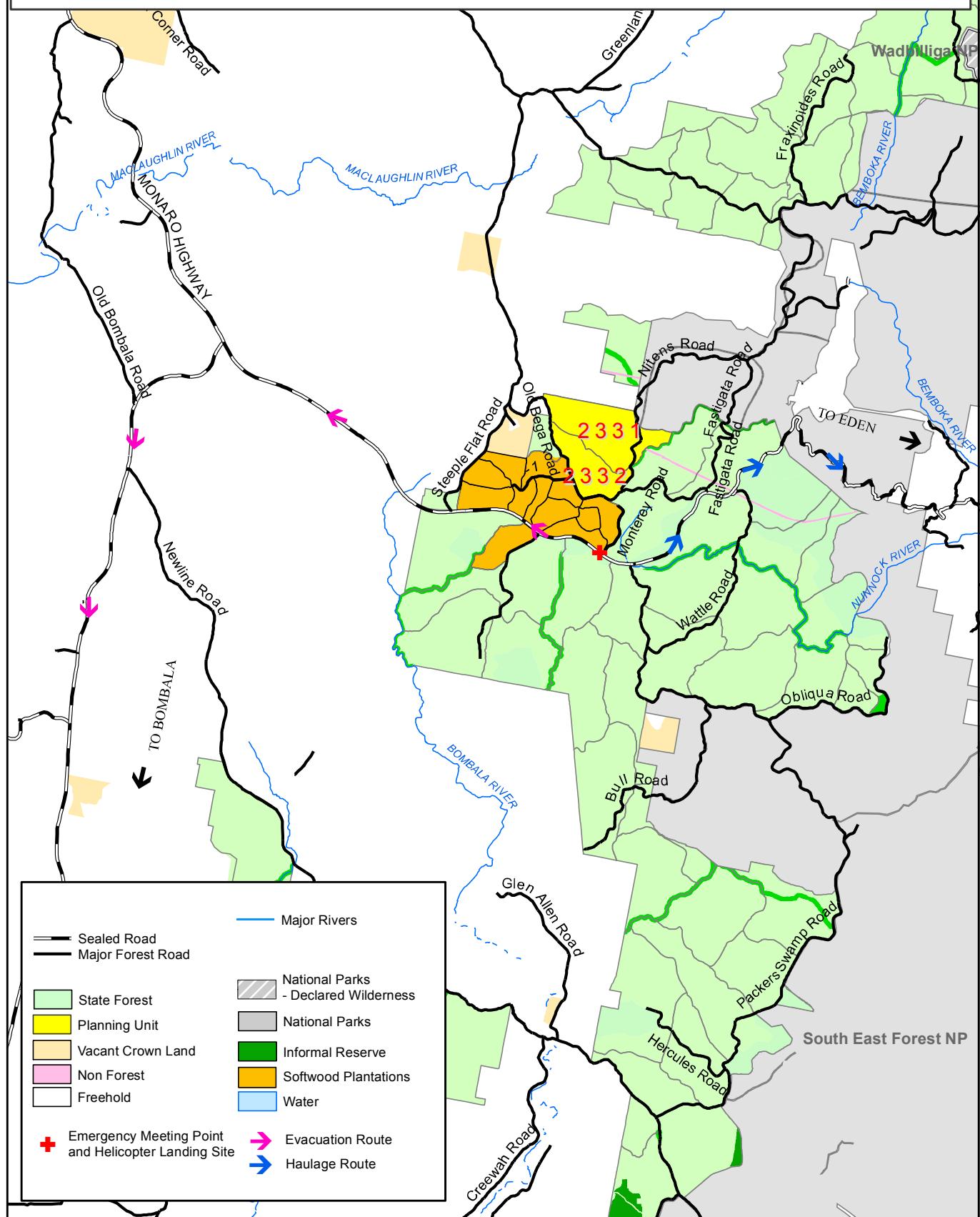


LOCALITY MAP

Compartments 2331 & 2332
Glenbog State Forest No.149

EDEN IFOA: EDEN MANAGEMENT AREA
Scale: 1:100,000



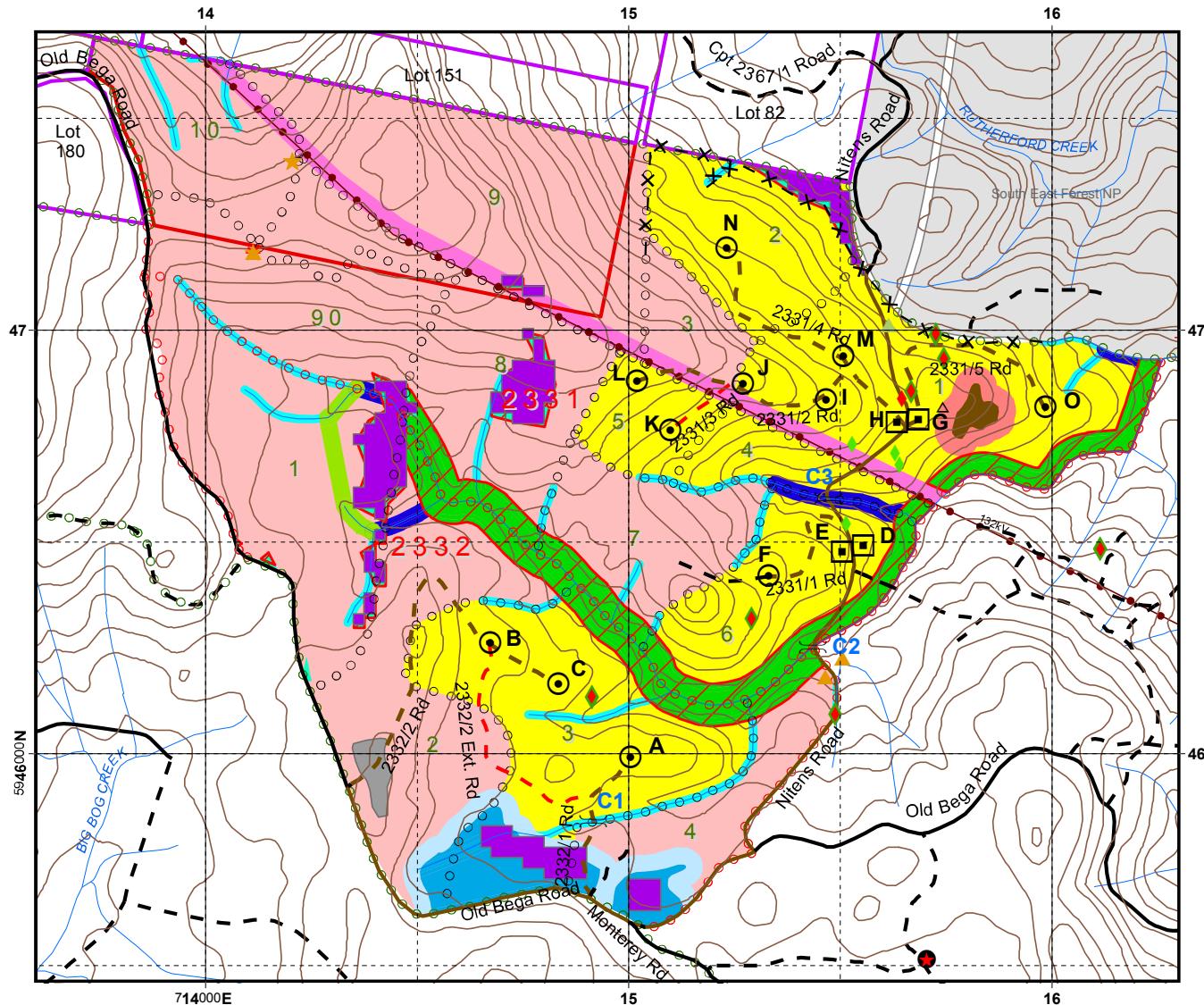
Harvest Plan Operational Map

Compartments: 2331 & 2332

State Forest: Glenbog No: 149

EDEN IFOA - Hardwood Forests

Map Sheet: NIMMITABEL 8724-1N

**ROADS**

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

DUMPS & CROSSINGS

- Temporary Dry Weather
- Temporary Wet Weather
- Existing Crossing

BOUNDARIES

- ○ ○ State Forest Boundary
- ○ ○ Compartment Boundary
- ○ ○ Coupe Boundary
- - - Proposed Control Line

MAP FEATURES

- △ Rocky Terrain
- Overhead Powerlines
- Gravel Pit
- Crown Lease

NET HARVEST AREA

- FMZ 4 - MSW

NON HARVEST AREA

- Mapped EEC - Montane Peatlands & Swamp/ Tablelands Snow Gum, Black Sallee, Candlebark & Ribbon Gum Grassy Woodland
- Owl Landscape
- Rare Forest Ecosystems
- Probable Rocky Outcrop & Exclusion Zone (0.1-0.5ha, 20m; >0.5ha, 40m)
- Probable Wetland & Exclusion Zone (>0.5 Ha, 40m)
- Harvesting Protection (FMZ 3A)
- Occupational permit - Powerline Eavesment (FMZ 7)
- Ridge & Headwater Habitat (40m)
- Excluded Forest

DRAINAGE

- Mapped LIC Drainage

FAUNA FEATURES

- ★ Gang-gang Cockatoo
- Southern Brown Bandicoot
- ▲ Flame Robin
- ▲ Olive Whistler
- * Koala
- ◆ Yellow-bellied Glider (Heard)
- ◆ Yellow-bellied Glider
- ◆ Yellow-bellied Glider (Feed Tree)

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	10m	Nil
1st Order	10m	10m
2nd order	15m	20m
3rd order	20m	30m
4th order	20m	50m

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

Harvest Plan Forest Type Map

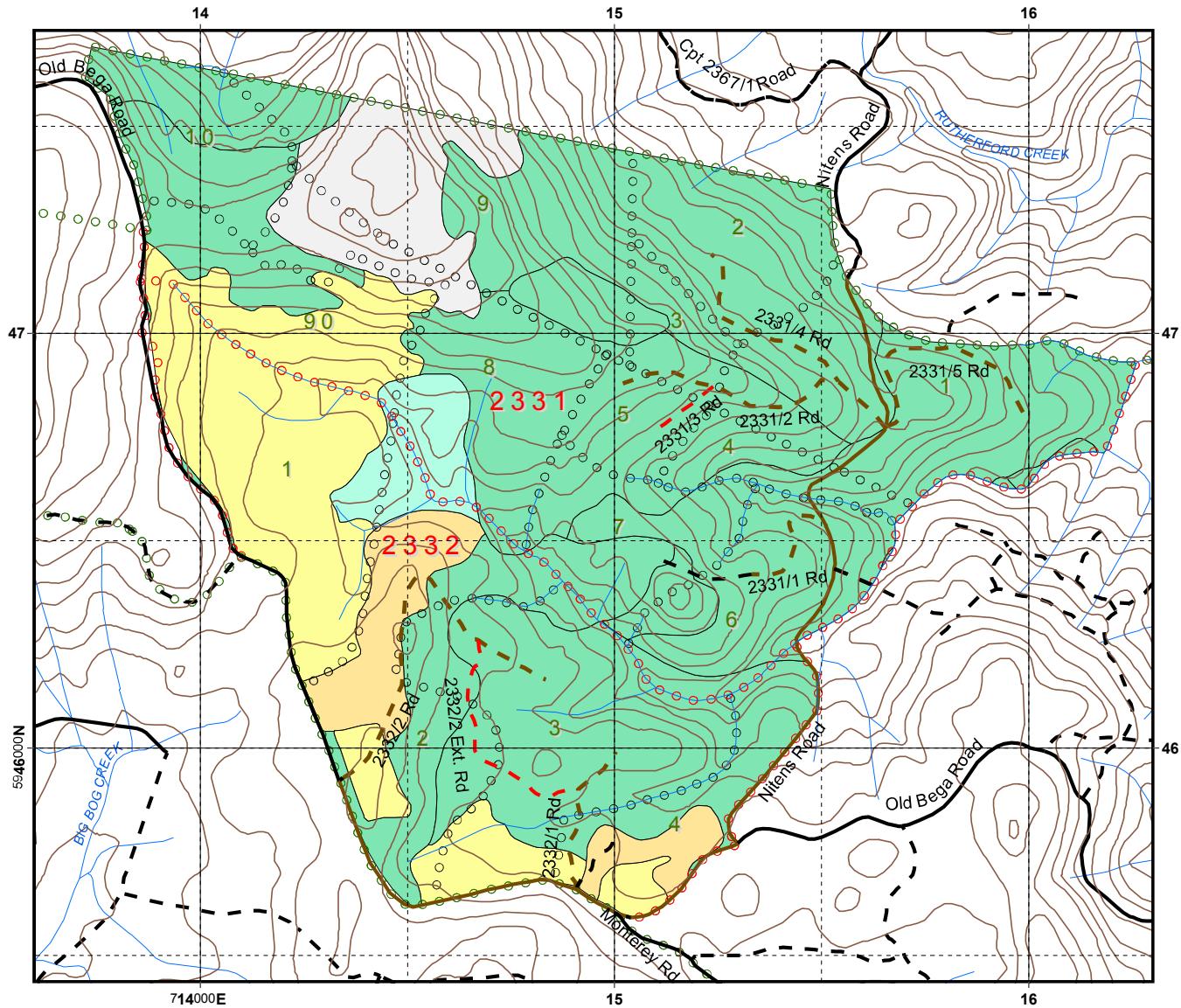
Compartments: 2331 & 2332

State Forest: Glenbog No: 149

Prepared By: Andrew Kemsley

EDEN IFOA - Hardwood Forests

Map Sheet: NIMMITABEL 8724-1N



ROADS

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

BOUNDARIES

- ○ ○ State Forest Boundary
- ○ ○ Compartment Boundary
- ○ ○ Coupe Boundary

DRAINAGE

- Mapped LIC Drainage

FOREST TYPE - RN17

- Type 111 Peppermint
- Type 131 Peppermint - Mountain / Manna Gum
- Type 140 Snow Gum - Mountain / Manna Gum
- Type 150 Messmate
- Type 151 Brown Barrel - Messmate
- Type 154 Brown Barrel
- Type 155 Brown Barrel - Gum
- Type 156 Brown Barrel / Messmate - Ash
- Type 218 Forestry Plantations
- Type 219 Settlements, Roads, gravel Pits, etc.
- Type 220 Cleared / Partially Cleared
- Type 231 Swamp

Forest Type No. | Ha.

Forest Type No.	Ha.
111	13.4
131	8.4
140	17.8
150	0.1
151	18.3
154	60.2
155	120.8
156	3.2
218	0.1
219	2.5
220	37.3
231	7.1

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

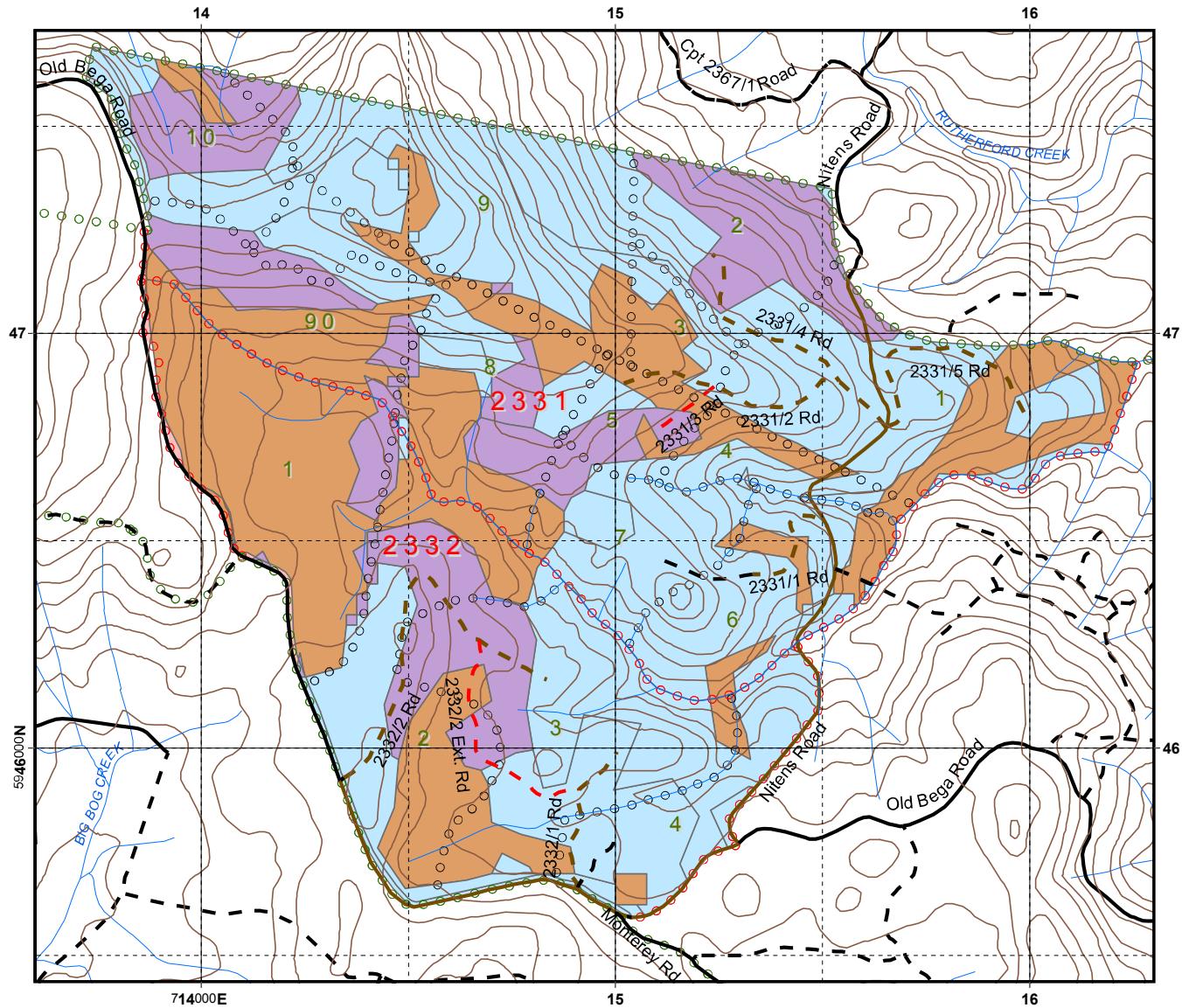
Harvest Plan Habitat Class Map (Indicative)

Compartments: 2331 & 2332

State Forest: Glenbog No: 149

Prepared By: Andrew Kemsley

EDEN IFOA - Hardwood Forests
Map Sheet: NIMMITABEL 8724-1N



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

BOUNDARIES

- ○ ○ State Forest Boundary
- ○ ○ Compartment Boundary
- ○ ○ Coupe Boundary

DRAINAGE

- Mapped LIC Drainage

HABITAT CLASS

- Unknown
- High
- Moderate
- Low

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



HARDWOOD FORESTS- EDEN IFOA HARVESTING PLAN

Glenbog State Forest - Compartments 2331 & 2332

Certification

This plan has been prepared in accordance with the Integrated Forestry Operations Approval issued under the Forestry and National Park Estate Act 1998. The Standard Harvest Plan Conditions for Hardwood Forest Operations in Southern Region, Eden apply to this operation.

Prepared By: Harvest Planner	Andrew Kemsley	Endorsed and Approved By: Planning Supervisor	Lee Blessington
Signature	Andrew Kemsley	Signature	Lee Blessington
Date	30.9.2014	Date	30.9.2014

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

Other maps included with this plan are locality, forest type and habitat quality class (Production Assistant and indicative).

Description of Proposal

Harvesting of hardwood forest

(a) Integrated Harvesting of Hardwood Forest:

Mixed-age stands dominated by a commercially mature overstorey will be harvested to create regeneration opportunities through integrated harvesting of sawlogs and pulpwood with the retention of trees for future sawlogs, fauna habitat, seed trees, visual maintenance and soil and water protection.

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: Roading plan prescribes roading requirements for this harvesting operation.

Area Identification and Yield Estimates

State Forest	Compartment/s	Coupe/s	Region	Management Area	Certification
Glenbog	2331	1, 2, 4, 5, 6	Southern	Eden	AS4708:2007 ISO 14001
Glenbog	2332	3	Southern	Eden	AS4708:2007 ISO 14001

	Cpt 2331	Cpt 2332	Total
Plan Compartment ID	20919	20920	NA
Gross Area (ha)	186.2	103.6	289.8
Net Harvest Area (ha)	63.3	22.9	86.2
Estimated Yield Pulp (t)	6000 t	2300 t	8300 t
Estimated Yield Sawlog (m3)	1250 m3	500 m3	1750 m3

Slope Classes (percent of harvest area)

Slope Class	Cpt 2331	Cpt 2332
	% of harvest area	% of harvest area
0-20°	97.0	99.8
20-25 °	3.0	0.2
25-30 °	0	0

Abbreviations used in this plan

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

**Forestry Corporation NSW– Eden IFOA
Harvesting Plan HP_ED_2331_2332_14
Compartments 2331 & 2332**

Attachment 1 – Site Safety Plan

SAFETY CONSIDERATIONS

Emergency Plan Information

- (a) **Mobile Phone reception on work site:**
 Good Poor Nil

- (b) **FCNSW Radio from work site:**
Channel No: 247
Call to: Eden Base
Call sign from: Your name
- Contractor Radio at work site:**
UHF Channel No:
Contractor Radio No:
Call to Bush Boss:

- (c) **Emergency meeting point for ambulance:**
Junction of Monterey Road & Snowy Mountains Highway.
1:100000 map sheet: Bombala 8724
MGA zone: 55
MGA Grid reference: E714893 N5944509.
Lat/Long for GPS: 36° 37' 14" S 149° 24' 11" E.

- (d) **Closest Helicopter Landing Place:**
Junction of Monterey Road & Snowy Mountains Highway.
1:100000 map sheet: Bombala 8724
MGA zone: 55
MGA Grid reference: E714893 N5944509.
Lat/Long for GPS: 36° 37' 14" S 149° 24' 11" E.

- (e) **Procedure for obtaining Ambulance assistance:**
Dial "000" OR Call 1300 880 548 Batemans Bay Forestry Office for Ambulance assistance.
Dial "112" only as an alternative to "000" if you have a GSM digital mobile phone and you are outside your own provider's GSM network coverage area.

<u>"000" Operator Question.</u>	<u>Response</u>
1. Police , Fire , Ambulance?	Ambulance.
2. <u>Suburb</u> (<i>State Forest name</i>): (<i>Nearest town or named locality</i>): (<i>Nearest Ambulance station</i>):	Glenbog Bemboka Bombala
3. <u>Address</u> : (<i>Nearest named State forest road</i>):	Monterey Road.
4. <u>Nearest Road Junction</u> :	Monterey Road and Snowy Mountains Highway.
5 <u>Local Government Area</u> :	Bega Valley Shire Council.
6. <u>Nature of the problem</u> : casualties.	Give details of accident, number and condition of
7. <u>Where is the accident</u> :	<u>Work site location – (Centre of Compartments)</u> .
MGA Grid reference:	Zone 55 E714934 N5946751.
Lat/long for GPS:	36° 36' 1" S 149° 24' 10 " E.
8. <u>Directions to navigate from Ambulance Station to meeting point</u> :	
Directions from Pambula:	
• Head North on the Monaro Highway for approx. 40.9km to Snowy Mountains Highway junction.	
• Turn right onto Snowy Mountains Highway and travel for approx. 9.1km to Monterey Road junction.	
9. <u>Injuries</u> ?:	Give detailed information about the condition of the casualty.
10. <u>Call back No.</u> :	Give your Mobile Number. or Batemans Bay Office:1300 880 548.
11. <u>Name of Reporter</u> :	Give own name.

Site Specific Identified Hazards

Assessment of existing hazards was undertaken at the time of planning. These hazards are in the attached table and where appropriate, control strategies have been applied. Where no control strategy has been described, the contractor must develop appropriate strategies as part of the contractors Safety Management Plan. A copy of the hazard assessment and control strategies is provided to assist in the development of the contractors Safety Management Plan for this harvesting area.

All additional site hazards identified during harvesting must be assessed and documented in the PA and Contractor copies of the site specific plan.

IDENTIFIED HAZARD	RISK RATING (prior to implementation of control measures)	SUGGESTED CONTROL STRATEGY	RISK RATING (after implementation of control measures)
1. Vehicle collision at adjoining roads of various traffic levels	1B	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.	2E
2. Overhead powerlines or cables	1D	Refer to FCNSW safety standard 1.3.12. Assess every individual tree for directional felling and degree of risk. Do not fall trees towards overhead hazard if within two tree lengths.	1E
3. Cliff lines & rocky very steep terrain	3C	Operators to assess work site within two tree lengths to identify immediate hazards. Communicate to other operators and mark sites.	3E
4. Hazardous or dead trees	1B	Refer to FCNSW safety standard 1.3.9. 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.	1D
5. Overhead hazards associated with dumps	1B	Refer to FCNSW safety standard 1.3.9. 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.	1D
6. Dust from passing vehicles along dirt haulage routes	1B	Restrict speed to minimise dust generation, slow down when passing vehicles. Turn on driving and hazard lights to increase visibility.	2E
7.			

Hazard Nos. 1/2/5/6 are shown on the attached HPOM

Risk ratings are in accordance with FCNSW Document "Risk Management Assessment Matrices, TRIM No. D00143573 Version No.: 1 Issue Date: June 2013 Review Date: June 2014".

Traffic management/road closures

The logging contractor is responsible for traffic control on all roads when felling is within two tree lengths of the tallest tree to be felled of the road, or snagging on roads or loading is occurring within 10 metres of a road. Warning of trucks entering must be **displayed 200 metres either side** of all State Forest road approaches leading to areas where harvesting operations are in progress.

Warning of timber harvesting operations must be **displayed 200 metres either side** of all thoroughfare State Forest road approaches leading to areas where harvesting operations are in progress.

This plan identifies haulage from the compartment will be east via Monterey Road turning left onto Snowy Mountains Highway (100km/hr Road). The intersection of Monterey Road and Snowy Mountains Highway has been assessed as achieving a minimum of 225m sight distance on both approaches. Therefore at this intersection additional signage in accordance with a Traffic Control Plan is not required.

Dust, noise and school bus routes

School bus route - No school bus routes coincide with the haulage route.

Silviculture and Harvesting Prescriptions

Compartment 2331

Year	1995	1979	2002
TSI	X	X	X
HR Burning	X	X	X
Wildfires	X	X	X
Logging m ³	13700	20200	3300

X – not applicable

Compartment 2332

Year	1996	1978	2002
TSI	X	X	X
HR Burning	X	X	X
Wildfires	X	X	X
Logging m ³	5400	2900	2100

X – not applicable

Silvicultural Planning

The planned harvest area consists of an overmature to mature stand, dominated by *E. fastigata* which has been previously thinning in order to reduce competition between the retained stems and increase sawlog growth rates. The area will be harvested in a modified shelter-wood silvicultural system in accordance with the Eden IFOA. It is proposed that this area will be next available for commercial thinning operations in approximately 20 years time.

Harvesting Prescription

Stand type	% of net area	Area (refer to HPOM for details)	Treatment (% INT, THIN)
Mature (mixed aged)	100%	Entire NHA	<ul style="list-style-type: none">• 100% Integrated (modified shelter-wood)• Target sawlogs, pulpwood and other miscellaneous products as markets allow in line with TSL and EPL requirements.• Refer to Standard Harvest Planning Conditions for more detail.

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

IFOA Limits

The integrated harvesting operation is in accordance with IFOA Part 1 Condition 5 (11).

No more than 60% of the net harvestable area within these compartments will be harvested during this operation. The next integrated harvesting operation is not permitted within 5 years from the completion of this harvesting event.

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

Compartments 2331 & 2332 are within Bega Valley 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 Bega Valley 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.

Private Property

Private property forms part of the northern and the western boundary of Compartment 2331, as indicated on the HPOM. Private property owners have been notified of the scheduled harvesting and post-harvest burning. The table below lists neighbours who adjoin Compartment 2331:

Name	Lot/DP Number (s)	Postal Address	Contact number (& email if available)	Was harvest plan notification letter returned to sender?	Pre burn notification done?
	180			Yes/No	
	82,151 & 152			Yes/No	

- No harvest disturbance is permitted on private property.
- 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.

Crown Leases

Crown Leases occurs within Compartment 2331, outside of the Net Harvest Area. Contact details are available from the Batemans Bay office.

Leasee	Contact number	Pre burn notification complete?

Occupation Permits

Apiary

3 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/s	Contact number	Pre burn notification complete?
	V20 & W19		
	V21		

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

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.

Overhead Powerlines

High voltage overhead powerlines (66k volts) occur within the compartment 2331 as shown on HPOM. In consultation with Essential Energy the following prescriptions have been developed for maintenance and construction of 2331/2 Rd and 2331/3 Rd and there use for haulage under powerlines and harvesting adjacent to powerlines:

- All dumps must be located outside of 2 tree lengths from powerlines.
- Extreme care must be taken not to disturb ground in vicinity of poles or come into contact with wires.
- Each tree must be individually assessed and directionally felled when within 2 tree lengths of powerline.
- Signs must be installed either side of 2331/2 Rd and 2331/3 Rd warning of overhead electrical hazards.
- Refer to FCNSW Safety Standard 1.3.12 for more information.

National Parks and Nature Reserves

South East Forest National Park forms part of the northern boundary of Compartment 2331.

No harvest disturbance is permitted within National Park.

- Access roads must be maintained free of debris and in a trafficable state.
- Boundaries must be marked in the field.

Forest Management Zoning

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

FMZ 3A – Harvesting and harvesting machinery are not permitted in these areas. Prescribed burning is only permitted in these areas where fire does not conflict with underlying protection zones e.g. rainforest, cultural heritage etc. (Refer to cultural heritage flora and fauna sections of this plan and the standard harvest plan conditions for more detail).

FMZ 7 – Prescribed burning is only permitted if fire does not conflict with the specific non-forest use of the site.

IFOA Required Approval of Forestry Activities

Planning Supervisor approval has been obtained for routine road maintenance and log haulage in FMZ 3A and the location is indicated on the HPOM by FMZ approved crossing C2. 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 Rainforest and Rare Forest Ecosystems require prior OEH approval and Stream Exclusion Zones require prior Planning Supervisor before forest harvesting related activities (eg: 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 Compartments 2331 & 2332. Due to the confidentiality of the Cultural Heritage sites, a Cultural Heritage site map will only be attached to the specific copies of the plan. All 10 metre radius exclusion buffers are to be marked in the field as **hard exclusion zones (i.e. pink & yellow tape)** where logging and/or road works are scheduled to be undertaken. **All operators must be taken to each site within the planned area before any activities are commenced.**

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 (eg 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: **Olive Whistler** (*Pachycephala olivacea*), **Glossy Black-Cockatoo** (*Calyptorhynchus lathami*), **Common Bent-wing Bat** (*Miniopterus schreibersii*), **Flame Robin** (*Petroica phoenicea*), **Scarlet Robin** (*Petroica boodang*), **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							TSL Condition	
							Significant Food Resource*	
							TSL Condition	
High	12	5.6g)i	12	5.6h)i	✓	5.6l	✓	5.6 k
Medium	8	5.6g)ii	8	5.6 h)ii	✓	5.6 l	✓	5.6 k
Low	4	5.6g)iii	4	5.6 h)iii	✓	5.6 l	✓	5.6 k

✓ - Condition applies

*4 Yellow Bellied Glider sap feed trees, occur within compartment 2331 at locations shown in the table below.

Species	Feature	Zone	GDA Easting	GDA Northing	Comments
Yellow-bellied Glider	Feed tree	55	715513	5946543	
Yellow-bellied Glider	Feed tree	55	715628	5946710	
Yellow-bellied Glider	Feed tree	55	715639	5946682	
Yellow-bellied Glider	Feed tree	55	715527	5946731	

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 & is unlikely to occur in the field. May require further investigation#.
Rare Forest Ecosystems	5.5	Yes
Riparian Protection Zones	5.7	Yes
Ridge & Headwater Habitat	5.8	Yes
Wetlands	5.9	Has been assessed as a risk that it may 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 as a risk that it may occur in the field. May require further investigation#.
Endangered Ecological Community	NA	Has been assessed as a risk that Montane Peatlands and Swamps EEC & Tablelands Snow Gum, Black Sallee, Candlebark and Ribbon Gum EEC may occur in the field. May require further investigation#. Harvesting, harvesting machinery and post harvest burning must be excluded from all areas of EEC.

#PA/Contract coordinators 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 2331 & 2332	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

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 boundaries 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 2331	Records in 2332	Licence conditions under the TSC Act or relevant Site-specific prescription
Powerful Owl <i>Ninox strenua</i>	Yes	No	6.3 Owl Landscape Exclusion Zones occur in compartments 2331 & 2332 (Refer to HPOM).
Southern Brown Bandicoot <i>Isodon obesulus</i>	No	No	6.5A & Species Management Plan
Spotted tailed Quoll <i>Dasyurus maculatus</i>	No	No	6.10
Koala <i>Phascolarctos cinereus</i>	No	No	6.11
Yellow-bellied Glider <i>Petaurus australis</i>	Yes	Yes	6.13
<i>Pomaderris parrisiae</i>	No	No	6.17 Where practicable, minimise damage to individuals from specified forestry activities.

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

15 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 1 Conditions 26, 27, 30, and 33 of Schedule 4 of the EPL must apply.

Expected Felling/ Extraction & Loading Method

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

Drainage Feature Crossings

3 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

Compartments 2331 & 2332 are 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 crossings or road crossing in the compartments.

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 compartments boundaries 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 compartments boundaries may be used with PA approval for snigging or extraction provided they are drained to EPL specifications.

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 PA 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 PA 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 compartments 2331 & 2332. 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
Boundary between NHA and Ridge & Headwater/Rare Forest Ecosystems, Probable Rainforest & FMZ 3A (due to coinciding with Rare Forest Ecosystems and Owl Landscape), Probable Wetland (also partially coincides with Montane Peatlands and Swamps mapped EEC - relies on moisture differentials).	

The table below lists critical boundaries in compartments 2331 & 2332. 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, PA 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
Boundary between Compartment 2331 & Private property (also partially coincides with Tablelands Snow Gum, Black Sallee, Candlebark and Ribbon Gum Grassy Woodland mapped EEC)	
Boundary between Compartment 2331 & National Park.	
Boundary between Net Harvest Area in Compartment 2331 & Crown Lease.	

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 Compartments 2331 & 2332 in Glenbog 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	No				
Rainforest	No				
Rocky outcrops	No				
Wetlands	No				
Cultural Heritage	No				
Existing Roads	No				
New Roads	Yes	New	Yes		
Heath	No				
Powerlines etc	No				
Other					

PA Feature Usage Record

Dates of commencement and cessation of logging

Date of commencement of logging: _____

Date of cessation of logging: _____

DUMP USAGE RECORD

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

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

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

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

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.

* If soil is not stabilised within 5 days it must be recorded as a non-compliance including the reason why on a Harvest Compliance Issue 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	2 nd	1st	2nd	1 st	2nd	1 st	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. _____

Weekly and Bi-weekly inspection

Item Inspected	Insert dates of inspection											
	Week 7		Week 8		Week 9		Week 10		Week 11		Week 12	
	1st	2 nd	1st	2nd	1 st	2nd	1 st	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. _____

Weekly and Bi-weekly inspection

Item Inspected	Insert dates of inspection											
	Week 13		Week 14		Week 15		Week 16		Week 17		Week 18	
	1st	2 nd	1st	2nd	1 st	2nd	1 st	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. _____

Weekly and Bi-weekly inspection

Item Inspected	Insert dates of inspection											
	Week 19		Week 20		Week 21		Week 22		Week 23		Week 24	
	1st	2 nd	1st	2nd	1 st	2nd	1 st	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. _____

PA Notes

PA Notes (continued)

PA Notes (continued)

PA Notes (continued)

PA Notes (continued)

Clearance Certificate

COMPARTMENTS: 2331 & 2332

GLENBOG STATE FOREST, SOUTHERN REGION

ToProduction 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 Operations Branch 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

Comply with maximum Thinning BA removal of 75%?

110 BA

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

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

ATTACHMENT 2

ROADING PLAN

Summary of Roading Requirements

Feature	Details	Works Required
Existing roads to be used.	6000m/8	Yes
New roads to be constructed	760m/2	Yes
Existing crossings used	3	Ye
New crossings to be constructed	0	NA
Length of road >10°	200m	NA
Borrow pits and gravel pits	1	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 (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 roading sheets along with other relevant changes or explanations.

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

CHECKLIST OF WORKS REQUIRED ON ROADS & CROSSINGS

Road/Crossing Name	Works Required	Date Started	Date finished	Signature
Old Bega Road Length = 880m (FCNSW Responsibility)	Nil works required RC/PA Comments:			
Nitens Road Length = 1620m (FCNSW Responsibility)	Grade where required. Roadside clearing 3m either side of road prism Clean pipes RC/PA Comments:			
2331/1 Rd Length = 310m (Contractor Responsibility)	Grade where required. Roadside clearing 3m either side of road prism Replace rollovers with rubberflaps, installing additional rubberflaps where required. RC/PA Comments:			

2331/2 Rd Length = 730m (Contractor Responsibility)	Grade where required. Roadside clearing 3m either side of road prism Replace rollovers with rubberflaps, installing additional rubberflaps where required. High voltage powerlines exist over part of road. Refer to Special Requirements – Overhead Powerlines for more information. RC/PA Comments:			
2331/4 Rd Length = 500m (Contractor Responsibility)	Grade where required. Roadside clearing 3m either side of road prism Replace rollovers with rubberflaps, installing additional rubberflaps where required. RC/PA Comments:			
2331/5 Rd Length = 610m (Contractor Responsibility)	Grade where required. Roadside clearing 3m either side of road prism Replace rollovers with rubberflaps, installing additional rubberflaps where required. RC/PA Comments:			
2332/1 Rd Length = 380m (Contractor Responsibility)	Grade where required. Note proximity to Mapped EEC – restrict works to existing road prism. Replace rollovers with rubberflaps, installing additional rubberflaps where required. RC/PA Comments:			
2332/2 Rd Length = 970m (Contractor Responsibility)	Grade where required. Roadside clearing 3m either side of road prism Replace rollovers with rubberflaps, installing additional rubberflaps where required. RC/PA Comments:			

2331/3 Rd Length = 190m (Contractor Responsibility)	Refer to New Road Construction Form High voltage powerlines exist over part of road. Refer to Special Requirements – Overhead Powerlines for more information. RC/PA Comments:			
2332/2 Ext. Rd Length = 570m (Contractor Responsibility)	Refer to New Road Construction Form RC/PA Comments:			
C1 – Natural Causeway E 714914 N 5945840 (Contractor Responsibility)	See attached crossing diagram. RC/PA Comments:			
C2 – Log Bridge E 715436 N 5946252 (FCNSW Responsibility)	See attached crossing diagram RC/PA Comments:			
C3 – 1200mm pipe E 715469 N 5946606 (FCNSW Responsibility)	Reinstate mitres on both approaches. Install rock/reshape pothole on road surface. No crossing diagram attached due to minimal works required. RC/PA Comments:			

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
2331/3 Rd	190m	7m	10°	18°	1-2m	190m	No	Retain	Contractor		
2332/2 Ext. Rd	570m	7m	6°	10°	<1m	400m	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 Operations must be recorded and passed on to the PA.

CROSSING NAME: C1

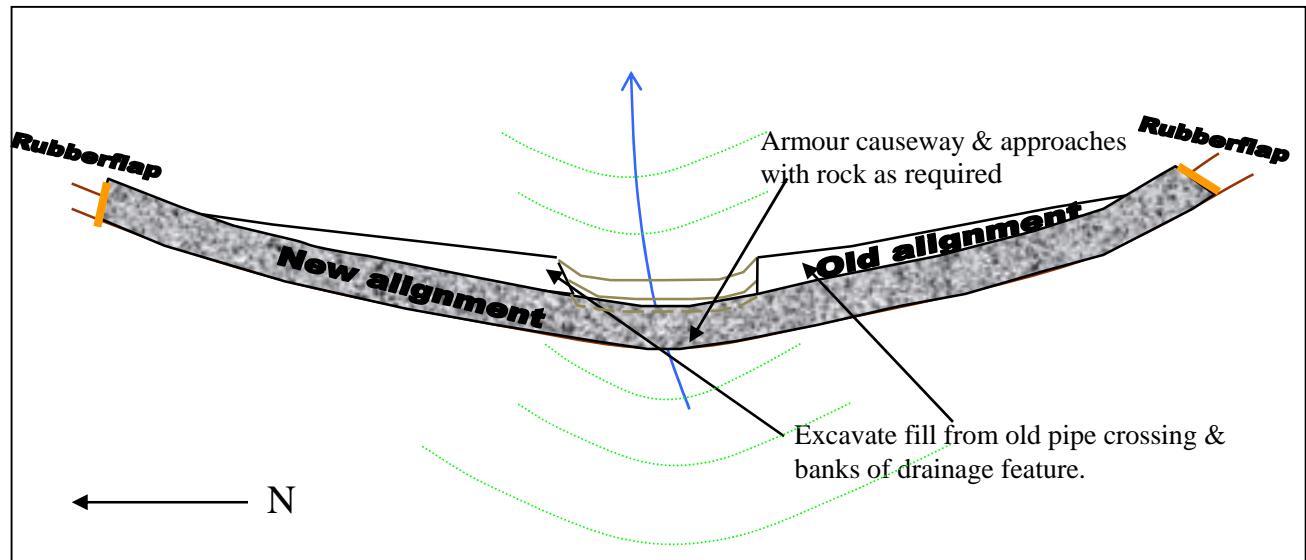
Waterway Classification: Fish Passage Class 3 – Minimal fish habitat.

Assessors Name: Andrew Kemsley **Crossing Type:** Natural causeway (maintenance)

Features	Works (As per EPL Schedule 5)	Plant/Materials
Structure	Install natural causeway– diagram below is recommended design.	Excavator.
Bed and Banks	- Excavate banks of old pipe crossing & banks of drainage feature.	Dozer/Excavator
Erosion and Sediment Control	- Minimise disturbance and clearing to the greatest extent practicable. - Seed and mulch all disturbed areas. - Install siltmesh where required.	Dozer/Excavator Siltmesh.
Disposal of excess spoil	- Remove excess spoil outside filter strip and/or re-spread & consolidate onto road/bridge pavement.	Excavator.
Soil Stabilisation within 20m	- Seed and mulch all disturbed areas. - PA to monitor for additional soil stabilization requirements	Seed and mulch. Manual labour
Road drainage within 5-30m • Type • outlet control • table drain checking devices	• Install rubberflaps on both approaches. • If possible utilise cross fall drainage, if not install hay bales or natural (rock/logs) checking devices.	Siltmesh.

Date of Assessment: 30.06.2014

Final Crossing Use: Retain



Date Work Started: _____

Date Work Finished: _____

Soil stabilisation must be completed within 5 days

CROSSING NAME: C2

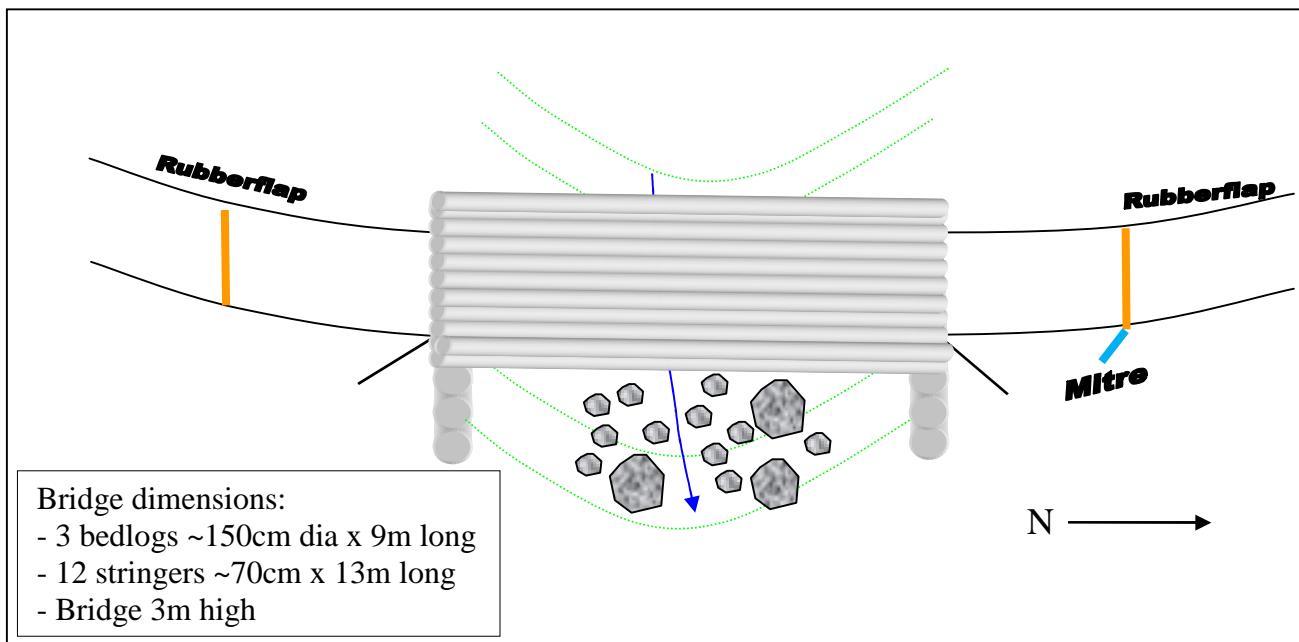
Waterway Classification: Fish Passage Class 3 – Minimal fish habitat.

Assessors Name: Andrew Kemsley **Crossing Type:** Bridge crossing (maintenance)

Features	Works (As per EPL Schedule 5)	Plant/Materials
Structure	Remove existing bridge. Install new log bridge – diagram below is recommended design.	Bridge timber Excavator.
Bed and Banks	- Lay geotextile during construction phase to prevent spoil entering creek.	Dozer/Excavator Geotextile
Erosion and Sediment Control	- Minimise disturbance and clearing to the greatest extent practicable. - Seed and mulch all disturbed areas. - Clearing must be done at right angles to water flow, unless angled approach reduces disturbance. - Install siltmesh where required.	Dozer/Excavator Siltmesh.
Disposal of excess spoil	- Remove excess spoil outside filter strip and/or re-spread & consolidate onto road/bridge pavement.	Excavator.
Soil Stabilisation within 20m	- Seed and mulch all disturbed areas. - PA to monitor for additional soil stabilization requirements	Seed and mulch. Manual labour
Road drainage within 5-30m	<ul style="list-style-type: none"> • Install mitre on northern approach. • Install rubberflaps if crossfall in inadequate in removing road surface runoff. • If possible utilise cross fall drainage, if not install hay bales or natural (rock/logs) checking devices. • Install wing logs where required. 	Siltmesh, seed.

Date of Assessment: 30.06.2014

Final Crossing Use: Retain



Date Work Started: _____

Date Work Finished: _____

Soil stabilisation must be completed within 5 days