



**Forestry
Corporation**

SUSTAINABILITY
SNAPSHOT
2015-16



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Forestry Corporation Sustainability Snapshot 2015–16

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SUSTAINABLE FORESTS AND A SUSTAINABLE BUSINESS

Sustainability is fundamental to forest management. We cannot continue producing products or providing services without maintaining healthy, sustainable, productive forests. For this reason, sustainability underpins every aspect of forest management, and every aspect of our business.

Sustainable forest management is about balancing all the different ways people use forests while maintaining the unique forest features the community values like biodiversity, clean air and water, habitat and cultural heritage. It is the key to managing forests for the long term.

Our sustainability framework sets out our priorities in terms of environmental, community, staff and business sustainability. Our Annual Report details our financial performance and this Sustainability Snapshot, designed to be read in conjunction with that report, provides an overview of how we are tracking against the four elements of our sustainability framework. The Sustainability Snapshot also reports on relevant commitments under the Montreal Process, the Forest Agreements and Integrated Forestry Operations Approvals, National Greenhouse Energy Reporting Act and proposed fire management inter-agency indicators.

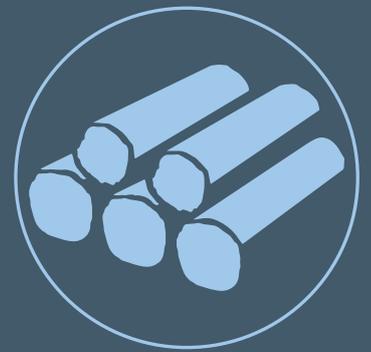


In recent years in addition to the Annual Report, we have produced a Year in Review and a Sustainability Supplement. This year we have combined these two documents together in an effort to provide a more holistic report on sustainability and present the information in a more engaging and accessible manner. Figures can still be compared with previous years by looking at previous editions of the Sustainability Supplement. All figures in this document relate to the 2015-16 financial year (FY16) unless otherwise stated.

Comments and feedback on our forest management practices and sustainability efforts are always welcome and can be submitted to info@fcns.com.au



OUR BUSINESS



GOVERNANCE

Public consultation and audits further improve forest management

Public consultation on new forest management plans and independent audits of the two operating divisions reaffirmed and further enhanced sustainable forest management during FY16.

The community was invited to provide input into two new forest management plans that have been developed for the coastal hardwood forests and softwood plantations. These plans set out how we manage State forests in line with both our sustainability framework and the principles of Ecologically Sustainable Forest Management (ESFM). These principles recognise the social, environmental and economic benefits of forestry while understanding the role of forest managers as custodians of the forests for future generations. The new forest management plans incorporate and replace several regional ESFM plans, providing greater coherence and clarity around forest management state-wide.

Following a public consultation period, the coastal hardwoods plan was expanded to include management actions and clearer information about how performance will be measured and reported as well as greater detail on the policy framework, agreements and legislation that give rise to ESFM in NSW.

Forest Management System Coordinator for the Softwood Plantations Division, Jack Cotterill, said engaging stakeholders in forest management was an important way to ensure the various uses and users of State forests are appropriately balanced.

“Forest management is complex and involves a careful balance of multiple objectives. The way we manage State forests is relevant to a range of groups with diverse views and interests, from forest neighbours to environmental groups through to government authorities like the Rural Fire Service and industry. Our forest management plans set out the guiding principles behind every activity we do

in the forest so consulting with our stakeholders ensures we develop robust plans that really enhance our day to day forest management,” Jack said.

In an affirmation of the sustainability of forest management practices, Forestry Corporation again received independent forest management certification during FY16. After a decade of joint certification, Forestry Corporation underwent two rigorous independent audits to certify the Softwood Plantations Division and Hardwood Forests Division separately for the first time.

The Hardwood Forests Division audit focussed on forest management units on the north coast around Bulahdelah, Wauchope, Coffs Harbour and Casino, northern tablelands around Bulga and eucalypt plantations near Coffs Harbour and Casino. The Softwood Plantations Division audit focussed on the Grafton and Bathurst Management Areas of the Northern Softwoods Region and the Tumut Management Area of the Snowy Region. Both audits also independently assessed centrally-managed corporate governance processes.

Each division met or exceeded the criteria and Forestry Corporation was issued with two certificates to the Australian Standard® for Sustainable Forest Management (AS4708:2013) as well as two certificates to ISO 14001:2004. The audits recognised the effectiveness of risk management processes and the development and application of new technologies, but identified two minor non-conformances around the management of depots and processes for identification and management of noxious weeds. Corrective actions have already been implemented and the Softwood Plantations Division underwent its first external surveillance audit in June.

Details about the criteria assessed by the Australian Standard for Sustainable Forest Management and audit summaries are available on our website.



100% OF EXTERNAL CERTIFICATION REQUIREMENTS MET



GOVERNANCE



Managing a diverse forest estate

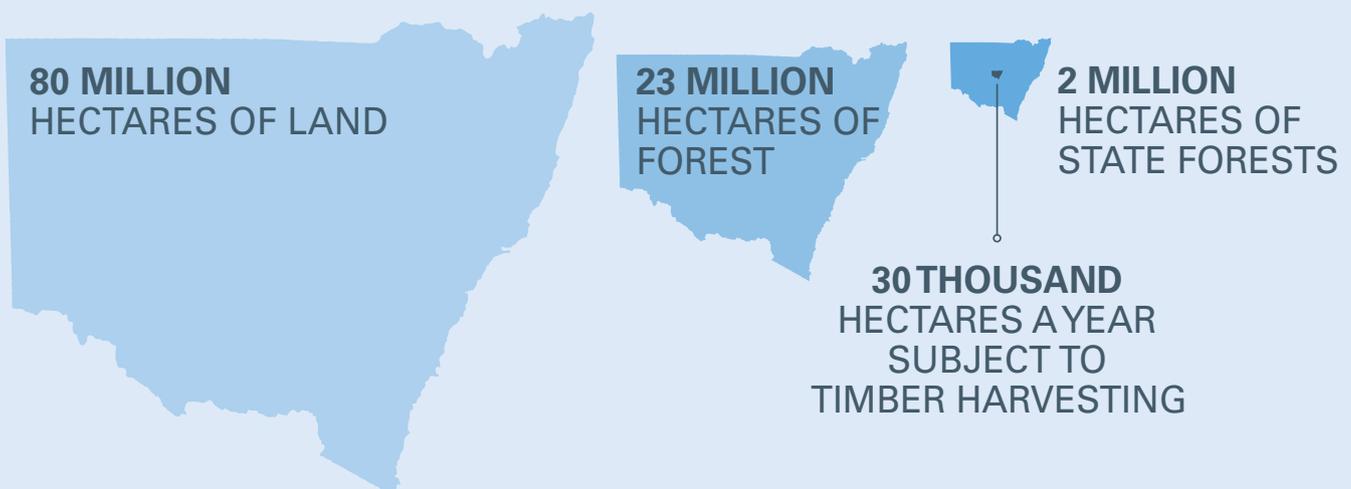
Forestry Corporation manages 2,186,893 hectares of land, which is primarily State forests with small areas of freehold private land managed through joint investment partnerships. This is the Defined Forest Area that is certified under the Australian Standard for Sustainable Forest Management and represents around ten per cent of the forested land in NSW. The remaining ninety per cent of forested land in NSW is not managed by Forestry Corporation and includes formal conservation reserves such as national parks and private property. No State forest was revoked during FY16. A land exchange with the Roads and Maritime Service resulted in 1.45 hectares being transferred for addition to the State forest estate in compensation for land that had previously been compulsorily acquired for the Pacific Highway upgrade.

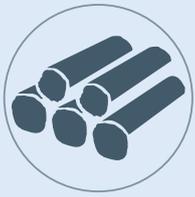
Areas we manage are assigned to a forest management zone (FMZ) category based on the management priority for that land, ranging from conservation reserves to timber production areas or non-forestry use. The FMZ system sets out what activities are permitted or prohibited in each area of forest, including which areas are available for timber harvesting. In addition to areas excluded from timber harvesting through the FMZ system, further areas are excluded for operational reasons. The FMZ system maps management intent across the estate and provides critical information to underpin operational planning.

In native forests, an assessment has been made of the dominant forest type and native forest structure. The Defined Forest Area is categorised into forest types ranging from mixed coastal eucalypt to River Red Gum and White Cypress Pine. Forest structure is the proportion of trees of different age and size over a given area and is largely determined by forest type, age and past disturbance such as timber harvesting or fire.

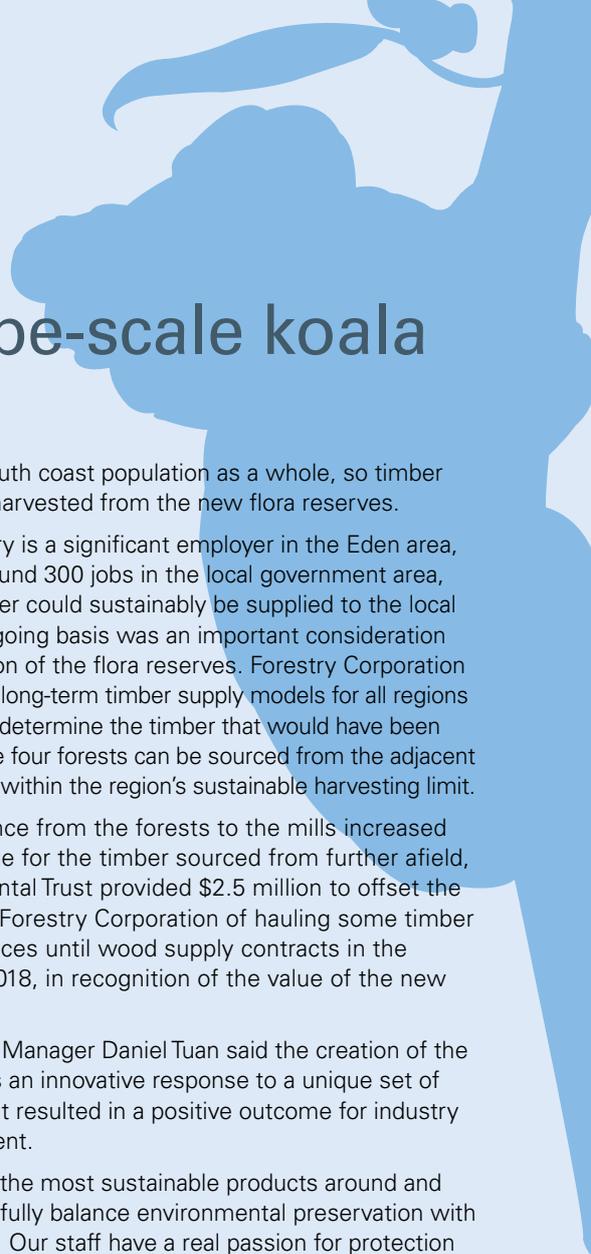
Complex wood supply models that take into account the area available for harvesting, the forest type and forest structure are used to determine the sustainable timber yield over the short, medium and long term. The models are verified against permanent growth plots and actual harvested volumes. These models demonstrate that the forest estate we manage is providing an ongoing sustainable timber yield and indicates that forest structure is stable, as harvestable areas regrow in a cyclical mosaic pattern across the estate.

Detailed information on the FMZ system, the Defined Forest Area managed by each operational division, the extent of native forest type by category and wood supply modelling is published on the Forestry Corporation website. Growth stage information is published in the Australian Government's State of the Forests reports. This information does not change significantly from year to year and is not reported annually.





GOVERNANCE



Unique approach to landscape-scale koala management

Four forests near Eden on the south coast will be managed specifically for conservation in a first-of-its-kind management model, after the NSW Government declared flora reserves in the Tanja, Murrah, Mumbulla and Bermagui State Forests to support the region’s small koala population.

Koalas are a threatened species and the biggest risks they face are wildfire, permanent land clearing for development, wild and domestic dogs, vehicles and drought. While there is a large and diverse koala population in northern NSW, the south coast koala population is very small and fragile and some of the region’s most viable koala populations live in these four State forests.

Careful management and preservation of koala habitat in and around operations has allowed koalas and timber harvesting to co-exist in State forests over the past 100 years, but the fragile state of the population on the south coast created a unique set of circumstances that called for a different management approach.

Landscape-scale management looks at forested land across a broad geographic area, regardless of where the State forest or national park boundaries fall. Following the declaration of the flora reserves, a single land manager will manage koala habitat across the local landscape. The flora reserves will remain State forests but the National Parks and Wildlife Service will manage them in conjunction with adjoining national parks and in line with working plans jointly developed by the Department of Primary Industries and the Office of Environment and Heritage, drawing on advice from koala experts. This is the first management model of its type in any State forest.

As the region’s koala population is small and fragile, limiting disturbance to the habitat of individual koalas is likely to be a

positive for the south coast population as a whole, so timber will no longer be harvested from the new flora reserves.

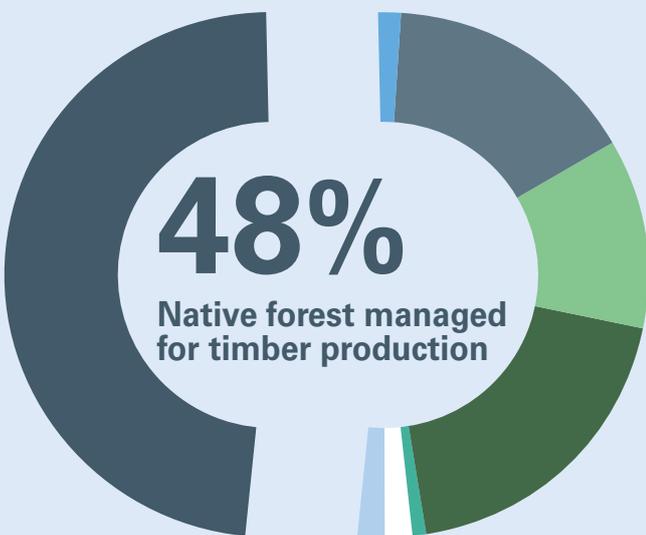
The timber industry is a significant employer in the Eden area, accounting for around 300 jobs in the local government area, and ensuring timber could sustainably be supplied to the local industry on an ongoing basis was an important consideration after the declaration of the flora reserves. Forestry Corporation maintains detailed long-term timber supply models for all regions and used these to determine the timber that would have been harvested from the four forests can be sourced from the adjacent management area within the region’s sustainable harvesting limit.

The greater distance from the forests to the mills increased the cost of haulage for the timber sourced from further afield, so the Environmental Trust provided \$2.5 million to offset the additional cost to Forestry Corporation of hauling some timber over longer distances until wood supply contracts in the region expire in 2018, in recognition of the value of the new flora reserves.

Senior Production Manager Daniel Tuan said the creation of the flora reserves was an innovative response to a unique set of circumstances that resulted in a positive outcome for industry and the environment.

“Timber is one of the most sustainable products around and every day we carefully balance environmental preservation with timber production. Our staff have a real passion for protection of threatened species so it’s exciting to be part of a new solution that will deliver good outcomes for our fragile local koala population while continuing to support an industry that’s so important to our local economy.”

FOREST MANAGEMENT INTENT



- Formal reserves (flora reserves - FMZ 1)
- Informal reserves (special management zones - FMZ 2)
- Protected by prescription (FMZ 2 - special management, FMZ 3A - harvesting exclusion and FMZ 3B special prescription)
- Protected FMZ 4
- Protected FMZ 5¹
- Protected FMZ 6¹
- Unavailable native forest
- Area of native forest managed for long term timber production

¹ Protected areas in areas zoned as plantation include retained vegetation in unstocked plantation areas. Further information on the Forest Management Zoning system is available on our website.



ASSET AND ESTATE PRODUCTIVITY

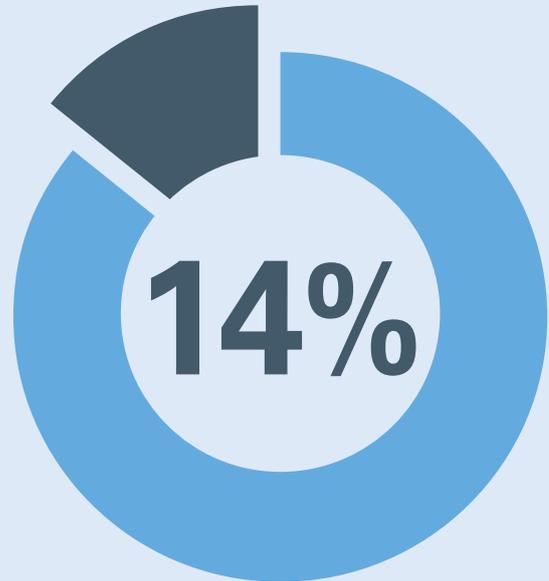
Meeting the community's timber needs

Forestry Corporation holds long-term timber supply contracts for products from both hardwood and softwood forests. This timber is used by customers to mill a range products. These contracts include provisions for customers to request slightly less than their allocation or slightly more in any given year. Over time though, the timber committed under these contracts is in line with the long term modelling of the timber resource. More information about long-term modelling can be found on our website.

PROPORTION OF TIMBER HARVESTED AGAINST MULTI-YEAR COMMITMENTS

Category	FY16 per cent (%)
Hardwood high quality sawlog	100
Hardwood pulpwood	100
Native cypress forest	89
Softwood planted preservation and sawlog	110
Softwood planted pulpwood	109

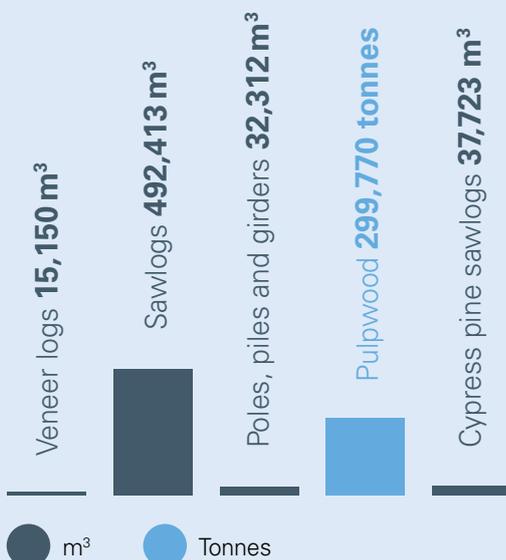
The Softwood Plantations Division enters into additional annual contracts are entered into based on spot volumes that are available in addition to long-term commitments



Forestry Corporation produces 14 per cent of all timber produced in Australia each year.

HARVESTED PRODUCT

HARDWOOD FORESTS DIVISION



SOFTWOOD PLANTATIONS DIVISION





ASSET AND ESTATE PRODUCTIVITY



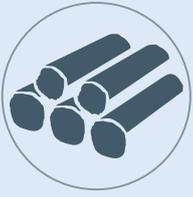
More than just timber

As well as being the source of the sustainable wood products that underpin the NSW timber industry, productive working forests support a range of other industries from apiary to grazing. While more than 90 per cent of Forestry Corporation's revenue is derived from timber harvesting, rent and fees paid by people and businesses accessing forest resources or using forest land for commercial primary production or service delivery also contribute to the financial returns of this State-owned business.

Revenue from business activities carried out in State forests contributes to recouping the cost of forest management and generates a revenue stream that contributes to overall profitability and, ultimately, the dividend returned to the people of NSW.

In some circumstances forest land is made available to provide emergency services to the community. The 138 independently-operated telecommunication towers situated on State forest land include many that are owned or operated by the Rural Fire Service, Ambulance, Police or other emergency services for communication in emergency situations and are not charged commercial rent. These telecommunication towers complement the fire towers owned and maintained by Forestry Corporation for both operational communication and our own firefighting and fire management activities within the forest and provide a valuable emergency service to the broader community.

Apiculture (sites)	3,937
Broombush (tonnes)	2,032
Charcoal (tonnes)	1,664
Telecommunication sites	141
Firewood – non-commercial (tonnes)	10,101
Fencing material (m ³)	7,673
Gravel/sand/rock (tonnes)	67,167
Grazing (hectares)	219,702



ASSET AND ESTATE PRODUCTIVITY

Applying the science of silviculture

The single most important thing we consider when planning a harvest operation is how to ensure the forest is healthy and will regenerate as quickly as possible. Silviculture is the scientific study of the best way to maintain biodiversity across the whole landscape in a productive forest.

Before harvesting timber, we select a silvicultural technique that will create ideal conditions for regeneration, provide habitat for wildlife and maintain a diverse forest ecosystem. The most appropriate silvicultural technique will vary depending on factors ranging from the type and maturity of tree to the climate and prevalence of sunlight in a specific location.

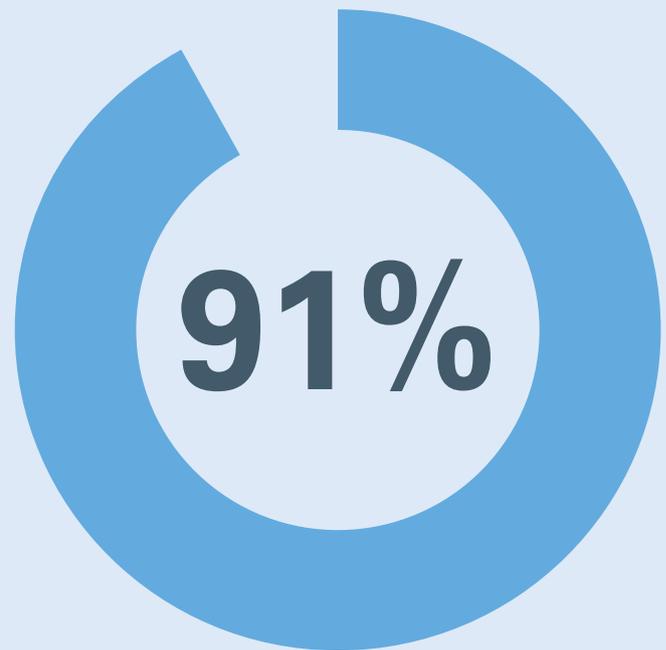
On the NSW north coast, many native forests are harvested in line with the silvicultural technique known as Single Tree Selection (STS), which involves harvesting individual trees within a compartment and leaving others untouched. STS varies in intensity from forest to forest, from sites where the individual trees harvested are well dispersed with standing trees, to areas where clusters of trees are harvested and clumps are retained.

The reason for this variation is that many eucalypts are light hungry, so opening up the canopy is often the best way to encourage the eucalypts to regenerate instead of favouring slow growing, shade-tolerant species and weeds. In many areas, regeneration survey results have shown that harvesting trees in clusters encourages more successful regeneration and so is more effective at ensuring a healthy, thriving forest grows back after harvesting.

Senior Planning Manager Dean Kearney said in many cases removing larger blocks of trees delivered a better environmental outcome by allowing more effective natural regeneration of locally adapted varieties.

“We manage diverse, multi-age native forests and once we harvest an area we often won’t harvest it again for several decades. Creating the optimum conditions for the small areas we harvest each year to regenerate naturally is a good environmental outcome because it ensures those areas continue to contain a broad mix of local tree species, which

maintains forest biodiversity over the long term. Every time we harvest timber in a native forest we carefully consider where we need to open up the canopy to encourage light-hungry species to regenerate and where we need to leave the canopy intact. Of course, this is in addition to identifying which trees are needed to maintain forest biodiversity and habitat, or to protect streams and other environmental features,” Dean said.



**REGENERATION
SURVEY PLOTS
SUCCESSFULLY REGENERATED
WITH COMMERCIAL SPECIES**

HARDWOOD & CYPRESS FOREST HARVEST & REGENERATION

Native forest harvested		FY16 (ha)
Alternate coupe		925
Cypress (release & thinning)		4,678
Single tree selection	Heavy/Medium/Light	11,931
	Regeneration	121
Other		78
Thinning		223
Total		17,956



ASSET AND ESTATE PRODUCTIVITY



Region records best seedling survival rate in more than 10 years

Seedling survival rates have hit a ten-year high in the Softwood Plantations Division's Snowy Region, which takes in plantations surrounding Tumut and Bombala in the south of the state.

Ninety-six per cent of the seedlings sown over the region's 5,300 hectares during FY16 have survived, which is the region's best seedling survival rate in more than a decade.

While favourable planting conditions have played a part, the high survival rate largely stems from improvements that have been made at every stage of the plantation re-establishment process in recent years.

Advances in seedling cultivation at Forestry Corporation's production nurseries over recent years have increased the overall quality of the seedlings dispatched to re-establish harvested plantations. Improvements to the dispatch and planting processes range from optimising moisture maintenance during transport and storage before planting, to enhancing quality assurance and monitoring of planting techniques. The hardiest, highest quality seedlings are also carefully selected and allocated to sites with the harshest conditions such as areas prone to frosts and snow.

Snowy Region Silviculture Manager Roger Davies said the high seedling survival rate indicated a range of processes were performing at optimal levels.

"Timing is critical in seedling survival and we need to hit our performance targets at every stage to ensure we are preparing the sites and planting in the right locations at the right time. Our seedling survival trend is continuing to increase, with crews around Bombala in particular leading the way in re-establishing thriving plantations," Roger said.

The bulk of the close to nine million seedlings produced to re-establish plantations are radiata pine grown at Blowering Nursery, Forestry Corporation's largest production nursery near Tumut. Native eucalyptus seedlings are grown at the Grafton Nursery to re-establish harvested hardwood plantations. More than 1,100 native seedlings are re-planted in every hectare of hardwood plantation that is harvested. The smaller rate of hardwood seedling production reflects the relative size of the hardwood plantation estate, which is less than a fifth of the size of the softwood plantation estate.

Seedlings are not grown to replenish native forests, as appropriate silvicultural regimes are carefully selected and implemented during harvesting to encourage natural regeneration. Natural regeneration facilitates the growth of a large variety of resilient, locally-adapted species, which delivers better outcomes for both the long-term production of timber and also for forest health and biodiversity. Seedlings are only planted to supplement natural regeneration in a small number of instances, if the natural process has not been as effective as planned.



100% OF SEEDLINGS PLANTED ARE CERTIFIED NON-GENETICALLY MODIFIED, IN ACCORDANCE WITH THE REQUIREMENTS OF AUSTRALIAN STANDARD 4708 – SUSTAINABLE FOREST MANAGEMENT



ASSET AND ESTATE PRODUCTIVITY

PLANTATION ESTABLISHMENT AND SURVIVAL

Softwood Plantations Division	2015 age class
Re-establishment of plantations (ha)	7,991
Cost of all plantation establishment ¹ ('000)	\$15,312
Proportion requiring restocking after one year	0%

Hardwood plantations (part of Hardwood Forests Division)	2015 age class
Re-establishment of plantations (ha)	224
Cost of all plantation establishment ¹ ('000)	\$786
Proportion requiring restocking after one year	2%

8,410,000

PINE SEEDLINGS IN THE 2015 AGE CLASS RE-ESTABLISHED

7,991 hectares

OF SOFTWOOD PLANTATIONS

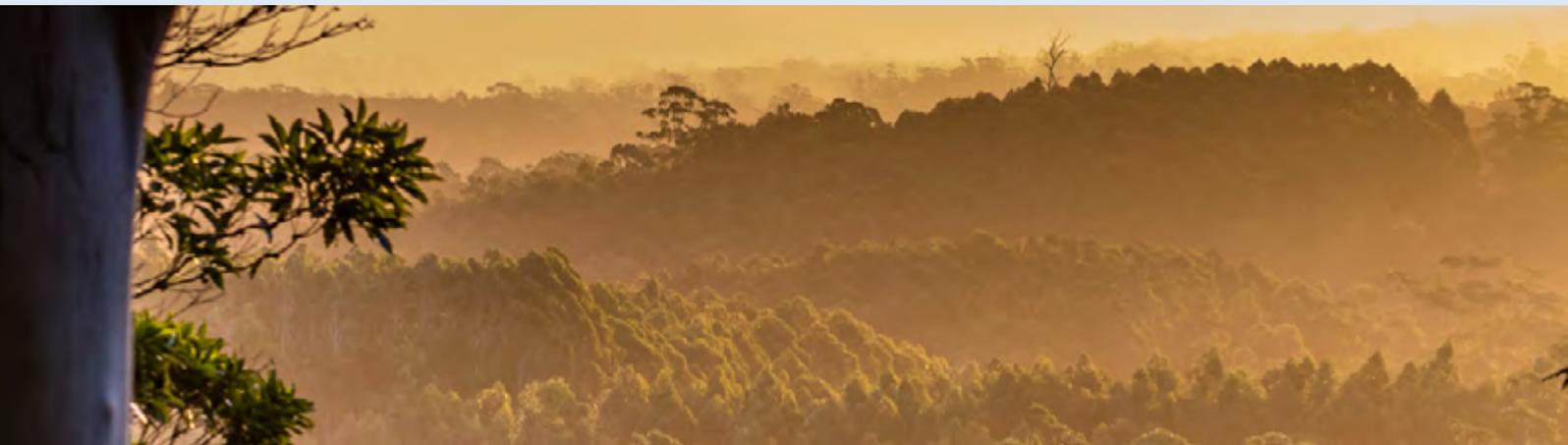
390,000

EUCALYPTUS SEEDLINGS IN THE 2015 AGE CLASS RE-ESTABLISHED

224 hectares

OF HARDWOOD PLANTATIONS

¹ Plantation establishment includes the cumulative cost associated with site preparation, planting, post planting fertilising and competition control as at 30 June for that age class. Third party investor plantings, joint ventures and fee for service areas are included in this figure



Calculating growth trajectory to maximise value

Growing timber is a long-term investment and pinpointing the optimum time to harvest trees and replant or regenerate a new crop of seedlings in its place is an important way to maximise that investment and ensure the future health of the forests.

Mean Annual Increment (MAI) is a measure that can be used to calculate when trees have reached the peak of their growth spurt and help determine when they should be harvested. MAI is the average annual rate at which a stand of trees has grown over its lifetime, usually expressed in cubic metres per hectare per year. The culmination point of the MAI is the point of optimum volume production, or the peak of the growth spurt, and usually the point where the trees should be harvested. Foresters calculate the typical

MAI for each species in various conditions to determine the biological age at which stands should generally be harvested in each particular location's unique growing conditions.

Biological age is a good measure of when to harvest for fast-growing radiata pine. However, for longer-lived tree species such as blackbutt the question of when to harvest is influenced by the value of the log as it increases in volume. In some instances, the modest growth that takes place after the culmination point of the MAI will still raise the market value of the logs sufficiently to warrant harvesting the tree at a later point.

In any given situation the decision about when to harvest is based on a combination of biological age and operational, logistical or market factors.

MEAN ANNUAL GROWTH AND STOCKING IN PLANTED FORESTS

Softwood plantation	FY16
Annual increment ¹ (m ³)	3,234,706
Net stocked area ² (ha)	201,981
Mean annual increment ⁴ (m ³ /ha/yr)	16.0
Hardwood plantation	FY16
Annual increment ¹ (m ³)	389,152
Net stocked area ² (ha)	29,260
Mean annual increment ⁴ (m ³ /ha/yr)	13.3

¹ Annual increment (AI) is the change in volume of the plantation net stocked area in one year (AI=NSAxMAI).

² Net stocked area (NSA) is the area of State forests estate (including joint ventures) where trees are planted (i.e. does not include roads, environmental exclusion areas, area awaiting regeneration etc) as at the end of the financial year.

⁴ Mean annual increment (MAI) is an indication of the productive potential of an average hectare within the estate. The indicator was calculated as part of the discounted cash flow valuation process and is under review.



ASSET AND ESTATE PRODUCTIVITY

FIGURE 1: TOTAL STANDING VOLUME

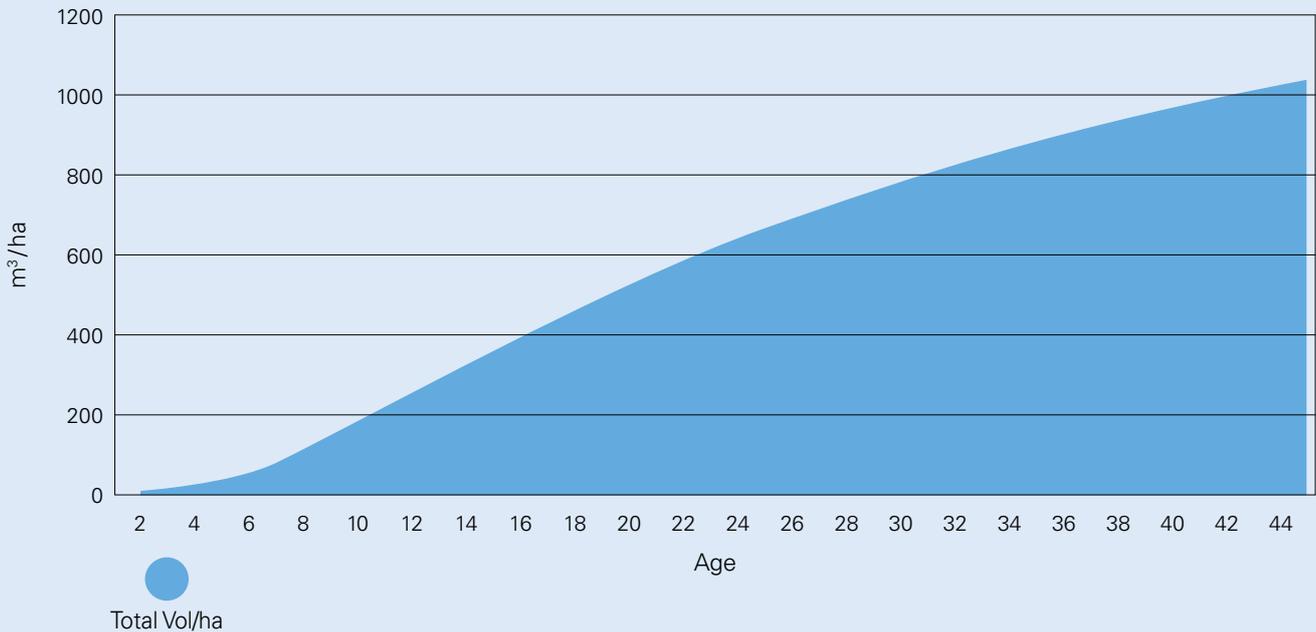
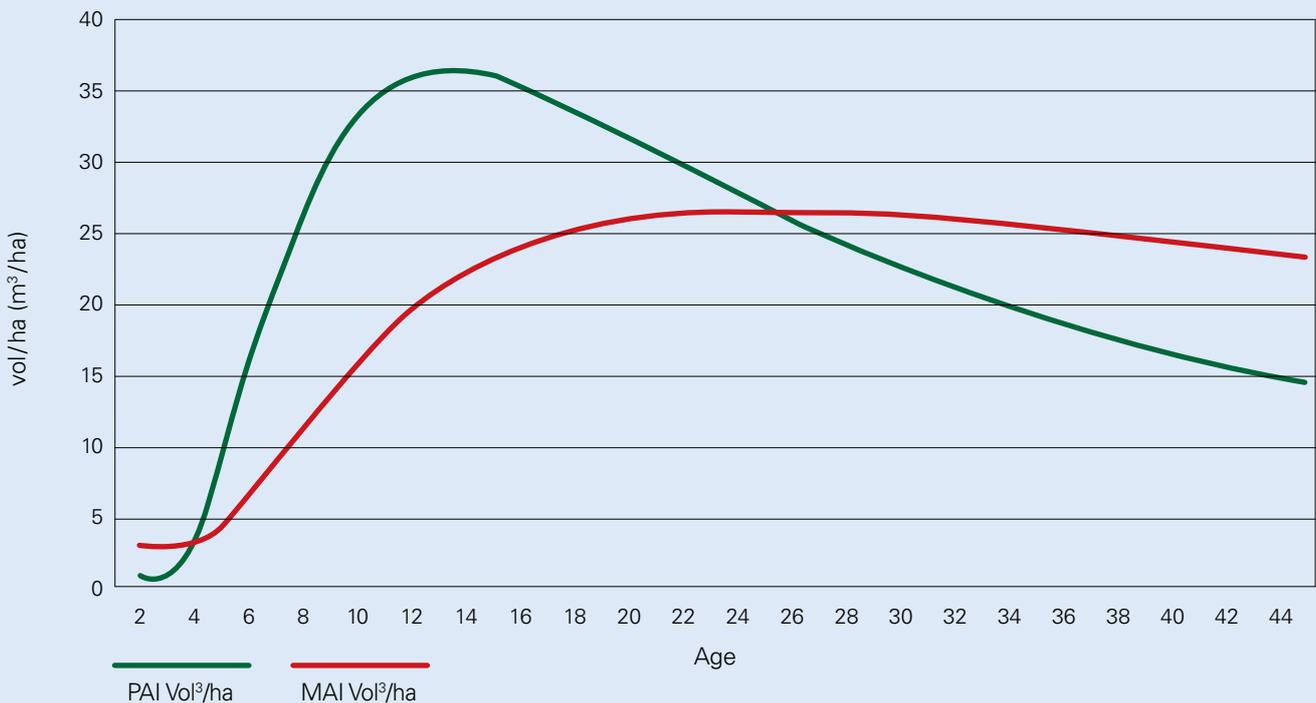


FIGURE 2: MEAN AND PERIODIC ANNUAL INCREMENTS



These graphs for a *Pinus radiata* stand in the Bombala Management Area planted in 1989 provide an example of how MAI is used to pinpoint the optimum time to harvest timber. The line in Figure 1 depicts the growth of the stand over time, showing the total volume production. In Figure 2 the red line shows the plotted MAI for each year as the stand grew. The green line depicts the Periodic Annual Increment (PAI), which is the change in the size of a tree between the beginning and ending of a growth period. The point at which the MAI is greatest represents where the trees reach biological maturity. This is called the culmination point of MAI and in this case is around 25 years. The actual MAI at this point can be calculated by dividing the volume by the age of the trees. In this case the stand volume of 662 cubic metres divided by 25 years gives a MAI of 26.5 cubic metres per hectare per year, compared to a state-wide average MAI of 16.0 cubic metres per hectare per year for softwoods. This indicates the growing conditions in this location were such that the trees grew very quickly and could have been harvested at a younger age than trees of the same species on other sites.



PROFITABILITY

Annual Report shows continued strong financial performance

Significant work has been completed in recent years to improve business processes and improve financial performance. Both operating divisions exceeded their financial targets in FY16 to deliver earnings before interest and tax (EBIT) of \$57 million, a 10 per cent increase on the FY15 result.

Full financial results and commentary are published in Forestry Corporation's Annual Report, which is available on our website.

\$57M EBIT
↑ 10% from FY15

Mobile technology to drive down costs along supply chain

Real-time information about timber transport and deliveries, less manual data entry and better responsiveness to customer demands are some of the benefits flowing from the introduction of an electronic docketing system in the Softwood Plantations Division.

Contractors and customers are required to record and track information about where the wood comes from, who harvested it, who transported it and which customer it went to. The new electronic system replaced a manual system of paper dockets with a mobile app used by log truck drivers. The app runs on a smart device located within each truck.

The introduction of the app has reduced duplication of effort and minimised the risk of data entry errors by allowing information about each load to be captured on the device and directly transferred to customers, contractors and Forestry Corporation staff. In doing so, it is expected to drive down administration costs throughout the supply chain.

Importantly, it also provides Forestry Corporation with real-time, or close to real-time, data about what products are delivered to which customer and when, which improves our ability to respond to customer requests and make better informed decisions about things like scheduling of deliveries.

Because harvesting crews often work in remote locations with limited mobile coverage, the app has been designed

to accurately capture and store data while not connected to a network and transmit the information when a connection becomes available.

Project Coordinator Russell Riepsamen said the division had seen immediate improvements in supply chain management and was already investigating opportunities to further expand the information captured by the system.

"This system has already given us a better understanding of what's being moved at any given time, which helps us make better decisions and be more responsive to customer requests or opportunities that may arise, but we see a lot of potential to develop it further," Russell said.

"We're now in the process of expanding the system to allow us to capture up-to-date information about what products we have in the forest at roadside and ready for transport. Ultimately, improving what we know about our products at any point in time will have huge benefits for the planning and scheduling of our operations and lead to a more efficient supply chain."



100% OF SOFTWOOD PLANTATIONS DIVISION'S DELIVERED SALES USE ELECTRONIC DOCKETING



PROFITABILITY



Funding recognises provision of community services and facilities

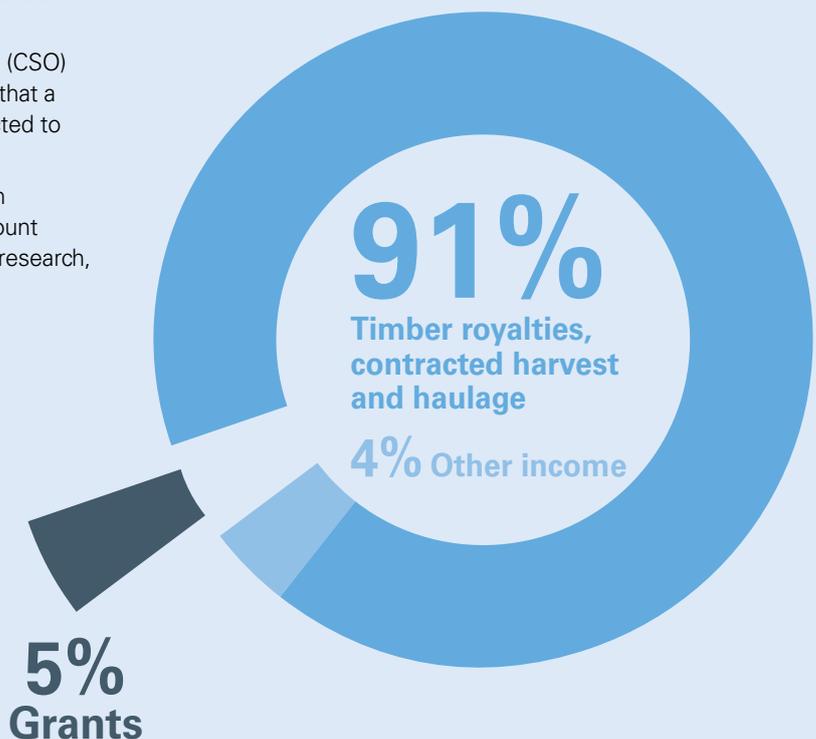
As well as operating a profitable timber harvesting business, Forestry Corporation manages an estate spanning more than two million hectares of forested crown land on behalf of the NSW Government. Around one million hectares of this estate is non-commercial forest that is not available for timber harvesting and never will be. In this non-commercial land, we provide community services ranging from maintaining roads and recreation facilities for free community use to environmental conservation, protection of Aboriginal and historical cultural heritage and fighting and preventing fires.

We receive an annual Community Services Obligation (CSO) grant from the NSW Government to provide services that a comparable commercial business would not be expected to provide in the course of normal business.

The CSO grant does not account for all expenditure on community services. We spend around the same amount again managing fire, pests, weeds, roads, recreation, research,

conservation and protection of cultural heritage in productive forests, which contributes to our operations but also benefits the community. The costs of providing these services are recorded as operational expenses and are wholly recouped by revenue from timber production and other commercial activities.

REVENUE FY16



CSO expenses incurred	\$'000 FY16
Community firefighting and prevention	3,986
Government relations and community engagement (non-commercial)	1,340
Recreation and tourism	3,660
Road construction and maintenance for community	4,678
Research	850
Non-commercial forest management	1,509
Total¹	16,023

¹ Forestry Corporation recognised revenue from CSO grants of \$15,995,000 in FY16, with expenditure beyond this amount funded from its operating business.

OUR ENVIRONMENT



FOREST ECOSYSTEM HEALTH

Data confirms plantations are in good health

Softwood and hardwood plantations are surveyed annually by research scientists at the Forest Research and Policy unit of the Department of Industry – Lands to assess their overall health and identify areas affected by damaging pests or diseases. In FY16, the entire softwood plantation estate was assessed in a combination of aerial and on-ground surveys and 75 per cent of the hardwood plantation estate was assessed using on-ground surveys.

A greater area of softwood plantations was unaffected by health issues than last year. In part, this improvement was due to good rain, which reduced susceptibility to issues associated with water stress such as the Monterey pine aphid (*Essigella*), drought-related tree mortality, *Diplodia* canker and *ips* bark beetles. In addition, the *Diaretus essigellae* wasp, which was introduced as a biological control for *Essigella* several years ago, has been successful in all regions except Grafton. Encouragingly, very low levels of aphid activity were observed this year and negligible damage was recorded. Possum damage also decreased and there was minimal damage from the *Sirex* wood wasp.

An overall reduction in damage from *Dothistroma* needle blight was also recorded this year, but there was a localised increase in *Dothistroma* needle blight in the plantations on the Northern Tablelands that required chemical control. There was also a significant increase in damage from *Cycalneusma* needle cast, which causes needle chlorosis and premature needle cast, around Tumut. This issue, which had not been reported previously, was found to affect 5.8 per cent of the estate and will be monitored into FY17.

Mike Freeman, Silviculture Manager for the Northern Softwoods Region, said the data paints a positive picture of overall plantation health.

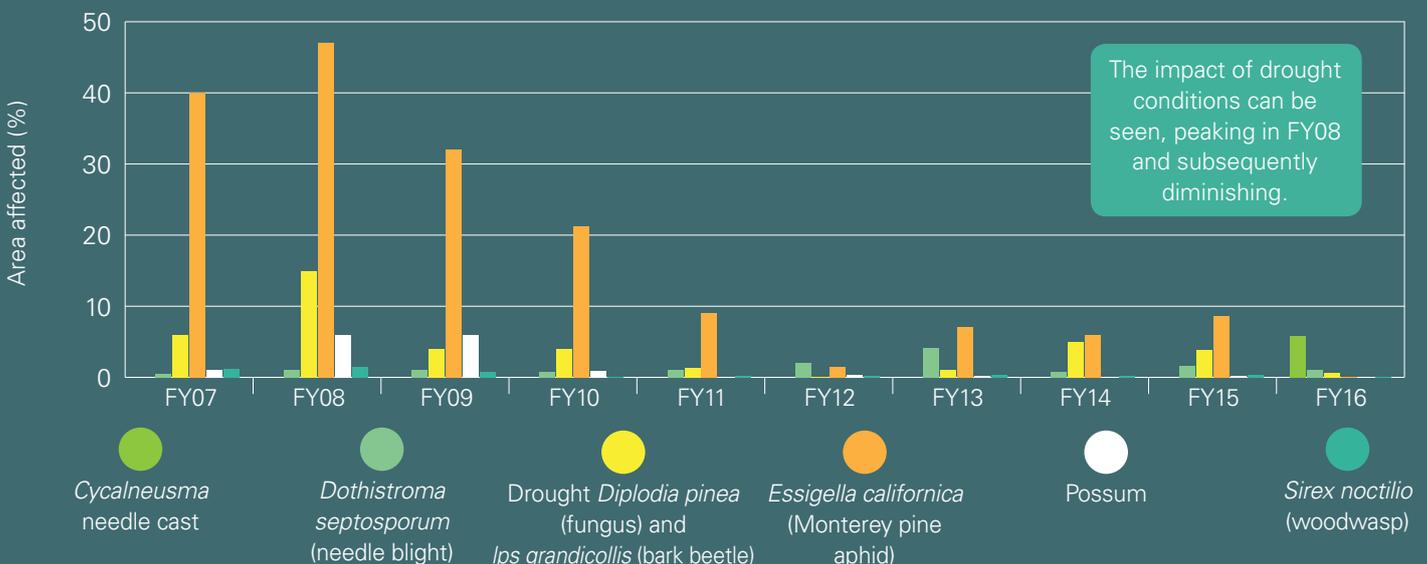
“This year, we’ve seen downward trends in the prevalence of a few key pests and diseases, which is an encouraging indication that work that’s been done over many years to breed and plant resilient trees and control threats like the Monterey pine aphid are paying dividends. Continued monitoring will ensure we identify and address any new emerging threats to preserve the health of the plantation estate,” Mike said.

In the hardwood plantations, a change in methodology saw a broader focus on monitoring plantations established over the past 30 years, where previously the focus had been on post-1994 plantings. As a result, fewer areas were reported to be affected by agents such as stem borers, which are generally more severe in younger plantations. While there was a slight increase in the number of plantations affected by Bell Miner Associated Dieback (BMAD) there were very low levels of *Psyllid* damage overall.

Damage from herbivorous insects increased, with severe damage from Christmas beetles in many *Eucalyptus dunnii* plantations. Stem borers affected 3.4 per cent of the estate and, while leaf and shoot fungi were identified in many plantations, levels of damage were below the reporting threshold.

In addition to managing pests that threaten tree health, Forestry Corporation invests in managing larger feral animal pests such as foxes and wild dogs that can threaten both flora and native wildlife, as well as controlling weeds in plantations and native forest.

SOFTWOOD PLANTATIONS HEALTH





FOREST ECOSYSTEM HEALTH

New research to enhance understanding of Bell Miner Associated Dieback

Assessing the health of the native forest estate is complex due to the large scale of the estate and impracticality of carrying out physical ground surveys in many areas. Robust natural regeneration is a good indication the forests are generally healthy, but there are several issues impacting forest health that are being closely managed.

A key issue is Bell Miner Associated Dieback (BMAD), a form of dieback affecting eucalypts that is associated with bell miner birds. The bell miners effectively farm leaf-eating *Psyllid* insects by aggressively excluding other birds which would otherwise feed on them, allowing *Psyllid* numbers to increase and repeatedly defoliate the trees. The phenomenon causes tree deaths, which in turn results in a loss of both threatened species' habitat and commercial timber. The scientific community has not reached consensus on its root causes, nor the most appropriate treatment, although increasingly it looks like lack of low intensity fire in the landscape may help create the conditions that allows BMAD to spread across large forest areas. The management of BMAD is a priority for maintaining and enhancing forest health.

Trees in both native forests and plantations are affected by BMAD, and it occurs across public and private land and in both State forests and national parks. Forestry Corporation actively participates in the BMAD Working Group, which brings Government, community groups, landholders and other members of the community together to curb its spread.

To address the issue, fire has been used to reduce understorey in certain areas following work that found this approach successful in Queensland, and two large-scale adaptive management trials have been assessing adaptive management approaches since 2006. However, there is hope that two new research projects underway will enhance understanding and management of the issue.

Currently, Forestry Corporation assesses the presence and extent of BMAD during annual plantation health surveys and during harvest planning. A survey of the hardwood plantation estate during FY16 identified a slight increase in the number of plantations affected by BMAD and new research work is

\$60K SPENT ON BMAD RESEARCH IN FY16

underway to identify the extent of BMAD across the native forest estate.

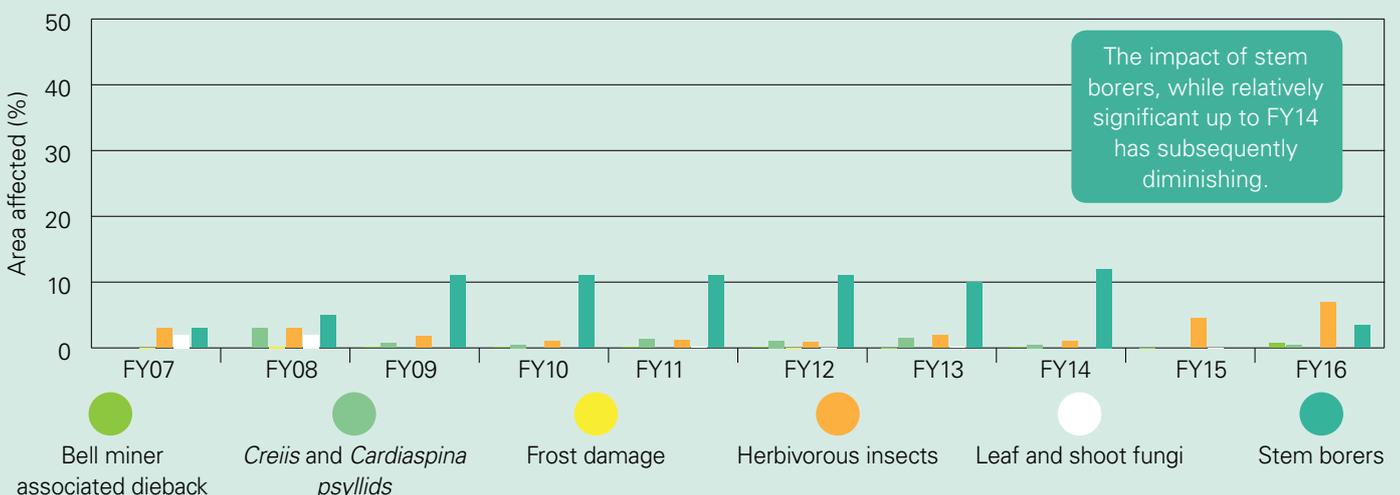
Working with the Forest Research and Policy Unit in the Department of Industry – Lands, Forestry Corporation is mapping the extent of BMAD across a very large area of the north coast from aircraft. The data will be compared with the results from a 2004 survey to assess the spread over the past 12 years. Staff are also carrying out ground-based canopy health assessments to validate the effectiveness of using satellite images to identify BMAD.

Forestry Corporation is also actively engaged in a new National Heritage Trust project administered by the Office of the Environment and Heritage to collate, define and rate research on the phenomenon and recommend treatment options for affected areas.

Strategic Planning Manager Justin Williams said it was hard to measure the spread and extent of BMAD, making it difficult to monitor the success of various rehabilitation measures and understand those efforts in a landscape-scale context.

"If the work we're doing finds that satellite imagery can be used to effectively identify BMAD, we will be able to retrospectively monitor changes in the extent of BMAD on a 'wall to wall' basis. It will also provide a cost-effective method for monitoring the extent of BMAD in the future. This means we will be better equipped to monitor the short and long-term effectiveness of treatments recommended by the National Heritage Trust, not just at the site scale but also at the landscape scale," Justin said.

HARDWOOD PLANTATIONS HEALTH





FOREST ECOSYSTEM HEALTH



Monitoring sheds light on Hastings River Mouse habitat

Forests are dynamic and diverse and are home to a vast variety of flora and fauna. Different plant and animal species thrive in different forest types and conditions. Some species need light and canopy disturbance to thrive, while others need areas of forest to be left undisturbed.

When preparing plans to harvest native forests, our ecologists survey the wildlife, birdlife and vegetation in each compartment to identify threatened species and ensure protection measures are put in the harvest plan. Appropriate protection measures for each threatened species are specified in native forestry regulations. These were determined by expert scientific panels and are designed to ensure areas of forest where threatened species have been found retain the conditions these species need to thrive.

Forestry Corporation's qualified ecologists and trained field staff routinely survey forest compartments during harvest planning. We keep records of all threatened flora and fauna sighted and map their locations using GPS to ensure they are protected during any operations. The number of surveys completed and the number of species seen fluctuate from year to year for a range of reasons, from harvest planning schedules to the prevalent species in different types of forest being surveyed. Data on species sightings simply presents a snapshot of activities undertaken during the year and is not a reliable measure of the number of species in forests.

To generate useful data on forest biodiversity and how certain species respond to activities and management practices, Forestry Corporation has established targeted monitoring programs providing information on everything from the impact of fox abatement on native wildlife to the health of forest waterways and catchments.

One such initiative is a monitoring program for the Hastings River Mouse (*Pseudomys oralis*) that has been established in

21 TARGETED SPECIES MONITORING PROGRAMS

Doyles River, Styx River, Marengo and Highlands State Forests in northern NSW. The program involves setting more than 1,000 traps in a grid structure for four nights during autumn at five sites to capture and assess the small mammals.

The aim is to track the long-term persistence of the species, gain an understanding of how populations respond to disturbance and provide greater understanding of the role of competition from the more common Bush Rat (*Rattus fuscipes*).

Following a second annual survey during March and April 2016, Senior Ecologist Chris Slade said evidence was pointing towards the Hastings River Mouse preferring habitat that has been recently disturbed.

"The evidence we're gathering from this monitoring program indicates the Hastings River Mouse responds well to disturbance. For example, we trapped several at one of the sites in Styx River State Forest that had recently been harvested for timber where none had been recorded in the mature forest during pre-harvest surveys. We will be carrying out hazard reduction burning in several grids before the 2017 trapping to see if the populations similarly respond to disturbance from fire," Chris said.



FOREST ECOSYSTEM HEALTH

INDIVIDUAL THREATENED SPECIES SIGHTINGS

	Protected	Threatened ¹
Arboreal mammals	653	580
Bats	399	355
Frogs	1,279	227
Ground mammals	1,446	47
Birds	5,770	914
Raptors	254	50
Reptiles	72	5
Flora	147	1,050

Threatened flora species reported	18
Threatened fauna species reported	59
Number of fauna surveys	1,417
Number of flora surveys and compartment traverses	699
Incidental and other	169
Expenditure on surveys ('000)	\$1,320

Monitoring program	Location	Details	Commenced
Hastings River Mouse (<i>Pseudomys oralis</i>)	Marengo, Styx River and Doyles River State Forests	1,150 traps in 23 locations	2015
Aquatic macro-invertebrates	Northern NSW	Ongoing monitoring at 6 sites	2015
Large-footed Myotis (<i>Myotis macropus</i>)	Kerewong and Kippara State Forests	Annual banding	2001
Southern Brown bandicoot (<i>Isodon obesulus</i>)	Eden	Remote cameras at 40 sites	2007
Smoky Mouse (<i>Pseudomys fumeus</i>)	Eden	Remote cameras and pitfall trapping	2008
Giant Burrowing Frog (<i>Helioporus australicus</i>)	Eden	Tadpole surveys and call recorders	2008
Biodiversity monitoring of birds, microbats, other mammals, reptiles and frogs	Brigalow-Nandewar	Sound recorders, cameras and observation	2013
Northern Corroboree Frog	Tumut area	Monitored via call response	2005
Golden-tipped Bat	Narooma	Radio tracking	2004
Burning study	Eden	Monitoring flora and fauna response to burning	1986
<i>Acacia ruppilii</i> , <i>Boronia umbellata</i> , <i>Parsonsia dorrigoensis</i> , <i>Niemeyeria whitei</i> , <i>Tasmannai pururascens</i> , <i>Hibbertia marginata</i> , <i>Grevillea quadricauda</i> , <i>Eucalyptus glaucina</i> , <i>Angophora robur</i> , <i>Maco zamia johnsonii</i>	North coast	Flora species monitoring	2005
Yellow-bellied Glider (<i>Petaurus australis</i>)	Tumut (or Bago Plateau)	Spotlighting and call playback at 123 sites	1995

¹ Vulnerable, endangered and critically endangered species are referred to as threatened species under the *Threatened Species Conservation Act 1995*. If threatened species are sighted, their presence is taken into account in preparing the harvest plan. Protected refers to all Australian flora and fauna that are not threatened species.



SOIL AND WATER

Monitoring macroinvertebrates to track waterway health

More than four decades of hydrology research and water quality monitoring has consistently shown that water from streams in forests is among the highest quality in the landscape. While higher sediment concentrations in streams occur naturally after heavy rainfall events, it's also known that forestry activities in both plantations and native forests can temporarily raise turbidity levels.

Because Forestry Corporation is conscious of the potential impact its operations can have on waterways, we have a range of riparian protection measures to minimise sedimentation and protect streams. Half of the two million hectares of State forest in NSW are managed solely for conservation and recreation and will never be harvested for timber. In addition, more than ten per cent of State forest land is fully or partly protected for catchment management purposes, including wetlands, filter strips reserved from timber harvesting or where forestry practices are modified and areas zoned as catchment under the Forest Management Zoning system.

In any given year, less than two per cent of the State forest estate is harvested for timber, which further reduces the potential impact of forestry activities such as road works and timber harvesting, on waterways. Strict rules and standards around things such as road drainage and protection of vegetation around waterways are applied in all of these operations to protect waterways and minimise sedimentation. All of these protection measures are backed up by long-running water quality monitoring programs.

To date, water quality monitoring has largely focussed on the level of turbidity and total suspended solids in streams and not the impact temporary increases may have on aquatic macroinvertebrates. Aquatic macroinvertebrates are bugs that live in waterways and their presence or absence is a useful indicator of the health of the ecosystem of a stream or waterway.

In 2015, Forestry Corporation began a pilot study to collect and identify aquatic macroinvertebrates from six sites on the Wilson River on the north coast, including four sites in State forest and two control sites in adjoining national parks. In December, turbidity probes were installed at two sites to monitor sediment levels where the samples are collected.

Water Quality Monitoring Project Officer Lisa Turner said the pilot project would sample macroinvertebrates each autumn and spring for a minimum of two years pre and post harvesting.

"This study will include monitoring before and after timber harvesting, which is planned in the study area during 2017, so it will be an important measure of how these macroinvertebrates, and by extension the aquatic ecosystem, respond to temporary increases in turbidity. This will give us a much clearer understanding of the outcomes of the work we do to protect the health of waterways within forests," Lisa said.



Riparian and wetland management

269,643 ha

MANAGED FOR CATCHMENT PROTECTION





SOIL AND WATER

Erosion incident puts hardwood plantation re-establishment under the microscope

Erosion stemming from a heavy rainfall event during a plantation's fallow period before replanting has led to a review of hardwood timber plantation re-establishment procedures and new measures to reduce the risk of soil movement on sites with high erosion potential.

Forestry Corporation was fined \$15,000 after soil from a newly harvested plantation area washed into a waterway in early 2015 and launched an extensive internal investigation to identify improvements that would prevent a similar incident in future. Plantation managers now collaborate with soil and water specialists during the planning phase of every hardwood plantation harvest operation to identify areas at risk of erosion.

Where a soil and water specialist identifies an increased risk of erosion, site-specific special protection measures are developed, ranging from increasing the buffer widths around streams to specific cultivation practices that reduce the potential for runoff to concentrate, and sowing a cover crop immediately after harvesting.

Plantation Manager Graeme Sonter said new processes to limit the risk of erosion were implemented during FY16.

"Forest management is a process of continuous improvement and this erosion incident prompted us to review every aspect of our operations to ensure something like this won't happen again. Each time a timber plantation is harvested, more than 1,100 new seedlings are planted in every hectare to re-establish the plantation and protect against erosion over the long term and we now have robust processes that provide all recently harvested sites with enhanced protection against erosion in the short-term as well," Graeme said.

EXPENDITURE ASSOCIATED WITH HARVEST-RELATED PLANNING AND COMPLIANCE IN HARDWOOD FORESTS DIVISION (\$'000)

	FY16
Compliance harvesting	2,624
Compliance tree-marking	3,278
Harvest planning	3,259
Pre-harvest surveys	1,790
Regulation licence charges	787

COMPLIANCE ITEMS

	FY16
Number of compliance check sheets conducted by Forestry Corporation supervisors	
Compliance monitoring	1,291
Systems implementation	293
Number of non-compliances recorded by staff for corrective action in moderate and above categories:	
Extreme	0
Major	1
Moderate	20
Number of clean-up notices issued to Forestry Corporation	
Clean-up notices	1
Number of fines (penalty infringement notices) issued to Forestry Corporation by regulators under various legislation	
<i>National Parks and Wildlife Act 1974</i>	2
<i>Protection of the Environment Operations Act 1997</i>	0
<i>Fisheries Management Act 1994</i>	0
<i>Plantations and Reafforestation Act 1999</i>	0
Number of prosecutions recorded against Forestry Corporation under the various legislation:	
<i>Threatened Species Conservation Act 1995</i>	0
<i>National Parks and Wildlife Act 1974</i>	0
<i>Protection of the Environment Operations Act 1997</i>	0
<i>Fisheries Management Act 1994</i>	0
<i>Plantations and Reafforestation Act 1999</i>	0



CARBON



Sequestering and storing carbon in actively managed forests

Sustainably managed forests play an important role in mitigating climate change by taking carbon out of the atmosphere and storing it. Forests also produce timber, a natural and renewable resource that itself stores carbon for the life of wood products and, taking into account the energy required to transform raw materials into building products, has a much smaller carbon footprint than other popular building materials such as concrete and steel.

After more than 15 years at the forefront of carbon research, including being the first forestry organisation in the world authorised to trade carbon credits from forests in a registered greenhouse gas abatement scheme, Forestry Corporation is continuing to investigate carbon balance and new ways to maximise the carbon benefits of forest management.

This research has included work to better understand the volume of carbon stored in working forests. The annual sequestration, or capturing, of carbon in working forests is expressed in two parts, firstly the sequestration achieved through forest growth and secondly the amount stored for the long term in products like flooring or furniture.

Formulas have been developed, tested and refined over many years to calculate both sequestration and long-term storage, with formulas for the latter taking into account the carbon lost during processing and manufacturing as well as the carbon recovered, used and stored for the life of wood products. The formulas have been verified through peer reviewed research.

In the calculations presented in this report the estimated long-term carbon stored in timber products is calculated for the previous twenty years of production. This reflects the fact that the carbon in these products has been taken out of the forest carbon cycle and transferred to long term storage in products that are used, recycled and eventually stored in landfill.

The calculation also estimates carbon used in fuel during the harvesting and transport of timber from the forests, as well as the emissions associated with hazard reduction burning and bushfires. While the vehicle fuel emissions are negligible when compared to bushfire emissions, much of the carbon lost through fires is recovered by regrowth whereas fossil fuel emissions are permanent.

It also takes into account new research into the annual energy and product substitution impact achieved by using locally-grown, certified wood and timber products instead of products sourced from less regulated markets or other popular but more carbon intensive alternatives such as concrete and steel. This is based on modelling carried out by the Department of Industry - Lands Forest Science Unit in a major national project that examined the greenhouse balance of native forest management in NSW¹.

Information Systems and Frameworks Manager Morgan Roche said the new research reinforced the correlation between certified sustainable forest management practices and carbon sequestration.

“New research is indicating that if locally-produced, certified sustainable timber and wood products were not available, carbon emissions would increase as people source alternatives to meet their demand for construction materials or paper products. The research indicates that sourcing pulpwood in particular from less regulated and uncertified sources would cause a dramatic increase in carbon emissions,” Morgan said.

Carbon research is among a range of projects carried out as part of Forestry Corporation's \$1.7 million investment in research during FY16. Research is carried out by the Forest Science Unit in Department of Industry – Lands as well as through partnerships with bodies such as Forest and Wood Products Australia. For further details about the range of research carried out in FY16, see the Annual Report on our website.

\$1.7M SPENT ON RESEARCH AND DEVELOPMENT

¹ Ximenes et al 2015 - Carbon stocks and flows in native forests and harvested wood products in SE Australia. Report prepared for Forest and Wood Products Australia. The report can be downloaded at <http://www.fwpa.com.au/rd-and-e/resources/883-carbon-stocks-and-flows-in-native-forests-and-harvested-wood-products-in-se-australia.html>



CARBON

MODELLED CARBON BALANCE FOR HARDWOOD AND CYPRESS FORESTS

Carbon balance in native and hardwood planted forests

Total standing volume CO₂ (Mt) 1,530.59

Annual carbon sequestration

Annual CO₂-e sequestered forest growth (Mt) 5.90

Annual CO₂-e harvest storage in hardwood products (Mt) 0.20

Cumulative long-term CO₂-storage in solid wood over a twenty year period (Mt) 6.48

Annual carbon emissions

Annual CO₂-e harvest and haulage emissions (Mt) 0.02

Annual CO₂-e fire emissions (Mt) 1.69

Annual non CO₂ fire emissions (Mt) 0.08

Annual energy and product substitution impact (MtC)

Poles, piles and girders 0.01

Sawn hardwood 0.08

Pulp 1.27

Annual sequestration balance

Net CO₂ (Mt) 5.68

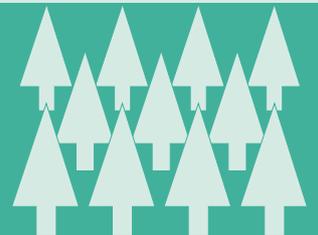
5.90

Net CO₂-e megatonnes sequestered by hardwood and cypress forests which is equivalent to 4.2% of the total CO₂ emission in NSW



3.34

Net CO₂-e megatonnes sequestered by softwood plantations which is the equivalent of the annual energy use of almost half a million homes



0.06

MEGATONNES annual carbon emissions from harvest and haulage, and fleet use

OUR COMMUNITY



NEIGHBOUR AND STAKEHOLDER RELATIONS



Community partnerships improve forest access and environmental sustainability

With thousands of direct neighbours and stakeholders state-wide, community partnerships and volunteer programs are an important way for forest neighbours and community members to formally engage in forest management.

Community partnerships and volunteer programs primarily focus on conservation projects, but also contribute to improving the visitor experience in State forests.

In the Oberon region, Forestry Corporation has teamed up with private plantation owners Hume Forests Limited and Central Tablelands Local Land Services to enhance the habitat of a population of the endangered Booroolong Frog (*Litoria booroolongensis*), which has been found in the Essington State Forest and neighbouring land managed by Hume Forests. The partnership will run for several years and involve tree planting, weed removal and work to reduce erosion and sedimentation.

Forestry Corporation has also been working with Conservation Volunteers Australia (CVA) for more than a decade to bring local and international volunteers to forests around the state to take part in a range of projects from removing weeds to upgrading walking trails.

In FY16, CVA volunteers in the Hunter region helped open up the first 100 metres of the popular Peach Tree Walking Track in Chichester State Forest for wheelchairs, walkers and prams. The one-kilometre loop track takes visitors through stunning rainforest, past huge strangler figs and along the Allyn River and had previously only been accessible by foot. Forestry Corporation is now working to improve the gradient of some sections of track to ultimately enable wheelchair access to the river.

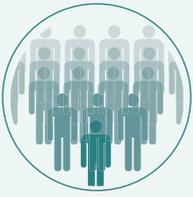
Partnerships Leader, Mike Hill, said the work done to improve accessibility at Peach Tree Walking Track is just one great example of what can be achieved working in partnership with the community.

"I've been lucky enough to work closely with community volunteers in several State forests over many years and have seen

the contribution all our volunteers make to improving the forest environment and enhancing the experience for visitors. These programs also provide us with an ongoing two way dialogue with community members, which is really valuable for forest managers," Mike said.



1,086 DAYS VOLUNTEER PROGRAMS



NEIGHBOUR AND STAKEHOLDER RELATIONS



Bumper hazard reduction burning season protects communities from fire

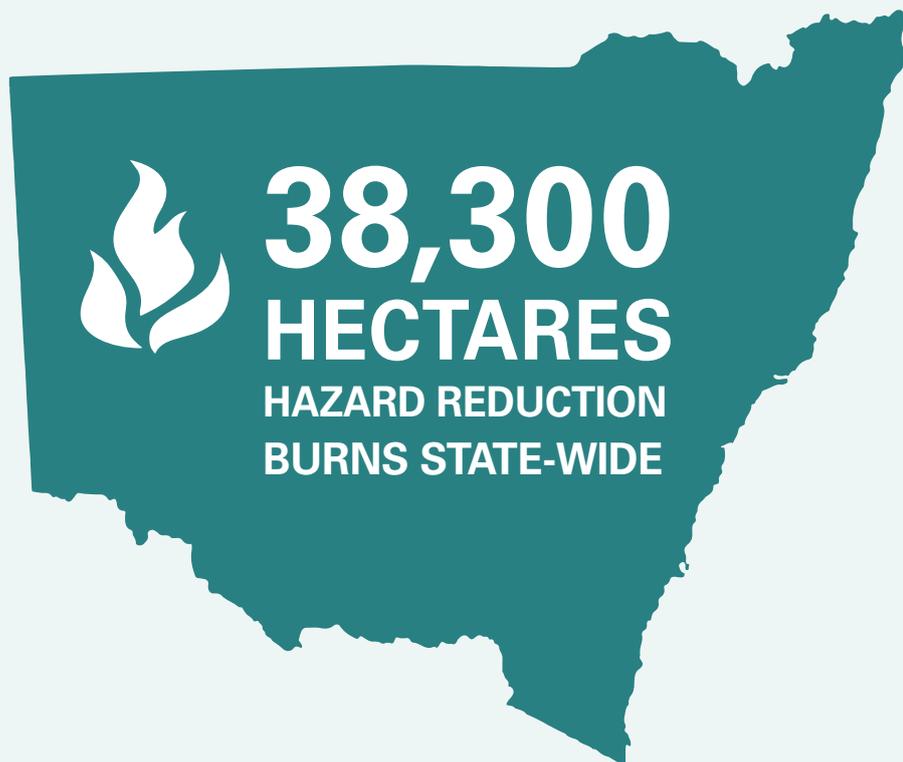
Mild weather conditions and the flexibility of a seasonal firefighting workforce presented the ideal environment for hazard reduction burning in many parts of the state during FY16. A bumper winter burning season on the mid north coast in particular, where hazard reduction burns were completed over more than 11,500 hectares of forest, contributed to Forestry Corporation's largest hazard reduction burning rate in more than six years. A total of 38,300 hectares were treated state-wide, greatly exceeding the target of 22,000 hectares set by the Rural Fire Service. A further 219,702 hectares were made available for grazing further reducing the fuel load across the forest estate.

Preparation is a fundamental part of fire management and the hazard reduction burning program complements investments in upgrading equipment such as response vehicles, radio facilities and fire towers, maintaining fire trails and staff training. While many staff have firefighting responsibilities as part of their roles, in recent years a workforce of casual firefighters has been engaged across the state. This not only bolsters firefighting capabilities over the peak fire season but also provides local staff with the flexibility to engage crews to take advantage of good hazard reduction conditions.

Wauchope-based Forest Protection Manager Karel Zejbrlik said fire management was a key concern for many forest neighbours and communities abutting State forests.

"Our main objective in completing hazard reduction burning is to protect communities and the environment by reducing the intensity and severity of wildfires. We're well equipped to respond quickly if a wildfire does break out, and a solid program of hazard reduction ensures we'll be in a strong position to protect the forests and our neighbours from wildfire," Mr Zejbrlik said.

Hazard reduction burns are carried out in strategic locations where they will have the most impact. Burning priorities are established in consultation with regional Bushfire Management Committees drawing on sophisticated laser imagery known as LiDAR, which is used to detect areas carrying high fuel loads, as well as on-the-ground assessments. Burns are planned in close consultation with local communities and taking into account weather, wind conditions and fuel moisture.



0.57%
ESTATE
AFFECTED BY
WILDFIRES



NEIGHBOUR AND STAKEHOLDER RELATIONS

Donation cements long-running support of rural education

A \$25,000 donation to the Country Education Foundation, a not-for-profit organisation assisting disadvantaged rural and regional school leavers to transform their lives through education and training, has enhanced Forestry Corporation's contribution to community education during FY16. The donation, made in Forestry Corporation's centenary year, builds on a long history of providing opportunities for young people in rural and regional communities and will help support these students engaging in university studies, completing apprenticeships or entering employment.

CEO Nick Roberts said the donation was made to celebrate a long history of creating jobs in the bush and help the Country Education Foundation provide more opportunities for education and employment beyond forestry to the next generation.

"Over the past 100 years, forestry has proven to be a great career path for young people in rural and regional NSW and, as a key member of an industry that employs around 22,000 people throughout NSW, Forestry Corporation continues that legacy today," Mr Roberts said.

The donation complemented long-running education programs including the school excursion programs at Cumberland and Strickland State Forests and contribution to the industry-wide Forest Learning program, which provides a suite of resources and information about forest management for teachers and students.

**\$63,757 SPENT
COMMUNITY SPONSORSHIPS
AND DONATIONS**

**2,595 CHILDREN
ENGAGED IN EXCURSIONS**





SERVICES AND FACILITIES



Photo: Bruce Thistleton.

Rest area revamp showcases south coast timbers

A major revamp has breathed new life into a popular rest area and walking track off the Princes Highway near Narooma. A recent timber harvesting operation in the surrounding forest provided an opportunity to redesign the rest area in Bodalla State Forest and realign the Mummaga Lake Walking Track.

Architect Steve Gorrell, who has designed award-winning facilities in State forests on the north coast including the Forest Sky Pier at Sealy Lookout near Coffs Harbour, redesigned the rest area to improve the overall site and to allow for greater accessibility.

Bodalla Forest Rest Area has long been a popular stop for families and caravaners travelling along the highway and the Mummaga Lake Walking Track is a short but picturesque walk loved by many locals. Locally-sourced hardwood timbers have been used as a part of the upgrade, helping to reduce the carbon footprint associated with overall construction and demonstrating timber's versatility and beauty as a building product.

Batemans Bay-based field worker Bruce Thistleton, who constructed the new hardwood facilities, said the upgraded rest area showcased both the forest and the timber it produced.

"Being so close to town and the highway, this rest area has always been a great place for people to experience our local forests and it's exciting that people will now also enjoy facilities made from the beautiful south coast timbers these forests produce," Bruce said.

28 MILLION VISITS A YEAR

150+ DESIGNATED RECREATIONAL VISITOR SITES

5 TOURISM AWARDS WON





CULTURAL



Increasing access to forest products supports cultural education

Bark from State forests is being used to create canoes, coolamons, fishing lines and traditional crafts thanks to partnerships between Forestry Corporation and a growing number of local Aboriginal communities.

Bark is usually stripped from trees during timber harvesting and burnt to both reduce the fuel hazard and release nutrients back into the soil. Forestry Corporation recognised an opportunity to improve access to forest products for traditional crafts by partnering with local Aboriginal communities to supply them with bark before trees are harvested for timber.

When communities request bark, our staff and timber contractors work with our Aboriginal Partnerships Team to identify the tree species required and carefully remove the bark in large sections that are suitable for canoe building. Our staff then carefully assist with transport and deliver these large sheets of bark to Aboriginal communities.

Aboriginal Partnership Liaison Deborah Swan said bark is highly valued by Aboriginal communities because it is such a versatile material.

"We started out providing bark and other forest products to Aboriginal groups involved in teaching young people traditional skills such as canoe making, but we're now working with a growing number of local Aboriginal communities up and down the east coast who are interested in gathering bark for cultural purposes," Deb said.

A large number of canoes that have been produced from this partnership will be launched into Darling Harbour at the Nawi (Canoe) Conference, held at the Australian Maritime Museum during November.

Sustainable forest management recognises opportunities to use forest resources for a variety of purposes, ranging from cultural celebrations to construction, while ensuring that forest features are protected today and into the future.

57,422 HECTARES OF STATE FORESTS HAVE RECOGNISED NATIVE TITLE

6 GAZETTED ABORIGINAL PLACES

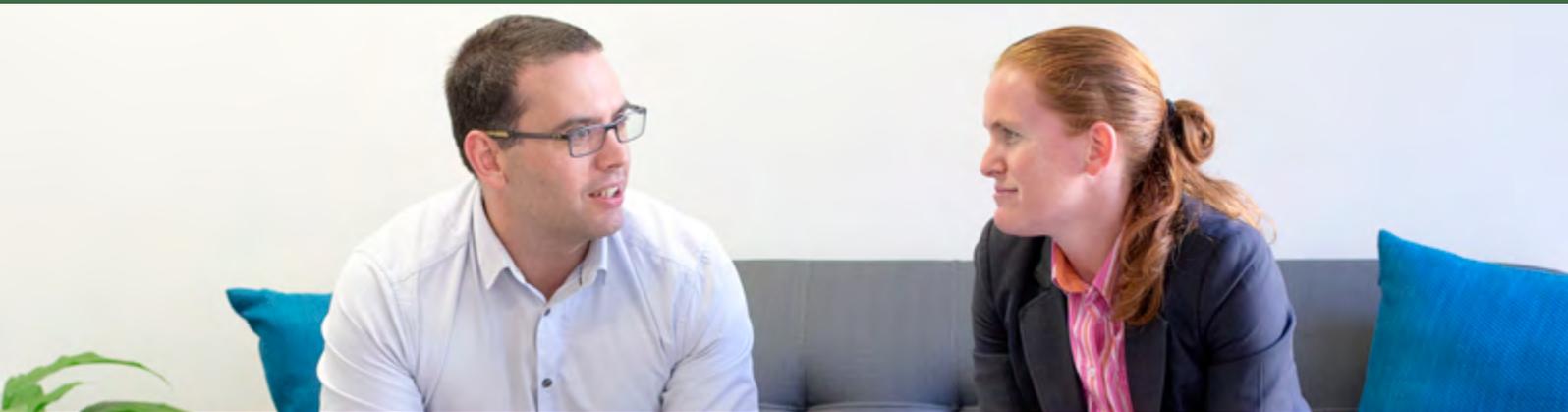
3,453 ABORIGINAL SITES

1,140 HECTARES MANAGED FOR ABORIGINAL CULTURAL HERITAGE

3,653 HECTARES MANAGED FOR NON ABORIGINAL CULTURAL HERITAGE

OUR STAFF

HEALTH AND SAFETY



Valuing staff wellbeing

The wellbeing of our people and communities was established as a core corporate value following input from staff throughout the business. New faces of the Health and Safety team include Manager, Amanda Tarbotton and Injury Management and Wellbeing Coordinator, Luke McIlroy.

Despite ongoing efforts, safety performance in FY16 was disappointing. The Total Recordable Injury Frequency Rate was higher than the target. At the same time, reporting of incidents, near misses and hazards has improved.

The team continues to deliver a range of initiatives to deepen and mature our safety culture and promote staff wellbeing.

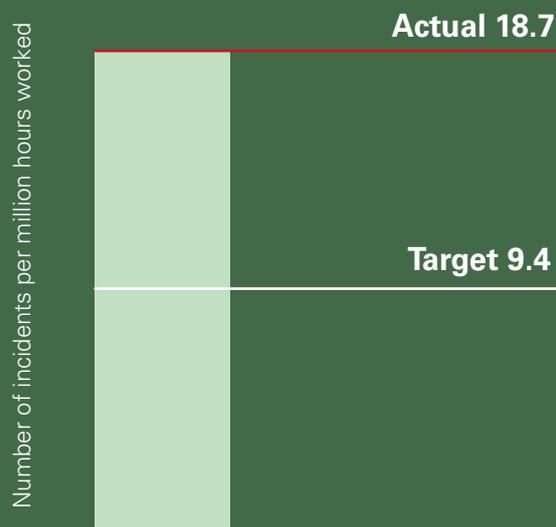
“Safety is always our priority and promoting staff wellbeing is an important part of preventing injuries before they happen. Particularly in physical jobs, targeted wellbeing programs can play a big role in reducing the impact of muscular skeletal injuries. Wellbeing is also something people have told us they value, so we’re now collaborating with staff throughout the organisation to look at new opportunities to improve their wellbeing at work,” Amanda said.

Forestry Corporation completed its first staff wellbeing survey during FY16 and plans to repeat similar surveys in future to gauge improvements in wellbeing.



RATE A WELLBEING PROGRAM AT WORK AS IMPORTANT OR CRITICAL

TOTAL RECORDABLE INJURY FREQUENCY RATE





HEALTH AND SAFETY



Driving safety throughout the supply chain

A series of incidents involving log trucks during FY16 drove a renewed focus on safety throughout the supply chain. While log haulage is carried out by contracted private operators, with more than four million tonnes of timber and log products being transported from NSW State forests through local communities each year, the safety of timber transport is paramount.

Training workshops and field days were held for staff and contractors, including drivers, schedulers and transport fleet managers, across the State to improve awareness of the primary factors affecting heavy vehicle stability, give drivers the skills to prevent rollovers, which account for a quarter of crashes involving log trucks, and benchmark safer practices.

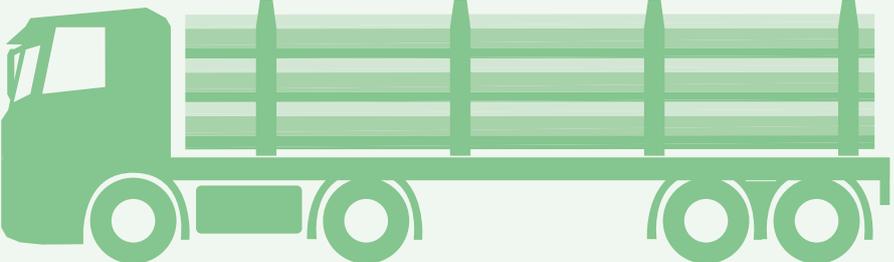
Forestry Corporation has also joined forces with other members of the Australian Forest Products Association and the forestry industry to focus on industry-specific safety improvements and will collaboratively begin work in FY17 to develop a Log Transport Code of Practice with the national heavy vehicle regulator that will take into account the unique issues facing the forestry industry.

The driver training and industry collaboration complement existing measures ranging from completing external accident investigations, to mandating specific safety technology in contracts and working with industry, supply chains, local governments and road managers to increase the use of safer log transport configurations.

Tijmen Klootwijk, Haulage and Sales Manager for the Northern Softwoods Region, said working in partnership had already delivered improvements in the Oberon region, with local staff working with haulage operators Mangan Harvest and Haul and Oberon Council to put safer next generation log trucks onto the region's roads.

"The next generation log trucks spread loads across a longer vehicle to significantly lower the centre of gravity and dramatically reduce their rollover risk. We're hoping that by working with contractors throughout the state we can drive similar safety improvements elsewhere," Tijmen said.

"Our log truck drivers share the roads with local communities throughout NSW so any improvements we can make in driver training and vehicle stability will improve safety for all road users."

100+ 
LOG TRUCK DRIVERS TRAINED



ORGANISATIONAL DEVELOPMENT



Performance program enhances skills and progresses careers

More than 95 per cent of staff are now actively engaged in skills and career planning, with 433 staff from all levels of the business taking part in the professional development scheme during FY16. The scheme, which involves performance planning, professional development and a six-monthly review process, was further enhanced with the introduction of individual development plans that encouraged staff to identify skill development opportunities and articulate career goals.

Leadership is recognised as having a central role in business performance and as such, Forestry Corporation invested in the LifeStyles Inventory (LSI) program with almost 100 leaders in the business participating in assessment and coaching during FY16. Enhancing staff skills in leadership, coaching and driving performance continues to be a focus for the business.

Firefighting is a core capability for many staff, and as a standard part of fire season preparation employees involved in firefighting take part in regular training to ensure their skills remain current and can also enhance their firefighting skills by completing national units of qualification.

Katie Brien, a Wauchope-based GIS officer, was one of three Forestry Corporation staff to take up the opportunity to gain a national qualification by taking part in a multi-agency air observer course. The course involved staff from other firefighting agencies including the Rural Fire Service, the NSW National Parks and Wildlife Service, Parks ACT and the Roads and Maritime Service. Katie will now be placed on a list of about 100 qualified air observers across NSW whose expertise can be called upon in the event of a fire emergency anywhere in the state.

"The air observers course focused on tracking the course of a fire from aircraft and using photos and map images. Working in GIS, developing and analysing maps is my forte, so the course was a great opportunity for me to apply my technical mapping abilities to a firefighting scenario. During a fire emergency it's all hands on deck and with this qualification I'll be able to build on the firefighting expertise our team already has and bring some new skills to the fire front," Katie says.



158 STAFF
STAFF ENGAGED IN FIRE
TRAINING

29 STAFF
DEPLOYED TO FIRE EMERGENCIES
INTERSTATE AND OVERSEAS



ORGANISATIONAL DEVELOPMENT



Survey shows staff engagement on the rise

When Forestry Corporation completed its first comprehensive survey to gauge the level of staff engagement in 2014, the results were disappointing. Staff are considered to be engaged if they speak positively about the organisation, if they intend to stay working in the business and if the organisation motivates them to complete their best work. The overall engagement score for the organisation is the percentage of employees who are engaged. An engagement score of 46 per cent placed the organisation in the bottom quartile for staff engagement and a full 11 percentage points below the Australian and New Zealand norm. Worryingly, the 2014 results indicated staff did not feel aligned with the organisation's values and did not feel the mission and goals provided meaningful direction.

Along with a range of measures to address specific feedback, more than 100 staff from throughout the business were involved in workshops during FY16 to identify values that not only align with our objectives, but also resonate with staff. The process essentially started with a blank sheet of paper and culminated in a new statement of purpose, four clear corporate values and a new strategic plan, Strategy 2019, underpinned by a series of specific initiatives.

Marty Grealy, Senior Manager Marketing for the Hardwood Forests Division, said getting grassroots involvement in developing the new purpose, values and strategy was a valuable process.

"Forestry Corporation was set up with clear objectives and has specific financial targets, but coming together with more than 100 of my colleagues from throughout the business to articulate what is important to us and what we think makes a successful business was insightful," Marty says.

"We are much more than just a timber business or forest manager. Our staff really care about the forests and are passionate about sustainability. I really think we've been able to distill some of that passion and commitment into a new statement of purpose and set of values that resonate with people throughout the organisation and the community more broadly."

A second employee engagement survey conducted during FY16 showed these measures are delivering results, with staff in all of the four divisions reporting higher levels of engagement and overall employee engagement increasing by seven per cent to 53 per cent. While this is still below the Australian and New Zealand norm, the increase is greater than what would normally be seen in organisations working to improve staff engagement.

53% OF STAFF ARE ENGAGED **↑ 7%**

100+ STAFF INVOLVED IN DEVELOPING NEW PURPOSE, VALUES AND STRATEGY



FAIR AND EQUITABLE WORKPLACE



Building a more diverse workforce

Developing a dynamic workforce for the future was one of five key initiatives identified as priorities in the newly-developed Strategy 2019. Females represent less than 20 per cent of the workforce, which is comparable with industries such as construction and mining but well below the Australian average of 46 per cent. With research showing that diverse teams are more effective and that gender diversity can even contribute to better financial performance and corporate governance, a project team has been formed to identify new initiatives that will improve diversity in the workforce.

The project team is headed up by Tamara Campbell, a Roding Supervisor for the Hardwood Forests Division's Production North region and reports directly to the CEO on progress.

"Like most foresters, I got into this industry because I love being outdoors and am passionate about the bush. I love the people I get to work with and while my career has been diverse in both location and work, the constant has been innovative and passionate workmates. I want to share this with as broad a group as possible and am enjoying working on ways to attract and retain women to forestry," Tamara says.



18%
FEMALE
STAFF

50%
TARGET

A new Enterprise Agreement

The Forestry Corporation Enterprise Agreement, which outlines the terms and conditions of employment for most staff, reached the end of its term and was renegotiated. The renegotiation was a positive process and by working constructively with staff and union representatives, we developed a very good agreement that meets the needs of both the business and our people. The two-year agreement came into effect on Thursday 27 August 2015, after being approved by the Fair Work Commission.