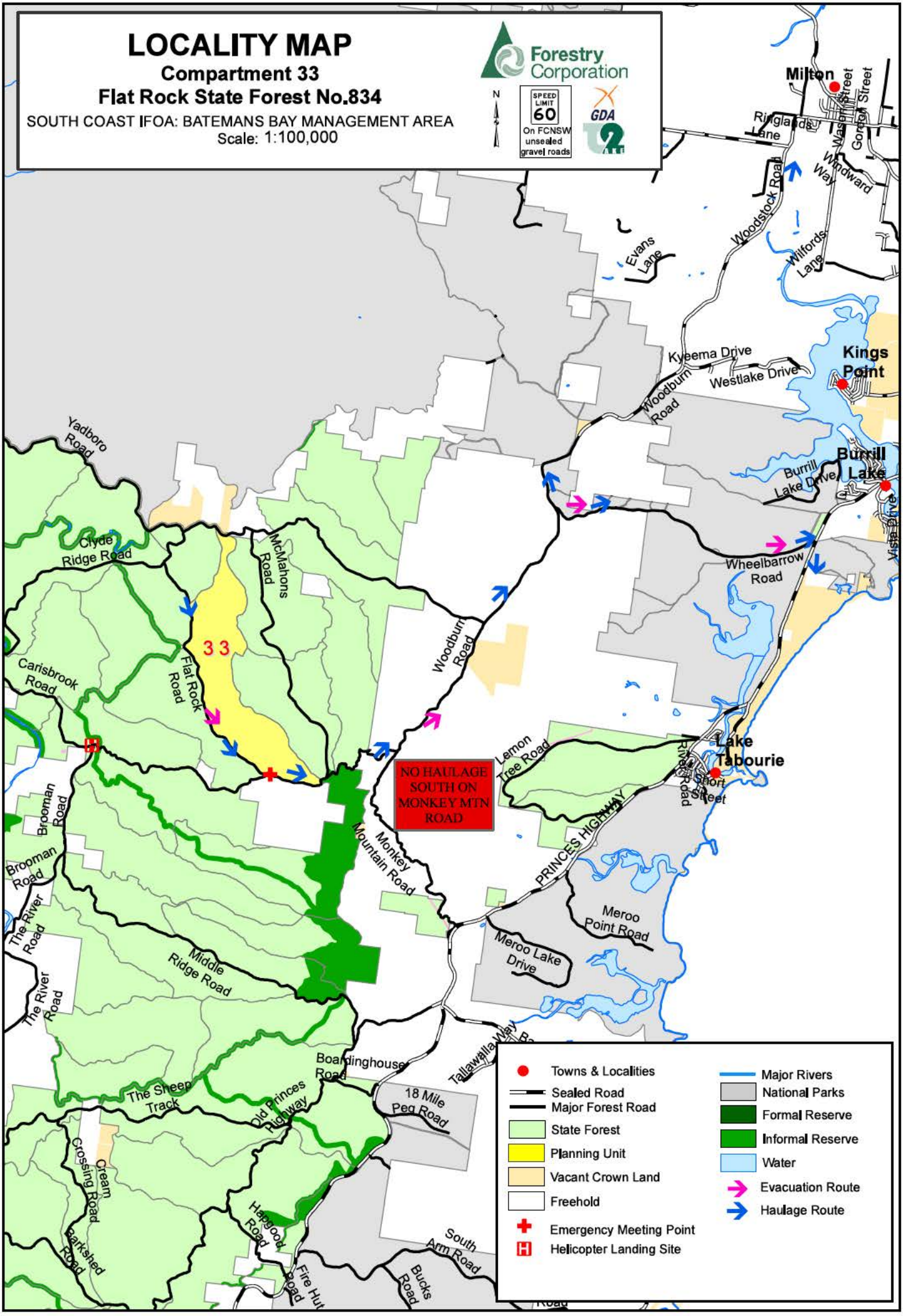

LOCALITY MAP
Compartment 33
Flat Rock State Forest No.834
SOUTH COAST IFOA: BATEMANS BAY MANAGEMENT AREA
Scale: 1:100,000
Forestry Corporation
N
SPEED LIMIT 60
On FCNSW unsealed gravel roads
GDA
Milton
Ringlands Lane
Washington Street
Gordon Street
Windward Way
Woodstock Road
Evans Lane
Wilfords Lane
Kyeema Drive
Westlake Drive
Kings Point
Woodburn Road
Burrill Lake
Burrill Lake Drive
Yadboro Road
Clyde Ridge Road
McMahons Road
Wheelbarrow Road
Woodburn Road
3 3
Carisbrook Road
Flat Rock Road
NO HAULAGE SOUTH ON MONKEY MTN ROAD
Lemon Tree Road
Lake Tabourie
River Road
Short Street
PRINCES HIGHWAY
Broman Road
Brooman Road
Monkey Mountain Road
Meroo Point Road
Meroo Lake Drive
The River Road
Middle Ridge Road
The River Road
Boardinghouse Road
Tallawalla Way
The Sheep Track
Old Princes Highway
18 Mile Peg Road
Cream Crossing Road
Barkshed Road
Happy Road
Fire Hut Road
South Arm Road
Bucks Road
Towns & Localities
Sealed Road
Major Forest Road
State Forest
Planning Unit
Vacant Crown Land
Freehold
Emergency Meeting Point
Helicopter Landing Site
Major Rivers
National Parks
Formal Reserve
Informal Reserve
Water
Evacuation Route
Haulage Route

Prepared By: Kate Halton
Version: 1

PLANNING SUPERVISOR APPROVAL
APPROVED: Lee Blessington
DATE: 24/03/16

Harvest Plan Operational Map

Compartment: 33

State Forest: FLAT ROCK No: 834

Map Sheet: TABOURIE 8927-2S

Forestry Corporation

GDA

Legend

Boundaries/Infrastructure
- Cpt Boundary
- State Forest Boundary
- Underground Cable (Telstra)
- Proposed Control Line

Roads
- Major Forest
- Minor Forest
- Shire Owned/Maintained (Brooman Rd)
- EPL Standard Existing (Major)
- EPL Standard Existing (Minor)
- EPL Standard (New Construction)

Drainage
- Indicative Unmapped Drainage Features
- LiDAR Corrected LIC Drainage

Harvest Area
- FMZ 4 RU 1 STS Heavy

Tenure
- Vacant Crown Land
- Private Property

Exclusions
- Stream PZ 10m
- Stream PZ 20m
- Stream PZ 30m
- Stream PZ 50m
- Rainforest
- Rainforest 20 exclusion
- LiDAR Corrected Ridge & Headwater (20m)
- Owl Landscape
- Special Management (FMZ 2)
- Harvesting Protection (FMZ 3A)
- Excluded Forest

Safety Points
- MEEP
- Safety Alert Feature-Mine Shaft

Dumps
- Temporary Dry Weather
- Temporary Wet Weather

Flora
- Leafless Tongue Orchid

Fauna
- Sooty Owl
- Yellow-bellied Glider (Heard)
- Powerful Owl
- Masked Owl
- Yellow-bellied Glider
- Yellow-bellied Glider (Feed Tree)
- Gang-gang Cockatoo
- Swift Parrot
- Little Lorikeet
- Grey-headed Flying-fox
- Squirrel Glider

Other
- Myrtle Rust

0 125 250 500 750 1,000 Meters

Scale: 1:15,000
Contour Interval 10m

Lot 7301 DP1151216
Lot 7302 DP1151217
Lot 11 DP827846
Lot 12 DP827846
Yadboro Road
Clyde Ridge Road
Clyde Ridge Road
Boyne Creek Rd
Cpt 31/1 Road
Cpt 31/6 Road
Cpt 31/5 Road
Cpt 31/2 Road
Cpt 31/4 Road
Cpt 31/3 Road
Cpt 31/9 Road
Flat Rock Road
33/2 Rd
33/3 Rd
33/4 Rd
33/5 Rd
33/6 Rd
33/9 Rd
33/7 Rd
33/8 Rd
33/10 Rd
33/11 Rd
11 Rd Realignment
Toad Rd
Toad Realignment
Toad Road
Cpt 35/1 Road
Cpt 36/1 Road
Cpt 32/1 Road
Cpt 32/7 Road
Cpt 32/6 Road
Cpt 32/5 Road
Cpt 32/2 Road
Cpt 32/4 Road
Cpt 32/3 Road
Cpt 30/2 Road
Cpt 30/1 Road
Ostrich Farm Road
McMahons Road
Three Falls Road
Fred's Road
Brooman Road
Brooman Rd
Cpt 41/3 Road
Cpt 41/5 Road
Cpt 42/3 Road
Cpt 42/4 Road
Caves Road
Lot 1 DP1063248
Lot 1 DP915430
Lot 1 DP748107
Lot 2 DP748107
Lot 3 DP748107
Lot 4 DP748107
Lot 19 DP755912
Lot 51 DP1077351
Mark as per map
Road is not bounadary

253000E 54 55 56 57
6075000N 76 77 78 79 6080

Prepared By: Kate Halton
Version: 1

Harvest Plan Forest Type Map

Compartment: 33

State Forest: FLAT ROCK No: 834

Map Sheet: TABOURIE 8927-2S

Forestry Corporation

GDA

Legend

Boundaries/Infrastructure

- Cpt Boundary
- State Forest Boundary

Roads

- Major Forest
- Minor Forest
- Shire Owned/Maintained (Brooman Rd)
- EPL Standard Existing (Major)
- EPL Standard Existing (Minor)
- EPL Standard (New Construction)

Drainage

- Indicative Unmapped Drainage Features
- LiDAR Corrected LIC Drainage

Forest Type (YA)

- Coastal Moist Forest
- Spotted Gum
- Coastal Dry Forest
- Rainforest
- Non Forest

Pre-harvest BA Sweeps

- BA Sweeps

Forest Type (YA)	Gross Area (ha)
Coastal Dry Forest	110.8
Coastal Moist Forest	44.1
Non Forest	0.0
Rainforest	5.5
Spotted Gum	305.1

0 125 250 500 750 1,000 Meters

Contour Interval 10m
Scale: 1:15,000

53 54 55 56 57
6080 79 78 77 76 6075000N
253000E

HARDWOOD FORESTS- SOUTHERN IFOA
SOUTH COAST HARVESTING PLAN

Flat Rock State Forest - Compartment 33

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	Kate Halton	Approved By: Planning Supervisor	Lee Blessington
Signature	Kate Halton	Signature	Lee Blessington
Date	24/03/16	Date	24/03/16

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, PtS= Protection Supervisor, HS = Harvesting Supervisor, RC = Roading Coordinator, IFOA = Integrated Forestry Operations Approval.

Area Identification and Yield Estimates

State Forest	Compartment/s	IFOA Region	Management Area	Certification
Flat Rock	33	Southern	Batemans Bay	AS4708:2007 ISO 14001

	Cpt
Plan Compartment ID	22248
Gross Area (ha)	467
Net Harvestable Area (ha)	362
Harvest Area (ha)	358
Poles, Piles, Veneer & Girders	100 m^3
Quota Logs (HQL)	1900m^3
High Quality Small	500m^3
Salvage	2000m^3
Pulp E1	2000t
Firewood/Misc	3000t

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

Slope Classes (percent of harvest area)

Slope Class	Cpt 33 % of harvest area
0-20º	96
20-25 º	3.7
25-30 º	0.3

Forestry Corporation

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.	NA
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

This plan identifies haulage from the compartment will be:

1. South along Flat Rock Road (FCNSW Road), turning left/east along Brooman Road, left/north onto Woodburn Road and then either continuing north on Woodstock Road or east on Wheelbarrow Road to the Princes Highway (RMS Road). Brooman, Woodburn, Woodstock and Wheelbarrow Roads are Shoalhaven Shire Council Roads.

The intersection of Flat Rock Road and 33/1 Road with Brooman Road has been assessed as less than 200m on either approach to both intersections. Prior to haulage commencing truck warning signs in accordance with "TCP_195_BroomanRd_Cpt33" must be implemented.

When harvesting within 2 tree lengths of Shoalhaven Shire Council Owned Brooman Road, this road must be temporarily closed in accordance with "TCP_78_57_Brooman_Cpt33".

Permission from Shoalhaven Shire Council to implement both TCPs was granted during the planning phase.

Dust, noise and school bus routes

Dust and noise – Where log haulage routes pass close to rural housing along natural surface/gravel roads dust and noise must be minimised to the greatest extent practicable. Trucks should reduce speed, restrict use to daylight hours and minimise the use of engine brakes through these areas.

School bus route - School buses run up and back along Woodstock Road and Woodburn Road to the intersection of Woodburn Road and Clyde Ridge Road (where there is a drop off/pick up point) between the hours of 7:30am to 8:30 am and 3:30pm to 4:30pm. On weekdays, to the greatest extent practicable, log haulage should avoid school bus times on the above roads.

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. Mine shafts/quarries	Assess snig track routes and tree felling paths prior to operating. Identify and mark site accordingly. Note: one known mine shaft occurs within the compartment (shown on HPOM) at **E255314 N6074591**. The mine appears to be caved in and only mullock heap/heavy vegetation was found at the site. FT to mark of during mark up.		
3. Underground cables, pipelines	Dial Before You Dig results indicate that all cables occur within excluded area on the northern end of the compartment, or south of Brooman Road. If cables are found within the harvest area during mark up, minimise ground disturbance across or along cables & pipelines. Increase depth of earth cover if required.		
4. Hazardous or dead trees	**Refer to FCNSW WHS procedure 4.26.** 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.**		
5. Overhead hazards associated with dumps	**Refer to FCNSW WHS procedure 4.26.** 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.**		
6. 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.		
7.			

- **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

Forestry Corporation

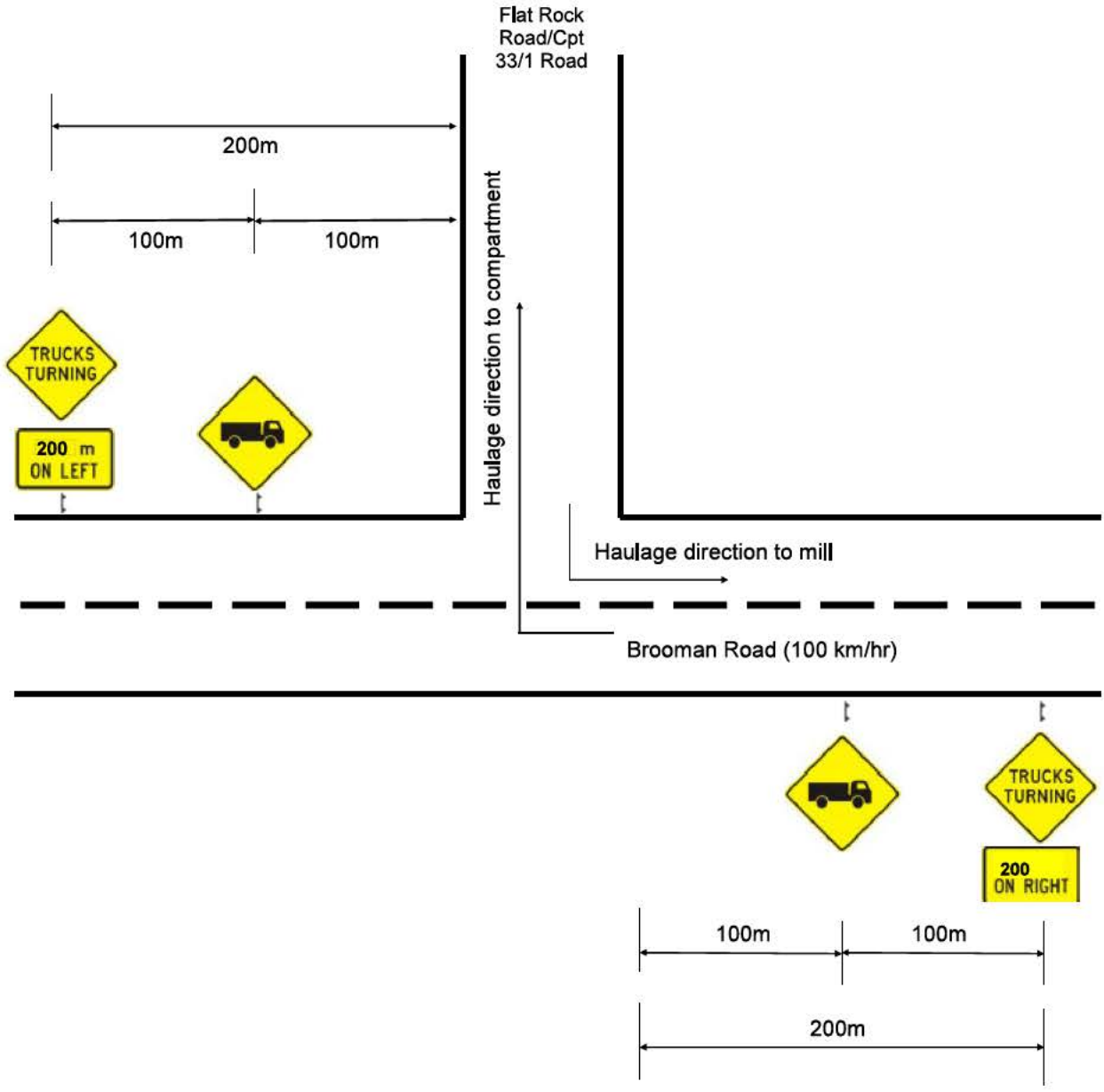
MEDICAL EMERGENCY EVACUATION PLAN

Nearest reliable mobile phone reception (describe location)			
Next G Network: Good	GSM: N/A	Satellite: N/A	
GPS Lat/Long: 35° 25' 23" S / 150° 17' 07" E	MGA: 253529E 6076641N	Datum: GDA 94	Zone:56
Location description: Intersection of Flat Rock Road and Toad Road			
Emergency meeting point for ambulance / police (refer to attached locality map)			
GPS Lat/Long: 35° 26' 29" S / 150° 18' 02" E	MGA: 254969E 6074693N	Datum: GDA 94	Zone: 56
Location description: Intersection of Flat Rock Road and Brooman Road.			
Helicopter landing place (refer to attached locality map)			
GPS Lat/Long: 35° 26' 10" S 150° 15' 30" E			
Location description: Intersection Carrisbrook Road and Brooman Road.			

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: • 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: Flat Rock Nearest town or locality: Flat Rock Nearest ambulance station: Ulladulla
3. Address?	Flat Rock Road
4. Nearest road junction/cross street?	Flat Rock Road and Brooman Road
5. Local government area?	Shoalhaven
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 Ulladulla head south on the Princes Highway for approx. 8km to Wheelbarrow Road junction. Turn right onto Wheelbarrow Road and travel for approx. 6km to intersection of Woodburn Road. Turn left onto Woodburn Road and travel approx. 7km to intersection of Brooman Road. Turn right onto Brooman Road and travel approx. 3.8km to intersection with Flat Rock Road.	
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 TCP 195: Intersection of Flat Rock Road or Cpt 33/1 Rd with Brooman Road (modified from RTA Traffic Control at Work Site TCP 195)



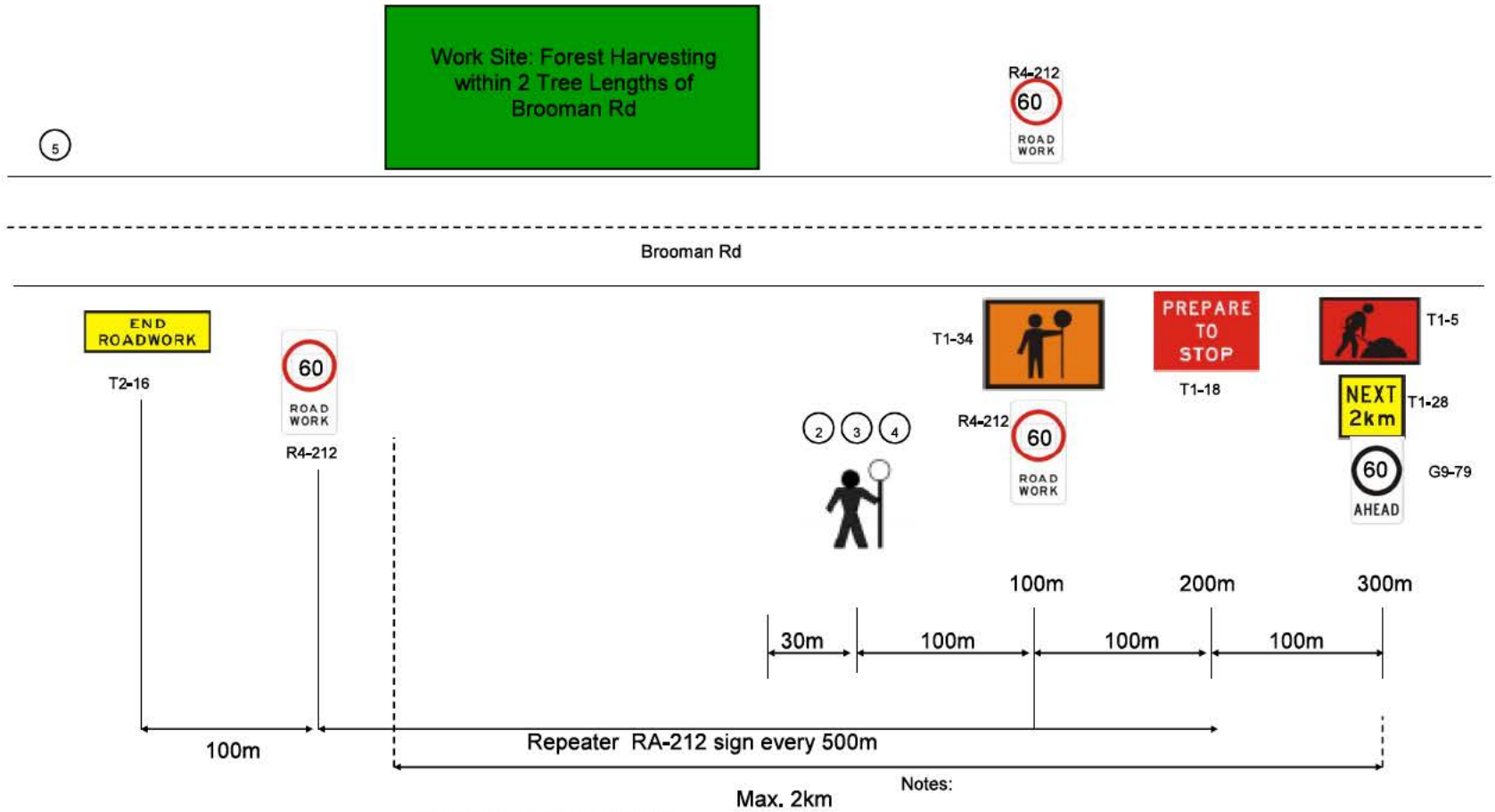
Notes:

(1) Log Haulage - Intersection of Flat Rock Road or 33/1 Rd with Brooman Road (not signposted assumed 100km/hr) . Sight distance restricted to <200m on both approaches to these intersections.

LONG TERM USE
ADT < 1500, <20 Truck Movements, Sight Distance Restricted
Prepared by Kate Halton, Red Card Certificate No. 5192055074 on 15/01/2016

Forestry Corporation NSW (FCNSW) Traffic Control Plan 78 & 57: Harvesting within 2 Tree Lengths of Brooman Rd (Shoalhaven Shire Council Rd) (modified from RTA Traffic Control at Work Site TCP 78 & 57)

Speed limit not posted, assumed maximum 100km/hr



FREQUENTLY CHANGING WORK AREA
2 LANE/2 WAY
ADT < 3000
Prepared by Kate Halton,

Red Card Certificate No. 5192055074 on 15/01/2016

Notes:

1. Each stoppage less than 5 minutes.
2. Traffic controllers to stop traffic for duration of work and then direct traffic past work area, once tree falling has ceased and any debris has been cleared from road.
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.
5. Traffic control plan must be mirrored for traffic approaching from the opposite direction.
6. If worksite is kept less than 500m long, repeater RA-212 (60 Road Work) signs are not required.
8. Ensure dumps or other road intersections are not within the traffic control area, unless they are closed off with a road closure barricade.
9. There are multiple properties on the southern side of Brooman Road. The TCP must either be set up either side of a driveway. If this is not practical it must be set up in such a way that traffic controller has line of site to drive ways and can signal driver to stop from existing their driveway if tree falling is taking place. A courtesy door knock of the affected properties must be undertaken every morning traffic control is in place to notify the neighbours that traffic control will be in place.

Silviculture and Harvesting Prescriptions

Year	1937-39	1946	1947	1948	1951-58	1963-68	1971	1978	1982-84	1986, 1990, 1991 & 1996	2002	2003	2004
TSI	X	X	X	X	X	X	X	X	√	X	X	√	X
HR Burning	X	X	X	X	X	X	X	X	X	X	√	√	√
Wildfires	X	√	X	√	√	√	√	X	X	√	X	X	X
Logging m^3	√*	X	√*	X	√*	2200	X	1800	4100	X	X	22000	X

√ - applies, **X** – not applicable, * yield information not available

Compartment	Resource Unit	No. of Sweeps	BA Average (m^2/ha)	BA Range (m^2/ha)
33	1	28	23	11-44

Silvicultural Planning

Single Tree Selection

The STS tract (358 ha) is a predominantly mixed aged mature forest and will be harvested under a heavy single tree selection (STS) regime. The objective within the 358 ha harvest area for this operation (resource unit 1) is to remove 45% of the basal area to create canopy openings for regeneration, whilst retaining and minimising damage to young regenerating stems, seed trees, habitat and recruitment trees.

It is envisaged that the next harvesting operation in this compartment would be on average 30 years time.

The STS tract for IFOA purposes includes the harvest area/resource unit 1 as indicated on the HPOM.

Single Tree Selection (STS) must remove no more than 45% of the basal area (BA), while retaining a minimum BA of 10m^2 per hectare within the tract.

Resource Unit (Refer to HPOM for detail)	Species Composition	Stand Structure and Condition
1	Overstorey dominated by sydney blue gum and spotted gum. Other species include blackbutt, sydney peppermint, yellow stringybark, white stringybark, silvertop ash, bloodwood and ironbark.	Structure: Mixed-aged. Highly variable over short distances. Generally scattered mature and overmature trees with good quality advanced pole/small sawlog sizes and sapling regrowth. Consolidated clumps of mature stems associated with gully lines. Condition: Mature component generally consists of stems with good form. Advanced growth and regrowth is generally very good.

Harvesting Prescription

Resource Unit (Refer to HPOM for detail)	% of Harvest Area	Silvicultural Treatment
1	100	STS heavy: • Retain and protect from harvesting/fire damage: -poles/advanced growth (<40cm DBHOB) with good form and vigour, -habitat and recruitment trees as per TSL, • 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 10m^2 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: -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	0	Not included within harvest area-unviable.

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

Myrtle Rust has been identified within the compartment at one location (table below shows coordinates). Refer to Southern Region Myrtle Rust field guide attached to this plan.

Identified Myrtle Rust (MGA)	
Eastings	Northings
253781	6077629

Compartment 33 is within Shoalhaven 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 Shoalhaven 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
Except for Brooman Road (Shoalhaven Shire Owned and maintained), within the compartment boundary only roads that are shown on the HPOM as EPL standard or sealed may be used for haulage.

Private Property

Private property/Vacant Crown Land occurs adjacent to the northern and southern boundary of the compartment, as indicated on the HPOM. Private property owners/Department of Lands have been notified of the scheduled harvesting and post-harvest burning. The table below lists private property neighbours who adjoin Compartment 33:

- No harvest disturbance is permitted on private property/Vacant Crown Land.
- Harvesting debris must not be left within five metres of the boundary fence lines.
- Any damage to fences must be repaired by the contractor.
- Access roads must be maintained free of debris and in a trafficable state.

Occupation Permits

Apiary

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

Name	Site Number	Contact number

- The HC must provide the apiary permittees with at least two weeks advance notice when bee boxes need to be removed or relocated.

Underground Cables
A dial before you dig request query of the compartment indicates that underground Telstra cables are present on the northern side of the compartment within excluded

forest and outside the compartment to the south of Brooman Road. 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 3B-Special Prescriptions (visual) and FMZ 4- General Management (normal harvesting prescriptions apply) occur within the compartment. Refer to HPOM for more detail. The FMZ 3B area is within unviable excluded forest, therefore no special prescriptions apply to this plan.

IFOA Required Approval of Forestry Activities

Construction or re-opening of roads or snig tracks may occur with prior approval in the following exclusion zones:

- Planning Supervisor approval required for Stream Exclusion Zones or Rainforest.

During the harvesting operation the HC must identify any crossings required in these exclusion zones and contact the Planner to obtain required approvals.

Cultural Heritage

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***), Gang-gang Cockatoo (***Callocephalon fimbriatum),* **Grey-headed Flying Fox** *(Pteropus poliocephalus)* and **Little Lorikeet** *(Glossopsitta pusilla)*.

Tree Retention

Zone	Hollow bearing Trees/ha	Recruitment Trees /ha	Protection of Retained Trees	Dead Standing Trees (only if safe)	Significant Food Resource*
Regrowth	**Up to 5**	**1 for every tree retained under 5.6d**	√	√	√
TSL condition	5.6d	5.6e	5.6h	5.6f	5.6 g

√ - Condition applies
*5 Yellow-bellied Glider feed trees occur within compartment 33 at locations shown in the table below.

Species	Feature	Zone	GDA Easting	GDA Northing	Comments
Yellow-bellied Glider	Feed tree	56	254104	6075391	Not Marked at planning stage-historic records. FT to mark.
Yellow-bellied Glider	Feed tree	56	255004	6075391	
Yellow-bellied Glider	Feed tree	56	255054	6075641	
Yellow-bellied Glider	Feed tree	56	255204	6075191	
Yellow-bellied Glider	Feed tree	56	255854	6074591	

General exclusion zones

General exclusions as listed below are shown on the HPOM.

Feature/Condition	TSL cond'n	Occurs within Planning Unit
Rainforest	5.4	Has been assessed as a risk that Cool Temperate/Depauperate (Dry) may occur in the field. May require further investigation#. Rainforest has not been assessed at planning stage. The FT must field verify the extent and mark exclusions during mark-up. The areas assessed as Depauperate (Dry) do not require 20m exclusion. These areas must be noted appropriately in the FT/HC notes section of the plan.
Riparian Protection Zones	5.7	Yes Based on spatially corrected LIC drainage.
Ridge & Headwater Habitat	5.8	Yes Based on spatially corrected LIC drainage.
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 investigation#.
Endangered Ecological Community	NA	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 33	Licence conditions under the TSC Act
Threatened Frog General Protection Measures	No	5.12
Bird Nest and Roost Site Protection	No	5.13
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

*Mine shaft shown on HPOM is most likely the shaft entrance has been completely filled in and does not trigger TSL condition 5.14.2

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 33	Licence conditions under the TSC Act or relevant Site-specific prescription
Powerful Owl *Ninox strenua* **Masked Owl** *Tyto novaehollandie.*	Yes Yes	6.4
Swift Parrot *Lathamus discolor*	Yes	6.5 Retention of eucalypt feed trees is required.
Spotted tailed Quoll *Dasyurus maculatus*	No	6.10
Squirrel Glider *Petaurus norfolcensis*	No	6.12
Yellow-bellied Glider *Petaurus australis*	Yes	6.13
Golden-tipped Bat *Kerivoula papuensis*	No	6.14
Cryptostylis hunteriana (Leafless tongue orchid)	No	6.16.2 Apply 10m exclusion around individuals (no specified forestry activates in exclusion zone). Apply additional 10m buffer zone around the exclusion

Threatened species and habitat features within trigger distance	Records in 33	Licence conditions under the TSC Act or relevant Site-specific prescription
		zone on individuals (limited tree removal and snigging 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. Refer to South Coast Field Guide for species profile.

Fisheries Licence Conditions

Compartment 33 contains Class 2 Aquatic Habitat as defined by the Southern IFOA Fisheries Licence. Therefore the conditions of the fisheries licence are triggered for this operation.

Unmapped drainage lines must not be harvested within the compartment.

Riparian Exclusion Zones, Buffer Zones and Special Operational Zones must be established as per condition 7A.1 – 7A.3 of the Fisheries Licence. Operations within these zones must comply with restrictions detailed in conditions 7A.4 – 7A.10.

If a need for "in-stream works" within Class 2 Aquatic Habitat is identified during the operation (additional to any works already described within the harvest plan) the HC must inform the Planner immediately. "In-stream works" are defined as *any activity being carried out within the incised channel or, where there is no defined bank, between the apparent edges of the watercourse.*

All "in-stream works" within Class 2 Aquatic Habitat must comply within condition 8 of the Fisheries Licence.

Soils and Water Protection

Refer to EPL Booklet & Standard Plan Conditions

Spatially Corrected LIC Drainage
Spatially corrected LIC drainage has been built using LiDAR derived drainage in compartment 33. Protection zones and filter strips have been rebuilt based on spatially correct LIC drainage and an additional mean stream bed width included for each stream order. Stream based Ridge and Head Water Exclusions have been rebuilt based on spatially corrected LIC drainage (mean stream width is not built in to this exclusion). The FT may to choose to carry out mark up using Ipad/GPS based on spatially corrected LIC drainage or traditional measure and mark up methods.

Site-specific EPL Conditions

Elements	Conditions
Unmapped Drainage Lines	EPL applies.

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), Exclusion Zones (FL), Buffer Zones (FL), Special Operational Zones (FL), 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 FL Exclusion Zone TSL Protection (hard)	EPL Protection Zone FL Buffer Zone TSL Protection* (soft)	EPL Operational Zone FL Special Operational Zone	Drainage Feature Protection: FT/HC marking instruction
Unmapped	**5**	**5**	**10**	**10m (Pink)**
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)**

Log Dump Location

39 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.

Inherent hazard level 2 Conditions 26, 27, 28, 30, 31 and 33 of Schedule 4 of the EPL must apply.

Dumps 10, 12, 18 and 26 are located within adjacent compartment 36.

Dumps 25, 35, 37 and 39 are unlikely to be required and will be dependent on the strength of the firewood marked at the time of harvest.

Drainage Feature Crossings

There are no crossings in compartment 33 (road or snig).

Mass Movement

Compartment 33 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 compartment.

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 33. 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
Rainforest	
Ridge and Headwater	

The table below lists critical boundaries in compartment. 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
Private Property Lot 51 (where Brooman Road is not the boundary)	
Boundary between compartment 33 and 32 (the section where the boundary is not a road or a drainage line)	

Pre-Operational Briefing

I acknowledge that I have received a copy of the Harvesting Plan for Compartment 33 in Flat Rock 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.

Position	Name	Signature	Date

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	Yes		NA		
Existing Roads	Yes	Error	Yes		
New Roads	Yes	New	Yes		
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.

Dump number	Start date	Finish date	*Track drainage completed within 2 days (yes/no)	Date of temporary cessation	**Temporary track drainage completed within 5 days (yes/no)	Date resumed

*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

Date	Event	Signed

HC/FT Notes (continued)

Date	Event	Signed

HC/FT Notes (continued)

Date	Event	Signed

HC/FT Notes (continued)

Date	Event	Signed

HC/FT Notes (continued)

Date	Event	Signed

Clearance Certificate

COMPARTMENTS: 33, FLAT ROCK STATE FOREST

To .....HC

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 94)	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	Comments
1	254822 E 6074883 N	26				
2	254776 E 6075073 N	16				
3	254657 E 6075177 N	16				
4	254500 E 6075138 N	20				
5	254045 E 6076787 N	11				
6	255089 E 6075129 N	22				
7	254158 E 6078273 N	22				
8	254391 E 6075320 N	24				
9	254309 E 6075576 N	30				
10	254166 E 6075689 N	34				
11	254063 E 6075811 N	14				
12	253522 E 6078323 N	22				
13	253367 E 6077673 N	26				
14	254539 E 6075854 N	22				
15	254853 E 6075679 N	16				
16	255037 E 6075551 N	20				
17	253879 E 6075889 N	20				
18	254164 E 6076310 N	30				
19	254001 E 6076370 N	16				
20	254187 E 6077761 N	18				
21	255314 E 6074964 N	18				
22	255745 E 6074676 N	22				
23	254059 E 6077583 N	24				
24	254012 E 6077345 N	24				
25	255996 E 6077144 N	22				
26	253912 E 6076828 N	14				
27	254002 E 6078552 N	42				
28	253992 E 6079371 N	44				
Total averages		23				

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.	12640m/14	Yes
New roads to be constructed	690/2	Yes
Existing crossings used	0	NA
New crossings to be constructed	0	NA
Length of road >10°	50m	No
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 name & length (m)	Required Works						RC/HC Comments	Date Started	Date finished	Signature
	Grade/ reshape	Clear pavement of small regen (dozer)	Clear roadside of small regen (dozer)	Open existing drains (mitres/spoons) & and utilise crests, crossfall, depressions for drainage.	Additional drains required to meet EPL	Other				
Flat Rock 4600m	N	N	N	Y#1	Y (refer to roading map). Maintain existing 2 pipes and 1 x RU, install 2 new RU	Minor roadside limb removal may be required.				
33/1 2000m	Y	Y (light)	Y	Y	Y#2					
33/11 110m	Y	Y	Y	Y	Y#2	Realign steep section				
33/10 230m	Y	Y	Y	Y	Y#2	A section 11 degrees for 50m, shown on roading map, gravel if required.				
33/8 500m	Y	Y	Y	Y	Y#2					
33/7 500m	Y	Y	Y	Y	Y#2					
33/6 420m	Y	Y	Y	Y	Y#2					
Toad 700m	Y#1	Y (light)	Y	Y#1	Y#1&2					
33/9 140m	Y	Y	Y	Y	Y#2					
33/5 270m	Y	Y	Y	Y	Y#2					
33/4 220m	Y	Y	Y	Y	Y#2					
33/3 1000m	Y	Y (light)	Y	Y	Y#2					
33/2 450m	Y	Y	Y	Y	Y#2					
Boyne Creek 1500m	Light grade#1	N	Y (or with grader)	Y#1	Y#2	Roadside clearing				

#2 Once existing drains opened, RC or HC to assess the road and ensure that additional and suitable drainage (mitres or RU's) are installed and the road meets EPL drainage specifications.

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
Toad Realignment	480m	8m	9.5º	18º	1m	450m	No	Retain	FCNSW		
33/11 Realignment	210m	8m	10º	23º	2m	250m	No	Retain	FCNSW		

Prepared By: Kate Halton
Version: 1

Harvest Plan Roading Map

Compartment: 33

State Forest: FLAT ROCK No: 834

Map Sheet: TABOURIE 8927-2S

Forestry Corporation

GDA

Scale: 1:8,000
Contour Interval 10m

Legend Refer to HPOM for full legend

- Existing RU (maintain)
- Existing Pipe
- Install new RU

0 125 250 500 750 1,000 Meters

54 55 77 76 75

254000E

6075000N

Flat Rock Road
new RU
29
33/5 Rd
30
28
27
33/9 Rd
23
Toad Rd
Toad Realignment
22
21
Toad Rd
26
Toad Road
McMahons Road
20
19
Cpt 36/1 Road
E pipe
33/7 Rd
Cpt 32/2 Road
17
16
18
15
33/8 Rd
Flat Rock Road
1
13
14
33/10 Rd
Fred's Road
2
33/1 Rd
3
4
11
33/11 Rd
E RU
E pipe
11 Rd Alignment
9
8
new RU
Brooman Road
Brooman Rd
Lot 1
DP1063248
Lot 1

Forestry Corporation NSW
Southern Region

MYRTLE RUST

Myrtle rust is caused by the fungus *Uredo rangelii* and affects plants in the family Myrtaceae, including Eucalyptus, Angophora, Callistemon, and Melaleuca. It was first detected in Australian in April 2010 and has spread along the NSW east coast, from the Clyde river and into southern Queensland.

Myrtle rust produces masses of powdery bright yellow or orange-yellow spores on young growing shoots, leaves, flower buds and fruits. Leaves may become buckled and twisted and die as a result of infection.

Its rate of spread and host species are being monitored in attempts to identify its potential impacts to biodiversity and primary industries.

Sate Forest			**Cpt no.**	
Date		**Surveyor(s)**		
Grid Reference	Zone	Easting/	Northing	
Location Description				
Photo taken	Yes No	**Photo Number**		
Plant Species Affected				

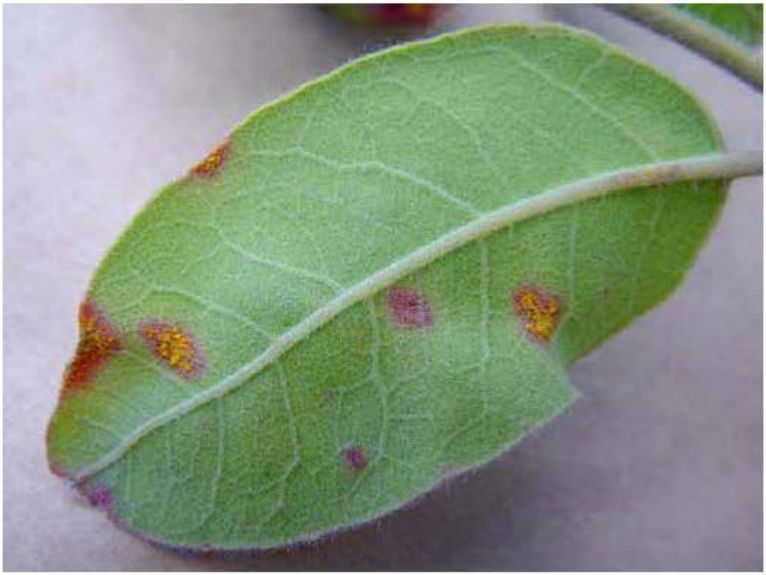



Photo: Dr Angus Carnegie © I&I NSW


Photo: Dr Angus Carnegie © I&I NSW

The images on this page show the top and undersides of the leaf.
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