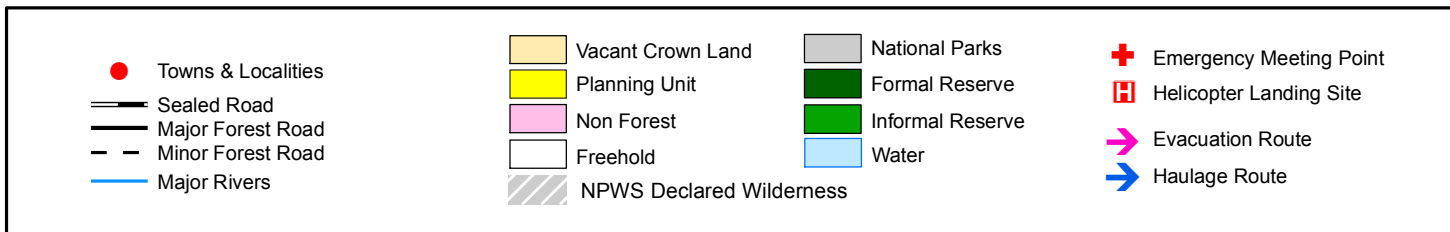
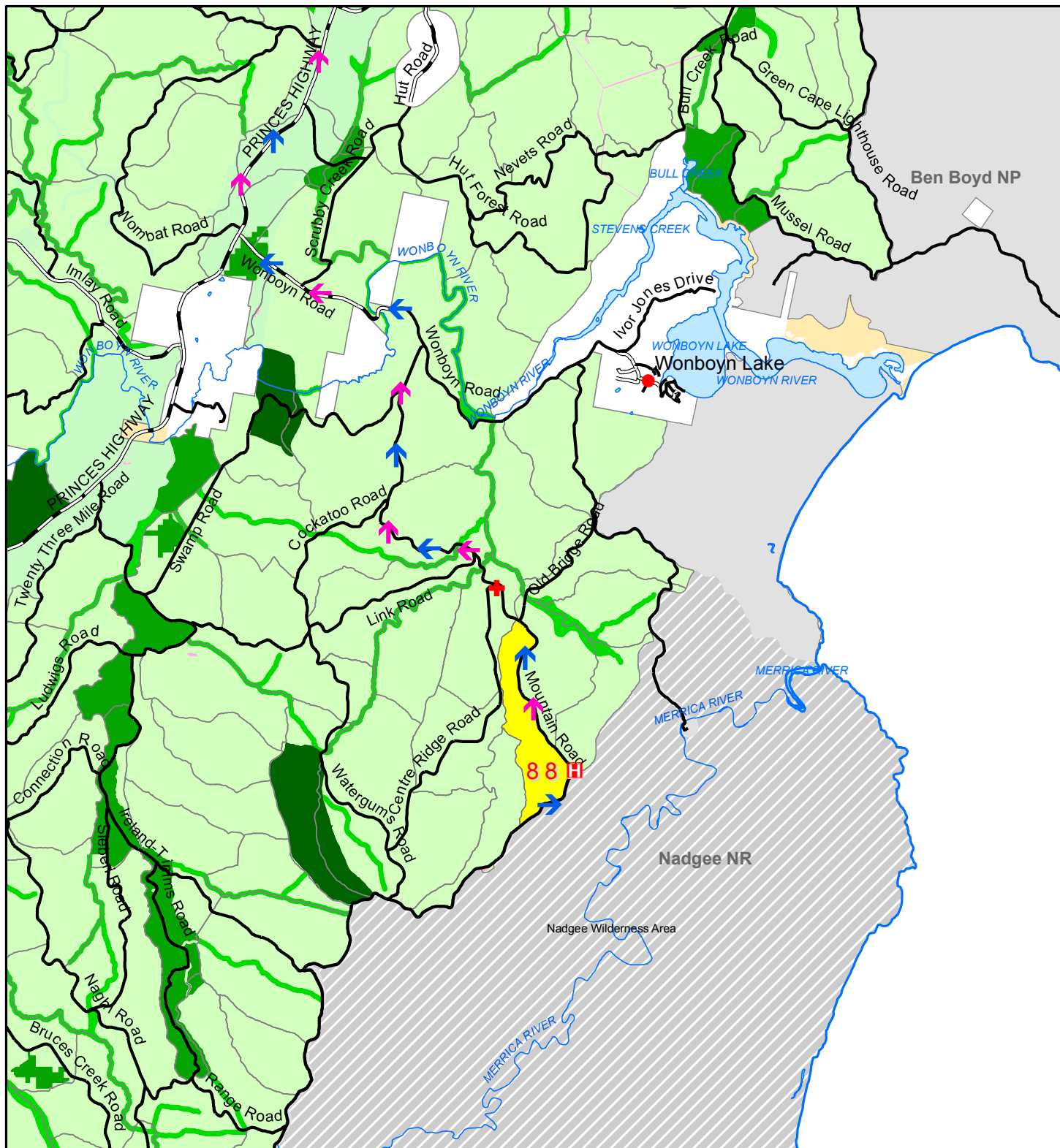


# LOCALITY MAP

Compartment 88  
 State Forest: Nadgee No:125  
 EDEN IFOA EDEN MANAGEMENT AREA  
 Scale: 1:100,000



# Harvest Plan Operational Map

Compartment: 88

State Forest: Nadgee No: 125

Eden IFOA

Map Sheet: Narrabarba 8823-2N

Prepared By:

Megan Costello

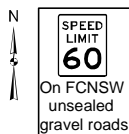


Version: 1

PLANNING SUPERVISOR APPROVAL

APPROVED: LEE BLESSINGTON

DATE: 18 / 06 / 2015



## LEGEND

### BOUNDARIES

- State Forest Boundary
- Compartment Boundary

### ROADS

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

### DUMPS & CROSSINGS

- Loading Bay/Turning Circle
- Existing Crossing

### DRAINAGE

- Mapped LIC Drainage

### NET HARVEST AREA

- Thinning (regrowth layer)
- Thinning

### NON HARVEST AREA

- Harvesting Protection (FMZ 3A)
- Special Prescription (Zone 3B)
- Ridge & Headwater Habitat (40m)
- Probable Heath & Exclusion Zone (10m)
- Probable Rock & Exclusion Zone (40m)
- Owl Landscape
- Southern Brown Bandicoot Habitat (Indicative)
- Long-nosed Potoroo Retention Area

### TENURE

- NPWS Declared Wilderness
- National Park Estate

### MAP FEATURES

- Rocky Terrain

### SAFETY POINTS

- Helicopter Landing Area

### FAUNA FEATURES

- Sooty Owl
- Yellow-bellied Glider (Heard)
- Glossy Black-Cockatoo (Feed Tree)
- Gang-gang Cockatoo
- Long-nosed Potoroo
- Glossy Black-Cockatoo

Scale: 1:15,000  
Contour Interval 10m



**DRAINAGE FEATURE PROTECTION (EPL IHL 1 & TSL). NOTE: THE GREATER OF THE WIDTHS (BOLD) MUST APPLY**

Feature	Filter Strip (EPL)	Stream Exclusion Zone (TSL)
Unmapped	<b>10m</b>	Nil
1st Order	10m	<b>10m</b>
2nd order	15m	<b>20m</b>
3rd order	20m	<b>30m</b>
4th order	20m	<b>50m</b>



Harvest Plan Operational Map (PA)

Compartment: 88

State Forest: Nadgee No: 125

Eden IFOA

Map Sheet: Narrabarba 8823-2N

Prepared By: Megan Costello



LEGEND

BOUNDARIES

- State Forest Boundary
- Compartment Boundary

ROADS

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

DUMPS & CROSSINGS

- Loading Bay/Turning Circle
- Existing Crossing

DRAINAGE

- Mapped LIC Drainage

NET HARVEST AREA

- Thinning (regrowth layer)
- Thinning

NON HARVEST AREA

- Harvesting Protection (FMZ 3A)
- Special Prescription (Zone 3B)
- Ridge & Headwater Habitat (40m)
- Probable Heath & Exclusion Zone (10m)
- Probable Rock & Exclusion Zone (40m)
- Owl Landscape
- Southern Brown Bandicoot Habitat (Indicative)
- Long-nosed Potoroo Retention Area

TENURE

- NPWS Declared Wilderness
- National Park Estate

MAP FEATURES

- Rocky Terrain

SAFETY POINTS

- Helicopter Landing Area

FAUNA FEATURES

- Sooty Owl
- Yellow-bellied Glider (Heard)
- Glossy Black-Cockatoo (Feed Tree)
- Gang-gang Cockatoo
- Long-nosed Potoroo
- Glossy Black-Cockatoo

Scale: 1:15,000  
Contour Interval 10m



DRAINAGE FEATURE PROTECTION (EPL IHL 1 & TSL). NOTE: THE GREATER OF THE WIDTHS (BOLD) MUST APPLY

Feature	Filter Strip (EPL)	Stream Exclusion Zone (TSL)
Unmapped	<b>10m</b>	Nil
1st Order	10m	<b>10m</b>
2nd order	15m	<b>20m</b>
3rd order	20m	<b>30m</b>
4th order	20m	<b>50m</b>

# Harvest Plan Forest Type Map

Compartment: 88

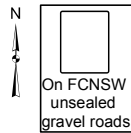
State Forest: Nadgee No: 125

Eden IFOA

Map Sheet: Narrabarba 8823-2N

Prepared By:

Megan Costello



## LEGEND

### BOUNDARIES

- State Forest Boundary
- Compartment Boundary

### ROADS

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

### DUMPS & CROSSINGS

- Loading Bay/Turning Circle
- Existing Crossing

### DRAINAGE

- Mapped LIC Drainage

### TENURE

- NPWS Declared Wilderness
- National Park Estate

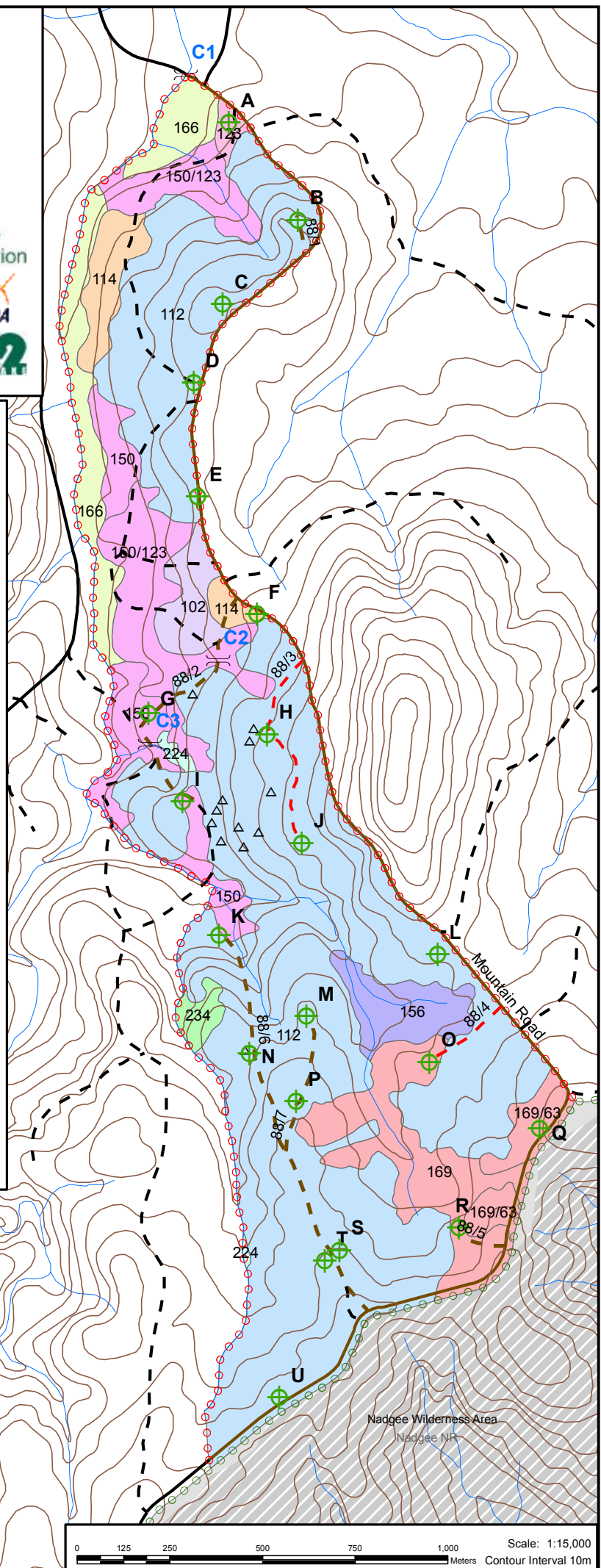
### MAP FEATURES

- Rocky Terrain

### BROAD FOREST TYPE

- 102 - Yertchuck
- 112 - Silvertop Ash
- 114 - Silvertop Ash - Stringybark
- 123 - Coastal Stringybark
- 150 - Messmate
- 156 - Brown Barrel/Messmate - Ash
- 166 - River Peppermint
- 169 - Yellow Stringybark
- 224 - Scrub
- 234 - Rock

Broad Forestry Types	Gross Ha.
102 Yertchuk	4.0
112 Silvertop Ash	126.1
114 Silvertop Ash - Stringybark	5.3
123 Coastal Stringybark	1.0
150 Messmate	10.2
150/123 Messmate / Coastal Stringybark	16.0
156 Brown Barrel / Messmate - Ash	5.5
166 River Peppermint	10.5
169 Yellow Stringybark	13.8
169/63 River Peppermint / Woollybutt	4.4
224 Scrub	0.6
234 Rock	1.6



# Harvest Plan Indicative Habitat Class Map

**Compartment: 88**

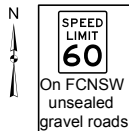
State Forest: Nadgee No: 125

Eden IFOA

Map Sheet: Narrabarba 8823-2N

Prepared By:

Megan Costello



## LEGEND

### BOUNDARIES

- ○ ○ State Forest Boundary
- ○ ○ Compartment Boundary

### ROADS

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

### DUMPS & CROSSINGS

- ⊕ Loading Bay/Turning Circle
- ≡ Existing Crossing

### DRAINAGE

- Mapped LIC Drainage

### TENURE

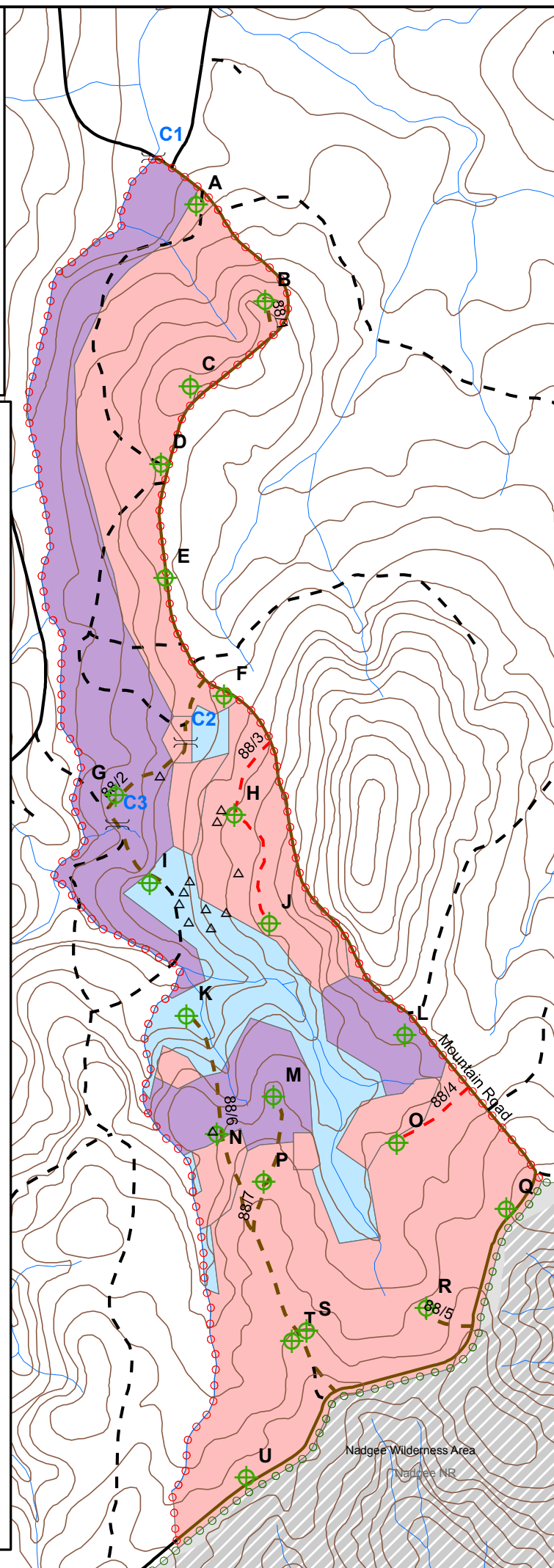
- ▨ NPWS Declared Wilderness
- ▨ National Park Estate

### MAP FEATURES

- △ Rocky Terrain

### HABITAT CLASS

- High
- Moderate
- Low



Scale: 1:15,000  
Contour Interval 10m





# Road Plan Operational Map 1 of 2

★ **Compartment: 88**

★ **State Forest: Nadgee No: 125**

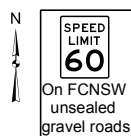
Eden IFOA

Map Sheet: Narrabarba 8823-2N



Prepared By:

Megan Costello



## LEGEND

### BOUNDARIES

- State Forest Boundary
- Compartment Boundary

### ROADS

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

### DUMPS & CROSSINGS

- ⊕ Loading Bay/Turning Circle
- Existing Crossing

### DRAINAGE

- Mapped LIC Drainage

### NET HARVEST AREA

- Thinning (regrowth layer)
- Thinning

### NON HARVEST AREA

- Harvesting Protection (FMZ 3A)
- Special Prescription (Zone 3B)
- Ridge & Headwater Habitat (40m)
- Probable Heath & Exclusion Zone (10m)
- Probable Rock & Exclusion Zone (40m)
- Owl Landscape
- Southern Brown Bandicoot Habitat (Indicative)
- Long-nosed Potoroo Retention Area

### TENURE

- NPWS Declared Wilderness
- National Park Estate

### MAP FEATURES

- △ Rocky Terrain

### SAFETY POINTS

- ⊞ Helicopter Landing Area

### FAUNA FEATURES

- ⊗ Sooty Owl
- ◆ Yellow-bellied Glider (Heard)
- ★ Glossy Black-Cockatoo (Feed Tree)
- ★ Gang-gang Cockatoo
- ★ Long-nosed Potoroo
- ★ Glossy Black-Cockatoo

Scale: 1:10,000  
Contour Interval 10m



## ROAD DRAINAGE FEATURES

- Existing Culvert
- Existing Mitre Drain
- New Culvert
- New Mitre Drain

**DRAINAGE FEATURE PROTECTION (EPL IHL 1 & TSL). NOTE: THE GREATER OF THE WIDTHS (BOLD) MUST APPLY**

Feature	Filter Strip (EPL)	Stream Exclusion Zone (TSL)
Unmapped	<b>10m</b>	Nil
1st Order	10m	10m
2nd order	15m	<b>20m</b>
3rd order	20m	<b>30m</b>
4th order	20m	<b>50m</b>

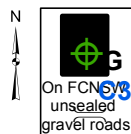
# Road Plan Operational Map 2 of 2

Compartment: 88

State Forest: Nadgee No: 125

Eden IFOA

Map Sheet: Narrabarba 8823-2N



Prepared By:

Megan Costello

## ROAD DRAINAGE FEATURES

- Existing Culvert
- Existing Mitre Drain
- New Culvert
- New Mitre Drain

## LEGEND

### BOUNDARIES

- State Forest Boundary
- Compartment Boundary

### ROADS

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

### DUMPS & CROSSINGS

- Loading Bay/Turning Circle
- Existing Crossing

### DRAINAGE

- Mapped LIC Drainage

### NET HARVEST AREA

- Thinning (regrowth layer)
- Thinning

### NON HARVEST AREA

- Harvesting Protection (FMZ 3A)
- Special Prescription (Zone 3B)
- Ridge & Headwater Habitat (40m)
- Probable Heath & Exclusion Zone (10m)
- Probable Rock & Exclusion Zone (40m)
- Owl Landscape
- Southern Brown Bandicoot Habitat (Indicative)
- Long-nosed Potoroo Retention Area

### TENURE

- NPWS Declared Wilderness
- National Park Estate

### MAP FEATURES

- Rocky Terrain

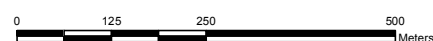
### SAFETY POINTS

- Helicopter Landing Area

### FAUNA FEATURES

- Sooty Owl
- Yellow-bellied Glider (Heard)
- Glossy Black-Cockatoo (Feed Tree)
- Gang-gang Cockatoo
- Long-nosed Potoroo
- Glossy Black-Cockatoo

Scale: 1:10,000  
Contour Interval 10m



## DRAINAGE FEATURE PROTECTION (EPL IHL 1 & TSL). NOTE: THE GREATER OF THE WIDTHS (BOLD) MUST APPLY

Feature	Filter Strip (EPL)	Stream Exclusion Zone (TSL)
Unmapped	<b>10m</b>	Nil
1st Order	10m	<b>10m</b>
2nd order	15m	<b>20m</b>
3rd order	20m	<b>30m</b>
4th order	20m	<b>50m</b>



## HARDWOOD FORESTS- EDEN IFOA HARVESTING PLAN

### Nadgee State Forest – Compartment 88

#### 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 Eden apply to this operation.

Prepared By: Harvest Planner	Megan Costello	Approved By: Planning Supervisor	Lee Blessington
Signature	Megan Costello	Signature	Lee Blessington
Date	18/06/2015	Date	18/06/2015

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, and Roding.

#### Description of Proposal

##### Harvesting of hardwood forest

##### Thinning of Regrowth Hardwood Forest:

Overstocked advanced regrowth stands originating from past logging activities and wildfire events will be mechanically thinned under site specific silvicultural regimes aimed at retaining the highest quality future sawlogs. Thinning reduces the number of competing stems in a stand and concentrates the growth potential onto the remaining crop trees. This process will maintain the uniform age structure that characterises regrowth forests.

This operation will be licensed under the EPL with notification sent to the regulatory authorities as per clause 23 of Integrated Forestry Operations Approval (IFOA).

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

**Attachment 2:** Roding plan prescribes roding requirements for this harvesting operation.



**Abbreviations used in this plan**

PA = Production Assistant, PtS= Protection Supervisor, PS = Production Supervisor, RC = Rooding Coordinator, IFOA = Integrated Forestry Operations Approval.

**Area Identification and Yield Estimates**

State Forest	Compartment/s	Coupe/s	IFOA Region	Management Area	Certification
Nadgee	88	NA	Eden	Eden	AS4708:2007 ISO 14001

	<b>Cpt</b>
Plan Compartment ID	<b>88</b>
Gross Area (ha)	198.9
Net Harvest Area (ha)	176.0
Estimated Yield Pulp (t)	17,263 t
Estimated Yield Sawlog (m3)	0 m3

**Slope Classes (percent of harvest area)**

	<b>Cpt 88</b>
<b>Slope Class</b>	<b>% of harvest area</b>
0-20°	99.6
20-25 °	0.3
25-30 °	0.1



## ATTACHMENT 1: SITE SAFETY PLAN

Worksite Information			
Is this Declared Hunting Area: Yes		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			
<p>This plan identifies haulage from the compartment will be north via Mountain Road (FCNSW owned) turning left onto Wonboyn Road (shire owned). Haulage will continue from Wonboyn Road onto Princes Hwy turning right onto Edrom Road (100km/hr Road). The intersection of Mountain Road and Wonboyn Road has been assessed as achieving a minimum of 200m sight distance on both approaches. Therefore 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><b>Dust, noise and school bus routes</b>  <b>Dust and noise</b> – 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.  <b>School bus route</b> - Wonboyn road is used by school buses 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.</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. Hazardous or dead trees	<b>Refer to FCNSW operational safety standard OSS010.</b> 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 <b>Contractor is responsible for implementing control strategies during harvesting.</b>		
3. Overhead hazards associated with dumps	<b>Refer to FCNSW operational safety standard OSS010.</b> Assess overhead hazard within two tree lengths of the dump. Assess risk, & if necessary remove hazard or relocate dump site. <b>Contractor is responsible for implementing control strategies during harvesting.</b>		
4. 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.		
5. Trucks colliding with oncoming school buses on Wonboyn Road weekdays 7:30-8.30am and 3.30-4:30 pm.	Use UHF channel 3 (channel used by school buses) whilst travelling along Wonboyn Road. When approaching corners communicate trucks location and/or direction of travel to alert bus drivers.		

- **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: Telstra		Satellite: N/A
GPS Lat/Long: 37° 18' 10.46" S / 149° 53' 30.5" E	MGA: 756306E 5867602N	Datum: GDA 94	Zone: 55
Location description: Junction of 88/2 Road and Mountain Road			
Emergency meeting point for ambulance / police (refer to attached locality map)			
GPS Lat/Long: 37° 17' 3.52" S / 149° 53' 5.96" E	MGA: 755765E 5869684N	Datum: GDA 94	Zone: 55
Location description: Intersection of Mountain Road and Centre Ridge Road.			
Helicopter landing place (refer to attached locality map)			
GPS Lat/Long: 37° 18' 53.42" S / 149° 54' 8.45" E			
Location description: Mountain Road near border with Nadgee Wilderness Area			
Procedures to obtain ambulance assistance			
<ol style="list-style-type: none"> <li>1. Dial 000</li> <li>2. If there is no mobile coverage, dial 112 (which will work on any mobile phone system).</li> <li>3. If no response on 112: <ul style="list-style-type: none"> <li>• use a radio link (TARA, be discrete with personal information)</li> <li>• move to an area with mobile coverage</li> <li>• find a landline</li> <li>• use another network (e.g. a contractor's VHF radio)</li> </ul> </li> </ol>		<p>Contact nearest Forestry Corporation office on:</p> <p>Channel: 247</p> <p>Telephone: 1300 880 548</p> <p>Give details of the situation and ask for a 000 call to be placed.</p>	
000 operator question:		Response:	
1. Police, Fire, Ambulance?		NSW Ambulance,	
2. Suburb?		State Forest name: Nadgee Nearest town or locality: Kiah Nearest ambulance station: Eden	
3. Address?		Mountain Road	
4. Nearest road junction/cross street?		Mountain Road and Wonboyn Road	
5. Local government area?		Bega Valley	
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 Eden head south on the Princes Highway travel approx. 23km to intersection with Wonboyn Road (on left). Drive 6.3km along Wonboyn Road to intersection with Mountain Road (on left). Continue driving 5.7km along Mountain Road until the intersection with Centre Ridge Road.			
8. 4WD ambulance required Y		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:			

<b>Silviculture and Harvesting Prescriptions</b>
--

Year	1975	1980	1996	2008
TSI	X	X	X	X
HR Burning	X	X	Ö	Ö
Wildfires	X	Ö	X	X
Logging m <sup>3</sup>	12439	0	0	0

Ö - applies, X – not applicable

		Pre-thinning			Removed			Post-thinning	
Cmpt No.	Indicative Thinnable Area (ha)	Stock (stems/ha)	B.A. (m2/ha)	Vol/Ha (m3/ha)	Stock (stems/ha)	B.A. (m2/ha)	Vol/Ha (m3/ha)	Stock (stems/ha)	B.A. (m2/ha)
88	176.0	887	47.8	314.8	637	18.9	117.7	250	28.9

Source: Based on Operational Inventory Data 1997 [Reden].

## **Silvicultural Planning**

Compartment 88 was harvested under a modified shelterwood system in 1975. Combined with a wildfire event in 1980, this has resulted in stands of even-aged advanced regrowth with scattered mature and overmature individual trees. The regrowth ranges from 104mm to a maximum of 380mm in diameter, 11-26m in height and is highly stocked.

The species mix is comprised of silvertop ash and stringybarks with messmate and river peppermint in the riparian areas.

The even-aged stands of advance regrowth described above will be thinned with the aim of retaining the highest quality future sawlogs and reducing the number of competing stems in the stand to concentrate the growth potential onto the remaining trees.

## **Harvesting Prescription**

Stand type	% of net area	Area (refer to HPOM for details)	Treatment (% INT, THIN)
Regrowth (even aged)	100%	Net harvest area	<ul style="list-style-type: none"> <li>• Thinning from below.</li> <li>• Refer to Standard Harvest Planning Conditions for more detail.</li> </ul>

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

## **IFOA Limits**

The thinning harvesting operation is in accordance with IFOA Part 1 Condition 5 (6) and Part 5 (1).

The PA will ensure that TSL tree retention prescriptions are met concurrent with harvesting operations.

## **Special Requirements**

### **Non-harvest areas**

The HPOM indicates the non-harvest areas in the compartments, as detailed in the legend. Harvesting disturbance is not permitted in non-harvest areas unless authorised by the Planning Supervisor.

### **Noxious Weeds/Disease/Pests Hygiene Requirements**

Compartment 88 is within Bega Valley/Cooma-Monaro 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 BegaValley/Cooma-Monaro 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.



## Rocky Terrain

Rocky terrain occurs within the net planned area. All rocky terrain shown on the HPOM was assessed at the planning stage and is unlikely to meet the definition of a rocky outcrop or cliff. PA will continue to conduct on the ground mark-up and searches and report back to foresters/ecologist any feature requiring further investigation.

## National Parks and Nature Reserves

Nadgee Wilderness Area neighbours compartment 88 to the south. The boundary between the Wilderness Area and compartment 88 is the southern edge of a 20 metre wide road maintenance corridor which runs parallel to Mountain Road.

Within the road maintenance corridor the only activities allowed are normal road maintenance (e.g.: road side clearing, road drainage and road re-alignment). Harvesting is NOT permitted within the road corridor. For the purpose of the harvesting activities within compartment 88, the boundary is Mountain Road.

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

- Harvesting debris must not be left within five metres of the boundary fence lines.
- The contractor must repair any damage to fences.
- Access roads must be maintained free of debris and in a trafficable state.
- Boundaries must be marked in the field.

## Forest Management Zoning

FMZ 4- General Management (normal harvesting prescriptions apply) occur within the compartment. Refer to HPOM for more detail.

## IFOA Required Approval of Forestry Activities

Planning Supervisor approvals have been obtained for road re-opening and routine road maintenance and log haulage and their locations are indicated on the HPOM stream crossings C1 and C3. No other crossings of these features are approved. 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.

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

## Cultural Heritage

**Cultural Heritage** - All relevant representatives have been consulted &/or inspected Compartment 88.

## Flora and Fauna

### Refer to TSL Booklet for Conditions

#### Mark-Up Conditions

During the pre-harvest mark up the PA must search for and record threatened species habitat features consistent with Conditions 5.2 and 8.6 of the TSL. Searches for threatened species features must be conducted within that portion of the net planned area where harvesting will occur, and within 50 metres outside this area (e.g. HCVOG, etc.) (conditions 5.1, 5.2 of the TSL).

Where any of these features are found, the feature must be recorded, the Harvesting Plan, including the HPOM, must be amended accordingly and the appropriate condition applied.

#### 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: **Glossy Black-Cockatoo** (*Calyptorhynchus lathami*), **Eastern False Pipistrelle** (*Falsistrellus tasmaniensis*), and **Gang Gang Cockatoo** (*Callocephalon fimbriatum*).

#### Tree Retention-Non-Regrowth Zone

The non-regrowth zone applies to the entire net harvest area. The PA is to mark as per Condition 5.6 of the TSL, in conjunction with indicative Habitat Quality Class Map and on ground assessment. Where the density of habitat trees specified in the table are not available, retain the existing habitat trees plus additional trees of the largest dbhob to meet the required retention rate.

Habitat Quality	Hollow Bearing Tree/ 2ha	TSL Condition	Recruitment Trees/ 2ha	TSL Condition	Protection of Retained Trees	TSL Condition (only if safe)	Dead Standing Tree	TSL Condition	Significant Food Resource	TSL Condition
<b>High</b>	12	5.6g)i	12	5.6h)i	0	5.6l	0	5.6j	0	5.6 k
<b>Medium</b>	8	5.6g)ii	8	5.6 h)ii	0	5.6 l	0	5.6j	0	5.6 k
<b>Low</b>	4	5.6g)iii	4	5.6 h)iii	0	5.6 l	0	5.6j	0	5.6 k

0 - Condition applies

#### General exclusion zones

General exclusions as listed below are shown on the HPOM.

Feature/Condition	TSL cond'n	Occurs within Planning Unit
<b>Rainforest</b>	5.4	Rainforest is not mapped within the compartment(s) #.
<b>Riparian Protection Zones</b>	5.7	Yes
<b>Ridge &amp; Headwater Habitat</b>	5.8	Yes

<b>Wetlands</b>	5.9	Has been assessed & is unlikely to occur in the field. May require further investigation#.
<b>Heath and Scrub</b>	5.10	Has been assessed as a risk that it may occur in the field. May require further investigation#.
<b>Rocky Outcrops and Cliffs</b>	5.11	Has been assessed as a risk that it may occur in the field. May require further investigation#.
<b>Endangered Ecological Community</b>	NA	Has been assessed & is unlikely to occur in the field. May require further investigation#. <b>Removal of timber, harvesting machinery and post harvest burning must be excluded from all areas of EEC.</b>

**#PA 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**

<b>Feature</b>	<b>Records in Cpt 88</b>	<b>Licence conditions under the TSC Act</b>
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

#### **Species & Site-Specific Threatened Flora and Fauna Prescriptions**

Contractors and supervisory staff must immediately report any sightings of Schedule 1 and 2 species to the PS. The Harvesting Plan must be amended to include additional prescriptions if necessary. If any species requiring a site specific prescription in accordance with condition 1.2 of the TSL are detected in or within 100m of the compartment boundary cease operations immediately & Inform PS.

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 88	Licence conditions under the TSC Act or relevant Site-specific prescription
<b>Powerful Owl</b> <i>Ninox strenua</i> , <b>Barking Owl</b> <i>Ninox connivens</i> <b>Masked Owl</b> <i>Tyto novaehollandiae</i> , <b>Sooty Owl</b> <i>Tyto tenebricosa</i>	No	6.3
<b>Southern Brown Bandicoot</b> <i>Isodon obesulus</i>	No	6.5A & Species Management Plan
<b>Long-nosed Potoroo</b> <i>Potorous tridactylus</i>	Yes	6.7 Long-nosed Potoroo retained tree buffer is shown on the HPOM. <b>Harvesting and burning must be excluded from these areas.</b>
<b>Yellow-bellied Glider</b> <i>Petaurus australis</i>	No	6.13

#### 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 applies
Drainage Feature Protection	See HPOM for widths
Inherent Hazard Class	1
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

#### Log Dump Location

21 Loading Bay/Turning Circles are indicated on the HPOM. Field location of Loading Bay/Turning Circles must utilise the most level site available consistent with the location

indicated on the HPOM. Inherent hazard level 1 Conditions 26, 27, 30, and 33 of Schedule 4 of the EPL must apply.

Where operationally feasible Loading Bays/Turning Circles are to be located outside of the constructed firebreak along Mountain Road. Where this is not feasible, the contractor must re-spread all woody debris from the Loading Bay/Turning Circle into the forested area. Large woody debris is to be placed against the forest interface. Other woody debris is to be stockpiled in such a manner as to be far enough away from the forest interface to facilitate Loading Bay/Turning Circle disposals burning. The Loading Bay/Turning Circle is to be re-shaped to a smooth surface.

In the event that the firebreak is used for extraction, rutting must not occur. If extraction results in significant ground disturbance that will inhibit the FCNSW annual slashing program, the contractor must re-shape the extraction track to the original ground surface condition.

### **Expected Felling/ Extraction & Loading Method**

The expected felling method is mechanical, extraction and loading method is by forwarder.

### **Drainage Feature Crossings**

Three road crossings (C1, C2, and C3) are approved for use on drainage features. (Refer to HPOM). Crossing details are contained in Attachment 2 of this Plan.

### **Mass Movement**

Compartment 88 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 two un-stable gully stuffers on road crossings C2 and C3 in the compartments. This is further detailed in the Crossing details in Attachment 2 of this Plan.

Condition 47 of Schedule 4 of the EPL must apply.

## **Road Works**

The roading and crossing works must be undertaken, by contractor or FCNSW staff, prior to the commencement of harvesting activity in the area served by the road or crossing. The roading plan specifies who is responsible for supervising and paying for the maintenance works.

Within the compartment boundary only roads that are shown on the HPOM as EPL standard or sealed may be used for haulage. **Refer to EPL Schedule 5 – Operating Conditions for Roads.**

Roads within the compartment boundary may be used with PA approval for snigging or extraction provided they are drained to EPL specifications.

## **Legal Conditions**

In 1999, the Commonwealth and NSW Governments signed a Eden Regional Forest Agreement which, among other things, allows for the supply of timber for 20 years from public lands under the following NSW legislation:

- Forestry Act 2012, and

- Forestry & National Park Estate Act 1998

The latter Act provides for the Eden Forest Agreement and Eden Integrated Forest Operations Approval (IFOA), both approved by NSW Government Ministers. This harvest plan is issued under the authority provided within the IFOA.

The IFOA also contains three licences issued under:

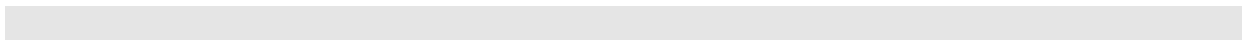
- Section 55 of the Protection of the Environment Act 1997 (EPL)
- Threatened Species Conservation Act 1995 (TSL).
- Section 220ZW of the Fisheries Management Act 1994 (FL).

This harvest plan will be managed in the field under:

- Licences issued under the Forestry Act (2012)
- Forest Practices Code part 2 (Timber Harvesting in Native Forests - 1999) and part 4 (Forest Roads and Fire Trails - 1999)
- Standard Harvest Plan Conditions for Hardwood Forest Operations under the IFOA
- FCNSW Corporate Fuel Management Plan 2008.

Harvesting operations must comply with all of the above Licences and the Code.

Further information is available from <http://www.environment.nsw.gov.au/>



**Pre Operational Briefing**

I acknowledge that I have received a copy of the Harvesting Plan for Compartment 88 in Nadgee 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 PS or his/her delegate.

Position	Name	Signature	Date

**Details to Record in PA Notes**

- Dates of commencement and cessation of logging
- Record the commencement and completion of harvesting at each dump
- Record the occurrence of temporary stopping of harvesting at each dump.
- Situations where drainage could not be completed due to saturated soils must be recorded in PA Notes.
- Record the commencement and completion of each construction, upgrading or maintenance of drainage feature crossings by snig tracks or extraction tracks.
- Bi-weekly checks of road drainage structures during haulage operations.
- Record the date of checks, drainage structure compliance and the any repairs required within the specified time period.
- Records of Threatened Flora and Fauna identified during compartment markup.
- Minor variations associated with moving or adding dumps.
- Daily events of importance eg. Instructions to crew, work activity.

**Post Harvest Mapping Features Confirmation Checklist**

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





### Snig/Extraction Track Crossing Record

Record the commencement and completion of each construction, upgrading or maintenance of watercourse/drainage line crossings by snig tracks or extraction tracks.

[illegible]

\* If soil is not stabilised within 5 days it must be recorded as a non-compliance including the reason why on a Non-Compliance Report.

If soil is saturated, temporary stabilisation must be put in place, and the instance entered into the compartment diary.

**\*\* If track edge clearing exceeds 3 metres, document the reason for field approval in the compartment diary.**

## Weekly and Bi-weekly inspection

Item Inspected	Insert dates of inspection											
	Week 1		Week 2		Week 3		Week 4		Week 5		Week 6	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Road drainage												
Road sediment controls												
Road causeways												
Road gully stuffers												
Snig gully stuffers												
PA initial												
PA presence												

**Comments:** record the item number in a box above and comment as required.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_

<b>Weekly and Bi-weekly inspection</b>
--

Item Inspected	Insert dates of inspection											
	Week 7		Week 8		Week 9		Week 10		Week 11		Week 12	
	1st	2 <sup>nd</sup>	1st	2 <sup>nd</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	1st	2 <sup>nd</sup>	1st	2 <sup>nd</sup>
Road drainage												
Road sediment controls												
Road causeways												
Road gully stuffers												
Snig gully stuffers												
PA initial												
PA presence												

**Comments:** record the item number in a box above and comment as required.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_

<b>Weekly and Bi-weekly inspection</b>
--

Item Inspected	Insert dates of inspection											
	Week 13		Week 14		Week 15		Week 16		Week 17		Week 18	
	1st	2 <sup>nd</sup>	1st	2 <sup>nd</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	1st	2 <sup>nd</sup>	1st	2 <sup>nd</sup>
Road drainage												
Road sediment controls												
Road causeways												
Road gully stuffers												
Snig gully stuffers												
PA initial												
PA presence												

**Comments:** record the item number in a box above and comment as required.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_



<b>Weekly and Bi-weekly inspection</b>
--

Item Inspected	Insert dates of inspection											
	Week 19		Week 20		Week 21		Week 22		Week 23		Week 24	
	1st	2 <sup>nd</sup>	1st	2 <sup>nd</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	1st	2 <sup>nd</sup>	1st	2 <sup>nd</sup>
Road drainage												
Road sediment controls												
Road causeways												
Road gully stuffers												
Snig gully stuffers												
PA initial												
PA presence												

**Comments:** record the item number in a box above and comment as required.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_

## PA Notes

[illegible]

<b>PA Notes (continued)</b>
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[illegible]

<b>PA Notes (continued)</b>
-----------------------------

[illegible]

<b>PA Notes (continued)</b>
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[illegible]



<b>PA Notes (continued)</b>
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[illegible]

**Clearance Certificate**

**COMPARTMENT: 88 NADGEE STATE FOREST**

To .....Production Assistant

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).....  
**Production Assistant**

**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 (PA estimate)	Number of AGS gaps created	Comments
Integrated/Modified shelterwood			
Thinning			
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**

Dump No#	Sweep 1	Sweep 2	Sweep 3	Sweep 4	Average
Post BA Average					m <sup>2</sup> /ha
Pre BA Average					47.8 m <sup>2</sup> /ha

Comply with maximum Thinning BA removal of 75%?

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	

<b>ATTACHMENT 2                      ROADING PLAN</b>
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**Summary of Roading Requirements**

Feature	Details	Works Required
Existing roads to be used.	7,014m/6	Yes
New roads to be constructed	805m/2	Yes
Existing crossings used	3	Yes
New crossings to be constructed	0	NA
Length of road >10°	0	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 PA for completion 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.

<b>CHECKLIST OF WORKS REQUIRED ON ROADS &amp; CROSSINGS</b>
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Road/Crossing Name	Works Required	Date Started	Date finished	Signature
Mountain Road (length = 4,565m) <i>FCNSW Responsibility</i>	Grade and shape road. Re-instate mitre drains. Clear inlets and outlets of culverts. Install 6 new culverts at: E 756544 N 5867208 E 756599 N 5867016 E 756656 N 5866972 E 756718 N 5866866 E 756829 N 5866747 E 756670 N 5865694  Install 12 new mitres at: E 756206    N 5869003    Both Sides E 756264    N 5868969    Both Sides E 756326    N 5868908    Both Sides E 756470    N 5868516    West side E 756377    N 5868445    West side E 756268    N 5868354    Both sides E 756184    N 5868057    West side E 756480    N 5867459    Both sides E 756919    N 5866638    Both sides			

	E 757062      N 5865989      Both sides E 757022      N 5865840      South side E 756754      N 5865721      South side  <b>RC/PA Comments:</b>			
C1 E 756175 N 5869036  <i>FCNSW Responsibility</i>	No Works Required  <b>RC/PA Comments:</b>			
88/1 Length = 110m  <i>Contractor Responsibility</i>	Remove vegetation up to 3m either side of road to facilitate truck movements. Grade and shape road. Re-establish table drains and drainage.  <b>RC/PA Comments:</b>			
88/2 Length = 727m <i>Contractor Responsibility</i>	Remove vegetation up to 3m either side of road to facilitate truck movements. Grade and shape road. Re-establish table drains and drainage. Open up end of track, south east of Loading Bay/ Turning Circle I, to stream crossing/boundary with CPT 87 to allow for potential haulage route from CPT 87. Haulage is not permitted on this section of road whilst harvesting in CPT 88.  <b>RC/PA Comments:</b>			
C2 E 756256 N 5867452 <i>Contractor Responsibility</i>	Refer to attached Crossing Form <b>RC/PA Comments:</b>			
C3 E 756071 N 5867232	Refer to attached Crossing Form <b>RC/PA Comments:</b>			



<i>Contractor Responsibility</i>				
88/3 Length = 525m  <i>Contractor Responsibility</i>	Refer to New Road Construction form <b>RC/PA Comments:</b>			
88/4 Length = 240m  <i>Contractor Responsibility</i>	Refer to New Road Construction form <b>RC/PA Comments:</b>			
88/5 Length = 132m  <i>Contractor Responsibility</i>	Remove vegetation up to 3m either side of road to facilitate truck movements. Grade and shape road. Re-establish table drains and drainage. <b>RC/PA Comments:</b>			
88/6 Length = 1,096m  <i>Contractor Responsibility</i>	Remove vegetation up to 3m either side of road to facilitate truck movements. Grade and shape road. Re-establish table drains and drainage. Existing road is significantly eroded from lack of water control. Road alignment can be adjusted to avoid eroded sections. Where re-alignment occurs the eroded section must be stabilised and drainage installed (at FCNSW cost)  Site specific measures are required for the section of road from Loading Bay/Turning Circle N to Loading Bay/Turning Circle K. The drainage spacing is to be reduced to half the distance of water flow along a road surface or table drain as specified in the EPL. <b>RC/PA Comments:</b>			
88/7 Length = 384m existing  <i>Contractor Responsibility</i>	Remove vegetation up to 3m either side of road to facilitate truck movements. Grade and shape road. Re-establish table drains and drainage. <b>RC/PA Comments:</b>			

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**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
88/3 Rd	565m	4m	6°	11°	0.5m	178m	No	Retain	Contractor		
88/4 Rd	240m	4m	2°	5°	-	-	No	Retain	Contractor		

**General Instructions for road construction:**

Features	Road Specifications	Additional instructions / Materials
Type of sediment trapping / soil erosion/ sediment control device to be used during construction	Natural surrounding vegetation supplemented with silt fencing, seed and mulch as required.	PA to monitor during road construction and assess requirements.
Recommended road drainage type	Recommend rubber flaps if >5 degrees. Rollovers or mitres if < or = 5 degrees. PA to measure & mark in the field in accordance to Sch. 5 Table 1 of the EPL. Trafficable rollovers to be installed upon harvest completion	Rubber flaps during operation. Permanent trafficable rollovers to be installed upon completion of use.
Spacing of road structures to be installed	As per EPL Sch. 5, Section C, Table 1	
Soil erosion / sediment control techniques	Drainage outlets must drain onto stable surface which provides efficient sediment trapping & energy dissipation. Upon harvest completion, logging debris is to be removed from table and mitre drains so they are left in effective working order	Seed & mulch as required
Stabilisation assessment intervals	As per EPL Sch. 5, Clauses 15, 17, 19 & 20	

Drop down & dissipater required	Required where fill batter >1m as per EPL Schedule 5 Clause 36	PA to monitor. Mitres with rock dissipater recommended.
Soil stabilisation techniques of disturbed areas	Seed & mulch as required	

**Note:** Maintenance works not completed by Roding Coordinator must be recorded and passed on to the PA.

Cpt: 88 Date: 18/2/15 Location: 756261 5867455 Photo: Y

Crossing Name: C2 DL (un-mapped DL)

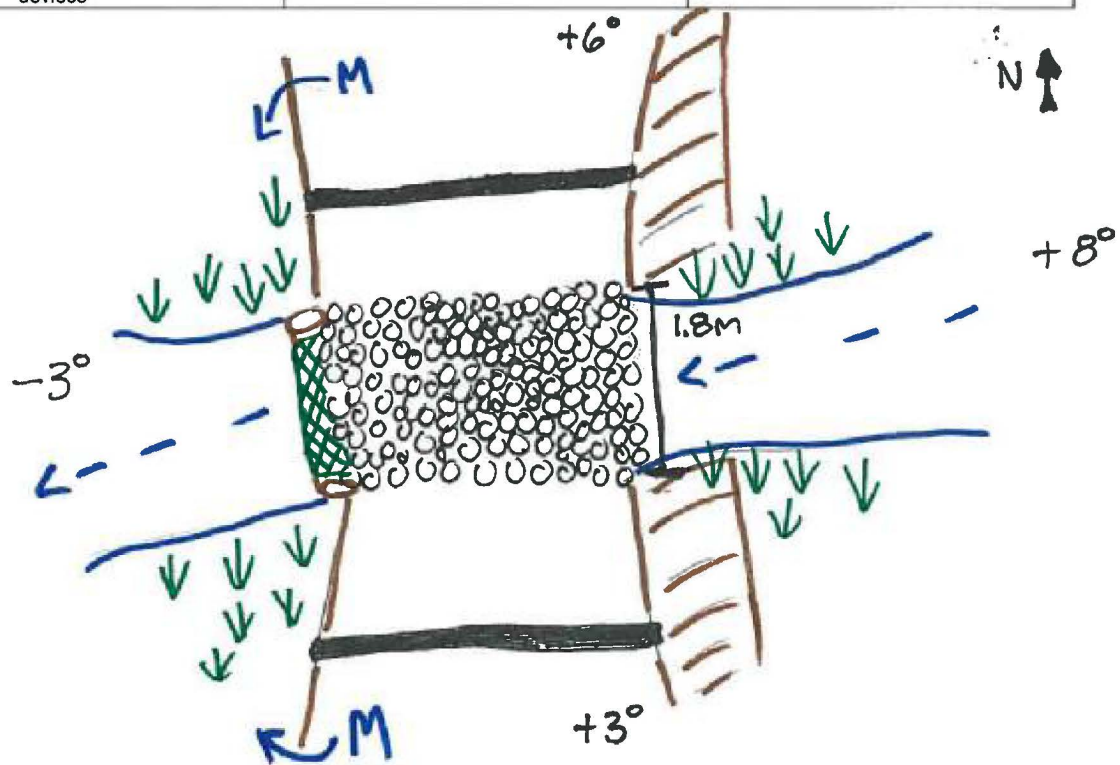
Waterway Classification: Fish Passage Class 3 – minimal fish habitat

Fisheries Licence Aquatic Habitat: Not class 1 or 2

Assessors Name: Megan Costello

Crossing Type: new culvert

Features	Works (as per EPL Sched. 5)	Plant/Materials
Structure	Failed gully stuffer – remove fill material from stream channel to existing banks. Re-established stream channel banks to allow for natural causeway crossing.	Seed and mulch Excavator Rock Silt log if required
Bed and Banks	Apply seed and mulch to disturbed areas and re-established stream banks	Seed and mulch
Erosion and Sediment Control	Install silt barriers downstream of crossing during construction.	Silt barriers
Disposal of excess spoil	Ensure spoil from failed gully stuffer is disposed outside of the SEZ. Can be used to re-align road grade. Flatten spoil and seed.	seed
Soil stabilisation within 20m	NA	NA
Road drainage within 5-30m <ul style="list-style-type: none"> <li>Type</li> <li>Outlet control</li> <li>Table drain checking devices</li> </ul>	Rubber strips and mitre drains Existing vegetation Hay bales or silt barriers	2x rubber strips Hay bales and silt barriers as required



#### Key

→Ru	Rubber strip
→M	Mitre drain
xxx	Roadside clearing
→Ro	Rollover drain
	Silt Log
○○○○○	Rock
ψ	Seeding
▽	Sediment control
∴	Gravel

Date Work Started: \_\_\_\_\_

Date Work Finished: \_\_\_\_\_

Soil stabilisation must be completed within 5 days

Record implementation date here: \_\_\_\_\_

Cpt: 88 Date: 18/2/15 Location: 756073 5867230 Photo: Y

Crossing Name: C3 DL (mapped DL)

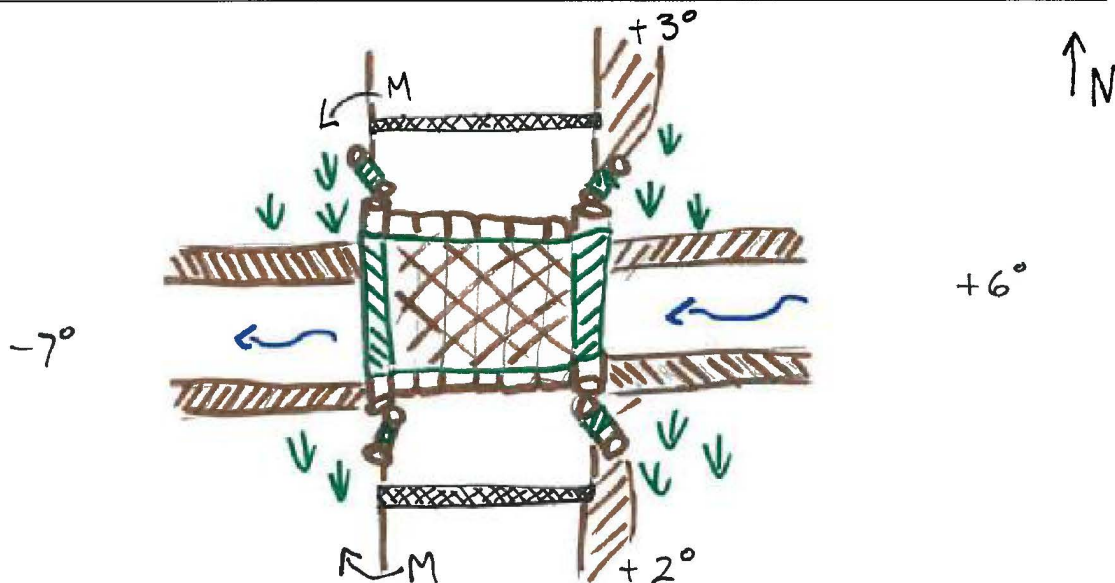
Waterway Classification: Fish Passage Class 3 – minimal fish habitat

Fisheries Licence Aquatic Habitat: Not class 1 or 2

Assessors Name: Megan Costello

Crossing Type: new bridge

Features	Works (as per EPL Sched. 5)	Plant/Materials
Structure	Failed gully stuffer – remove fill material from stream channel to re-align with adjacent existing banks. Install new 7.0m bridge. Key stringers into existing road bed and secure with posts. Lay geotextile over stringers and use compacted dirt to form a running surface. Install kerb and wing logs	Geotextile Stringers (11x 7m) Excavator Kerb logs (x2) Wing logs (x4)
Bed and Banks	Banks may require rip-rap for after gully stuffer material has been removed. Apply seed and mulch to disturbed areas	Seed and mulch Rip rap or geotextile as required
Erosion and Sediment Control	Install silt barriers downstream of crossing during construction.	Silt barriers
Disposal of excess spoil	Ensure spoil from failed gully stuffer is disposed outside of the SEZ. Flatten spoil and seed.	seed
Soil stabilisation within 20m	NA	NA
Road drainage within 5-30m <ul style="list-style-type: none"> <li>Type</li> <li>Outlet control</li> <li>Table drain checking devices</li> </ul>	Rubber strips and mitre drains Existing vegetation Hay bales or silt barriers	2x rubber strips Hay bales and silt barriers as required



Date Work Started: \_\_\_\_\_

Date Work Finished: \_\_\_\_\_

Soil stabilisation must be completed within 5 days

Record implementation date here: \_\_\_\_\_

#### Key

→ Ru	Rubber strip
→ M	Mitre drain
xxx	Roadside clearing
→ Ro	Rollover drain
□	Silt Log
ooooo	Rock
ψ	Seeding
▽	Sediment control
∴	Gravel