



2012-13  
*stewardship report*



Forestry Tasmania



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**Contact us:**

General enquiries: 1800 FOREST  
 Tourism enquiries: 1300 720 507  
 Stakeholder feedback:  
[forestrytas.com.au/sfm/stakeholder-feedback](http://forestrytas.com.au/sfm/stakeholder-feedback)

Forestry Tasmania  
 GPO Box 207  
 Hobart, Tasmania 7001  
 (03) 6235 8203  
[forestrytas.com.au](http://forestrytas.com.au)  
[forestry.tasmania@forestrytas.com.au](mailto:forestry.tasmania@forestrytas.com.au)  
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The appendices to this report may be accessed by clicking below:

**Appendix 1**  
 2012 – 2013 Financial Statements

**Appendix 2**  
 Sustainable Forest Management data tables

**Research and Development Branch**  
**Annual Report**

# report card 2012/13

## Sustaining biodiversity and habitat

- ✓ We adopted our coupe context landscape level planning tool as standard practice in coupe planning.
- ✓ We upgraded our environmental assessment system for events held on State forest to make permit conditions legally binding. We assessed 10 proposals using this new system.
- ✓ By harvesting only 110 hectares of old growth forest using clearfelling, we achieved the Tasmanian Community Forest Agreement target of harvesting less than 330 hectares of old growth forest using this silviculture. We harvested a further 521 hectares using partial harvesting techniques.
- ✓ We added seven new trees to our giant tree register. Most of these were found by using our innovative LiDAR technology.

## Sustaining jobs for current and future generations

- ✗ We recorded a loss (after tax) of \$13.4 million, reflecting the continuing difficult economic circumstances surrounding our business.
- ✗ Our financial situation forced us to rely on a significant amount of funding from the State Government.
- ✓ We fully supported the Tasmanian Forests Agreement process, based on the potential for a significantly enhanced Tasmanian reserve system and an uncontested wood supply.
- ✓ We produced 1.03 million tonnes of logs, with a final product value of \$188 million.
- ✓ We paid suppliers, contractors and employees \$129.5 million.
- ✓ Of the 9,190 hectares of native forest that has reached regeneration reporting age, 94 per cent met at least the minimum prescribed standard, which is above our benchmark of 85 per cent.
- ✓ Of the 1,726 hectares of native forest artificially sown (the remainder were sown naturally), 79 per cent met our strict seed provenance requirements. Importantly, we did not sow any seed from our least preferred sources.
- ✓ We resumed using the rail system for long haul log transport, taking the equivalent of six B-double truck movements per day off the Midland Highway.
- ✗ The improved residue market saw the amount of residue left after harvesting reduce from 25 cubic metres per hectares in 2011/12 to 11 cubic metres per hectare in 2012/13. However, we have still not yet reached our target level of five cubic metres per hectare.
- ✓ We pruned 4,641 hectares of our plantation estate, with 89 per cent of this area meeting our quality standard benchmark.
- ✗ The improving pulp market allowed us to thin 1,159 hectares of plantation. However, we still need to conduct thinning operations in many stands where we have delayed operations due to poor markets.
- ✓ We adopted controlled release fertiliser as our primary fertilisation tool, reducing our fertiliser inputs by 80 per cent whilst achieving improved tree growth and saving establishment costs.
- ✓ In July 2012, we launched Hardlam, our laminated veneer lumber product, at the Australian Woodworking Industry Association show in Sydney. Subsequent promotional activities have generated considerable interest in the product, including a Gold Star Award for design, innovation and marketability at the Australian Timber Flooring Association's Flooring and Finishes Show.





### Sustaining carbon stores, clean air, water and healthy forests

- ✓ 97 per cent of the chemical applications we modelled using our Pesticides Impact Rating Index were deemed to be low or very low risk.
- ✓ We took stream water samples after 18 chemical application operations. No chemicals were detected.
- ✓ We had no major hydrocarbon or chemical spills. Two minor hydrocarbon spills, totalling 15 litres, were identified and rapidly addressed.
- ✓ We conducted 32 broad area fuel reduction burns, which covered 10,054 hectares.
- ✓ We conducted a total of 137 planned burns, including regeneration and fuel reduction burns, covering 13,270 hectares. Our careful planning saw only two of the 90 indicative air quality exceedances recorded by the Environment Protection Authority during the planned burns season attributed to us.
- ✓ We reduced our fossil fuel carbon emissions from our vehicle fleet and electricity use by 13 per cent, compared with 2011/2012.

### Sustaining safety, community access and heritage

- ✓ We maintained our strong culture of safety, achieving our best safety performance on record, with only 4.46 lost time injuries per million hours worked and all nine performance targets being met.
- ✓ We continued to inform the public, through various media, about the progress of our burning operations. During the planned burn season, the Environment Protection Authority recorded only 21 formal complaints, of which 11 could be attributed to our burning operations.
- ✓ Our staff worked a total of 40,000 hours on the State firefighting effort, and were used in various roles such as firefighters, sector commanders, incident management team members, air operations supervisors, geographic information systems operators, fire behaviour specialists and other specialist roles.
- ✓ We were not issued any infringement notices under the Workplace Health and Safety Act.
- ✓ We continued to hold our popular school holiday open days, produced another series of our television series *Going Bush* and donated our skills and time to many community events.
- ✓ Visitor numbers to the Tahune AirWalk increased by 15 per cent on the previous year, as a result of our marketing focus on both local and Asian markets.
- ✓ We used a proportion of our funding from the State Government to repair the Coolangatta and Wielangta roads.

### Sustaining science-based stewardship

- ✓ We received no major non-conformances from our AS 4801 (Occupational Health and Safety), AS4708 (Australian Forestry Standard) and ISO 14001 (Environmental Management System) surveillance audit. We received eight minor non-conformances, which we are actively working to address.
- ✓ Our research staff authored 18 technical reports and 15 peer reviewed papers, delivered 14 conference presentations, maintained the Warra Long Term Ecological Research site, hosted seven lunchtime talks and led numerous field days.
- ✓ We established an 80-metre tall carbon flux tower at our Warra Long Term Ecological Research site. The tower will enable us to measure how the forest reacts to climate events and to attract further research at the site.
- ✓ We made excellent progress on our LiDAR project, capturing data from more than 700,000 hectares of forest and developing several new tools to assist staff in planning forest operations.
- ✓ We reduced our staff head count by eight per cent, from 383 to 351, to better align with our reduced income. This equates to 326 full-time equivalent staff.
- ✓ Audits of our operations by the Forest Practices Authority continued to show that our forest practices planning and operations rated 'above sound' on all 11 criteria examined, a result that was above our own internal performance benchmark.
- ✗ Three Forest Practices Act Section 41 notices were issued relating to our forest operations by either our own staff or the Forest Practices Authority.
- ✓ We maintained our capacity as a Registered Training Organisation, with 63 staff enrolled in various courses.

# the year AT A GLANCE

## Year at a glance 2013

	2010/11	2011/12	2012/13
Forest estate ('000 hectares) at 30 June			
Total state forest (includes forest reserves) <sup>1</sup>	1,490	1,490	1,490
Total forest reserves	222	222	222
Total plantations <sup>2</sup>	109	108	109
Area certified to Australian Forestry Standard <sup>3</sup>	1,506	1,505	1,505
<b>Forest areas established ('000 hectares)<sup>4</sup></b>			
Native forest regenerated	8.1	4.4	3.5
Hardwood plantations established (includes replanting)	0.7	0.9	0.4
Softwood plantations established (including replanting)	0.9	1.1	0.9
<b>Native forest area harvested ('000 hectares)<sup>4</sup></b>			
Clearfell, selective harvesting and thinning <sup>5</sup>	10.5	2.6	4.2
<b>Wood production</b>			
Hardwood – high quality sawlog and sliced veneer (m <sup>3</sup> )	196,702	109,946	120,932
Hardwood – sawlog, sliced veneer, high grade domestic peeler and special species – all grades (m <sup>3</sup> )	691,103	694,230	311,612
Export log – low grade low grade export peeler <sup>9</sup> (tonnes)	-	-	89,156
Hardwood – pulpwood (tonnes)	1,376,554	315,037	363,409
Hardwood – plantation pulpwood (tonnes)	171,205	61,303	144,106
Softwood – sawlog <sup>8</sup> (m <sup>3</sup> )	269,985	18,930	4,985
Softwood – pulpwood <sup>8</sup> (tonnes)	353,092	255,543	98,783
Special timbers sawlog	14,477	12,486	10,427
Total volume produced	2,580,160	1,272,272	1,027,697
<b>Fire management services</b>			
Number of fires attended	36	51	55
Area of state forest burnt (hectares)	375	447	19,127
Cost of suppression (current values \$'000)	133	304	5,100
<b>Roads</b>			
New road construction (km)	103.94	55.8	65.1
Major road upgrades or realignments (km)	5.3	3.1	1.6
Major new structures (#)	3	11	9
Road maintained/resheeted (km)	1444.9	683.55	435.7
<b>Finance (\$'000) <sup>7</sup></b>			
Total revenue	199,126	112,669	192,349
Total expenses	(356,775)	(214,152)	(198,849)
<b>Profit (loss) after tax</b>	<b>(129,476)</b>	<b>(70,929)</b>	<b>(13,402)</b>
<b>Employment</b>			
Number of staff (head count) <sup>6</sup>	424	383	351
Number of staff (full-time equivalents: FTE) <sup>6</sup>	380	349	326
Lost time injury frequency rate	9.5	5.68	4.46
Wood production per FTE (tonnes)	6,271	7,393	3,152
Profit (loss) per FTE (\$,000)	(341)	(203)	(41)
Total revenue per FTE (\$,000)	524	323	590



### Notes:

1. Excludes crown land (Buckland Military Training Area) managed by Forestry Tasmania.
2. Figures exclude plantation areas harvested but not yet replanted, and former plantations which are now managed for recreation within Forest Reserves. Includes all plantations in state forests and Forestry Tasmania managed plantations on other land tenures.
3. This area excludes some leases over state forest, and joint venture and leasehold plantations that are not managed by Forestry Tasmania, but may be separately certified. It also includes waterbodies outside state forest from which FT is licensed to collect and salvage floating and beached native softwood special timbers.
4. Figures are for operations that were completed during the 2012/13 financial year
5. Thinning includes both commercial and non-commercial thinning.
6. As at June 30, 2013
7. Full details of the financial statements are provided in Appendix 1.
8. The quantities reported for softwood plantations do not include production from the former softwood joint venture (Taswood Growers), due to the sale of the relevant forestry rights during the period.
9. From 2012/13 Export Log – Low grade reported as a separate category. This was previously included in the Hardwood sawlog figure.

# OUR ORGANISATION

In 2012/13, Forestry Tasmania managed 1.5 million hectares of State forest on public land as multiple-use forest. This area contained approximately one-half of Tasmania's forests. Half of this area was available for wood production, with the remainder being set aside for conservation and recreation.

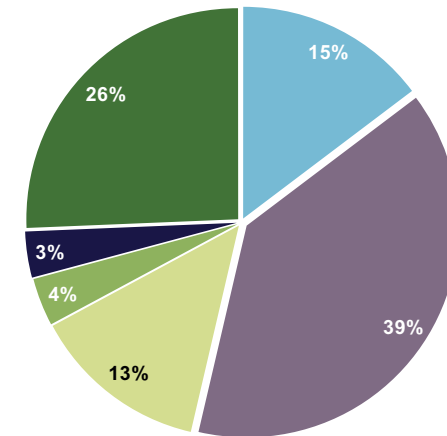
At 30 June 2013, we employed 351 staff and engaged 810 suppliers, through our Head Office in Hobart and four district offices around the State.

In 2012/13, 1.03 million tonnes of products such as sawlog, peeler log and pulpwood were harvested from State forest for processing into sawn timber, rotary peeled veneer, and pulp and paper products. The estimated final value to the Tasmanian economy of wood products produced from Tasmanian timber was \$188 million.

On 3 June 2013, the Tasmanian Forests Agreement Act received Royal Assent and created significant changes in Forestry Tasmania's role as a forest land manager. Around 500,000 hectares of former multiple-use forest is now classified as 'future reserve land', and will be transferred to the management of the Tasmanian Parks and Wildlife Service in a number of tranches, subject to the Tasmanian Forests Agreement's durability clauses.

Forestry Tasmania has been confirmed as the legislated manager of State forests, which in future will be termed Permanent Timber Production Zone land. Under the Agreement, timber supply from State forest has been reduced from at least 300,000 cubic metres of sawlog per annum, to at least 137,000 cubic metres of sawlog per annum. In 2013/14, the size of our workforce is expected to decrease in line with the reduced scope of our operations.

**Land use on State forest and areas managed by Forestry Tasmania**  
(includes Buckland Military Training Area)



- Formal Reserves
- Informal Reserves (includes future reserved land designated under TFA)
- Native forest outside wood production areas
- Hardwood plantation
- Softwood plantation
- Native forest available for wood production

# OUR PURPOSE

## Our vision

Tasmania's State forests will be a globally trusted source of sustainable timber and other forest products and services for this and future generations.

## Our mission

Forestry Tasmania manages State forests for optimum community benefit, using environmental best practice to create long-term wealth and employment for Tasmanians.

## Our values

- We care for people and their environment
- We get things done
- We do what we say we will do
- We are proud of who we are and what we do
- We think before we act



# Statement of corporate intent AND BUSINESS OVERVIEW

In 2012/13, Forestry Tasmania's fundamental statutory responsibility was to manage 1.5 million hectares of State forest, which represented 22 per cent of Tasmania's total land area and 39 per cent of its forested land area. Its main undertaking was the sustainable management of Tasmania's State forests to optimise community benefit, including the sustainable production and delivery of forest products and services, the facilitation of new forest-based industries, the conservation of natural and cultural heritage values and the provision of education, recreation and tourism services.

This responsibility was delivered through the following key activities:

- (a) management of native forests, hardwood plantations and softwood plantations, including the planning, conducting, monitoring and review of operations to access, assess, establish, tend, protect, monitor, conserve and/or harvest forests; and
- (b) supply of forest products and services under negotiated contracts, to businesses in Tasmania, elsewhere in Australia and overseas.

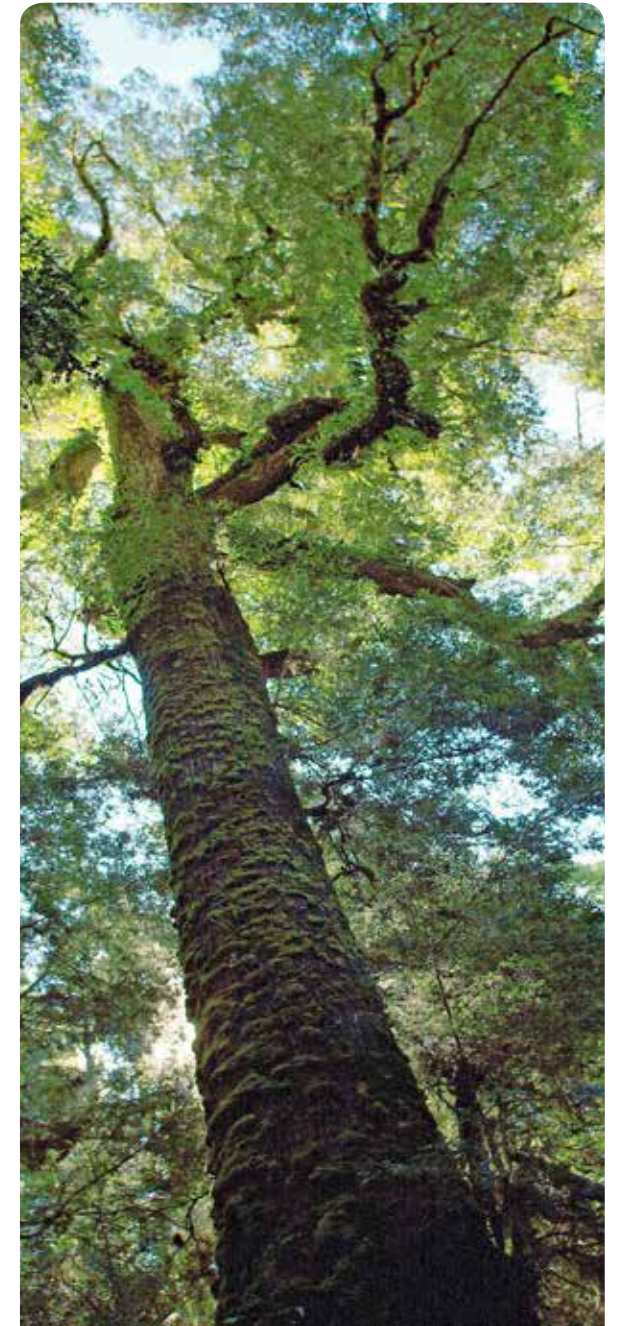
In addition to its main undertakings, and the key activities that supported them, Forestry Tasmania engaged in the following activities:

- (c) part ownership of various softwood plantation and hardwood plantation joint ventures;

- (d) ownership of Newwood Holdings Pty Ltd, established to develop new forest industry infrastructure at the Huon and Smithton Wood Centres;
- (e) ownership of the Adventure Forests brand and portfolio of commercial tourism properties: the Tahune AirWalk and Maydena Adventure Hub are wholly owned by Forestry Tasmania, Hollybank Treetops Adventure is 50 per cent owned by Forestry Tasmania, and Tarkine Forest Adventures is leased to a private operator; and
- (f) ownership of Forestry Services International, providing external consultancy services based on Forestry Tasmania's international reputation as a leader in forest research, forest assessment, forest management and forest product development.

Forestry Tasmania's underlying ethos is sustainability and stewardship. Its forest management activities are certified under the internationally recognised Australian Forestry Standard. Forestry Tasmania operates under specified criteria in relation to its targets for environmental, economic and social sustainability. These criteria are published in Forestry Tasmania's Sustainability Charter. Forestry Tasmania reports its performance against each of these criteria in this annual *Stewardship Report*.

Please refer to the financial statements in Appendix 1 for the organisation's Statement of Corporate Intent, which is a requirement of Tasmanian Government Business Enterprises.



# corporate GOVERNANCE

The Board of Directors of Forestry Tasmania comprises six independent non-executive directors. It is responsible for the overall corporate governance of the organisation.

This includes setting strategic direction, overseeing financial performance and business affairs, setting management goals and monitoring management's performance.

As a fully state-owned Government Business Enterprise, the Board of Directors is responsible directly to the Minister for Energy and Resources for its operations.

Directors are appointed in accordance with the *Government Business Enterprises Act 1995*. Remuneration fees for non-executive directors are set by the Government.

The Board aspires to a high degree of ethical behaviour and accountability and has developed a set of policies and procedures to govern its operations in accordance with these principles.

Monthly reports on operations and finance are supplied to the Board about the outputs of the organisation. This is reviewed monthly with senior managers, who also regularly contribute advice on strategic issues to the Board.

The Board visits operating sites and major customers as part of its corporate governance role. The Chairman of the Board has regular meetings with the Minister for Energy and Resources and reports quarterly financial performance to the Treasurer.

## Board of Directors

Robert Annells <sup>PSM</sup> (Chairman) Dip Val, Grad Dip UP (appointed 24 September 2012)

Geoff Coffey FCPA, ACIS ACIM, GAICD, Dip FP

Robert Smith BScFor (Hons) ANU, MSc (ResEcon) *Purdue*, PhD *Purdue*, MBA *Macquarie* (appointed 9 July 2012)

Ross Bunyon <sup>AM</sup> BCom NSW, Comp. IEngAust (appointed 17 September 2012)

Christine Mucha BAgSc (Hons), PhD, Dip AgEc, FAICD, Comp. IEngAust (appointed 29 April 2013)

Robert Woolley BEc *Tas*, FICA, MAICD (appointed 29 April 2013)

Mr Miles Hampton (resigned 17 September 2012)

Mr Adrian Kloeden (retired 30 September 2012)

Dr Humphrey J Elliott (retired 30 September 2012)

Mr Robert L Gordon (Managing Director) (retired as a Director 31 December 2012)

## Secretary to the Board

Sue Shoobridge – BCom, FCPA, FAICD

The following is also noted in respect to the Board:

- All the Directors are soundly experienced in corporate law and governance issues.
- The combined skills of the Directors include international, corporate management, marketing, finance and forest management.
- The Directors adhere to the Forestry Tasmania Corporate Governance Policy and Human Resources Policies and Procedures.

The Directors have fully reviewed the set of *Guidelines for Tasmanian Government Businesses* produced by the Department of Treasury and Finance in October 2008, and revisions and updates since that time. They have considered their application to the governance of Forestry Tasmania.

Refer to the financial statements in Appendix 1 for further details on corporate governance.



Forestry Tasmania Board (L-R) Geoff Coffey, Bob Smith, Ross Bunyon <sup>AM</sup>, Bob Annells <sup>PSM</sup>, Rob Woolley, Dr Christine Mucha.



# reporting STRUCTURE AND SCOPE

This *Stewardship Report* combines reporting against the objectives and aims in our Sustainability Charter with our annual financial report, to provide a comprehensive analysis of our economic, environmental and social performance. Information in this report provides a summary of our performance for the 2012/13 financial year.

As a Government Business Enterprise, we are required to provide an extensive set of financial statements annually to Parliament. The financial statements must incorporate details of corporate governance and a statement of corporate intent. This information can be found in the financial statements in Appendix 1. In order to avoid duplication, we have taken the approach to refer to the financial statements where appropriate.

The 2012/13 financial statements and the sustainable forest management data underpinning this report may be viewed via the following links:

[www.forestrytas.com.au/uploads/File/pdf/pdf2013/financial\\_statements\\_2013.pdf](http://www.forestrytas.com.au/uploads/File/pdf/pdf2013/financial_statements_2013.pdf)

[www.forestrytas.com.au/uploads/File/pdf/pdf2013/sustainable\\_forest\\_management\\_appendix\\_2013.pdf](http://www.forestrytas.com.au/uploads/File/pdf/pdf2013/sustainable_forest_management_appendix_2013.pdf)

They may also be downloaded as pdf files from [forestrytas.com.au](http://forestrytas.com.au)

Our Sustainability Charter, released in November 2008 after three rounds of stakeholder input, provided a 10-year framework for the sustainable management of Tasmania's State forests. It provides the structure to this report. We expect areas of interest will change over time and the content of the Stewardship Report will be modified from year to year to ensure the document remains useful and relevant to our stakeholders. However, most of the data

tables used in this report will continue to be provided in future years, so that long-term trends become apparent over time. Any corrections to information provided in earlier reports are noted in the footnotes of the relevant tables.

In addition to reporting against the Sustainability Charter, we have again chosen to report against the G3 Global Reporting Initiative sustainability reporting guidelines. These voluntary guidelines are recognised throughout the world. Through the self-assessment process, this report fulfils application level 'C' of the Global Reporting Initiative guidelines.

Read more about the Global Reporting Initiative at: [globalreporting.org](http://globalreporting.org)

The Global Reporting Initiative content index is available at the end of this report and shows the Global Reporting Initiative indicators against which we have reported, and where relevant information can be found.

The Stewardship Report covers all the processes and activities involved in the management of State forests during the reporting period. This includes forest land management, road establishment and maintenance, plantation and native forest timber establishment and maintenance, timber harvesting and sales, and tourism and recreation management and development. Where Forestry Tasmania is a joint venture partner, Forestry Tasmania's share of the contribution or benefits is specified.

The 'year at a glance' section provides a quick reference to some of this year's statistics. The 'report card' section provides a snapshot of our overall performance, showing

the areas where we have been successful in improving our performance and acknowledging those areas where more focus and improvement is required. We also have a 'where to from here' section that identifies our main priorities for the coming year. This is set within the framework of our sustainable forest management objectives and our corporate objectives.

The majority of the data used in this report have been obtained through internal data sources such as our finance and sales systems, forest operations database (an in-house asset management system) and through the overlaying of spatial information using our geographical information systems. The remaining data have been obtained from external sources such as the Forest Practices Authority and the Department of Primary Industries, Parks, Water and Environment.



# message FROM THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER

The 2012/13 financial year was again extremely challenging for Forestry Tasmania, with the introduction of significant business changes during a continuation of the most difficult trading conditions the organisation has ever encountered.

We are creating a new organisation with new leadership and a more focused strategic direction. For the first time in many years, we are in a position to plan for the future with a measure of certainty.

The new organisation will be leaner, better able to meet the needs of its customers, committed to a more constructive engagement with its stakeholders and the community, and seeking to have its forest management and wood production practices certified independently at the highest international level.

## Financial results

During 2012/13, Forestry Tasmania's trading position continued to be affected by factors including the relative strength of the Australian dollar and restricted access to critical processing and export sites, including chip mills and port facilities. While sales of high quality eucalypt sawlog increased by almost 12 per cent and eucalypt pulpwood tonnages were up more than 15 per cent, there were significant reductions in sales of export logs and pulpwood from softwood plantations. Revenue from total forest sales was \$56.3 million – a reduction of 28 per cent on the comparable figure for 2011/12.

The application for funding for non-commercial activity, which was foreshadowed in the previous *Stewardship Report*, drew a positive response from the Government,

which allocated funding of \$20 million. Our net result was a loss after tax of \$13.4 million, after deficit funding from the Government of \$15 million was brought to account.

The Directors wish to acknowledge government underwriting, which enabled the business to keep operating. While every effort will be made to return to profitability as quickly as possible, it is highly likely that Forestry Tasmania will continue to require government support for some time to come.

## Strategic reviews

Last year's *Stewardship Report* expressed the hope that we would be able to finalise the strategic reviews of the business to provide certainty on the way ahead. It is extremely pleasing to report that that has been achieved. The outcomes during the year of both the URS review and the Tasmanian Forests Agreement have delivered strategic certainty, new opportunities and new challenges for Forestry Tasmania.

The URS business review highlighted ongoing trading difficulties for the organisation for the foreseeable future. The Government response was built on the bedrock of ongoing support for Forestry Tasmania and the industry, along with changes to ensure we maintain our focus on the need to restore profitability at the earliest possible opportunity.

The Government determined that Forestry Tasmania would retain its commercial functions as a Government Business Enterprise, with responsibility for land management and wood production in publicly owned production forests. Management of formal forest reserves will transfer to the Department of Primary Industries, Parks, Water and the Environment.

## Tasmanian Forests Agreement

The passage of the Tasmanian Forests Agreement Act marked a further significant change in the way Forestry Tasmania operates. As we pointed out last year, Forestry Tasmania was not a party to the Signatories process that led to the Tasmanian Forests Agreement, but assisted the process by providing information and assistance on request.

The intent of the Tasmanian Forests Agreement is to see more than 500,000 hectares of State forest protected. At the same time, legislated supply volumes for sawlog and peelers have been reduced substantially.

The Tasmanian Forests Agreement delivers a total of \$277 million to assist industry restructuring and further diversification of the Tasmanian economy, and assumes support from the major environmental groups for Forest Stewardship Council certification for Forestry Tasmania. These are very significant benefits and the Board has fully endorsed the Tasmanian Forests Agreement and committed the organisation to cooperate fully in its implementation.

We are encouraged by the Signatories' vision for a strong and competitive forest sector. We are also convinced that the Agreement offers our State the best opportunity to move on from the divisive 'forest wars', and for Forestry Tasmania to undertake an orderly and strategic restructure of its business.

## Looking ahead

We face an immediate need to consolidate the business. This will include reducing costs and maintaining or increasing revenues. We will also push hard for Forest



# message FROM THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER

Stewardship Council certification and continue to pursue value adding and new market opportunities.

With the total area of production forest reduced from 1.5 million hectares to around 0.8 million hectares, we will not be able to maintain the staffing levels of the past. To the extent possible we will, however, seek to maximise the opportunity for Forestry Tasmania staff to transfer, along with the land management responsibility, to the Parks and Wildlife Service.

## Certification

As community attitudes and the attitudes of our customers and markets change, we need to change with them.

People all over the world are increasingly concerned at forest management practices and looking for reassurance that forest products are produced sustainably. This means independent certification.

For many years now, Forestry Tasmania has held certification under the Australian Forestry Standard (which also provides international endorsement under the Programme for Endorsement of Forest Certification) and the International Standards Organisation.

However, many of our customers and end users of our products have made it clear that we also need to be marketing our product under the Forest Stewardship Council label if we are to retain their business. Additionally, major provisions of the Tasmanian Forests Agreement are contingent upon Forestry Tasmania achieving Forest Stewardship Council certification.

In May 2013, Forestry Tasmania established a project team to pursue Forest Stewardship Council certification as a business priority. Forestry Tasmania is recognised around the world as a technically skilled organisation, and we are confident that most of our operational practices will, with some modification, meet the Forest Stewardship Council standard. However, we face a significant challenge to improve our stakeholder engagement.

## Innovation

We are continuing to progress the implementation of the Forestry Innovation Plan. As we have reported in previous *Stewardship Reports*, the Forestry Innovation Plan aims to diversify Tasmania's forest industry beyond its traditional mix of sawlogs and commodity export woodchips, to the higher value products now in demand in Australia and overseas.

Our primary focus is Hardlam, a veneer-based, engineered wood product manufactured from eucalypt logs that would otherwise be woodchipped. Hardlam complements traditional sawn timber supplies, has excellent strength and stability, and may be used in structural or appearance-grade applications.

The Hardlam project received a major boost subsequent to the reporting period, when the Australian Government announced funding of \$4 million for Oak Tasmania to establish a manufacturing plant in Hobart.

Another project envisioned by the Forestry Innovation Plan was realised when Island Bioenergy began testing its new wood pellet facility. The \$1 million plant at Glenorchy will compress sawdust into pellets for domestic heaters, offering the potential for a substantial market in a clean, renewable and inexpensive source of warmth during the Tasmanian winter.

## Leadership change

After a long period of industry uncertainty, there has been significant change in leadership at Forestry Tasmania over the reporting period. We have farewelled two Chairmen – Adrian Kloeden and Miles Hampton – two other members of the Board – Humphrey Elliott and Deborah Radford – and our long-serving Managing Director Bob Gordon.

In addition to a new Chairman and Chief Executive Officer, we have welcomed four new members of the Board – Bob Smith, Ross Bunyon, Christine Mucha and Rob Woolley.

We thank all of those who have departed, but in particular Bob Gordon for his leadership and perpetual optimism through very difficult times for Forestry Tasmania and the industry. Bob was the driving force behind the Forestry Innovation Plan and we wish him and his wife, Dr Dianne Snowden, all the best for the future.



Bob Annells  
Chairman



Steve Whiteley  
Chief Executive Officer

## Tasmanian Forests Agreement

In November 2012, the Reference Group of Signatories signed the Tasmanian Forests Agreement, which culminated two years of negotiations between key environmental, community, union and industry groups.

The Tasmanian Forests Agreement provides for the reservation of an additional half million hectares of native forests. It also provides for an ongoing native forest and plantation wood supply for industry from remaining State forests, to be known as Permanent Timber Production Zone Land. This supply includes at least 137,000 cubic metres per annum of high quality sawlogs, peeler wood supply to meet renegotiated contracts, and a yield of special timbers to meet the needs of the Tasmanian special timbers industry.

The *Tasmanian Forests Agreement Bill 2012* provided legislative backing for the Agreement. This Bill was referred to a Legislative Council Select Committee in December 2012. In its submission to the Select Committee, Forestry Tasmania recognised that the Signatories' process and the Tasmanian Forests Agreement had been a negotiated settlement between deeply divided parties, rather than a comprehensive scientific and technical process.

Forestry Tasmania acknowledged that the environment within which it, the broader forest industry and regional communities would be required to operate for the foreseeable future had changed dramatically. This presented the industry with major financial, operational and strategic challenges. The Tasmanian Forests Agreement was designed to largely address these challenges, through agreements on future guaranteed wood supply offset by increased areas of new reserves.

Despite some concerns flowing from the proposed lower level of wood supply and the significant addition of new reserves, Forestry Tasmania has been encouraged by many aspects of the Tasmanian Forests Agreement, including the Signatories' vision for a strong, competitive forest sector.

The Tasmanian Forests Agreement offers an opportunity to develop higher value markets and additional employment, through domestic processing for products such as laminated veneer lumber and pulp, and to diversify away from the historical reliance on woodchip export markets for forest and mill residues, by developing bioenergy markets.

To a large extent, the enhanced value from an uncontested wood supply underpins Forestry Tasmania's conditional support for the Tasmanian Forests Agreement, which deserves community support if it is truly durable and results in a vibrant and competitive forest products sector.

However, Forestry Tasmania's short-term commercial viability will be significantly challenged by the reduced supply levels prescribed in the Tasmanian Forests Agreement. Forestry Tasmania recognises that this is one of the consequences of an agreement designed to achieve the goal of peace within the commercial public forest estate.

Forestry Tasmania endorsed the Tasmanian Forests Agreement provided that it helps facilitate an orderly transition in public commercial forestry from one based primarily on native forests (until 2027), to an enhanced sector based primarily on plantations, but complemented by an important ongoing native forest industry after 2027, based on a supply level of sawlogs of about 100,000 cubic metres per year and the best use of associated arisings.

Forestry Tasmania also called for restoration of investor and market confidence as well as strong support for:

- innovation and investment in new markets for forest products such as Hardlam, wood for biofuels and electricity production, and pulpwood primarily from plantations for the sustainable supply of a potential pulp mill in northern Tasmania;
- Forest Stewardship Council certification for management of the proposed Permanent Timber Production Zone;

- improved infrastructure and access for export of forest products, particularly from ports in north western and southern Tasmania; and
- a triple bottom line approach for forest regulation such that wood supply levels can be maintained.

Forestry Tasmania highlighted some specific management issues to be addressed through ongoing consultation and cooperation with the Government; the Signatories; the Department of Infrastructure, Energy and Resources; the Department of Primary Industries, Parks, Water and Environment; and the Parks and Wildlife Service. These included:

- further consideration of the special timbers supply;
- selection of final reserve boundaries that provide for appropriate management and funding for the Warra Long Term Ecological Research Site in southern Tasmania;
- maintenance of the road network required to access remaining production forests that are isolated by the new reserves; and
- development of agreed protocols for forest management activities adjacent to and within the new reserves.

Given the potential for the 2012 Tasmanian Forests Agreement to resolve Tasmania's long standing forest conflict, Forestry Tasmania recognised that it represented a unique opportunity to strengthen Forestry Tasmania's, and the broader forest industry's, competitiveness and resilience, and ultimately stabilise the operating environment for the benefit of all involved.

In June 2013, the Tasmanian Parliament passed the *Tasmanian Forests Agreement Act 2013*, which gave legislative effect to the Agreement.

More information: [forestsagreement.tas.gov.au](http://forestsagreement.tas.gov.au)



# sustaining BIODIVERSITY AND HABITAT



One of our key roles is to maintain biodiversity on State forest. Our Forest Practices Officers use conservation databases, threatened species management recommendations, fauna technical notes, and expert advice to manage species such as the endemic Tasmanian wedge tailed eagle.

Land managed by Forestry Tasmania forms an important component of Tasmania's reserve system, and managing biodiversity remains a key part of our role. We ensure that old growth forest, rare and threatened vegetation communities, habitats and threatened species are maintained outside reserves.

Science informs us that not all values can be represented in any one part of the forest estate at a particular time. Our aim, therefore, is to ensure that these values are maintained across the landscape and across various age classes.

## Reserve system

The Comprehensive, Adequate and Representative reserve system was established under the Regional Forest Agreement to:

- include the full range of vegetation communities;
- ensure the level of reservation is large enough to

maintain species diversity, as well as community interaction and evolution; and

- conserve the diversity within each vegetation community, including genetic diversity.

In State forests the Comprehensive, Adequate and Representative reserve system is made up of formal reserves (known as forest reserves) and informal reserves.

All reserves are zoned for protection under our Management Decision Classification system. Formal reserves have been proclaimed by Parliament. While the informal reserve system is also used to maintain Comprehensive, Adequate and Representative reserve values identified in the Regional Forest Agreement, its physical configuration may be adjusted to meet forest management requirements, provided the overall level of protection of reserve values is maintained.

## Area protected in State forest

Land classification state forest <sup>1,2</sup> area (ha)	2008/09	2009/10	2010/11	2011/12	2012/13 <sup>5</sup>	(%) SF area (2012/13)
Forest Reserves	222,100	221,900	221,900	221,900	221,900	15%
Informal Reserves	298,000	299,100	300,700	301,300	588,400	39%
Outside wood production areas <sup>3</sup>	306,900	311,500	318,700	322,300	204,000	14%
<b>Non-production total<sup>4</sup></b>	<b>827,000</b>	<b>832,500</b>	<b>841,300</b>	<b>845,500</b>	<b>1,014,300</b>	<b>67%</b>
Managed primarily for protection	55%	55%	56%	54%	67%	

Notes:

1. Area includes Buckland Military Training Area managed by Forestry Tasmania.
2. Does not include Special Timber Zones, which will be resolved by TFA signatories.
3. Areas currently not part of the wood resource due to such factors as non-commercial forest, excessive slope, streamside reserves, inaccessibility, etc.
4. Figures in total row are not the sum of the columns but the rounded actual totals. Percentages based on actual areas.
5. 2012/13 Informal Reserve area include future reserve land designated by the *Tasmanian Forests Agreement Act 2013*.

Comprehensive, Adequate and Representative reserves provide security for species that might otherwise be disadvantaged by production forestry. They provide continuity of habitat and, for many plants and animals, recolonisation sources. In this sense, Comprehensive, Adequate and Representative reserves have ecological 'influence' over the surrounding production forest, with the level of influence proportional to the distance from the reserve to the production forest.

As of June 2013, 67 per cent of the State forest estate was primarily managed for the protection of environmental values, including nearly 54 per cent within the Comprehensive, Adequate and Representative reserve system and another 14 per cent that lies outside areas identified for timber production.

### State forest activity assessments

Activities that are not covered by the forest practices system are assessed using our State forest activity assessment process. These activities range from recreational events through to communication towers, construction of visitor facilities, new beekeeping sites and, in some cases, scientific research.

The State forest activity assessment process ensures that natural and cultural values (such as flora, fauna, geology, soil, water and heritage), stakeholder values and operational needs can be assessed and considered, and that potential negative effects of the activity can be mitigated or avoided. It also ensures that any proposed activities occurring on State forest meet legislated requirements.

Although the State forest activity assessment process has now been established for several years, new challenges continue to arise both with proposed developments and the need for continuous improvement. The latter of these issues saw the completion of a comprehensive review of the entire process during 2012/13. The review successfully streamlined the assessment process so that it can be applied more efficiently and consistently to a wider scope of activities. Importantly, the review also strengthened the compliance process by making permit conditions for event holders legally binding. Although this review resulted in a greatly improved process, we continue to seek improvements in the constant pursuit of better environmental outcomes for our forests.

While the process doesn't aim to prevent any activity or event occurring on State forest, our obligation for responsible management resulted in one proposed activity

over the past year not being allowed due to the sensitive environment of the Forest Reserve in which it was proposed to occur. However, there were also a number of successful events that were made possible through the flexible attitude of event organisers, who were willing to follow prescriptions suggested by Forest Practices Authority experts, despite being under no legislated obligation to do so. These events demonstrated that although active recreation events such as four wheel driving and motocross events can provide some of the bigger management challenges for activities on State forest, successful stakeholder engagement and the pro-active attitudes of forest planners can result in positive outcomes.

The table below reports the State forest activity assessments that have been conducted for Forest Reserves, as part of our obligation to manage reserves in accordance with the Reserve Management Code of Practice.

**State forest activity assessment in Forest Reserves (Non-harvest related activities covered by an assessment)**

Type of Activity	2008/09	2009/10	2010/11	2011/12	2012/13
Tourism infrastructure	1	7	4	0	0
Roads and related infrastructure	1	3	5	2	0
Water and utility infrastructure	0	2	1	8	3
Recreation events	0	9	4	2	6
Other	9	2	5	4	1
<b>Total</b>	<b>11</b>	<b>23</b>	<b>19</b>	<b>16</b>	<b>10</b>



# *sustaining* BIODIVERSITY AND HABITAT

## **Biodiversity**

One of our key stewardship roles is to sustain biodiversity across State forest. We do this in the context of current policy settings, and by continuously improving our forest planning and practices. By maintaining our part of the Comprehensive, Adequate and Representative reserve system, maintaining a permanent native forest estate, and by applying the Forest Practices Code, we adopt the model of managing biodiversity through well-managed reserves and effective complementary management in the areas designated for wood production.

In 2012/13, the area of State forest in Comprehensive, Adequate and Representative reserves increased from 523,200 hectares to 810,300 hectares largely due to reclassification of formerly unreserved land into future reserved lands. In the short-term future, the total Comprehensive, Adequate and Representative reserve area managed by Forestry Tasmania will likely again change as the future reserved land is transferred to the management of the Parks and Wildlife Service in a number of tranches.

Around 33 per cent or 496,000 hectares of State forest is actively managed for wood production. In this area, biodiversity conservation is delivered in several different ways. This includes adhering to the Forest Practices Code, which, on-the-ground, requires detailed planning for management of biodiversity values. Requirements include riparian buffers, habitat clumps to reserve hollow-bearing trees and other biological legacies, and guidelines to disperse harvesting at the local landscape scale.

Our native forest management also includes strategies that better sustain biodiversity by emulating natural disturbance processes, such as adopting fire as a forest regeneration tool, which is an important element in managing wildfire-driven ecosystems. This, coupled with sowing with locally sourced eucalypt seed, ensures that the local genetic diversity in the regenerating native forest is maintained.

We have continued to improve and adapt our management by developing new ways to integrate retention forestry principles into forest management planning. This is illustrated through adapting variable retention silviculture, which is the global best practice standard for harvesting old growth forest, to Tasmanian wet eucalypt forests.

In 2012/13, we improved our conservation planning systems, such that we do things better, faster, more cost effectively, and at the most appropriate scale, including the landscape scale. A recent example of this was our development of a new conservation planning tool that puts landscape ecological principles into practice to help ensure ecological resilience and biodiversity is sustained across the wood production estate.



Tasmanian freshwater crayfish

## A new conservation planning system

Forestry Tasmania is deploying a new approach to planning systems that guide harvest operations, to ensure non-wood values in production forests are maintained at both the coupe and landscape scales.

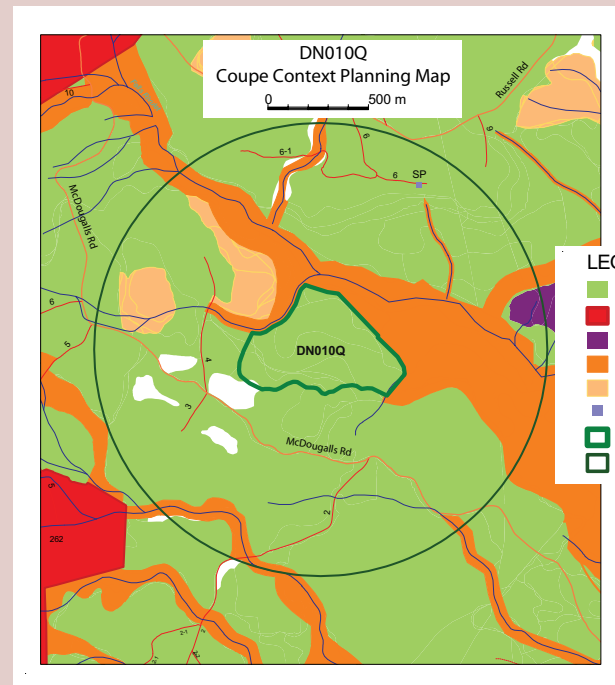
The coupe context planning system incorporates the principles of landscape ecology into coupe planning. For example, it will be used to maintain habitat connectivity across the landscape and heterogeneity in forest age class structure, with particular emphasis on maintaining mature forest habitat.

It does this by prescribing areas of forest to be set aside from harvesting for the long term, and by limiting the proportion of young forest (less than five years old) in a one-kilometre radius of each coupe centre. This is a significantly different approach to traditional operational planning, which has focused on managing special values confined to the 20 to 70 hectares of individual coupes.

The production forest landscape consists of a mosaic of dedicated reserves and areas available for wood production. Planners will now account for the spatial distribution of this mosaic when planning harvest operations. Requirement for additional forest retention will be identified within the context of the coupe that is planned for harvesting. Consequently, harvest operations will leave enough forest in long-term retention to deliver landscape-level objectives for non-wood values.

In our three-year plan, 90 per cent of coupes meet, or exceed, a minimum forest retention level of 20 per cent at the coupe-context scale. This target is supported by a landscape-level biodiversity study (see the 2011/12 *Stewardship Report*) and is consistent with current conservation paradigms. Maintaining undisturbed forest at the local scale can significantly improve the ecological value and resilience of managed landscapes. This tool will enable us to maintain conservation values in managed forests.

Example of a coupe context planning map. This information can help planners decide on the optimal areas of native forest to set aside for long-term retention to maintain ecological benefit for biodiversity and threatened species, while minimising the effects on wood supply.





# sustaining BIODIVERSITY AND HABITAT

## Threatened species, communities and habitats

Tasmania's flora and fauna is highly endemic, and the State is free from some of the threatening processes present on mainland Australia. Tasmania has 135 listed forest-dwelling threatened animals, ranging from tiny freshwater snails, to the majestic Tasmanian wedge-tailed eagle, Australia's largest raptor. Tasmania also has 310 threatened terrestrial plant species, 15 threatened forest communities, three threatened ecological communities, and 17 non-forest communities. Forestry Tasmania takes its role very seriously in ensuring the ongoing viability of these species.

As of June 2012/13, a total of 54,590 hectares of forest available for wood production had been designated as biodiversity special management zone under our Management Decision Classification system. This area comprises values such as threatened forest communities or specific species habitat. If harvesting occurs in these areas, it must be carried out with specific prescriptions to manage the existing values. When planning harvesting activities, our trained Forest Practices Officers use conservation databases, botany field manuals, threatened species management recommendations, fauna technical notes, and expert advice to develop coupe-specific management prescriptions to manage any threatened species values in the area.

## Old growth forests

Old growth forests are mature forests in which the effects of disturbance are now negligible. They are important environmentally, socially and economically to Tasmania.

Within Tasmania, old growth occurs across all land tenures. Well over one million hectares of old growth forest is protected across all land tenures in Tasmania.

A small proportion of old growth in State forest is available for harvesting and this portion is vital for sustaining the supply of high quality sawlogs. The total area of old growth harvested in 2012/13 (using clearfell and non-clearfell methods) was 631 hectares, which is comparable to last year, and significantly less than in preceding years. Of this area, 521 hectares (82 per cent) was harvested using non-clearfell techniques and 110 hectares (17 per cent) was clearfelled. The total area of old growth forest clearfelled in State forests since 30 June 2001 is 10,340 hectares. Based on 1996 baseline mapping, this represents 0.85 per cent of the total old growth forest area in Tasmania.

The Tasmanian Community Forest Agreement set a target to reduce clearfelling to less than 20 per cent of the annual harvest in old growth forests, or to limit the annual clearfelling of old growth forests to less than 330 hectares. As the area of old growth forest harvested by clearfelling this year was just 110 hectares, the target was achieved.

In Tasmania's tall old growth forests, the main silvicultural alternative to clearfelling has been the development of variable retention silviculture. The research program has provided assurance that the variable retention technique can be safely and effectively implemented in old growth forests and is supported by science, validated by peer-reviewed research papers and summarised in a major report titled *A New Silviculture for Tasmania's Public Forests* (available at [forestrytas.com.au](http://forestrytas.com.au)).

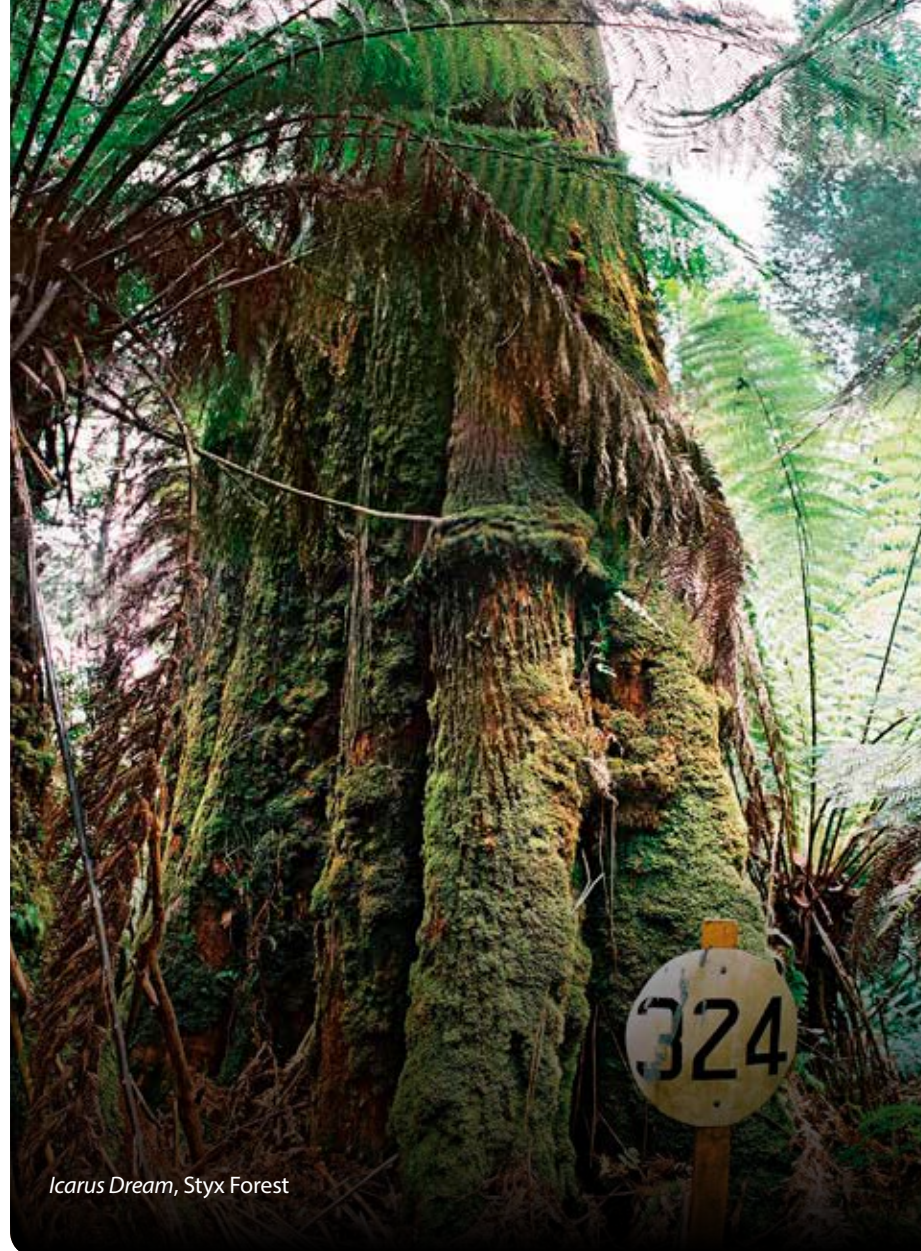
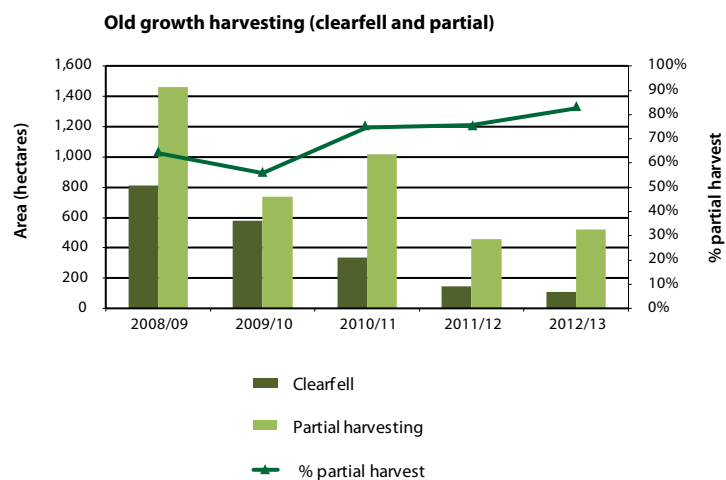




## Giant trees

Our giant tree policy requires that all trees over 85 metres in height or 280 cubic metres in volume be protected. We implement this policy by pro-actively searching for giant trees, using LiDAR and on-the-ground surveys. When giant trees are located they are protected in reserves of at least 100 metres in radius. Most giant trees are protected in larger reserves.

In 2012/13, seven new giant trees were added to the giant tree register, taking the total in the register from 135 to 142 trees.



*Icarus Dream, Styx Forest*

# sustaining JOBS FOR CURRENT AND FUTURE GENERATIONS



Rob DeWilt, McKay Timber. The estimated final value of wood products from logs supplied from State forest managed by Forestry Tasmania in 2012/13 was \$188 million. This final value represents full time employment for about 3,300 Tasmanians.

## Financial performance

We recorded a loss (after tax) of \$13.4 million, reflecting the continuing difficult economic circumstances surrounding our business. Our financial situation forced us to rely on significant funding from the State Government. The Financial Statements for 2012/13 (Appendix 1) provide full details of the financial performance of Forestry Tasmania for the 2013 financial year and provide specific details of the assistance provided from the Government. The report may be viewed via the following link: [www.forestrytas.com.au/uploads/File/pdf/pdf2013/financial\\_statements\\_2013.pdf](http://www.forestrytas.com.au/uploads/File/pdf/pdf2013/financial_statements_2013.pdf)

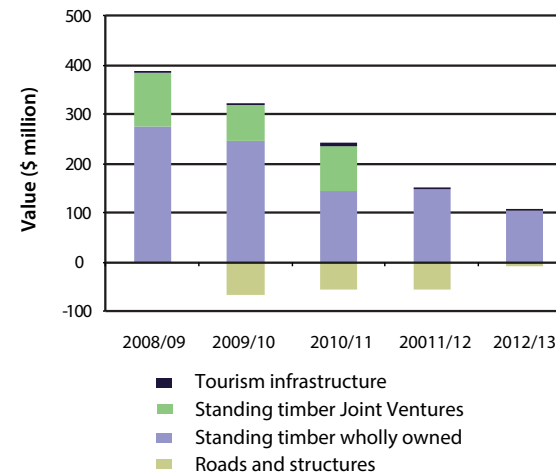
## Forest assets valuation

Forestry Tasmania engaged James W Sewall Company (Sewall) to establish a valuation for its entire forest estate, inclusive of land, roads and obligations. Sewall is a United States-based company with international (including Australasian) experience in valuing forest estates. Forestry Tasmania has used Sewall for this purpose since 2010.

The net valuation of the forest, inclusive of roads, is \$183.9 million for 2013 compared to \$208.7 million in 2012.

With the passing of the *Tasmanian Forests Agreement Act 2013* Forestry Tasmania is now responsible for the Permanent Timber Production Zone. The valuation reflects the quantities available for harvest under that Act, of 137,000 cubic metres of high quality sawlog, 200,000 tonnes of eucalypt peeler logs and 870,000 tonnes of pulpwood associated with the high quality sawlog volume. These figures are substantially lower than those applicable prior to passage of the new legislation, and will generate lower ongoing revenue, resulting in a consequential

## Forest assets valuation



reduction in the forest valuation, which is based on projected cash flow generation.

Other key components of the valuation are as follows:

1. By 1 January 2014, 220,000 hectares of existing formal forest reserves are to be transferred to the Parks and Wildlife Service and the costs associated with this responsibility have been excluded from that date.
2. Projected sales revenue is based on the revised quantities available for harvest.
3. Government transition funding to be provided over the next three years has been included as either revenue or cost reduction.
4. The transition process referred to above is likely to impact projected costs for administration, forest management, overheads and research and development. As an interim measure, these costs have been included in the valuation by adopting the full current cost of \$88.27 per productive



hectare in 2013/14, reducing progressively to the target rate of \$66.53 per productive hectare over a period of five years.

- A discount rate of 9.7 per cent has been applied by the valuer to reflect the greater certainty that exists following the passing of the Tasmanian Forests Agreement, compared to the rate of 10.1 per cent used last year.

### Wood products

The estimated final value of wood products from logs supplied from State forest managed by Forestry Tasmania in 2012/13 was \$188 million. This estimate is based on the actual quantities produced and the best available information on the recovery and value of each derived product. When indirect flow-on effects are taken into account, assuming the current annual average salary for Tasmanian adults in full-time employment of approximately \$57,000 per year, this final value represents full-time employment for about 3,300 Tasmanians.

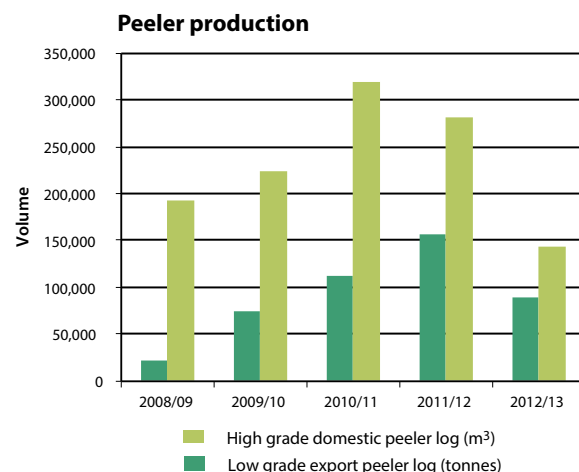
Forestry Tasmania's direct contribution to the economy included \$129.5 million in payments to staff, contractors and suppliers, of which salaries and wages paid to Forestry Tasmania's employees accounted for \$28 million.

Overall production of logs from State forests managed by Forestry Tasmania in 2012/13 was 1.03 million tonnes, which was a decrease of approximately 245,000 on 2011/12 production levels. This consisted of 764,000 tonnes from native forest, 144,000 tonnes from eucalypt plantations and 120,000 tonnes from softwood plantation.

Production of high quality eucalypt sawlog increased from 109,000 cubic metres in 2011/12 to 120,932 cubic metres

in 2012/13. Production of both native forest and plantation pulpwood also improved. However, the reduced strength of the peeler market saw our production of this product almost halve from 439,398 tonnes in 2011/12 to 231,878 tonnes in 2012/13.

Note that these production and value figures do not include wood produced on areas of State forest leased to private forestry companies.



### Eucalypt wood production

Product Group	2008/09	2009/10	2010/11	2011/12	2012/13
High quality sawlog and veneer (m³)	245,154	210,538	196,702	109,940	120,932
<b>Arisings</b>					
Low quality sawlog (m³)	56,613	37,897	48,532	42,011	37,531
High grade domestic peeler log (t)	186,100	224,432	318,597	372,466	142,722
Low grade export peeler log (t)	22,234	74,669	112,795	157,321	89,156
Plantation pulpwood (t)	135,549	179,495	171,205	61,303	144,106
Native forest pulpwood (t)	2,005,448	1,388,986	1,376,554	315,037	363,409
<b>Total arisings</b>	<b>2,405,944</b>	<b>1,905,479</b>	<b>2,027,682</b>	<b>857,749</b>	<b>776,924</b>

### Wood quality

Forestry Tasmania is mandated to supply for industry an amount of high quality sawlog that is suitable for uses such as sawmilling. Unfortunately, it is not possible to use every piece of wood grown in the forests for this purpose. Indeed, in the process of harvesting high quality products we produce significantly more lower grade products. The amount of each product we produce therefore reflects the quality of timber that we are sourcing from our forests.

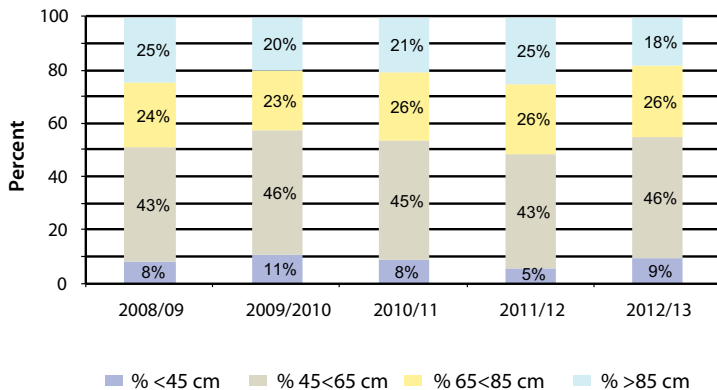
Furthermore, we are expecting the average size of eucalypt sawlog to decrease over time, as our resource becomes increasingly regrowth and plantation based. Wood processing operations will have to adapt significantly in the future in order to adjust to the altered resource. It is evident that this transition is already under way, with an ever-increasing proportion of Forestry Tasmania's production being directed into peeler logs for rotary veneer.



# sustaining JOBS FOR CURRENT AND FUTURE GENERATIONS

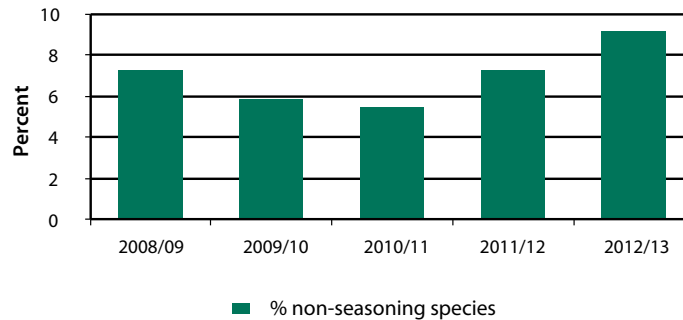
Forestry Tasmania uses two indicators to monitor the quality of eucalypt sawlogs provided to the conventional hardwood sawmilling industry. The first indicator is log diameter, which is a well-recognised proxy for sawn timber recovery and end product value. In 2012/13, the proportion of wood supplied in each log diameter category did not vary markedly from the five-year average. The second indicator is the proportion of non-seasoning wood supplied. Non-seasoning species are generally from the peppermint and gum eucalypt groups, and are typically more challenging to kiln dry as sawn timber. Nine per cent of the wood we supplied to our sawmill customers this year was from non-seasoning species. This was two per cent higher than the five-year average of seven per cent. These indicators show that during 2012/13 we have largely been able to supply the traditional sawmilling industry with appropriate resource.

**Percentage of eucalypt Category 1 and 3 (high quality) sawlogs by diameter group**



Note: Does not include small quantities of high quality eucalypt sawlogs sold through Island Specialty Timbers.

**Percentage of non-seasoning species sold over the past five years**



## Product recovery

We maximise the use of all felled trees from harvested areas through the selection of craftwood, special timbers, high quality sawlogs and veneer, with the remainder being available as peeler logs, pulpwood and fuelwood.

We have three main processes in place in order to ensure the recovery of wood volume and value is maximised. These are as follows:

- (i) Segregation inspections carried out by our staff to determine the presence of any logs that may have been misclassified as a lower grade product. These inspections take place on coupe landings, at mills and on log trucks. This year, we conducted more than 820 such inspections.
- (ii) A feedback docket system that enables purchasers of logs and our staff to record any log grading issues.

- (iii) Post-logging residue assessments, to ensure the efficient removal of forest products and to quantify merchantable wood being left on the forest floor after harvesting operations.

In 2012/13, we conducted logging residue assessments in 27 harvested areas. The average amount of remaining timber that we assessed as merchantable was 11 cubic metres per hectare. This result is above our target level of five cubic metres per hectare, but is considerably lower than the previous year's average of 25 cubic metres per hectare. The increased ability to find markets for lower value products has led to this improvement. We will continue to seek new opportunities to recover this product.

## Hardlam

In 2011/12, we developed Hardlam, a veneer-based engineered wood product manufactured from logs that would otherwise be converted to woodchips. The product will be a practical and affordable alternative to solid lumber. In 2012/13, we continued to work on product development and market testing, as well as on developing a proposal for a Tasmanian-based production facility. We launched Hardlam in July 2012 at the Australian Woodworking Industry Association show in Sydney. Subsequent promotional activities have generated considerable interest in the product, including a Gold Star Award for design, innovation and marketability at the Australian Timber Flooring Association's Flooring and Finishes Show.

## Rail transport of logs

On 19 March 2013, after a break of more than 10 years, Forestry Tasmania resumed using the state railway system for log transport.

The closure of the Triabunna woodchip mill caused major difficulties in selling the pulp logs that arose from the production of sawlogs and peeler logs in the southern forests. In an effort to manage the build-up of pulp logs, Forestry Tasmania significantly increased the quantities sold as firewood, and maximised opportunities for south-bound log haulage on return trips that initially transported pulp logs from the southern forests to Bell Bay. The majority of pulp logs have, however, either been exported from Hobart Port at uneconomical prices or been left on the forest floor and burnt in the regeneration process. The only other solution was to cart more pulp logs to Bell Bay. However, road cartage costs associated with the 500-kilometre round trip would have led to even greater financial losses.

To overcome this, Forestry Tasmania developed a working partnership with Tasrail, SFM Pty Ltd and Artec Pty Ltd to use the recently developed Brighton Transport Hub to load and transport pulp grade logs from the southern forests to the Artec woodchip mill at Bell Bay in the north of the State. The partnership, which has been developed on a trial basis, was made possible by a State Government transport subsidy, which provided funds for road haul over short to medium distances from southern forest coupes to the rail hub. The trial will be reviewed after six months, with the aim of confirming ongoing viability.

To 30 June 2013, the operation had run 43 trains, moving 22,426 tonnes of wood to northern Tasmania. This equates to removing six B-double road trucks from the Midland Highway on every day of the year.



Forestry Tasmania is taking advantage of the new Brighton rail hub to transport pulp logs to the Artec woodchip mill at Bell Bay. To 30 June 2012, the operation had run 43 trains, moving 22,426 tonnes of wood to northern Tasmania. This equates to removing six B-double road trucks from the Midland Highway on every day of the year.

## Sustainable yield

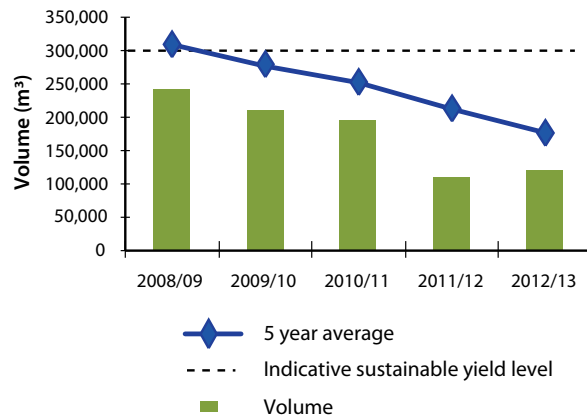
A vital prerequisite for sustainable forest management is that the volume of timber harvested from the forest estate does not exceed its productive and regenerative potential over a given time period. For the last two decades we have managed harvesting in State forests to maintain an annual sustainable supply of at least 300,000 cubic metres of high quality eucalypt sawlog and veneer log. This management approach was required by the Forestry Act, which has recently been changed as a result of the *Tasmanian Forests Agreement Act 2013*. This latter Act has reduced the land area available for wood production, and subsequently the required high quality eucalypt sawlog and veneer log quantity, from 300,000 to 137,000 cubic metres per annum.

Managing the forest for the legislated high quality eucalypt sawlog supply will inevitably produce other products, such as lower grade sawlogs, peelers and pulpwood. We describe these products collectively as 'arising'.

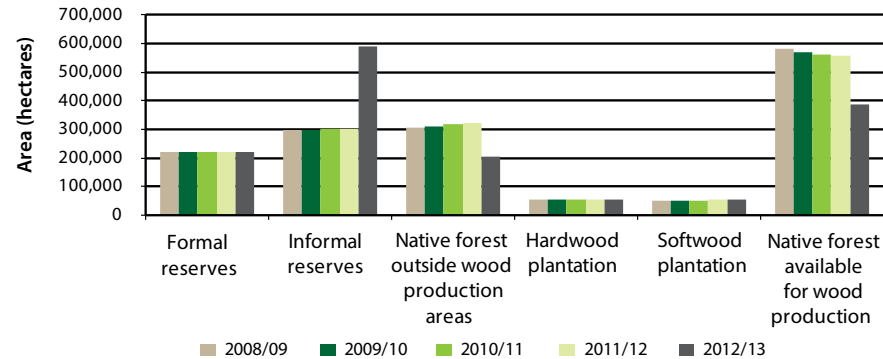
In 2012/13 we produced a total of 120,932 cubic metres of high quality sawlog and veneer. The five-year trend has shown a significant reduction in the annual average amount of sawlog produced, remaining well within the 300,000-cubic metre legislated supply. We produced 776,924 tonnes of eucalypt arising, which was also well within the potential supply level of 2.8 million tonnes. These low production figures are indicative of our changed land base arising from the Tasmanian Forests Agreement, and a continuing poor market for lower grade products such as peeler and pulpwood.

# sustaining JOBS FOR CURRENT AND FUTURE GENERATIONS

**Production of high quality sawlog and veneer**

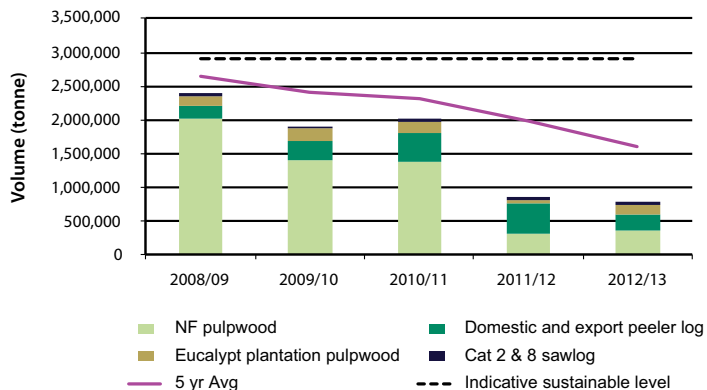


**Trends in land use for areas managed by Forestry Tasmania**



• The Informal Reserves in 2012/13 include Future Reserve Land designated by the *Tasmanian Forests Agreement Act 2013*.

**Arisings production levels against potential supply level**



To maintain the reduced supply of timber a sufficient, though also reduced, area of production forest is required. Under the *Tasmanian Forests Agreement Act 2013*, only 33 per cent of the reduced State forest estate is available for wood production. This area comprises native eucalypt forest (387,000 hectares, or 26 per cent) and plantations (108,000 hectares, or seven per cent). The remaining area (67 per cent) comprises informal reserves and other areas outside production forests.

**Setting the scene for the next wood review**

Maintaining the productive capacity of the forest is one of Forestry Tasmania's key criteria for sustainable forest management. This criterion is most relevant when discussing high quality eucalypt sawlog supply. We model and monitor this sawlog supply to ensure harvesting is consistent with the long-term productive capacity of Tasmania's State forests.

The Regional Forest Agreement requires us to review our sustained yield calculation for high quality eucalypt sawlog supply every five years. To estimate sawlog supply from the forest, we use forest inventory, future growth estimates and historical harvest records. At each review since 1997, we have identified significant changes to sawlog supply. These changes are usually associated with a reduction in the area of native forest available for wood production, and an increased contribution from a maturing plantation resource. For example, in 2005, the Tasmanian Community Forest Agreement reserved more old growth forest, thus reducing the potential supply of sawlogs from native forest.

The fourth such review since the Regional Forest Agreement was signed in 1997 was due last year. We commenced preparations for this review of our sustained yield calculation in 2010/11. However, the review has been delayed by the uncertainty surrounding the resource base



that will arise from the Tasmanian Forests Agreement. Given that the *Tasmanian Forests Agreement Act 2013* now exists, we will be able to conduct the review in 2013/14.

## Native forests

### Eucalypt forests

Of the 496,000 hectares available for wood production, the majority (387,000 hectares) is native forest. This area provides the majority of the high quality eucalypt sawlogs and veneer logs, peeler logs and pulpwood as well as special timbers from non-eucalypt species.

We aim to ensure that productivity in State forests is always maintained. In order to achieve this, forest regeneration practices are constantly monitored and reviewed.

Successful eucalypt regeneration generally requires:

- effective site preparation by fire or by mechanical disturbance to create receptive seedbeds;
- an adequate supply of high quality seed; and
- freedom from heavy frosts, drought and excessive damage by insects and browsing animals.

To ensure high quality native forest regeneration, we actively maintain a native forest quality standards process. This process enables the timely, effective and accurate monitoring and reporting of silvicultural operations in native forests. The process uses goals, targets, standards and performance indicators to determine the success of regeneration operations. An annual quality standards review is held to discuss issues of concern relating to silvicultural operations, to ensure a constructive approach

to improving practices, and to provide a forum for exchange of information and ideas. The following is a summary of the results collated from this process.

### Site preparation

Site preparation has a significant effect on the success of regeneration. Site preparation techniques include high or low intensity burning, mechanical loosening of the soil or excavator heaping and subsequent burning of logging slash. In some cases, the disturbance caused by harvesting produces sufficient seedbed for adequate regeneration and no further treatment is required.

The quality standard for clearfelled areas is that receptive seedbed is created over at least two-thirds of the area to be regenerated. In partially harvested areas, the quality standard is that receptive seedbed is created over at least one-third of the area to be regenerated, with less than 10 per cent scorching of retained stems, and the achievement of an acceptable level of fire protection.

In 2012/13, we assessed 3,868 hectares of native forest (1,668 hectares of clearfelled area and 2,183 hectares of partially harvested area) against these standards. 78 per cent of clearfell and 84 per cent of partial harvest areas respectively achieved the site preparation quality standard. This compares with the five-year average of 87 per cent and 88 per cent for clearfell and partial harvest respectively. Eleven clearfelled areas did not meet the site preparation standard as a result of poor burns. Four partially harvested coupes did not meet the standard because insufficient seedbed was created or an acceptable level of fuel management was not reached.



# sustaining JOBS FOR CURRENT AND FUTURE GENERATIONS

## Seed and sowing

Forestry Tasmania classifies the source of seed sown onto harvested native areas into three categories:

- **On-site seed** is collected from the harvested area or from a similar area within one kilometre.
- **In-zone seed** is from the same seed zone as the nominated harvesting area. The seed zones are detailed in Native Forest Silviculture Technical Bulletin No. 1 Eucalypt seed and sowing. For the purposes of quality standards, in-zone seed does not include the on-site seed component.
- **Out-of-zone seed** is collected from outside the seed zone of the nominated from the harvesting area. This is the least preferred seed source.

The seed provenance quality standard is that each harvested area should be regenerated with at least 10 per cent on-site seed, with the remainder being in-zone seed matched to forest type.

In 2012/13, we sowed 1,726 hectares with eucalypt seed. A total of 1,365 hectares (79 per cent) of this area achieved the seed provenance quality standard. This is 10 per cent higher than the five-year average of 69 per cent. A shortage of on-site seed was the main reason for not achieving the desired standard.

In 2012/13, we sowed 1,671 kilograms of eucalypt seed, of which 45 per cent was on-site, and 55 per cent in-zone with no out-of-zone seed used. When compared to the five-year average this is a decrease in on-site seed (49 per cent on-

site); however, it is a better performance when compared to the average use of out of zone seed (two per cent).

The quality standard for sowing operations requires that the delay between site preparation completion and artificial sowing be less than 21 days. This ensures the best chance of successful regeneration. In 2012/13, we achieved this standard in 94 per cent of the artificially sown area. This is greater than the five-year average of 91 per cent.

## Regeneration success

Regeneration success of eucalypt areas is reported when they are three years old. Swamp blackwood, rainforest and Huon pine forest coupes are reported when they are five years old. Regeneration success is determined by undertaking surveys. For each forest type, there is a set minimum stocking standard that needs to be achieved. This approach complies with the recommended national methodology for regeneration success monitoring.

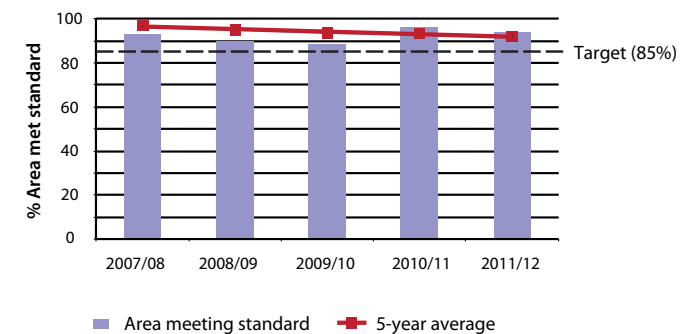
In 2012/13, 9,190 hectares of native forest regeneration reached the relevant reporting age for regeneration success, and we achieved the required stocking standard in 94 per cent of this area. This is slightly above the five-year average of 93 per cent, and exceeds our target of 85 per cent of the harvested area being regenerated to standard.

We did not meet the stocking standard in 16 coupes, totalling 578 hectares. There were numerous reasons for understocking including poor regeneration burns, insufficient natural seed-fall, inappropriate silviculture, frost events and browsing by native mammals. All these areas

contained sufficient regeneration or retained trees to be considered as ecologically stocked and useful for wood production at a reduced rate.

Under this year's native forests quality standards program, we awarded the Gilbert-Cunningham trophy, which recognises the achievement of excellence in regrowing native forests following harvesting, to Derwent District. This was the tenth year that Forestry Tasmania has presented the Gilbert-Cunningham trophy.

## Native forest regeneration success summary



### Variable retention silviculture successful in regenerating our forests

Over the past seven years, Forestry Tasmania has developed variable retention silviculture for managing its old growth wet eucalypt forests. Variable retention aims to maintain biodiversity and ecosystem function in managed forests by retaining patches of forest or individual trees. Retained areas are intended to provide continuity of structure and function, enhance landscape connectivity, and influence the regenerating forest. However, these ecological goals must be balanced against silvicultural considerations such as achieving successful regeneration.

Forestry Tasmania has undertaken an extensive monitoring and research study to evaluate regeneration success and related silvicultural outcomes after operational variable retention harvesting in wet eucalypt forests, and to compare these to outcomes after conventional clearfell burn and sow harvesting.

The study has found that regeneration density and height in three-year-old aggregated retention coupes were similar to those in comparable clearfell burn and sow coupes. This early regeneration success in the aggregated retention coupes is attributed to the development of successful 'slow burning' techniques that achieved a high proportion of burnt seedbed, the adoption of aerial sowing as a standard operating procedure, and the absence of any increase in browsing pressure or edge-related growth suppression. Seedling height and density were strongly related to the state of the seedbed, and increased with increasing burn intensity, confirming that the creation of burnt seedbed is essential for good early regeneration in wet eucalypt forests.

These early results indicate that initial silvicultural goals for regeneration can be met after variable retention harvesting in wet eucalypt forests.

### Regeneration success in clearfell burn and sow silviculture

Every year, through the native forests quality standards program, we gather data from the districts on the success or otherwise of their regeneration treatments across all of the forest that we have harvested. Regeneration takes some time to establish, and sometimes additional work is required to get the regeneration to the standards that we set. Consequently, we report on the quality of the regeneration that we have established when the coupes of interest have reached three years of age in eucalypt forests.

The silvicultural system that generates much of the criticism directed at forest managers is clearfell burn and sow. Clearfell burn and sow has been the system of choice for tall wet eucalypt forests for many years, although we have now moved many of our operations in these forests to variable retention. The high intensity burns generate columns of smoke that are visible for many miles, and the images of smouldering coupes are not pretty. But the system is demonstrably effective.

This year, we reviewed the success or otherwise of our regeneration treatments in clearfell burn and sow operations over the last seven years. Systematic surveys are conducted in all coupes that we harvest and regenerate, and each 16-square metre survey plot is examined for the presence or absence of regeneration. We set ourselves the standard that at least 65 per cent of the plots are stocked with at least one acceptable seedling – all coupes that fall below this level are considered for further treatment, if possible. Coupes that are stocked below 10 per cent must be re-treated.

The table shows that of a total of 18,037 hectares that were harvested and regenerated using clearfell burn and sow silviculture over the last seven years, 16,697 hectares (92.6 per cent) of the program achieved the desired standard, and just 65 hectares (0.36 per cent) was reported at less than 40 per cent stocked. Such coupes are still growing trees, but at a lower than desirable stocking. There were no coupes reported at less than 10 per cent stocking.

### Regeneration success in clearfell burn and sow silviculture

Reporting year	Area (ha)	Meets stocking standard (> 65%) (ha)	Understocked (< 65%) (ha)	40 to 64% (ha)	10 to 39% (ha)
2007	2,959	2,879	80	80	0
2008	2,849	2,825	24	24	0
2009	1,289	1,213	76	58	18
2010	2,570	2,222	348	348	0
2011	2,659	2,286	373	326	47
2012	2,374	2,226	148	148	0
2013	3,337	3,046	291	291	0
<b>total</b>	<b>18,037</b>	<b>16,697</b>	<b>1,340</b>	<b>1,275</b>	<b>65</b>
As percentage of program:		92.6%	7.43%	7.06%	0.36%



# sustaining JOBS FOR CURRENT AND FUTURE GENERATIONS

## Special timbers

Special timbers are an integral part of the Tasmanian brand. They are used to produce high value furniture and craftwood products, and include blackwood, black-heart sassafras, myrtle, silver wattle and celery-top pine. With the exception of blackwood, special timbers are mostly derived from old growth forests. Our Special Timbers Strategy (forestrytas.com.au) has provided for the ongoing long-term supply of these timbers to the Tasmanian craft and design industries. However, the implementation of the Tasmanian Forests Agreement Act will require us to review our supply strategy in future years.

During 2012/13, we produced a total of 10,712 cubic metres of special timbers. This comprised 7,246 cubic metres of millable logs, with the remainder being out of specification sawlog and craftwood. The volume of millable logs produced represents 58 per cent of the annual supply targets as outlined in our Special Timbers Strategy. Blackwood made up 86 per cent of the total volume produced, with the rest comprising species such as Huon

pine, myrtle, sassafras, celery-top pine and eucalypts with attractive craft features such as burls.

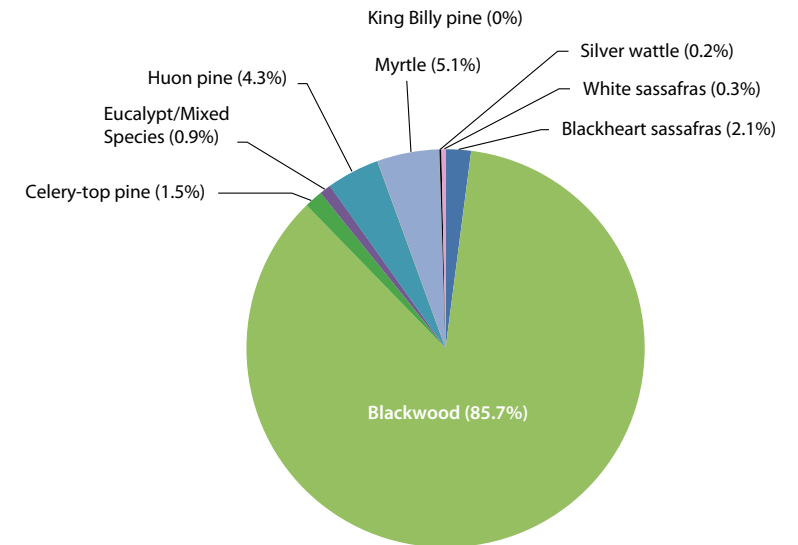
Blackwood from the north west forests constituted 90 per cent of the blackwood supply, and of this, more than half came from swamp forests. The swamp grown timber is sought after for its grain uniformity and depth of colour. These swamp forests are harvested during the drier period of the year, and although seasonal conditions for accessing the swamps were good this year, the patches of blackwood forest harvested did not yield as much high grade sawlog as in previous years. Of the swamp blackwood harvested, 55 per cent was millable timber destined for high end furniture, veneer or cabinetry.

Forestry Tasmania is the only legal supplier of the famed Huon pine timber, salvaging it from the historically cut-over Teepookana Plateau, as well as from the river banks and beaches around Macquarie Harbour after flood events. Salvage operations are confined to drier months, and this year ceased in May. Of the 460 tonnes of Huon pine salvaged, 61 per cent was sawlog grade – going into projects like old boat repairs or brand new vessels.

Whilst there has been robust demand for celery-top pine, the supply of this resource remained at just under 11 per cent of the 500 cubic metre special species strategy supply target. Harvest operations focusing on regrowth coupes for eucalypt sawlog supply currently deliver low proportions of this species.

There was limited harvesting of other areas within the Special Timbers Zone, reflecting the commitments made by Forestry Tasmania during the Tasmanian Forests Agreement process.

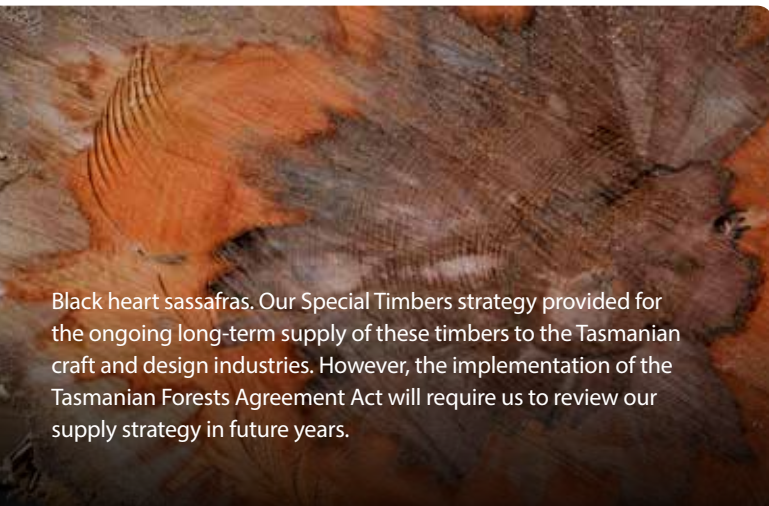
## Production of special timbers sawlogs in 2012/13



## Plantations

Forestry Tasmania's eucalypt plantations will play an increasingly important role in the future production of wood products from State forests. The majority of these plantations have been developed over the last two decades, and to date some 56,000 hectares have been planted. 74 per cent (41,000 hectares) is under full or partial Forestry Tasmania ownership, while the remaining 26 per cent, currently controlled by external parties, will return to Forestry Tasmania ownership after one pulpwood rotation, within the next five to 10 years.

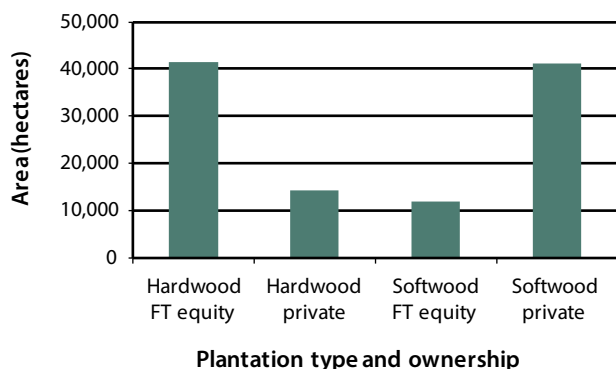
Forestry Tasmania also has a long history in softwood plantation management (*Pinus radiata*) and some 53,000 hectares have been established on State forest. Equity in



Black heart sassafras. Our Special Timbers strategy provided for the ongoing long-term supply of these timbers to the Tasmanian craft and design industries. However, the implementation of the Tasmanian Forests Agreement Act will require us to review our supply strategy in future years.

this resource has now been largely divested and the estate is owned and managed by external parties. However, approximately 12,000 hectares is still partly owned by Forestry Tasmania. Further details on plantation ownership are provided in the data tables in Appendix 2.

### Plantations area on State forest



The management objective for the eucalypt plantation estate is the sustainable supply of high value, large diameter, pruned logs for the production of solid timber and veneer products, primarily for local industry, but also for interstate and overseas markets. Secondary products include unpruned logs for sawing and peeling, pulpwood for paper, and posts and poles. There are also increasing opportunities to develop engineered wood products from plantation logs.

The two main eucalyptus species are *Eucalyptus globulus* (Tasmanian blue gum) and *E. nitens* (shining gum). Both species are fast growing and are suited to Tasmanian conditions; *E. nitens* is favoured on colder, higher elevation sites due to its frost tolerance, *E. globulus* is favoured on

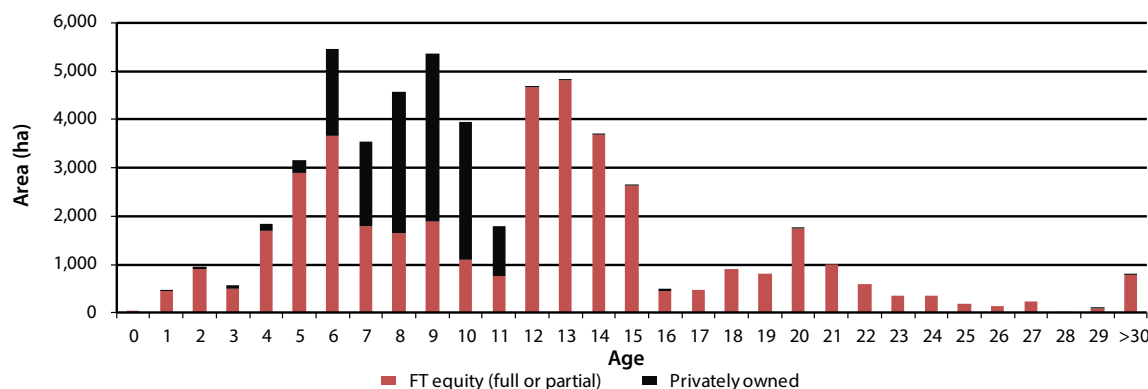
frost-free sites. The wood properties of *E. globulus* are superior to *E. nitens* in terms of pulp yield, density and strength; however, both species can suffer from internal defects (tension wood in *E. globulus* and checking in *E. nitens*), which is being managed through appropriate silviculture, processing and utilisation practices. Tree breeding will also play a long-term role in improving the quality of the wood.

Currently, 73 per cent of our plantation estate is *E. nitens*, and 21 per cent *E. globulus*, with the remaining six per cent of area being other species. The *E. globulus* planting program was significantly reduced in the 1990s following damage caused by severe episodes of *Mycosphaerella*, a leaf fungal disease. However, a review and risk analysis of the planting strategy found that over the course of a rotation, the losses due to pests and diseases such as *Mycosphaerella* are manageable. The current intention is to extend plantings of *E. globulus* more widely, with the long-term goal being to establish about 50 per cent of the plantation estate as *E. globulus*.

The production of high value, large diameter, pruned logs is achieved through intensive silviculture, particularly pruning and thinning, with planned rotation lengths of approximately 25 years. Pruning promotes the development of clear, defect-free wood (clearwood) on the pruned section of the trees and is usually undertaken in three pruning lifts, from age three years, to a height of 6.4 metres. Thinning occurs after pruning is completed and removes lower-value trees from the stand in order to reduce competition and promote growth on the retained, pruned crop trees. This increases the production and quality of the pruned logs for harvest at the end of the rotation and also provides a mid-rotation financial return from the thinned logs.

The age-class distribution of the entire hardwood resource reflects the establishment history of our plantations. Of a total of 56,000 hectares, about 30,000 hectares (54 per cent) is younger than 10 years while only 5,500 hectares (10 per cent) is older than 20 years.

### Age class distribution of eucalypt plantations on State forest



# sustaining JOBS FOR CURRENT AND FUTURE GENERATIONS

Currently, the total standing volume of the hardwood plantations under full or partial Forestry Tasmania management is approximately five million cubic metres, or about 133 cubic metres per hectare. This reflects the relatively young age of the estate with an area-weighted, average age of 14 years. A large program of production thinning is now under way in stands older than 10 years to optimise the future growth of pruned logs.

## Growth characteristics, silviculture and annual operations in the eucalypt plantation estate (full or partial FT equity)

Growth characteristics	
Standing volume <sup>1</sup>	5,000,000 m <sup>3</sup>
Average standing volume <sup>1</sup>	133 m <sup>3</sup> /ha
Area-weighted average age	14 years
Area by silviculture <sup>2</sup>	
High pruned and thinned (high quality, pruned logs)	26,180
Low pruned and thinned (unpruned logs)	1,770
Unpruned and unthinned (pulpwood production)	12,530
Thinned only	610
Plantation species	
<i>E. nitens</i>	30,160
<i>E. globulus</i>	8,750
Other hardwoods	2,460

Notes:

1. Figures based on 2012 data.
2. Includes treated and yet to be treated area.

The annual planting program on State forest has declined over the past four to five years, and in 2012/13 only 400 hectares were planted. This follows a downward trend since 2007, when approximately 2,000 hectares were established per annum and reflects the consolidation of the plantation estate with the end of native forest conversion and the small areas of second rotation sites becoming available for replanting. Second rotation establishment will increase significantly in the future as the plantation estate matures and harvesting occurs.

## Tree improvement through genetics

Our Tree Improvement Program aims to apply the best breeding techniques available to maximise the economic, environmental and social benefits from the plantation estate. This is achieved through testing, identifying and capturing genetic material that has the right balance of growth rate and wood quality.

A highlight for the year was the application of a rapid method for testing wood stiffness and fibre yield using a device that measures the speed that sound travels through a tree trunk. The technique was developed in partnership with the Cooperative Research Centre for Forestry. The device will help Forestry Tasmania improve plantation wood stiffness and fibre yield by targeting trees for breeding and seed production. Into the future, this will add greater utility and value to the plantation resource.

## Fertilising

Improving nutrition is a key means of improving the health and productivity of our plantations, because many

of Tasmania's forest soils have relatively low nutrient availability, particularly of nitrogen and phosphorus. Consistent with our aim of long-term sustainability, fertiliser use is adjusted for each stand and site, according to soil, climate, economic, operational and environmental factors. Ongoing research is investigating new fertiliser products for primary fertilising (at planting) and also ways to improve secondary fertilisation (from age two years onwards).

In 2012/13, fertilising continued to be a routine component of plantation establishment. However, due to budgetary restraints, only a limited secondary fertilising program was conducted.

## Maximising the quality of solid wood products from plantations

In line with commitments to increase the future supply of high quality sawlogs from plantations, large volumes of knot-free timber (clearwood) are required. Pruning is integral to this production. Pruning is presently undertaken in three stages, or lifts, to a height of 6.4 metres. These stages allow the trees time to rebuild leaf area (canopy) and to allow the healing over of the stem to subsequently produce knot-free timber.

Monitoring the timing of pruning, ensuring adequate numbers are pruned and assessing the quality of pruning are fundamental to maximising pruned wood volume. The quality standards system for these pruning assessments also provides valuable information about the growth of the stand. In 2012/13, we pruned 4,641 hectares of eucalypt plantations across first, second and third lifts. Of this area, 4,130 hectares, or 89 per cent, met the quality standards.



### Forestry Tasmania adopts controlled release fertilisers

Applying fertiliser to our plantation seedlings has long been recognised as essential for successful plantation establishment. Our traditional approach to establishment fertilising has been to use repeated applications of di-ammonium phosphate in the first two to three years after planting. However, recent technological developments have seen us adopt a more effective, less costly and more environmentally friendly approach. We now use a single application of controlled release fertiliser at the time of planting.

We have been testing controlled release fertiliser for several years and the results have been impressive. Controlled-release products have a polymer coating, which allows for a slow but continuous release of a full range of nutrients as the plant requires them. On a range of sites we have found that controlled release fertiliser provides for an 18 to 70 per cent improved height growth over no fertiliser, and 13 to 46 per cent over di-ammonium phosphate in the first year alone.

The benefits of changing to this type of fertiliser go beyond the growth response. The controlled release fertiliser products use 10 to 20 per cent of the standard volume of fertiliser and are applied at the same time as planting, leading to significant cost savings. This method is environmentally friendly because less fertiliser is used, resulting in less leaching and volatilisation losses compared with di-ammonium phosphate applications. The fertiliser also enables trees to out-compete neighbouring weeds and grow beyond the dangerous browsing zone more rapidly.

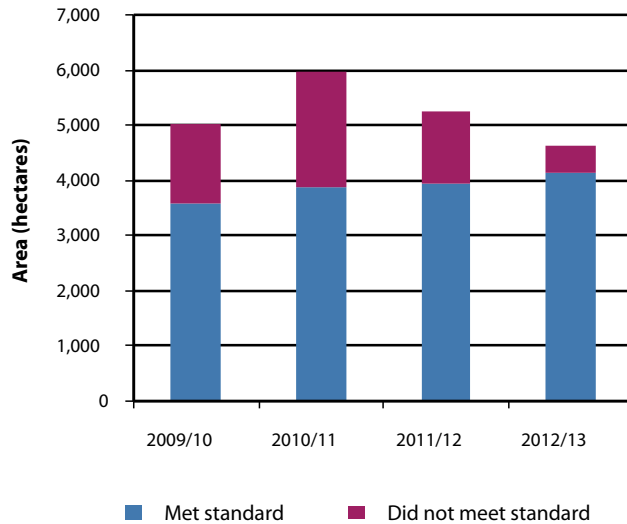
This work represents significant value, demonstrates innovation and is an example of precision silviculture. We have been able to reduce fertiliser inputs and optimise the uptake of these nutrients whilst getting improved growth benefits. We will continue to research and strive for such improvements in all of our operations.



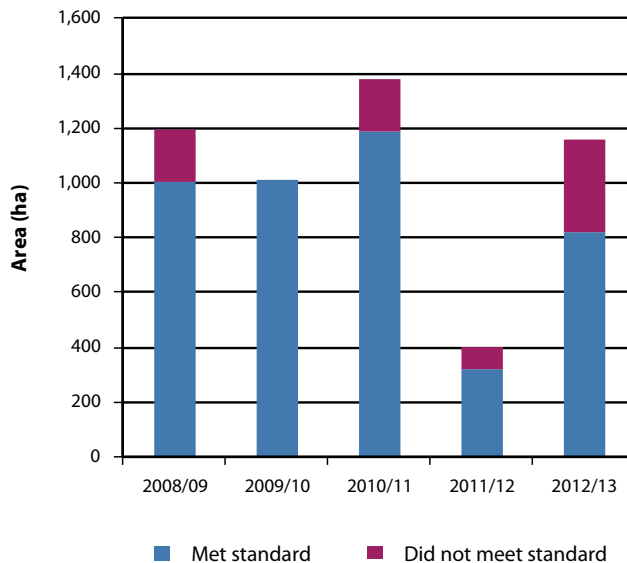
Kristen Dransfield, Research and Development Branch. Forestry Tasmania has adopted a more effective, less costly and more environmentally friendly approach to fertilising plantations, via the use of controlled release fertiliser.

# sustaining JOBS FOR CURRENT AND FUTURE GENERATIONS

**The area of eucalypt plantations 1st, 2nd and 3rd lift pruned and area that met quality standard**



**The area of eucalypt plantations commercially thinned and the area that met quality standard**



## Plantation thinning

Pruning and thinning can be used to increase the production of pruned logs from plantations and to maximise the value of plantation timber. Thinning increases individual tree growth rates by concentrating the sites' growing resources on a smaller number of trees. The number and height of pruning lifts, and the timing and intensity of thinning, can be varied in order to achieve the best outcomes on a given site.

In 2011/12 we reported difficulties in achieving our programmed thinning operations as the depressed market for pulpwood, which is the primary use of thinned plantation trees, made operations financially unviable. In 2011/12 we thinned 403 hectares of eucalypt plantation, with an area of 4,450 hectares outstanding. In 2012/13 our thinning operations have increased again with 1,159 hectares treated. Of this area, 822 hectares, or 71 per cent, met the quality standards for thinning. We are continuing to actively investigate ways to manage the plantations that are overdue for thinning, including pursuing pulpwood markets and developing early age thinning silviculture for future rotations.

## Non-wood products and services

### Land and property management

Under Section 8 of the Forestry Act, Forestry Tasmania has statutory responsibilities for exclusive management and control of all State forest and the granting of all permits, licences, forest leases and other occupation rights. Section 28 enables Forestry Tasmania, on behalf of the Crown, to grant easements over Crown land in State forest for such

purposes and upon such terms and conditions as the corporation determines.

Forestry Tasmania administers all leases, licences, easements and access agreements on State forest through a property rights database. Each district has an officer with responsibility for negotiating land and property matters.

Forestry Tasmania agrees to leases, licences and easements with commercial companies, non-commercial organisations and government entities for many purposes including telecommunications towers, weather stations, pipelines, electricity transmission lines and dams. Forest Practices Plans or State forest activity assessments are required to be completed as part of the evaluation process. There are 471 current leases, licences and easements on State forest with approximately 200 in various stages of negotiation.

Access licences are granted for many purposes including apiary, hunting, bush food collecting, tourism and access to neighbouring properties. Access licences may be exclusive or non-exclusive depending on the circumstances. Commercial operators using forestry roads, that is roads owned and operated by Forestry Tasmania, are granted access licences for use of such roads on commercial terms that cover some of the capital and operating costs of the road.

## Honey production

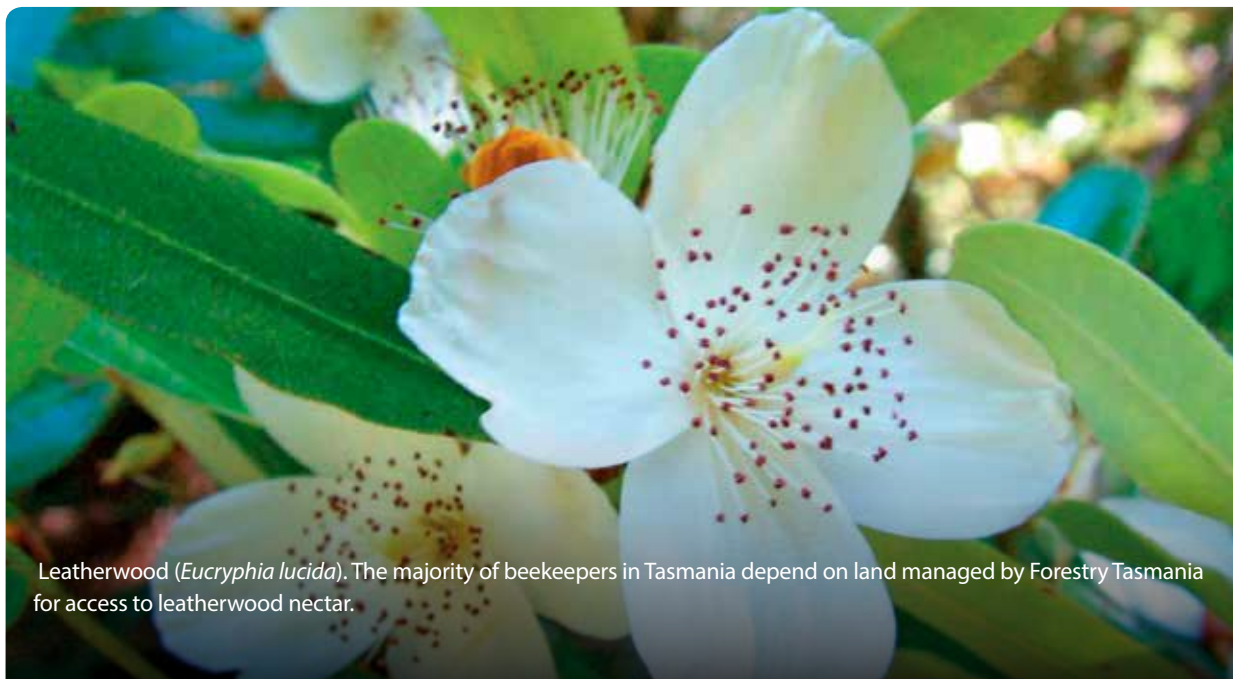
The apiary industry is regulated by the Department of Primary Industries, Parks, Water and Environment. The majority of beekeepers in Tasmania depend on land managed by Forestry Tasmania for access to leatherwood nectar, although significant sources also occur in conservation reserves managed by other agencies. Leatherwood (*Eucryphia lucida*) trees predominantly occur in mature wet eucalypt forest and rainforest. Approximately one million hectares of forest within Tasmania has been identified as likely to contain leatherwood. Of this area, 359,000 hectares (33 per cent) occurs in State forests, with about 106,000 hectares of this area being within areas zoned for wood production. There are presently 384 sites available for beekeeping on State forest. Where practical, forest management prescriptions exclude leatherwood from harvesting. Analysis conducted in 2008 showed that since 1993, less than three per cent of leatherwood-rich State forests had been harvested.<sup>1</sup> Beekeeping is flagged as a management objective for areas with a high leatherwood component under Forestry Tasmania's management decision classification zoning system, and harvesting within these special management zones takes particular account of maintaining and enhancing leatherwood sources.

Forestry Tasmania collaborates with the Tasmanian Beekeepers Association on leatherwood resource management through participation in the Murchison Leatherwood Committee and the Wedge Community Forest Agreement, and through consultation on leatherwood resource mapping in the Southern Forests.

Over the past two years, Forestry Tasmania and the Tasmanian Beekeepers Association have reached agreement on access charges to State forest for beekeeping purposes, security of tenure for site licences and access arrangements. Agreement has also been reached on separation of sites to preserve the integrity of collection zones.

State forests also provide other sources of nectar for honey production including various eucalypts, 'manuka' (*Leptospermum* spp.) and other understorey species. Forestry Tasmania also works with beekeepers to maintain the integrity of the Black Bee Reserve in the southern Central Highlands near Tarraleah.

<sup>1</sup> Leaman, Gao, and Hickey 2008. Changes to old growth forest management in Tasmanian State forests and the implications for the leatherwood nectar source: A report to the TCFA Implementation Committee.



Leatherwood (*Eucryphia lucida*). The majority of beekeepers in Tasmania depend on land managed by Forestry Tasmania for access to leatherwood nectar.



# sustaining CARBON STORES, CLEAN AIR, WATER AND HEALTHY FORESTS



The maintenance of ecosystem health and vitality is important for the long-term sustainability of the forest and relies on good management of potential threats such as fire, weeds, pests and diseases. We use an integrated approach and monitor forest health so that we can take action when required to prevent significant damage to the nature and condition of State forests. Given the important role forests play in offsetting carbon dioxide emissions, we manage State forests to ensure they continue to act as a long-term carbon store while providing a sustainable source of wood products. These wood products not only store carbon, as half the dry weight of wood is carbon, but they provide society with a low-emission building and energy resource. For example, metals, concrete and plastic require much more energy to produce for the construction of buildings than wood. Replacing these materials with wood reduces greenhouse gas emissions.

## Carbon and climate change

### Our carbon dioxide emissions

The main energy inputs used by Forestry Tasmania are fuel (unleaded petrol and diesel), mainly for the purpose of transport of staff and equipment, and electricity used to power our offices and workshops. The estimated fossil fuel derived greenhouse gases emitted in carbon dioxide equivalent amount to 2.6 kilotonnes per year. This does not include energy use by our contractors. This is a 13 per cent reduction compared with last year's emissions. The reduction can be attributed to a reduced vehicle fleet, an 11 per cent reduction in electricity consumption and an increased proportion of green energy supplied to the Tasmanian electricity grid.

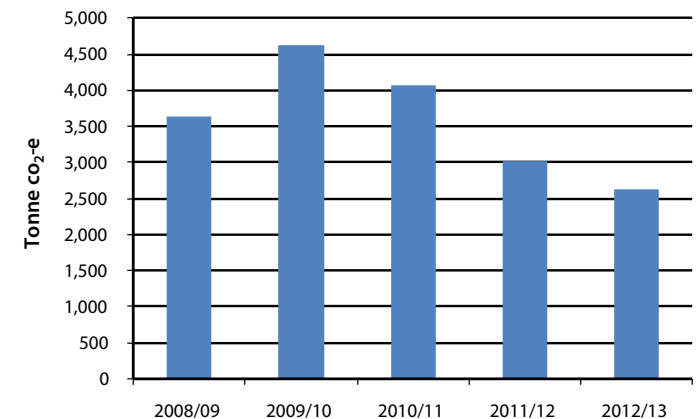
### Summary of energy usage and resulting CO<sub>2</sub>-equivalent emissions as a result of fuel used for transport and electricity usage within our offices

Input	Usage	CO <sub>2</sub> -e <sup>1</sup>
Unleaded	110,772 litres	263,673
Diesel	755,421 litres	2,038,232
Oil	8,486 litres	24,782
Electricity	1,496,379 kilowatt hours	299,276
<b>Total</b>		<b>2,625,963</b>

Notes:

1. Calculated with Australian Government Department of Climate Change, 2013. National Greenhouse Accounts Factors, [www.climatechange.gov.au](http://www.climatechange.gov.au)

### Annual amount of fossil fuel derived CO<sub>2</sub>-equivalents produced from fuel and electricity usage



Although estimates are easy to generate, and we have done this previously, it is very difficult to accurately measure our contribution to carbon dioxide emissions from our burning program. This is because the amount generated by each burn depends on factors such as forest type, residual fuel loads, recent weather, local topographic conditions and burn intensity. However, at the estate level, carbon sequestered through our growing forests outweighs carbon lost during the harvesting and regeneration process<sup>2</sup>.

### Air quality

Planned burning is undertaken in State forests by Forestry Tasmania each autumn. Burning is dispersed and only a limited number of forest industry burning operations occur on any one day. In wet eucalypt forests this burning is important to create a seedbed for regeneration. The seeds of the eucalypt species found in this forest type need an ash and mineral soil seedbed, abundant sunlight and reduced competition from other plants to establish and grow. In the more open, drier forest types of the highlands and eastern Tasmania, burning is important to reduce the fuel load arising from residues remaining after harvesting.

In addition, other landowners undertake autumn burning for agricultural and fuel management purposes.

Smoke is an inevitable product of this burning. The fine particles that make up smoke have an irritant effect and, like any such fine particle, are capable of lodging in the lungs if inhaled. For this reason, Forestry Tasmania attempts to minimise the effects of its burning on the Tasmanian community.

<sup>2</sup> MBAC (2007). Forestry Tasmania's carbon sequestration position. MBAC Consulting Group, Melbourne.

### Investigating biomass potential in Tasmania

Forestry Tasmania has consistently promoted the concept of using forest residues for electricity production. Biomass energy has the potential to displace fossil fuels that would otherwise be burned to generate electricity. The practice is commonplace in European countries, with the energy produced being classified as renewable. In contrast, current Australian Federal legislation means that electricity generated from native forests does not qualify as renewable energy.

This year we hosted Professor Andreas Rothe from the University of Applied Sciences, Weihenstephan, in Germany. He spent six months researching and compiling a report on the current and potential use of forest biomass energy in Tasmania and comparing it with his home state of Bavaria. He estimated that approximately 3.3 million tonnes of biomass could be sourced for bioenergy from sustainable forestry in Tasmania. He advocated sourcing the wood primarily from private land, with the majority coming from plantations and the remainder from native forest regrowth.

Professor Rothe indicated that with appropriate policy settings Tasmania could achieve a goal of sourcing all of its energy from renewable sources in the future, with at least 30 per cent coming from biomass. He advocated smaller scale, localised plants distributed across the State. Similar infrastructure in Bavaria, where 700 such plants exist, has considerable local employment benefits.

The report Professor Rothe produced will play a key role in future debates about biomass energy in this country.

Read Professor Rothe's full report:

[www.forestrytas.com.au/uploads/File/pdf/pdf2013/biomass\\_report\\_rothe\\_170713.pdf](http://www.forestrytas.com.au/uploads/File/pdf/pdf2013/biomass_report_rothe_170713.pdf)



Professor Andreas Rothe, University of Applied Sciences, Weihenstephan, Germany. Professor Rothe's research indicates that, with appropriate policy settings, Tasmania could achieve a goal of sourcing all of its energy from renewable sources in the future, with at least 30 per cent coming from biomass.



# *sustaining* CARBON STORES, CLEAN AIR, WATER AND HEALTHY FORESTS



Carbon flux tower, Warra Long Term Ecological Research site, southern Tasmania. The 80-metre high tower will significantly increase Warra's standing as one of Australia's premier long-term ecological research locations.

Forestry Tasmania, other forest industry companies and the Parks and Wildlife Service coordinate their autumn burning through their participation in the Coordinated Smoke Management Strategy, a Forest Practices Authority initiative. Every morning during autumn the Forest Practices Authority sets maximum smoke load limits for Tasmania's airsheds, and Coordinated Smoke Management Strategy participants manage their smoke production by burning within the allocation. In addition, Forestry Tasmania aims to burn only in areas for which forecast weather conditions indicate the smoke will be dispersed away from settled areas. At present, the Coordinated Smoke Management Strategy only applies to burns carried out by the forest industry and Parks and Wildlife Service, so many other burns go unrecorded.

Practices previously implemented and continued during the 2013 burning season included the following:

- Days on which poor smoke dispersion was likely were again declared 'no burn days'.
- Daily advisories were issued at or before 11:00 am on the morning of planned burns.
- An appraisal of smoke management outcomes was issued each night. These included, when necessary, an explanation of factors that contributed to any unexpected outcomes.
- Notifications were issued to media so as to alert residents when we had reason to believe a regeneration burn may have contributed to poor air quality.

For more information about our planned burns communications strategy, see the 'Sustaining Community Access, Safety and Heritage' chapter of this report.

## **Warra carbon flux tower**

2012/13 saw the installation and commissioning of a carbon flux tower at the Warra research site in the southern forests. The 80-metre high tower will significantly increase Warra's standing as one of Australia's premier long-term ecological research locations. The Australian Government, through the Terrestrial Ecosystem Research Network, funds the tower, and it is the fourteenth established in Australia. It is the second tallest and southernmost tower of its type in the world.

The tower will be vital in contributing to understanding how forests respond to climate. In simple terms, the tower 'takes the pulse' of the forest, providing information on how it is functioning and how it responds to extreme events such as significant rainfall, drought and heatwaves. It does this by providing real-time measurements of exchanges of carbon dioxide, water and energy between the surrounding forest and the atmosphere.

We aim to use the tower to attract external research to the Warra site and, therefore, further develop our understanding of forest ecology. Even before the tower was erected, the prospect of the tower's eventual establishment attracted interest, with the site already being used in a doctoral study of soil methane fluxes.



We also continued to provide information on the Tasmanian forest industry planned burns website ([plannedburnstas.com.au](http://plannedburnstas.com.au)) and on Forestry Tasmania's own website to ensure that the community had access to information about the location of planned burns.

### Air quality monitoring

Forestry Tasmania has two sets of air quality monitoring stations at its disposal to monitor the impact of its planned burning activities on the community. The Environment Protection Authority Division of the Department of Primary Industries, Parks, Water and Environment manages these stations. They provide us with the ability to both plan our burns for minimal impact and to identify if we have exceeded national air quality guidelines.

The primary tool we use is the publicly available Base Line Air Network Tasmania (BLANKET) network of air quality monitoring stations. This network supplies near real-time particle concentration data, thus allowing us to monitor the amount of smoke or dust in the atmosphere near each station. The measurement equipment used at these sites

means that the data provided is only indicative of air quality, but it nevertheless provides a valuable tool to monitor the spatial extent of smoke events produced by planned burns, domestic firewood consumption or wildfires.

Forestry Tasmania uses the network to monitor and estimate the extent of any degradation of air quality arising from all forms of prescribed burning. This information strongly influences the scheduling process for the remaining burn program.

The Environment Protection Authority identified 90 indicative exceedances of the national air quality standard at the BLANKET sites across the duration of our prescribed burning program. We reviewed these events in relation to the timing of all our burns. We found that we could not attribute any of the exceedances wholly to our burning program, but acknowledge that we probably contributed to two exceedances detected at the Geeveston monitoring station. A further network of 'reference' air monitoring stations is located at Hobart, Launceston, Devonport and George Town. These sites provide precise data that

can be used to accurately assess whether an exceedance of the national air quality standard has occurred. The disadvantage of these sites is that they do not produce real-time data and require resources to analyse their data. At the time of publishing this report, the Environment Protection Authority was unable to provide us with the exceedance data from these sites for this burn season. In previous years, our burn planning has generally resulted in few attributable exceedances.

The Environment Protection Authority is also responsible for recording and investigating all smoke - related complaints for the State. Forestry Tasmania therefore forwards all smoke related complaints that it receives to the Environment Protection Authority for compilation. In the 2012/13, the Environment Protection Authority received 21 complaints, which is significantly lower than the 83 complaints received in 2011/12. It determined that 11 (52 per cent) of the complaints were related to our activities, compared with 42 (48 per cent) the previous year.

For more information on air quality monitoring in Tasmania, visit [epa.tas.gov.au](http://epa.tas.gov.au)

### Air quality particulate monitoring stations summary

Station type	2008/09		2009/10		2010/11		2011/12		2012/13	
	Exceeded	FT Contributed	Exceeded	FT Contributed	Exceeded	FT Contributed	Exceeded	FT Contributed	Exceeded	FT Contributed
Reference station	3	0	21	3	14	0	1	0	Not available <sup>1</sup>	Not available <sup>1</sup>
Real-time indicative monitoring stations <sup>2,3</sup>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	90 <sup>4</sup>	2

Note: This table provides a summary of PM2.5 & PM10 exceedances recorded by the EPA each year.

- Reference station data was not analysed by EPA at time of publication.
- Analysis of real-time monitoring exceedances began in 2012/13.
- Exceedance data is indicative only due to measuring technique employed at station.
- Data from between 15th March and 11th June, 2013 only.

# sustaining CARBON STORES, CLEAN AIR, WATER AND HEALTHY FORESTS

## Water, soils and geodiversity

### Water quality

Streams in State forests provide quality habitat for native species, water that needs minimal treatment for domestic and agricultural use, and recreational opportunities such as fishing, canoeing and swimming. Water quality in Tasmania's State forests is generally excellent, partly because of the range of strategies that Forestry Tasmania use to minimise the impacts on water quality of activities such as pesticide use, harvesting and road construction.

In order to minimise the risk of chemical contamination from any of our pesticide operations, we use the Pesticide Impact Rating Index computer software package, which has been tailored for forestry usage. The Pesticide Impact Rating Index determines the risk of various pesticide operations based on mobility, toxicity to indicator plants, invertebrate, fish and mammal species, and site-specific variables such as soil type and landscape. It can also assess the risk of pesticide operations to human health through comparison with the Australian Drinking Water Guidelines. It combines this data with site-specific information to produce a risk assessment of the potential for pesticides to move off site, and their potential to affect aquatic organisms. The use of the Pesticide Impact Rating Index has reduced the risk of pesticide contamination of streams by enabling the identification of the safest but most effective pesticides to use for control of weeds, insect pests or fungal disease. In 2012/13, 97 per cent of the operations we classified using the Pesticide Impact Rating Index were rated as low to very low risk.

We also conduct a water quality monitoring program at sites where there may be a risk to water quality associated with chemical use. The Pesticide Impact Rating Index provides our staff with a scientific means of identifying those sites, allowing our water monitoring resources to be effectively targeted. In 2012/13, we submitted water samples from 18 operations for independent analysis. These samples include a pre and post spray sample as well as a sample taken after the first significant rain event that occurred after the operation was completed. None of the samples we submitted contained any detectable levels of chemicals.

### Soil and geomorphology

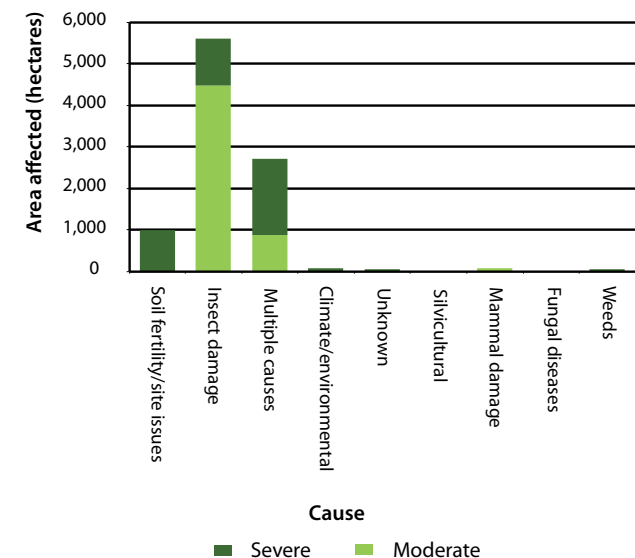
In preparing a Forest Practices Plan, soil and geomorphology values are among the total set of site environmental values that we need to consider under the forest practices system. The Forest Practices Code guides the planning and conduct of forest operations under specific soil and geomorphological conditions, to ensure that we minimise soil damage such as compaction and erosion. In addition to applying these sound operational prescriptions and practices, some areas require special management, or even total protection, due to their sensitivity to disturbance. As at the end of 2012/13, our management decision classification system recorded a total of 4,391 hectares as having been declared unavailable for harvesting due to the risk of erosion, with a total of 170,401 hectares managed for soil and geoconservation values.

## Weeds, pests and diseases

### Forest health surveillance

Forest health surveillance is conducted annually with the aim of detecting new or emerging health problems and facilitating the management of pests and diseases in plantations on State forest. Roadside and ground surveys cover approximately 38,000 hectares of hardwood plantation. Two additional pest-specific management programs are carried out: one for browsing mammals and the other for chrysomelid leaf beetles (*Paropsisterna* spp).

### The main health problems causing moderate or severe damage in established eucalypt plantations in State forests



This year saw further changes to integrated pest management for leaf beetles. Targeted, risk-based monitoring was further implemented, which meant monitoring was greatly reduced or excluded from low-risk areas of the State, such as the far north west and far south. Furthermore, the population threshold for spray operations was dropped significantly in areas developing severe chronically thin crowns, in an effort to protect trees from further damage and provide the best chance of crown recovery. There was evidence of recovery in a proportion of these plantations. The area reported to be suffering from severely poor crown density due to interplay of causes (including past fungal defoliation by *Kirramyces* and *Mycosphaerella*, cold, exposure, wind and leaf beetle defoliation) dropped from 3,728 hectares in 2011/12 to 1,844 hectares this year.

In contrast to 2011/12, which saw low leaf beetle populations across the State, this year saw extreme levels of beetle activity in the north east. This resulted in the greatest area of defoliation seen for many years, with significant damage from leaf beetle feeding recorded across over 5,000 hectares. About 80 per cent of this damage was in the moderate category (25-50 per cent leaf area loss). Given the level of leaf beetle activity, as well as the more targeted monitoring program, it was not unusual that a much greater percentage of the monitored area was recorded as being 'over threshold' this year compared to the previous summer. Consequently, there was also an increase in the area across which control operations were conducted – up to 4,741 hectares this year from 2,533 hectares in 2011/12.

These control operations are likely to have ameliorated damage levels, keeping them in the 'moderate' category rather than allowing them to progress to 'severe', in which dramatic effects on growth are known to occur.

The outstanding feature of the large leaf beetle populations this year was that they were dominated by the recently described species *Paropsisterna selmani* rather than the historically important *Paropsisterna bimaculata*. Little is known about the life history of this beetle, although recent observations suggest it emerges from over-wintering earlier and may have faster larval development than *P. bimaculata*. Adult beetles caused significant damage from late October, removing a large proportion of new foliage. Few larvae were apparent until late November, but in early to mid-December there appeared to be a rapid explosion of the larval population, which caused problems for the monitoring and control program. It is currently unknown whether this species represents a significant, emerging pest species or whether unusual weather events triggered the observed population response. Research planned for spring 2013 aims to reveal more about the life cycle and behaviour of *P. selmani*.

#### **Use of pesticides**

For the purpose of weed control and insect pest management, we applied a total of 2,038 kilograms of active ingredient to 5,270 hectares in 2012/13. This represents an increase of 229 kilograms compared to the amount applied in 2011/12. At the Forest Nursery at Perth, a total of 56.7 kilograms of active ingredient was applied for the purpose of controlling weeds, pests and fungi.

#### **Fuel and chemical spills**

We have set procedures in place for managing fuel and chemical spills. We record all accidental spills of fuels or chemicals in our corrective action request system and manage them to ensure that the potential adverse environmental effects are minimised. We notify the Department of Primary Industries, Parks, Water and the Environment of spills greater than 20 litres.

We had two minor hydrocarbon spills this year. A 10-litre spill of oil occurred on a coupe when a contractor was servicing an excavator and a five-litre spill of diesel fuel occurred in the Geeveston Depot when a fuel sled ruptured. In both cases, the contaminated soil was removed from the site.

No chemical spills or overspray events were recorded.



# sustaining CARBON STORES, CLEAN AIR, WATER AND HEALTHY FORESTS

## Fire management

As a land manager, Forestry Tasmania is obliged to control and extinguish unplanned bushfires that occur on State forest. There are many causes of bushfires, including lightning, arson and carelessness. Lightning causes only a small proportion of the fires recorded as occurring on State forest, with the majority being caused by people. Bushfires are highly variable in terms of the area burnt, fire intensity and event duration, all of which depend on the interaction of weather conditions, topography, fuel load, type and arrangement.

Controlled fire is a valuable tool used by Forestry Tasmania at high intensity to create an ash seedbed to facilitate the germination of eucalypt seed in wet forest types, and at lower intensity to manage fuel loads and arrangement in drier forest types, buttongrass moorland and heathlands. Such burning is intensively planned and conducted in accordance with long-established prescriptions developed from operationally based research.

The 'bushfire season' may run from October to April. As the bushfire season winds down, the silvicultural burning program ramps up to its peak in March/April.

We organise our fire management activities following PPRR principles, that is, Preparedness, Prevention, Response and Recovery.

**Preparedness** includes the preparation of fire management and fire action plans, the training of staff, the development and purchase of equipment, the construction and maintenance of fire trails, fuel breaks and reliable water storages, weekend standby arrangements for staff during

the fire season and the development of close working relationships with other fire and land managers, particularly the Tasmania Fire Service and the Parks and Wildlife Service.

**Prevention** includes the Forestry Tasmania fire lookout and detection flight system, by far the largest and best integrated in the State, ground patrols in areas of frequent fire occurrence, and prescribed burning to reduce fuel loads at both local and landscape scales.

**Response** is the reaction to fire reports, investigation, assessment and suppression activity. In this Forestry Tasmania is assisted and supported by our partners in the Inter-agency Fire Management Protocol: the Tasmania Fire Service and the Parks and Wildlife Service.

**Recovery** encompasses the multitude of post-fire rehabilitation tasks and the after-action review. The lessons learnt and conclusions drawn from these reviews feed back into Preparedness activities.

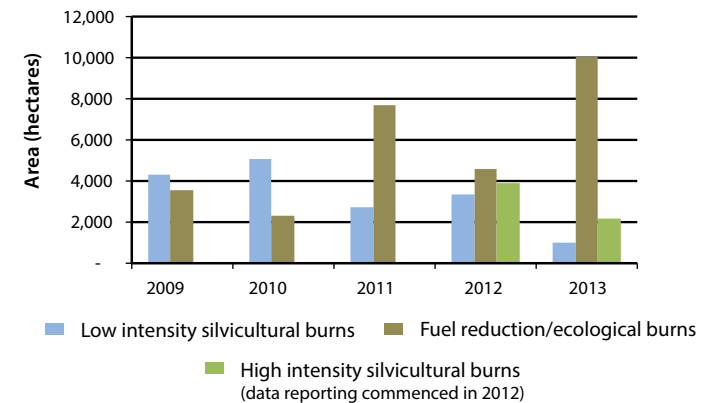
The 2012/13 fire season was hot and dry and marked by forest fire danger ratings ranging from Very High to Catastrophic. Average summer temperatures were the highest ever recorded, and the peak of 41.8 degrees in Hobart on 4 January was the hottest day ever recorded in the city. The box to the right describes Forestry Tasmania's firefighting efforts over the summer period.

## Planned burning

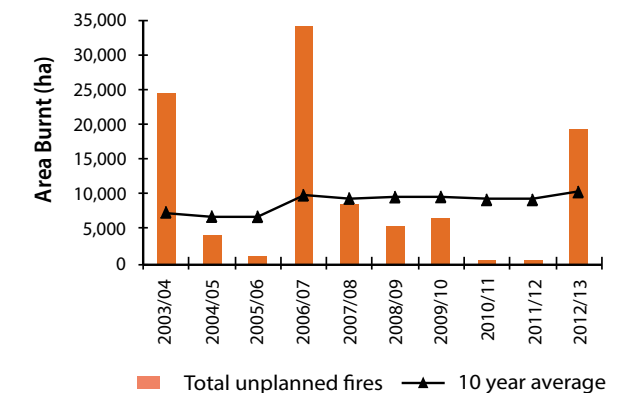
Due to the dry summer there was a delayed start to the burning program. Nevertheless, 137 planned burns were completed, covering 13,270 hectares. This figure is made up of both high and low intensity silvicultural burns

as well as strategically located fuel reduction burns. As discussed in the air quality section, very few of these burns caused any significant air quality issues. Broad-area fuel reduction burns are burns that are strategically planned to protect nearby assets, or for ecological purposes such as coastal heath or buttongrass management. In 2012/13, Forestry Tasmania undertook fuel reduction burning on over 10,000 hectares of State forest.

## Burns conducted on State forest



## Area burnt on State forest by unplanned fires



#### 40,000 hours on the fire front

For Forestry Tasmania, some very strong positives emerged from the demanding challenges presented in the State's 'Summer of Flames'.

While battling to maintain firefighting and equipment capacity in the face of the significant forest industry downturn, Forestry Tasmania's more than held its own in the busiest fire season for 30 years.

Forestry Tasmania's fire season commenced on 10 October 2012 and continued until 31 March 2013. There were 74 fires fought on a multi-agency basis, which were fewer than in previous years; however, the area burnt – more than 110,000 hectares – was the most extensive in 30 years.

The most significant outcome was that despite significant property damage from the firestorms that occurred on 4 January, there was no loss of life, which demonstrated the effectiveness of the operational priorities of the Tasmania Fire Service and the multi-agency preparation and collaboration, particularly at the height of the threat. However, there is a risk that this overwhelmingly positive outcome may lead to a level of community complacency, which could only add to future risk.

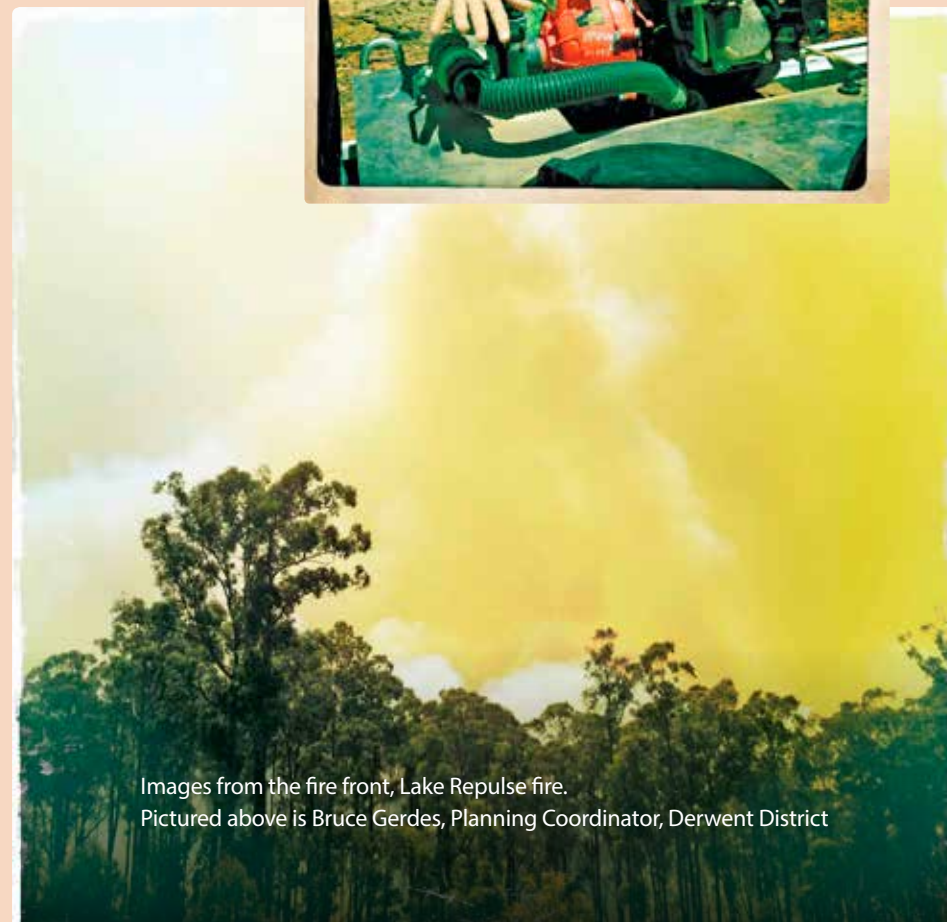
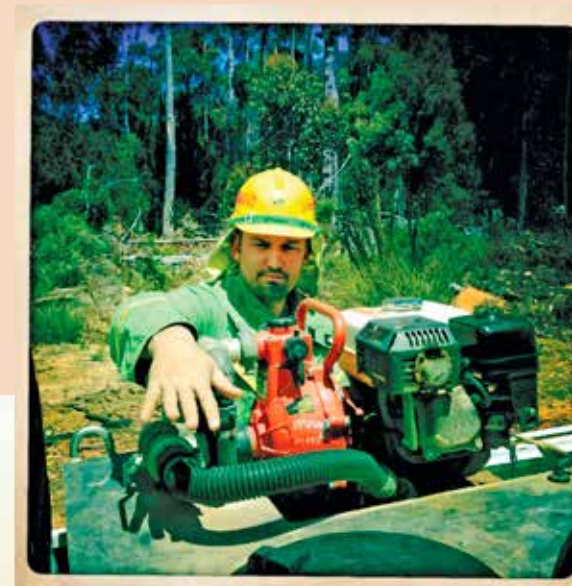
What also stood out was the magnitude of our efforts, with our calculations indicating an incredible 40,000 Forestry Tasmania's hours dedicated to the job of fighting fires.

Forestry Tasmania's contribution to the fire season included:

- Around 31,000 hours of firefighting – as crew and strike team leaders, heavy tanker drivers and tree fallers
- More than 5,000 hours worked in incident management teams – as controllers and in planning roles such as mapping, resourcing and fire behaviour prediction
- The provision of about 3,000 hours of divisional or sector command
- Over 700 hours of managing air operations
- More than 350 hours of aerial fire mapping, including night vision work

In all, 55 unplanned fires burnt approximately 19,127 hectares of State forest during the 2012/13 season. The area burnt in 2012/13 was 185 per cent of the 10-year rolling average on State forest, which amounts to 10,351 hectares. Fire suppression activities during the 2012/13 season cost Forestry Tasmania \$5.1 million.

One of the lowlights of the campaign was the death of experienced Victorian firefighter Peter Cramer from natural causes while deployed to the Forcett fire. Forestry Tasmania's condolences were extended the family.



Images from the fire front, Lake Repulse fire.  
Pictured above is Bruce Gerdes, Planning Coordinator, Derwent District



# *sustaining* SAFETY, COMMUNITY ACCESS AND HERITAGE



Forestry Tasmania supported a number of community events in 2012/13. Pictured is Ruiping Gao, Sustainability Branch, at the 2013 Mother's Day Classic in Hobart.

The Tasmanian Forests Agreement conferred significant changes on Forestry Tasmania, not least of which was the designation of 'future reserve land', which, along with most existing forest reserves, will be transferred to the management of the Parks and Wildlife Service in a number of tranches. These transfers will include all of Forestry Tasmania's tourism properties, except for the Tahune AirWalk and Hollybank Treetops Adventure, as well as many sites that it formerly managed for free-of-charge recreation.

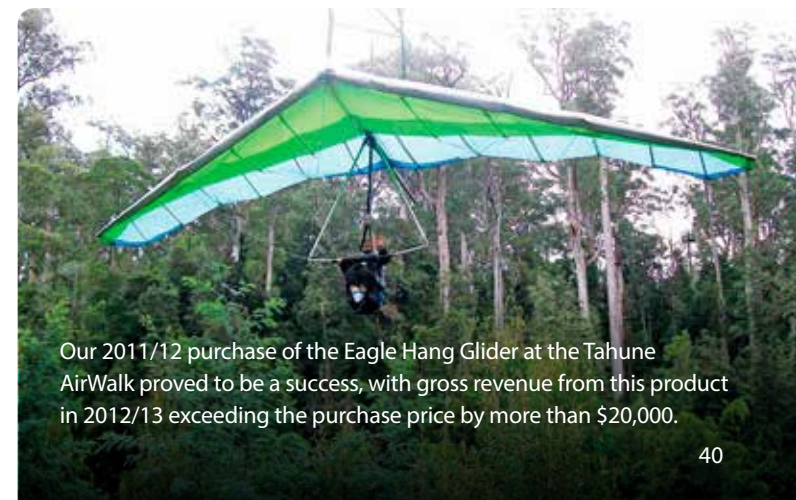
Nevertheless, in 2012/13, Forestry Tasmania continued to deliver its non-commercial activities as required by the Forestry Act, albeit in a financially constrained manner. The 2012 State Budget provided \$110 million in contingency funding for Forestry Tasmania, a significant portion of which was allocated in the 2012/13 financial year to cover non-commercial costs such as repairs to the Wielangta Road and Coolangatta Road on Bruny Island.

## **Adventure Forests**

In 2012/13, Forestry Tasmania continued to market four properties under the Adventure Forests brand: the Tahune AirWalk and Eagles Eyrie, which it wholly owns; Tarkine Forest Adventures, which it leased to a family business, GMG Pty Ltd; and Hollybank Treetops Adventure, which is a joint venture between Forestry Tasmania and Australian Zipline Canopy Tours. Additionally, we have operated the Forest and Heritage Centre in Geeveston as a Community Service Obligation since the State Government transferred management to us in 2010.

The year saw the implementation of new marketing strategies focused on raising customer awareness about product at the individual properties. Accordingly, we developed and launched a new website, [tahuneairwalk.com.au](http://tahuneairwalk.com.au), and undertook a range of social media marketing activities, which included promoting the release into the wild, from the AirWalk cantilever, of a rehabilitated wedge-tailed eagle by the Raptor Refuge of Tasmania. We also marketed product in conjunction with other operators and were heavily involved in Tourism Tasmania's Visiting Journalist Program.

Our main marketing focus was on increasing visitation from Asian markets, especially from China and Hong Kong. In 2012/13, our marketing activities yielded an 80 per cent increase in visitation in this sector. Recognising that local visitors were less than 15 per cent of the Tahune AirWalk market, we also undertook radio advertising aimed at appealing to this market. Total visitation at the AirWalk increased by 15 per cent compared to last financial year.



Our 2011/12 purchase of the Eagle Hang Glider at the Tahune AirWalk proved to be a success, with gross revenue from this product in 2012/13 exceeding the purchase price by more than \$20,000.



In the 2011/12 financial year, we had purchased the Eagle Hang Glider at the Tahune AirWalk, which previously had been operated by a private business. This move proved to be a success, with gross revenue from this product in 2012/13 exceeding the purchase price by more than \$20,000. We also implemented a number of operational improvements, including new point-of-sale procedures that provide a more accurate measurement of our actual market segments.

### Forest education

Forestry Tasmanian continued its sponsorship of the Forest Education Foundation, which operates the National Forest Learning Centre in our Head Office in Hobart. The centre continued to be a focus for school groups.

We also continued working in partnership with the Forest Education Foundation on our Head Office open days, which run during the school holidays and deliver a range of informative activities about forest management.

### Health and safety

Forestry Tasmania achieved outstanding results in safety and workers compensation during 2012/13, with all nine performance measures for staff being met. For many of the performance indicators, the results were the best on record.

We sustained three lost time injuries during the financial year, but nevertheless saw a record low lost time injury frequency rate of 4.46.

A key focus during the year was our preparation for the commencement of the new Work Health and Safety Act,

enacted in Tasmania as part of the national harmonisation of health and safety law. Forestry Tasmania has been progressively reviewing aspects of its safety management policies and procedures in line with changes to the Act.

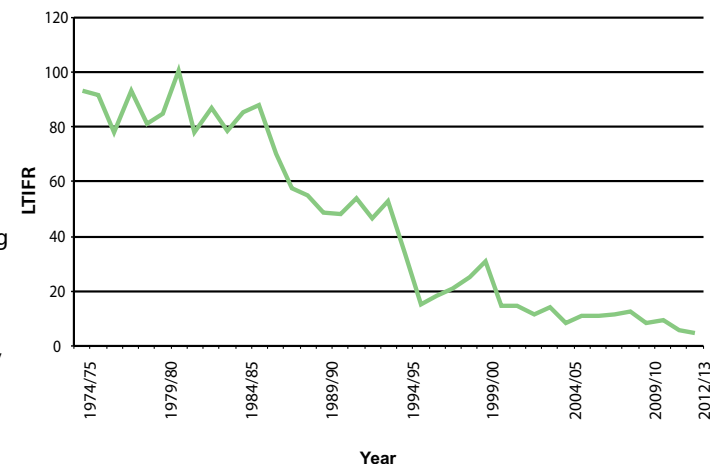
Forestry Tasmania continues to promote a positive approach to safety, which focuses individual workers' attention on staying safe at work. In 2012, the organisation participated in a safety culture survey, as part of an ongoing commitment to the Safety Circle® program. The research found that of the six organisations surveyed, Forestry Tasmania had by far the highest and most consistent safety cultural strengths.

This was considered to reinforce the capacity of the organisation to maintain a focus on safety despite the present challenges being faced.

The organisation also committed to a new health and wellbeing program in 2013, starting with 90-minute information sessions delivered to staff. The sessions demonstrated that addressing the basics such as food, sleep, hydration and exercise can have beneficial outcomes for good health, both physically and mentally. This program will be extended in 2013/14, with employees being offered individual health assessments and exercise programs, together with some corporate health challenges.

Forestry Tasmania's certification to Australian and New Zealand Standard 4801: Occupational Health & Safety Management Systems remains in place following the required surveillance audits.

**Our long-term safety performance as measured using the lost time injury frequency rate (LTIFR)**



After a strong safety performance last year, our harvesting contractors had six lost time injuries in 2012/13. To assist contractors in addressing the contributing factors to these types of incidents, Forestry Tasmania will continue to provide a program of education and mentoring, as well as regular safety management system and site audits.

### Workers' compensation

Forestry Tasmania received a record low number of 15 workers' compensation claims during 2012/13. Fortunately, many of the injuries were less serious in nature, resulting in the cost of new claims being over 60 per cent below our performance measure.

# *sustaining* SAFETY, COMMUNITY ACCESS AND HERITAGE

The number of lost time injuries also continued on a downward trend, constituting 20 per cent of all claims received. The average number of days lost was fewer than five, with all claimants back at full duties within a week.

Forestry Tasmania reviewed and updated its Injury Management Program during the first half of 2013. WorkCover Tasmania subsequently approved the program.

## **Aboriginal and historic cultural heritage**

We undertake archaeological surveys as part of our pre-harvest assessment of special values. These surveys may detect new sites or re-detect old sites that were found by us in the past and mentioned in historical records, but which had no contemporary map reference. Once we find archaeological sites, we assess and protect them as necessary. These sites may include former mines, tramways, huts, artefact scatters, boilers and old mill sites.

This year, we surveyed 404 hectares for non-Aboriginal heritage and found 20 new sites. These included timber tramways, huts, water races and locations of early prospecting implements.

We also found one new Aboriginal cultural heritage site as a result of surveys conducted over an area of 23 hectares.

## **Community engagement**

During 2012/13, the Board of Forestry Tasmania identified stakeholder engagement as a key area in which significant improvements needed to be made in order to bring the organisation in line with community expectations and

current professional best practice. Forestry Tasmania has recognised that deeper change to its community engagement practices is essential if it is to achieve a respectful and meaningful dialogue with stakeholders.

In the coming year, Forestry Tasmania will be producing and implementing a stakeholder engagement strategy, along with the organisational systems needed to support its implementation. Once implemented, active stakeholder engagement will be a key part of Forestry Tasmania's routine business.

## **Communications during regeneration burning season**

Through our Fire Management Branch, in 2012/13 Forestry Tasmania again implemented a pro-active communications strategy to inform the community about the regeneration burning program. Our outreach activities followed a similar format to previous years, and included:

- a total of 68 media advisories in the mornings and evenings of planned burns;
- information flyers in the daily and regional newspapers; and
- a media conference at the beginning of the planned burn season.

It should be noted that Forestry Tasmania is just one of many land managers that carries out planned burns during the autumn. We continue to hope that other forestry companies and the private landowners who carry out planned burns will make a similar effort to inform the community about their activities.

## **Helping Dunalley rebuild**

Forestry Tasmania played a major part in the effort to fight the bushfires that affected the Dunalley region over the summer. We also did our best to support the local community in the aftermath of the fires.

With the onset of winter, the additional stress of having to find sources of heating would have placed an extra burden on many families who had already suffered significant losses and trauma. To relieve some of this stress, Forestry Tasmania teamed up with other forest industry groups and St Vincent de Paul to organise the supply, cutting, splitting and delivery of firewood to families affected by the wildfires.

The operation took place over a weekend in May. Forestry Tasmania's contribution was the provision of more than 300 tonnes of dry wood. Many Forestry Tasmania staff members also volunteered their own time to assist the operation.



Forestry Tasmania teamed up with other forest industry groups and St Vincent de Paul to organise the supply, cutting, splitting and delivery of firewood to Dunalley families affected by the wildfires.

## Right to Information

The *Right to Information Act 2009* places a significant emphasis on the pro-active disclosure of information without the need for stakeholders to make formal applications. In response to formal requests, it also provides for active disclosure, which is the voluntary release of information, and for an enforceable right to information under assessed disclosure if some of the information sought is exempt under the Act.

In 2011/12, Forestry Tasmania continued to pro-actively release information via our website and to the media. Forest Practices Plans remained available for purchase via our online shop.

During the year, we also received six applications for assessed disclosure, which was a decrease on the previous year's total of 16. In accordance with our internal policy, all finalised applications for assessed disclosure, with the exception of those relating to personal information, were uploaded to our website.

## Branchline

Our e-newsletter, *Branchline*, was again issued to stakeholders in Tasmania, mainland Australia and overseas. It was published on a flexible schedule, in response to emerging issues and to keep stakeholders informed about upcoming events such as forestry talks and open days. We produced 10 issues of *Branchline* in 2012/13, compared with 24 the previous year.

## Going Bush

The *Going Bush* television series was once again produced as a national program, with participation by Wood Solutions, Neville Smith Forest Products, Private Forestry

Service Queensland, VicForests, Forests NSW, the Victorian Association of Forest Industries, Hurford Hardwood, as well as Forestry Tasmania.

More than 127,000 Tasmanians saw the five episodes of the series on the Southern Cross Network – an increase of almost 16,000 or more than 14 per cent on the previous series. Nationally, access for the first time to the metropolitan market through 7Two lifted the total audience by 70 per cent, to more than 600,000.

## Community Assist Program

The 2012/13 financial year was the last in which the Community Assist Program operated, following the decision to cease the program due to financial constraints.

The program operated as a partnership between Forestry Tasmania and Southern Cross Television and provided funding for organisations involved in not-for-profit community projects. This year's program focused on donating the skills of Forestry Tasmania's staff to the community. Nine separate projects were undertaken around the state, ranging from weed eradication works and track building to web site design.

Refer to Appendix 2 for full details of sponsorships provided in 2012/13.

## 'Care for People' schools award

Forestry Tasmania again offered the 'Care for People' schools award in 2012/13. The award recognised students who had made a significant contribution to their communities during the academic year.

All Tasmanian schools were eligible to participate in the award and were approached by Forestry Tasmania during the year to nominate a student who had demonstrated compassion or thoughtfulness towards others. Each school was provided with a perpetual shield on which the student's name was inscribed and the recipients were given a backpack, drink bottle, sunhat and a family pass to an Adventure Forests tourism attraction.

2012/13 was the sixth year in which the award was offered and 147 schools participated in the program, an increase from 130 in the previous year.

## Understanding the areas on which we need to work

Questions, concerns or complaints about our operations and activities are received as a result of people writing or speaking to us or to the Minister for Forests. Some of these questions, concerns and complaints are outside our control, for example, those that relate to legislation. However, those that are relevant to us are recorded in our corrective action request system. Through this process, a staff member is nominated as being responsible for addressing the specific issue. Responses usually involve a letter, a telephone call or a meeting. In some cases, the response to a complaint includes an operational response (that is, attending to a reasonable request).

The Office of the Minister for Forests received 27 letters or other forms of correspondence regarding Forestry Tasmania in 2012/13, which was a significant decrease on the 54 received in the previous year. The major issues raised in this correspondence were road maintenance (37 per cent of letters) and forest harvesting (15 per cent).



# *sustaining* SCIENCE-BASED STEWARDSHIP



Alison Phillips, Technical Officer, Research and Development Branch. The Research and Development Branch is addressing many of the national research priorities for the wood products industry.

## Legal compliance

### Forest Practices Act

All forest practices must be carried out in accordance with a certified Forest Practices Plan that contains specifications for harvesting, road works and reforestation activities in accordance with the Forest Practices Code. The code requires special provisions to protect natural and cultural values, including flora, fauna, geomorphology, soils and water, cultural heritage and visual amenity. We certified 137 Forest Practices Plans in 2012/13.

The forest practices system emphasises high environmental standards through planning, training and education. Where problems arise, corrective action, including the remediation of damage, takes place. This is followed by review, analysis and improvement of systems to ensure that similar errors do not occur in the future. Where the problem is considered serious, legal enforcement is applied in a number of ways. This includes verbal or written notification by a Forest Practices Officer issued under Section 41 of the Forest Practices Act. The Forest Practices Authority can also prosecute or issue fines for failure to comply with a certified Forest Practices Plan.

No fines were issued to us by the Forest Practices Authority this year. However, we were issued one Section 41 notice due to our failure to lodge an appropriate certificate of compliance report. We promptly lodged the compliance report and, as of July 2013, no compliance certificates were outstanding for all of the Forest Practices Plans we have in operation.

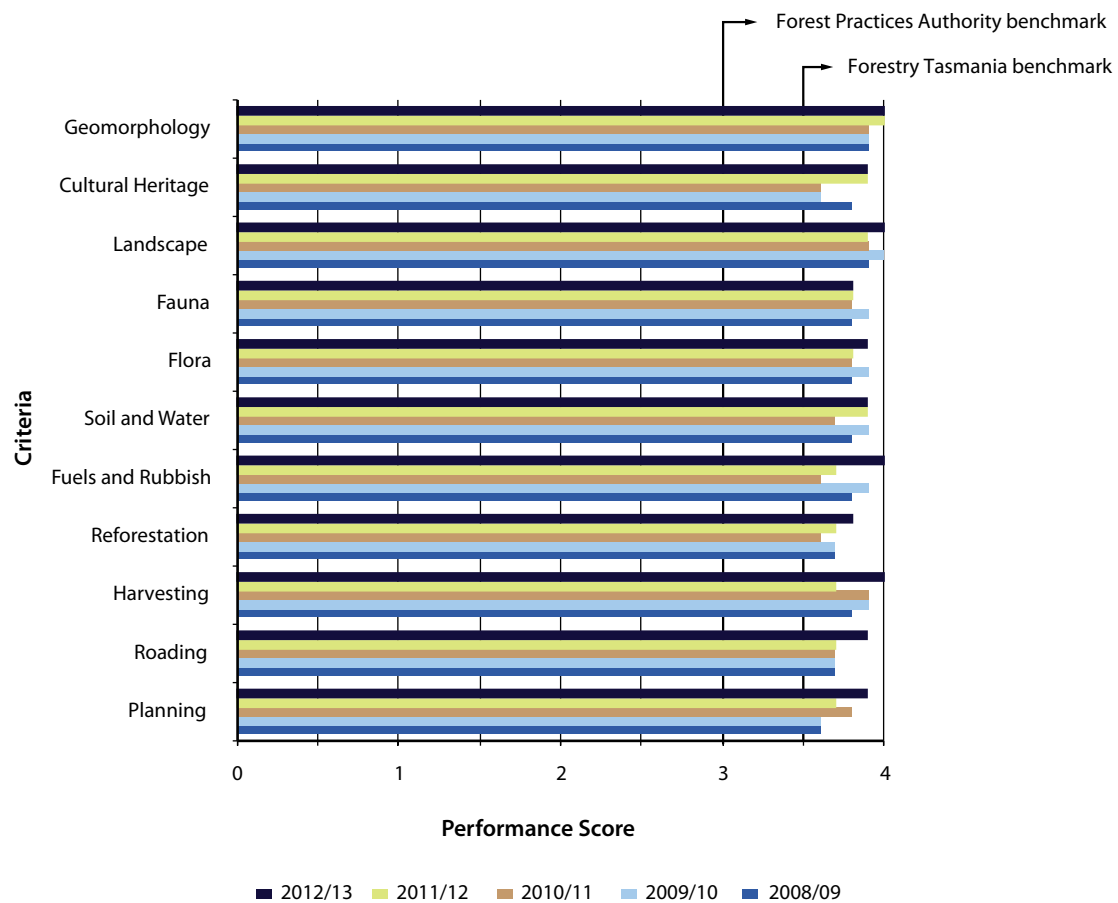
We were also issued two Section 41 notices in relation to harvesting issues. One of these notices involved breaches of the wet weather limitations in the Code of Practice. The contractors were instructed to cease work and to ameliorate the track damage that had occurred before work recommenced. The other Section 41 notice related to the felling of seven trees outside a designated coupe boundary. This incident resulted in us reviewing our boundary marking procedures.

The Forest Practices Authority undertakes an independent annual audit of a representative sample of Forest Practices Plans. The audit examines environmental management during forest operations at various stages of completion. In addition to the assessment of operational performance, the audit checks the standard of the plan, including all assessments and procedures required by the forest practices system.

The Forest Practices Authority audit examined 10 Forest Practices Plans developed by Forestry Tasmania. We scored an average rating of 'above sound' on all 11 criteria examined, which meets our internal benchmark. There were no follow-up investigations required as a result of these inspections, which is an exceptional outcome. There was only one case where minor additional follow-up work was required, relating to remedial work on a road that was showing signs of erosion.

For more information on the Forest Practices Authority's regulatory mechanisms refer to [fpa.tas.gov.au](http://fpa.tas.gov.au)

**Our environment performance measured by the Forest Practices Authority over the past five years**



Read the most recent audit public summary reports:  
[www.forestrytas.com.au/forest-management/afs-public-summary-reports](http://www.forestrytas.com.au/forest-management/afs-public-summary-reports)

# *sustaining* SCIENCE-BASED STEWARDSHIP

## Forest Stewardship Council certification

Forestry Tasmania has always sought and continues to seek external recognition for the quality of our forest management. However, we have become increasingly aware that our stakeholders and customers are asking us to obtain further independent verification that we are managing our forests appropriately. We have therefore made a decision to seek the highest level of Forest Stewardship Council certification possible for those forests for which we are responsible. Accordingly, we have established a project to achieve this objective.

Forestry Tasmania's decision is consistent with legislation arising from the Tasmanian Forests Agreement that requires us to achieve Forest Stewardship Council certification by March 2015.

Forestry Tasmania is already familiar with forest certification processes, with our existing management system being independently certified to ISO 14001 and the Australian Forestry Standard for a number of years. However, we need to adjust some of our present management and systems to accommodate the requirements of the Forest Stewardship Council standard. The three largest areas we need to address are identification and management of high conservation value forests on the land we manage, making improvements to our stakeholder engagement processes, and reviewing our forest management plan. We also need to determine the actual lands that may be certified, engage an appropriate certifying body, and review the Forest Stewardship Council standard in detail to determine where further refinements to our systems and management are required.

With these improvements, we are confident that our forest management will be certified under the Forest Stewardship Council.

For more information on the Forest Stewardship Council, go to [au.fsc.org](http://au.fsc.org)



## Research

Over the last three years, the Australian Government has developed a program through the Standing Council on Primary Industries to establish Research, Development and Extension plans across primary industry. Forests and Wood Products Australia prepared the first Research, Development and Extension strategy for the forest and wood products sector in 2010. More recently, in March 2013, the Forest and Wood Products Industry Research and Development Providers met to consider Draft National Research Priorities. These priorities can be summarised as:

1. Volume and value
2. Systems development for estate productivity
3. Know, grow and diversify the market
4. Resource risk management
5. Environmental and social sustainability

Examination of the current priorities within the Research and Development Branch shows that we are addressing many of the national priorities.

Volume and value is clearly a priority for Forestry Tasmania. The productivity group is focused on identifying the most appropriate silvicultural regimes (pruning and thinning) for management of our plantation estate. Site quality is highly variable across the estate, and the preferred product mix can vary regionally. Understanding the growth response of plantation stands to different silvicultural regimes informs the application of the most appropriate regime to stands throughout the State. Research into the stand responses to



different regimes is conducted both through formal trials and through studies of operationally managed stands.

Veneer production is likely to be of major importance from our plantations in the future. Understanding wood characteristics such as strength, hardness and density is essential to valuing the resource. A study with the Forestry Cooperative Research Centre used logs from southern Tasmania and also mainland Australia, and from both pruned-and-thinned stands and unthinned pulp stands, from low and high productivity sites. Early results indicate acceptable recoveries and properties of the veneer for both species. Further testing of veneer and plywood will be undertaken through the National Centre for Future Forest Industries in 2013/14.

Native forests remain an important part of the production estate. Ensuring that all the harvested forests are regenerated to a high standard through the quality standards process ensures that the productivity of these forests is maintained into the future.

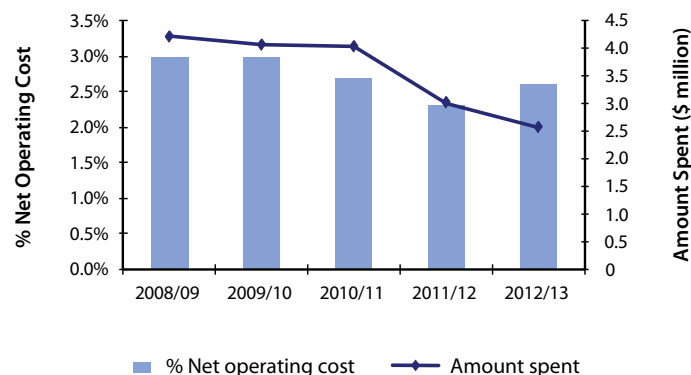
The forest health surveillance group undertakes risk management. Whilst the leaf beetle program is a high-profile part of the group's work, quarry hazard site surveillance, quarry surveys and Sirex management are all ongoing. At present, the group has a strong focus on better understanding the crown dynamics of mid-rotation *E. nitens* plantations with chronically thin crowns.

The carbon flux tower has provided a new focal point for research at the Warra supersite, including the climate

change and carbon programs. The site continues to foster an active research program involving collaborations with state, national and international institutions. Linking the Warra supersite through the National Terrestrial Ecosystem Research Network (tern.org.au) has strengthened the national role of the site.

In 2012/13, our research staff authored 18 technical reports and 15 peer-reviewed papers, delivered 14 conference presentations, maintained the Warra Long-Term Ecological Research site, hosted seven lunchtime talks and led numerous field days.

**Amount spent annually on research as a percentage of Forestry Tasmania's operating cost**



## Organisational capacity

Forestry Tasmania's key strategic human resources issue is the maintenance of appropriate levels of skills and experience in the face of budgetary constraints. During the reporting period, we reduced our staff head count by approximately eight per cent, from 383 in June 2012 to 351 on 30 June 2013. This equates to 326 full-time equivalent staff. This reduction occurred through natural attrition and the non-renewal of some short-term contracts. During the downsizing process we have been seeking to maintain our key corporate knowledge and skill set, where we are able to do so.

The organisation will face continued organisational capacity challenges in the post-Tasmanian Forests Agreement environment. Our reduced land base and changed focus has seen the need for an organisational restructure and staff reduction program, which will be implemented in the coming year.

The majority of Forestry Tasmania employees' conditions of employment are covered by an enterprise agreement. The current agreement, Forestry Tasmania Enterprise Agreement Number 3 of 2012, was 'voted up' by eligible employees on 17 September 2012. The agreement has a completion date of 9 October 2014.

# sustaining SCIENCE-BASED STEWARDSHIP

## Training and development

The Training and Development unit continued to organise training on a statewide basis, enhance data integrity and reporting within the Learning and Development module of the human resources management system, and operate the Registered Training Organisation. The Registered Training Organisation has been working hard on strengthening its compliance while facing several staff changes.

The unit provided training and development support to trainees employed by Forestry Tasmania around the State, as well as middle and senior management development training as required. Talent Management training was also provided for senior and middle management employees.

As a Registered Training Organisation, we had 63 staff enrolled in various courses. We had 32 staff enrolled in Certificate III in Forest Growing and Management (specialising in forest firefighting). Upon completing the program, these people will be issued with this national qualification. This program was made possible through the federally funded National Workforce Development Fund, managed through the ForestWorks Industry Skills Council. Six staff have been enrolled in Certificate III in Forest Growing and Management, five people enrolled in Certificate IV in Forest Operations and 14 people enrolled in Diploma of Forest and Forest Products. All participants are at various stages of completion (three had completed the program at 30 June 2013).

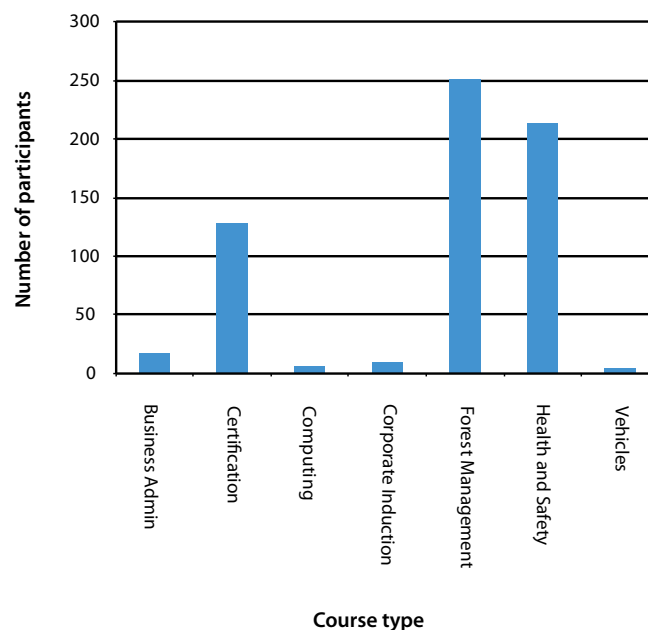
Learners and the Registered Training Organisation were also required, where applicable, to transition from the

previous 2005 version of the Forest Products and Industry training package to the 2011 version.

The Training and Development unit represents Forestry Tasmania on the Interagency Training Committee for fire management, which also includes the Parks and Wildlife Service, Tasmania Fire Service and the Tasmanian Industry Skills Advisory Committee for the forest industry. We also provided courses in forest firefighting and prescribed burning to both our own personnel and external clients.

ForestWorks continued to assist with access to the National Workforce Development Fund to allow Forestry Tasmania to continue offering staff further qualifications to upgrade their skills in the forest growing and management sector.

Number of people who underwent training this year



Forestry Tasmania continued to develop and manage a pool of 'Training and Education' qualified trainers and assessors and envisages an expansion or increased use of such staff to assist with future assessment, particularly for firefighting operations.

## Recognising long-serving employees

During December 2012, we recognised a number of long-serving employees who had reached 40-year, 35-year and 25-year milestones with Forestry Tasmania. Special events were held at the district offices and Head Office. The employees had served Forestry Tasmania for a combined total of 440 years.

## Resources information

Resources Branch is responsible for collecting and providing information on our forest resources. In the past year, the branch continued to maintain our geographic information systems infrastructure and information, manage our forest inventory systems and develop new tools to better use the data and information for forest management.

We also continued to manage the LiDAR program that we initiated several years ago. LiDAR capture in 2012/13 was over double the area of previous years, with well over 700,000 hectares captured. Significant amounts of LiDAR data now exist in all districts.

Research into new applications for LiDAR has continued, but the focus is now on delivering LiDAR-derived information to our staff end users, with new tools such as the Blueskies LiDAR viewer, which was implemented in some districts.

As our LiDAR processing proceeds, the Blueskies tool will be progressively rolled out to all districts. A prototype desktop tool for the display and analysis of LiDAR-derived information, which will make coupe planning a more interactive process, was also delivered under this project.

We also focused on geographic information systems, primarily in the development of options for a new suite of map browsing and development tools to replace our current ageing infrastructure. We conducted a great deal of testing to find solutions that will meet our mapping needs into the future.

**Business systems developments**

We commenced work on a delivery scheduling tool, which will assist wood schedulers to work out the most efficient options for supplying and delivering wood to customers. Other benefits are the ability to reschedule deliveries in a timely manner.

Improvements were made to the forest operations database system to improve the monitoring of Forest Practices Plans and to integrate the forest health surveillance survey outcomes with the forest assets that they describe.

Work is ongoing in the development of a permanent inventory plot tool, which will be used by field staff to gather data from our permanent forest measurement plots. These plots have been established for several years and the data collected from them will be used in modelling forest growth. We have traditionally collected this information on

paper, but moving to field-computer collection will reduce data errors and data entry time.

A decision support tool, Standworks, will enable analysis and projection of inventory data and the modelling of alternative management regimes. It is close to completion and will be ready to roll out early in the 2013/14 financial year.

**External commercial services**

Our provision of external commercial services continued profitably during 2012/13. Our Forest Technical Services business sells operational and specialised forestry services and advice to customers in Tasmania, interstate, and internationally.

Revenue in the last 12 months again totalled over \$0.6 million, with 21 projects being undertaken. Work included tree-breeding and silvicultural research for Chinese eucalypt plantations, fabrication of helicopter-mounted fire-ignition equipment, field surveys of natural values, biometric modelling services, health surveillance of plantations and quarries, strategic forest estate yield modelling, and forest mapping. High-precision forest and terrain mapping using airborne LiDAR technology was also provided to forestry companies, councils, utility corporations and land management agencies.





# where to FROM HERE?



Listed below are some of the challenges and priorities we will be striving to achieve in 2013/14 to ensure we continue to deliver the aims outlined in our Sustainability Charter:

## **Sustaining biodiversity and habitat**

- Continue to develop, implement and promote our coupe context metrics for habitat retention in consultation with the Forest Practices Authority.
- Ensure effective transfer of forest reserves and future reserve areas to appropriate Nature Conservation Act categories.
- Develop a High Conservation Value Management Plan for the permanent timber production zone land.
- Complete LiDAR identification of giant trees on State forest.

## **Sustaining jobs for current and future generations**

- Work with industry partners to develop Tasmanian-based Hardlam processing facilities.
- Report on sustainable yield position arising from the Tasmanian Forests Agreement.
- Continue working towards securing new markets for lower grade forest products.
- Assist the Tasmanian Forests Agreement signatories to develop a special timbers management plan.
- Continue work on product recovery studies in the hardwood plantation resource.

## **Sustaining carbon stores, clean air, water and healthy forests**

- Install more instrumentation at the Warra flux tower and promote research opportunities with external partners.
- Investigate the ecology of leaf beetle pests in order to develop integrated pest management strategies.

- Assist the Department of Primary Industries, Parks, Water and Environment to restore harvested areas on future reserved land.
- Implement a program to maintain 200 firefighters.

## **Sustaining safety, community access and heritage**

- Deliver Safety Circle® refresher training to all staff.
- Fully implement a staff health and wellbeing program.
- Significantly improve and increase stakeholder engagement programs.
- Consolidate our commercial tourism operations.
- Work with the Government and Tasmanian Forests Agreement signatories to support and fully implement the Tasmanian Forests Agreement Act.

## **Sustaining science-based stewardship**

- Actively work towards achieving Forest Stewardship Council Certification.
- Implement an organisation restructure and work with Department of Primary Industries, Parks, Water and Environment to resolve the uncertainty for staff resulting from changed operating conditions.
- Update our Forest Management Plan to reflect the adjusted land base arising from the Tasmanian Forests Agreement.
- Complete the LiDAR data acquisition program.
- Develop and implement the LiDAR-based Forest Inventory projection system.

# GLOBAL REPORTING INITIATIVE CONTENT INDEX

This report has been self-assessed as complying with level C disclosure of the Global Reporting Initiative.

GRI Ref.	Profile Disclosures	Reported	Location within this report
<b>Strategy and analysis</b>			
1.1	CEO statement.	Fully	Message from the Chairman and Chief Executive Officer
<b>Organisational profile</b>			
2.1	Name of the organisation.	Fully	Our organisation
2.2	Primary brands, products, and services.	Fully	Our organisation
2.3	Operational structure.	Fully	Our organisation
2.4	Headquarters location.	Fully	Our organisation
2.5	Countries of operation.	Fully	Our organisation
2.6	Nature of ownership and legal form.	Fully	Our organisation
2.7	Markets served.	Partially	Our organisation
2.8	Scale of organisation	Fully	Year at a glance table
2.9	Significant changes during the reporting period regarding size, structure, or ownership.	Fully	Message from the Chairman and Chief Executive Officer, Tasmanian Forests Agreement
2.10	Awards received during the reporting period.	Fully	Hardlam (Wood products)
<b>Report parameters</b>			
3.1	Reporting period.	Fully	Reporting structure and scope
3.2	Date of most recent previous report.	Fully	Reporting structure and scope
3.3	Reporting cycle.	Fully	Reporting structure and scope
3.4	Contacts.	Fully	Contact us
3.5	Process for defining report content.	Partially	Reporting structure and scope
3.6	Boundary of the report.	Fully	Reporting structure and scope
3.7	Limitations of the scope or boundary of the report.	Fully	Our organisation Reporting structure and scope
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that could affect comparability.	Partially	Reporting structure and scope
3.10	Explanation of the effect of any restatements of information provided in earlier reports.	Fully	Reporting structure and scope
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	Fully	Reporting structure and scope
3.12	GRI content index.	Fully	GRI content index

# GLOBAL REPORTING INITIATIVE CONTENT INDEX

GRI Ref.	Profile Disclosures	Reported	Location within this report
<b>Governance, commitments and engagements</b>			
4.1	Governance structure.	Fully	Corporate governance
4.2	Indicate whether the chair of the highest governance body is also an executive officer.	Fully	Corporate governance
4.3	State the number of members of the highest governance body that are independent and/or non-executive members.	Fully	Corporate governance
4.4	Mechanism for shareholders and employees to provide recommendations or direction to the Board.	Partially	Corporate governance
4.14	List of stakeholder groups engaged by the organisation.	Partially	Community engagement
4.15	Basis for identification and selection of stakeholders with whom to engage.	Partially	Community engagement



GRI Ref.	Performance Indicators	Reported	Location within this report
<b>Economic</b>			
EC1	Economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.	Fully	The year at a glance Appendix 1: Financial statements
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro-bono engagement.	Partially	Sustaining safety, community access and heritage
<b>Environmental</b>			
EN3	Direct energy consumption by primary energy source.	Fully	Carbon and Climate Change
EN4	Indirect energy consumption by primary energy source.	Fully	Carbon and Climate Change
EN5	Energy saved due to conservation and efficiency improvements.	Partially	Carbon and Climate Change
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	Fully	Reserve system
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity.	Fully	Biodiversity
EN16	Total direct and indirect greenhouse gas emissions by weight.	Partially	Carbon and Climate Change
EN23	Total number and volume of significant spills.	Fully	Fuel and chemical spills
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	Fully	Legal Compliance
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organisation's operations, and transporting members of the workforce.	Partially	Carbon and Climate Change
<b>Social</b>			
LA1	Total workforce by employment type, employment contract, and region.	Partially	Organisational capacity
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs.	Fully	Health and safety
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region.	Partially	Health and safety
LA10	Average hours of training per year per employees	Partially	Organisational capacity
SO1	Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting.	Partially	Community engagement, air quality

# *sustainable* FOREST MANAGEMENT POLICY

Forestry Tasmania is a State Government Business Enterprise with the fundamental statutory responsibility to manage the Permanent Timber Production Zone of Tasmania's public forests<sup>1</sup>. We will manage these forests using environmental best practice to create long-term wealth, employment and social benefits for Tasmanians.

Under this policy, Forestry Tasmania will:

- Operate in an environmentally, socially and economically responsible manner.
- Actively engage with stakeholders.
- Strive to maximise recovery and value of our forest products.
- Implement measures that minimise waste and prevent pollution.
- Undertake and support research that will ensure that operational practices are underpinned by sound science.
- Meet or exceed relevant legislation and other requirements subscribed to by the organisation.
- Maintain a forest management system and conduct forest management in a manner that is certified to be compliant with ISO 14001, AS 4801 and the Australian Forestry Standard.
- Commit to and actively work towards long-term incorporation of Forest Stewardship Council Principles and Criteria into the Forest Management System.
- Develop objectives and targets that assist in achieving the strategic aims and goals outlined in the Sustainability Charter (Forest Management Plan).
- Ensure that staff and contractors have sufficient information, skills, training and resources to implement this policy.
- Regularly monitor, audit, review and publicly report on our performance.
- Commit to continual improvement in our sustainability performance.
- Communicate this policy and make it publicly available.

Steve Whiteley  
Chief Executive Officer  
August 2013

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<sup>1</sup> FT is also presently responsible for managing other areas of State forest that are currently being transitioned to become reserves under the *Nature Conservation Act 2002*

## Appendix 1

2012 – 2013 Financial Statements

[www.forestrytas.com.au/uploads/File/pdf/pdf2013/financial\\_statements\\_2013.pdf](http://www.forestrytas.com.au/uploads/File/pdf/pdf2013/financial_statements_2013.pdf)

## Appendix 2

Sustainable forest management data tables – contents below

[www.forestrytas.com.au/uploads/File/pdf/pdf2013/sustainable\\_forest\\_management\\_appendix\\_2013.pdf](http://www.forestrytas.com.au/uploads/File/pdf/pdf2013/sustainable_forest_management_appendix_2013.pdf)

The tables in this section support the statements made in the main report and provide a more detailed view of long-term trends.

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