



NSW Forest Agreements and Integrated Forestry Operations Approvals Implementation Report 2013–14

Upper North East, Lower North East, Eden,
Southern, Riverina Red Gum, South Western
Cypress, and Brigalow–Nandewar regions

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This report was coordinated by the Stakeholder Engagement & Governance Branch of the EPA, with assistance from the Office of Environment & Heritage, including the National Parks and Wildlife Service, the Forestry Corporation of NSW and Fisheries NSW (Department of Primary Industries).

Recommended citation:

EPA 2015, *NSW Forest Agreements and Integrated Forestry Operations Approvals Implementation Report 2013–2014: Upper North East, Lower North East, Eden, Southern, Riverina Red Gum, South Western Cypress, and Brigalow–Nandewar regions*, a report prepared by the Minister for the Environment as part of the implementation of the NSW Forest Agreements and integrated forestry operations approvals, NSW EPA, Sydney.

Published by:

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PO Box A290
Sydney South NSW 1232
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ISBN 978 1 76039 352 6

EPA 2016/0263

September 2017

Contents

Overview.....	iv
1 2013–14 snapshot of ecologically sustainable forest management	1
1.1 Introduction.....	1
1.2 Ecosystem biodiversity and species biodiversity	1
1.3 Maintaining the productive capacity of forests.....	7
1.4 Maintaining ecosystem health and vitality	25
1.5 Conservation and maintenance of soil and water resources	27
1.6 Maintenance of forest contribution to global carbon cycles	28
1.7 Socio-economic benefits.....	29
1.8 Legal, institutional and economic frameworks	35
1.9 Research and development	38
2 Compliance with integrated forestry operations approvals and other requirements ..	39
2.1 Introduction.....	39
2.2 New IFOAs	39
2.3 IFOA amendments.....	39
2.4 EPA compliance program	40
2.5 Crown native forestry compliance and enforcement activities by the EPA.....	41
2.6 Private native forestry compliance and enforcement activities by the EPA.....	44
2.7 Forestry Corporation internal compliance program.....	44
2.8 Fisheries	46
3 Achievement of milestones and undertakings defined for NSW forest regions	47
3.1 Introduction.....	47
3.2 Progress in coastal Forest Agreements and IFOAs.....	47
3.3 Progress in western NSW IFOAs	47
References	49
Appendix 1: Milestones and undertakings – Coastal IFOAs.....	51
Appendix 2: Milestones and undertakings with identified time periods – Brigalow– Nandewar region.....	65
Appendix 3: Milestones and undertakings – Riverina Red Gum IFOA.....	73
Appendix 4: Milestones and undertakings – South Western Cypress IFOA	80
Acronyms and abbreviations.....	85

Overview

This is the fifteenth annual report on the implementation of the NSW Forest Agreements and integrated forestry operations approvals (IFOAs), prepared under Section 69H of the *Forestry Act 2012* and the NSW IFOAs.

This publication reports on ecologically sustainable forest management (ESFM), compliance with environmental conditions, and achievement of important milestones and undertakings in NSW coastal forest regions (eastern NSW IFOAs). It also compiles information about timber harvesting, compliance, and the achievement of milestones and undertakings for the Riverina Red Gum, Brigalow–Nandewar, and South Western Cypress regions (western NSW IFOAs).

NSW Forest Agreements and IFOAs provide a strategic and operational framework to manage public forests in NSW, with the overall objective of achieving forest conservation and ESFM.

Implementation of the agreements and approvals is a cooperative undertaking between:

- NSW Environment Protection Authority (EPA)
- Office of Environment and Heritage (OEH), including the National Parks and Wildlife Service (NPWS)
- Forestry Corporation of NSW (formerly Forests NSW)
- Fisheries NSW (now a division within the Department of Primary Industries).

What is reported

This report provides a snapshot of progress on the implementation of the NSW Forest Agreements and IFOAs for the period 1 July 2013 to 30 June 2014.

Chapter 1 provides a summary of results of monitoring important ESFM criteria and indicators for forestry areas in NSW coastal regions (and timber supply in coastal and western IFOA regions).

Chapter 2 outlines compliance with IFOAs in all regions.

Chapter 3 provides information on progress of key milestones and undertakings contained within the Forest Agreements and IFOAs in all regions.

Links to other reporting

This annual report has been streamlined to link with, and not duplicate, other published reports, including:

- 2013–14 agency annual reports which report a number of statewide highlights (including but not restricted to forest regions). During 2014, OEH, together with the Department of Planning and Environment and the Office of Local Government, joined the newly formed Planning and Environment cluster. The [OEH Annual Report 2013–14](#) covers the period 24 February 2014 to 30 June 2014 (OEH 2013c). For the period 1 July 2013 to 23 February 2014, please see the [Department of Premier and Cabinet Annual Report 2013–14](#) (DPC 2014), as it reflects the inclusion of OEH within the Department of Premier and Cabinet for that period.
- the EPA Annual Report 2013–14 (EPA 2014a), and the [Forestry Corporation Annual Report 2013–14](#) (FCNSW 2014a).
- The [Forestry Corporation Sustainability Supplement 2013–14](#) (FCNSW 2014b) complements the Forestry Corporation Annual Report. The Sustainability Supplement provides reporting based on a subset of international Montreal process criteria and

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

indicators (published in 1998 and reviewed in 2008). The Montreal criteria and indicators underpin Forestry Corporation's Forest Management System and Australian Forestry Standard certification.

- The OEH [State of the Parks program](#) (OEH 2015) is based around a triennial online survey that asks park managers to provide current information about each of their parks. The latest online survey was undertaken in 2013 (unpublished at the time of writing). The information collected helps park managers monitor the condition of protected areas, identify pressures on them, and evaluate how effectively the areas are being managed. The program is also a major information source for a large number of reporting requirements.
- The [five and ten year review of NSW Forest Agreements and IFOAs](#) (DECCW 2010) assessed the implementation of the provisions of the agreements, and whether integrated forestry operations approvals were effective in achieving their purpose. The 2010 review identified milestones that would continue to be reported, and identified other milestones and undertakings that were complete or delivered through alternative mechanisms and did not need to be reported further. As a result of the review the EPA made comprehensive amendments to the coastal IFOAs, which commenced on 1 March 2013.
- The Australian Government's [State of the Forests reporting](#) – comprehensive reporting against ESFM criteria and indicators at a national scale occurs at five-yearly intervals as part of the State of the Forests Report. Among other things, the Australia-wide report provides information on public, private and leasehold forests; native forests and plantations; forests managed for conservation and forests managed for wood production; and forests important for Australia's Indigenous people. The most recent [State of the Forests 2013 Report](#) (published in March 2014) (ABARES 2014) covers the period 2006–2011 and has been referenced in the current report as 'SOFR 2013'.

What regions are reported

This report updates compliance, achievement of ESFM and achievement of milestones in the four eastern NSW forestry regions; and compliance, timber harvesting and achievement of milestones in the four eastern regions and the remaining three western IFOA regions.

The forestry regions, mapped in Figure 1, are:

- The Upper North East (UNE), Lower North East (LNE), Eden and Southern regions with corresponding Forest Agreements and IFOAs
- Brigalow–Nandewar region, including the area under a community conservation area agreement (CCA Agreement)
- Riverina Red Gum region
- South Western Cypress region.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Integrated Forestry Operations Approval Regions

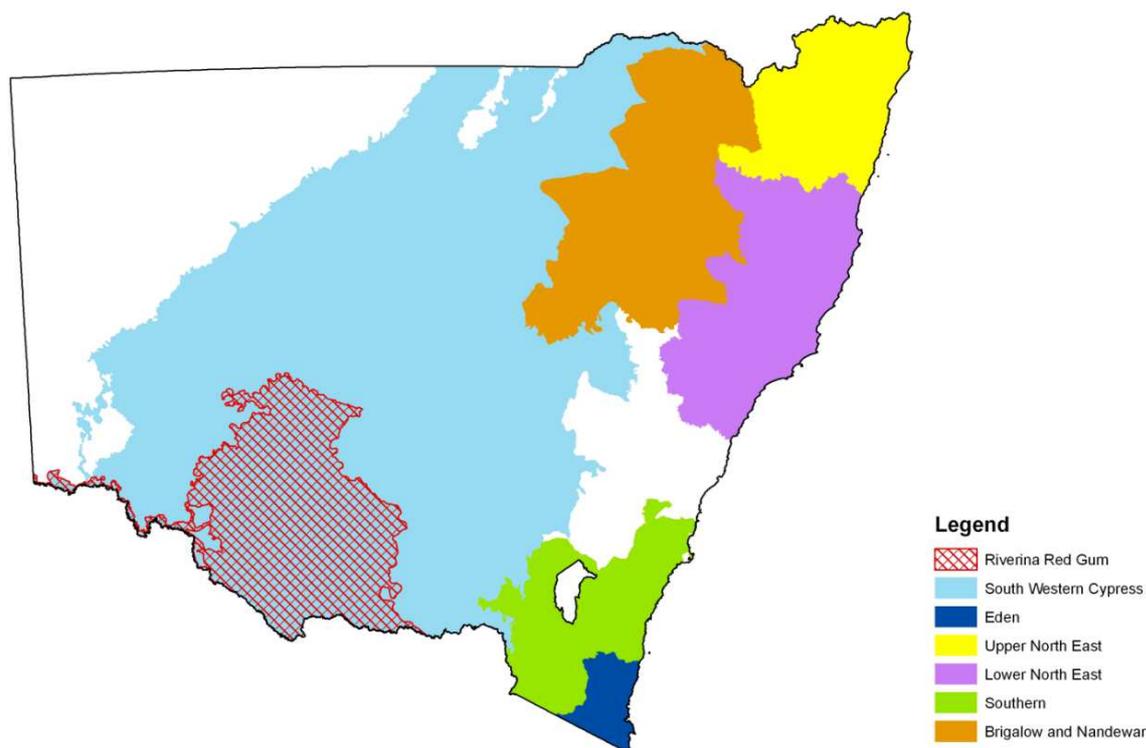


Figure 1. Forest agreements and integrated forestry operation approvals (IFOAs) operating in NSW.

Note: The four coastal regions have forest agreements and IFOAs in place. The three inland regions have IFOAs in place but not forest agreements. Also note that the Riverina Red Gum region overlaps with the South Western Cypress region but they have separate IFOAs in place for their operations.

Forest Agreements and IFOAs operating in NSW

NSW Forest Agreements and IFOAs (coastal regions)

Forest Agreement/IFOA	Signed	In place until
Eden region Forest Agreement	4 March 1999	4 March 2019
LNE region Forest Agreement	5 March 1999	4 March 2019
UNE region Forest Agreement	5 March 1999	4 March 2019
Southern region Forest Agreement	3 May 2002	3 May 2022
IFOA for the Eden region	21 December 1999	31 December 2018
IFOA for the LNE region	21 December 1999	31 December 2018
IFOA for the UNE region	21 December 1999	31 December 2018
IFOA for the Southern region	3 May 2002	31 December 2020

IFOAs established for western forest regions

Agreement/IFOA	Commenced	In place until
Brigalow and Nandewar Community Conservation Area Agreement (CCA Agreement)	11 June 2009	10 June 2016
Brigalow–Nandewar IFOA	23 October 2010	31 December 2025
Riverina Red Gum IFOA	1 January 2011	31 December 2030
South Western Cypress IFOA	1 July 2011	31 December 2025

Remaking of the coastal integrated forestry operations approvals

The NSW Government is currently remaking the IFOAs for the Eden, Southern, Upper and Lower North East coastal regions of NSW into a single IFOA that is efficient, effective and reflects modern best practice. The remake's objectives are to deliver a new IFOA with no erosion of environmental values and no change to current wood supply levels.

The NSW Government released a discussion paper in February 2014 outlining the key elements of the coastal IFOA for public comment and conducted six community information sessions around NSW. The Government received 877 [submissions](#) and published them on the EPA website. At the time of publication of this report the Government is still considering and reviewing the public submissions as part of the development of a draft consolidated coastal IFOA.

The western IFOAs are not part of the coastal IFOA remake.

Contributing agencies

Agencies contributing to this report include:

- NSW Environment Protection Authority (EPA)
- Office of Environment and Heritage (OEH) primarily the National Parks and Wildlife Service (NPWS), that manages, conserves and cares for more than seven million hectares of land in national parks and reserves. NPWS links customer, conservation and cultural outcomes in a sustainable way by building participation in the management and use of parks
- Forestry Corporation of NSW (referred to in this report as Forestry Corporation, and as FCNSW in the Appendices)
- Department of Primary Industries (DPI), including NSW Fisheries, which is also part of DPI.

1 2013–14 snapshot of ecologically sustainable forest management

1.1 Introduction

Monitoring of indicators is an integral component of ecologically sustainable forest management (ESFM). ESFM criteria and indicators were established in the NSW Forest Agreements (for coastal regions) to track changes in key social, economic and environmental values over time.

ESFM is defined in the NSW Forest Agreements as the guiding philosophy of forest conservation and management, and is based on the recognition that forests hold social, economic and environmental values in society. ESFM performance indicators reflect these key values.

The *Forestry Act 2012* (69H) requires ESFM reporting annually on each Forest Agreement (in place only for coastal regions). The current annual report provides information on a snapshot of ESFM criteria and indicators for coastal regions including mandatory timber harvesting volumes and wood products and other selected ESFM indicators that often change annually, such as threatened species monitoring.

Comprehensive reporting against ESFM criteria and indicators at a national level occurs every five years as part of Australian Government [State of the Forests reporting](#).

Forest Agreements are not in place for the western regions but delivery of timber commitments under western IFOAs is reported. A range of other ESFM indicators may also be reported for western regions, especially as part of the Australian [State of the Forests reporting](#).

1.2 Ecosystem biodiversity and species biodiversity

Area of forest by type and tenure

The SOFR 2013 report, Indicator 1.1, provides an update of Australia's forest area by jurisdiction. See Table 1 for NSW. Note that this is intended for national reporting and includes all forest areas in NSW (not only forests in IFOA regions).

The [Forestry Corporation Sustainability Supplement 2013–14](#) (FCNSW 2014b) also provides information on the extent of native forest types on state forests. Native forest types found in NSW are defined in [Research Note No. 17](#) (Forestry Commission of NSW 1965).

Table 1: NSW forest area by jurisdiction

Description	Percentage
Total native forest area ('000 hectares)	22,281
Proportion of total Australian native forest	18%
Industrial plantation area ('000 hectares)	392
Proportion of total Australian industrial plantation	19%
Other forest area ('000 hectares)	8
Proportion of total Australian other forest	5%
Total forest area ('000 hectares)	22,681
Proportion of total Australian forest	18%
Total land area ('000 hectares)	80,064
Proportion of total Australian land forest area as proportion of jurisdiction's land area	28%

Source: SOFR 2013, which cites Australian Bureau of Agricultural and Resource Economics and Sciences, National Forest Inventory

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

SOFR 2013 compares the area of forest type by tenure and jurisdiction. A summary of SOFR data for NSW is reproduced in Table 3 below.

Table 3: Area of native forest, by tenure and jurisdiction

Tenure type	NSW area ('000 hectares)	Proportion of NSW total native forest area (%)
Leasehold forest	5,745	25.78
Multiple-use public forest	2,022	9.07
Nature conservation reserve	5,581	25.05
Other Crown land	79	0.35
Private land (including Indigenous)	8,852	39.73
Unresolved tenure	2	0.01
Total native forest	22,281	(100)

Source: SOFR 2013, which cites Australian Bureau of Agricultural and Resource Economics and Sciences, National Forest Inventory, PSMA Australia Ltd. The tenures listed here are defined in SOFR 2013 based on tenure classes used for forests in the National Forest Inventory.

Additions to the national parks estate

As at 30 June 2014, OEH was managing 7,097,735 hectares of land for conservation. This is an increase of 14,932 hectares compared to 30 June 2013.

There were no significant reserve additions within the coastal Forest Agreement regions during the reporting period; however, two new state conservation areas were established in north-western NSW in July 2013, protecting key examples of natural ecosystems which had been significantly under-represented in the NSW national parks system.

Warrambool State Conservation Area (SCA) is located south-east of Lightning Ridge in the Darling Riverine Plains (within the South Western Cypress IFOA region) and protects over 12,000 hectares of high conservation value lands, including three endangered ecological communities (EECs). Ukerbarley SCA is located north-west of Coonabarabran (within the Brigalow–Nandewar IFOA region) and protects 465 hectares of highly significant wildlife corridor, providing habitat for more than 139 native animal species, including 10 threatened species such as the superb parrot and brown tree creeper.

State conservation area categorisation affords protection which would not otherwise be available due to potential mineral and energy values. It also provides an opportunity for review every five years to consider re-categorisation.

Area of forest in protected area categories

Table 4 shows SOFR 2013 data on the area of forest in publicly-owned formal and informal comprehensive, adequate and representative (CAR) reserves in NSW.

SOFR 2013 reports that the total area of public native forest protected in NSW is 6.1 million hectares, which is 27% of the total forest area in NSW. SOFR 2013 (page 71) also

reports the area of IUCN (International Union for Conservation of Nature) protected area categories by jurisdiction.

Table 4: Area of protected native forest on public land in NSW, by CAR reserve type

Forest area measure	Dedicated formal reserves	Informal CAR reserves	Values protected by prescription	Total forest protected
Forest area '000 hectares	5,601 ^a	393 ^b	125 ^c	6,119
Proportion of total forest ^b	25%	2%	1%	27%

CAR = comprehensive, adequate and representative

^a Forest in tenure type 'nature conservation reserve' (Indicator 1.1a) plus forest in special protection zones in tenure type 'multiple-use public forest'

^b Forest in the 'CAR informal reserves' category in tenure type 'multiple-use public forest' defined in SOFR 2013

^c Forest in the other informal protections or protected under IFOAs

Source: SOFR 2013

Native vegetation clearing

The [NSW Report on Native Vegetation](#) (OEH 2014) provides a summary by OEH of actions by private and public land managers to conserve and manage native vegetation including monitoring vegetation change, compliance and enforcement, and private native forestry.

At the time of writing, the most recent annual NSW Report on Native Vegetation was the 2011–13 two-year report. The report combines four major reports relating to native vegetation management in NSW. These are the Native Vegetation Report Card, Private Native Forest Report, NSW Woody Vegetation Change Report 2010–2011, and the Native Vegetation Compliance and Enforcement Report Card.

Changes to state forest estate

A total of 1338 hectares of state forest were revoked during the year ended 30 June 2014. The largest revocation of state forest was just over 1000 hectares of Wilbatroy State Forest (near Corinella) for additional national park in the South Western Cypress region. Other revocations included the sale of a depot, revocation for Aboriginal use and a land exchange to facilitate construction of a road to access plantations.

Forest dwelling species – status, monitoring and survey

[Australia's State of the Forest Report 2013](#) summarises national, state and territory reporting on Indicator 1.2a *Forest dwelling species for which ecological information is available*. This indicator reports the level of information available to manage forest dwelling species and tracks changes in this knowledge over time. As stated in the State of the Forest Report, the amount of habitat, disturbance and life history information available to make management decisions indicates the capacity to assess risk to species and to implement conservation strategies.

Forest dwelling species are species that may use forest habitat for all or part of their lifecycles. Table 5 lists numbers of forest dwelling vertebrate species reported in NSW. The total number has increased from that reported in previous five-yearly State of the Forest Reports as a result of improved information and targeted surveys.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Table 5 also lists the number of forest dependent vertebrate species. Forest dependent species are species that must inhabit a forest habitat for all or part of their lifecycles.

Table 5: Number of forest dwelling vertebrate species, and forest dependent vertebrate species in NSW (as compiled for the SOFR 2013)

Taxonomic group	Forest dwelling	Forest dependent
Fish	73	36
Amphibians	77	31
Reptiles	213	92
Birds	344	199
Mammals	120	68
Total, 2011	827	426
Total, 1998	504	–
Total, 2001	780	–
Total, 2006	760	–

Notes: (–) Comparison not reported. Subspecies are included in the SOFR 2013 compilation where managed by jurisdictions or nationally. Non-native species are not included.

Numbers of recorded forest dwelling (including forest dependent) vascular plant species are summarised in Table 6.

Table 6: Number of forest dwelling vascular plant species, by jurisdiction

Reporting date	NSW	Australia ^a
2011	7,472	16,836
2006	7,461	nr
2001	7,448	16,532
1998	–	13,622

Notes: ^a Numbers for Australia are included for comparison but note that many species occur in more than one jurisdiction; nr = not reported. Source: Australia's State of the Forest Report 2013.

^b All states and territories have developed lists of forest-dwelling vertebrates and vascular plant species, allowing compilation into new national lists. These national lists show that the number of forest-dwelling species has generally increased in each jurisdiction since the number was first reported in SOFR 1998, reflecting improved information from targeted surveys.

Note that Tables 5 and 6 are based on SOFR 2013 and therefore are intended for national-scale reporting rather than NSW IFOA-based reporting. The [Forestry Corporation Sustainability Supplement 2013–14](#) (FCNSW 2014b) provides information on numbers of individual threatened fauna species sightings on state forests.

The indicator: *1.2.b Status of forest dwelling species at risk of not maintaining viable breeding populations as determined by legislation or scientific assessment* is reported in SOFR 2013. Although the data has been collated and presented Australia-wide, the report provides an assessment of primary, secondary and tertiary threats for all forest dwelling threatened species listed in the *Environment Protection and Biodiversity Conservation Act 1999*, including extinct species, based on current listing advice.

Australia-wide, land-use change and forest loss caused by clearing for agriculture, grazing, urban and industrial development, has been the most significant threat for fauna

species, followed by predation from introduced predators (e.g. fox, cat, rat and trout) (SOFR 2013). Forestry operations are reported as being a relatively small threat to threatened forest fauna and flora, compared with other identified threats.

OEH maintains a comprehensive [threatened species profile search facility](#) to view and contribute sighting records and profiles of species, populations and communities. The threatened species profile search is for all species, not just forest dwelling.

Monitoring of representative species from a range of habitats

Monitoring in national parks

Animal pests present a significant threat to threatened species. Foxes are a major focus of pest management efforts in national parks through implementation of the Fox Threat Abatement Plan (Fox TAP) (OEH 2011) as detailed in Section 1.4 of this report. Monitoring of threatened species occurs on an ongoing basis in conjunction with implementation of the Fox TAP program.

Non-targeted monitoring occurs through the WildCount program, the primary aim of which is to monitor common wildlife species. WildCount completed its third successful fauna monitoring season in 2014. Remote motion sensitive cameras were deployed at a total of 204 sites across eastern NSW, 200 of which were on national parks estate. The WildCount 2014 field season recorded 87 species: 43 mammals, 41 birds, and three reptiles across the Regional Forest Agreement (RFA) regions. This included four voluntary conservation agreement properties revisited in 2014, two in the Southern region, one in the Lower North East region and one in the Upper North East region. Findings from across the four RFA regions in 2014 are detailed in Table 7 below.

While threatened species are reported, WildCount is not a threatened species survey and any records discovered are considered auxiliary to the project's intended purpose of monitoring common and widespread species.

WildCount will assist in understanding species distribution trends over time. It is anticipated that future reporting will include information on these species distribution trends as most of these species occur within the Forest Agreement and IFOA regions.

Table 7: Summary of 2014 WildCount findings across RFA regions

Region	Number of sites	Number of parks	Number of species detected	Number of threatened species
Eden	10	5	29	1
Southern	49	32	49	3
LNE	57	41	67	7
UNE	37	31	58	6

In addition to the primary objective of broad-scale monitoring for widespread and common species, a volunteer program was continued in 2014 with 40 participants involved from across NSW. The volunteers assisted WildCount team leaders in the field and office undertaking various tasks, primarily over the WildCount field season which runs for three months (over the autumn season).

To find out more go to the [WildCount](#) webpage.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Ecosystem monitoring run by research institutions and NPWS that occurred in the Southern region in 2013–14 included the following:

Broad-headed snake

The Morton National Park, Woronora Plateau and Royal National Park broad-headed snake populations are managed sites under the OEH Saving our Species program (SOS). The next decadal phase of research and population conservation management at these sites is aligned to actions identified in the SOS project plan for the species. For further information and updates see [Saving NSW threatened species](#).

Leafless tongue orchid (*Cryptostylis hunteriana*)

A state-significant population of the vulnerable leafless tongue orchid, a ground dwelling saprophytic ephemeral plant, occurs at several sites in Meroo National Park.

A population of over 200 individuals occurring at Termeil Point was in danger of major reduction as a result of visitor impacts from increased day visitation and camping, trampling and inappropriate vehicle movements.

A census of the population during its flowering period from November to February (particularly December to January) was conducted before and after site protection works. The pre-work census informed the environmental impact assessment for the works and also provided a baseline relative measure of the population. The main protection features installed were bollards, cabling, post and wire exclusion fencing and formalisation of camping sites. Censuses taken after the installations will assess the benefit to the *Cryptostylis* population from site protection works.

Eastern bristlebird recovery and monitoring at Barren Grounds Nature Reserve, and Budderoo, Booderee and Jervis Bay national parks

The endangered eastern bristlebird has two important sites in the Illawarra–Shoalhaven, with about 1600 birds in total: Jervis Bay coastal heaths and the Southern Highlands heaths and woodlands. Recovery actions for the eastern bristlebird population include long-term population and vegetation monitoring, and translocation of individuals to establish new populations. Monitoring has demonstrated that populations remain resilient, having survived a major wildfire in Booderee National Park in 2003. At Barren Grounds Nature Reserve and Budderoo National Park fire management strategies are being informed by ongoing surveys of eastern bristlebird occurrence.

The translocation of a nucleus population of bristlebirds released to Beecroft Peninsula from Jervis Bay National Park (Gurumbi section) has survived and expanded (with no discernible impact on the source population). Translocation of bristlebirds in the Cataract River catchment in 2008 also continues to be successful. Further monitoring is required to establish the population dynamics within these two recovered populations.



Figure 2: Eastern bristlebird, *Dasyornis brachypterus*. Photo: C. Pattison

Monitoring in state forests

Representative species monitoring reported in the [Forestry Corporation Annual Report 2013–14](#) (FCNSW 2014a) included:

- producing a publication on trends in bird diversity over 12 years in eucalypt plantations on the north coast, demonstrating an increase in diversity over time
- completing 15 years of annual monitoring of Australia's largest roost of eastern horseshoe bats in Ourimbah State Forest, revealing a continued sustainable colony.

See also the case study below: *impact of harvesting on koala populations*.

Case study – Forestry Corporation working with the community to minimise the impact of harvesting on koala populations in Pine Creek State Forest

A hardwood plantation near Bellingen has produced essential timber products while ensuring the maintenance of a healthy koala population – an example of how partnering with community groups is helping achieve common goals.

The plantation in Pine Creek State Forest was established on previously cleared farmland adjoining a vast area of natural forest. Over the years, a variety of additional native trees had naturally germinated within the plantation and koalas had begun moving between the plantation and their core habitat in the natural forest.

Before harvesting the mature plantation, Forestry Corporation set the self-sown areas aside as habitat for native wildlife and local staff met with community groups to mark out more areas to be set aside during harvesting to create wildlife corridors.

The community partnership initiative is further reported in the Forestry Corporation [Year in Review 2013–14](#) (FCNSW 2014c).

Monitoring of representative species on private land

The EPA uses various mechanisms to monitor regulatory compliance on private land in accordance with the [EPA Compliance Policy](#) (EPA 2013b) and the [PNF Compliance Strategy 2013–16](#) (EPA 2013c). The EPA does not carry out any formal monitoring of representative species in relation to forestry occurring on private land.

1.3 Maintaining the productive capacity of forests

Land available for timber production

State forests

Forestry Corporation uses a land classification system called Forest Management Zoning (FMZ). The FMZ system is detailed in [Managing Our Forests Sustainably: Forest Management Zoning in NSW State Forests](#) (SFNSW 1999). The FMZs are mapped and are appended to Forestry Corporation ESFM plans¹.

Table 8 shows the area of state forest in each IFOA region.

Figure 1 shows the total number of hectares of each FMZ category across all NSW IFOA regions. Land for conservation purposes is classified as FMZ 1, 2 or 3A. Modified harvesting is permitted in FMZ 3B areas, while FMZ 4 areas are native forest areas available for timber production. Zones 5, 6, 7 and 8 correlate with hardwood plantations,

¹ ESFM plans can be found at: www.forestrycorporation.com.au/management/sustainable-forest-management/esfm

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

softwood plantations, non-forestry use zones (i.e. infrastructure, such as power lines and transmission towers), and land for further assessment, respectively.

Table 8: Forestry Corporation of NSW Defined Forest Area under the Australian Forestry Standard within the IFOA areas and additional areas

	Hardwood forest division (hectares)	Softwood plantation division (hectares)	Total (hectares)
Upper North East	417,127	23,557	440,684
Lower North East	481,897	15,445	497,342
Southern	268,391	153,949	422,340
Eden	164,196	42,736	206,932
Riverina Red Gum	36,775	0	36,775
South Western Cypress	152,845	0	152,845
Brigalow–Nandewar	276,090	1,600	277,690
Total for IFOA areas	1,797,321	237,287	2,034,608
Goulburn sub-region	0	44,666	44,666
Other state forests	17,859	104,196	122,055
Total state forests area	1,815,180	386,149	2,201,329

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

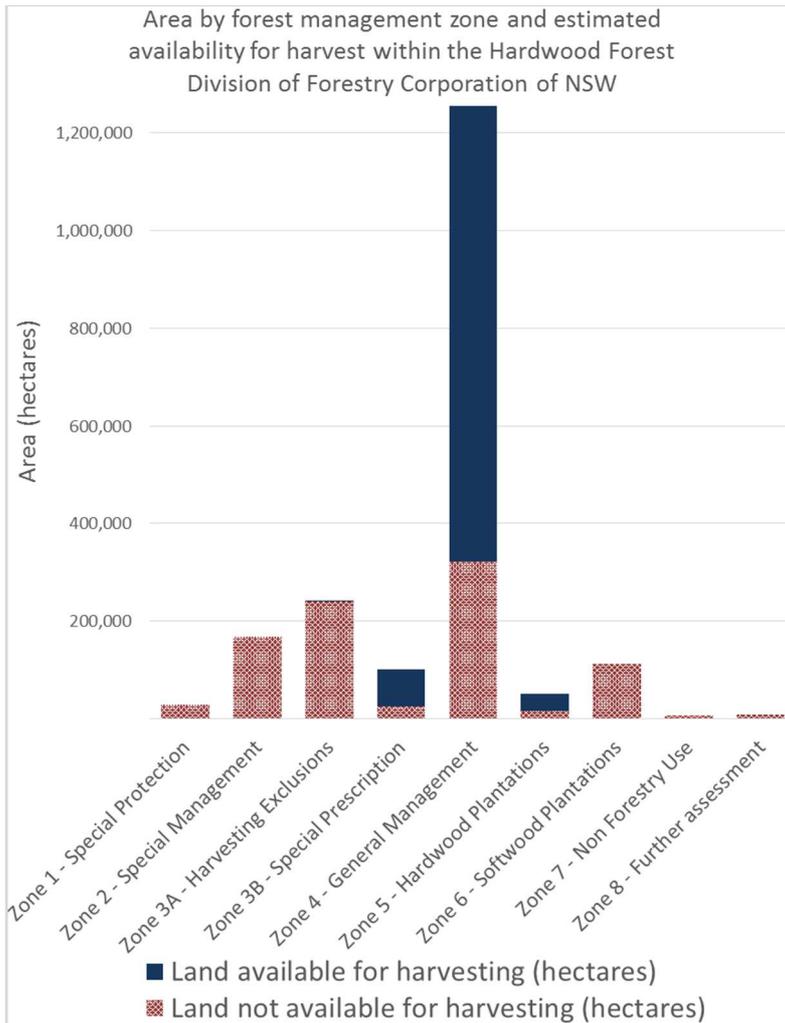


Figure 1: Respective areas of Forest Management Zones in all NSW IFOA regions (western and coastal) and proportions that can and cannot be harvested

Table 9 and Figure 2 compare areas of harvestable and non-harvestable state forest tenure. Harvesting is only permitted in zones 3A, 3B, 4 and 5 while some parts of these zones (for example, steep land) are excluded for other reasons.

Table 9: Forest management zones in NSW including areas excluded from harvesting

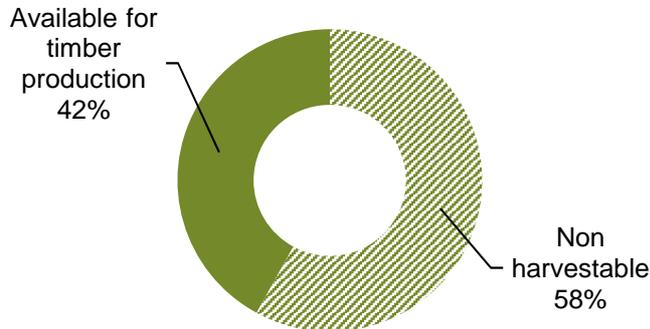
Softwood Plantations Division			
FMZ	Harvestable (hectares)	Non-harvestable (hectares)	Total (hectares)
Zone 1 – Special Protection Zone	0	9,548	9,548
Zone 2 – Special Management	10	15,753	15,763
Zone 3A – Harvesting Exclusions	10	9,020	9,030
Zone 3B – Special Prescription	69	19,039	19,108
Zone 4 – General Management	290	56,115	56,405
Zone 5 – Hardwood Plantations	411	174	585
Zone 6 – Softwood Plantations	224,977	37,312	262,289
Zone 7 – Non Forestry Use Zone	173	2,868	3,041
Zone 8 – For further assessment	4,812	5,124	9,936
Total	230,752	154,953	385,705

Hardwood Forests Division			
FMZ	Harvestable (hectares)	Non-harvestable (hectares)	Total (hectares)
Zone 1 – Special Protection	0	19,575	19,575
Zone 2 – Special Management	0	160,630	160,630
Zone 3A – Harvesting Exclusions	150	231,173	231,323
Zone 3B – Special Prescription	75,932	11,427	87,359
Zone 4 – General Management	933,261	318,071	1251,331
Zone 5 – Hardwood Plantations	35,674	15,687	51,361
Zone 6 – Softwood Plantations	0	949	949
Zone 7 – Non Forestry Use Zone	0	4,373	4,373
Zone 8 – For further assessment	0	8,373	8,373
Total	1,045,016	770,257	1,815,273
Grand total	1,275,768	925,210	2,200,978

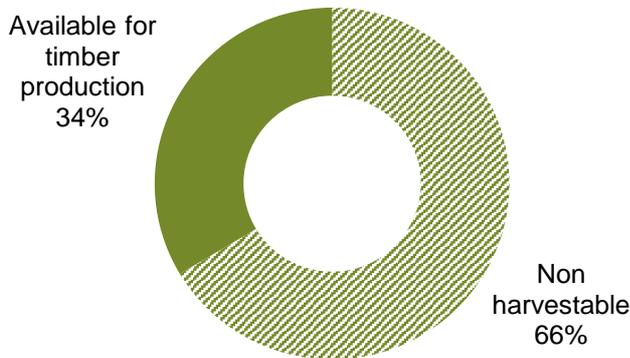
Notes: For reporting purposes the FMZs within the Softwood Plantations Division have been allocated to the most relevant categories rather than being grouped under FMZ 6 softwood planted forest. This has resulted in increases to the areas not available for harvesting in some FMZs.

To estimate harvestable areas all identified non-harvestable areas from the total forest estate are excluded. For coastal regions, additional areas are removed from the harvestable area based on models developed from studying the difference between mapped exclusions and actual exclusions identified in harvesting operations. A greater proportion of the available area is available for harvest in the planted forests estate, where most non-harvestable area is retained vegetation, usually native forest.

Upper North East and Lower North East regions



Southern and Eden regions



Western regions

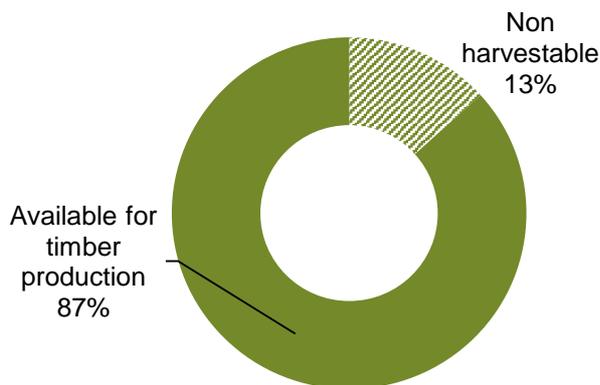


Figure 2: Proportion of total forest management zones in all NSW IFOA regions (western and coastal) that can and cannot be harvested

Note: The estimate for harvestable areas is derived by excluding all identified non-harvestable areas held on the corporate geo-database. For coastal regions, a further percentage is then removed from the harvestable area based on the net harvest modifier models. These modifiers have been developed from intensive harvesting studies that determined the relationship between mapped exclusions and actual exclusions identified in harvesting operations.

Total growing stock of both merchantable and non-merchantable tree species on native forest land available for timber production

The objective of this indicator is to maintain or increase the total growing stock of merchantable and non-merchantable tree species on native forest land available for timber production.

The Forestry Corporation uses a model forest resource and management evaluation system (FRAMES) coupled with field measurements to estimate and predict the long-term availability of timber and plan harvesting operations.

Figure 3 shows predicted volumes for all Forestry Corporation’s main timber products for native forests and hardwood plantations over the current century.

During the four years from 2010 to 2014 the actual volume harvested was lower than the predicted maximum, mainly due to the global economic crisis slowing uptake by industry. This combined with major weather events and constrained supply to customers, contributing less timber harvested over the period than anticipated. For 2013–14, 89% of the committed volume was supplied (all products including high and low quality timber) or 78% of the committed sawlog and veneer volume.

Because the areas of forest growth stage categories do not change significantly over short periods, growth stages are not reported annually in the current report. Refer to the 2009–2010 and the 2013 SOFR for additional growth stage information.

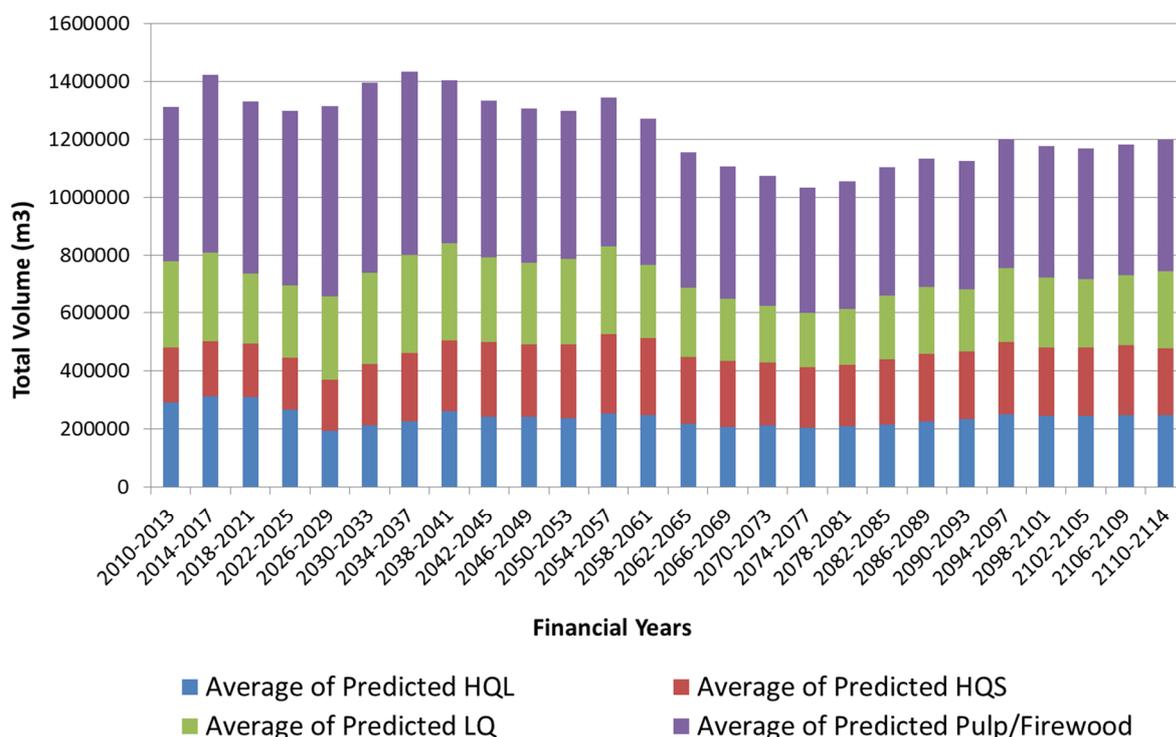


Figure 3: Predicted Forestry Corporation harvested timber volumes by quality class, 2010–2114

Source: Forestry Corporation

Certification of native forest harvesting

The Forestry Corporation produces timber which is certified sustainable under the internationally recognised Australian Standard (Sustainable Forest Management) (otherwise known as the Australian Forestry Standard or AFS) (AS4708:2013).

In 2013–14 the Forestry Corporation was externally audited to check conformance with the AFS and its Environmental Management System (certified under the international standard, ISO 14001:2004).

The audits involved assessing practices in three operational areas of the state and reviewing the corporate systems used to manage its business. They are not related to audits of compliance of forestry operations under the IFOAs (Chapter 3 of the current report).

The AFS sets criteria that forestry management must meet, including maintaining the biological diversity of forests, protecting soil and water resources, maintaining the productive capacity of forests and the forest ecosystem's health and vitality, and providing for public participation.

To maintain AFS certification, the Forestry Corporation needs to demonstrate that its forestry activities are undertaken in a systematic manner that addresses a range of forest values.

The AFS also includes a 'chain of custody' standard to track forest and wood products through their supply chain.

Native forest regeneration

SOFR 2013 reports that, across NSW, effective regeneration of multiple-use public native forests has remained high (averaging 90.5%) since 2007. Elements that can slow down regeneration include drought and wildfire.

State forest estate – annual removal of wood products compared to allowable volumes and quantities specified in IFOAs

The coastal and western IFOAs specify the types, volumes and quantities of native forest timber products that Forestry Corporation is permitted to harvest. Actual versus specified volumes (or tonnage) harvested are reported here.

For most products, the IFOAs permit annual variations to the specified volumes to accommodate changes in environmental and economic circumstances.

Timber harvested in coastal IFOA areas

Actual volumes and quantities harvested versus volumes and quantities specified in IFOAs
Figure 4 depicts actual volumes and quantities harvested in each IFOA region as a percentage of the volumes and quantities specified in IFOAs. The UNE, LNE and Southern lines are based on extraction of high quality large sawlogs and large veneer logs. For consistency with earlier reports, these exclude poles, piles and girders (which are also specified in the IFOAs).

In the **UNE region** during 2013–14, 54,716 m³ of high quality large sawlogs and large veneer logs were harvested from Forestry Corporation native and hardwood plantation forests. This represents 50.2% of the permitted volume (109,000 m³ per year, as specified in the UNE IFOA) and is similar to the amount harvested in the previous year. Additionally, Forestry Corporation supplied 7980 m³ of large poles, piles and girders.

For the **LNE region**, high quality large sawlogs and large veneer logs harvested from the region during 2013–14 totalled 104,344 m³, representing 65.2% of the committed volume of 160,000 m³ per annum, as specified in the LNE IFOA. This is a slight increase on the amount harvested in the previous year. Additionally, Forestry Corporation supplied 21,863 m³ of poles, piles and girders.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

High quality large log volumes harvested in the **Eden region** in 2013–14 totalled 21,387 m³ which represented 93.0% of the committed volume (23,000 m³ in accordance with the Eden IFOA). This is an increase on the amount harvested in the previous year (18,874 m³). No piles, poles or girders were extracted in the Eden region.

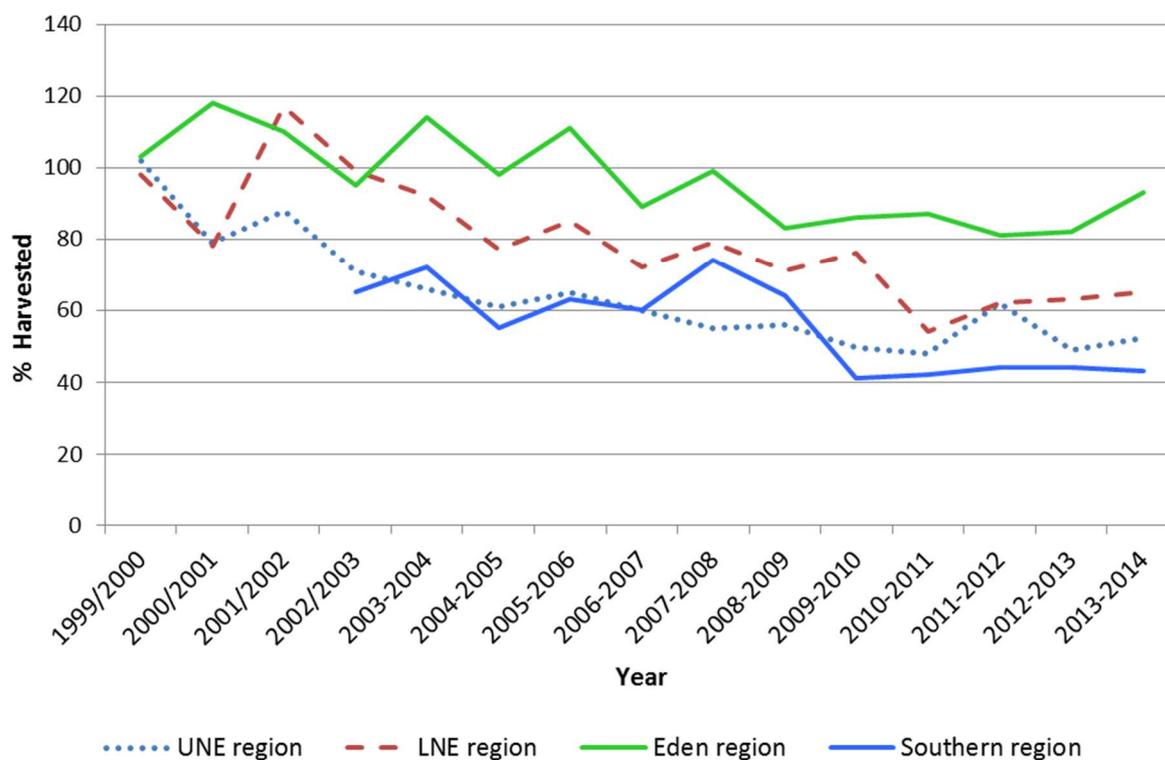


Figure 4: Log volumes harvested as a percentage of volumes specified in IFOAs – all coastal regions

Source: Forestry Corporation data

Notes: * All quota sawlogs harvested from native forest.

** Timber harvesting in Southern region under the terms of NSW Forest Agreements and IFOA began in 2002. South Coast sub-region and Tumut sub-region figures have been combined. Separately, the percentages of committed volumes are 82.1% in the South Coast sub-region and only 5% in Tumut sub-region.

In 2013–14, 260,857 tonnes (t) of pulp grade timber were harvested in Eden region, or 75.6% of the specified volume of 345,000 t per year. This was an increase from the previous year (203,806 t harvested or 59.1%). Percentages of pulp grade timber sold from Eden region since 1999–2000 are shown in Figure 5.

High quality large logs harvested in **Southern region** totalled 41,727 m³. This represents 43.2% of the permitted volume, based on a permitted volume of 96,500 m³ per year (48,500 m³ from the South Coast sub-region and 48,000 m³ from the Tumut sub-region). The quantities of high quality large logs reported by sub-region, are South Coast sub-region: 36,487m³ (76% of committed volume) plus 265 m³ of poles, piles and girders; and Tumut sub-region: 5240 m³ (10.8% of committed volume). This is similar to the amount harvested last year.

Volumes and quantities not specified in the FAs and IFOAs

There are no volume limits set in the coastal approvals for certain timber products that are produced as a by-product of harvesting operations in hardwood plantations and native forests. These products include low quality sawlogs, firewood, and landscape timbers. Additionally the Coastal IFOAs do not cover operations conducted in softwood plantations.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

In 2013–14, around 380,000 m³ of non-specified logs were harvested from Forestry Corporation native forests and hardwood plantations across all coastal Forest Agreement and IFOA regions. Additionally, around 180,000 tonnes of non-specified pulp grade timber was produced across all coastal regions (see Table 10 for further detail).

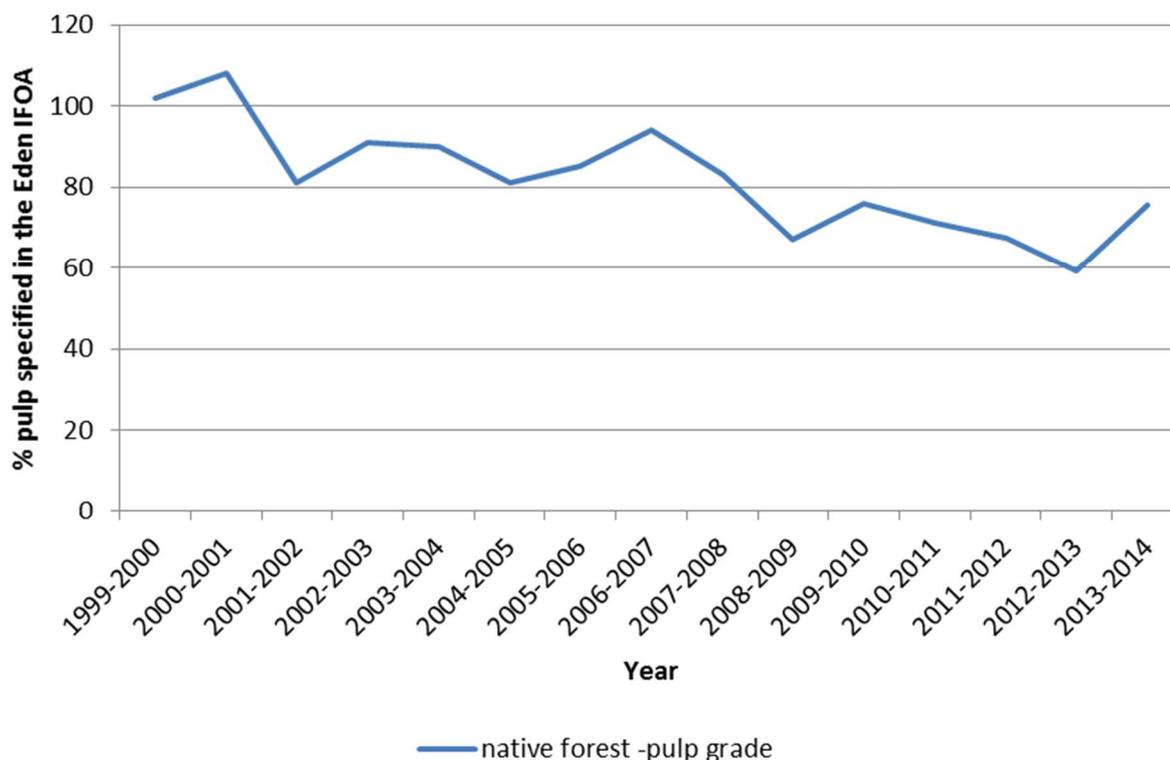


Figure 5: Pulp grade timber harvested as a percentage of volume specified in the IFOA – Eden region only

Source: Forestry Corporation data

Timber volumes harvested in western IFOA regions

Under western IFOAs, an annual report is to specify the nature of forest products operations authorised under the *Forestry Act 2012* and, where information is available, the quantity of each forest product authorised to be taken under the Act in that year.

This information is presented below and summarised in Table 11.

Riverina Red Gum region

The Riverina Red Gum IFOA identifies average yearly allocations and sets 20-year limits for high quality large logs and residue logs, but does not set maximum annual limits. The IFOA sets maximum allocations of early thinning.

An amendment to the Riverina Red Gum IFOA commenced on 1 July 2013. The [amendment](#) extended the existing early thinnings program from 1 July 2012 through to 30 June 2019, at a volume of 35,370 tonnes per annum (total 212,220 tonnes). An independent panel determined that these volumes of early thinnings could be sustainably harvested to promote the growth of high quality timber. The independent panel's report was provided to both ministers for their consideration. A further resource assessment will be undertaken prior to 2019 to determine what volumes will be sustainable post 2019.

Another amendment commenced on 22 December 2013. This [amendment](#) applied to logging operations, including thinning operations, on western lands leases to produce

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

residue and residue logs (including dry residue and dry residue logs), but no more than 63,000 tonnes in total (that is 18,000 tonnes x 3.5 years). It allowed residue operations to continue at pro-rata of current annual volume rates for an additional six months until 30 June 2014. The intention was to give the NSW Government time to consider the appropriate volume of residue that should be harvested from western lands leases for the next five years (2014–19) and to allow the industry to continue operating during this time.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Table 10: Quantities of native forest and hardwood plantation timber products – coastal regions (2013–14)

Log type	Unit	Southern region		Eden region		LNE region		UNE region	
		South Coast sub-region	Tumut sub-region	Native forest	Hardwood plantation	Native forest	Hardwood plantation	Native forest	Hardwood plantation
Large veneer*	m ³	183	0	0	NA	3,009	2,131	4,587	0
High quality large sawlogs*	m ³	36,305	5,240	21,387		91,152	8,053	49,506	624
Small veneer	m ³	0	0	0		2,079	500	1,279	0
High quality small sawlogs	m ³	5,582	104	2,118		19,598	3,912	23,665	167
Low quality sawlogs	m ³	23,914	8,085	2,888		110,425	40,052	57,201	951
Large poles/piles and girders**	m ³	265	0	0		5,933	1,982	3,743	0
Small poles/piles and girders	m ³	337	0	0		11,953	1,994	4,237	0
Fencing/landscape/sleepers (sawn)	m ³	14,134	118	1,481		0	3,986	123	0
Sub-total	m ³	80,718	13,547	27,874		244,149	62,610	144,340	1,741
Pulp grade and chipwood***	t	32,775	0	260,857		14,955	582	0	0

Notes: * Veneer and high quality large sawlogs harvested from Forestry Corporation native forests and hardwood plantations comprise quota log volumes. The IFOAs specify quantities of these products.

** Poles, piles and girders that meet quota specifications have been reported separately in this report. For comparison with previous reports, Figure 4 (percentage of quantities specified in IFOAs) does not include poles, piles and girders; however, the IFOAs do specify these quantities.

*** In Eden, pulp grade timber figures form part of the quota requirements under the Eden Forest Agreement and IFOA. Pulp timber in other regions is reported as non-quota.

Source: Forestry Corporation data. Note that amounts reported are derived from an operational database and a small number of minor reconciliations may have been undertaken since the end of the reported period.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Figure 6 compares the volume (m³) of high quality large sawlogs and low quality sawlogs and tonnes (t) of early thinning obtained from the Riverina Red Gum region over 2013–14 and the previous two years.

During 2013–14, 5255 m³ of high quality large sawlogs (including large veneer logs) were harvested from native forests in the Riverina Red Gum region. The IFOA does not restrict harvesting above the average volume as long as the 20-year limit of 90,253 m³ is not exceeded over the life of the IFOA (an annual average volume of 4413 m³).

A total of 6027 m³ of low quality sawlogs were obtained in the Riverina Red Gum region in the reporting period. No upper limit is specified in the Riverina Red Gum IFOA. Low quality sawlogs can be a by-product of high quality large sawlog operations or early thinning operations.

During 2013–14, 25,562 tonnes of residue was harvested from operations associated with the production of high quality sawlogs. A further 15,783 tonnes of residue grade log was harvested from western lands lease areas during the 2013–14 period.

The Riverina Red Gum IFOA permits early thinning operations to be carried out in Riverina state forests for the purpose of producing red gum residue. Under the amendment commencing 1 July 2013, up to 212,220 tonnes of river red gum residue may be harvested between 1 July 2013 and 30 June 2019 (inclusive) (that is, an average of 35,370 tonnes x 6). No more than 212,220 tonnes of river red gum residue may be produced from the program of early thinning operations during that period. This residue is in addition to residue produced from the harvesting operations referred to in clause 5(2) of the IFOA (high quality large logs). Under this product category 14,421 t of residue grade logs was harvested during the reporting period.

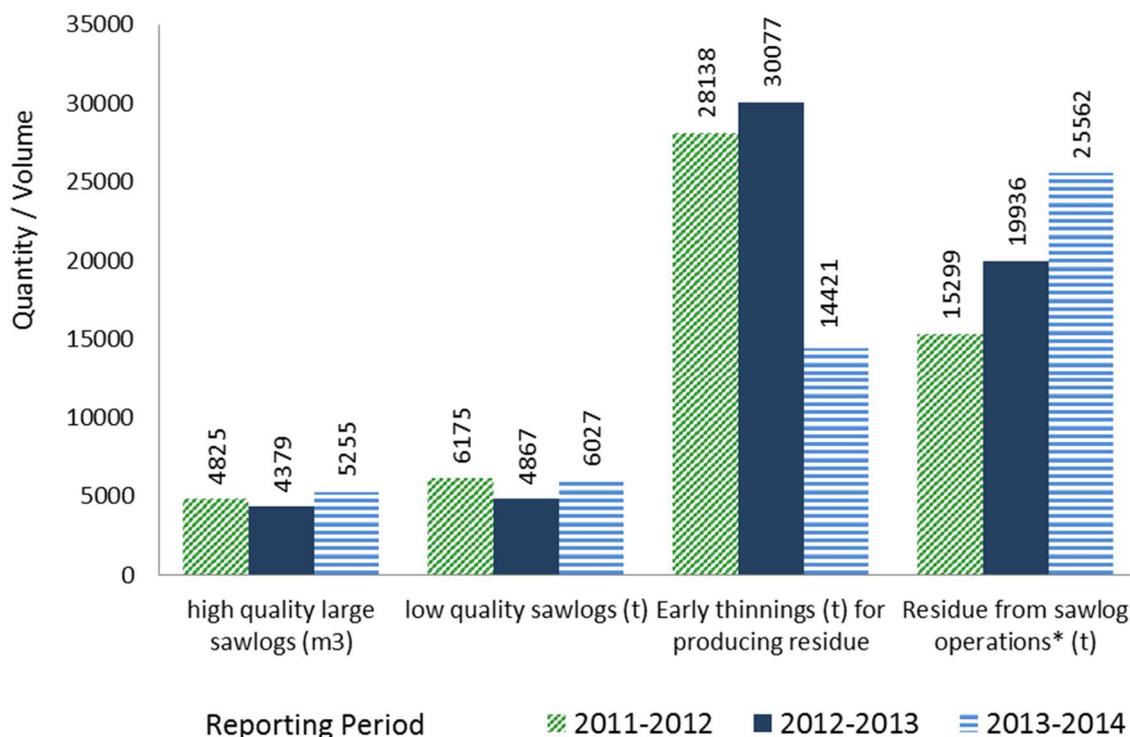


Figure 6: Volume (m³) of high quality large sawlogs and low quality sawlogs, and quantity of early thinning (t) obtained from the Riverina Red Gum IFOA region over 2013–14 and the previous years

Notes: Figures do not include the additional 15,783 tonnes of residue grade log harvested from western lands lease areas during the 2013–14 period.

The chart reports the years 2011–12, 2012–13 and 2013–14 only (reflecting when the IFOA commenced).

Brigalow–Nandewar region

The Brigalow–Nandewar IFOA identifies average yearly allocations and specifies maximum annual limits for white cypress logs, western ironbark logs, and firewood. The IFOA specifies maximum annual limits for small quantities of other logs and products (clause 5(2)(c)(d)). The IFOA also allows the harvesting of products of trees, shrubs and other vegetation (other than timber) that are of economic value, such as broombush.

Figure 7 compares the volumes of cypress sawlogs and ironbark sawlogs, and quantity of firewood and fencing obtained from the Brigalow and Nandewar region over 2013–14 and the previous year.

Note that an amendment to the Brigalow–Nandewar IFOA commenced on 1 July 2013. The [amendment](#) reduced the volume of cypress logs that can be produced in the approval by 43,500 m³ (or an average reduction of 3000 m per year) for 14.5 years. This amendment was to address the difference between supply areas for wood supply agreement holders and the boundaries between the Brigalow–Nandewar and South Western Cypress IFOA regions. The equivalent volume of logs has been added to the South Western Cypress region so there is no overall change in the total volume of timber between both regions.

In 2013–14, 28,359 m³ of cypress logs were harvested in the Brigalow–Nandewar IFOA region, representing 69% of the annual average permitted volume (average of 41,000 m³ over the IFOA). During 2013–14, 866 m³ of ironbark sawlog and fencing timber was harvested, which was below the specified annual limit of 2050 m³.

In 2013–14, 4367 tonnes of firewood was harvested under the conditions of the Brigalow–Nandewar IFOA, which was 45% of the 9800 tonnes average yearly allocation.

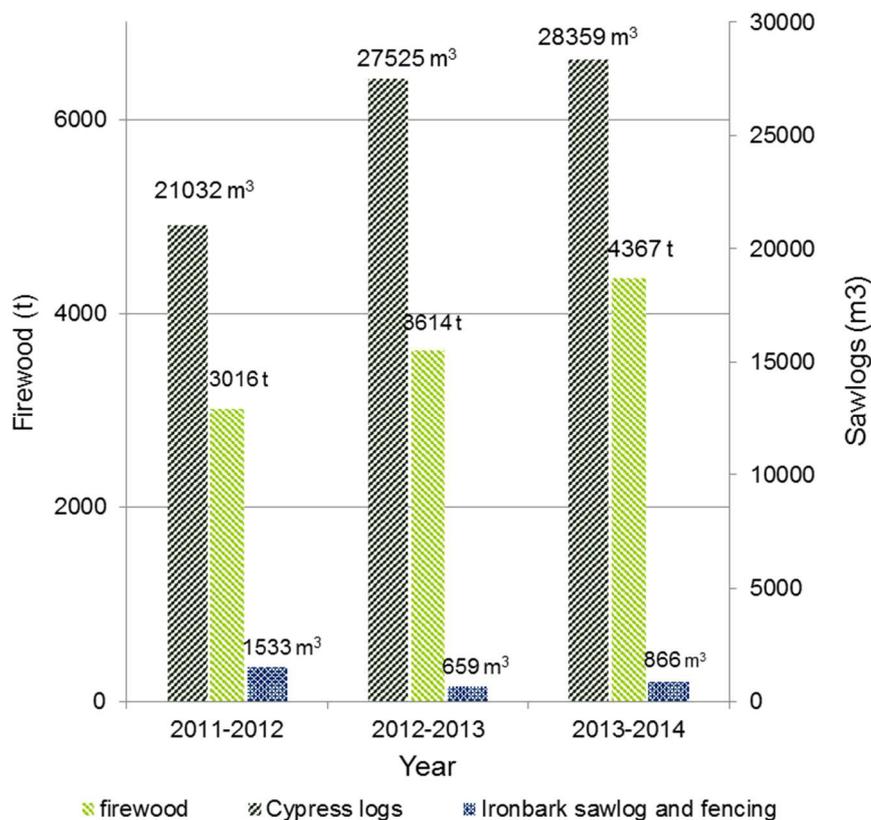


Figure 7: Volumes (m³) of cypress sawlogs and ironbark sawlogs, and quantity of firewood and fencing (t) obtained from the Brigalow and Nandewar region over 2013–14 and the previous years

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

South Western Cypress region

The South Western Cypress IFOA identifies average yearly allocations and specifies maximum annual limits for white cypress logs. For timber products other than logs and residual timber (such as craft wood and vine posts) the IFOA specifies maximum annual limits.

An amendment to the South Western Cypress IFOA commenced on 1 July 2013. The [amendment](#):

- increased the volume of logs by 43,500 m³ (3000 m³ per year for 14.5 years) to the area of the region north of the Mitchell highway. This amendment addressed the difference between supply areas for wood supply agreement holders and the boundaries between the Brigalow–Nandewar and South Western Cypress IFOA regions. The equivalent volume of logs was deducted from the Brigalow–Nandewar region resulting in no overall change in the total volume of timber between both regions.

The allowable volume of cypress logs from south of the Mitchell Highway is no more than 328,895 m³ of logs (that is, (22,390 m³ x 14.5) + 4240 m³) over the 14.5 year period commencing 1 July 2011, and no more than 31,346 m³ of logs (that is 22,390 m³ + (40% x 22,390 m³)) in any one financial year.

- increased the allowable annual volume of timber products other than logs and residue to 5000 m³ per year (previously 1500 m³ per year) to address concerns raised by industry that the lower cap placed an unreasonable constraint on timber businesses developing other markets for timber products apart from logs and residue
- removed the 6000 m³ annual cap on volumes of residue timber specified in clause 5(2)c, to address concerns raised by industry that the cap placed an unnecessary additional constraint on timber businesses developing other markets for residue
- added the volume of 25,000 m³ of logs (5000 m³ per year over the five-year period) from western lands leases in the region commencing 1 July 2013 with a review requirement for any further volumes from these lands. This amendment is to allow a volume of 5000 m³ per year for a five-year period to recognise the occasional use of western lands leases for production of logs in the region that were not previously recognised in the IFOA. The five-year timeframe and review requirements are in recognition that these lands have not yet formally been assessed for wood volumes or environmental impacts and that any longer-term wood supply will require this assessment.

Figure 8 compares the quantities of cypress sawlogs, timber products other than logs and residue, and residue timber from early thinning obtained from the South Western Cypress region over 2013–14 and the previous years.

During 2013–14, 23,237 m³ of cypress logs were harvested from **south** of the Mitchell Highway for the purpose of producing logs (of any quality and kind) from white cypress trees. There were no areas harvested from north of the Mitchell Highway for the period.

No sawlog harvesting was undertaken on NSW **western lands leases** during the period.

Logging operations for the purposes of producing timber products other than logs and residue recorded 0 m³ due to market and operational scheduling circumstances.

Logging operations for the purpose of residue timber from white cypress or bull oak trees may be carried out in accordance with clause 32G of the IFOA. A total of 4810 tonnes of residue timber from early thinning was harvested.

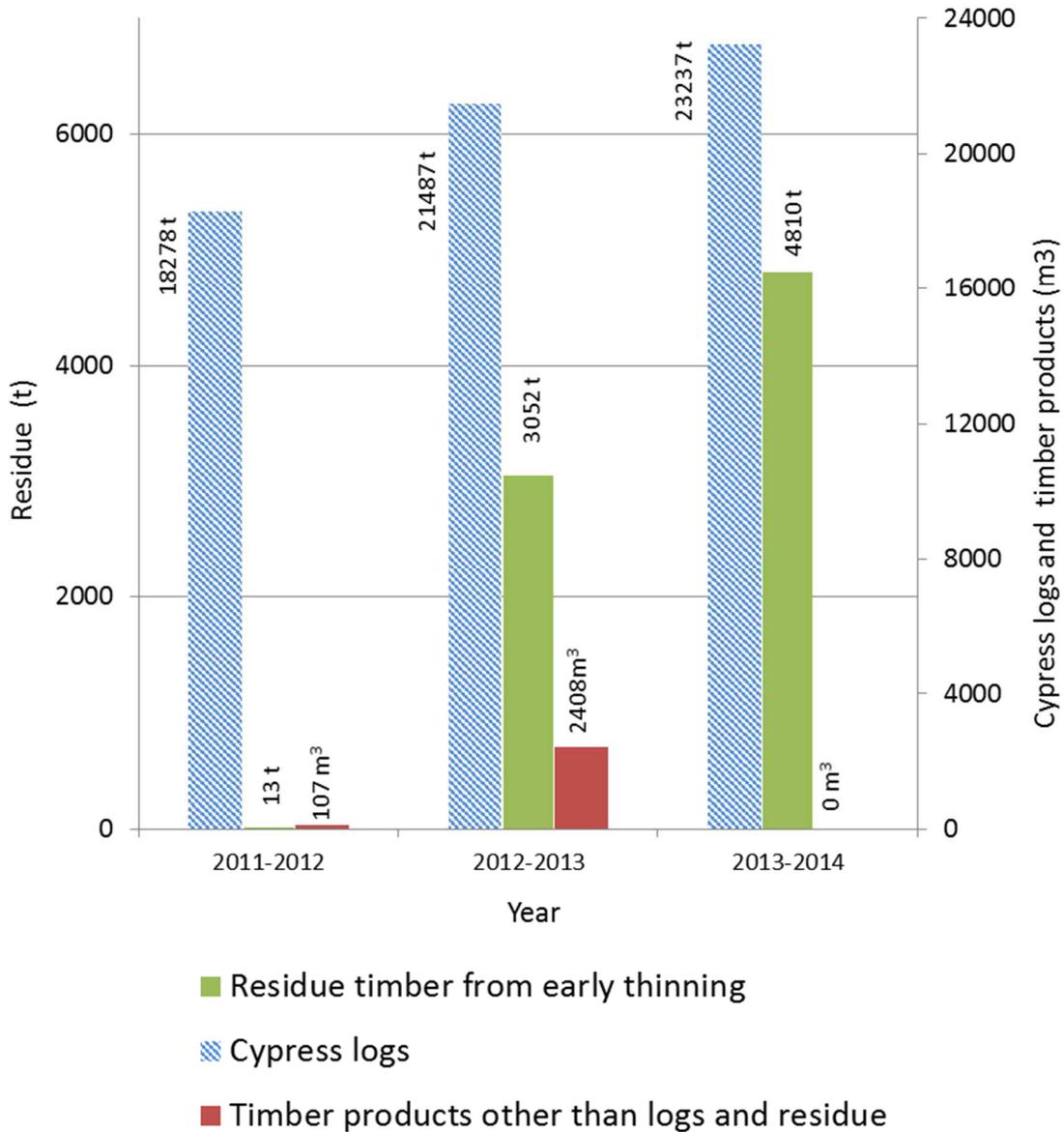


Figure 8: Volume (m³) of cypress sawlogs, timber products other than logs and residue (m³), and residue timber from early thinning (t) obtained from the South Western Cypress region over 2013–14 and the previous years

Note that the quantities of timber products and residue in 2011–12 were small and may not register on the chart.

A summary of timber products obtained from state forests and western lands leases covered by the three western IFOAs is presented in Table 11.

Table 11: Timber and forest products harvested from western IFOA regions in 2013–14

Product	Volume (m ³) or quantity (t)		Estimated harvest area (ha)
Riverina Red Gum region			
High quality saw log	5,255 m ³		419
Low quality sawlog	6,027 m ³		
Residue	25,562 t		
Early thinning	14,421 t		173
Residue (western lands leases)	15,783 t		556
Firewood permits issued	Number	Quantity	na
	223	426	
Brigalow–Nandewar region			
Cypress log	28,359 m ³		8,511
Ironbark log	866 m ³		
Timber products (including ironbark and cypress fencing)	0 m ³		
Firewood (not including permits under the <i>Forestry Act 1916</i> (<i>Forestry Act 2013</i> as of January 2013))	4,367 t		
Firewood permits issued – see IFOA cl. 82	Number	Quantity	na
	515	548 t	
Didgeridoo	0		0
Broombush	497 t		
South Western Cypress region			
Cypress log	23,237 m ³		2,853
Cypress log (western lands leases)	0 m ³		
Residue	4,810 t		
Timber products (other than logs and residue timber, such as craft wood and vine posts, from white cypress trees)	0 m ³		
Firewood permits issued – see IFOA cl. 82	Number	Quantity	na
	317	381 t	
Didgeridoo	0		0

Annual removal of non-timber forest products

The [Forestry Corporation Sustainability Supplement 2013–14](#) (FCNSW 2014b) also reports on additional selected forest products in all regions. This includes apiculture (number of sites), broombush (t), charcoal (t), fencing material (m³), firewood (t), gravel/sand/rock (t), grazing (ha), and wood blocks (number).

Burning operations in western forests

The IFOAs for the South Western Cypress, Brigalow–Nandewar, and Riverina Red Gum regions require burning operations to be reported annually.

For 2013–14, Forestry Corporation carried out hazard reduction burning over 4200 hectares of Pilliga East State Forest, in the Brigalow–Nandewar region.

No burning operations were carried out in the South Western Cypress or Riverina Red Gum regions.

Information about grazing in western forests

The Forestry Corporation is required to report annually on the total area within state forests in the South Western Cypress, Brigalow–Nandewar, and Riverina Red Gum regions over which grazing of domestic stock was authorised by Forestry Corporation (whether under new or existing grazing permits or forest leases).

The information for 2013–14 is presented in Table 12.

Table 12: Information about grazing operations in western IFOA regions 2013–14

IFOA area	Activity	Area (ha)
Brigalow–Nandewar	Grazing	6,707
South Western Cypress	Grazing	55,501
Riverina Red Gum	Grazing	11,199

Source: FCNSW 2013–14 annual report of forestry operations in western IFOAs

Management of private native forestry in NSW

Private native forestry (PNF) is the management of native forest on privately owned land or Crown land that is not Crown-timber land within the meaning of the *Forestry Act 2012* for the purpose of obtaining forest products on a sustainable basis. There is an estimated eight million hectares of native forests on private land across NSW, of which around half a million hectares is currently allowed to be logged under approval. Approximately five million hectares would be considered as suitable for PNF operations although most of this is not used for this purpose.

The EPA regulates PNF under the *Native Vegetation Act 2003* and the PNF Code of Practice. The PNF Code is designed to ensure that forest operations improve or maintain environmental outcomes and encourage sustainable management of native forests on private land. Approval through a PNF property vegetation plan (PVP) is required to carry out forestry operations on private land. This is a legally binding agreement between a landholder and the EPA. PNF PVPs are valid for up to 15 years, giving landowners the security they need to make long-term forest management decisions.

Private native forestry approvals

Forestry operations within approved areas may occur on a cyclical basis at any time during the term of the PNF PVP approval. Only a small percentage of the total approved area will have active forestry operations occurring in the reporting period.

Between 1 August 2007 and 30 June 2014, 2923 PVPs have been approved for PNF, covering 553,455 hectares of private forest (Table 13). In the 12 months of 2013–14, 40,899 hectares were approved, under 286 new PNF PVPs. Within this area all rainforest, old growth forest, wetlands, heathlands and many other environmentally important areas are required to be protected in accordance with the PNF Code.

Table 13: Area of PNF PVPs approved between August 2007 and June 2014

Forest region	Area of PNF PVPs (ha)*							Total
	2007–2008	2008–2009	2009–2010	2010–2011	2011–2012	2012–2013	2013–2014	
Northern NSW	63,845	92,390	54,727	58,490	58,730	43,200	35,190	406,572
Southern NSW	4,425	4,943	3,804	5,830	3,093	4,243	494	26,832
Riverina Red Gum	18,394	37,367	4,506	11,860	4,664	10,047	1,694	88,532
Cypress and Western Hardwood	3,029	8,184	3,906	3,511	5,678	3,698	3,521	31,527
Totals	89,693	142,884	66,943	79,691	72,165	61,188	40,899	553,463

Notes: * These figures include areas of PNF PVPs which have expired. Source of data EPA Forestry Section database.

Additional private native forestry trends are reported in the OEH [NSW Report on Native Vegetation](#) (OEH 2014).

Department of Primary Industries – reporting on plantations

Plantations authorised under the PR Act – annual volumes removed

Plantations approved under the *Plantations and Reafforestation Act 1999* (PR Act) in coastal IFOA areas since 2001 are listed in Table 14.

Table 14: Area (hectares) of plantations approved under the PR Act (includes state forests and private plantations)

Year	North Coast	Hunter	South Coast
2001–02	919	134	1,038
2002–03	3,425	118	322
2003–04	2,915	200	1,523
2004–05	8,060	2,233	4,397
2005–06	123,457	1,664	2,033
2006–07	14,038	438	1,826
2007–08	14,567	2,506	584
2008–09	10,283	2,434	809
2009–10	1,833	538	36
2010–11	1,098	193	173
2011–12	1,998	1	18
2012–13	3,364	0	2,266
2013–14	55	73	0

In addition to the coastal areas, 318.6 hectares of new plantations were authorised in the Murrumbidgee CMA region and 60 hectares in the central west.

Overall, figures for timber volumes and other products supplied from plantations are not routinely collected.

Plantations established and re-established by Forestry Corporation – native and softwood

The Forestry Corporation reports planting seasons by calendar year. No new plantations (first rotation) were established on previously cleared land by Forestry Corporation during the 2013 planting season. Forestry Corporation does not clear native forests to establish plantations.

Fifty hectares of new softwood plantations (first rotation) were planted during the 2012 planting season.

The Forestry Corporation re-established 251 hectares of hardwood plantation on the mid-north and north coastal areas of NSW.

1.4 Maintaining ecosystem health and vitality

Introduction

A number of agents can affect ecological processes in forests and may produce significant changes to the condition of the forest. This indicator measures the areas affected by those processes, and the level of impact within those areas. This indicator should be considered together with those discussed in Section 1.2, *Ecosystem biodiversity and species biodiversity*, to give an overall picture of forest health and vitality.

Forestry Corporation forest health surveys

Forest health surveys are conducted annually in Forestry Corporation hardwood and softwood plantations, and cover most of the plantation estate managed by Forestry Corporation. Surveys in state-owned native forests are less regular and are largely driven by known health issues such as die back. See the [Sustainability Supplement 2013–14](#) for a summary of findings.

NSW Invasive Species Plan

As reported previously, the [NSW Invasive Species Plan](#) (DPI 2008) provides the framework for the coordinated management of pest animals and weeds across various land tenures and will guide invasive species management in NSW to 2015.

A revised 2015–2022 NSW Invasive Species Plan will set goals and provide strategic direction and guidelines to exclude, eradicate or manage invasive species as appropriate to their situation.

Pest management on national park estate

Regional pest management strategies 2012–17

Pests are among the greatest threats to biodiversity throughout Australia, and in NSW they have been identified as a major threat to 70% of species, populations and communities listed under the *Threatened Species Conservation Act 1995*. New [regional pest management strategies](#) prepared by NPWS aim to minimise the adverse impacts of pests on biodiversity, protected areas and the community. These publicly available documents clearly identify priority areas and values to be protected through control activities.

OEH continued to implement the [NSW Fox Threat Abatement Plan 2010](#) (OEH 2011), which establishes priorities for fox control to conserve biodiversity in NSW. All of the fox threat abatement site plans have been completed, with fox control implemented at the vast majority of priority sites. These priority sites are located across all the Forest Agreement regions, mostly on NPWS reserves but also on some other tenures including Crown land and state forests.

The [NSW Fox Threat Abatement Plan 2010](#) establishes priorities for fox control to conserve biodiversity in NSW and can be viewed at the OEH website.

Case study – Madeira vine beetle biological control agent

Madeira vine is an invasive weed from South America that some researchers consider to be the biggest weed threat to biodiversity in NSW. The Madeira vine beetle (*Plechtenycha correntina*) biological control agent has been mass reared and released into infestations in south-eastern Queensland and NSW from mid-2011 onward. Larval and adult life stages of the Madeira vine beetle feed on the leaves of the vine, leaving 'windows' and damage to leaf margins. In NSW, releases have occurred at many sites on NPWS estate.

The NSW environmental and aquatic weeds biological control taskforce (of which NPWS is a member) engaged the University of Wollongong and Mark Hamilton (Pest and Ecological Management Unit, NPWS) to develop monitoring protocols for the establishment and success of the Madeira vine beetle releases, at sites from the mid-north to the south coast of NSW.

The initial results are promising with the beetle establishing at most sites. To date, leaf damage was mostly minimal (less than 4% of foliage consumed) albeit varied, likely owing to the beetle being in the early stages of establishment. Further information on this agent and those for other weeds can be found on the DPI website.

Case study – Measuring the response of weed management

Widespread weeds are being managed by NPWS for biodiversity conservation at over 300 sites across NSW. Site management is prioritised through the Biodiversity Priorities for Widespread Weeds, which consider the threatened status and condition of the biota at risk, the value of the site to survival of that biota, presence of other threats, and urgency for and feasibility of control. At a subset of high priority sites, monitoring programs are in place to determine control efficacy and response of biodiversity to control. For example, monitoring conducted at a Watagans National Park site to protect Lowland Rainforest endangered ecological community (EEC) indicates that in a little over a year lantana cover has been reduced from 75–100% to less than 5%, and native species richness increased from an average of 12 species to 28 species per 20 m². Similarly, at a Towra Point Nature Reserve site to protect Kurnell Dune Forest EEC and *Syzygium paniculatum*, lantana cover decreased from 64% to less than 2%, resulting in an increase of native species richness from an average of 12.8 to 14.4 species per 20 m².

For additional information about pest control on park see 'Achievements' in the OEH Annual Report 2013–14.

Forestry Corporation

SOFR 2013 provides numerous case studies and images of change agents of forest areas for this reporting period. Change agents reported include spotted gum canker, spring needle cast, myrtle rust, possums in some plantations, bell miner associated dieback, siren attacks, and monterey pine aphid. River regulation and allocation of water resources and persistent drought have caused decline in river red gum (*Eucalyptus camaldulensis*) forest in the Murray–Darling Basin. For further reading see pages 175 to 187 of the SOFR 2013.

Area of forest burnt by planned and unplanned fire

This indicator is used to provide an understanding of the impact of fire on forests through the reporting of planned and unplanned fire. Fire is an important part of many forest ecosystems in Australia and may have either positive or negative impacts on forest health and vitality.

SOFR 2013 reports on this indicator across all jurisdictions. Table 15 summarises SOFR findings for NSW over a five-year period from 2006 to 2011.

Table 15: Total NSW forest area burnt by planned and unplanned fire, 2006–07 to 2010–11

Fire category	2006–07 area ('000 hectares)	2007–08 area ('000 hectares)	2008–09 area ('000 hectares)	2009–10 area ('000 hectares)	2010–11 area ('000 hectares)	Total 2006–2011 area ('000 hectares)
Planned	61	81	84	128	93	447
Unplanned	352	51	23	160	2	588
Total	413	132	107	288	95	1,035

Source: SOFR 2013. Includes fires recorded for all NSW forest areas, including areas outside the FA and IFOA regions.

1.5 Conservation and maintenance of soil and water resources

Native forestry operations in state forests are authorised under IFOAs that list specific conditions for protecting the environment. Environment Protection Licences (EPLs) issued under the *Protection of the Environment Operations Act 1997* (POEO Act) aim to ensure that practical measures are taken to protect local waters from diffuse source pollution that may arise from forestry activities. Fisheries Licences (FLs), issued under section 220ZW of the *Fisheries Management Act 1994*, also contain measures for protecting aquatic values.

As discussed in the overview to this report, the NSW Government is currently remaking the IFOAs for the Eden, Southern, Upper and Lower North East coastal regions of NSW. It will also be proposing changes to the environmental regulatory framework for forestry operations conducted on public land. It is proposed that the current EPLs will be replaced with streamlined planning, operational, and reporting conditions. These will be supported by supplementary material, including enforceable protocols and other best practice guidance material.

SOFR 2013 reports on the area of multiple-use public forest for which disturbance activities were planned in 2010–11 and the proportion of the area that was assessed for risk to soil values. In NSW the assessment of erosion hazard considers a range of factors including rainfall intensity, slope, soil erodibility, and management practices that could contribute to soil disturbance or mitigate disturbance. The areas disturbed, planned and assessed in NSW are summarised in Table 16.

Table 16: Area of multiple-use public forest where disturbance activities were planned, and proportion assessed for risk of soil erosion, 2010–11

Disturbance activity	Metric	NSW
Native forest harvesting and silviculture	Area (hectares)	27,484
	Proportion assessed for risk of soil erosion (%)	100
Plantation operations	Area (hectares)	14,068
	Proportion assessed for risk of soil erosion (%)	100
Road construction and maintenance	Area (hectares)	nr
	Proportion assessed for risk of soil erosion (%)	na
Fire management	Area (hectares)	36,936
	Proportion assessed for risk of soil erosion (%)	100

Notes: na = not applicable; nr = not reported for this indicator.

Source: SOFR 2013

NPWS rehabilitation field guide

The *Rehabilitation Field Guide – Australian Alps* provides general rehabilitation information, as well as specific information for recovering alpine, subalpine and montane landscapes in south-east Australia. It provides simple information and basic techniques that improve ecosystem management.

The rehabilitation field guide is especially relevant to the Tumut sub-region of the Southern FA region. It is a pilot project and is focused on integrating sound rehabilitation practices into core activities within NPWS and provides a template that can be overlain with specific ecosystem information and techniques for repairing them.

Water quality research in forested catchments

The SOFR 2013 report outlines catchment-scale research in NSW forests on the impacts of forest management activities on water quantity.

Case studies involved in the research include the Red Hill plantation catchment near Tumut and the Canobolas plantation catchment near Orange, as well as modelling work in the south-east native forests.

The Forestry Corporation is also monitoring water quality to assess the impacts of its activities on water quality, principally sediment loads (Webb 2008; Webb et al. 2012a cited in SOFR 2013). In addition, NSW EPA and Forestry Corporation have been designing a decision-support system for the management of runoff from unsealed roads.

1.6 Maintenance of forest contribution to global carbon cycles

Forest management can have a significant positive or negative impact on the global carbon cycle. SOFR 2013 provides a comprehensive update, Australia-wide, on the contribution of Australian forests to the global carbon cycle.

SOFR 2013 also provides a case study (page 398) on the carbon dynamics of managed native forests in NSW. The modelling results showed that management of multiple-use production forest could have the capacity to produce greater mitigation of climate change than management of forest for conservation. However, the magnitude of the difference, and the point in time after which the 'harvest' option delivered greater climate change mitigation than the 'conservation' scenario may have, depend on how components of the

analysis are included. These components are further explored on page 399 of SOFR 2013.

In NSW, total standing volume of carbon dioxide (CO₂) and other carbon indicators are charted in the [Forestry Corporation Sustainability Supplement 2013–14](#) (FCNSW 2014b). Specifically the supplement reports against Indicator 15a: *Carbon sequestration in softwood planted forests* and Indicator 15b: *Carbon balance in hardwood forests*.

1.7 Socio-economic benefits

Employment

Forest industry

Based on the Australian Bureau of Statistics (ABS) 2011 Census of Population and Housing, the forest and wood products industries employ around 22,000 people in NSW.

Employment in the Forestry Corporation

Improving financial and environmental performance and enhancing customer and community service were the drivers behind a restructure of staff roles in the Hardwood Forests Division of the Forestry Corporation this year.

The [Forestry Corporation of NSW Annual Report](#) (FCNSW 2014a) notes that, as at 30 June 2013, Forestry Corporation employed a total of 592 staff, which is a drop of 80 on last year's reported figure. The figure comprised 337 employees primarily involved in management, administration and technical roles, and 255 employees primarily engaged in timber marking, mechanical trades, road construction and maintenance, tree planting and pruning, nursery work, forest conservation and fire protection.

Resilience of forest dependent Indigenous communities and forestry workers to changing social and economic conditions

SOFR 2013 examines community resilience of forest dependent Indigenous communities and forestry workers to changing social and economic conditions. Although no single measure of resilience is possible, the information presented in SOFR 2013 evaluates resilience in terms of community adaptive capacity, dependence on forests and the characteristics of Indigenous workers.

Support for commercial forest-based activities and engagement during forest management activities (employment as well as formal skills acquisition) can provide social and economic benefits which can potentially strengthen the personal and community resilience of Indigenous communities.

The area of land managed under the Indigenous estate is another measure that can suggest strengthened cultural connectedness and economic benefit. Currently in NSW, 2,735,000 hectares (12.3%) of forest area is either Indigenous owned and managed, Indigenous managed, co-managed or held under special rights. This figure is increasing, due to the recognition of native title, land rights legislation and other factors.

Employment in EPA forestry regulation

In 2013–14 the EPA had a total of 30 staff employed in the EPA Forestry Section. Staff are responsible for on-ground operational work, specialist investigations, strategic regulation, policy reform and stakeholder engagement, noting all staff participate in the Forestry Section's compliance program work.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Employment under the *Plantations and Reafforestation Act*

In 2013–14 DPI had a total of 5 EFT staff employed in work related to administration of the PR Act including policy work, assessment, audit and compliance.

Parks

For NPWS, there were a total of 1695 (paid full-time equivalent) positions in NSW as at June 2014, as well as a number of dependent businesses including ecotourism ventures and beekeeping.

Revenue

Forestry Corporation

This year represented a major turning point for the Hardwood Forests Division (HFD). Performance against annual delivery plans and budgets exceeded targets agreed with customers, resulting in one of the division's most productive years.

After recording losses in recent years, during 2013–14 the division dramatically improved its financial position aiming to return a profit in the next reporting period. Full earnings for the period are reported in the [FCNSW Annual Report 2013–14](#).

During the year, the HFD underwent a significant restructure of the entire division. The outcome is reflected in the earnings turnaround driven by increased efficiency and reduced costs, and improved accountability leading to increased production and stakeholder value. The year-end position resulted in a \$2 million contribution to Forestry Corporation's overall earnings.

While the new structure resulted in a reduction in the number of permanent roles, it will ensure the division continues to provide the community with economic returns as well as environmental and recreational benefits. The restructure is expected to reduce ongoing costs by around \$5 million a year.

Major price review negotiations were completed for high quality log products. The division commenced its first ongoing export of low quality hardwood logs not wanted by domestic processors. A number of other log export trials were also underway.

Parks

From 1 July 2013 to 23 February 2014, for information about parks revenue see the Premier and Cabinet Annual Report 2013–14 and from 24 February to 30 June 2014 see the OEH Annual Report 2013–14.

Major new contracts

Forestry Corporation

The corporation invested \$8.55 million to re-acquire 50,000 cubic metres of pre-allocated hardwood per year from Boral over the next nine and a half years.

The buy-back is for species-specific timber allocations in UNE and LNE and will deliver increased marketing flexibility and have a positive impact on the long-term viability of local industry in the region.

Parks

No major contracts to report in 2013–14.

Investment in the forest sector and other initiatives

NSW Forest Agreements have provided long-term Government commitment around the ongoing supply of timber resources to provide certainty to a sustainable value-adding timber industry and direct and indirect employment opportunities.

Expenditure on reported forest management activities in NSW state forests was reasonably stable over the five-year reporting period of SOFR 2013 (see Table 17). This included the plantation areas established or re-established by the then Forests NSW in the period 2006–2011, and the estimated annual costs associated with site preparation, planting, and post-planting fertilisation and management.

In 2006–07, Forests NSW established or re-established 8149 hectares of plantation, most of which was softwood. The associated costs for that year were \$15.8 million. In 2010–11, the area of plantations established or re-established increased to 11,046 hectares, at a cost of \$17.2 million.

Table 17: Expenditure on forest management in NSW state forests, 2006–07 to 2010–11

Activity	2006–07 (\$'000)	2007–08 (\$'000)	2008–09 (\$'000)	2009–10 (\$'000)	2010–11 (\$'000)
Harvest management Supervision and environmental compliance—native forests	6,219	5,164	5,561	5,454	5,184
Harvest management Harvest planning and pre-harvest surveys	–	–	3,997	4,755	5,022
Other forest management activities Firefighting and fire prevention – wildfire	3,000	1,800	1,000	2,400	100
Other forest management activities Hazard reduction burning	8,200	9,800	9,600	8,300	5,700
Other forest management activities Weed management	779	597	899	1,125	1,019
Other forest management activities Animal pest management	586	546	585	591	392
Recreation and tourism Recreation and tourism	2,721	2,092	2,437	2,547	2,408
Training and employee development Training	2,300	2,200	1,800	1,850	2,680

Notes: – = not available

SOFR 2013 data are for forests managed by the then Forests NSW across the state (not only IFOA regions).

It is possible that the reported expenditures on the various aspects of forest management are not mutually exclusive, so figures cannot be summed.

Source: Forests NSW 2009, 2010, 2011 data, cited in SOFR 2013.

Recreation, tourism and visitor experiences

International and domestic forest-based tourism or ecotourism

Tourist visits to the national parks estate, which is representative of forests in other tenures, provide an indication of forest use for ecotourism, although not all parks are fully forested (some contain no forest). SOFR 2013 reports that approximately eight million visits were made by international and domestic tourists to forest destinations in NSW in both 2009 and 2010 (Table 18).

Table 18: International and domestic visitors to forest nature-based tourism destinations in NSW, 2009 and 2010

Destination	2009 inter-national number of visitors ('000)	2009 domestic number of visitors ('000)	2009 total number of visitors ('000)	2010 inter-national number of visitors ('000)	2010 domestic number of visitors ('000)	2010 total number of visitors ('000)
National and state parks	1,327	1,853	3,180	1,379	1,794	3,173
Botanical and public gardens	1,164	766	1,930	1,198	693	1,891
Bushwalking/rainforest	807	1,982	2,789	815	2,136	2,951
Total	3,298	4,601	7,899	3,392	4,623	8,015

Source: Tourism NSW (2009, 2010).

Notes: SOFR 2013 (page 483) also compares the number of permits issued by Forests NSW for organised recreational activities in NSW state forests, 2008–09 to 2010–11. Note that SOFR data is intended for national reporting and, in NSW, is not restricted to IFOA regions.

State forests (and western lands lease)

The NSW Government has committed an additional \$5.6 million a year, indexed to CPI, towards community service aspects of land management in state forests. The additional funding acknowledges that Forestry Corporation is managing land for more than just the timber harvesting business it runs, and seeks to adequately fund these community services.

The [Forestry Corporation Sustainability Supplement 2013–14](#) (FCNSW 2014b) updates facilities provided at more than 130 designated recreational visitor sites in NSW.

Case study – New state forest facilities and attractions on the mid-north coast

The mid-north coast has been a focus for tourism and partnerships in 2013–14 with a new viewing platform, walking track and picnic facilities constructed at the iconic old bottlebutt, a red bloodwood tree in Burrawan State Forest, and a partnership formed with the Hello Koalas Sculpture Trail project.

The new facilities mean visitors can now experience the largest red bloodwood tree in the southern hemisphere, while the partnership highlights the role of local forests in the community.

Recreation Coordinator, Sandra Madeley, said the *Hello Koalas Sculpture Trail* featured a sponsored artwork *Forest the koala*, which is on display at the Glasshouse in Port Macquarie.

Parks

Regional tourism

OEH promoted tourism in national parks through targeted regional marketing campaigns and by delivering high quality visitor experiences. This has resulted in numerous tourism awards including awards for Cape Byron State Conservation Area and Oxley Wild Rivers National Park located in the Upper and Lower North East regions respectively.

For specific highlights on recreation, tourism and visitor experiences within national parks and reserves, from 1 July 2013 to 23 February 2014, see the [Department of Premier and Cabinet Annual Report 2013–14](#), and from 24 February to 30 June 2014 see the [Office of Environment and Heritage Annual Report 2013–14](#).

Case study – Park tourism award winners

At the North Coast Tourism Awards, the Solitary Islands Coastal Walk won gold for best New Tourism Development and OEH partners at Cape Byron State Conservation Area (in Upper North East region), Arakwal Dolphin Dreaming, took out a Gold Award in Indigenous Tourism.

The play *Convict Footprints on the Old Great North Road* won gold in ‘Excellence in Tourism’ at the Hunter Central Coast Tourism Awards, and the Green Gully Track in Oxley Wild Rivers National Park won gold in the Adventure Tourism category at the Inland Tourism Awards.

Number of visits to parks per annum (UNE, LNE, Eden, Southern regions)

NPWS State of the Parks results for 2013 showed increases in visitor numbers to parks in all coastal and western regions. Table 19 summarises visitor numbers in coastal national parks from 2013 data. Visits to many parks in Western NSW have also been increasing. There were 183,000 extra visits to western parks since the 2010 State of the Parks report.

Table 19: Estimated visitor numbers to national parks in NSW coastal regions, 2013

IFOA region	Estimated visitor numbers
Upper North East	5,030,222
Lower North East	6,716,646
Eden	412,354
Southern	4,964,719

Source: NSW State of the Parks Survey 2013

Additional information from visitor surveys can be found at:
environment.nsw.gov.au/research/NSWparkspopularity.htm

Case study – Visitor facilities at Boonalla Aboriginal Area

In June 2014, the newly constructed visitor facilities at Boonalla Aboriginal Area were officially opened by Aboriginal elder, Dick Talbot. Boonalla Aboriginal Area is located 26 km north of Gunnedah.

A day use area including a barbecue and shelter, information sign, toilets, fireplace and seating have been constructed along a 2WD accessible road near the entrance to the reserve. In addition, the access trail and walking track to Boonalla Cave has been upgraded including the addition of interpretive signage along the route.

NPWS and Boonalla Aboriginal Area Co-management Committee are responsible for the area.

Cultural, social and spiritual needs and values

This indicator considers the degree to which land is placed under appropriate tenure classifications or management regimes to protect Indigenous peoples' values in forests.

There have been significant achievements in Aboriginal joint management, recognition of native title, gazettal of a new Aboriginal Area on the south coast, the successful exhibition of Plans of Management (PoMs) for Aboriginal owned parks in Narooma, and the signing of a Memorandum of Understanding (MoU) in the north-west.

Case study – Native title celebrations for the Bandjalang people

On 2 December 2013, in Evans Head, the Federal Court recognised the native title rights of the Bandjalang people in northern NSW to Crown land, state forests and parks from Evans Head to Casino and Grafton, including Broadwater National Park and most of Bundjalung National Park. Native title was granted to the Bandjalang people providing legal recognition of the Bandjalang people's rights and interests in relation to their country.

The determination ensures that these lands will continue to be places of ceremony, learning and inspiration for generations to come.

OEH staff are currently involved in whole of government Indigenous Land Use Agreement (ILUA) negotiations with the Bandjalang people, so that together they can manage parks and protect cultural heritage in the determination area.

It is only the third determination of native title rights in NSW.

Case study – Narran Lakes Memorandum of Understanding

The newest Aboriginal joint management arrangement is in an area that is one of the state's most important waterbird breeding areas. Narran Lake Nature Reserve near Walgett now has new facilities and a new MoU to boost Aboriginal collaboration in the management of the reserve.

The most recent addition to NSW reserves was the gazettal of the Cullunghutti Aboriginal Area, part of Coolangatta Mountain. The local Aboriginal people have been working with OEH for years on the purchase and management of this special place. Aboriginal people from La Perouse to the far south coast attended this special day, which celebrated with the broader community the mountain's significant cultural, historical and contemporary values.

Case study – Biamanga and Gulaga National Parks PoM

The Biamanga and Gulaga Boards of Management discussed and adopted recommendations from the National Parks and Wildlife Advisory Council on the PoM for Yuin Bangguri (Mountain) Parks, which includes both Biamanga and Gulaga national parks. The final plan is anticipated to be adopted and released by the Minister in the 2014–15 period. This is the second PoM developed in NSW for jointly managed parks that involves lease back agreements to traditional owners. Implementation of the plan over the next ten years will confirm the ongoing commitment of NPWS to joint management arrangements for these parks.

1.8 Legal, institutional and economic frameworks

Legislation

Reforms to forestry legislation

The [Discussion paper on the remake of the coastal IFOAs](#) (EPA 2014c) released in February 2014 outlines the NSW Government proposals to make a number of legislative amendments to the *Forestry Act 2012* and the *Protection of the Environment Operations Act 1997* to facilitate the remake to the coastal IFOAs.

Proposed legislative changes include making non-licence terms enforceable by introducing offence and penalty provisions for these terms, ensuring that all harvesting operations on public land are scheduled under Schedule 1 of the Protection of the Environment Operations Act, introducing minimum competencies for harvest and haulage contractors, ensuring environmental penalties and sanctions reflect modern best practice, and improving public access to IFOA amendments.

Reforming Aboriginal heritage legislation

The modernisation process of Aboriginal heritage legislation continued during 2013–14. Following public engagement workshops in 2012, the Aboriginal Culture and Heritage Reform working party submitted draft recommendations for managing Aboriginal culture and heritage to the government in late 2012. OEH produced a response to these recommendations for government consideration, [Reforming the Aboriginal cultural heritage system in NSW: A NSW Government model in response to the Aboriginal Culture and Heritage Reform Working Party's recommendations and public consultation](#) (OEH 2013a). Further community consultation on a proposed approach to reforming Aboriginal cultural heritage legislation occurred in 2013. New legislation will affect how

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Aboriginal cultural heritage is protected and managed in native forests across public and private tenures.

Native Vegetation Regulation 2013

The Office of Environment and Heritage and the EPA finalised the review of the Native Vegetation Regulation 2005, and introduced the Native Vegetation Regulation 2013.

Changes to the regulation included:

- expanding the definition of private native forestry to include Crown land that is not Crown-timber land
- allowing the Minister for the Environment to make a natural resource management plan to identify trees that have regrown following private native forestry as 'protected regrowth'
- PNF PVP landholders clearing under the rural infrastructure routine agricultural management activity (RAMA) in non-critical environmental areas are now required to implement minimum tree retention rates set out in clause 4.2 of the PNF Code of Practice.

A [Snapshot of changes to the Native Vegetation Regulation](#) (OEH 2013b) was published on the OEH website.

The EPA also commenced work to improve the identification and protection of koala habitat on private land.

Following the review of the PNF Code of Practice the EPA amended the seasonality rules for logging on steep slopes in Northern NSW. The amendment applies between the months of December and March in areas of the Northern Rivers catchment management area where the rainfall erosivity is 6000 or greater and ground slopes are 20 degrees or steeper. The amendments commenced on 23 September 2013. The EPA will conduct a comprehensive review of the PNF Code once the coastal IFOA remake has been completed.

Environmental Management Systems (EMS)

Refer to Appendix 1 for reporting on Milestone 1 – Environmental Management Systems.

Plans of management and ESFM plans

Refer to Appendix 1, reporting on Milestones 2.1, 2.4, 2.7 and 2.8. [Statements of management intent](#) (SMIs) are now available for all parks without a plan of management. While not statutory documents, or a replacement for a plan of management, these documents outline the management principles and priorities for the individual park with reference to its key values and major threats. Management directions are also included in each statement with reference to the diversity of existing thematic plans that may already be in place for that park (for example a fire management strategy). Publication of a draft or final plan will replace the statement of management intent for the relevant park.

All existing PoMs can be viewed at [Plans of management](#) on the OEH website.

All existing SMIs (as at 30 June 2014, over 180 documents) can be viewed at [Statements of management intent](#) on the OEH website.

In 2013–14 no progress was reported on reviewing of Forestry Corporation ESFM plans. Forestry Corporation is completing an ESFM review in 2014–15.

Other new or revised policies or circulars for the financial year

EPA Forestry

The EPA's [Discussion paper on the remake of the coastal IFOAs](#) in February 2014 proposes significant policy changes under a single coastal IFOA. Proposed reforms include:

- moving towards outcomes-based licensing which includes best practice guidance and protocols
- addressing barriers to achieving best practice soil and water protection
- adopting a multi-scale landscape approach
- using advances in technology to improve accuracy and efficiency of identifying protected areas of environmental significance
- removing beekeeping, grazing, weed and pest control from being regulated under the IFOA.

The NSW Government reviewed and considered public submissions on the discussion paper as part of the development of the consolidated coastal IFOA.

Forestry Corporation

The following forest management related policies or circulars were revised or newly published:

Codes, guidelines and other

- Risk management guidelines
- Work capacity internal review process guidelines
- Performance and development scheme guidelines
- Manual for the use of chemicals
- CEC 2014/03 – Protective structures on heavy plant

Policies

- P2013/07 – Employee Expenses and credit card policy
- P2013/08 – Internal gifts for staff policy
- P2013/11 – Media policy
- P2014/01 – Records management policy
- P2014/02 – Social media policy
- P2014/03 – Gifts and benefits policy
- P2014/04 – Bullying harassment and discrimination policy
- P2014/05 – Procurement – selection and commitment of external plant hire policy
- P2014/06 – Sponsorship policy

NPWS

The following policies were revised or created in 2013–14:

- Boundary fencing policy – adopted and published in February 2014
- Protocol for undertaking Volunteer Rescue Association training activities in national parks – published in June 2014

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

- Revocation, re-categorisation and road adjustment policy – minor update published in May 2014
- Code of practice for horse riding in parks – updated April 2014

1.9 Research and development

A summary of various research activities is provided in the [Forestry Corporation Annual Report 2013–14](#) (FCNSW 2014a).

2 Compliance with integrated forestry operations approvals and other requirements

2.1 Introduction

Integrated forestry operations approvals (IFOAs) provide the operational framework for the conduct of forestry operations in state forests and on Crown-timber land. The approvals, made under the *Forestry Act 2012*, contain non-licence terms and terms of licences under the *Protection of the Environment Operations Act 1997* [POEO Act; Environment Protection Licences (EPLs)], *Threatened Species Conservation Act 1995* [Threatened Species Licences (TSLs)] and the *Fisheries Management Act 1994* (Fisheries Licences). Non-licence terms, TSLs and EPLs are administered by the EPA, and fisheries licences are administered by NSW Department of Primary Industries (Fisheries). An IFOA enables an integrated environmental regulatory regime for native forest harvesting operations.

There are seven IFOAs which cover the Upper North East, Lower North East, Southern (including Tumut), Eden, Brigalow–Nandewar, South Western Cypress and Riverina Red Gum regions.

TSLs apply to all native forestry operations. In the Upper North East, Lower North East, Southern and Eden regions, EPLs are only required for harvesting operations that meet criteria set out in clause 24 Schedule 1 of the POEO Act. For other harvesting operations in these regions the Forestry Corporation may elect not to apply an EPL, but must still comply with section 120 of the POEO Act that prohibits the pollution of waters.

Forestry operations in the Brigalow–Nandewar, South West Cypress and Riverina Red Gum regions are required to apply an EPL to all operations.

2.2 New IFOAs

No new IFOAs were established over 2013–14, although a comprehensive remake of the four Coastal IFOAs commenced (refer to Chapter 1).

2.3 IFOA amendments

A number of amendments were made to the IFOAs during 2013–14.

The amendments include:

- Amendment No. 3 to the Brigalow–Nandewar IFOA
- Amendment No. 2 to the South Western Cypress IFOA
- Amendments Nos. 2 and 3 to the Riverina Red Gum IFOA.

Amendment No. 3 reduced log limits under the Brigalow–Nandewar IFOA to address the difference between supply areas for wood supply agreement holders and the boundaries between the Brigalow–Nandewar and the South Western Cypress IFOA regions.

Consistent with Amendment No. 3, Amendment No. 2 increased log limits under the South Western Cypress IFOA so there was no overall change to the total volume of timber between both regions. It also increased the annual cap on different timber product volumes in recognition that existing caps placed constraints on timber businesses developing product markets. The amendment clarifies that dead trees must not be felled in a timber operation.

The amendments to the Riverina Red Gum IFOA extended the existing early thinning program on state forests to 30 June 2019 based on an independent determination that specified residue volumes could be sustainably harvested to promote the growth of high quality timber. The authorisation of residue operations on western lands leases was also extended by six months.

2.4 EPA compliance program

The EPA is responsible for the regulation of native forestry operations on private and public (Crown) land in NSW. The EPA regulates the impact of native forestry operations on soil and water, threatened species and their habitat to promote ecologically sustainable forest management. The EPA's compliance program is implemented in accordance with the [Crown Forestry Compliance Strategy 2013–16](#) (EPA 2013a) and [Private Native Forestry Compliance Strategy 2013–16](#) (EPA 2013c).

To achieve the objectives of these strategies the EPA also develops an annual list of key environmental compliance priorities for Crown and private native forestry. The compliance priorities for 2013–14 are summarised in Table 20.

Table 20: The Crown and private native forestry compliance priorities for 2013–14

Crown forestry environmental compliance priorities	Private native forestry environmental compliance priorities
<p>Hollow-bearing and recruitment trees Identification, retention and protection of adequate and appropriate trees for maintenance and replacement of arboreal tree hollow habitat</p>	<p>Hollow-bearing and recruitment trees Identification, retention and protection of adequate and appropriate trees for maintenance and replacement of arboreal tree hollow habitat</p>
<p>Koalas Identifying and protecting koalas and their habitat</p>	<p>Koalas Protecting koalas and their habitat</p>
<p>Threatened ecological communities Improved identification and protection of threatened ecological communities</p>	<p>Threatened ecological communities Improved identification and protection of threatened ecological communities</p>
<p>Road and snig track crossings Protection of waters from inadequate road and snig track crossing location, design, construction, operation and maintenance</p>	<p>Road and snig track crossings Protection of waters from inadequate road and snig track crossing location, design, construction, operation and maintenance</p>
<p>Exclusion zones Protecting key exclusion zones in: (a) Western – forest management zones and threatened species protection zones (b) Coastal – mapped rainforest, rocky outcrops, riparian protection zones and threatened species exclusion zones</p>	<p>Road and snig track drainage Prevention of soil erosion and water quality degradation resulting from road and snig track drainage establishment and maintenance</p>
<p>Forest structure Maintaining forest structure, including through basal area assessments</p>	<p>Forest operations plans Ensuring effective pre-harvesting operational planning and operational instructions and guidance to improve best practice, regulatory compliance and environmental outcomes</p>
<p>Forest health Forest health issues in the regulatory framework, including bell miner associated dieback</p>	<p>Unapproved logging Improving compliance with <i>Native Vegetation Act 2003</i> requirements</p>

Compliance priorities ensure that the EPA targets its regulatory effort on issues deemed to be high risk and of high public interest. They also provide a clear indication of the EPA's expectations regarding environmental performance.

EPA's compliance program comprises responsive and proactive activities. Responsive activities include investigating public complaints or notifications. It can also include self-reported incidents by Forestry Corporation. Proactive activities such as audits can focus on geographic areas where public notifications are less likely.

An annual report detailing the regulatory achievements or actions delivered against each of these compliance priorities has also been produced, see [Private Native Forestry and Crown Forestry Environmental Compliance Priorities: actions taken in 2013–14](#) (EPA 2014b).

Range of regulatory tools to achieve compliance

The EPA uses a range of regulatory tools to help achieve compliance, including audits, investigations, issuing penalty infringement notices, and education/training.

The EPA's compliance audits are always third party audits, i.e. independent from the entity being audited. Compliance audits are a preventative tool insofar as they aim to identify risks before they develop into an environment incident. Compliance audits use a systematic process of assessing actual performance against environmental risk. The scale of harm, sensitivity of the receiving environment and likelihood of environmental harm occurring are used to determine risk. This is followed by a request to take action where improvements are required to reduce environmental risk.

The request allows the auditee to take appropriate risk abatement action to prevent future incidents.

EPA carries out investigations as part of incident management and in response to community concerns. Unlike audits, investigations do not follow a structured process but apply a more flexible approach to assess non-compliance. The result of an investigation can vary and lead to a range of measures being applied such as guidance, requests for clean-up/remedial action, incident management, or recommendations for policy and legislative reform.

2.5 Crown native forestry compliance and enforcement activities by the EPA

In 2013–14, the EPA completed 21 compliance audits and 29 investigations of active forestry operations on NSW public lands. This regulatory work targeted six compliance priorities for the management of important environmental values such as the retention, selection and protection of hollow-bearing and recruitment trees and koala habitat identification and protection. The EPA's compliance priorities are set annually and are subject to ongoing review.

The EPA also investigated 16 compliance incidents reported by the public.

Compliance audit reports for individual public forestry operations are available on the EPA's [public register](#).

Total non-compliances on public land

Non compliances found and reported by the EPA included:

- 15 non-compliances with EPL conditions
- 11 non-compliances with section 120 of the POEO Act
- 197 non-compliances with TSL conditions.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

During 2013–14 the EPA issued 73 audit action plan requests to the Forestry Corporation of NSW. It also issued Forestry Corporation with six corrective action requests, ten advisory letters, six warning letters, six official cautions and two penalty notices.

IFOA region summary

Upper North East region

Six audits in the Upper North East IFOA region (UNE) focused on IFOA TSL requirements regarding retaining and protecting trees, koala use searching, and basal area assessments. The region achieved an overall compliance rate of approximately 90%, comprising 322 assessments of compliance with the 33 recorded non-compliances. Non-compliance found by the EPA related to how recruitment trees were selected and how hollow-bearing and recruitment trees were marked up and protected. There was a good rate of compliance in how hollow-bearing trees were selected and protected.

The EPA issued 17 audit action plans as a result of these audit findings for matters that had environmental risks from moderate to low.

Six investigations were completed in this region. Non-compliances found by the EPA related to koala use searches not done in line with the TSL requirements, snig track drainage and potential for water pollution. Corrective action requests were issued in areas to protect waters.

Lower North East region

Five audits were done in the Lower North East IFOA region (LNE). These focused on IFOA TSL and EPL requirements regarding water pollution, retaining and protecting trees, landscape protection and threatened species protection.

The region achieved an overall compliance rate of 84%. Of the 299 assessment findings made, there were 47 non-compliances found. Non-compliance findings related to failing to protect waters, not marking boundaries of rainforest and old growth, koala use searches not done in line with the TSL requirements, and how recruitment trees were selected. There was a high rate of compliance with how hollow-bearing trees were selected and retained. Some of these incidents generated separate investigations resulting in regulatory action. The EPA issued 25 audit action plans as a result of these audit findings for matters that had environmental risks from high to low. The findings and proposed actions from these audits will inform future regulatory activities.

Ten investigations were completed in the LNE region. Key offences found by EPA investigations related to not doing koala searching before operations commence, general compartment mark up, hollow-bearing and recruitment tree selection and protection, excessive ground disturbance, logging in a rocky outcrop, failure to field mark, and logging in bat roost exclusion zones.

Forestry Corporation of NSW was issued with two penalty notices for the LNE region during the reporting period. One penalty notice was for failure to field mark a bat roost exclusion zone. The other penalty notice was for logging in a rocky outcrop.

Southern region

Two audits were done in the Southern IFOA region. These focused on IFOA TSL requirements to identify and protect threatened species, landscape features, and the retention, selection and protection of hollow-bearing and recruitment tree resources.

The region achieved an overall compliance rate of 79%, comprising 107 assessments of compliance with 22 recorded non-compliances. The key non-compliances found by the EPA were failure to select proper recruitment trees, and failure to protect hollow-bearing

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

and recruitment tree resources. Hollow-bearing and recruitment tree non-compliances are moderate environmental risks. The EPA issued 14 audit action plans as a result of these audit findings for matters that had environmental risks from high to low. Findings and proposed actions from these audits will inform future regulatory activities.

Two investigations were completed in the reporting period for this region.

One investigation was completed into ground disturbance, hollow-bearing and recruitment trees, regeneration and water pollution. The EPA issued warning and advisory letters as a result of this investigation.

The second investigation resulted in Forestry Corporation being prosecuted in the Land and Environment Court of NSW for the two offences of causing water pollution and damage to a riparian habitat by burning activities in Mogo State Forest. The prosecution resulted in Forestry Corporation being fined \$35,000 and having to pay the EPA's legal costs. The court determined that the full amount of the penalty be paid to an environmental service order for OEHL to manage a high resolution threatened ecological community (TEC) mapping project. The project will assist in the identification and management of TECs in NSW native forestry areas.

Tumut sub-region of Southern Region

The EPA conducted no proactive or responsive regulatory activity in this sub-region during the reporting period.

Eden region

Five audits were completed in the Eden IFOA region. These focused on IFOA TSL requirements regarding compartment mark up, retaining and protecting trees, landscape protection and threatened species protection.

The region achieved an overall compliance rate of 77%, comprising 227 assessments of compliance with 52 recorded non-compliances. Key non-compliances related to how hollow-bearing trees were selected, not protecting hollow-bearing and recruitment trees, logging in threatened species and riparian exclusion zones and failure to conduct compartment mark up before operations. Most of these key non-compliances posed moderate to high environmental risks and triggered separate investigations. The EPA issued 14 audit action plans as a result of these audit findings.

The EPA completed four investigations in this region in the reporting period. These led to issuing official cautions for not identifying and protecting rocky outcrops and not doing compartment mark ups. These investigations and official cautions will inform the EPA's future regulatory work.

Brigalow–Nandewar region

The EPA conducted no proactive or responsive regulatory activity in this region during the reporting period. The EPA plans to carry out proactive regulatory activities in this region in 2014–15.

Riverina Red Gum region

Three audits were done in the Riverina Red Gum IFOA region. These focused on IFOA conditions about stream protection. The region achieved an overall compliance rate of 98%; of the 43 compliance assessments made, one non-compliance was found for logging in a riparian zone.

The EPA completed one investigation in this region during the reporting period. This led to the issue of a warning letter for failure to implement field method and protocols licence requirements.

South Western Cypress region

The EPA conducted no proactive or responsive regulatory activity in this region during the reporting period.

2.6 Private native forestry compliance and enforcement activities by the EPA

The EPA is implementing a PNF monitoring and compliance strategy, and undertaking operational inspections, audits and investigations. This is supported by regulatory extension activities.

During 2013–14, the EPA undertook 69 operational inspections and 74 audits of PNF operations. Five new compliance investigations were also initiated. During 2013–14, one official caution letter, three warning letters, 31 advisory letters and two corrective action requests were issued. EPA also issued two penalty notices to harvesting contractors for logging in rainforest, old growth and riparian zones. As in previous years, non-compliances have commonly been associated with the operation of roads and snig tracks, including road drainage feature crossings, and inadequate identification or protection of riparian areas. The EPA is working with landholders and contractors to improve operational best practice, including identifying features to be protected before commencing harvesting operations and minimising disturbance during them.

2.7 Forestry Corporation internal compliance program

The Forestry Corporation was recertified for three years to the Australian Forestry Standard (AS4708:2007) and Environmental Management System (ISO 14001:2004). Rigorous external audits of regional operations and corporate systems were carried out in five operational regions spanning all forestry regions. The audits helped to ensure that the Forestry Corporation continued to meet and exceed environmental, social, economic and sustainability criteria of these standards.

The Forestry Corporation updated its internal compliance monitoring system for hardwood forests in late 2012. The 2013–14 period was the first full year of operation under the revised system. The internal compliance monitoring system focuses on structured quality assurance assessments (QAA) of forestry activities including harvesting, implementation of silviculture prescriptions, roading, tree retention and protection, safety considerations, exclusion boundary compliance, snig track construction, log dump operation, wet weather management, pest and weed management, and hazard reduction burning. The assessments measure performance against established standards and rate the severity of non-compliance incidents.

Internal compliance monitoring is not related to audits of compliance of forestry operations under the IFOAs carried out by the EPA, Fisheries NSW and DPI Plantations. However, internal compliance monitoring helps the Forestry Corporation to identify issues and environmental risks, and to focus timely management responses on priority incidents. More information about the Forestry Corporation's internal compliance monitoring system is available within the [Sustainability Supplement 2013–14](#).

The Forestry Corporation typically undertakes internal compliance monitoring of each harvesting crew four times each year. Each QAA considers forestry operators' application of site-specific conditions and operational requirements. Individual QAAs for timber harvesting typically take two days for one person to complete. The results of audits are reported back to contractors each quarter as part of monitoring contractors' key performance indicators and as a tool to manage performance. The Forestry Corporation records non-compliance issues in a reporting system and the severity of an incident

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

determines the level of response. The aim is to achieve a rapid response where an issue has occurred or is likely. All incidents are required to be reviewed and actioned by the relevant supervisor in a timely manner and incident reviews are conducted monthly by the management team.

In 2013–14, the Forestry Corporation conducted 160 QAAs across the hardwood forest estate. This included 55 QAAs in the North East Region, 62 in the Central Region, 31 in the Southern Region and 12 in the Western Region. The Forestry Corporation compliance monitoring program identified high rates of compliance and low rates of medium and high severity incidents (see [Forestry Corporation Sustainability Supplement 2013–14](#)).

In addition to the Forestry Corporation's internal compliance program, the Corporation is subject to independent audit as part of certification and by the regulators of the IFOAs (EPA, Fisheries NSW, and DPI Plantations). The Corporation is invited to provide information and records to assist the EPA with its audits and investigations, to respond to the results and enforcement decisions made by EPA, and to prepare responsive action plans if necessary. Feedback is recorded in EPA audit reports and published on the public register. The EPA and Forestry Corporation regularly discuss enforceability and interpretation of individual license conditions and it is noted that delivering clear findings with the current licence conditions is sometimes problematic and findings are not always agreed. In 2013–14 some areas of difficulty included the requirement for a 'thorough search' in respect to verifying evidence of threatened species; practical implementation of tree retention and protection requirements and realistic tolerances of GPS accuracy for boundary compliance. These and other issues are currently subject to review under the current remake of the Coastal IFOAs.

The Forestry Corporation publishes internal non-compliance incidents (NCIs) requiring corrective action identified by its supervisors annually. The Forestry Corporation records a non-conformance incident if it can be resolved within 24 hours and is not related to systematic failures. Similarly, the Corporation does not record incidents considered to be minor with low consequence or harm. Table 21 summarises the NCIs recorded in the six years to 2013–14.

Table 21: Number of internal non-compliance incidents that required corrective action recorded across all state forests by Forestry Corporation, 2008–2014

Type of incident	2008–09	2009–10	2010–11	2011–12	2012–13	2013–14
Soil and water	28	143	135	175	84	110
Flora and fauna	93	93	103	32	61	25
Fish habitat and passage	0	38	67	28	1	0
Other non-compliance issues (e.g. safety, illegal dumping, trail bikes)	434	319	72	150	86	36
Total	555	593	377	385	232	171

Notes: The number of compliance check sheets conducted each year by Forestry Corporation supervisors is not set and may change each year. For example in 2011–12 Forestry Corporation carried out 354 checks of compliance monitoring and 38 checks of systems implementation across softwood and hardwood forests in NSW. In 2013-14 Forestry Corporation carried out 284 checks of compliance monitoring and 20 checks of systems implementation. For the hardwood forest estate only, Forestry Corporation conducted 160 QAAs in 2013-14.

During the 2012 financial year, the compliance system underwent a major modification to reduce the tiers of checks to three and to increase the focus on corrective and preventative action.

2.8 Fisheries

Compliance with the Fisheries Threatened Species Licence (FL) contained in the IFOAs is audited by Fisheries NSW.

No offences or issues were investigated for the 2013–14 reporting period.

3 Achievement of milestones and undertakings defined for NSW forest regions

3.1 Introduction

What are milestones?

Milestones record tasks and the timing required for continual improvement in the management of forested areas. Examples of topics for milestones are:

- developing environmental management systems (EMS)
- preparing management plans for areas of high conservation value
- reporting harvested timber volumes and other forest products such as firewood
- coordinating approaches to land management issues, such as pest, weed and feral animal control
- entering joint venture initiatives with local landholders and Aboriginal people
- monitoring criteria and indicators
- developing strategies with stakeholders to provide cooperative management opportunities
- preparing management plans for tourism and recreation within forest areas.

What are undertakings?

Undertakings are other tasks agreed between state agencies that are listed in approvals or licences. They include:

- documents to be prepared, such as a policies, roading plans and grazing management plans
- training to be provided
- monthly reports and annual reports
- systems for providing public access to documents.

3.2 Progress in coastal Forest Agreements and IFOAs

Appendix 1 reports on 2013–14 progress of milestones specified in the NSW Forest Agreements for the UNE, LNE, Eden and Southern regions.

Detailed information on progress against the milestones is provided in the report *Review of New South Wales Forest Agreements and Integrated Forestry Operations Approvals, Upper North East, Lower North East, Eden and Southern regions* (EPA 2010c), available at: www.environment.nsw.gov.au/resources/forestagreements/ReviewFAandIFOA.pdf.

Appendix 1 does not duplicate this work but updates it where necessary. Only ongoing milestones are reported. Completed milestones and those no longer applicable are only reported if there are significant updates or changes.

3.3 Progress in western NSW IFOAs

Brigalow and Nandewar Community Conservation Area Agreement and Brigalow–Nandewar IFOA

Milestones and undertakings in the Brigalow–Nandewar region are set out in the Brigalow and Nandewar Community Conservation Area Agreement (CCA Agreement) (CCC 2009) and the Brigalow–Nandewar IFOA (EPA 2010a):

www.epa.nsw.gov.au/resources/forestagreements/ccaAgreement.pdf

www.epa.nsw.gov.au/forestagreements/brigalownandewarifoa.htm

The achievement of milestones and undertakings is reported in Appendix 2.

Riverina Red Gum IFOA

Undertakings in the Riverina Red Gum region are set out in the Riverina Red Gum IFOA (EPA 2010b):

www.epa.nsw.gov.au/forestagreements/redgumifoa.htm.

The achievement of milestones and undertakings is reported in Appendix 3.

South Western Cypress IFOA

Undertakings in the South Western Cypress region are set out in the South Western Cypress IFOA (EPA 2011):

www.epa.nsw.gov.au/forestagreements/swcypressifoa.htm.

The achievement of milestones and undertakings is reported in Appendix 4.

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NSW Forest Agreements and IFOAs Implementation Report 2013–2014

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Appendix 1: Milestones and undertakings – Coastal IFOAs

This appendix reports on 2013–14 progress of milestones and undertakings specified in the NSW Forest Agreements for the UNE, LNE, Eden and Southern regions.

Milestones and undertakings previously recorded as complete or no longer applicable are not listed.

Report milestone number	Milestone	Progress for 2013–14
1. Environmental Management Systems		
Milestone 1.2 Agency: PWG	Preparation of Parks and Wildlife Group (PWG) EMS Refer to UNE, LNE and Eden Forest Agreements section 2.1.2, Att 3; Southern Forest Agreement section 2.1.2, Att 6 (2)(b)	Revised status – Complete Will not have to be reported in the current period or following.
2. Management planning		
Milestone 2.1 Agency: NPWS	Plans of management for the NPWS estate Refer to UNE, LNE and Eden FAs section 2.3.2, Att 8; Southern FA section 2.3.2	Of the 394 reserves in the UNE and LNE regions, 254 have plans of management adopted by the NSW Minister for the Environment and 40 draft plans have been publicly exhibited. A statement of management intent has been prepared for 89 reserves. Of the 18 reserves in the Eden region, 16 have plans of management adopted by the NSW Minister for the Environment and one draft plan has been publicly exhibited. A statement of management intent has also been prepared. Of the 128 reserves in the Southern region, 113 have plans of management adopted by the NSW Minister for the Environment and three draft plans have been publicly exhibited. A statement of management intent has been prepared for 11 reserves.
Milestone 2.4 Agency: FCNSW	Report on meeting targets in ESFM plans Refer to UNE, LNE, Eden, Southern FAs section 2.2.6	Forestry Corporation continues to report at a statewide scale on performance across a range of social, environmental, economic and sustainability areas through its annual report and sustainability supplement.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Report milestone number	Milestone	Progress for 2013–14
Milestone 2.5 Agency: FCNSW and NPWS	Formation of a working group in Southern region to make recommendations on the management and tenure of areas of state forests that are isolated from the productive state forests Refer to Southern FA section 6.16	Ongoing No progress reported for 2013–14.
Milestone 2.7 Agency: FCNSW	Working plans for flora reserves to be incorporated into ESFM plans Refer to UNE and LNE and FAs section 2.2.2; Eden FA section 2.2.2; Southern FA sections 2.2.2, 2.3.2	Ongoing Almost all existing flora reserves on state forests have management plans. Management plans will be progressively prepared for new reserves. Model plans (document templates) have been issued to guide future preparation of management plans.
Milestone 2.8 Agency: FCNSW	Working plans for informal reserves to be incorporated into ESFM plans Refer to UNE, LNE and Eden FAs section 2.3.3; Southern FA section 2.3.3	Model plans developed by FCNSW have been issued for regions to develop plans for informal reserves and areas managed by prescription. The working plans are being completed progressively.
3. CAR reserve system		
Milestone 3.2 Agency: Fisheries	Aquatic reserves declared under the <i>Fisheries Management Act 1994</i> that affect forestry operations in the UNE, LNE, Eden or Southern regions Refer to LNE, UNE, Eden, Southern FAs section 2.3.4	No new aquatic reserves declared in the reporting period.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Report milestone number	Milestone	Progress for 2013–14
Milestone 3.3 Agencies: NPWS with FCNSW	Upgrading of FMZs, reviewing mineral objections and lands for further consideration (FURCONS) Refer to UNE and LNE FAs sections 2.3.1, 2.3.3, 6.16.2; Eden FA section 6.16.1; Southern FA section 2.3.3	There have been no further reviews of FMZs, mineral objections or lands for further consideration (FURCONS) in 2013–14.
4. Crown reserves and assessment of Crown land		
Milestone 4.1 Agency: NPWS	Management and five-year review of Crown reserves/state conservation areas Refer to UNE, LNE and Eden FAs 2.3.3; UNE and LNE FA section 2.3.3; Eden FA section 2.2.3; Southern Forest Agreement section 2.3.3	The second five-year review of state conservation areas (SCAs) has been finalised, with all recommendations agreed to. The SCA category is no longer needed for seven SCAs and parts of two SCAs – ten parcels of land totalling approx. 35,864 ha. For further information on the review findings see www.environment.nsw.gov.au/resources/parks/14568SCAreview.pdf . The third five-year review is due to commence in 2017.
Milestone 4.2 Agency: NPWS	Identification and assessment of additional areas available for formal reservation Refer to UNE and LNE FAs section 6.16.2	There were no new assessments or reservations of additional Crown land under the UNE and LNE Forest Agreements in 2013–14. A whole of government review of the management of Crown lands is currently underway.
5. Threatened species management – no further reporting, see previous report		
6. Pest, weed and feral animal control		
Milestone 6.2 Agency: FCNSW	Preparation of grazing management plans, feral and introduced predator control plans and threatened flora species management plans on state forests Refer to UNE, LNE and Eden FAs section 2.4.2; Southern FA section 2.4.3	Model strategic plans for pest and weed management have been approved by the EPA. FCNSW has prepared regional pest and weed plans based on this approved model. Regional grazing plans are being progressively prepared based on an FCNSW approved model. As part of the remake of the coastal IFOAs, all supplementary plans including grazing would be reviewed to align with any new requirements.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Report milestone number	Milestone	Progress for 2013–14
7. Managing for other forest values and uses		
<p>Milestone 7.4 Agencies: OEH, who chairs Occupation Permit Taskforce (NPWS, FCNSW, and NSW Farmers)</p>	<p>After consultation, the occupation permit taskforce must oversee the phasing out of occupation permits in state forests which currently exist in areas identified as formal reserves and informal reserves and permissive occupancies on Crown land identified as formal reserves and informal reserves. Refer to UNE, LNE, Eden FAs section 2.3.3; Southern FA section 2.3.3</p>	<p>No progress reported for 2013–14.</p>
8. Private land		
<p>Milestone 8.1 Agency: OEH Veg. mapping</p>	<p>Identification of private land of conservation priority Refer to UNE and LNE FAs section 2.9.1 – 1 January 2000; Southern FA section 2.9 – 30 June 2002</p>	<p>Processes in place for identifying private land of conservation priority are listed on page 26 of the Review of NSW Forest Agreements and Integrated Forestry Operations Approvals (DECCW 2010). The information will continue to be updated in subsequent reports.</p>
<p>Milestone 8.5 Agency: FCNSW</p>	<p>Improve administrative arrangements and cooperation and coordination by state agencies to facilitate the timber industry utilising private forest resources including marketing and pricing Refer to Southern FA Att 6 (3)</p>	<p>The Review of NSW Forest Agreements and Integrated Forestry Operations Approvals (DECCW 2010) summarised programs and arrangements by state agencies and non-government organisations, including marketing and pricing, to assist use and management of private forest resources.</p>

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Report milestone number	Milestone	Progress for 2013–14
Milestone 8.6 Agency: FCNSW	Arrangements to ensure ESFM on private forests involving the provision of technical advice, extension services, research and assistance in the estimation of sustainable yield Refer to Southern FA Att 6 (3 point 1)	The NSW Report on Native Vegetation summarises actions by private forestry land managers, with the help of OEH, to conserve and manage native vegetation. The reports are available at: www.environment.nsw.gov.au/vegetation/reports.htm .
9. Private native forestry and plantations – no further reporting required – final update was in the 2010–11 report		
10. World heritage and wilderness		
Milestone 10.1 Agency: NPWS	Review of CERRA World Heritage Areas to identify any additional rainforest to be included Refer to UNE and LNE FAs section 2.7	As reported previously, additional areas were identified in 2005. With agreement of the NSW and Queensland governments, proposed extensions to the Gondwana Rainforests of Australia World Heritage Area were added to Australia’s Tentative List in 2010. No progress reported for 2013–14.
Milestone 10.2 Agency: NPWS	Studies of the dedicated reserve system to identify World Heritage values, including eucalypt dominant vegetation and religious beliefs embedded in the landscape Refer to UNE and LNE FAs section 2.7; Eden FA section 2.6; Southern FA section 2.7	As noted in previous reports, the National Parks Association undertook preliminary studies in 2012 and proposed a nomination for consideration by NPWS. No progress is reported for 2013–14.
11. Cultural heritage – no further reporting required – final update was in the 2010–11 report		

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Report milestone number	Milestone	Progress for 2013–14
12. Aboriginal interests		
<p>Milestone 12.4 Agencies: NPWS FCNSW</p>	<p>NPWS and Forestry Corporation to undertake joint management arrangements with local Aboriginal communities and examination of state forests for co-management arrangements</p> <p>Refer to UNE, LNE and Eden FAs section 5.1.1; UNE and LNE FAs section 5.1.1; Southern Forest Agreement section 5.1.1</p>	<p>For parks there are currently 13 formal joint management arrangements that have been established (including leases, ILUAs and MoUs) with Aboriginal communities that are formalised under the <i>National Parks and Wildlife Act 1974</i> within the Forest Agreement areas. There are also a number of joint management agreements under negotiation. The Gundungurra Non-Native Title Indigenous Land Use Agreement is nearing completion. It covers reserves in the Southern Forest Agreement area.</p> <p>Two meetings were held with the Monaro Ngarigo representatives (Southern Aboriginal Working Group); these meetings were held in March and June 2014 and agreement was reached to finalise with signing of the MoU.</p> <p>The Southern MoU is in the final stages of the approval process (Southern).</p> <p>The draft Plan of Management Yuin Bangguri (Mountain) Parks, which incorporates Gulaga and Biamanga national parks will soon be adopted by the Minister. The Gulaga and Biamanga NPs Boards of Management are currently looking at alternatives for the reservation status for the Bellbrook Farm property that was purchased by the Board. The property has potential for cultural tourism operations. Interim management guidelines for a three year period are currently in place.</p> <p>Representatives from 18 of the 24 Aboriginal boards of joint management and advisory committees, established through formal agreements with the National Parks and Wildlife Service (NPWS), participated in the annual meeting of Aboriginal Joint Management Custodians of NSW in May 2014. The Custodians gathered to share experiences and talk about partnerships for managing national parks and supporting Aboriginal peoples' continuing connection to their lands and culture. The Tumut Brungle Gundagai Aboriginal Community hosted the meeting; they have an agreed MoU with NPWS. It includes working in partnership in the management of parks in the Tumut area, providing employment and training opportunities for Aboriginal people, and protecting Aboriginal cultural heritage, artefacts and sites. The NPWS organises the annual Aboriginal Joint Management Custodians meeting and acknowledges the significance of the event. The Head of NPWS, Ann King, participated, as did other senior staff members. Other priority issues for the meeting included governance for the current boards and committees, social and economic opportunities for NSW Aboriginal peoples and exploring best practice management and conservation options for NPWS reserves.</p> <p>The Aboriginal joint management custodians of NSW have been meeting every year since 2009. The meeting is hosted by a different Aboriginal community each year at a different location. For example, last year it was hosted by Bundjalung People of Byron Bay (Arakwal).</p>

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Report milestone number	Milestone	Progress for 2013–14
<p>Milestone 12.4 Agencies: NPWS FCNSW</p>	<p>NPWS and Forestry Corporation to undertake joint management arrangements with local Aboriginal communities and examination of state forests for co-management arrangements</p> <p>Refer to UNE, LNE and Eden FAs section 5.1.1; UNE and LNE FAs section 5.1.1; Southern Forest Agreement section 5.1.1</p>	<p>FCNSW welcomes Aboriginal groups to undertake traditional activities on native state forests. During 2013–14 a range of partnership agreements and permits were in place in a number of State forests within the coastal Forest Agreement areas including:</p> <ul style="list-style-type: none"> • Warre Warren Aboriginal Place and McPherson State Forest – joint management arrangements with the Darkinjung Aboriginal Land Council. FCNSW has provided a shelter, toilet and water tanks. The site is used for cultural camps and teaching children about traditional culture. • Riamukka State Forest permit with the Anaiwan Traditional Elders – permit for cultural teaching and camping. A shed, camping quarters, shelter, water tank and mower have been provided for the Elders. One Elder lives on site to manage the area and prevent vandalism. • Keepa Elders – permit provided on Mount Sugarloaf for cultural teaching and camping. Shelter and toilet and water facilities will be developed over the next 12 months. • Purfleet Taree Land Council and Karuah Land Council – agreements are in place and being further developed for traditional use of plants from local state forests and traditional hunting. • Provision of bark from a range of species to many different Aboriginal groups for traditional canoe making on both the north and south coast. Bark is provided that is left over from the bark piles on log dumps. • Provision of free firewood permits to Aboriginal communities in particular for Aboriginal youth to provide heating for Elders. <p>FCNSW Hardwood Forests Division has an Aboriginal Partnership Liaison Team of six cultural heritage officers who work with Aboriginal communities to further develop these partnership arrangements. Aboriginal groups are regularly contracted to FCNSW for archaeological site survey as part of the planning process for harvesting and roading operations.</p>

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Report milestone number	Milestone	Progress for 2013–14
<p>Milestone 12.5 Agencies: NPWS FCNSW</p>	<p>Joint ventures with local Aboriginal communities and development of project plans Refer to UNE, LNE and Eden FAs section 5.1.1; Southern Forest Agreement section 5.1.1</p>	<p>Forestry Corporation Regional Aboriginal Affairs Officers continued to facilitate consultation and input from Aboriginal communities, on appropriate protection measures for sites.</p> <p>A range of joint ventures with local Aboriginal communities are already in place in a number of state forests; see Milestone 12.4 above for details.</p> <p>NPWS continues to provide in-kind support to the Bundian Way Management Committee and advice to the project coordinator.</p> <p>Bombala Area provides substantial support to this program. The NPWS Area Manager is a member of the Bundian Way Management Committee and by way of provision of advice on various matters.</p> <p>Under the Aboriginal Park Partnership Funding Program (APPPF) two gatherings were funded: 1. Bundian Way Back to Country Elders Yarn-up and 2. Combined schools Year 11 Koori excursion. This provided the opportunity for 14 Aboriginal high school students to get involved in various educational and cultural activities at the Jigamy Keeping Place – the Gateway for the Bundian Way. The Elders Yarn-up was also incorporated into this camp.</p> <p>The South Coast Aboriginal Working Group continued to steer project plans and proposals that include community celebration arrangements for the newly declared Cullunghutti Aboriginal Area.</p> <p>NPWS Coffs Coast Area supported the Repair to Country Team involving Aboriginal people gaining training to undertake weed control and bush regeneration across natural areas.</p> <p>The Aboriginal Project Officer at NPWS Nowra Area is progressing an interpretation panel for final agreement and approval by the Jerrinja Community Elders and Aunties. Ongoing consultations and meetings have been held with the Elders and Aunties where oral history stories about Woolumboola Lake were recorded. These stories are being transferred to the interpretation panel by an interpretations expert contractor. A photograph to go on the panel is currently being considered by the Elders.</p>
<p>13. Aboriginal interests in the Hume and Riverina regions of FCNSW and the South West Slopes region of NPWS</p>		
<p>Milestone 13.2</p>	<p>Specified enterprise development on state forests within Hume and Riverina regions of Forestry Corporation Refer to Southern FA section 5.1.4.2</p>	<p>The Review of NSW Forest Agreements and Integrated Forestry Operations Approvals (DECCW 2010) summarised initiatives. No further update provided by Forestry Corporation for 2013–14.</p>

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Report milestone number	Milestone	Progress for 2013–14
Milestone 13.5	Forestry Corporation to initiate specific employment opportunities in the Hume and Riverina regions of Forestry Corporation subject to external funding Refer to Southern FA section 5.1.4.4	The Review of NSW Forest Agreements and Integrated Forestry Operations Approvals (DECCW 2010) summarised initiatives. No further update provided by Forestry Corporation for 2013–14.
Milestone 13.7 Agency: NPWS	Specified employment and training opportunities with NPWS Refer to Southern FA section 5.1.4.6	<p>Two temporary (three year) Aboriginal Field Officer positions were maintained, they are half funded from OEH and Biamanga and Gulaga boards of management. The appointments are based in Narooma and Tanja. These positions are part of the Enhanced Bushfire Management Program.</p> <p>An Aboriginal Cadet Ranger position was maintained and is based in Narooma.</p> <p>A temporary (two-year) Aboriginal Field Officer was maintained for the Southern Ranges Region Enhanced Bushfire Management Program.</p> <p>A temporary full time (two-year) Aboriginal Field Officer (Aboriginal identified position) was maintained for the South Coast Region Enhanced Bushfire Management Program. Another Aboriginal person was also appointed full-time to the program but is not an identified position. These positions are based at Nowra Depot but cover the South Coast region.</p> <p>A temporary part-time Clerk position is continuing for an Aboriginal Community Projects Officer. This position is also located at Nowra.</p> <p>A salaried student-based apprentice was appointed to the South Coast region for two years. This is the second year for this position.</p> <p>South Coast Region continued employment of fulltime Aboriginal Rangers and field officers in all of its Areas.</p> <p>A temporary part-time Clerical Officer position is continuing for an Aboriginal Community Liaison Officer. This position is located at Tumut and services Southern Ranges Region.</p> <p>Aboriginal Rangers and Tour Guides are currently undertaking training with the Eden Local Aboriginal Land Council (LALC) for the Bundian Way Project. They will be utilised for a two day guided river paddle along the Snowy River to meet and interact with potential mentors from the adventure guiding and ecotourism field. This activity will be undertaken prior to 30 June 2015.</p>

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Report milestone number	Milestone	Progress for 2013–14
14. Supply arrangements		
Milestone 14.1 Agency: FCNSW	Consultation on timber arrangements through the development of plans of operation Refer to UNE, LNE and Eden FAs section 3.4; Southern FA section 4.3	Forestry Corporation regions continue to consult with stakeholders, such as industry and neighbours, in the development of annual plans of operation.
Milestone 14.4 Agency: FCNSW	Review legislation and policies relevant to the allocation and pricing of hardwood logs from state forests Refer to UNE, LNE and Eden FAs Att 8	Policies relevant to allocation and pricing are regularly reviewed and adjusted. Forestry Corporation reports no new developments for 2013–14.
15. Supplementing timber supply		
Milestone 15.1 Agency: FCNSW	Supplementary timber supply by actions such as purchasing private lands and/or timber rights to supply high quality large sawlogs and large veneer logs Refer to UNE and LNE FAs sections 2.9.2, 3.3, 3.6, 6.16.2, Att 10; Eden FA section 2.8.2; Southern FA sections 3.3.3, 3.6	In 2013–14 Forestry Corporation obtained 9202 m ³ of supplementary timber supply. Of this, 5001 m ³ was high quality logs.
Milestone 15.2 Agency: FCNSW	Development of a process to consider unmet targets prior to land purchases Refer to UNE and LNE FAs section 6.16.2; Southern FA section 3.3.3	The Review of NSW Forest Agreements and Integrated Forestry Operations Approvals (DECCW 2010) summarised initiatives to consider unmet targets before land purchases. Forestry Corporation also noted that, as an alternative to purchasing land, it continues to source additional timber by purchasing timber rights.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Report milestone number	Milestone	Progress for 2013–14
Milestone 15.3 Agency: FCNSW	Establishment of plantations Refer to UNE FA section 3.2; LNE FA sections 3.1, 3.3, 3.6; Southern FA section 3.6, Att 8	No new establishment of hardwood plantations in 2013–14 by Forestry Corporation.
16. FRAMES improvement, inventory, sustainable yield, volume review		
Milestone 16.1 Agency: FCNSW	Continuous FRAMES development program for the UNE, LNE, Eden and Southern regions Refer to UNE, LNE, Eden FAs section 3.5; Southern FA section 3.5 and Att 6 (7)	The NSW Government Project 2023 – North Coast Resources Review incorporated a review of timber resources and adjustment to timber volumes to be harvested. The review was published in June 2014.
Milestone 16.2 Agency: FCNSW	Inventory system for regrowth forests for Eden; improvement to inventory in UNE, LNE and Southern Refer to UNE, LNE and Eden FAs section 3.5, Att 8; Southern FA section 3.5, Att 6 (6) (e)	FCNSW commenced an inventory program in Eden FA during 2013–15. This involved capture of LiDAR and commencement of a program to measure 350 inventory plots. Refer also to Milestone 16.1.
Milestone 16.3 Agency: FCNSW	Commission and publish an independent review of the FRAMES system, including improvements applying to South Coast and Tumut sub-regions Refer to Southern FA Att 6 (8 point 1)	FCNSW commenced a project during 2013–15 to review resource availability in Eden. An independent review may be appropriate at the conclusion of this process.
Milestone 16.4 Agency: FCNSW	Monitoring FRAMES through comparison of actual versus predicted volumes Refer to UNE, LNE, Eden section 3.5; Southern FA section 3.5, Att 6 (6) (f), Att 6 (7 point 12)	FCNSW completed a FRAMES Actual vs Predicted Harvest Reconciliation report in February 2014 covering the period 2008–09 to 2012–13.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Report milestone number	Milestone	Progress for 2013–14
Milestone 16.5 Agency: FCNSW	Strategic and operational requirements of sustainable yield systems and processes, review sustainable yield every five years using enhanced FRAMES and publish methods Refer to UNE, LNE and Eden FAs section 3.1; Southern FA Att 6 (8)	FCNSW noted progress towards this milestone. See also Milestone 16.1. For example, the results of the strategic resource modelling (completed in 2012 as part of the NSW Government Project 2023 – North Coast Resources Review) were used in 2013–14 to assess the operational implications of changes to Blackbutt allocations.
Milestone 16.6 Agency: FCNSW	Complete and publish independent audits of sustainable yield Refer to Southern FA Att 6 (8 point 3)	No progress reported specifically for the Southern FA Region.
Milestone 16.7 Agency: FCNSW	Review of wood supply/timber volumes Refer to UNE and LNE FAs sections 3.2, 3.5	See Milestone 16.1.
17. Forestry Corporation practices including silviculture		
Milestone 17.4 Agency: FCNSW	Establishing demonstration areas in the Southern region, as an aid for field supervisor training Southern FA sections 2.2.8, 4.2, Att 6 (2) (o)	Forestry Corporation reports that adequate field training is being provided in Southern region. The demonstration areas will be established only if there is a need to further train field staff.
Milestone 17.10 Agency: FCNSW	Liaison by Forestry Corporation with the NSW Department of Planning, NPWS and EPA on proposed forestry operations not covered by a Forest Agreement or IFOA including environmental assessment and evaluation Refer to UNE, LNE and Eden FAs FA section 2.2.7	As reported in the 2010 Review of the NSW Forest Agreements and IFOAs (PDF 1.2MB) there has been no liaison with other departments on proposed forestry operations not covered by the NSW Forest Agreements or IFOAs. If such operations were proposed, they would be carried out in accordance with the <i>Environmental Planning and Assessment Act 1979</i> . This milestone is considered to be ongoing as liaison will occur when relevant situations arise. Forestry Corporation did not report significant liaison with key agencies during the reporting period 2013–14.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Report milestone number	Milestone	Progress for 2013–14
19.	Charcoal provisions in NSW Forest Agreements – no further reporting required – final update was in the 2010–11 report	
20.	Staff training, employment and industry initiatives – no further reporting required – final update was in the 2010–11 report	
21.	Community awareness and education – no further reporting required – final update was in the 2010–11 report	
22.	Community consultation – informing the public – no further reporting required – final update was in the 2010–11 report	
23. Reporting and monitoring		
Milestone 23.1 Agency: OEH	Monitoring and reporting of criteria and indicators Refer to UNE and LNE FAs section 2.11.2, Att 9; Eden FA section 2.10.2, Att 9; Southern FA section 2.11.2, Att 7	National Montreal Implementation Group (MIG) indicators were finalised in 2008 and published at: www.daff.gov.au/ABARES/forestsaustralia/Pages/framework/default.aspx The NSW Review of NSW Forest Agreements and Integrated Forestry Operations Approvals was finalised in 2010. The review recommended publication of a separate report entitled ESFM Criteria and Indicators for the Upper North East, Lower North East, Southern and Eden regions of NSW, and that ESFM reporting should be extended to five-yearly. Extension of the reporting timeframe will allow changes in forest values over time to be reported more meaningfully and will align NSW ESFM criteria and indicator reporting with other five-year reporting.
Milestone 23.2 EPA	Annual reports on Forest Agreements and tabling reports Refer to UNE, LNE and Eden, Southern FA section 6.9	Annual reports on the implementation of the NSW Forest Agreements have been completed up to and including the current report. Annual reports have been tabled up to 2012–13. Progress for all regions is compiled into one annual report. The annual reports provide progress on: <ul style="list-style-type: none"> • achievement of milestones in the NSW Forest Agreements • monitoring of key ESFM criteria and indicators by Forestry Corporation and OEH • compliance with the IFOAs.
24. Research and data management		
Milestone 24.6 EPA	A compendium of NSW forest research must be prepared Refer to UNE and LNE FAs section 2.11.3; Eden FA section 2.10.3; Southern FA section 2.11.3	No progress to report in 2013–14.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Report milestone number	Milestone	Progress for 2013–14
Milestone 24.7 Agency: FCNSW	Operational research trial Refer to Eden FA section 3.1	The project is dependent on the outcomes of the IFOA remake, which will include consideration of conditions around operations in filter strips.
Milestone 24.8 Agency: FCNSW	Develop a suite of computational tools to help manage NSW forests at operational scales for a range of values, including wood yield, growth stage, water quality and quantity, natural and cultural heritage and wildlife habitat Refer to Southern FA Att 6 (6) (a)	Forestry Corporation has a Forest Management System that integrates all regulatory and non-regulatory requirements to achieve best forest management outcomes. As part of the continuous improvement process, Forestry Corporation continues to develop and enhance tools to better manage forests at an operational scale. Refinements are currently being made to tactical inventory processes through use of LiDAR and mobile electronic devices (iPads). New tools have also been developed to assist ecological assessment undertaken during the harvest planning process.
Milestone 24.9 Agency: FCNSW	Develop by the end of 2010, a model to predict recruitment and maintenance of habitat trees over time Refer to Southern FA Att 6 (6) (b)	Forestry Corporation reported no further developments in 2013–14.

Appendix 2: Milestones and undertakings with identified time periods – Brigalow–Nandewar region

Report milestone number	Milestone	Timeframe	Responsibility	Progress for 2013–14
Community Conservation Area Agreement Undertakings 4.1 and 13.2	Community Conservation Area Agreement The Community Conservation Council will review the Community Conservation Area Agreement in consultation with the Community Conservation Advisory Committees after seven years. The Council may develop amendments or a replacement Agreement consistent with the Act.	10 June 2016	EPA	This undertaking is due by 2016. No progress in 2013–14. To be reviewed in accordance with agreement timeframes.
Community Conservation Area Agreement Undertaking 10.1	Plans of management (OEH) OEH to develop plans of management for zones 1, 2 and 3 of the community conservation area in consultation with the Community Conservation Advisory Committees.	Ongoing	NPWS	Of the 62 reserves under zones 1, 2 and 3, five have plans of management adopted by the NSW Minister for the Environment and four draft plans have been publicly exhibited. A statement of management intent has been prepared for 49 reserves.
Brigalow Nandewar Green Firewood Strategy	Reporting on Green Firewood Strategy Annual reporting (to the Community Conservation Council) by FCNSW on progress and implementation of Brigalow–Nandewar Green Firewood Strategy.	Within 60 days of the end of each financial year	FCNSW	FCNSW submitted an expenditure and payment report to OEH in July 2012 The final report on the Strategy was submitted to the CCC by DPI.
IFOA clause 9(5)	Soil assessor training DECC approval of soil assessor training course(s).	When required	EPA	EPA approved soil assessor training has been conducted in Brigalow–Nandewar region since 2009–2010.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Report milestone number	Milestone	Timeframe	Responsibility	Progress for 2013–14
IFOA clauses 29(1) and (5)	Proposed new TSC Act listings DECC required to notify FCNSW of proposed new TSC Act listings relevant to forestry operations.	When required	EPA to notify FCNSW	No update reported. This is an ongoing task as listings become apparent.
IFOA clauses 37(1) to (5)	37. Sustainable yield study for hardwood species (1) Forestry Corporation is to conduct (over the first five years of the term of this approval) a study of the sustainable yield for logs and other timber products from tableland hardwood and western hardwood species (other than western ironbark trees) in the Brigalow–Nandewar region for the remainder of the term of this approval. See IFOA for full undertakings 37 (1) to (5).	Study to be undertaken within the first five years of commencement of the IFOA (by October 2015)	FCNSW	In 2013–14 FCNSW commenced a broad-scale inventory that included western hardwood species other than ironbark. In the absence of markets or commitments for these species FCNSW has deferred any yield modelling. If the situation changes FCNSW will undertake the study in accordance with cl. 37 (1) to (5).
IFOA clauses 41(1) to (7)	41. Travelling stock reserves (1) Forestry Corporation to assess or determine matters when deciding whether to carry out, or authorise the carrying out of, a logging operation in which timber on a travelling stock reserve (within the meaning of the <i>Rural Lands Protection Act 1998</i>) that is Crown-timber land is to be cut and removed. Continued...	Forestry Corporation plan for managing logging operations on travelling stock reserves in the Brigalow–Nandewar region is to be prepared within 12 months of the commencement of the approval	FCNSW (EPA may provide written comments)	Draft prepared and currently being reviewed. Plan to be finalised in line with a revised FCNSW timeline, now to be reported by 2015–16.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Report milestone number	Milestone	Timeframe	Responsibility	Progress for 2013–14
IFOA clauses 41(1) to (7) continued	<p>41. Travelling stock reserves, cont.</p> <p>(4) Forestry Corporation is to prepare a plan for managing logging operations on travelling stock reserves in the Brigalow–Nandewar region within 12 months of the commencement of this approval. The plan is to include measures, in relation to each forested area within a travelling stock reserve that Forestry Corporation identifies as having high conservation value (under subclause (1) or otherwise), for ensuring that the environmental attributes that contribute to the high conservation value of the area are maintained or improved.</p> <p>(6) Forestry Corporation may not carry out, or authorise the carrying out of, any logging operations on land within a travelling stock reserve until it has forwarded its draft plan for managing those operations to DECCW and considered any written comments DECCW may provide regarding the contents of the plan within two months of receiving it.</p> <p>See IFOA for full undertakings 41(1) to (7).</p>	See above.	FCNSW (EPA may provide written comments)	Draft prepared and currently being reviewed. Plan to be finalised in line with a revised FCNSW timeline now to be reported by 2015–16.
IFOA clauses 44(1) to (3)	<p>44. Assessment of regeneration in silvicultural management</p> <p>(1) Forestry Corporation must assess the extent and nature of regeneration in areas of land within the Brigalow–Nandewar region that are logged during the term of this approval. Assessments must be carried out on a regular and periodic basis.</p> <p>See IFOA for full undertakings 44 (1) to (3).</p>	The first such assessment is to be completed by the end of 2013	FCNSW	Draft prepared and to be reviewed prior to implementation (not completed as at June 2014).

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Report milestone number	Milestone	Timeframe	Responsibility	Progress for 2013–14
IFOA clauses 46 (1) to (3)	<p>46. Pest animal management plan – review and amendment</p> <p>(1) Forestry Corporation must review the pest animal management plan applying to state forests within the Brigalow–Nandewar region, regularly and periodically (and at least every five years from the date of its approval for implementation). Accordingly, the Pest Animal Management Plan 2006 Western Region NFOB (referred to in clause 45) must be reviewed by 30 June 2011.</p> <p>See IFOA for full undertakings 46(1) to (3).</p>	<p>The Pest Animal Management Plan 2006 Western Region NFOB (referred to in clause 45) must be reviewed by 30 June 2011</p>	FCNSW	<p>Review completed. New Pest Animal Management Plan to apply from 1 July 2014 to 30 June 2019 (five-year period).</p>
IFOA clauses 49 (1) to (3)	<p>49. Weed management plan – review and amendment</p> <p>Forestry Corporation must review the weed management plan applying to state forests within the Brigalow–Nandewar region, regularly and periodically (and at least every five years from its approval for implementation). Accordingly, the Weed Management Plan 2006 Western Region NFOB (referred to in clause 48) must be reviewed by 30 June 2011.</p> <p>See IFOA for full undertakings 49 (1) to (3).</p>	<p>The Weed Management Plan 2006 Western Region NFOB (referred to in clause 48) must be reviewed by 30 June 2011</p>	FCNSW	<p>Review completed. New Weed Management Plan to apply from 1 July 2014 to 30 June 2019 (five-year period).</p>

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Report milestone number	Milestone	Timeframe	Responsibility	Progress for 2013–14
IFOA clauses 52 (1) to (3)	<p>52. Grazing management plan – review and amendment</p> <p>(1) Forestry Corporation must review its grazing management plan applying to state forests within the Brigalow–Nandewar region, regularly and periodically (and at least every five years from the date of its approval for implementation). Accordingly, the Grazing Management Plan 2006 Western Region NFOB (referred to in clause 51) must be reviewed by 30 June 2011.</p> <p>See IFOA for full undertakings 52 (1) to (3).</p>	The Grazing Management Plan 2006 Western Region NFOB (referred to in clause 51) must be reviewed by 30 June 2011	FCNSW	Review completed. New Grazing Management Plan to apply from 1 July 2014 to 30 June 2019 (five-year period).
IFOA clause 55	<p>55. Burning operations management plan – preparation of first plan</p> <p>Forestry Corporation must prepare (and approve for implementation) a burning operations management plan that complies with clause 54 within 12 months of the commencement of this approval. Forestry Corporation is to invite DECCW and DII (Fisheries) to provide comments on a draft of the plan, and is to take into account any comments made by those agencies (within a reasonable time) in finalising the plan.</p>	Plan is to be finalised within 12 months of commencement	FCNSW (EPA and Fisheries may provide written comments)	Draft prepared and to be reviewed. Once finalised will be forwarded to EPA for comments (not completed as at June 2014).
IFOA clauses 57 (1) to (3)	<p>57. Burning operations management plan – review and amendment</p> <p>(1) Forestry Corporation must review the burning operations management plan applying to state forests within the Brigalow–Nandewar region, regularly and periodically (and at least every five years from the date of its approval for implementation).</p> <p>See IFOA for full undertakings 57 (1) to (3).</p>	Regularly and periodically – and at least every five years from the date of its approval for implementation	FCNSW	Draft prepared and being reviewed. Once finalised will be forwarded to EPA for comments (no progress reported as at June 2014).

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Report milestone number	Milestone	Timeframe	Responsibility	Progress for 2013–14
IFOA clauses 60 (1) to (3)	<p>60. Road and fire trail management plan – review and amendment</p> <p>(1) Forestry Corporation must review the road and fire trail management plan applying to the Brigalow–Nandewar region, regularly and periodically (and at least every five years from its approval for implementation). Accordingly, the Road Management Plan 2006 Western Region NFOB must be reviewed by 30 June 2011.</p> <p>See IFOA for full undertakings 60 (1) to (3).</p>	<p>Regularly and periodically and at least every five years from its approval for implementation</p>	<p>FCNSW</p>	<p>Draft prepared and currently being reviewed. Plan to be finalised in line with the revised timelines.</p> <p>(No progress reported as at June 2014).</p>
IFOA clauses 80 to 88	<p>80. Annual reports on forestry operations</p> <p>(1) Forestry Corporation is to provide DECCW and DII (Fisheries) with a report on forestry operations undertaken in the Brigalow–Nandewar region in each financial year. The information that must be included in the annual report is set out in clauses 81 to 87.</p> <p>See IFOA for full undertakings 80 to 88.</p>	<p>The annual report for a financial year is to be provided to EPA and NSW Fisheries by 1 September in the next financial year (A copy of each annual report under this Division is to be kept by Forestry Corporation for the remainder of the term of this approval.)</p>	<p>FCNSW (to be confirmed by EPA and Fisheries)</p>	<p>Annual reports on forestry operations for all western IFOA regions are required to be provided by September each year. A summary of timber supply derived from western forests is provided in Chapter 1 (table 11) of the present report.</p>

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Report milestone number	Milestone	Timeframe	Responsibility	Progress for 2013–14
IFOA clauses 149 to 151	<p>149. Species management plans for certain threatened plant species</p> <p>Forestry Corporation is to prepare a species management plan for each of the following threatened species of plant to assist in identifying, managing and controlling any adverse impacts of forestry operations on the species:</p> <p>(a) <i>Bertya</i> sp. A Cobar-Coolabah (also named <i>Bertya</i> opponents)</p> <p>(b) <i>Diuris tricolor</i></p> <p>(c) <i>Pomaderris queenslandica</i></p> <p>(d) <i>Pterostylis cobarensis</i></p> <p>(e) <i>Swainsona recta</i></p> <p>(f) <i>Swainsona sericea</i>.</p> <p>See IFOA for full undertakings 149–151.</p>	Within 12 months of the commencement approval and to be submitted to EPA	FCNSW	Draft SMPs have been developed for all identified species and are in the process of being finalised and implemented.
IFOA clauses 152 to 154	<p>152. Monitoring plans for plant species</p> <p>To review and approve the development of FMPs for the following species: <i>Acacia jucunda</i>, <i>Monotaxis macrophylla</i>, <i>Phebalium glandulosum</i> subsp. <i>eglandulosum</i>.</p> <p>See IFOA for full undertakings 152–154.</p>	Within 12 months of the commencement approval and to be submitted to EPA	FCNSW	Draft monitoring plans have been developed for all identified species and are in the process of being finalised and implemented.
IFOA clauses 149, 152 and 259	<p>Approved plans</p> <p>Intention to amend IFOA to give effect to approved plans under clauses referred to above. This will result in amendment and ultimately omission of clause 259.</p>	Potentially within 12 months of the commencement approval	EPA and FCNSW	Subject to finalisation of actions 149 and 152.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

Report milestone number	Milestone	Timeframe	Responsibility	Progress for 2013–14
IFOA clause 155	<p>155. Strategic monitoring and assessment program</p> <p>Forestry Corporation is to develop and undertake a strategic monitoring and assessment program in the Brigalow–Nandewar region:</p> <p>(a) to improve knowledge of the habitat requirements of threatened species within the region, and</p> <p>(b) to monitor populations of native animals and plants within the region and assess the extent to which any changes in population levels may be attributable to forest management and practice.</p> <p>See IFOA for full undertaking 155.</p>	Forestry Corporation is to develop the strategic monitoring and assessment program in consultation with EPA before the end of the 12 month period following the commencement of this approval	FCNSW	<p>A draft strategic monitoring and assessment program has been developed.</p> <p>To ensure parity across the state, this draft program is now being considered as part of a statewide native forestry strategic monitoring program being developed as part of the coastal IFOA remake.</p> <p>The timing of delivery of the monitoring and assessment programs is therefore linked to the delivery of the coastal IFOA remake.</p>
IFOA clauses 158 and 159	<p>Give effect to species management plans</p> <p>Approval of monitoring plan for <i>Polygala linariifolia</i> and <i>Tylophora linearis</i>.</p>	Not stated	EPA and FCNSW	Draft management plans have been developed for all identified species and are in the process of being finalised and implemented.
IFOA clauses 233 (1) to (4)	<p>Auditing methodology for the retention of trees</p> <p>(1) Forestry Corporation is to develop, in consultation with DECCW, a methodology for auditing compliance with the requirements for the retention of trees for the purposes of this Part (namely, clauses 197 (2), 198, 199, 200, 206 and 216). Forestry Corporation is to endeavour to have in place an auditing methodology (approved by DECCW) within 12 months of the commencement of this approval.</p> <p>See IFOA for full undertaking 233 (1) to (4).</p>	Within 12 months of the commencement approval	EPA and FCNSW	<p>A draft methodology has been prepared.</p> <p>To ensure parity across the state, if possible, an agreed audit methodology will aim to be consistent with any tree retention assessment requirements that are developed through the coastal IFOA remake process. The timing of delivery of this audit methodology is therefore linked to the delivery of the coastal IFOA remake.</p>

Appendix 3: Milestones and undertakings – Riverina Red Gum IFOA

IFOA Clauses	Detail	Timeframe	Responsibility	Progress for 2013–14
26	Five-year review Five-year review of approval, consideration on minimum basal area retention, new TSC act listings, drainage protection features	Jan 2016	Ministers (both agencies)	The five-year review is scheduled to commence in January 2016 subject to consultation and agreement between FCNSW and the EPA.
27 (1) to (4)	Review early thinning operations (other than in the western lands leases) (1) A review of the early thinning program referred to in clause 5 will be conducted in the period 1 July 2012 to 31 December 2012 to determine a sustainable annual maximum amount of river red gum residue that may be produced from early thinning operations, taking into account the silvicultural and environmental impacts and benefits of the program, and the extent of the resource. (2) The terms of reference for the review will be set jointly by DECCW and Forestry Corporation. See IFOA for full undertakings 27 (1) to (4)	Prior to 1 July 2012 – review will be conducted from 1 July 2012 to 31 December 2012	Joint Forestry Corporation and OEH review conducted by independent scientific panel (membership mutually agreed by agencies) – jointly funded	Amendments to the IFOA in July 2013 extended the early thinnings program to 30 June 2019. A further resource assessment will be undertaken prior to 2019 to determine what volumes will be sustainable after 2019.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

IFOA Clauses	Detail	Timeframe	Responsibility	Progress for 2013–14
27 (5) to (10)	<p>Review residue operations in the western lands leases</p> <p>(5) Forestry Corporation will conduct a series of reviews for the purpose of recommending the maximum volume of residue and residue logs (including dry residue and dry residue logs) that may be produced from logging operations (including early thinning operations) in the western lands leases for each of the following periods:</p> <p>a) 1 January 2014 to 31 December 2019 b) 1 January 2020 to 31 December 2025 c) 1 January 2026 to 31 December 2031.</p> <p>(6) The terms of reference for the review will be set jointly by Forestry Corporation and DECCW no less than 12 months before the commencement of the next review period (for example, the terms of reference for the review described in subclause (5)(b) must be settled by 31 December 2012).</p> <p>See IFOA for full undertakings 27 (5) to (10)</p>	<p>Joint TOR by 31 Dec 2012 for the first review period 1 January 2014 – 31 December 2019</p> <p>Forestry Corporation must send draft copy to the EPA by June 2013.</p> <p>Forestry Corporation in consultation with the EPA must produce agreed recommendations for any amendments by 30 Sept 2013</p>	<p>Joint TOR</p> <p>Forestry Corporation (lead)</p> <p>EPA review and joint recommendations required</p>	<p>Amendments were made to the IFOA in December 2013 which extended residue operations for six months. The EPA subsequently considered Forestry Corporation’s review report and sought further information regarding available yields, locations, and mitigating potential environmental impacts.</p> <p>Recommendations were made to both Ministers regarding maximum residue volumes and a further extension to residue operations.</p>
28 (2), (3)	<p>Optimal basal area retention rate trial</p> <p>(2) Forestry Corporation may carry out a trial in accordance with this clause to determine the optimal rate of basal area retention for the purposes of clause 43, in a range between six and 12 square metres per hectare, having regard to the need for both ecologically sustainable forest management and a sustainable timber supply.</p> <p>See IFOA for full undertakings 27 (2) and (3)</p>	<p>Note: This research will inform the five-year review referred to in clause 26.</p> <p>Also part of RRG Structural Adjustment Package Agreements – to feed into Adaptive Management Program (by June 2013)</p>	<p>FCNSW (lead) must consult with the EPA as to the area selected and parameters of the trial</p>	<p>No progress to report in 2013–14.</p>

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

IFOA Clauses	Detail	Timeframe	Responsibility	Progress for 2013–14
29 (1) to (4)	<p>Auditing methodology for tree retention requirements in this approval</p> <p>(1) Forestry Corporation is to develop, within 12 months of the commencement of this approval and in consultation with EPA, a methodology for:</p> <p>a) auditing compliance with the requirements for the retention of trees for the purposes of this approval (clauses 42 to 45 and clause 179); and</p> <p>b) calculating dbhob using stump dimensions (clause 191).</p> <p>See IFOA for full undertakings 29 (1) to (4)</p> <p>See also tree retention requirements under clauses 42–45, 179 and 191.</p>	To be undertaken within 12 months of commencement (due 1 January 2012)	<p>FCNSW (lead) in consultation with the EPA</p> <p>Requires EPA written approval to have effect</p>	<p>A draft methodology has been prepared.</p> <p>To ensure parity across the state, if possible, an agreed audit methodology will aim to be consistent with any tree retention assessment requirements that are developed through the coastal IFOA remake process. The timing of delivery of this audit methodology is therefore linked to the delivery of the coastal IFOA remake.</p>
30 (1) to (4)	<p>Methodology for targeted survey for regent parrot</p> <p>(1) Forestry Corporation is to develop, in consultation with EPA, a methodology for the targeted survey for the regent parrot required under clause 160, by 29 July 2011.</p>	Before 29 July 2011	<p>FCNSW (lead) in consultation with the EPA</p> <p>Requires EPA written approval to have effect</p>	<p>The IFOA was amended in July 2013 to include new requirements for the identification and protection of regent parrots.</p> <p>The new conditions include:</p> <ul style="list-style-type: none"> • adding additional areas to the Riverina Forests Drainage Protection Map • application of an additional 50 m buffer to these areas and a 100 cm diameter at breast height maximum tree felling limit in these areas • seasonal restrictions to harvesting in regent parrot nest tree zones.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

IFOA Clauses	Detail	Timeframe	Responsibility	Progress for 2013–14
31	Field protocol for measuring distances Develop a field protocol for measuring distances specified in clauses 104, 105 and 106.	To be undertaken within 12 months of commencement (due 1 January 2012)	Joint FCNSW, Fisheries and the EPA	A draft protocol has been prepared. The protocol will remain in draft until the feasibility of utilising improved technology around stream identification (including mapping using LiDAR) has been considered. FCNSW will continue using the interim conditions for measuring distances until the protocol has been finalised.
47 (4), (6) and (7)	Travelling stock reserves Forestry Corporation must prepare a plan for managing operations on travelling stock reserves. EPA and RLPB to be consulted. See IFOA for full undertakings 47 (1) to (9)	To be undertaken within 12 months of commencement (due 1 January 2012); the EPA to comment on Forestry Corporation draft plan within two months of receiving draft.	FCNSW (lead) and OEH and RPLB consulted	FCNSW has prepared a draft plan. The plan has not been finalised as at 30 June 2014.
50 (1) to (4)	Assessment of regeneration in silvicultural management Forestry Corporation must assess the extent and nature of regeneration in areas of land logged during the approval. OEH to be consulted regarding assessment of regeneration in silvicultural management. See IFOA for full undertakings 50 (1) to (4)	To be undertaken before carrying out the first assessment, which is due 31 December 2013	FCNSW (lead) and OEH consulted	The assessment has not been finalised as at 30 June 2014.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

IFOA Clauses	Detail	Timeframe	Responsibility	Progress for 2013–14
52 (1) to (3)	<p>Pest animal management plan – review and amendment</p> <p>(1) Forestry Corporation must review the pest animal management plan applying to state forests within the Riverina state forests, regularly and periodically (and at least every five years from the date of its approval for implementation). See IFOA for full undertakings 52 (1) to (3)</p>	Regularly and periodically, and at least every five years from the date of its approval for implementation	FCNSW	Review completed. New Pest Animal Management Plan to apply from 1 July 2014 to 30 June 2019 (five-year period).
55 (1) to (3)	<p>Weed management plan – review and amendment</p> <p>(1) Forestry Corporation must review the weed management plan applying to state forests within the Riverina state forests, regularly and periodically (and at least every five years from its approval for implementation). See IFOA for full undertakings 55 (1) to (3)</p>	Regularly and periodically, and at least every five years from the date of its approval for implementation	FCNSW	Review completed. New Weed Management Plan to apply from 1 July 2014 to 30 June 2019 (five-year period).
58 (1) to (3)	<p>Grazing management plan – review and amendment</p> <p>(1) Forestry Corporation must review its grazing management plan applying to state forests within the Riverina state forests, regularly and periodically (and at least every five years from the date of its approval for implementation). See IFOA for full undertakings 58 (1) to (3)</p>	Regularly and periodically, and at least every five years from the date of its approval for implementation	FCNSW	Review completed. New Grazing Management Plan to apply from 1 July 2014 to 30 June 2019 (five-year period).

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

IFOA Clauses	Detail	Timeframe	Responsibility	Progress for 2013–14
61	<p>Burning operations management plan – preparation of first plan</p> <p>Forestry Corporation must prepare (and approve for implementation) a burning operations management plan that complies with clause 60 within 12 months of the commencement of this approval. Forestry Corporation is to invite DECCW and DII (Fisheries) to provide comments on a draft of the plan, and is to take into account any comments made by those agencies (within a reasonable time) in finalising the plan.</p>	<p>Plan is to be finalised within 12 months of commencement (due by 1 January 2012)</p>	<p>FCNSW (lead) EPA and Fisheries consulted</p>	<p>Draft prepared and currently being reviewed. Once finalised will be forwarded to EPA for comments (not completed as at June 2014).</p>
63 (1) to (3)	<p>Burning operations management plan – review and amendment</p> <p>(1) Forestry Corporation must review the burning operations management plan applying to state forests within the Riverina state forests, regularly and periodically (and at least every five years from the date of its approval for implementation). See IFOA for full undertakings 63 (1) to (3)</p>	<p>Regularly and periodically, and at least every five years from the date of its approval for implementation</p>	<p>FCNSW</p>	<p>Draft prepared and currently being reviewed. Once finalised will be forwarded to EPA for comments (not completed as at June 2014).</p>
66 (1) to (3)	<p>Road and fire trail management plan – review and amendment</p> <p>(1) Forestry Corporation must review the road and fire trail management plan applying to the Riverina state forests, regularly and periodically (and at least every five years from its approval for implementation). See IFOA for full undertakings 66 (1) to (3)</p>	<p>Regularly and periodically, and at least every five years from the date of its approval for implementation</p>	<p>FCNSW</p>	<p>FCNSW has prepared a draft Regional Road Management Plan for presentation to the EPA for review.</p>
71 (1) to (5)	<p>Preparation of annual program of forestry operations</p> <p>Forestry Corporation must prepare annual program of operations for each financial year. See IFOA for full undertakings 71 (1) to (5)</p>	<p>First one due 1 July 2011</p>	<p>FCNSW (lead) forward to EPA and Fisheries</p>	<p>An annual program for 2013–14 submitted to EPA (on 1 July 2014).</p>

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

IFOA Clauses	Detail	Timeframe	Responsibility	Progress for 2013–14
82	Forestry Corporation to provide monthly advice on operations	Monthly reports commenced on 1 April 2011	FCNSW (lead)	The process of reporting is in place and reporting continues as per the requirements of the IFOA.
86 to 91	Annual reports on forestry operations Annual report for financial year must be given to OEH and Fisheries See IFOA for full undertakings 86 to 91	By 1 Sept in next financial year (i.e. first report due 1 Sept 2012)	FCNSW (lead); report must be given to EPA and Fisheries	Forestry Corporation reported to the EPA for the period 2013–14. The information submitted is summarised in the current report – see Section 1.3, 'Timber volumes harvested in western forests'.
138, 140–143	New records to be forwarded to DECCW (1) Forestry Corporation must advise DECCW of any record of a threatened species of animal or plant made or found in the Riverina state forests during the term of this approval ('new record') if Forestry Corporation considers it may be suitable for inclusion on the Atlas of NSW Wildlife (referred to in clause 137). See IFOA for full undertakings related to new records	Within three months of the new record being made or two working days for spp. listed in cl. 140	FCNSW – must notify EPA	Action was not required for 2013–14.
238–243	Environmental Protection Licence annual return In addition to the annual report required (cls 86 to 91) Forestry Corporation must prepare and give OEH an annual return relating to the EPL.	Calendar years – from the first year within 60 days of end of year (i.e. 1 March 2012)	FCNSW – must submit to EPA	EPL Annual Return submitted February 2014.

Appendix 4: Milestones and undertakings – South Western Cypress IFOA

IFOA Clauses	Detail	Timeframe	Responsibility	Progress for 2013–14
32, 142, 144, 148, 178	New evidence of species Forestry Corporation to notify OEH of its discovery of new evidence of plant and animal species.	Within three months of the new record being made or found, or two working days for species listed in cl. 144	FCNSW	No action reported as being required for 2013–14.
41 (2), (4), (6) and (7)	Travelling stock reserves Forestry Corporation to prepare a plan managing logging operations on TSRs. OEH to be consulted regarding draft plan for managing operations on travelling stock reserves.	To be undertaken within 12 months of commencement (Due 1 July 2012) Forestry Corporation cannot carry out operations on TSRs until it has considered written comments on the plan from OEH OEH to comment on Forestry Corporation draft plan within two months of receiving draft	FCNSW (lead) RLPB and OEH consulted	Draft prepared and currently being reviewed prior to EPA consultation. The plan has not been finalised as at 30 June 2014.
44	Assessment of regeneration in silvicultural management Forestry Corporation must assess the extent and nature of regeneration in areas of land within the South Western Cypress region that are logged during the term of this approval. EPA to be consulted regarding an assessment of regeneration in silvicultural management.	To be undertaken within the first five years of the IFOA (due by 31 December 2015) OEH consulted before carrying out the first assessment	FCNSW (lead) and EPA consulted	Draft prepared and currently being reviewed prior to EPA consultation.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

IFOA Clauses	Detail	Timeframe	Responsibility	Progress for 2013–14
46, 49, 52, 57, 60	Plan reviews for South Western Cypress region Forestry Corporation must review the pest animal management, weed, grazing, road management, and burning operation plans applying to state forests within the South Western Cypress region, regularly and periodically (and at least every five years from the date of its approval for implementation).	By 30 June 2016 and at least every five years for pest animal management, weed, grazing, road management plans By 30 June 2017 for review of burning operations plan Preparation of first burning operations plan – see 55 below	FCNSW	No action was required for this period.
55	Preparation of first burning operations plan within 12 months of commencement Forestry Corporation must prepare (and approve for implementation) a burning operations management plan that complies with cl. 54 within 12 months of the commencement of this approval. EPA and Fisheries to be invited to comment on a draft burning operations management plan.	Plan is to be finalised within 12 months of commencement (due by 1 July 2012)	FCNSW (lead), Fisheries and OEH (comments)	Draft prepared and currently being reviewed. Once finalised will be forwarded to EPA for comments. (No progress reported as at 30 June 2014).
65	Preparation of annual program of forestry operations Forestry Corporation must prepare annual program of operations for each financial year See IFOA for full undertakings 65 (1) to (5)	First one due 1 July 2011	FCNSW (lead) forward to EPA and Fisheries	Forestry Corporation submitted the required annual program for 2013–14 on 1 July 2014.
76	Monthly advice on operations Forestry Corporation to provide monthly advice on operations	Monthly	FCNSW (lead)	The process of reporting is in place and reporting continues as per the requirements of the IFOA.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

IFOA Clauses	Detail	Timeframe	Responsibility	Progress for 2013–14
80 to 88	<p>Annual reports on forestry operations</p> <p>Annual report for financial year must be given to OEH and Fisheries</p> <p>See IFOA for full undertakings 80 to 88</p>	<p>By 1 Sept in next financial year (i.e. first report due 1 Sept 2012)</p>	<p>FCNSW (lead); report must be given to EPA and Fisheries</p>	<p>Forestry Corporation reported to the EPA for the period 2013–14. The information submitted is summarised in the current report – see Section 1.3, 'Timber volumes harvested in western IFOA regions'.</p>
149 and 151	<p>Preparation of species management plans</p> <p>Forestry Corporation must prepare and forward species management plans for the plant species referred to in cl. 149 to the EPA before the end of the 12 month period following the commencement of this approval.</p> <p>The species are: <i>Austrostipa metatoris</i>, <i>A. wakoolica</i>, <i>Diuris tricolor</i>, <i>Pterostylis cobarensis</i>, <i>Swainsona sericea</i>.</p> <p>Note: It is contemplated that if OEH approves the contents of a species management plan, the IFOA will be amended to require the plan to be given effect to. OEH and FCNSW intend that the species management plans required will be finalised and approved within 12 months of the commencement of the IFOA.</p>	<p>12 months of the commencement (due by 1 July 2012)</p>	<p>FCNSW (lead) and OEH approve</p>	<p>Draft species management plans have been developed for all identified species and are in the process of being finalised and implemented.</p>
155	<p>Strategic monitoring and assessment program (SM&AP)</p> <p>Forestry Corporation is to develop and undertake a strategic monitoring and assessment program in the South Western Cypress region.</p>	<p>Within 12 months of the commencement (due by 1 July 2012)</p>	<p>Forestry Corporation (lead) and OEH</p>	<p>SW Cypress SM&AP will use the same methodology as the Brigalow SM&AP. To ensure parity across the state, this draft program is now being considered as part of a statewide native forestry strategic monitoring program being developed as part of the coastal IFOA remake.</p> <p>The timing of delivery of the monitoring and assessment program is therefore linked to the delivery of the coastal IFOA remake.</p>

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

IFOA Clauses	Detail	Timeframe	Responsibility	Progress for 2013–14
233 (1) to (4)	<p>Auditing compliance with Part (namely, clauses 198, and 216); methodology to be developed</p> <p>(1) Forestry Corporation is to develop, in consultation with OEH, a methodology for auditing compliance with the requirements for the retention of trees for the purposes of this Part (namely, cls 198 and 216). Forestry Corporation is to endeavour to have in place an auditing methodology (approved by OEH) within 12 months of the commencement of this approval.</p> <p>(4) The methodology developed under this clause does not have effect unless and until OEH has approved it in writing. It may be amended from time to time with the written approval of OEH.</p> <p>See IFOA for complete 233 (1) to (4)</p>	12 months of the commencement (due by 1 July 2012)	Forestry Corporation (lead) and OEH (approval)	<p>A draft methodology has been prepared.</p> <p>To ensure parity across the state, if possible, an agreed audit methodology will aim to be consistent with any tree retention assessment requirements that are developed through the coastal IFOA remake process. The timing of delivery of this audit methodology is therefore linked to the delivery of the coastal IFOA remake.</p>
240	<p>Burning operations – annual planning and mapping within five years</p> <p>Before including a burning operation in an annual program of forestry operations, Forestry Corporation must carry out a comparative assessment of the environmental impact of carrying out the operation and of not carrying out the operation.</p> <p>Continued...</p>	Annual assessment and mapping within five years (due July 2016)	FCNSW	Project is underway and in line with FCNSW management priorities. Date of completion is to be advised.

NSW Forest Agreements and IFOAs Implementation Report 2013–2014

IFOA Clauses	Detail	Timeframe	Responsibility	Progress for 2013–14
240 continued	<p>Forestry Corporation must, within the five years of the commencement of this approval:</p> <p>(a) identify and map vegetation types within the state forests of the South Western Cypress region and prepare post-fire age class distribution maps for those vegetation types, and</p> <p>(b) develop a theoretical post-fire age class distribution model for those vegetation types to enable a comparison to be made with actual post-fire age class distribution for those types, in accordance with the process outlined in the Forestry Corporation Corporate Fuel Management Plan 2008 (Chapter 6.2.2).</p> <p>See IFOA for full 240 (1) to (5)</p>			See 240 above.
306 and 307	<p>Pollution incident notification</p> <p>Relating to breaches of the terms of the EPL (in carrying out logging operations and ancillary road construction).</p> <p>Notification and reports of pollution incidents causing or threatening material harm to the environment.</p>	<p>Details relating to a breach must be included on the register within 14 days of Forestry Corporation becoming aware of the breach</p> <p>Written notification within seven days of Forestry Corporation becoming aware of the incident</p>	FCNSW (lead) and EPA notified	EPL Annual Return submitted February 2014.
309 to 314	<p>Special annual return to be given to EPA</p> <p>In addition to the annual report required to be prepared under Chapter 1 [of the IFOA], Forestry Corporation is to prepare and give to OEHL an annual return relating to logging operations and ancillary road construction regulated by the terms of the EPL.</p>	Within 60 days of the end of each calendar year (first date 1 March 2012)	FCNSW (lead) and EPA notified	EPL Annual Return submitted February 2014.

Acronyms and abbreviations

AFS	Australian Forestry Standard (AS4708:2007)
cl.	Clause from an Act or other legislation
CO ₂	Carbon dioxide
CVA	Conservation Volunteers Australia
dbhob	Diameter breast height over bark (referring to tree measurement)
DPI	NSW Department of Primary Industries
EMS	environmental management system
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence
ESFM	ecologically sustainable forest management
FA	NSW Forest Agreement
FCNSW	Forestry Corporation of NSW
FL	Fisheries Licence
FMZ	Forest Management Zone
Forestry Corporation	Forestry Corporation of NSW
FRAMES	Forest Resource and Management Evaluation System
ha	hectares
IFOA	Integrated Forestry Operations Approval granted under the <i>Forestry Act 2012</i>
HFD	Hardwood Forests Division of FCNSW
IUCN	International Union for Conservation of Nature (relating to protected area categories)
LNE	Lower North East region
m	metres
MOU	Memorandum of Understanding
NSW	New South Wales
NPW Act	<i>National Parks and Wildlife Act 1974</i>
NPWS	National Parks and Wildlife Service (within OEH)
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
PR Act	<i>Plantations and Reforestation Act 1999</i>
PNF	Private Native Forestry
PVP	property vegetation plan
PWG	Former Parks and Wildlife Group of OEH
SCA	State Conservation Area
SOE	State of the Environment
SPD	Softwood Plantation Division of FCNSW
TOR	Terms of reference
TSC Act	<i>Threatened Species Conservation Act 1995</i>
TSL	Threatened Species Licence
t	tonnes
UNE	Upper North East region