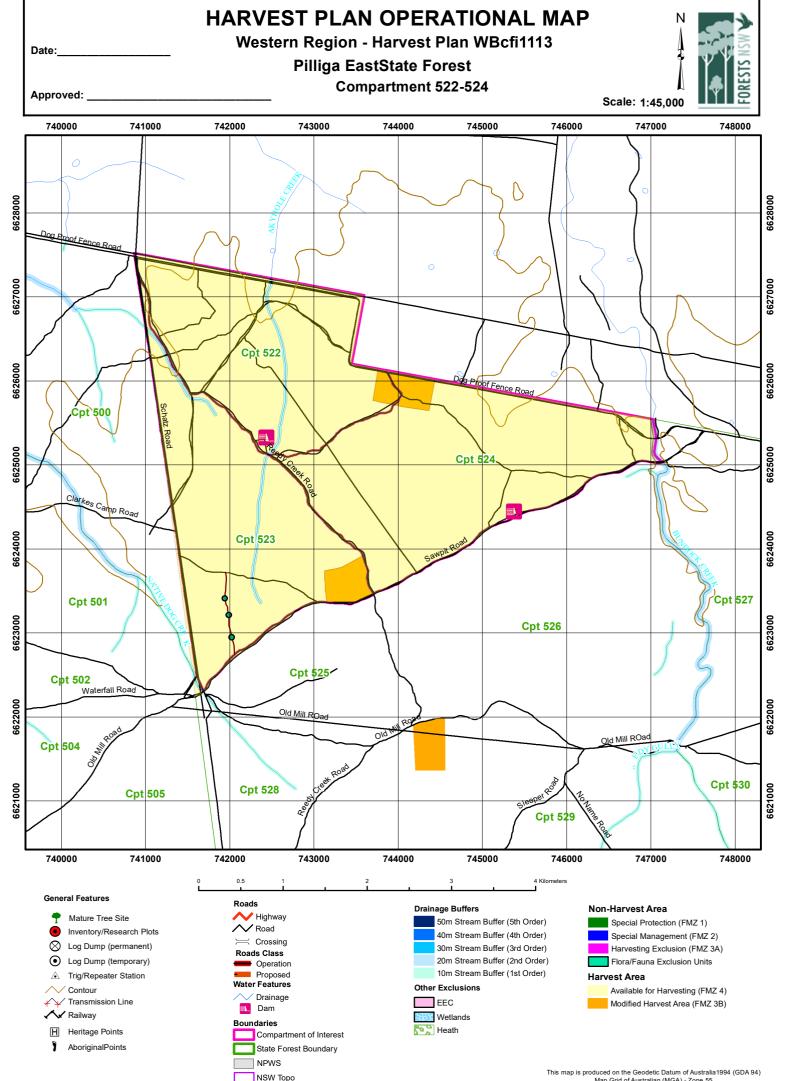


This map is produced on the Geodetic Datum of Australia1994 (GDA 94) Map Grid of Australian (MGA) - Zone 55



FORESTS NEW SOUTH WALES - WESTERN REGION

NATIVE FOREST HARVESTING PLAN No. WBcfi1113

Refer: FPC 2010/01



Pilliga East State Forest - Compartments 522, 523, 524

Certification

This plan has been prepared in accordance with the Integrated Forestry Operations Approval issued under the Forestry and National Park Estate Act 1998. The <u>Standard</u> <u>Harvest Plan Conditions for Native Forest Operations in Western Region – Brigalow</u> <u>Nandewar</u> apply to this operation.

Prepared By: Joe Mills Harvest Planner	Endorsed By: Ross Irvine Environment & Resources Manager	Approved By: Ross Irvine A/Environment & Resources Manager
Signature	Signature	Signature
Date 28/10/2011	Date 3/ 1/0/2011	Date 3//0/2011

Note: Approval includes the Harvest Plan Operational Map (HPOM) with the corresponding approval date displayed on the map, verifying final approved version. Locality and forest type maps are included for information only and do not form a part of this approval.

PRE-OPERATIONAL BRIEFING (SUPERVISING FOREST OFFICER ACKNOWLEDGMENT)

I confirm that I have received a copy of the Harvest Plan for the above Compartment. I have been briefed on the conditions of the Plan. I understand the requirements for supervision and operational control as explained to me by the Forest Manager or his/her delegate.

SUPERVISING FOREST OFFICER: _

Signature:

Date:

PRE-OPERATIONAL BRIEFING (LICENSEE/CONTRACTOR ACKNOWLEDGMENT)

I confirm that I have received a copy of this Harvest Plan and that:

I understand the conditions of the Plan,
 I will inform all relevant people not present at this briefing, prior to them starting operations, of these aspects of the Plan, as explained to me by a Forests NSW officer.

Signature:	Name:	Date:
Position:	Licence N	No:

Principal licensee/contractor/other (explain)

Description of Proposal

White cypress sawlogs, ironbark sawlogs and green residue will be harvested under regulation of the Integrated Forest Operations Approval for Brigalow-Nandewar Region (B-N IFOA).

The operation will use mainly mechanical harvesting and processing to produce logs and forward them to dumps. The logs will be removed from the forest by truck.

Natural regeneration is planned. No after-harvest burning or planting is proposed.

Attachment 1: Site Safety Plan prescribes the safety requirements and Medical Emergency Evacuation Plan for this harvesting operation.

No construction, reopening or upgrading of roads or bush tracks is proposed. Prescriptions for maintenance of existing roads and tracks are specified below.

Area Identification and Yield Estimates

State Forest	Compartment/s	Region	Management Area	Harvest Plan ID
Pilliga East	522,523,524	Western	Baradine	3510

COMPARTMENT	522	523	524
Event ID	14754	14755	14756
Gross Area (ha)	443	505	602
Net Harvest Area (ha)	426	469	583
Estimated Yield Cypress Sawlog (m ³ or t)	500m ³	500m ³	600m ³
Estimated Yield Ironbark / Hardwood Sawlog (m ³ or t)	50m ³	50m ³	50m ³
Estimated Yield Residue (t)	100t	100t	100t

Silviculture and Harvesting Prescriptions

The planning area has a long history of prior disturbance. The most recent harvesting operations occurred in the early 1990's, removing both white cypress and ironbark sawlogs. The cypress stands have mostly reached their potential, with older trees beginning to senesce, and stands have been thinned to maximum commercial spacing. There are patches of regeneration that have established amongst mature trees.

The forest is very variable throughout the three compartments, and is generally in good health with some very dynamic sites. Bends have been identified as the main defect effecting cypress logs throughout the Net Harvest Area, with some evidence of fire scars.

There are some mature stands of ironbark scattered throughout the planning area with some good form regeneration emerging.

Year	1993	1994
TSI	Х	Х
HR Burning	Х	Х
Wildfires	Х	Х
Logging Cypress Sawlog (m ³)	\checkmark	Х
Logging Hardwood Sawlog	\checkmark	

 $\sqrt{1}$ - applies, X – not applicable

The area of each silvicultural treatment must be mapped and recorded in the Postlogging information section of this plan.

Silvicultural Planning

The 'release' operation is aimed at releasing established regeneration from competition with the mature overstorey. Once released, the stand will require thinning in the next 15-25 years.

The remaining areas to be treated as salvage consist of immature regeneration or smaller patches of mature cypress with no regeneration, scattered throughout the planning area. Within these areas mature cypress trees should be removed to create enough canopy space for regeneration to establish and develop. Retained trees should be selected from the healthiest trees available.

The Ironbark Sawlog operation is aimed at removing commercially mature trees, trees lacking potential for future growth and trees competing with more dominant trees within the stand. Where regeneration is not present or unlikely to occur, trees should be selected to build upon canopy openings so as to encourage establishment and development of regeneration.

Only living white cypress, ironbark, and bull oak trees may be harvested as per <u>Standard</u> <u>Harvest Plan Conditions for Native Forest Operations in Western Region – Brigalow</u> <u>Nandewar v3.</u> **Dry firewood must not be harvested beyond 31 December 2015.**

Stand type	% of net area	Area (refer to HPOM for details)	Treatment Refer to Standard Harvest Plan Conditions for Native Forest Operations in Western Region. – Brigalow Nandewar for more detail.
Mature Cypress with adequate regeneration.	75%	Throughout planning area	Release cypress silviculture.
Unhealthy Mature Cypress without adequate regeneration	10%	Scattered Patches throughout	 Release Cypress Silviculture Removal of unhealthy overstorey
Western Ironbark	100% NHA	All	Ironbark standard silviculture.

Harvesting Prescription

The SFO will ensure that all relevant tree retention and silvicultural prescriptions are met during harvesting operations.

The operation must, as far as practicable, not damage individual plants of good form regeneration or sapling size of white cypress or ironbark, especially where there are few others nearby.

Tree Marking

<u>Cypress</u>

The area will be tree marked for **retention**. The operation must, as far as practicable:

- For the allowed species, fall each tree not marked for retention, unless it clearly does not meet the product standard, and
- Not fall or damage trees marked for retention, or marked as boundary trees.

Ironbark

The area will be tree marked for **removal**. The operation must, as far as practicable:

- For the allowed species, fall each tree marked for removal, unless it clearly does not meet the product standard, AND
- Not fall or damage trees not marked for removal, particularly those marked for retention or marked as boundary trees.

4. Special Conditions

Critical boundaries

The Compartment is bounded by roads and fences on all sides. Refer to the Operational map for more detail. Marking of the compartment boundary is not proposed.

<u>Private Property</u> – Compartments 522 and 524 are bounded by private property fence line on the northern side along Dog Proof Fence road. No Damage is to occur to the fence.

Research / Inventory Plots

No permanent research plots or trials are within this compartment.

The markings of temporary plots or trials may exist throughout the compartment, these should be ignored.

Leases/Ops

The area is covered by an Occupation Permit for beekeeping. In particular:

- <u>Roads</u>. Existing roads must not be blocked or damaged. Any damage must be repaired immediately.
- Apiary Sites. A 20m buffer must be applied around each bee hive encountered.

Transmission Lines/Cables/Pipelines

There are no known Transmission Lines/ Cables/ Pipelines in the planned area.

Forest Management Zoning Conditions

FMZ 3B: An area of special prescription, Grassy Box Woodland (3BWGhPgbw) occurs in the operation area (shown on HPOM). The objectives for the management of this area are to maintain persistence of large-crowned Eucalypts.

In this operation – mature cypress trees may be removed as per the <u>Standard Harvest</u> Plan Conditions for Native Forest Operations in Western Region. – Brigalow Nandewar.

FMZ 4 'General Management' occurs within the compartment (shown on HPOM). Normal harvesting prescriptions apply in this area.

Cultural Heritage Conditions

An Aboriginal cultural heritage site is located within harvest area. A 20m no-harvest zone must be applied around this site.

There are no other cultural heritage sites (Aboriginal or non-Aboriginal) known in this compartment. If a site that might be a cultural heritage site is found:

- Its location must be promptly reported to the Forestry Office via Supervising Forest Officer.
- A 20m no-harvest zone must be applied around this site until advised otherwise

Flora and Fauna Conditions

The SFO must search for threatened species and mark-up the block as per the <u>Standard Harvest Plan Conditions for Native Forest Operations in Western Region. –</u> <u>Brigalow Nandewar</u>.

Mark-up Conditions

Refer to <u>Standard Harvest Plan Conditions for Native Forest Operations in Western</u> <u>Region. – Brigalow Nandewar</u> for prescriptions.

Tree retention Conditions

Refer to <u>Standard Harvest Plan Conditions for Native Forest Operations in Western</u> <u>Region. – Brigalow Nandewar</u> for prescriptions.

Site-Specific Conditions, Exclusion Zones & Modified Harvest Areas

There are no known areas of heath, rocky outcrops, cliffs and/or endangered ecological community (EEC) occurring within the net operational area that need additional harvest exclusions or modified harvesting zones implemented.

The SFO should watch out for any of these areas that may occur.

These areas are not shown on the Operational Map.

Refer to <u>Standard Harvest Plan Conditions for Native Forest Operations in Western</u> <u>Region. – Brigalow Nandewar</u> for prescriptions.

A modified harvest zone has been allocated for Black-striped Wallaby (see "Temporary harvest exclusion" on HPOM). A buffer zone around the record **located at 746566E**, **6625653N (GDA 1994 Zone 55)** must be implemented.

Within this buffer zone, the following additional prescriptions must be implemented:

- i) Any areas with relatively dense understory must be identified as an environmentally significant area for the species and excluded from forestry operations.
- ii) Cypress release, bull oak and salvage operations are prohibited
- iii) Harvesting operations must minimise canopy openings and disturbance to understorey tree and shrubs, ground logs rocks and litter
- iv) No post-harvesting burning can occur.

Note: Dense understorey includes but is not limited to dense woody or shrubby vegetation within three metres of the ground. Areas of dense understory vegetation which occur near open grassy areas suitable as feeding habitat must be prioritised for identification in (i) above)

Species Known or Likely to Occur

There is a record of a Black-striped Wallaby within 100m of the planning area to which a site specific condition applies. See above

There are no other known records of Threatened fauna, flora or habitat features present within the planning area that require prescriptions within this plan.

Contractors and supervisory staff must immediately report any sightings of Schedule 1 and 2 species to the Supervising Forester. The Harvesting Plan must then be amended to include additional prescriptions if necessary.

Fisheries Licence Conditions

Applicable Fisheries Licence conditions are detailed in the Brigalow – Nandewar IFOA. Refer to <u>Standard Harvest Plan Conditions for Native Forest Operations in Western</u> <u>Region. – Brigalow Nandewar</u> for prescriptions.

Soil and Water Protection Conditions

Applicable Environmental Protection Licence conditions are detailed in the Brigalow – Nandewar IFOA. Refer to <u>Standard Harvest Plan Conditions for Native Forest</u> <u>Operations in Western Region. – Brigalow Nandewar</u> for prescriptions. Site-specific EPL conditions – The following features occur within the planned area. Refer to operational map for more detail.

Elements	Conditions
Unmapped Drainage Lines	5m Drainage Feature Protection Zone
1st order mapped drainage line or mapped drainage depression	10m Drainage Feature Protection Zone
2nd order mapped drainage line or mapped drainage depression	20m Drainage Feature Protection Zone
Dams	10m

It is the responsibility of the SFO to identify any exclusion areas which will need to be crossed during harvesting. The SFO should then contact the Planning Forester to obtain the necessary approval.

There are 11 drainage feature crossings proposed to be used during this operation as shown on the Operational Map and indicated in the table below.

Drainage Feature	Road / Bush Track / Extraction Track	Soil Dispersibility Assessment Date (IFOA Clause 299)	Regional Manager / DECCW Approval Date or N/A
Native Dog Creek	Schatz Road	18/01/2011	N/A
Unnamed 1 st order stream	Schatz Road	31/08/2011	N/A
Unnamed 1 st order stream	Unnamed Road	31/08/2011	N/A
Oakyhole Creek	Unnamed Road	31/08/2011	N/A
Oakyhole Creek	Unnamed Road	31/08/2011	N/A
Oakyhole Creek	Reedy Creek Road	31/08/2011	N/A
Oakyhole Creek	Clarkes Camp Road	02/09/2011	N/A
Oakyhole Creek	Dog Proof Fence Road	31/08/2011	N/A
Bundock Creek	Dog Proof Fence Road	18/01/2011	N/A
Bundock Creek	Sawpit Road	18/01/2011	N/A
Unmapped drainage line	Dog Proof Fence Road	02/09/2011	N/A

Any construction, re-opening or up-grading of a crossing for any drainage feature requires a Soil Dispersibility Assessment and a Schedule 3 Approval. For routine maintenance just a Soil Dispersibility Assessment is required. The Schedule 3 Approvals <u>must be attached</u> and any site-specific prescriptions in those approvals must be applied as conditions of this plan.

Road Works Conditions

There are no planned road works in the harvest area. All roads and tracks must comply with the <u>Standard Harvest Plan Conditions for Native Forest Operations in Western</u> <u>Region. – Brigalow Nandewar</u>.

Legal Conditions

This operation may only proceed while this operational plan, the relevant site safety plan and the <u>Standard Harvest Plan Conditions for Native Forest Operations in Western</u> <u>Region. – Brigalow Nandewar</u> are held on site.

This operation must comply with the following:

- Standard Harvest Plan Conditions for Native Forest Operations in Western Region. – Brigalow Nandewar
- Licence conditions issued by Forests NSW under the Forestry Act (1916).
- Forest Practices Code, Part 2, Timber Harvesting In Native Forests (4th edition 1999).
- □ Forest Practices Code, Part 4, Forest Roads and Fire Trails (1999).
- Integrated Forestry Operations Approval issued under Part 4 of the Forestry and National Parks Estate Act 1998 (IFOA) as amended May 2003 including associated licences:
 - Threatened Species Conservation Licence (TSCL) issued under the Threatened Species Conservation Act 1995
 - Fisheries Management Licence issued under Part 7 (Div 3) Fisheries Management Act 1994
 - Environmental Protection Licence (EPL) issued under the Protection of the Environment Operations Act 1997.

SFO FEATURE USAGE RECORD – LOG DUMPS

Dates of commencement and cessation of logging

Date of commencement of logging:

Date of cessation of logging:

DUMP USAGE RECORD

• Record the commencement and completion of harvesting at each dump

Dump number	Start date	Finish date	Easting*	Northing*	**Temporary track drainage Required?	Comment

* GPS coordinates in GDA94:

** If a downhill extraction track enters a log dump from the uphill side, then at the end of each day on which it is used during a logging operation, a drainage structure must be in place on the extraction track within 40 metres of the log dump, on its uphill side.

Date		Liconcolocatrostor
(dd/mm/yy)	Authorisation given / hazard identified / instruction made / comments	Licensee/contractor acknowledgment
1 1		
1 1		

Supervising Forest Officer's Notes

Certificate Of Clearance To Move From Current Compartment(s)
To:, Supervising Forest Officer.
I request approval to move my logging crew and all associated machinery from Compartment(s) in
I certify that:
all permanent roads, trails and mitre drains have been cleared of harvesting debris;
butt damage to retained trees has been kept to acceptable limits;
all trees marked for removal have been felled;
utilisation limits have been satisfactorily met;
stump heights conform to requirements;
all hanging trees have been brought down;
all log dump sites have been satisfactorily restored as required;
harvesting debris is not accumulated around retained trees;
all accumulated litter has been disposed of properly;
all modified harvesting conditions have been complied with;
all snig track and road drainage has been installed satisfactorily and other required rehabilitation work has been completed;
all necessary repairs to damaged roads, signs, fences and other structures have been carried out.
I believe that I have met all my obligations under the conditions of the Timber Licence that applies to the area just completed and any N&PW Act Licence that applies to the area just completed, as stated in this Harvest Plan.
Signature:Licence No:
Date:
Licensee/Contractor
As a result of inspections of the logging operations carried out in accordance with this Harvest Plan, I am satisfied that, to the best of my knowledge, the harvesting licensee/contractor responsible for this harvesting operation has satisfactorily completed all work. Approval is given for her/him to remove her/his machinery and equipment and leave the area/commence operations in another harvesting plan area, being:
Compartment(s):, in, state Forest
This clearance does not release the licensee/contractor from any obligation to undertake any remedial work in deficiencies, found during any inspections of the area made within 12 months of the date of this post-harvesting inspection, are shown to have resulted from inadequate practices during the harvesting operation.
Date of last inspection of the area by the Supervising Forest Officer:
Supervising Forest Officer,
Signature Name

HARVEST PLAN AMENDMENT RECORD

Amendment No. & type																		P		Amendment Details	All Copies Amended	Signature
Number	Major	Minor																				
1																						
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

Note: The purpose of this log is to track amendments to the Harvest Plan from time of first approval. All maps, Harvest Plans etc. are to be clearly identified with a version # and date so that changes to the Plan may be clearly identifiable. The Harvest Planner is responsible for ensuring all amendments are implemented, recorded and filed

Supervising Forest Officer's Hand-Over Acknowledgment

I confirm that I have received a copy of the Harvest Plan for the above Compartment. I have been briefed on the conditions of the Plan and the progress of the operation. I understand the requirements for supervision and operational control, as explained to me by the current SUPERVISING FOREST OFFICER.

Signature:		Date:
	Incoming Supervising Forest Officer	
Signature:		Date:
Position:	Incoming Supervising Forest Officer	
Cignoture		Data
	Incoming Supervising Forest Officer	Date:
Signature:		Date:
Position:	Incoming Supervising Forest Officer	
Signature:		Date:
Position:	Incoming Supervising Forest Officer	
Signature:		Date:
	Incoming Supervising Forest Officer	

RECORD OF INCIDENTAL THREATENED PLANT OR THREATENED FAUNA FEATURE SIGHTING

- For each occurrence/population sighted/identified, a separate form 5 must be filled out and provided to the Region Ecologist as soon as practicable. The details must also be recorded on this form in the Supervising Forest Officer's copy of the operational plan, with the date the separate form 5 went to the Ecologist.
- Some features or species require no further prescription but should still be recorded while other features or species require an immediate prescription and/or further survey before logging may continue in the vicinity.
- Locations of species/features recorded on this form should be noted on the operational map.
 IR form = incidental record form 5. ECO = Regional Ecologist

Species or features detected (include type, number, etc.)	Map datum GDA 94Location (MGA reference)Easting(6-digit)(7-digit)		Action taken	Date IR form
	Easting (6-digit)	Northing (7-digit)		given to ECO

Supervising Forest Officer's Post-Harvesting Notes

Record significant circumstances about harvesting this area. Draw or attach an annotated operational scale map.

A CI UAL AREA HARVESTED (by sirvicultural deathlent)										
Treatment	code on	Area (ha)	REGEN	N QUAL	ITY	REGEN	REGEN DENSITY			
	map	treated	Good	Fair	Poor	Dense	Fair	sparse	COMMENTS	
THINNED	T1									
	T2									
RELEASED	R1									
	R2									
SALVAGE	S1									
	S2									
Not	NH1									
Harvested	NN2									
	NH3									

ACTUAL AREA HARVESTED (by silvicultural treatment)

POSSIBLE NEXT HARVEST			Main product type	Antio	cipated vo	lume
	C = cypress H = hardwood ()		(put C or H in each relevant cell)	High	Medium	Low
			High quality large sawlog			
			High quality small sawlog			
			Low quality sawlog			
			Fencing/posts			
			Vineyard posts (cypress)			
			Residue			
Code on map	Comment		Habitat trees / Non-merchantable			
	🗌 0 to 5 ye	ears to next harvest				
	5 to 10 ye	ears to next harvest				
	🗌 10 to 20 ye	ears to next harvest				
	🗌 20 to 30 y	ears to next harvest				
	🗌 30 plus ye	ears to next harvest				

.....

1. Noxious or environmental weed problems; high levels of feral animal use.

- 2. Sites of soil erosion for attention.
- 3. Boundary compromised; neighbour issues resulting from logging or haulage.

4. Operation map errors for attention (e.g. forest type; roads) of appropriate staff (e.g. GIS, Planner)

5. Any other comments – SUPERVISING FOREST OFFICER / FA / Forester

Date	Date Before or Category			Component						
(and GPS grid ref optional)	after harvest		All trees	White cypress	Ironbark	Other species				
	Before	merchantable								
	OR	pre-merch								
	After	non-merch								
		total	+							
trees marked for (circle	correct one): ret									
·	Before	merchantable								
	OR	pre-merch								
	After	non-merch								
		total	+							
trees marked for (circle	correct one): ret									
	Before	merchantable								
	OR	pre-merch								
	After	non-merch								
		total	+		+					
trees marked for (circle	correct one): ret									
	Before	merchantable								
	OR	nro morch								
	After	pre-merch non-merch								
		total	+							
trees marked for (circle	correct one): ret									
	Before	merchantable								
	OR After	pre-merch								
		non-merch total	+							
trees marked for (circle	correct one) [,] ret									
	Before	merchantable								
	OR	pre-merch non-merch			-					
		total			+					
trees marked for (circle	correct one): ret									
	Before	merchantable								
	OR	nro-morch								
	After	pre-merch non-merch								
		total								
trees marked for (circle	correct analy rat									

RECORD OF BASAL AREA SWEEPS OF ALL RETAINED STEMS - 10cm dbhob or larger

BA is measured at 1.3m above the ground, and does not include stems less than 10cm diameter at that point.

Operational plan distribution and amendment control sheet ('DACS')

Date approved by RM		Plan number	WBcfi1113	State Forest or Property/County	Pilliga East
Date PM review is required	31 December 2012			Compartment or Parish/Portion or Lot/DP	522-524

<u>Amendment</u>: Normally the supervising Forester would amend the Office, Forester and SFO copies on explaining the amendment to the SFO, and should annotate the Amendment record (Form 11) in them. The SFO (or Forester as applicable) should amend the bush crew copy/copies when explaining it to the bush operators, and should annotate the Amendment record (Form 11) in it/them.

Plan copy	Name of recipient	Delive	ry to rec	ipient	Amendment affected in plan copies					Plan recall						
		Method	Date	Ву	1	1		2	, ,	3		4		5	Date	Date
		H = hand E = email	done	(initials)		Ву	Date	Ву	Date	Ву	Date	Ву	Date	Ву	received	destroyed
		E = email M = mail			done	(initials)	done	(initials)	done	(initials)	done	(initials)	done	(initials)		
RO																
Ops Centre																
Supervising Forester																
SFO																
Bush crew supervisor																
Contractor																
Customer																

CERTIFICATION OF COMPLETION OF THE OPERATION

This checklist is intended to comprise the top page in the planning documentation folder / wallet

Region:	State Forest OR County/parish	Pilliga East
Management	Compartment OR	522-524
Area:	Portion, lot/DP, prop	erty

Tick when added to	Documentation	Comment
set		
1. 🗌	Data search results – flora and fauna	
2.	Data search results – indigenous cultural heritage	
3.	Data search results – non-indigenous cultural heritage	
4.	Copy (if any) of the flora/fauna survey report(s) (Ecologist retains the original survey data sheets)	
5.	Copy (if any) of the indigenous cultural heritage survey report(s) and original data	
6.	Copy (if any) of the non-indigenous cultural heritage survey report(s) and original data sheets	
7.	Records of consultation with regulators, including specific license, consent, concurrence, etc (eg individual s120 TSL, Native Veg Act consent, concurrence from RLPB)	
8.	Records of consultation with lessees and/or permittees	
9.	Records of consultation with stakeholders and the community	
10. 🗌	Copies of notifications sent (eg neighbours, Lands)	
11. 🗌	Environmental impact assessment	
12. 🗌	Due diligence checklist (form 10.1)	
13. 🗌	Quality control checklist (form 10.2)	
14. 🗌	Operational plan with signed approval pages	
15. 🗌	The Distribution Control Sheet for the plan	
16. 🗌	The Amendment Control Sheet for the plan	
17. 🗌	Copies of all revisions of and amendments to the plan	
18. 🗌	Supervising Forest Officer's copy of the plan, with diary notes (form 4), incidental records (eg forms 5, 20, 22), briefing records, post-harvest notes (form 6), other notes/annotations	
19. 🗌	Completed clearance certificate (form 7) – only harvesting	

I certify that:

This file contains all documents associated with planning, implementation and recording for this operation as
identified in the table above and is complete for internal/external audit purposes;

The relevant information from them has been transferred to the compartment history data set; and

The Region's geodatabase has been updated for the area completed in this operation.

Position	Signature	Date
Comment		