follows:

Jones, EM, Koch, A, Mann, D, Hamede, RK & Jones, ME 2023, 'What drives the abundance of marsupial carnivores in production forest landscapes?', *Forest Ecology and Management* 529, <u>DOI:</u> 10.1016/j.foreco.2022.120745.

Evie was supervised by Rodrigo Hamede (UTAS), Menna Jones (UTAS), Amy Koch (FPA) and Dydee Mann (FPA). Her research was funded by a Forest and Wood Products Australia Limited matched funding scheme, with funding provided by Forico Pty Ltd, SFM, Sustainable Timber Tasmania, Timberlands, Norske Skog, and Private Forests Tasmania, as well as a Holsworth Wildlife Research Endowment.

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One of the many remote camera images taken by Evie Jones. In this family scene, devil mum Hera and her imps are outside their den, which was found in a windrow in a young eucalypt plantation in Surrey Hills at the end of 2021.

Recording Aboriginal heritage: good photographs required!

Peter McIntosh, Earth Sciences and Cultural Heritage Manager, FPA

Several thousand artefact sites on the Aboriginal Heritage Register have been recorded by foresters. In the past there was not much emphasis on the quality of the records. Locations were estimated by positions on 1:100 000 or 1:25 000 maps and, if the foresters were inclined to do so, they sketched any artefacts found but seldom photographed them. If the artefact was of uncertain origin, FPA's Aboriginal Cultural Heritage Officer used indigenous knowledge to decide whether a stone flake or other artefact was a product of nature, human hands, or other disturbance.

Photographing artefacts has become more important for establishing their Aboriginal origin as FPA does not currently have an Aboriginal Cultural Heritage Officer. And photographs are increasingly important as a record, especially as artefacts are so easily 'lost' due to their being covered by sediment, disturbed by animals, or simply covered by ground vegetation and litter. It has to be remembered that while foresters and FPA staff can identify 'probable' artefacts, the final decision of whether supposed artefacts have been manufactured by Aboriginal people is now made by qualified archaeologists at Aboriginal Heritage Tasmania (AHT). They do not have the resources to check every find in the field, so sending in good, high-resolution photographs together with a carefully completed AHR Site Recording form is essential if AHT staff are going to be able to identify an artefact as being Aboriginal.

Key points to remember are:

- Always use a scale preferably the standard scale provided by AHT (request a scale from AHT or the FPA if you don't have one).
- Photograph the artefact on a plain coloured matt background, not white paper.
- Photograph both sides of the artefact.



- Make sure the lighting is sufficient. Oblique lighting that shows up artefact morphology such as concave faces is best.
- Ensure the artefact image with its scale fits the whole photo frame.
- Use the highest resolution setting possible.
- Always send the AHR Form and photos (as separate files) to the FPA for checking – don't send them directly to AHT.

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Good examples of photos of the front and back of an artefact.

TFFPN Workforce Development and Diversity Project

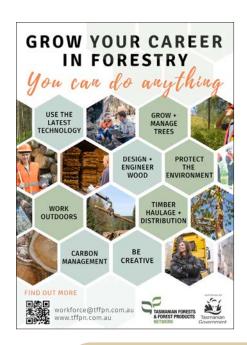
The Tasmanian Forest and Forest Products Network Workforce Development and Diversity Project, supported by the Tasmanian Government, has worked closely with forest industry stakeholders to develop and deliver a Diversity Action Plan and implement the Workforce Development Plan.

Key activities from this project include:

- mapping forest industry careers
- developing a Workforce Development Portal
- working with stakeholders to produce diversity and inclusion factsheets and information for employers
- developing a Pilot Certificate IV in Forest Operations Training Program.

More information on these initiatives can be found on the workforce portal at <u>Workforce Development Portal –</u> <u>Tasmanian Forest and Forest Products</u> <u>Network (tffpn.com.au).</u>







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CM001B: A case study of dispersed habitat tree retention

David White, Forest Operations Manager South, Sustainable Timber Tasmania

Forest Practices Officer Dave White reports on a trial investigating the practicalities of implementing dispersed habitat tree retention during harvesting.

Background

Catamaran (CM) 001B enjoys the noteworthy status of being Sustainable Timber Tasmania's (STT) southern-most coupe on Permanent Timber Production Zone (PTPZ) land. Importantly, CM001B is also the lead site of a series of trials STT is doing to investigate alternative management of potential habitat trees when conducting forest operations.

This article details the considerations taken in preparing and implementing a forest practices plan (FPP) for CM001B, and expands to touch on broader issues associated with such an endeavour. The FPP I am highlighting here was certified in March 2018, roaded that same year, and harvested the following autumn in 2019. However, this was far from a first pass by the timber industry at this forest. The Leprena Sawmill operated near the mouth of the D'Entrecasteaux River where it empties into Recherche Bay from 1884 to 1939. Evidence of the main tramline was rediscovered in and around CM001B during the FPP planning process.

A patch of forest which overlaps the north-eastern quadrant of CM00IB was later harvested in 1983 by a crew which included Michael Casey, a current Forest Practices Officer (FPO), who would go on to implement the 2019 harvest as the STT Senior Forest Officer. The area's history demonstrates the truly renewable and resilient nature of southern Tasmania's wet native eucalypt forests.

The area's history demonstrates the truly renewable and resilient nature of southern Tasmania's wet native eucalypt forests.

Planning

In preparing the FPP, a review of the PItype (Photo Interpretation) indicated that roughly two cohorts of the stand would likely be encountered: namely, a regrowth component growing under a scattering of larger old veteran mature trees. Specifically, the two main areas were 'om E+3d ER2d S' (over mature eucalypt 34-41 m tall, 5-20% crown cover, above eucalypt regrowth 15–27 m tall, 10–50% crown cover and scrub) and 'ER2d dd E2F' (eucalypt regrowth 15-27 m tall, 10-50% crown cover under dead and dying eucalypt 41–55 m tall, <5% crown cover). Photo year was 2002 so the regrowth had an additional 16 years, while the older trees were just quietly senescing.

During field work to assess special values (which involved refining techniques for efficiently navigating head-high cutting grass) it became apparent that the mature trees within this coupe were, in log quality terms, riddled with defects. They were old, growing on seasonally inundated



Old boiler near Leprena Mill site



Rail steel in CM001B

CM001B (continued)



Hollow-bearing tree observed during planning

soils with a high water table, had been damaged by previous logging operations and storms off the Southern Ocean, and showed the effects of at least one significant bushfire. This meant they had hollows, the ones I could see and the ones I couldn't.

Interestingly, conventional interpretation of the LiDAR-based habitat model indicate that taller trees would have the lion's share of habitat structure. However, in this case it was the shorter old trees which proved to have more hollowbearing structure, as seen in the photo above right.

Models are great but continue to offer no substitute for on-ground assessment and judgement.

Back at the office, the Threatened Fauna Adviser (TFA, now known as the Threatened Species Adviser) produced TFA Rec II for swift parrots, which



Pre-burn drone imagery of CM001B facing westward. Taller healthier trees around tramway in the foreground.

requires the retention of all medium- and high-density nesting habitat, and 90% retention of nesting trees in low-density habitat. The coupe was nearly entirely composed of *Eucalyptus obliqua* and tea tree, so foraging habitat didn't enter the equation. A summation of the fieldwork was that the presence of old-growth structure in low densities was pervasive throughout the coupe, but random and variable in distribution (i.e. practically unmappable in any efficient way).

At this point there were two options: I) put the prospect in the too-hard basket and walk away or, 2) come up with a plan to extract some resource while retaining the potential hollow-bearing structure.

... come up with a plan to extract some resource while retaining the potential hollowbearing structure. The 2013 Tasmanian Forests Agreement resulted in a reduction in the production forest land base in the back valleys, nudging forest operation options closer to coastal areas which include Swift Parrot Important Breeding Areas. Therefore, to get the wood out, circumstances necessitated the pursuit of option 2.

Implementation

Given the irregular dispersion of these habitat trees, not necessarily discernible from remote sensing data at the time, a mechanism had to be developed to clump up the majority of trees. STT also had to create a prescription flexible enough to allow for maximum recovery of regrowth stems between well dispersed mature stems. Another important consideration was to develop an approach that could deliver an outcome without having to pre-identify and GPS every single habitat tree across 47 ha of cutting grass infested forest. The site-specific approach adopted

CM00IB (continued)

used the following wording in the FPP:

- Harvest prescription is to partially harvest the coupe with a targeted retention of hollow-bearing trees.
- To achieve this, all trees greater than I m diameter at breast height or trees with significant defect will be retained where operationally safe to do so.
- Where it is necessary to impact a significant number of mature trees, which are candidates for retention to recover regrowth, the contractor will consult with STT prior to felling these trees.
- Contiguous patches of mediumdensity nesting trees (>I ha) should be excluded in clumps. STT is responsible for flagging these patches out with blue tape.

This prescription worked well because the target trees for harvest were significantly less than the I m+ diameter at breast height that the older cohort exhibited. Note, the third dot point was to trigger a discussion in which STT could be empowered to potentially advise the contractor to leave a group of regrowth stems and enable the safe retention of habitat without fear of being held to task for leaving merchantable timber behind.

Like anything in operational forestry, the make-or-break for successful implementation always boils down to people's willingness to make it work. Ray Penny, Bush Boss for PL&NR Voss, did a fantastic job in implementing the spirit and intent of the prescription – with the final tally of habitat trees being felled for safety totalling 6 out of dozens retained. There were innovations along the way too, like Michael Casey (STT) spray painting a I m band on the end of the harvesting machine so the operator was not required to get out of the machine and measure diameters on stems that were on the verge of the prescription. (The best harvesters work smarter, not harder).

From nearly 37 ha of harvested area, STT recovered 900 m³ sawlog, 4300 t of peeler product, 40 m³ of hydro poles, 4000 t of pulp and a minor amount of firewood for a total yield ~9400 t. That's roughly 250 t per hectare all whilst retaining the

majority of the largest/oldest trees of the stand (i.e. 'old-growth' structure that cannot be quickly replaced).

... [harvested] roughly 250 t per hectare all whilst retaining the majority of the largest/oldest trees of the stand (i.e. 'oldgrowth' structure that cannot be quickly replaced).

Regeneration

Since CM001B, STT has gone on to harvest additional coupes in a dispersed habitat tree fashion. The primary challenge following harvest is to regenerate the cleared area without undoing all the careful work undertaken at the harvesting phase to retain mature habitat trees. The challenge is that years of experience and science show the most effective way to do this in wet sclerophyll forest is through the application of fire to create an ash bed that can be sown.

The burning of CM001B proved to be a ranging exercise in terms of understanding best conditions to achieve such results – with hindsight we recognise we burnt it a

bit too hot. Following this key learning, in a series of subsequent trials of dispersed habitat tree retention, some regeneration burns have been conducted under less intense conditions and delivered better results, creating a seedbed while minimising impact to retained stems. These trials are further informing STT on how best to tackle this challenge.

CM001B initial results (at ~6 months) showed the following (after manually assessing approximately 90% of the dispersed retained trees):

- 63% of standing trees have a visible hollow (either small, large or both), and of these trees 70% were still alive (includes alive and the likely-to-fall category)
- 33% of retained trees have fallen over or died
- 69% of the standing trees were still alive
- 78% of standing trees showed signs of senescence
- 68% of retained trees had a merchantable product
- 21% of standing trees were deemed hazardous (unstable at base, leaning, presence of 'widow makers').



Retained tree with potential hollow visible.

CM00IB (continued)

A subsequent survey at age 20 months recorded further mortality, reducing the number of live retained dispersed stems to $\sim 40\%$ despite initial observed epicormic sprouting. Observed windthrow was negligible though, so the vertical structure essentially persists. This statistic, demoralising as it might seem, should be considered with the following: I) many of these trees were on their last legs with poor crowns and showing significant senescence and; 2) through application of the prescription, an additional 10 ha of forest ended up untouched (clumped predominantly along the southern boundary), due to the density of mature stems in these patches. The original FPP had a boundary containing 47 ha of eligible harvest and the final contiguous shape came out at \sim 37 ha. More recent regeneration operations by STT have shown that less intense burns conducted under more vigorous mature trees yield better survival.

More recent regeneration operations by STT have shown that less intense burns conducted under more vigorous mature trees yield better survival.

This style of harvest does result in an increased level of potential hazards that need to be proactively managed. Hazardous trees (including those that may have been rendered so by the burn) need to be assessed and avoided during activities such as regeneration monitoring or game control. Risk assessments need to be conducted around trees that can potentially reach major forest road thoroughfares, which may necessitate follow-up measures.

Some forward-thinking individuals have posed the question around unintentionally creating hazards for the people who may harvest this stand during the next rotation. Some of these concerns may be offset by the initial winter and spring, which typically bring saturated soils and windstorms that knock over the more unstable stems prior to cotyledon emergence. No question, there is a



New seedlings emerging in 2021: the regeneration survey indicated 75% of plots stocked at an average density of 2000+ stems per hectare of regrowth under retained mature trees.

heightened level of diligence required, but through careful and proactive consideration, it can all be managed – just not in a business-as-usual fashion.

The initial result is a new crop of young vigorous trees established amongst a significant amount of retained structure that might otherwise have been clear-felled under practices associated with 10 to 15+ years ago. In this case, a 2021 regeneration survey indicated 75% of plots stocked at an average density of 2000+ stems per hectare of regrowth under retained mature trees.

Foresters also need to be looking for unanticipated effects in similar pursuits. For example, a recent regrowth coupe near Southport was initially stocked with minor amounts (<5%) of blue gum of a size that necessitated single-tree and clumped retention of swift parrot foraging habitat. The coupe was burnt and sown with 100% *E. obliqua* seed, but regeneration survey results anecdotally suggest composition achieved has been tweaked to ~30% blue gum and 70% *E. obliqua*. This is a result of seed fall from this species-specific retention in the harvested area.

Final words

Dispersed habitat tree retention is possible to implement safely and productively in the Southern forests, but expectations need to be managed.

'Most of the trees, most of the time' should be the mantra around retaining mature structure, where the purpose is to maintain habitat values while also enabling recovery of regrowth product. Some mature trees will have to be felled for infrastructure (roads and landings) or safety reasons. Some trees will get burnt during seedbed creation when using fire (yes - retained stems will be black), and a subset of these will die (though the vertical hollow-bearing structure may persist in the form of a dead stag for decades). And some trees will blow over post-harvest. However, with care and planning during all phases of the FPP cycle, most of the mature structure can persist most of the time in an irregular mosaic of densities amongst successful harvest and regeneration forest operations.

The author is deeply indebted to FPO Erik Martin who was instrumental in making this CM001B project possible and looks forward to repaying him in kind one day.

Biodiversity Program update





Kirsty Kay, Acting Biodiversity Manager, FPA (right) Amy Koch, Biodiversity Research Manager, FPA (left)

The FPA biodiversity team has been hard at work on all sorts of fronts, as per usual. This year there have been some additional challenges given Anne Chuter's move from Biodiversity Manager to the CFPO role. Fortunately, team member Kirsty Kay is acting as Biodiversity Manager during the transition, but this has meant the Bio team have been even more short-staffed than usual. Contractors Phil Bell and Steve Casey have helped fill the gap. Despite these transitions, we've still managed some considerable achievements.

Training

In early 2023 we ran 4 training days on swift parrot habitat management and ecology, with assistance from Phil Bell, Andrew Hingston and others. It has been several years since the last course and some new information has become available on the habitat requirements of swift parrots, so this was a really important course to run. The feedback received so far has been very positive, which is a credit to the significant effort put in by Dydee Mann. More information on page 30.

Planning tools

On a less happy note, we detected an unfortunate glitch with one of our key planning tools - the Biodiversity Values Database. This meant that not all relevant threatened species records on the Natural Values Atlas were being displayed on the BVD. A notification was sent out as soon as we realised (17 March 2023). It took many weeks to resolve, despite considerable effort from FPA staff, coming back online on I June 2023. This issue may have been occurring since we transferred some functions to NRE Tas in October 2022. We recommend checking any FPPs developed between October 2022 and I June 2023 if planners have relied solely on the BVD. We sincerely apologise for the inconvenience caused by this.

CARING FOR OUR CRAYFISH

The Tasmanian Giant Freshwater Crayfish (*Astacopsis gouldi*), commonly known as Lobster, is the largest freshwater crayfish in the world and is endemic to rivers in northern Tasmania. The species is slow-growing and long-lived and is threatened by poaching, habitat loss, siltation of waterways and climate change.



It is illegal to fish for any species of freshwater crayfish, including yabbies, in Tasmania.

Poaching of the Giant Freshwater Crayfish is a serious offence and substantial penalties apply under the *Threatened Species Protection Act 1995* and the *Inland Fisheries Act 1995*. Report all illegal fishing activities to **infish@ifs.tas.gov.au** or **1300 INFISH.**

Australian Government

This project is supported by NRM North and Cradle Coast NRM, through funding from the Australian Government.

Amy Koch was on the steering committee for the NRM Cradle Coast Giant Freshwater Crayfish Recovery Project. The project protected known populations, and improves the extent and quality of their habitat. More information: <u>https://www.cradlecoast.com/giant_freshwater_crayfish_recovery/</u>.

Planning tools are a critical component of the approach to managing biodiversity under the forest practices system, and it is important that the FPA provide the appropriate tools in an easy-to-use format. The Threatened Species Adviser (TSA) continues to be updated, in light of new information and newly listed species. Recent updates have included the addition of management pathways for newly listed threatened flora species *Chiloglottis valida* (large bird orchid), *Senecio extensus* (subalpine fireweed), *Senecio longipilus* (longhair fireweed) and *Senecio tasmanicus* (Tasmanian fireweed). Management recommendations for the Tasman Peninsula dusky antechinus are also now available on the TSA.

Bio staff work hard to try and keep our planning tools up-to-date and user friendly, as is evidenced by the recently released revisions of the Fauna Technical Note I on eagles, and Flora Technical Note 8 on phytophthora. However, we are aware that there is always room for improvement. Therefore, the Bio team circulated a link to an online survey seeking feedback on our planning tools, particularly about how they could be improved and what new planning tools are needed. We received some really positive and useful feedback, which will inform our ongoing work in this area.

Research

FPA collaborates with a number of researchers on a range of topics. PhD candidate Evie Jones recently submitted her thesis looking at the impact of forestry and browser control measures on Tasmanian devils (see article on page 20). Honours student Jack Service submitted his thesis mid-year looking at habitat use of masked owls. Jack is now assessing the masked owl roost and nest sites used by the owls that he tracked during his Honours. FPA staff continue to work with UTAS researcher James Pay to learn more about the effectiveness of our management on wedge-tailed eagles.

Other items

Bio staff have continued to perform the routine tasks of providing advice, improving planning tools, liaising with stakeholders and progressing strategic projects. Some might be surprised to hear life hasn't been all work for the Bio program staff. Many of our staff members have been stretching their wings and migrating to distant shores. Amy and Angela both went (separately) to New Zealand to check out the big trees, gorgeous beaches and elusive birds. Dydee jetted off to explore the wonders of Japan. And Kirsty took the family to sample the produce in France. Jason did his usual type of fun which was catching raptors in Tasmania!

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Save the date: FPA Research Update II September 2023



Swift Parrot Habitat Management and Ecology Courses – 4 courses, Feb to May 2023: (above) Dydee Mann demonstrates how 2 birds in the hands are easier to find than one in the bush; (centre top) Phil Bell and Kirsty Kay make learning fun; (centre bottom) Forest Education Foundation staff enjoying the course; (right) checking the nest boxes on Kelsey Tier.







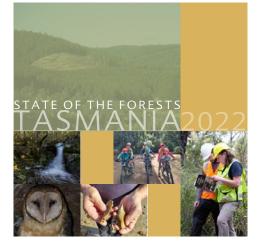
Forest facts and figures at your fingertips: State of the forests Tasmania 2022 data report

Chris Grove, Communications and Training Manager, Forest Practices Authority

State of the forests Tasmania 2022 Data report



A report to the Minister for Resources and to be laid on the table of each house of parliament pursuant to section 42 of the Forest Practices Act 1395. Solution by the Forest Practices Andro in comparison on the comparison of Natural Resources and Environment Training, Solutionable Timber Tamania, the Operation of State Growth, Private Forests Tamania and the Astrolland Genemical Department of Agriculture Tablers and Parlies The report Corest Tamania Solution Department of Agriculture Tablers and Parlies the report Corest Tablers of Tablers and the Astrolland Genemical Agriculture Tablers and Foress and for the five year relevant of the Tablers Agreement Commission Regional Fores Agreement for State [2017].



State of the forests reports on the FPA website:

Left: <u>State of the forests Tasmania 2022</u> <u>data report</u>

Above: <u>State of the forests Tasmania 2022</u> <u>booklet</u>



FPA

The report reveals the continuing decline in plantation area, mainly due to plantations being returned to agricultural land.



About half of Tasmania is forested and almost 60% of forest is reserved. Most old-growth forest (88%) is protected in reserves, an increase of 32.8% since 1996 (photo by Peter Tonelli).

Want to find facts and know more about Tasmania's forests? Check out the State of the forests Tasmania 2022 data report, which was prepared by the Forest Practices Authority. This fiveyearly report was tabled in the Tasmanian Parliament in March 2023 by the Hon Felix Ellis MP, Minister for Resources.

Covering the period from 1 July 2016 to 30 June 2021, the report provides a comprehensive overview of Tasmania's forests, the condition they are in and any changes that have occurred over time. It builds on previous reports released in 2002, 2007, 2012 and 2017.

Anne Chuter, the Chief Forest Practices Officer, said that the report is a comprehensive overview of Tasmania's forest (see box on opposite page).

'It reveals that Tasmania's forests are diverse and complex. The report includes production native forest and plantations, as well as reserved native forest on both public and private land, ' she said.

'l'd encourage people to have a look at the report. The executive summary provides an overview of the key statistics, information and trends. We've also released a booklet summarising the key facts and figures in the data report.'



An estimated 3,346 full-time equivalent people were directly employed in the forest industry in 2021, a similar number to 2016.

Forest facts

- About half of Tasmania's land area is forest (49%, 3,327,000 ha of mapped forest).
- There has been some decrease in total forest area:
 - Plantations have decreased by about 7%
 - Native forest has decreased by about 0.3%.
- Almost 60% of native forest is reserved (1.786 million hectares), an increase of 8,700 hectares since 2016.
- 99% of the wilderness identified as high-quality in the Tasmanian Regional Forest Agreement is reserved.
- Old-growth forest area is 1,196,000 ha.
- Old-growth area has a decreased by 1% (37,000 ha) since 2016 and 4% since 1996 due to harvesting, fires and other disturbances.
- 88% of old-growth forest (1,047,000 ha) is protected in reserves, an increase of 32.8% since 1996.
- Estimated total carbon biomass of 1,876 million tonnes has remained relatively constant over the last 15 years indicating that the contribution of Tasmanian forests to global carbon cycles has been maintained.
- An estimated 3,346 full-time equivalent people were directly employed in the forest industry in 2021, similar to the 3,212 people estimated in 2016. The forestry sector represented a total of 1.6% of all persons employed in Tasmania in 2021, no change from 2016 but a decline from ten years ago, when approximately 5% of the workforce was in the forestry sector. However, it remains a major employer in regional communities, and there are flow-on effects to other economic sectors.
- Total annual production of wood products from Tasmanian forests and plantations for 2016–21 averaged 5.5 million tonnes per annum. This is an increase of 72% from the 3.2 million tonnes per annum during 2011–16.
- The value of logs harvested increased by 10.7 per cent during the reporting period.
- The forestry industry in Tasmania has been recovering over the last five years with increased production of hardwood plantation fibre, demand for timber construction materials and interest in the carbon capture market associated with both native and plantation forests.



The FPA launched the booklet at AGFEST in March 2023. From left: Minister for Resources Felix Ellis, FPA Board Chair Pam Allan and Chief Forest Practices Officer Anne Chuter.

Earth sciences publications

McIntosh PD, Slee AJ, Neudorf C & Lian O (2022) 'Ancient shorelines of northwest Tasmania – a preliminary report,' abstract, *Proceedings of the Australasian Quaternary Association Conference*, Adelaide, 6–8 December 2022.

Slee AJ & McIntosh PD (2023) 'Drainage derangement at Howitzer Hill in the Trowutta-Sumac Karst, north-west Tasmania', *Helictite* 47:13–19.

McIntosh PD, Slee AJ & Thomson R (2022) 'Do eucalypt plantations on Ferrosols in north-west Tasmania contain more or less soil carbon than native forests on the same soil type?' Australian Forestry, DOI: 10.1080/00049158.2022.2096277

Slee AJ, Barrows TT, Shulmeister J, Gontz A, Kiernan K, Haworth R, Clark D & Fifield LK (2022) 'The age and paleoclimate implications of relict periglacial block deposits on the New England Tablelands, Australia,' *Quaternary Research* 111: 121–137. <u>DOI: https://doi. org/10.1017/qua.2022.32</u>

Slee AJ & McIntosh PD (2022) 'History of slope instability in the Oldina plantation, Tasmania,' *New Zealand Journal of Forestry Science* 52(5). <u>https://doi.org/10.33494/</u> nzjfs522022x168x

Slee AJ, McIntosh PD, Wang N, Lounejeva E (2022) 'Aeolian silts indicate the LGM environment in the River Leven Valley, Loongana, Tasmania', *Quaternary Australasia* 39:22–24.

Slee AJ, McIntosh, PD Woodward C, Wang N & Gadd P (2021) 'A rapid sediment pulse induced by glacial melting during the MIS 8/7e transition buried well-developed karst in the Railton Valley, Tasmania, Australia,' <u>Boreas</u> 51: 185–200.



FPA earth scientists Adrian Slee (left) and Peter McIntosh.

Training update and gallery

Soil Erodibilty Course – South 22 June and North 12 October 2022

The FPA Earth Sciences specialists Peter McIntosh and Adrian Slee led these 2 field-based courses near Maydena and Smithton for 63 participants. The participants examined around six soil profiles of different erodibility and learnt how to assess soil erodibility from field observations.

FPA Risk Assessment Form – 12 August 2022

The FPA's risk assessment form process requires that reasonable action is taken to ensure that trees retained under a forest practices plan do not result in an increased risk to public safety. Forest Practices Officers (FPOs) must attend the risk assessment form training to achieve the accreditation necessary to complete this form. The Compliance Program talked 21 FPOs through how to complete the form in a field-based day near Sheffield.

Key Principles for Successful Investigation – 31 Aug 2022

This course was designed to ensure that FPOs are aware of the standards required when obtaining evidence that could ultimately be used by the courts. It is not designed to create investigators, though it will provide functional capacity. The Compliance Program ran this course for 9 FPOs.

Compulsory FPO Refresher Course – 18, 19 and 25 October 2022

FPOs and forestry managers from across the state participated in the FPA's mandatory Refresher Course in October. Three day-long courses were held for FPOs in the regional areas of Devonport, Launceston and Hobart. The refresher course is important for ensuring FPO knowledge of the forest practices system is up-to-date and relevant, and provides an excellent opportunity for FPOs to ask questions and give feedback to FPA staff. The forest practices system relies on clear communication between the FPA and its FPOs and the bi-annual refresher course fosters this important connection. In all, 123 people attended a refresher course in-person and 9 people participated online, due to last-minute circumstances. The FPOs who could not attend in-person completed a detailed refresher catch-up process – many of whom agreed this was not an easy option.

The FPA appreciates everyone's efforts to attend and coordinate these courses and values the opportunity they provide for two-way communication with FPOs.

Visual Landscape Management Refresher – 2 November 2022

FPO Amy Robertson led the review and update of the FPA's visual landscape management (VLM) process in 2021 and 2022. She delivered a refresher course in Westbury for 19 participants. After a morning of presentations and scenario practise, the group visited some coupes in Cluan Tier to discuss how VLM works in practice.

Swift Parrot Habitat Management And Ecology Courses – 4 courses, Feb to May 2023

This one-day course was led by Dydee Mann who presented alongside Phil Bell (FPA), Andrew Hingston (UTAS), Marie Yee (STT) and Phil Hirstich (Devonport City Council). A half-day classroombased session was followed by an afternoon in the field. In total, 93 people participated in one of 4 sessions (3 in the south near Copping and one in the north near Devonport).

FPO Training Course – June to November 2023

The first 2 days of the FPO Training Course took place on the east coast in June. The 18 participants will meet for 2 days per month (except during July) until November. The course also includes the 4-day Biodiversity Course held in September.

The first session covered the legal and policy framework of the forest practices system and the role that FPA and FPOs play in this. It included a Risk Assessment Form field trip to Wielangta Forest.

Upcoming training

Course	Timing	Duration	Location
Biodiversity Course	19 to 22 Sept 2023	4 days for FPO Training Course participants 3 days for others	Launceston
Research Update	II Sept 2023	l day	Hobart
Forest Practices for Supervisors Course South	19, 20 Sept and 28 and 29 Nov 2023	4 days	STT Geeveston
Forest Practices for Supervisors Course North A	25, 26 Sept and 13, 14 Nov 2023	4 days	STT Perth
Forest Practices for Supervisors Course North B	27, 28 Sept and 15, 16 Nov 2023	4 days	STT Perth
Wildlife Habitat Clumps	March 2024	l day	2 or 3 regional days
Eagle Course	May 2024	2 days	ТВА
Quarry Course	Oct 2024	ТВА	ТВА

Training update and gallery (continued): FPO Refresher Course 2022









Clockwise from bottom left: FPOs Andrew Cox, Neil Denney and Colin MCoull receive their long-service awards from then CFPO Peter Volker; the 3 venues – Kingston, Launceston and Devonport; Forest Practices Reference Group current Chair Heath Blair; and out-going FPORG Chair Jason Bolch; Chris Ringk and Ben Roberts; Simon McNamara and Kirsten Dransfield; Alex Tabor and Anne Chuter.















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FPO Training Course 2023: FPA Risk Assessment Form field trip



Clockwise from top left: James Fergusson explains how to complete the FPA's Risk Assessment Form; Adam Hyland, Dion McKenzie and Bonnie Galbraith acting for the camera; group discussion; David Hogan; Dydee Mann and Paul Kelly share a joke; the Sustainable Timber Tasmania course participants; Roseanne Champion and Stephanie Haag. Centre: James Fergusson guides Bonnie Galbraith, Kylie Kemp and Stephanie Haag.