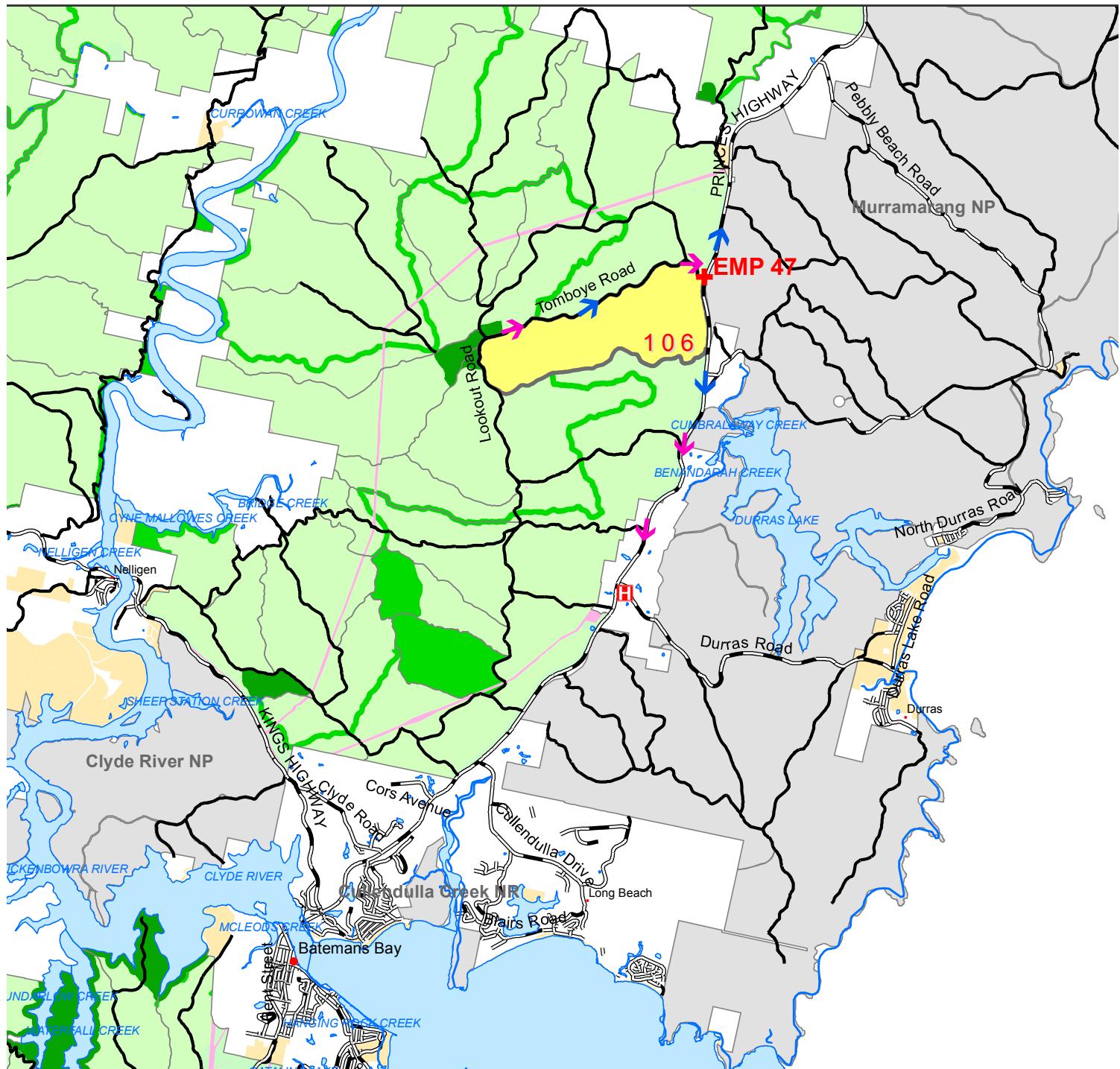


LOCALITY MAP

Compartment 106

Boyne State Forest No. 832

SOUTHERN IFOA - South Coast
BATEMANS BAY MANAGEMENT AREA
Scale: 1:100,000



● Towns & Localities
— Sealed Road
— Major Forest Road
- - Minor Forest Road

State Forest
Planning Unit
Vacant Crown Land
Non Forest
Freehold

Major Rivers



BATEMANS BAY

National Parks
Formal Reserve
Informal Reserve
Softwood Plantations
Water

Emergency Meeting Point
Helicopter Landing Site

Evacuation Route
Haulage Route

1,000 500 0 1,000 2,000 Meters

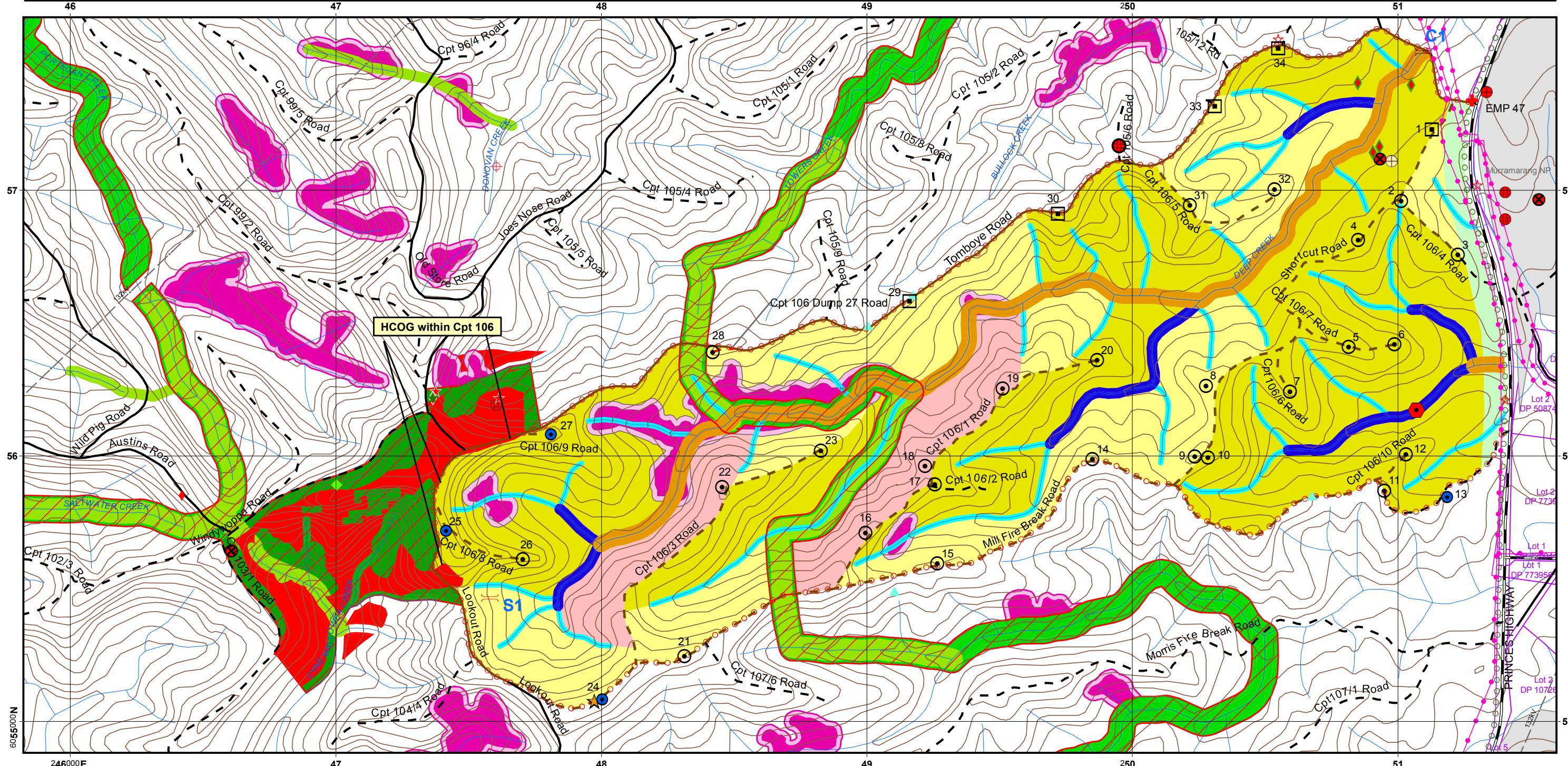
Harvest Plan Operational Map

Compartment: 106

State Forest: BOYNE No: 832

Southern (South Coast) Forest Agreement Region - IFOA

Map Sheets: CURROWAN 8926-4N KIOLOA 8926-1N



LEGEND

BOUNDARIES

State Forest Boundary

Compartment Boundary

ROADS

Sealed

Major Forest

Minor Forest

EPL Standard Existing (Major)

EPL Standard Existing (Minor)

EPL Standard (New Construction)

UTILITY

Powerlines

Underground Telstra Cable

HARVEST AREA

- FMZ 4 \ RU1 \ STS Heavy
- FMZ 4 \ RU2 \ STS Medium
- FMZ 3B \ RU3 \ STS Medium (100m total width)

DUMPS & CROSSINGS

- Temporary Dry Weather
- Temporary Wet Weather
- Permanent Bee Set Down
- New Crossing
- Existing Crossing

DRAINAGE

- Mapped LIC Drainage
- Water bodies

NON HARVEST AREA

- FMZ 4 \ RU4 \ Excluded Forest
- Harvesting Protection (FMZ 3A) (100m total width)
- Special Management (FMZ 2)
- Ridge & Headwater Habitat (80m total width)
- High Conservation Value Old Growth
- Owl Landscape (100m total width)
- Rainforest and Exclusion Zone (20m)

TENURE

- National Park Estate
- Private Property

SAFETY POINTS

- Emergency Meeting Point

FAUNA FEATURES

- Sooty Owl
- Spotted-tailed Quoll
- Powerful Owl
- Masked Owl
- Masked Owl (Nest/Roost)
- Yellow-bellied Glider
- Yellow-bellied Glider (Heard)
- Glossy Black-Cockatoo
- Glossy Black-Cockatoo (Feed Tree)
- Southern Myotis
- Swift Parrot
- Gang-gang Cockatoo
- Raptor Nest

FLORA FEATURES

- Leafless Tongue Orchid
- East Lynne Midge Orchid

STREAM EXCLUSION ZONES (EPL IHL 2 & TSL)

Feature	Filter Strip	Protection Zone	Operational Zone
Unmapped	N/A	N/A	N/A
1st Order	5m	5m	10m
2nd order	5m	15m	10m
3rd order	5m	25m	10m
4th order	5m	45m	10m

0 125 250 500 750 1,000 Meters
Scale: 1:15,000
Contour Interval 10m

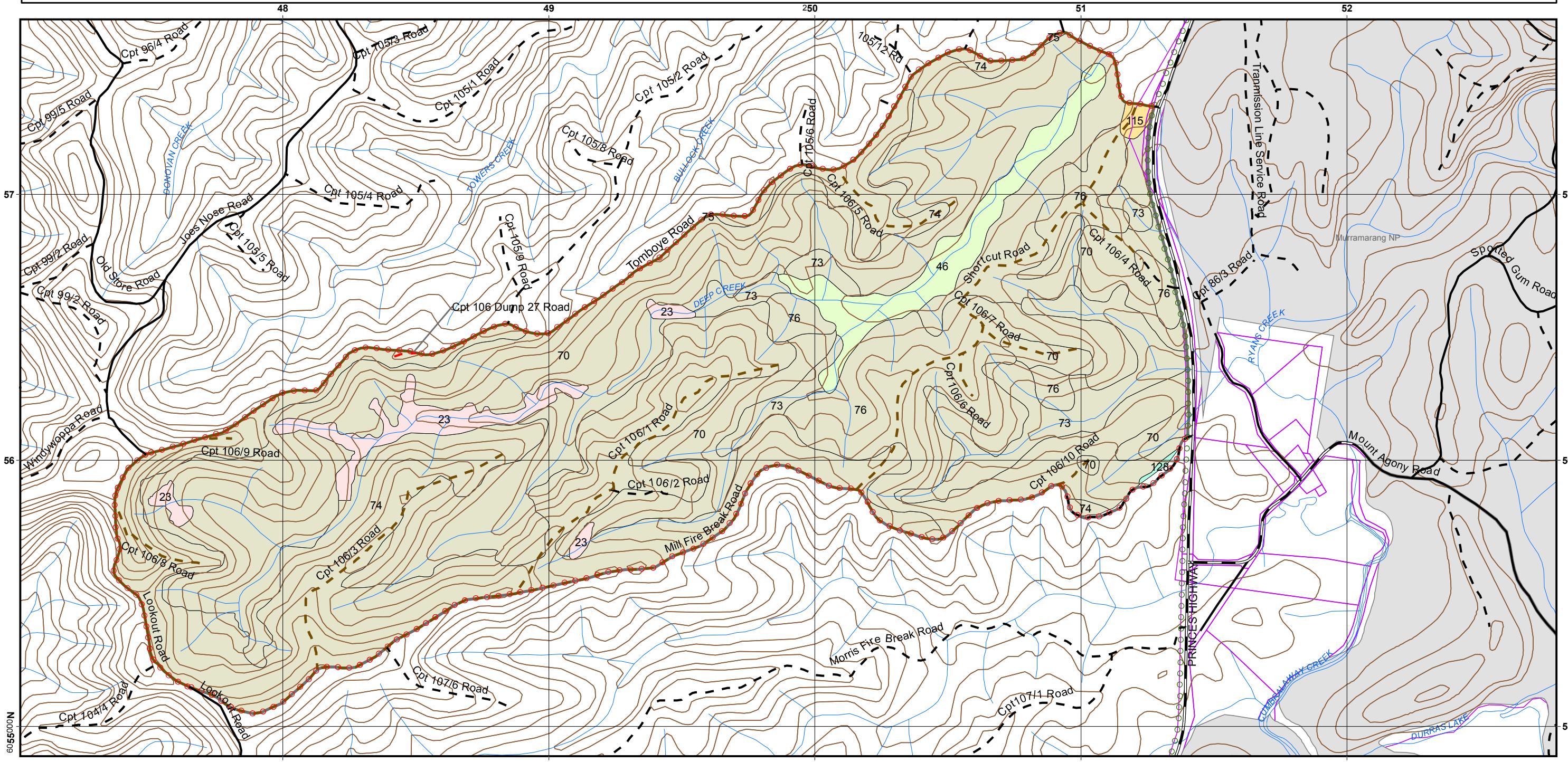
Harvest Plan Forest Type Map

Compartment: 106

State Forest: BOYNE

No: 832

Southern (South Coast) Forest Agreement Region - IFOA
Map Sheets: CURROWAN 8926-4N KIOLOA 8926-1N



LEGEND

BOUNDARIES

- ○ ○ State Forest Boundary
- ○ ○ Compartment Boundary

ROADS

- Sealed
- Major Forest
- Minor Forest
- EPL Standard Existing (Major)
- EPL Standard Existing (Minor)
- EPL Standard (New Construction)

DRAINAGE

— Mapped LIC Drainage

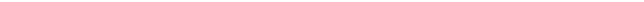
TENURE

National Park Estate
 Private Property

FOREST TYPE - Rn17

- Type 23 Myrtle - 12.2 ha
- Type 46 Sydney Blue Gum - 17.6 ha
- Type 70 Spotted Gum - 197.7 ha
- Type 73 Spotted Gum - Sydney Blue Gum / Bangalay - 31.1 ha
- Type 74 Spotted Gum - Ironbark / Grey Gum - 140.0 ha
- Type 75 Spotted Gum - Yellow / White Stringybark - 0.1 ha
- Type 76 Spotted Gum - Blackbutt - 79.3 ha
- Type 115 Sydney Peppermint - Stringybark - 1.2 ha
- Type 128 Sydney Peppermint - 0.3 ha

Note: Max possible BNA = 392.7 ha



0 125 250 500 750 1,000 Scale: 1:15,000
Meters Contour Interval 10m



HARDWOOD FORESTS- SOUTHERN IFOA SOUTH COAST HARVESTING PLAN

Boyne State Forest - Compartment 106

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 Harvest Plan Standard Conditions for Hardwood Forest Operations in South Coast apply to this operation.

Prepared By: Harvest Planner	Josh Driscoll	Approved By: Planning Supervisor	Lee Blessington
Signature		Signature	Lee Blessington
Date	2/10/2014	Date	2/10/2014

Note: Approval includes the Harvest Plan Operational Map (HPOM) with the corresponding approval date displayed on the map, verifying final approved version.

Other maps included with this plan are Locality, Forest Type, Roading and Cultural Heritage (limited distribution).

Description of Proposal

Harvesting of Hardwood forest

Harvesting of Hardwood forest, using Single Tree Selection Silviculture subject to the Southern IFOA requirements will be undertaken within this planning unit. **Timber harvesting and road construction will not be licensed under the EPL.**

The primary product of the harvesting is high quality large sawlogs (quota logs), small high quality sawlogs, veneer logs, girders, poles & piles where timber markets are available. Parts of felled logs that do not meet high quality log specifications are segregated and graded into other classifications such as salvage sawlogs, pulp logs & miscellaneous timbers e.g. split & round posts, firewood, mining timbers & craftwood. The availability of miscellaneous timbers depends mainly on forest types, log defectiveness & market conditions at the time of harvesting.

Clause 22 – Integrated Forestry Operations Approval (IFOA) Consideration

All relevant factors have been reviewed taking into account the volume and monetary value of each forest product to supply Term Agreement Holders. The harvesting operation also complies with Clause 22 of the IFOA.

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

Attachment 2: Roading plan prescribes roading requirements for this harvesting operation.

Abbreviations used in this plan

FT = Forest Technician, HC= Harvesting Coordinator, PS= Protection Supervisor, HS = Harvesting Supervisor, RC = Roading Coordinator, IFOA = Integrated Forestry Operations Approval.

Area Identification and Yield Estimates

State Forest	Compartment	IFOA Region	Management Area	Certification
Boyne	106	Southern	Batemans Bay	AS4708:2007 ISO 14001

	Cpt 106	Total
Plan Compartment ID	20942	NA
Gross Area (ha)	483.4	483.4
Net Harvestable Area (ha)	354.8	354.8
Harvest Area (ha)	354.8	354.8
Poles, Piles, Veneer & Girders	177m ³	177m ³
Quota Logs (HQL)	7800m ³	7800m ³
High Quality Small	1020m ³	1020m ³
Salvage	1620m ³	1620m ³
Pulp E1	4344t	4344t
Firewood/Misc	1260t	1260t

Note: The yield estimates in the table above are derived from the Plan of Operations.

Slope Classes (percent of harvest area)

Slope Class	Cpt 106
	% of harvest area
0-20°	98.6
20-25 °	1.3
25-30 °	0.1



ATTACHMENT 1: SITE SAFETY PLAN

Worksite Information		
Is this Declared Hunting Area: No	Comments:	
Have Exclusion Zone signs been erected or checked prior to starting work daily.	N/A	
Comments:		
Description of Work to be undertaken on site: - Refer to description of proposal above.		
Site Supervisor		
Name:	Contact number:	
Communication		
Radio channel number	VHF:	UHF
Other (e.g. hand signals):		
Traffic management (describe) e.g. Signage, Road closure, Traffic control		
<p>This plan identifies haulage from the compartment will be east via Tomboye Road (FCNSW owned) turning left or right onto Princes Hwy (RTA 100km/hr Road). The intersection of Tomboye Road and Princes Hwy has been assessed as achieving a minimum of 200m sight distance on both approaches. At this intersection additional signage in accordance with a Traffic Control Plan is not required.</p> <p>Road intersections outside the control of FCNSW are not covered by this plan or any FCNSW Traffic Control Plan. Haulage contractors must abide by RTA road laws and standard operating procedures in relation to haulage routes outside the control of FCNSW.</p> <p>The logging contractor is responsible for traffic control on FCNSW roads when felling is within two tree lengths of the tallest tree to be felled of the road or snagging on roads or loading is occurring within 10 metres of a road. Warning of trucks entering must be displayed 200 metres either side of all State Forest road approaches leading to areas where harvesting operations are in progress.</p>		
<p>Traffic Control Plan 78 & 57: Harvesting within 2 Tree Lengths of Princes Highway Boyne State Forest compartment 106</p> <p>When harvesting within 2 tree lengths of RMS controlled Princes Highway, traffic control must be undertaken in accordance with a relevant traffic control plan (attached to this plan). In order to implement traffic control along Princess Highway a Road Occupancy Licence (ROL) and Speed Zone Authorisation (SZA) must be obtained from RMS. The Harvesting Supervisor must give the planner a minimum of two weeks notice prior to this being required to obtain the ROL and SZA. Once obtained, the harvest planner will provide the Harvesting Supervisor with the ROL and SZA.</p>		
Name of on-site safety first-aider/s		
Location of first-aid kit		

SITE HAZARD & RISK ASSESSMENT NO.	CONTROL	WHO	IMPLEMENTED
1. Vehicle collision at adjoining roads of various traffic levels	Warning signs at FCNSW intersections, road closure on FCNSW roads. Implement Traffic Control plans (where specified in this harvest plan). 60km/hr speed limit on all State Forest gravel roads unless otherwise signposted. Compliance with FCNSW lights on policy.		
2. Underground cables, pipelines	Minimise ground disturbance across or along cables & pipelines. Increase depth of earth cover if required.		
3. Hazardous or dead trees	Refer to FCNSW safety standard OSS010. Assess area within two tree lengths of work site. Assess risk, mark any Distinctly Dangerous Trees with the symbol Ø & if necessary remove hazard or move work site. Use machinery to assist with hazard removal if possible Contractor is responsible for implementing control strategies during harvesting.		
4. Overhead hazards associated with dumps	Refer to FCNSW safety standard OSS010. Assess overhead hazard within two tree lengths of the dump. Assess risk, & if necessary remove hazard or relocate dump site. Contractor is responsible for implementing control strategies during harvesting.		
5. Dust from passing vehicles along dirt haulage routes	Restrict speed to minimise dust generation, slow down when passing vehicles. Turn on driving and hazard lights to increase visibility.		

- All visitors, contractors and employees **must** be fully **inducted** onto the worksite by the workplace supervisor e.g. the Principal Contractor or the Forestry Corporation supervisor. This must be recorded on the attached induction sheet.
- Relevant **Safe Work Procedures** are available and understood for the type of work to be undertaken.
- A **Risk and Hazard Assessment Worksheet** must be completed if site specific hazards are identified that are not covered by a **Safe Work Procedure**. The top (pink sheet) is to be attached to this site safety plan.
- Operators in training must be supervised by the site supervisor.
- All appropriate Personal Protective Equipment (PPE) must be worn on the worksite at all times.



MEDICAL EMERGENCY EVACUATION PLAN

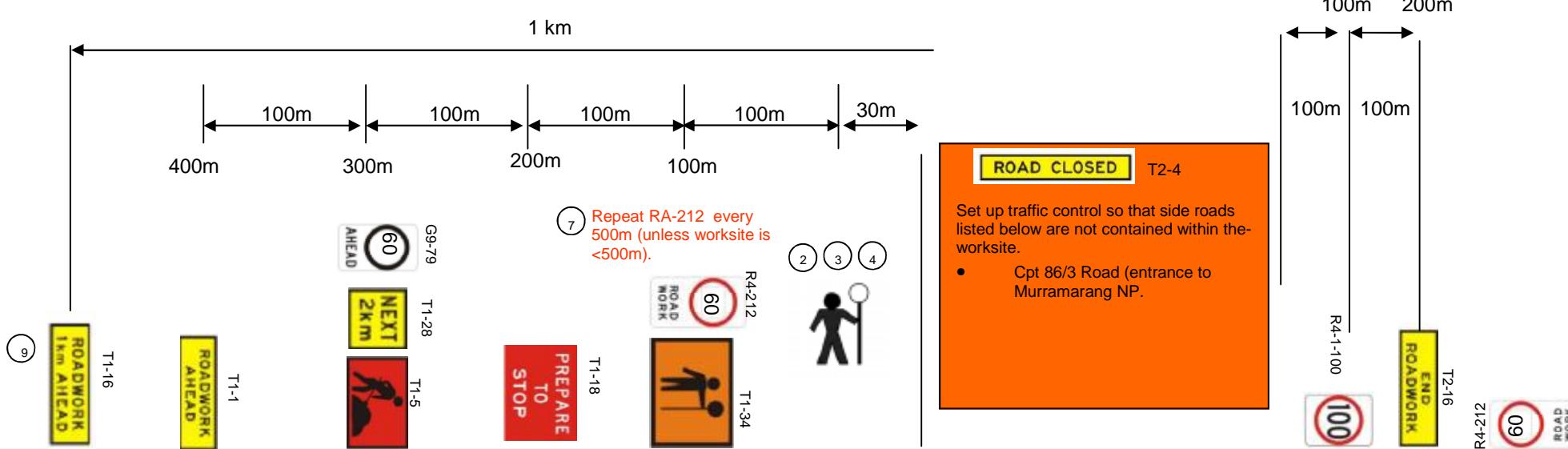
Nearest reliable mobile phone reception (describe location)			
Next G Network: Good	GSM: N/A	Satellite: N/A	
GPS Lat/Long: 35° 35' 47" S 150° 15' 17" E	MGA: E251279 N6057339	Datum: GDA 94	Zone: 56
Location description: Throughout planning area.			
Emergency meeting point for ambulance / police (refer to attached safety map)			
GPS Lat/Long: 35° 35' 47" S 150° 15' 17" E	MGA: E251279 N6057339	Datum: GDA 94	Zone: 56
Location description: Intersection of Tomboye Road and Princes Hwy.			
Helicopter landing place (refer to attached safety map)			
GPS Lat/Long: 35° 38' 56" S 150° 14' 23" E	MGA: E250108 N6051459	Datum: GDA 94	Zone: 56
Location description: Junction of Durras Road (South) and Princes Highway, opposite the service station			
Procedures to obtain ambulance assistance			
1. Dial 000 2. If there is no mobile coverage, dial 112 (which will work on any mobile phone system). 3. If no response on 112: <ul style="list-style-type: none">• use a radio link (TARA, be discrete with personal information)• move to an area with mobile coverage• find a landline• use another network (e.g. a contractor's VHF radio)	Contact nearest Forestry Corporation office on: Channel: 236 Telephone: 1300 880 548 Give details of the situation and ask for a 000 call to be placed.		
000 operator question:	Response:		
1. Police, Fire, Ambulance?	NSW Ambulance		
2. Suburb?	State Forest name:	Boyne	
	Nearest town or locality:	Batemans Bay	
	Nearest ambulance station:	Batemans Bay	
3. Address?	Tomboye Road		
4. Nearest road junction/cross street?	Tomboye Road and Princes Highway		
5. Local government area?	Eurobodalla		
6. Nature of the problem?	Describe the accident, number and condition of casualties		
7. Where is the accident?	Refer to safety meeting point above		
Directions to navigate from nearest ambulance station to the emergency meeting point. From Batemans Bay head north on the Princes Highway, travel approx. 15km to intersection with Tomboye Road (on left).			
8. 4WD ambulance required: N	CB radio channel to use:		
9. Injuries?	Give detailed information about the condition of the casualty (do not mention names over radio system)		
10. Your name and call back number:			

Forestry Corporation NSW Hardwood Forests Traffic Control Plan 78 & 57: Harvesting within 2 Tree Lengths of Princes Highway

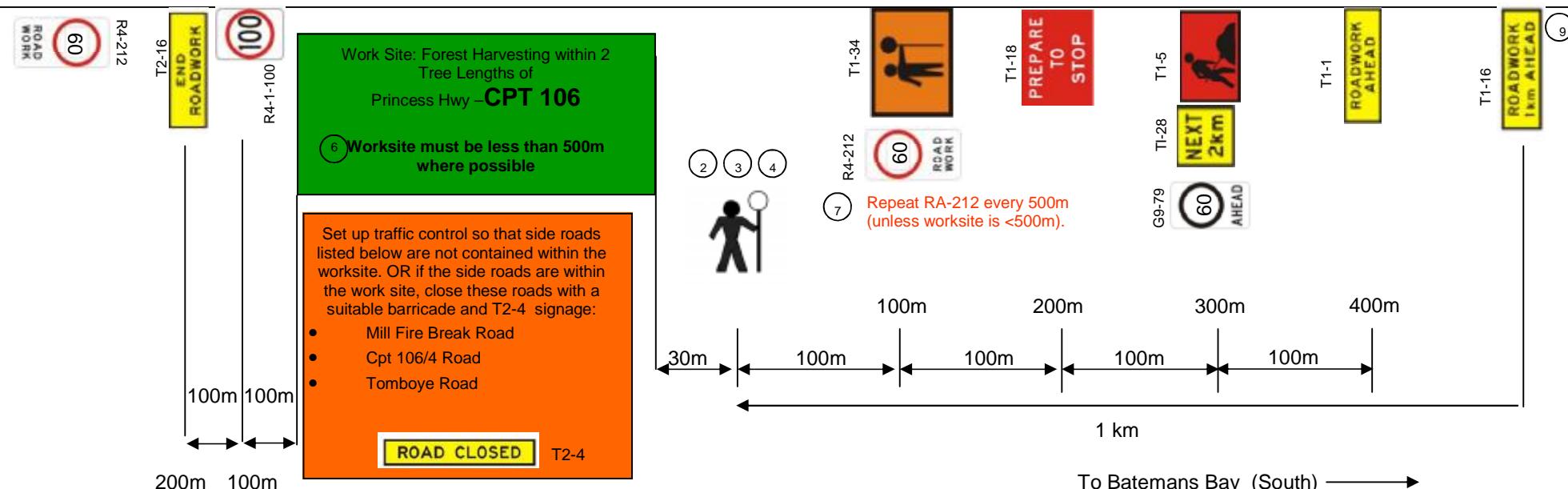
Boyne State Forest compartment 106

(modified from RTA Traffic Control at Work Site TCP 78 & 57) Speed limit 100km/hr, ADT 2900)

← To Termeil (North)



Princes Hwy (100km/hr zone)



Notes: 1. Each stoppage less than 5 minutes.
2. Traffic controllers stop traffic for duration of works and then direct traffic past works area, once tree falling has ceased and any debris has been cleared from road.

Notes: 2. Traffic controllers to stop traffic for duration of work and then direct traffic past work area, once tree falling has ceased and traffic controllers and tree faller to maintain radio contact so that no tree falling is occurring while traffic is let through.

3. Traffic controllers and tree faller to maintain radio contact so that no tree felling is occurring while traffic is let through
4. Traffic controller must have sight distance to oncoming traffic of at least 150m

4. Traffic controller must have sight distance to oncoming traffic of at least 150m.
5. Roadwork signs are to be covered when not in use (meal breaks and shift breaks).

5. Roadwork signs are to be covered when not in use (meal breaks and shift breaks)
6. Where possible the worksite must be less than 500m. The worksite MAY be longer

6. Where possible the worksite must be less than 500m. The worksite MAY be longer controller.

7. Where worksite is more than 500m, repeater R4 212 (60km speed limit) signs are

8. Permanent road signs which contradict this TCP must be covered whilst TCP is in

9. Road work 1km ahead (T1-16) only required where sight distance from traffic to Di

10. Access to Cpt 86/3 Road (entrance to Murramarang NP must not be blocked).

SHORT TERM WORK (UP TO 5 MINUTES)

2 LANE/2 WAY APT < 3000

Prepared by Kate Halton; Signed: Date: 19/01/2014 Red Card Certificate No. 5192055074 on 02/09/2014

Silviculture and Harvesting Prescriptions

Year	1920s 1930s	1944	1954	1960s	1975	1977	1988	1989	1990	2001	2005
TSI	3	X	X	2	X	X	X	X	X	X	X
HR Burning	X	X	X	X	X	X	X	Ö	Ö	X	Ö
Wildfires	X	Ö	Ö	Ö	X	X	X	X	X	Ö	X
Logging m³	X	X	X	X	Ö	Ö	248	X	21092	X	X

Ö - applies, X – not applicable

Compartment	Resource Unit	No. of Sweeps	BA Average (m ² /ha)	BA Range (m ² /ha)
106	1	13	25.2	18-34
106	2	8	24.2	16-32
106	3	1	20	N/A

Silvicultural Planning

Single Tree Selection

Resource Unit 1

Multi-aged forest, dominated by the mature / over mature component. The resource unit will be harvested under a heavy single tree selection (STS) regime. The objective within the 218.7 ha harvest area for this operation is to remove 45% of the basal area whilst retaining and minimising damage to stems with the best potential to produce future high quality products, to create canopy openings for regeneration and minimising damage to seed trees, habitat trees and habitat recruitment trees as per TSL.

Resource Unit 2

Predominantly even aged regrowth forest, with a minor mature component. The resource unit will be harvested under a medium single tree selection (STS) regime. The objective within the 126.4 ha harvest area for this operation is to remove 35% of the basal area, whilst retaining an even distribution of stems with the best potential to produce future high quality products and minimising damage to habitat trees and habitat recruitment trees as per TSL.

Resource Unit 3 – FMZ 3B

Predominantly even aged regrowth forest, with a minor mature component. The resource unit will be harvested under a medium single tree selection (STS) regime. The objective within the 9.7 ha harvest area for this operation is to remove 35% of the basal area, whilst retaining an even distribution of stems with the best potential to produce future high quality products and minimising damage to habitat trees and habitat recruitment trees as per TSL.

Resource Unit 4

Even aged regrowth forest. Excluded from harvesting.

Single Tree Selection (STS) must remove no more than 45% of the basal area (BA), while retaining a minimum BA of 10m² per hectare within the tract.

Resource Unit (Refer to HPOM for detail)	Species Composition	Stand History	Stand Structure and Condition
1	<p>Overstorey dominated by spotted gum (<i>Corymbia maculata</i>) grey ironbark (<i>Eucalyptus paniculata</i>) and blackbutt (<i>E. pilularis</i>)</p> <p>Other overstorey species include: Sydney blue gum (<i>E. saligna</i>), Sydney peppermint (<i>E. piperita</i>), white stringybark (<i>E. globoidea</i>), monkey gum (<i>E. cypellocarpa</i>), rough-barked apple (<i>Angophora floribunda</i>) and woolybutt (<i>E. longifolia</i>).</p>	<ul style="list-style-type: none"> The resource unit has had multiple Timber Stand Improvement (TSI) operations in the 1920/30s and again in the 1960s. The resource unit has undergone light selective logging, targeting sawlogs and mining timber in the 1970/80's. A medium intensity logging event occurred in 1990. 	<ul style="list-style-type: none"> The resource unit is a multi-aged forest, dominated by the mature \ over mature component.
2	Same species composition as Resource Unit 1.	<ul style="list-style-type: none"> Same stand history as Resource Unit 1. 	<ul style="list-style-type: none"> The resource unit is predominately even-aged regrowth dominated forest, with a minor mature component. The regrowth component would benefit from basal area reduction and release from the mature \ over mature component.
3	Same species composition as Resource Unit 1.	<ul style="list-style-type: none"> Same stand history as Resource Unit 1. 	<ul style="list-style-type: none"> The resource unit is predominately even-aged regrowth dominated forest, with a minor mature component. The regrowth component would benefit from basal area reduction and release from the mature \ over mature component.
4	Same species composition as Resource Unit 1.	<ul style="list-style-type: none"> Same stand history as Resource Unit 1. 	<ul style="list-style-type: none"> The resource unit is predominately even-aged regrowth dominated forest. Limited commercial value due to low sawlog yield.

Harvesting Prescription

Resource Unit (Refer to HPOM)	% of Harvest Area	Silvicultural Treatment
1	62%	<p>STS heavy:</p> <ul style="list-style-type: none"> • Retain and protect from harvesting/fire damage: <ul style="list-style-type: none"> - habitat and recruitment trees as per TSL, - Seed trees within 2 tree heights of large canopy openings, where lignotubers are not present. Canopy openings should be adequately disturbed to be receptive to seed regeneration if lignotubers are not present. - advanced regrowth (<40cm DBHOB) with the best potential to produce future high quality products with good form and vigour, • Retained trees should be evenly spaced throughout the resource unit. • Ensure no more than 45% of the BA within the resource unit is removed, while retaining a minimum BA of 10m² per hectare within the tract. • All other products should be removed markets permitting. If this objective cannot be achieved the following options should be considered: <ul style="list-style-type: none"> -reject tree felling (HC must first obtain approval from HS), -defer harvesting until ideal market conditions prevail, -consider harvesting under a light or medium STS regime.
2	35%	<p>STS medium:</p> <ul style="list-style-type: none"> • Retain and protect from harvesting/fire damage: <ul style="list-style-type: none"> - habitat and recruitment trees as per TSL, - Seed trees within 2 tree heights of large canopy openings, where lignotubers are not present. Canopy openings should be adequately disturbed to be receptive to seed regeneration if lignotubers are not present. - Retain additional advanced regrowth trees (<40cm DBHOB) with good form and vigour and potential to produce high future quality products to ensure the total BA removed across the resource unit is no more than 35%. • Retained trees should be evenly spaced throughout the resource unit for development into the next crop. <p><u>Retained tree selection: Future Crop</u></p> <ul style="list-style-type: none"> - Good tree form – straightness, shape, minimal limbs etc - Healthy full crowns - Wood quality – look for minimal signs of defect – bumps, scars, hollows, spiral grain, bleeds etc. • All other products should be removed.

Resource Unit (Refer to HPOM)	% of Harvest Area	Silvicultural Treatment
3	3%	<p>STS medium (visual protection):</p> <ul style="list-style-type: none"> • Retain and protect from harvesting/fire damage: <ul style="list-style-type: none"> - habitat and recruitment trees as per TSL, - Seed trees within 2 tree heights of large canopy openings, where lignotubers are not present. Canopy openings should be adequately disturbed to be receptive to seed regeneration if lignotubers are not present. • Retain additional advanced regrowth trees (<40cm DBHOB) with good form and vigour and potential to produce high future quality products to ensure the total BA removed across the resource unit is no more than 35%. • Retained trees should be evenly spaced throughout the resource unit to ensure a continuous canopy is maintained with no large gaps (visual protection) and for development into the next crop. <p><u>Retained tree selection: Future Crop</u></p> <ul style="list-style-type: none"> - Good tree form – straightness, shape, minimal limbs etc - Healthy full crowns - Wood quality – look for minimal signs of defect – bumps, scars, hollows, spiral grain, bleeds etc. <ul style="list-style-type: none"> • All other products should be removed.
4		<ul style="list-style-type: none"> • Excluded Forest

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

Special Requirements

Noxious Weeds/Disease/Pests Hygiene Requirements

Compartment 106 is within Eurobodalla Shire Council which is a designated red zone for Myrtle Rust. In order to prevent the spread of Myrtle Rust all harvesting machinery, equipment and vehicles heading west from Eurobodalla Shire Council or south into Victoria must be inspected for vegetation containing Myrtle Rust. If present, the vegetation must be removed from the harvesting machinery, equipment or vehicle prior to leaving the compartment.

Permanent Growth and Research Plots

Any inventory plots located during the harvesting operation are to be treated the same as the surrounding area.

Road Works

Only roads that are shown on the HPOM as EPL standard or sealed may be used for haulage.

Occupation Permits

Apiary

8 apiary sites provided in the table below are located within the planning unit as detailed in the table below. Contact details are available from the Batemans Bay office.

Name	Site Number	Contact number	Pre burn notification complete?
	scbby24.23		
	scbby24.24		
	scbby25.23 & 25.24		
	scbby26.24		
	scbby26.25		
	scbby27.24 & 27.25		

- The HC must provide the apiary permittees with at least two weeks advance notice when bee boxes need to be removed or relocated.
- Permanent apiary set down sites are located on dump 13, 24, 25, 26 (see HPOM), must be levelled and free of debris at the completion of logging.
- Permanent sites must not be ripped.

National Parks and Nature Reserves

National Park and Nature Reserve form the eastern boundary of the planning unit/harvest area. Princes Highway forms the boundary between Murramarang National Park and State Forest.

No harvest disturbance is permitted within National Park or Nature Reserves.

Underground Cables

A dial before you dig request query of the compartment indicates that underground Telstra cables are present on the eastern side of the compartment. Dial before you dig and field markers (where located) have been used to indicate the approximate location of the cable on the HPOM. Prior to any harvesting or roading activity taking place in the vicinity of the cables, the HC should inspect the area for markers or other evidence of the cables and flag with marking tape.

When carrying out harvesting or road maintenance activities near cables, minimise ground disturbance across or along and increase depth of earth cover if required.

From time to time above ground infrastructure associated with the cables occurs. Where this infrastructure is detected, the FT should pass the location and details on to the burning supervisor who should consider if extra protection measures (eg rake hoe line) are required.

Any damages to cables must be immediately reported to Telstra on 13 22 03.

Forest Management Zoning

FMZ 3A Harvesting Excluded, FMZ 3B-Special Prescriptions (visual) and FMZ 4-General Management (normal harvesting prescriptions apply) occur within the compartment. Refer to HPOM for more detail.

FMZ 3B (Visual) – A visual protection zone exists 100 metres wide parallel to the Princes Highway. Harvesting is permitted in this zone under the following modified conditions:

- STS medium must be practiced, removing no more than 35% of the basal area (BA), nor more than 50% of the canopy while retaining a minimum BA of 14m² within the harvest area;
- Retained trees should be evenly spaced throughout the resource unit to ensure a continuous canopy is maintained with no large gaps
- Tree heads should be felled to avoid windrows and large elevated heads knocked down to minimise the visual effects from the Princes Highway; and
- Snigging of timber should be by the shortest possible route outside the FMZ 3B area and then by the most direct route to the nearest log dump.

FMZ 3A – Logging operations are restricted as per condition 18(b) of the IFOA. Refer to Harvest Plan Standard Conditions for Hardwood Forest Operations in South Coast for detail of what logging operations are permitted in this zone.

– Prescribed burning is only permitted in these areas where fire does not conflict with underlying protection zones e.g. rainforest, cultural heritage etc. (Refer to cultural heritage flora and fauna sections of this plan and the standard harvest plan conditions for more detail).

IFOA Required Approval of Forestry Activities

Planning Supervisor approvals have been obtained for road re-opening, routine road maintenance and log haulage in FMZ 3A along Tomboye Road and Mill Fire Break Road. Forestry Operations within the plan area must minimise impacts to the exclusion zones and meet the requirements of the EPL and General Exclusion Zones in section of this plan.

Approvals have not been obtained for snig track construction and/or use in FMZ 3A. If the HC identifies the need for harvesting related activities to occur within FMZ 3A during the operation, the Planner must be contacted to seek Planning Supervisor approval.

All areas of Rainforest and HCVOG require prior OEH approval and Stream Exclusion Zones require prior Planning Supervisor approval before forest harvesting related activities (eg: road or snig track construction & reopening) can be undertaken. It is the responsibility of the HC to identify any exclusion areas which will need to be crossed during harvesting. The HC must then contact the Planner to obtain the necessary approval.

Cultural Heritage

Cultural Heritage - All relevant representatives have been consulted &/or inspected Compartment 106.

Flora and Fauna

Species adequately covered by general prescriptions:

The following species have been recorded in or around the compartments and are adequately covered by the general prescriptions. No further protection measures are required for these species:

Sooty Owl (*Tyto tenebricosa*), **Glossy Black-Cockatoo** (*Calyptorhynchus lathami*), **Eastern Freetail-bat** (*Mormopterus norfolkensis*), **Grey-headed Flying Fox** (*Pteropus poliocephalus*), **Varied Sittella** (*Daphoenositta chrysopera*), **Gang Gang Cockatoo** (*Callocephalon fimbriatum*),

Tree Retention

Zone	Hollow bearing Trees/ha	Recruitment Trees /ha	Protection of Retained Trees	Significant Food Resource*
Regrowth	Up to 5	1 for every tree retained under 5.6d	ö	ö
TSL condition	5.6d	5.6e	5.6h	5.6f

ö - Condition applies

General exclusion zones

General exclusions as listed below are shown on the HPOM.

Feature/Condition	TSL cond'n	Occurs within Planning Unit
High Conservation Value Old Growth	5.3	Yes
Rainforest	5.4	Has been assessed as a risk that Warm Temperate/Cool Temperate/Depauperate (Dry) may occur in the field. May require further investigation#.
Riparian Protection Zones	5.7	Yes
Ridge & Headwater Habitat	5.8	Yes
Wetlands	5.9	Has been assessed & is unlikely to occur in the field. May require further investigation#.
Heath and Scrub	5.10	Has been assessed & is unlikely to occur in the field. May require further investigation#.
Rocky Outcrops and Cliffs	5.11	Has been assessed & is unlikely to occur in the field. May require further

Endangered Ecological Community	NA	investigation#. Has been assessed & is unlikely to occur in the field. May require further investigation#. Harvesting, harvesting machinery and post harvest burning must be excluded from all areas of EEC.
--	----	---

#FT/HC will continue to conduct on the ground mark-up & searches and report back to foresters/ecologists any features requiring further investigation.

General Threatened Flora and Fauna Prescriptions

Feature	Records in Cpt 106	Licence conditions under the TSC Act
Threatened Frog General Protection Measures	No	5.12
Bird Nest and Roost Site Protection	Yes	5.13 1 x Raptor Nest at: Eastings 251070 Northings 6056172
Tree Bat Roost Protection	No	5.14.1
Subterranean Roost Protection	No	5.14.2
Protection of flying-fox Camps	No	5.14.3
Burning	Net planned area	5.16
Ground Habitat Protection	Net planned area	5.17

Species & Site-Specific Threatened Flora and Fauna Prescriptions

The following species have been recorded within or nearby the area and the associated prescriptions must be implemented:

Threatened species and habitat features within trigger distance	Records in Cpt 106	Licence conditions under the TSC Act or relevant Site-specific prescription
Powerful Owl <i>Ninox strenua</i> , Masked Owl <i>Tyto novaehollandie</i> .	No No	6.4 <i>Owl Landscape Exclusion Zones occur in compartment 106.</i>
Swift Parrot <i>Lathamus discolor</i>	Yes	6.5 Retention of eucalypt feed trees is required.
Spotted tailed Quoll <i>Dasyurus maculatus</i>	Yes	6.10
Yellow-bellied Glider <i>Petaurus australis</i>	Yes	6.13
Golden-tipped Bat <i>Kerivoula papuensis</i>	No	6.14
Cryptostylis hunteriana Genoplesium vernalis	No Yes	6.16.2 Apply 10m exclusion around individuals (no specified forestry activates in exclusion zone). Apply additional 10m buffer zone around the exclusion zone on individuals (limited tree removal and snagging permitted, hazard reduction burning excluded to greatest extent practical). To assist burning crew exclude burning from buffer zone, minimise accumulation of debris around the base or retained trees.

Fisheries Licence Conditions

There are no known records of threatened fish species or class 1 or 2 aquatic habitat relevant to this operation. The conditions of the fisheries licence are not triggered for this operation.

Soils and Water Protection

Refer to EPL Booklet & Standard Plan Conditions

Site-specific EPL Conditions

Elements	Conditions
Unmapped Drainage Lines	EPL does not apply: refer to drainage feature protection below.
Drainage Feature Protection	See HPOM for widths
Inherent Hazard Class	2
Dispersible Soils	No
Seasonality Harvesting Exclusions	No
Seasonality Burning Exclusions	No
Log Dumps	Refer relevant conditions for IHL
Snig Tracks	Refer relevant conditions for IHL
Roads	See Schedule 5 of EPL Booklet
Slope limits for harvesting	Refer to Schedule 4B.3 of EPL

Drainage Feature Protection

Filter strips (EPL), Protection Zones (EPL), Operational Zones (EPL), Protection Zones -hard (TSL) and Protection Zones -soft (TSL) must be retained along all drainage lines, prescribed streams and watercourses within the net planned area of the compartments at minimum widths as stated in the Table below.

Table 1: Minimum filter strip, protection zone and operational zone widths for mapped and unmapped drainage lines, prescribed streams and watercourses in hardwood forests in Inherent Hazard Level 1 & 2 (metres – measured along the ground surface)

Stream Order	EPL Filter Strip TSL Protection (hard)	EPL Protection Zone TSL Protection* (soft)	EPL Operational Zone	Drainage Feature Protection: FT/HC marking instruction
Unmapped	N/A#	N/A#	N/A#	5m (Red)
1st order	5	5	10	10m (Pink)
2nd order	5	15	10	20m (Pink)
3rd order	5	25	10	30m (Pink)
4th order +	5	45	10	50m (Pink)

for this operation FCNSW has chosen to harvest this area without EPL coverage. All EPL conditions continue to apply **except** for the rules applying to filter strips, protection zones and operational zones of the **unmapped drainage lines**. Refer to Best Management Practices for unmapped drainage lines in the standard conditions.

Harvesting of unmapped drainage lines, MUST NOT occur in unmapped drainage lines which are running or holding water. It is the responsibility of the HC to inspect each unmapped drainage line prior to harvesting it, to determine if it is running or holding water.

Log Dump Location

34 log dumps are indicated on the HPOM. Field location of log dumps must utilise the most level site available consistent with the location indicated on the HPOM. Dump13 is only displayed as it is a Bee set down point within the Compartment. It is not to be used. Inherent hazard level 2 Conditions 26, 27, 28, 30, 31 and 33 of Schedule 4 of the EPL must apply.

Drainage Feature Crossings

One snig track crossing (S1) and 1 road crossing (C1) are approved for use on drainage features. (Refer to HPOM). Road crossing details are contained in Attachment 2 of this Plan. Snig track crossing details are provided below:

Crossing Name & Coordinates	Crossing details	Required Works
S1-new Easting 247581 Northing 6055465	Mapped 1 st order drainage line, occurs as a drainage line in the field. Natural Causeway crossing. Not class 1 or 2 Fisheries Licence aquatic habitat. Class 4 fish passage class: unlikely fish habitat.	Construct natural causeway crossing (expected side cut <0.5m) as per EPL. Construction should minimise disturbance and clearing and be at right angles to the flow unless and angled approach results in reduced disturbance. Armour depression with rock/gravel if required in wet conditions. Install cross banks/rollovers on completion of use within timeframes and spacing's specified in EPL.

Mass Movement

Compartment 106 is not in an area identified as having a potential for mass movement. No specific prescriptions relating to mass movement/snigging are required.

Suitability of existing log dams and gully stuffers

There are no known log dams or gully stuffers on snig track or road crossings in the compartments.

Condition 47 of Schedule 4 of the EPL must apply.

Post Log Burning Control Lines

To assist the post log burning crews prevent fire from entering areas to be excluded from burning, control line construction must be undertaken concurrently with harvesting. Where possible snig tracks patterns should be designed to double as control lines. Control lines must be located as close as reasonably practical to the feature to be excluded from burning. The HC must assess the areas harvested, snig track network and existing roads to determine if there are sufficient control lines in place and where required instruct the contractor to construct additional mineral earth control lines to supplement these. The HC must record instances where it was not possible to construct a suitable control line close to the feature to be excluded and recommend harvest areas which should be excluded from the post log burning operation due to inadequate control lines.

The table below lists critical boundaries in compartment 106. Where possible design snig track patterns so they double as bare earth containment lines as close as possible to these boundaries. Where this is not practical, it is NOT necessary to construct a bare earth break along boundary of the exclusion; the practice of no direct ignition will be followed.

Critical boundary	Completed Yes /No
FMZ 3A / Ridge and Headwater / Owl Landscape	
High Conservation Old Growth	
Rainforest and Exclusion Zone	

The table below lists critical boundaries in compartment 106. Where possible design snig track patterns so they double as bare earth containment lines as close as possible to these boundaries. Where this is not practical, HC must instruct contractor to construct a bare earth break (drained as per EPL snig track conditions) as close as possible to the critical boundary.

Critical boundary	Completed Yes /No
NIL	

Pre-Operational Briefing

I acknowledge that I have received a copy of the Harvesting Plan for Compartment 106 in Boyne State Forest and that I have been briefed on the conditions of the Plan and understand the supervision and operational control requirements as explained to me by the HS or his/her delegate.

Post Harvest Mapping Features Confirmation Checklist

Feature	Planning Updates	Reason (Error/New)	GIS update tool completed?	Harvesting Updates	Comments
Soil Regolith	No				
Mapped Drainage	No				
Rainforest	No				
Rocky outcrops	No				
Wetlands	No				
Cultural Heritage	No				
Existing Roads	No				
New Roads	No				
Heath	No				
Powerlines etc	No				
Other					

HC Feature Usage Record

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
 - Record the occurrence of temporary stopping of harvesting at each dump.

*At completion of snig track/dump, track drainage must be completed within **2** days unless soil is saturated.

*At temporary cessation of snig track use, track drainage must be completed within 5 days unless soil is saturated.

Situations where drainage could not be completed due to saturated soils must be recorded in HC/FT Notes.

HC/FT Notes

HC/FT Notes (continued)

HC/FT Notes (continued)

HC/FT Notes (continued)

HC/FT Notes (continued)

Clearance Certificate

COMPARTMENT: 106

BOYNE STATE FOREST, SOUTHERN REGION

ToHC

I request approval for me to move my logging crew and all associated machinery from the above-mentioned area to the next compartment in accordance with Section 3.5 of the Forest Practices Code.

I certify that:

- (a) all permanent roads, trails and mitre drains have been cleared of harvesting debris;
- (b) butt damage to retained trees has been kept to acceptable limits;
- (c) all trees marked for removal have been felled;
- (d) utilisation limits have been satisfactorily met;
- (e) stump heights conform to requirements;
- (f) all hanging trees have been felled and brought down;
- (g) all log dumpsites have been satisfactorily restored as required;
- (h) harvesting debris is not accumulated around retained trees;
- (i) all accumulated litter has been disposed of properly;
- (j) all filter and buffer strip requirements have been complied with;
- (k) all snig track, extraction track and temporary logging road drainage has been installed satisfactorily and other required rehabilitation work has been completed;
- (l) all necessary repairs to damaged roads, signs, fences and other structures have been carried out.
- (m) **_____ (insert quantity) rubber flaps have been recovered in a satisfactory condition and reported to Roading Coordinator for collection.**
- (n) all machinery, equipment and vehicles have been checked and are free of noxious weeds, diseases and pests.

I believe that I have met all my obligations under the conditions of the Contractors Licence, the EPL and TSL which apply to the compartment just completed, as stated in this Harvesting Plan.

Signature.....Name.....Date

Contractor

As a result of inspections of the logging operations made in accordance with this Harvesting Plan, I am satisfied that, to the best of my knowledge, the contractor responsible for this harvesting operation has satisfactorily completed all work and approval is given for her/him to remove her/his machinery and equipment and leave the area/commence operations in another compartment.

This clearance does not release the contractor from any obligation to undertake any remedial work if subsequent deficiencies are shown to result from inadequate practices during the harvesting operation, which are found during any inspections of the area made within 12 months of the date of this post-harvesting inspection.

Last inspection was made on(Date)

Signed(Date).....
HC

Post Logging Information

Record any circumstances of significance relating to the harvesting of this compartment. Please draw or include any annotations on the attached operation scale map.

Summary of silvicultural treatment

Treatment type	Area (ha) subject to treatment (HC estimate)	Number of AGS gaps created	Comments
Australian Group Selection			
Single Tree Selection			
Thinning/Spacing			
Post Harvest Silviculture			

Actual area harvested (record on attached HPOM) Give reasons for harvestable areas that were not harvested (eg. Too steep, defective timber). Make reference to map.

Post Logging Basal Area sweeps

Sample point	GPS (GDA 94E)	GPS (GDA 94N)	Pre-harvest (B) BA m ² /ha	Post-harvest(A) BA m ² /ha	Difference (D) (B - A) m ² /ha	% BA removed D/B x100	Waypoint	Resource Unit
1	250763	6056176	24				WP 446	RU 1
2	251013	6056352	20				WP 448	RU 1
3	248786	6055900	30				WP 461	RU 1
4	248359	6055785	24				WP 463	RU 4
5	250001	6056389	28				WP 467	RU 1
6	249431	6056334	28				WP 469	RU 4
7	249108	6055880	20				WP 470	RU 4
8	247707	6055729	22				WP 473	RU 1
9	247854	6055199	18				WP 475	RU 2
10	248415	6055391	32				WP 476	RU 2
11	249283	6055807	18				WP 477	RU 1
12	249268	6055684	26				WP 480	RU 2
13	251074	6056690	26				WP 486	RU 1
14	251189	6057038	30				WP 494	RU 3
15	250632	6057443	22				WP 498	RU 1
16	250339	6057241	24				WP 500	RU 2
17	250679	6057171	30				WP 501	RU 2
18	250299	6057077	26				WP 504	RU 2
19	250246	6056759	34				WP 505	RU 1
20	249899	6056860	28				WP 509	RU 1
21	248098	6056045	28				WP 513	RU 1
22	247574	6055403	18				WP 515	RU 2
23	248787	6056437	16				WP 516	RU 2
24	249547	6056806	18				WP 517	RU 2
25	250185	6056115	30				WP 521	RU 2
26	251228	6056226	22				WP 522	RU 1
27	251040	6057244	26				WP 525	RU 1
28	249907	6056176	28				WP 529	RU 2
Total Averages			25					

NOTE: the featureclass 'BA_Sweeps' within the plandata database can be uploaded to GPS to locate each sample point.

Comply with maximum STS BA removal of 45% or Thinning BA removal of 60% Y/N

Possible next cut (tick appropriate boxes)

Main product type	Anticipated volume		
	H	M	L
Girders			
Veneer			
Poles/piles			
Quota			
Smalls/Thinnings			
Salvage			
Pulpwood/chipwood			

Time to next harvest	
0 to 5 years	
5 to 10 years	
10 to 20 years	
20 to 30 years	
30 plus years	

ATTACHMENT 2**ROADING PLAN****Summary of Roading Requirements**

Feature	Details	Works Required
Existing roads to be used.	2335m / 13	Yes
New roads to be constructed	47m / 1	Yes
Existing crossings used	1	No
New crossings to be constructed	0	NA
Length of road >10°	145m	NA
Borrow pits and gravel pits	0	NA
Mass movement prescriptions apply	No	NA
Dispersible soil conditions apply	No	NA
Seasonality provisions apply	No	NA

Note: Maintenance works not completed by Roading Coordinator must be recorded and passed onto the HC for completion during harvesting and documentation.

The start and finish dates of all maintenance and construction must be recorded on the individual roading sheets along with other relevant changes or explanations.

All rubber flaps on minor forest roads must be removed and replaced with trafficable rollover banks on completion of operation.

CHECKLIST OF WORKS REQUIRED ON ROADS & CROSSINGS

Road/Crossing Name	Works Required	Date Started	Date finished	Signature
Tomboye Road (3860m)	<ul style="list-style-type: none"> ● Patch grade and/or gravel, reshape where required. ● Ensure all existing drainage structures are working effectively. ● Install 1 new mitre (north) at western end of road. ● Install 1 new mitre 5m west (south side) of the intersection with Cpt 106/9 Road – current mitre on road intersection. ● Clean existing 3 pipes. ● Note: CH sites and their exclusion zones on the road pavement must not be graded. <p>RC/HC Comments:</p>			

Lookout Road (1070m)	<ul style="list-style-type: none"> ● Grade pavement, reshape where required. ● Crowning the road from mitre (east) near 106/8 Road to pipe (wp 454) is required for site specific prescription. ● Roadside clearing ● Ensure all existing drainage structures are working effectively. ● Install 1 new pipe at northern end just past intersection with Tomboy Road (on Joes Nose Road). ● Clean existing 3 pipes. <p>RC/HC Comments:</p>			
Mill Fire Break Road (3675m)	<ul style="list-style-type: none"> ● Pavement & roadside clearing. ● Grade pavement, reshape where required. ● Remove existing rollover crossbanks along EPL licensed section on road. ● Establish drainage to EPL standard: Mitres, Spoons, Rubber flap crossbanks drainage structures. ● 145m of EPL standard section is at 10°. No realignment required. ● Note: CH sites and their exclusion zones on the road pavement must not be graded. <p>RC/HC Comments:</p>			

Shortcut Road (1915m)	<ul style="list-style-type: none"> ● Pavement & roadside clearing. ● Grade pavement, reshape where required. ● Gravel may be required for minor wet depression at eastern end of road. ● Remove existing rollover crossbanks. ● Establish drainage to EPL standard: Mitres, Spoons, Rubber flap crossbanks drainage structures. ● Note: Underground Telstra cables cross road at eastern end. <p>RC/HC Comments:</p>			
Cpt 106/1 Road (1405m) Cpt 106/4 Road (310m) Cpt 106/6 Road (220m) Cpt 106/7 Road (400m) Cpt 106/8 Road (430m) Cpt 106/9 Road (100m)	<ul style="list-style-type: none"> ● Pavement & roadside clearing. ● Grade pavement, reshape where required. ● Remove existing rollover crossbanks. ● Establish drainage to EPL standard: Mitres, Spoons, Rubber flap crossbanks drainage structures. ● 30m of Cpt 106/4 Road licensed section is at 10°. No realignment required. <p>RC/HC Comments:</p>			

<p>Cpt 106/3 Road (1235m)</p> <p>Cpt 106/5 Road (600m)</p> <p>Cpt 106/10 Road (180m)</p>	<ul style="list-style-type: none"> ● Realign intersections: <ul style="list-style-type: none"> - Cpt 106/3 Road: For truck haulage to west on Mill Fire Break Road & avoiding CH site (110m). - Cpt 106/5 Road: x2 Options to East (80m) [preferred] & West (40m) for truck haulage. - Cpt 106/10 Road: For truck haulage to west on Mill Fire Break Road (50m). ● Pavement & roadside clearing. ● Grade pavement, reshape where required. ● Remove existing rollover crossbanks. ● Establish drainage to EPL standard: Mitres, Spoons, Rubber flap crossbanks drainage structures. <p>RC/HC Comments:</p>			
<p>C1 (Tomboye Road)</p> <p>Easting</p> <p>Northing</p> <p>Mapped 3rd order drainage line, occurs as a drainage line in the field.</p> <p>Existing Bridge</p> <p>Not class 1 or 2 Fisheries Licence aquatic habitat. Class 3 fish passage class: unlikely fish habitat.</p>	<ul style="list-style-type: none"> ● Eastern approach 5-30m drainage: ensure mitre drainages at 13m (north) and 10m (south) are draining effectively. Reinstate mesh silt fences. ● Western approach 5-30m drainage: ensure mitre drainages at 6m (north) and 10m (south) are draining effectively – Reshape a crown on road OR install Rubber flap in combination with mitre. Reinstate mesh silt fences. ● Seed and mulch to be used on disturbed areas. <p>RC/HC Comments:</p>			

NEW ROAD CONSTRUCTION										
------------------------------	--	--	--	--	--	--	--	--	--	--

Road Specific Conditions:

Road Name	Road Length (m)	Max. width of road prism (m)	Max. road grade (length road >10 degrees?)	Max. ground slope (length road >30 degrees?)	Estimated Max. height of cut / fill batters (m)	Estimated Max length of batters (m)	Mass movement / dispersible soils	Final road use	Responsibility	Start Date	Finish Date
Cpt 106 Dump 27 Road	47m	7m	2°	2°	N/A ridgetop	N/A	No	Temp.	Contractor		

Version: 1

1 of 2

Roading Plan Map

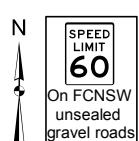
Compartment: 106

State Forest: BOYNE No: 832

Southern (South Coast) Forest Agreement Region - IFOA

Map Sheet: CURROWAN 8926-4N KILOA 8926-1N

Prepared By: Josh Driscoll



Contour Interval 10m
0 50 100 200 300 400 500 Meters

ROADING FEATURES

- New Mitre Drain
- Existing Pipe
- New Pipe

Des Nose Road

Cpt 106/9 Road

S1

Lookout Road

