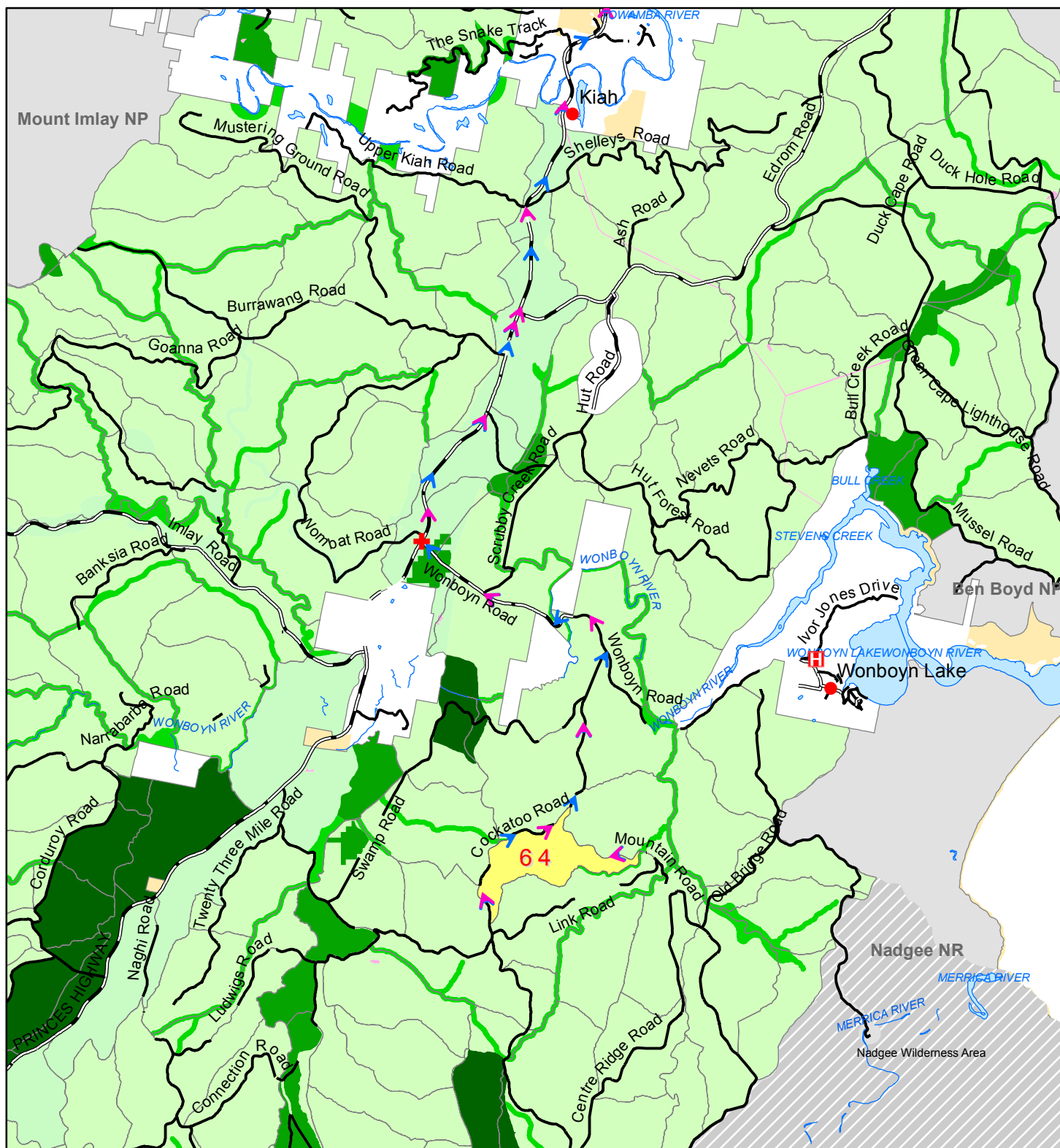


LOCALITY MAP

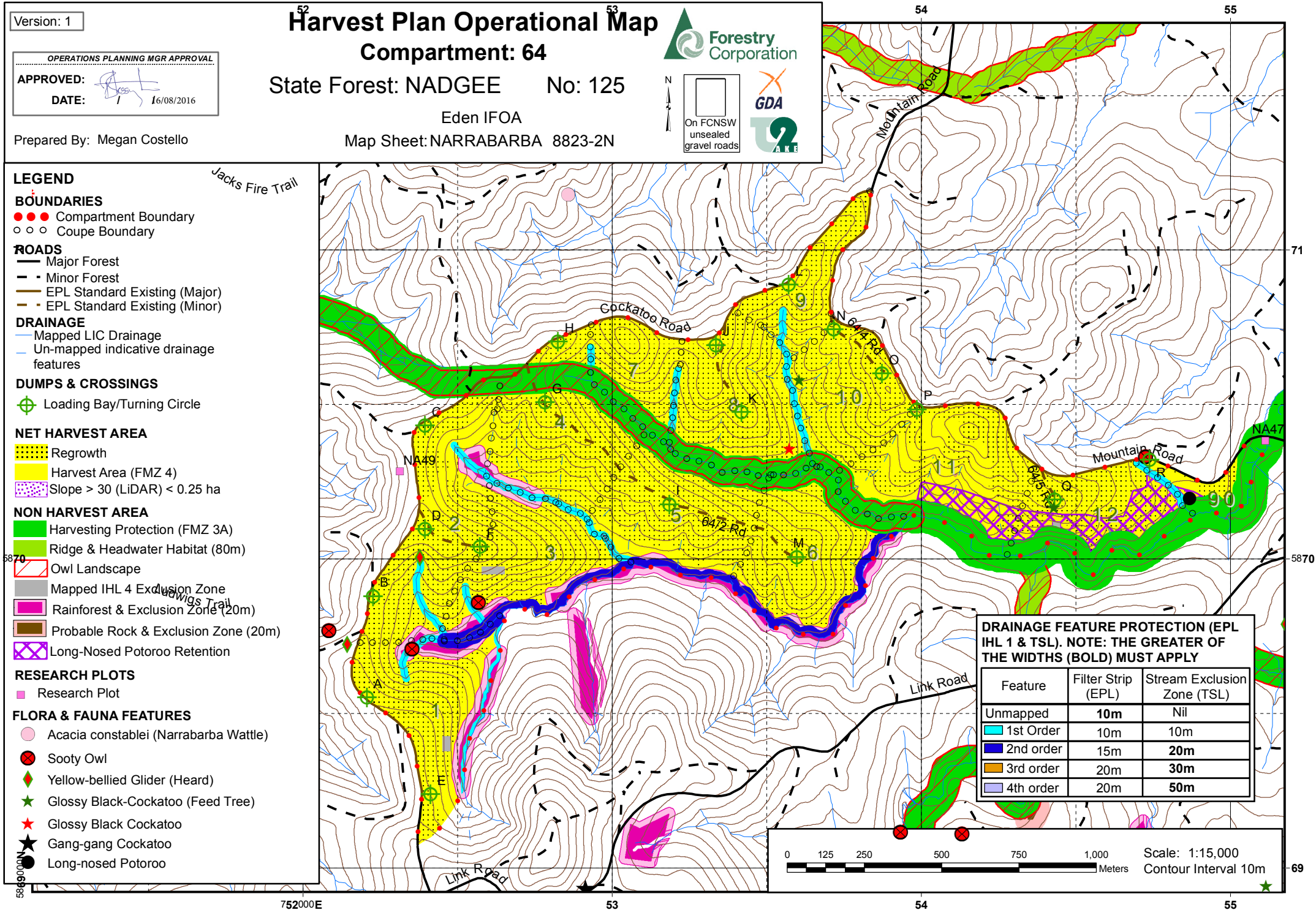
Compartment 64
State Forest: Nadgee No: 125

EDEN IFOA EDEN MANAGEMENT AREA

Scale: 1:100,000



- | | | | |
|--------------------|-------------------|--------------------------------|-------------------------|
| Sealed Road | State Forest | Formal Reserve | Emergency Meeting Point |
| Major Forest Road | Planning Unit | Informal Reserve | Helicopter Landing Site |
| Major Rivers | Vacant Crown Land | Harvesting Exclusion (Zone 3A) | Evacuation Route |
| Towns & Localities | Freehold | Non Forest | Haulage Route |
| | Water | National Parks | |
| | | NPWS Declared Wilderness | |



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Version: 1

Harvest Plan Forest Type Map

Compartment: 64

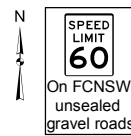
State Forest: NADGEE

No: 125

Eden IFOA

Map Sheet: NARRABARBA 8823-2N

Prepared By: Megan Costello



LEGEND

BOUNDARIES

- ● ● Compartment Boundary
- ○ ○ Coupe Boundary

ROADS

- Major Forest
- - Minor Forest
- EPL Standard Existing (Major)
- - EPL Standard Existing (Minor)

DRAINAGE

- Mapped LIC Drainage
- - Un-mapped indicative drainage features

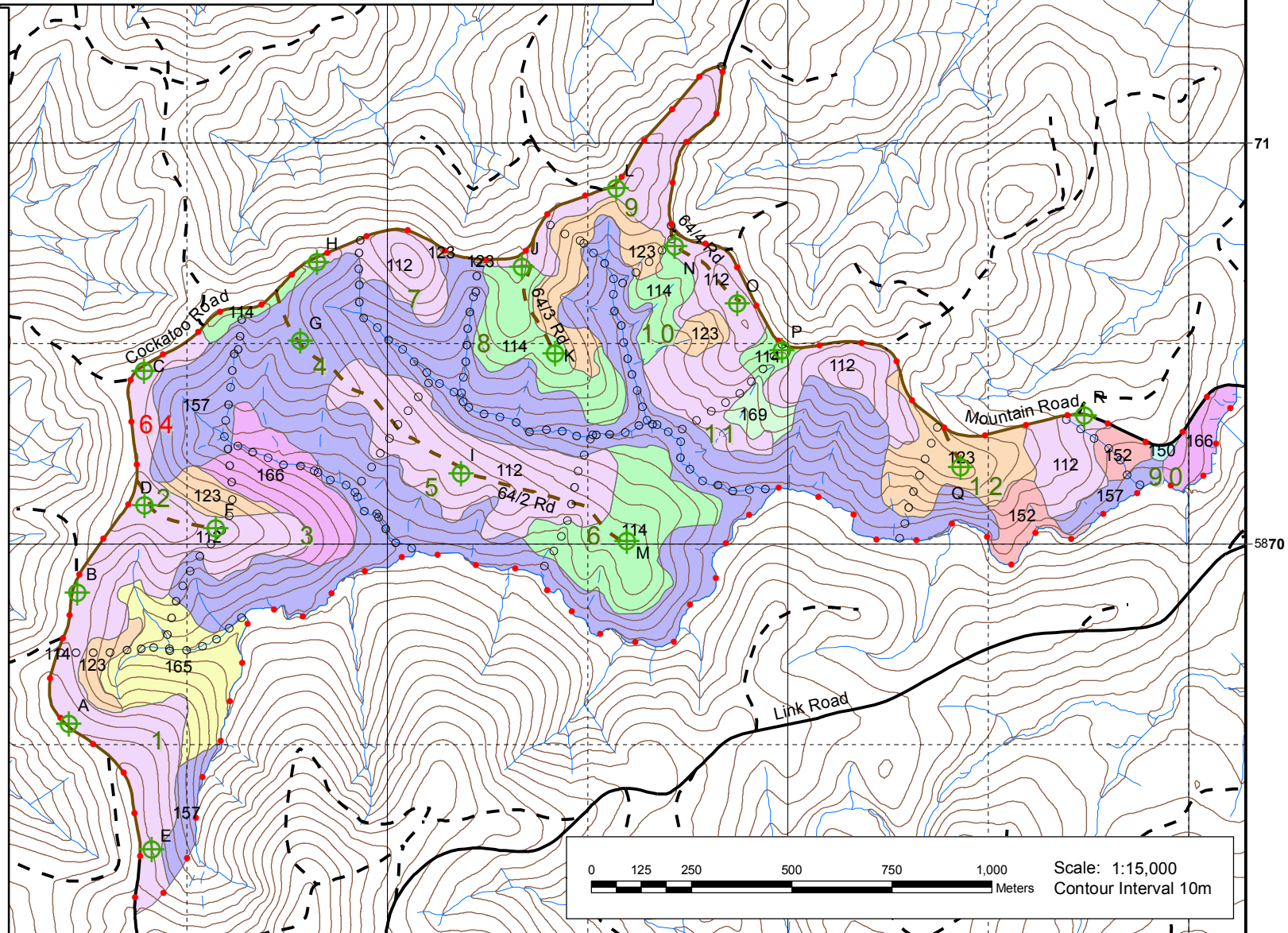
DUMPS & CROSSINGS

- ⊕ Loading Bay/Turning Circle

BROAD FOREST TYPE

- 112, Silvertop Ash
- 114, Silvertop Ash - Stringybark
- 123, Coastal Stringybark
- 150, Messmate / Coastal Stringybark
- 152, Messmate - Gum
- 157, Yellow Stringybark - Gum
- 165, Gully Peppermint
- 166, River Peppermint
- 169, Yellow Stringybark

BROAD FOREST TYPE	GROSS HA
112 Silvertop Ash	60.4
114 Silvertop Ash - Stringybark	20.3
123 Coastal Stringybark	15.7
150 Messmate / Coastal Stringybark	0.2
152 Messmate - Gum	3.5
157 Yellow Stringybark - Gum	72.7
165 Gully Peppermint	8.3
166 River Peppermint	8.8
169 Yellow Stringybark	1.5



Scale: 1:15,000
Contour Interval 10m

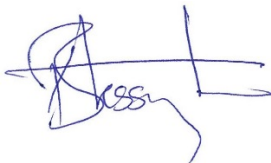
752000E

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Harvest and Haul Plan

State Forest	Nadgee	Compartment	64
Management Area	Eden	IFOA Region	Eden
Harvest Plan No.	44787	Coupes	All (1-12 & 90)
Legal Conditions	Native Forest Thinning in accordance with IFOA conditions. Harvesting and Roding activities must have EPL coverage. To implement this plan you must hold a current Contractors Licence. Standard Harvest Plan Conditions and Operating Procedures apply. Survey expiry date for this plan is 15/7/2018.		
Certification	Timber products removed from the plan area are within the Defined Forest Area covered by Australian Forestry Standard AS4708:2013 Certificate 604224		
Prepared by	Planner	Megan Costello	Date: 18/08/2016
	Megan Costello		
Approved by	Operation Planning Mgr		Date: 18/08/2016
	Lee Blessington		
Abbreviations	PA = Production Assistant, PS = Production Supervisor, RC = Roding Coordinator, Crew = Harvest Contractor/Forest Operators, IFOA = Integrated Forestry Operations Approval, TSL = Threatened Species Licence, EPL = Environment Protection Licence, FL = Fisheries Licence, CH = Cultural Heritage, SOP = Standard Operating Procedure, HPOM = Harvest Plan Operational Map.		

1. Harvest Area Details

	Cpt 64
Event ID	56201
Gross Area (ha)	192.3
Harvest Area	151.0
Estimated Yield	14,607
Yield/ha	102
Slope (% 0-20 degrees)	89.3
Slope (% 20-25 degrees)	9.0
Slope (% 25-30 degrees)	1.5

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Slope (% > 30 degrees)	0.2
------------------------	-----

Contractor must ensure timber removed is allocated to the correct compartment when entered onto Delivery Docket.

2. Management Conditions on Boundaries

Boundary	Conditions
FMZ	<p>FMZ 3A Harvesting Excluded and FMZ 4- General Management occur within the compartment and are shown on the HPOM.</p> <p>FMZ 3A – Harvesting and harvesting machinery are not permitted in these areas. PA must mark boundaries as shown on the HPOM.</p>
Research	<p>Research Plots –</p> <p>NA 47 (Ecology Research Plot) is located on the edge of the compartment boundary in coupe 90 next to Mountain Road.</p> <p>NA 49 (Ecology Research Plot) is located on the opposite side of Cockatoo Road to Compartment 64 (between dumps C & D) and may be affected by road-lining operations. The PA must apply a two tree length exclusion zone, to be measured from the edge of the plot</p> <p>Any other inventory plots located during the harvesting operation which are not shown on the HPOM or described above are to be treated the same as the surrounding area.</p>
Cultural Heritage	<div style="background-color: black; width: 100%; height: 40px;"></div> <div style="background-color: black; width: 100%; height: 20px;"></div>

3. Expected Yields

Product Estimates	Volume
Total (pulp)	14,607t

Species	Species Mix (Pulp)
STA	30%
SBK	70%

4. Haulage

Haul Route	North out Cockatoo and Mountain Roads to turn left onto Wonboyn Road, then turning right onto Princes Hwy before turning right onto Edrom Road.
School Bus Routes	Wonboyn road is used by a school bus 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.
Dust and Noise	Homes immediately adjacent to Wonboyn road may be adversely impacted by noise created by log haulage. Truck drivers should reduce speed and minimise the use of engine brakes near these homes.

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5. Community

Issue	Detail	Conditions
Notifications Required	Nil	All relevant notifications have been conducted. A notification list for FCNSW staff is available from the planner.
Permit to Enter Required	■ [REDACTED]	■ [REDACTED]
Neighbours	■ [REDACTED]	■ [REDACTED]
Pests/Weeds	Myrtle Rust/other weeds/pests	Is known to occur in Bega Valley/Cooma-Monaro Shires. To prevent further spread the crew/haulage operators must ensure all harvesting machinery, equipment and vehicles heading west from Bega Valley/Cooma-Monaro Shire or south into Victoria are checked and all infected vegetation removed.

6. Infrastructure

Infrastructure	Conditions
Gravel Pits/Borrow Pits	N/A

7. Harvesting Conditions

Silviculture Type	Harvesting Objectives and Condition for each stand condition		
Thinning Entire Harvest Area	<p>Wildfire events occurred in compartment 64 in 1951, 1972 & 1980. Compartment 64 was harvested in alternate coupes in 1974, 1979 & 1982. Hazard reduction burns were conducted in 1996, 2002 & 2003. Coupes that were harvested in the 1970's and 1980's have regenerated into an even-aged stand dominated by Silvertop Ash and Yellow Stringybark. These stands now have full canopy closure and have occupied the site. The objective is to commercially thin from below to promote the growth of the most dominant and vigorous trees in the stands.</p> <p>The crew is to select for removal trees with the poorest vigor, form and size.</p> <p>The crew must minimise damage to retained trees during falling and extraction.</p> <p>Where practicable aim for an evenly distributed residual stocking of 250 spha. In lower stocked areas; the residual stocking can be reduced to 150 spha. An overall compartment average of 250 spha is the target.</p> <p>The PA must conduct regular checks of retained tree damage and provide feedback to the crew.</p>		
IFOA Limits	MSW	IFOA Limits	Thinning
Gross Area	-	Thinning Area	151.0
Harvest Area	-	Pre-Thin BA/SPH	44.1/797
		Post-Thin BA/SPH	27.6/250
Planned Removal	-	Planned Removal/SPH	68%/547

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8. Tree Retention - refer to TSL booklet for full conditions

Prescription	Condition/Responsibility												
Mark-Up – the PA is responsible for marking up the forest ahead of harvesting operations consistent Forest Mark Up and Tree Retention SOP													
Compartment Mark-Up Survey (5.1, 5.2)	Compartment mark-up surveys must be conducted at least 100m in advance of operations. The survey must search for threatened and protected species features listed in conditions 5.1 and 5.2 of the TSL.												
Hollow-bearing and Recruitment tree retention (H and R)	<p>Non-Regrowth Zone - 5.6, conditions apply. Due to the disturbance and fire history of this compartment very few mature and over-mature trees that contain hollows occur. The PA is not required to mark H & R trees if they don't occur on the ground.</p> <p>Additional H trees for Greater Glider condition does not apply.</p> <p>PA must verify the habitat quality and record on the habitat quality map. PA must select and mark H and R trees as per the habitat quality.</p> <table><tr><th>Habitat Quality</th><th>H Trees/2ha</th><th>R Trees/2ha</th></tr><tr><td>High</td><td>12</td><td>12</td></tr><tr><td>Moderate</td><td>8</td><td>8</td></tr><tr><td>Low</td><td>4</td><td>4</td></tr></table>	Habitat Quality	H Trees/2ha	R Trees/2ha	High	12	12	Moderate	8	8	Low	4	4
Habitat Quality	H Trees/2ha	R Trees/2ha											
High	12	12											
Moderate	8	8											
Low	4	4											
Significant Food Resources (5.6 k)	<p>PA must ensure retention of 6 Eucalypt feed trees/2 ha where they occur, glider sap feed trees, stands of forest oak and forest oak feed trees.</p> <p>2 Glossy Black Cockatoo feed trees are present in the compartment located at:</p> <table><tr><td>E</td><td>753606</td><td>N</td><td>5870580</td></tr><tr><td>E</td><td>754430</td><td>N</td><td>5870167</td></tr></table>	E	753606	N	5870580	E	754430	N	5870167				
E	753606	N	5870580										
E	754430	N	5870167										
Harvesting - crew and HC responsibilities													
Protection of Retained Trees (5.6g)	<p>Trees marked or selected for retention must not be felled.</p> <p>The crew must minimise damage to H, R and E trees by using directional felling.</p> <p>Harvesting debris should not accumulate within 5 m of retained trees. Where debris does accumulate the crew must remove or flatten to < 1m high.</p> <p>The PA must be notified of any badly damaged retained trees and they must assess and record if a replacement retained tree is required.</p>												

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Stag Retention (Dead standing trees 5.6e)	The crew should retain stags where safe to do so. The crew must record the date, DBH, risk and location of unsafe stags removed
Significant food resources	The crew should avoid damaging flowering or fruiting banksias or grass trees.

9. Site-Specific Flora and Fauna

Condition	Boundary Type	Prescription
Riparian Habitat Protection (5.7) (Lidar Corrected)	Pink Tape	Implement filter strip/stream exclusion zone around drainage features as shown on the HPOM. Refer to SOP1. PA must mark the location of all mapped and UMDL.
Ground Habitat (5.17 d)	N/A	No additional prescription.
Rainforest (5.4)	Pink Tape	Rainforest is mapped in the compartment. The PA must mark all rainforest exclusion zones as shown on the HPOM. All additional rainforest encountered during compartment mark-up must also have exclusion zones marked.
Ridge & Headwater Habitat (RHH) (5.8)	Pink Tape	RHH is mapped in the compartment underneath the FMZ 3A reserve area. The crew must protect all areas of marked RHH.
Feed trees for Glossy black cockatoo,	Pink Tape and paint	PA must ensure mapped feed trees are marked prior to harvesting. Crew must protect all marked feed trees.
Long-nosed Potoroo retention area	Pink Tape	Long-nosed Potoroo retention area is mapped in the compartment. The PA must mark the retention area as mapped. The crew must protect the marked retention area.
Fish	N/A	Compartment contains Class 1 Aquatic Habitat. All streams, drainage lines, wetlands and other water bodies within the compartment are Class 1 Aquatic Habitat. Only crossings shown on the HPOM can be used.

10. Soil & Water – Refer to EPL Booklet for full conditions

Issue	Assessment	Conditions
EPL Scheduled Activity	Yes	
Inherent hazard level	1	Nil

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Dispersible Soils	No	Nil
Mass Movement / Instability	No	Nil
Seasonality conditions	No	Nil
Historical or existing erosion	No	Nil
Ground cover	>70%	Nil
Seasonal Burning conditions	No	Nil
Log Dumps	SOP 5	PA is responsible for authorising moving the location of a log dump.
Roading management during harvesting	SOP 6	Refer to SOP 6. PA is responsible for monitoring road and crossing drainage during haulage.
Wet Weather and Rutting	SOP 6	Crew is responsible for implementing automatic closures and following notified closures. PA is responsible for ensuring crew notified when notified closure is lifted.
Snigging	SOP 8	Crew is responsible for progressive drainage of snig tracks
Snig Track Crossings	SOP 9	PA is responsible to ensure snig track crossings are approved prior to use and rehabilitated upon completion.

11. Crossing Approvals

There are no crossing approvals for this harvest plan. Any other feature crossings must be assessed, recorded below and approved by the Operations Planning Manager before use.

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12. Operational Plan Briefing: A briefing of this operational plan was conducted by

Person	Role	Nature of Briefing	Date

13. Acknowledgement of Briefing: I acknowledge that I have received a copy of the plan documents and that I have been briefed on the conditions of the Plan. I understand the operational control requirements as outlined in the plan and take responsibility for the implementation of plan conditions relevant to my responsibilities

Name	Role	Signature	Date

14. Standard Operating Procedures: The following SOP's apply to this plan. FCNSW staff and the crew must hold a copy on site whilst operating and comply with the conditions set out in each SOP.

Procedure Number	Title
1	Drainage Feature Protection
2	Exclusion Zone Boundary Management
3	Forest Mark-Up
4	Operating in Inherent Hazard Level 3 Areas
5	Log Dump Operation and Use
6	Road and Crossing Management and Wet Weather Controls
7	Safety Requirements
8	Snigging and Snig Track Construction
10	Documentation and approvals

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Operational Diary:

[illegible]

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15. Roothing Plan: Maintenance works not completed by RC must be recorded and passed onto the PA for completion and documentation. The start and finish dates of all maintenance and construction must be recorded on the individual rooding 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.

Summary of rooding requirements		
Feature	Details	Works Required
Existing roads to be used.	7,015m/7	Yes
New roads to be constructed	-	NA
Existing crossings used	-	NA
New crossings to be constructed	-	NA
Length of road >10°	-	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

Checklist of works required on roads & crossings				
Road/Crossing Name	Works Required	Date Started	Date Finished	Initials
Cockatoo Road (length = 3,176m) <i>FCNSW Responsibility</i>	Grade and shape road. Re-instate mitre drains and table drains. Clear inlets and outlets of culverts. Refer to Road Plan map. Install 4 new culverts at: E 753695 N 5871054 E 753135 N 5870730 E 753071 N 5870766 E 752817 N 5870705 Install 9 new mitre drains at: E 753635 N 5870986 Both sides E 753545 N 5870878 South side E 752646 N 5870584 South side E 752529 N 5870520 North side E 752374 N 5870257 Both sides E 752206 N 5869756 Both sides E 752180 N 5869696 East side E 752169 N 5869632 West side E 752388 N 5869205 West side RC/PA Comments:			
64/1 Rd (length = 252m) <i>Contractor Responsibility</i>	Clear up to 3m to facilitate truck movements. Grade and shape road. Re-instate table drains. Install drainage to meet EPL requirements. RC/PA Comments:			

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64/2 Rd (length = 1,123m) <i>Contractor Responsibility</i>	Clear up to 3m to facilitate truck movements. Grade and shape road. Re-instate table drains. Install drainage to meet EPL requirements. RC/PA Comments:			
64/3 Rd (length = 310m) <i>Contractor Responsibility</i>	Clear up to 3m to facilitate truck movements. Grade and shape road. Re-instate table drains. Install drainage to meet EPL requirements. RC/PA Comments:			
Mountain Road (length = 1,769m) <i>FCNSW Responsibility</i>	Grade and shape road. Re-instate mitre drains and table drains. Clear inlets and outlets of culverts. Refer to Road Plan map. The section of Mountain Road to the east of dump R is not licensed, but daylighting of up to 3m either side is permitted. Install 6 new culverts at: E 754555 N 5870284 E 754438 N 5870271 E 754318 N 5870357 E 754230 N 5870495 E 754032* N 5870485 E 753748 N 5870748 * <i>may be installed as a mitre drain on both sides of road</i> Install 2 new mitre drains at: E 754375 N 5870292 Both sides E 753714 N 5870785 East side RC/PA Comments:			
64/4 Rd (length = 270m) <i>Contractor Responsibility</i>	Clear up to 3m to facilitate truck movements. Grade and shape road. Re-instate table drains. Install drainage to meet EPL requirements. RC/PA Comments:			
64/5 Rd (length = 115m) <i>Contractor Responsibility</i>	Clear up to 3m to facilitate truck movements. Grade and shape road. Re-instate table drains. Install drainage to meet EPL requirements. RC/PA Comments:			

