



LOCALITY MAP
Western Region - Harvest Plan WCc1414

Management Area: NARRANDERA

State Forest Name: BOONA

State Forest No: 375

Compartment: 213

Scale: 1:200,000

Compartment Area: 350 ha



Highway

Roads

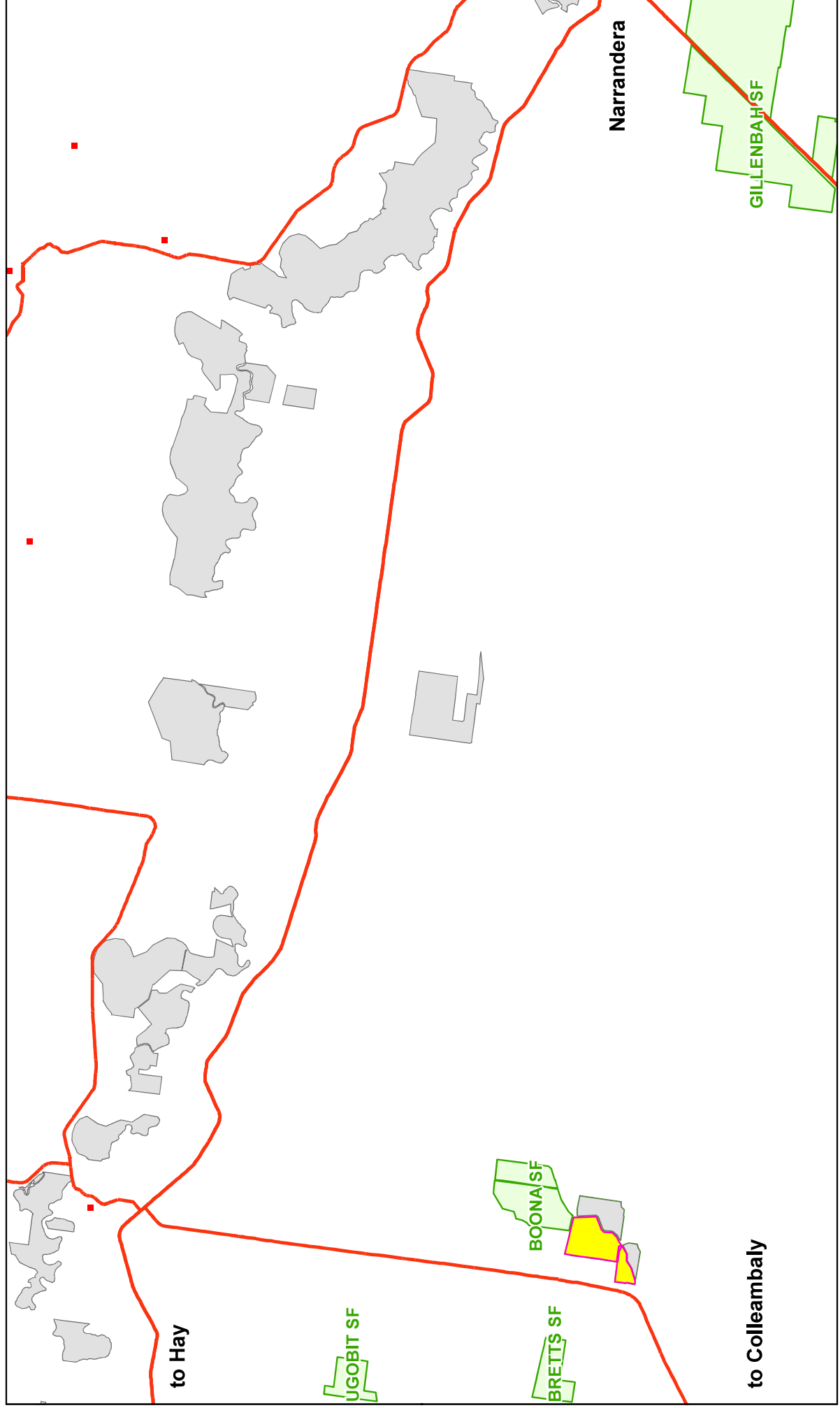
Major Drainage

Compartment(s) of interest

State Forest

Locality

Heritage Sites



HARVEST PLAN OPERATIONAL MAP

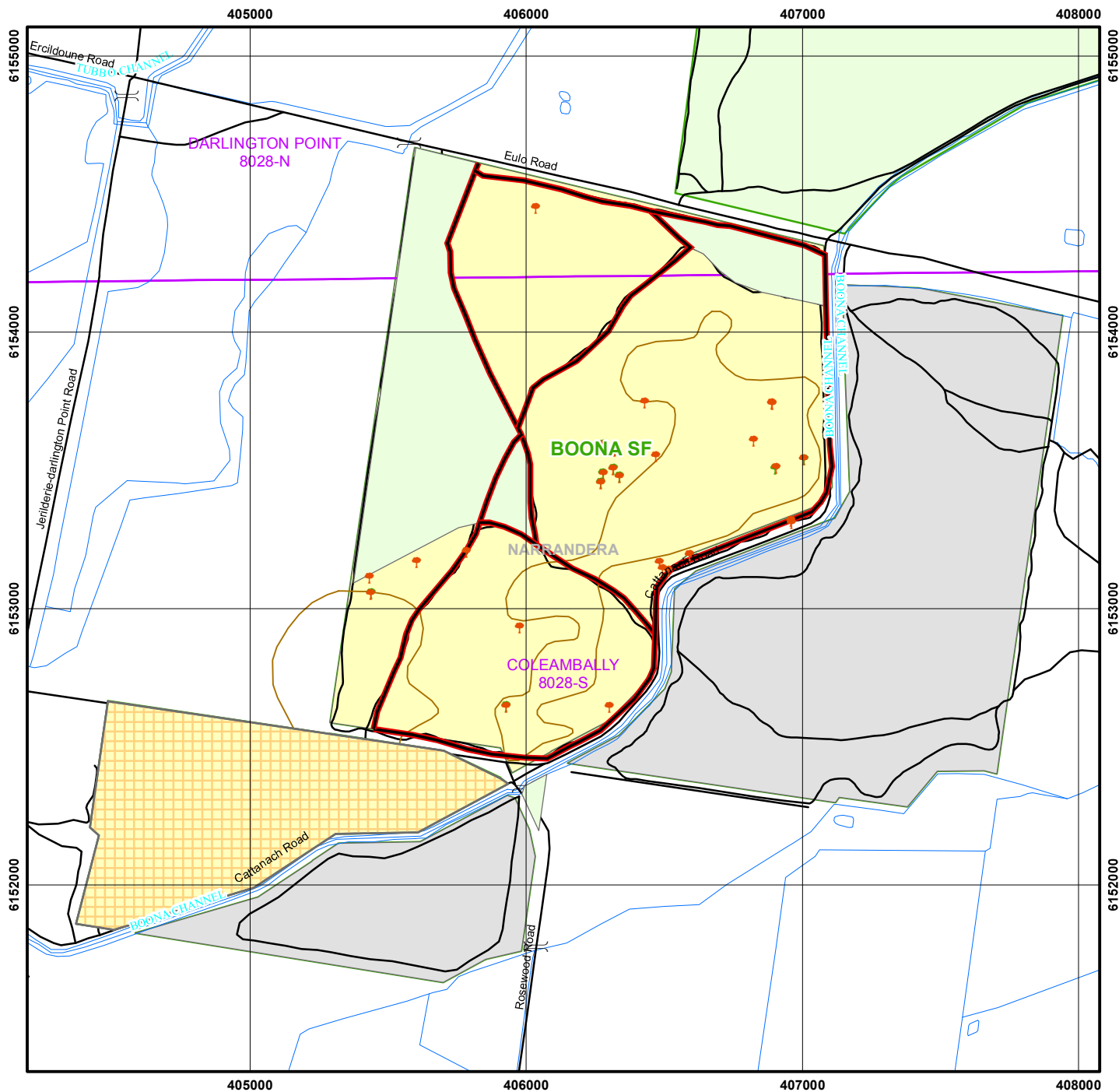
Western Region - Harvest Plan WCc1414

State Forest Name: Boona

Compartment: 213



Scale: 1:20,000



General Features

- Tree (as per IFOA 244 (1)g1)
- Inventory/Research Plots
- Log Dump (permanent)
- Log Dump (temporary)
- Trig/Repeater Station
- Contour
- Transmission Line
- Railway

Roads

- Highway
- Road

Roads Class

- Operation
- Proposed

Water Features

- Drainage
- Dam

Boundaries

- Compartment of Interest
- State Forest Boundary
- NPWS
- NSW Topo

Drainage Buffers

- 50m Stream Buffer (5th Order)
- 40m Stream Buffer (4th Order)
- 30m Stream Buffer (3rd Order)
- 20m Stream Buffer (2nd Order)
- 10m Stream Buffer (1st Order)

Other Exclusions

- EEC
- Wetlands
- Heath

Non-Harvest Area

- Special Protection (FMZ 1)
- Special Management (FMZ 2)
- Harvesting Exclusion (FMZ 3A)
- Flora/Fauna Exclusion Units

Harvest Area

- Available for Harvesting (FMZ 4)
- Modified Harvest Area (FMZ 3B)
- Logging Deferred (IFOA clause 32A)

DISCLAIMER: This map is not guaranteed to be free from error or omission. Therefore, the State of New South Wales and its employees disclaims liability for any act done or omission made on the information on the map and any consequences of such acts or omissions.

This map is produced on the Geodetic Datum of Australia 1994 (GDA 94) Map Grid of Australia (MGA) - Zone 55

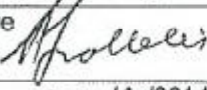

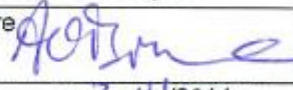
Date Print: 2/03/2015

FORESTRY CORPORATION OF NSW - WESTERN REGION
NATIVE FOREST HARVESTING PLAN No. WCc1414nn

Refer: FPC 2010/01

Boona State Forest - Compartment 213
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 Standard Harvest Plan Conditions for Native Forest Operations in Western Region – South-Western Cypress v.3 apply to this operation.

Prepared By: S Gralleis Asst District Manager	Endorsed By: Ross Irvine Environment & Resources Mgr	Approved By: Andrew O'Brien Senior Manager
Signature 	Signature 	Signature 
Date 27/11/2014	Date 3/11/2014	Date 3/11/2014

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 may be 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 Forestry Corporation officer.

Signature: _____ Name: _____ Date: _____

Position: _____ Licence No: _____

Principal licensee/contractor/other (explain)

Description of Proposal

White cypress sawlogs will be harvested under regulation of the Integrated Forest Operations Approval for South-Western Cypress Region.

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	Plan Number
Boona	213	Western	Narrandera	10658

COMPARTMENT	213
Plan Compartment ID	21851
Gross Area (ha)	349.2
Net Harvest Area (ha)	214.9
High Density Area (Y/N)	No
Estimated Yield Cypress Sawlog (m ³ or t)	1000-1500t
Estimated Yield Residue (t)	Nil

Silviculture and Harvesting Prescriptions

The planning area has a long history of silvicultural treatment with reliable records going back to the 1950's.

The mature cypress stands within compartment 213 were established during regeneration events in the 1890's. Additional noticeable regeneration growth occurred in 1955, following suitable seed fall and weather conditions. They have been thinned on several occasions with the last harvesting event occurring in 1973.

Significant rabbit activity in the late 1970's severely affected regeneration growth, delaying the overall stand growth performance. Conditions are now suitable for thinning of these stands.

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

Silvicultural Planning

The cypress thinning operation is aimed at reducing competing stems whilst concentrating growth on the retained, higher quality, future sawlogs. This stand will require further thinning in around 10-20 years.

Harvesting Prescription

Stand type	% of net area	Area (refer to HPOM for details)	Treatment Refer to <i>Standard Harvest Plan Conditions for Native Forest Operations in Western Region. – South-Western Cypress v.3</i> for more detail.
Mature Cypress with regeneration	5% NHA	Cmpt 213	<ul style="list-style-type: none"> Release Silviculture
Mature Cypress without regeneration	95% NHA	Cmpt 213	<ul style="list-style-type: none"> Thinning silviculture

The SFO will ensure that all relevant tree retention and silvicultural prescriptions are met during harvesting operations, especially those in relation to management of Sandhill Pine Woodland EEC (clause 270B).

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

Tree Marking

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.

4. Special Conditions**Critical boundaries**

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

Private Property – not applicable.

National Park – Blocks under NPWS management are located on the eastern boundary, segregated from the state forest by a road and a water canal.

Research / Inventory Plots

No research plots or trials are known in this compartment. Residual markings from temporary plots established during a University study in 2008/09 are to be ignored.

Leases/OPs

The area is covered by an Occupation Permit for grazing and may also have beekeeping present.

Infrastructure

- Fences. No fence may be damaged except at places approved by the Supervising Forest Officer. Any damage to a fence by the Contractor must be immediately reported to the lessee via the Supervising Forest Officer and fixed immediately by the Contractor.

- Gates and roads. The Contractor must keep the gate(s) on the property as found (open or closed). 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 electrical transmission lines present within the harvest area. However, contractors are reminded that if they encounter a transmission line then:

- *Harvesting machinery must not operate within 20m of this transmission line.*

Forest Management Zoning Conditions

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

Cultural Heritage Conditions

There are no 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 the 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 Standard Harvest Plan Conditions for Native Forest Operations in Western Region. – South-Western Cypress v.3.

Mark-up Conditions

Refer to Standard Harvest Plan Conditions for Native Forest Operations in Western Region. – South-Western Cypress v.3 for prescriptions.

Tree retention Conditions

Refer to Standard Harvest Plan Conditions for Native Forest Operations in Western Region. – South-Western Cypress v.3 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, other than the recognition of the Sandhill Pine Woodland EEC prescriptions.

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

These areas are not shown on the Operational Map.

Large habitat trees (LHTs) recorded during traverse survey are shown on the operational map. Additional LHTs may be identified as mark-up progresses.

Refer to Standard Harvest Plan Conditions for Native Forest Operations in Western Region. – South-Western Cypress v.3 for prescriptions.

Species Known or Likely to Occur

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

Fisheries Licence Conditions

Applicable Fisheries Licence conditions are detailed in the South-Western Cypress – IFOA. Refer to Standard Harvest Plan Conditions for Native Forest Operations in Western Region. – South-Western Cypress v.3 for prescriptions.

Soil and Water Protection Conditions

Applicable Environmental Protection Licence conditions are detailed in the South-Western Cypress – IFOA. Refer to Standard Harvest Plan Conditions for Native Forest Operations in Western Region. – South-Western Cypress v.3 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
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 no Road, snig / extraction track drainage line crossings anticipated or approved for use on drainage features within this operation.

Road Works Conditions

Nil planned.

Legal Conditions

This operation may only proceed while this operational plan, the relevant site safety plan and the Standard Harvest Plan Conditions for Native Forest Operations in Western Region. – South-Western Cypress v.3 are held on site.

This operation must comply with the following:

- q Standard Harvest Plan Conditions for Native Forest Operations in Western Region – South-Western Cypress v.3
- q Tree-marking Protocol for Native Forest Operations in Western Region – South-Western Cypress

- q Licence conditions issued by Forests NSW under the Forestry Act (2012).
- q Forest Practices Code, Part 2, Timber Harvesting In Native Forests (4th edition 1999).
- q Forest Practices Code, Part 4, Forest Roads and Fire Trails (1999).
- q Integrated Forestry Operations Approval issued under Part 4 of the Forestry and National Parks Estate Act 1998 (IFOA) as amended July 2013 including associated licences:
 - o Threatened Species Conservation Licence (TSCL) issued under the Threatened Species Conservation Act 1995
 - o Fisheries Management Licence issued under Part 7 (Div 3) Fisheries Management Act 1994
 - o Environmental Protection Licence (EPL) issued under the Protection of the Environment Operations Act 1997.

Supervising Forest Officer's Notes

[illegible]

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 _____ State Forest to the next area in accordance with Section 5.5 of the Forest Practices Code Part 2 Timber Harvesting In Native Forests.

I certify that:

- c all permanent roads, trails and mitre drains have been cleared of harvesting debris;
- c butt damage to retained trees has been kept to acceptable limits;
- c all trees marked for removal have been felled;
- c utilisation limits have been satisfactorily met;
- c stump heights conform to requirements;
- c all hanging trees have been brought down;
- c all log dump sites have been satisfactorily restored as required;
- c harvesting debris is not accumulated around retained trees;
- c all accumulated litter has been disposed of properly;
- c all modified harvesting conditions have been complied with;
- c all snig track and road drainage has been installed satisfactorily and other required rehabilitation work has been completed;
- c 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 if 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 _____
date: _____

Signature

Name

HARVEST PLAN AMENDMENT RECORD

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Amendment No. & type			Date Prepared	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: _____

Position: Incoming Supervising Forest Officer

Signature: _____

Date: _____

Position: Incoming Supervising Forest Officer

Signature: _____

Date: _____

Position: Incoming Supervising Forest Officer

Signature: _____

Date: _____

Position: Incoming Supervising Forest Officer

Signature: _____

Date: _____

Position: Incoming Supervising Forest Officer

Signature: _____

Date: _____

Position: Incoming Supervising Forest Officer

Supervising Forest Officer's Post-Harvesting Notes

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

ACTUAL AREA HARVESTED (by silvicultural treatment)

Treatment	code on map	Area (ha) treated	REGEN QUALITY			REGEN DENSITY			COMMENTS
			Good	Fair	Poor	Dense	Fair	sparse	
THINNED	T1								
	T2								
RELEASED	R1								
	R2								
SALVAGE	S1								
	S2								
Not Harvested	NH1								
	NN2								
	NH3								

POSSIBLE NEXT HARVEST

C = cypress H = hardwood

Code on map	Comment	Main product type (put C or H in each relevant cell)	Anticipated volume		
			High	Medium	Low
		High quality large sawlog			
		High quality small sawlog			
		Low quality sawlog			
		Fencing/posts			
		Vineyard posts (cypress)			
		Residue			
		Habitat trees / Non-merchantable			
	C 0 to 5 years to next harvest				
	C 5 to 10 years to next harvest				
	C 10 to 20 years to next harvest				
	C 20 to 30 years to next harvest				
	C 30 plus years to next harvest				

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

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2. Sites of soil erosion for attention.

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3. Boundary compromised; neighbour issues resulting from logging or haulage.

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

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

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

Date (and GPS grid ref optional)	Before or after harvest	Category	Component			
			All trees	White cypress	Ironbark	Other species
	c Before OR c After	merchantable				
		pre-merch				
		non-merch				
		total				
trees marked for (circle correct one): retention / removal						
	c Before OR c After	merchantable				
		pre-merch				
		non-merch				
		total				
trees marked for (circle correct one): retention / removal						
	c Before OR c After	merchantable				
		pre-merch				
		non-merch				
		total				
trees marked for (circle correct one): retention / removal						
	c Before OR c After	merchantable				
		pre-merch				
		non-merch				
		total				
trees marked for (circle correct one): retention / removal						
	c Before OR c After	merchantable				
		pre-merch				
		non-merch				
		total				
trees marked for (circle correct one): retention / removal						
	c Before OR c After	merchantable				
		pre-merch				
		non-merch				
		total				
trees marked for (circle correct one): retention / removal						
	c Before OR c After	merchantable				
		pre-merch				
		non-merch				
		total				
trees marked for (circle correct one): retention / removal						

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