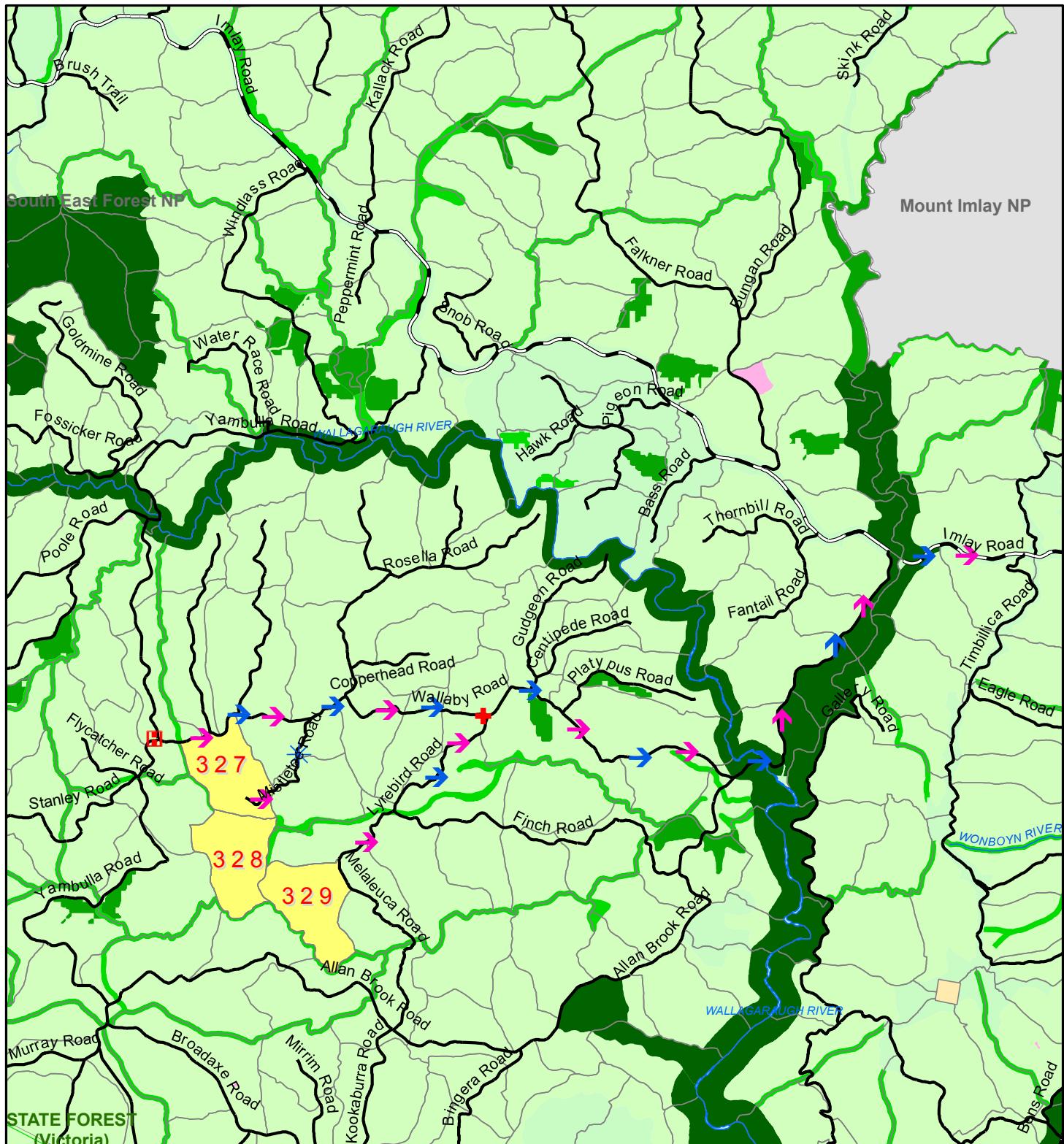


LOCALITY MAP

Compartments 327, 328 & 329
 State Forest: Yambulla No: 126
 EDEN IFOA EDEN MANAGEMENT AREA
 Scale: 1:100,000



Sealed Road
 Major Forest Road
 Minor Forest Road
 Major Rivers

Rain Gauge

State Forest
 Planning Unit
 Vacant Crown Land
 Non Forest
 State Forests Victoria.

National Parks
 Formal Reserve
 Informal Reserve

H Helicopter Landing Area
 + Emergency Meeting Point
 → Evacuation Route
 → Haulage Route

Prepared By: Megan Costello

Version: 1

PLANNING SUPERVISOR APPROVAL

APPROVED: LEE BLESSINGTON

DATE: 08 / 04 / 2015

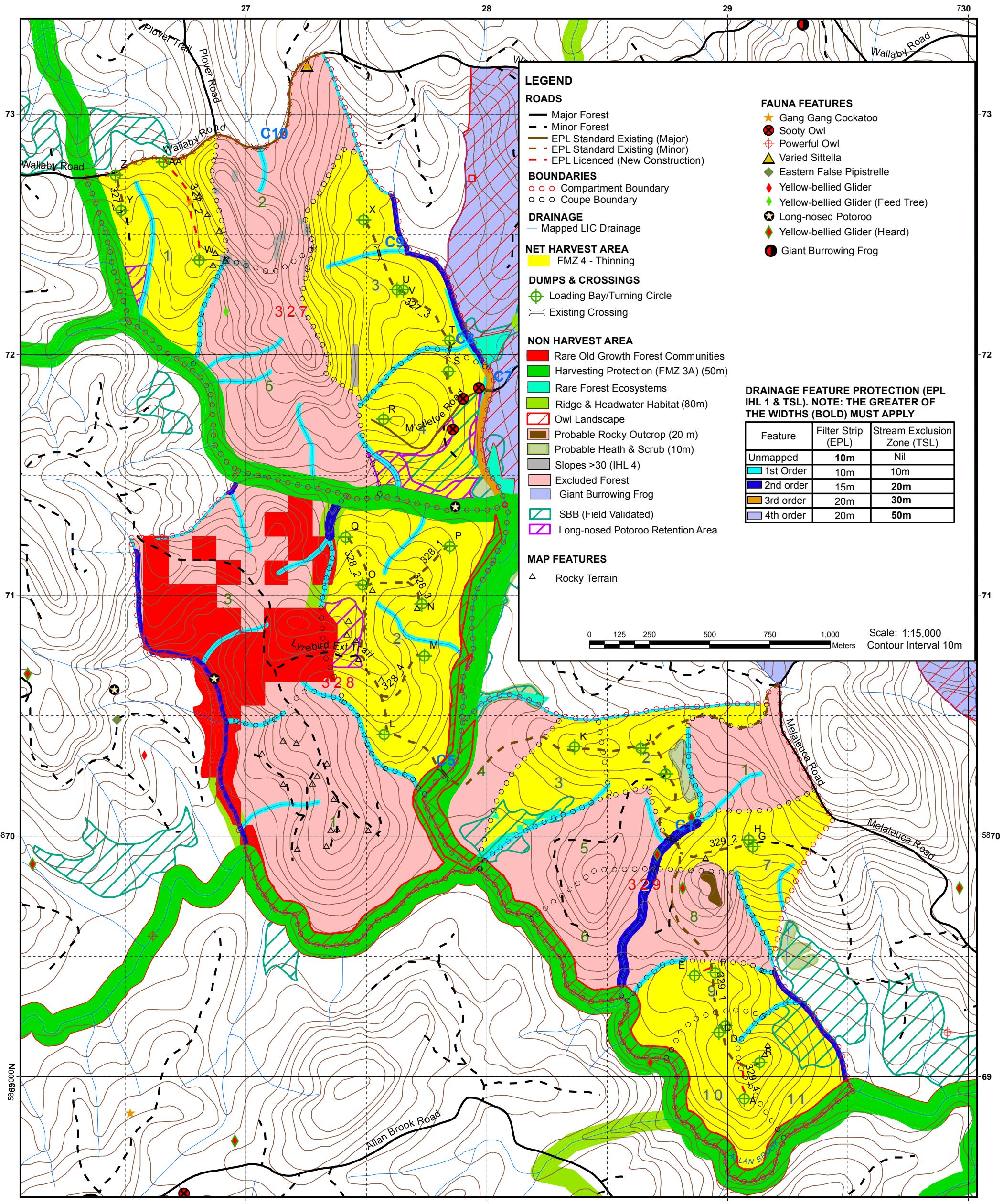
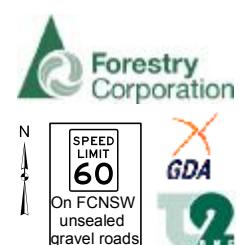
Harvest Plan Operational Map

Compartments: 327,328,329

State Forest: YAMBULLA No: 126

Eden IFOA - Hardwood Forests

Map Sheet: TIMBILICA 8823-3N



Harvest Plan Forest Type Map

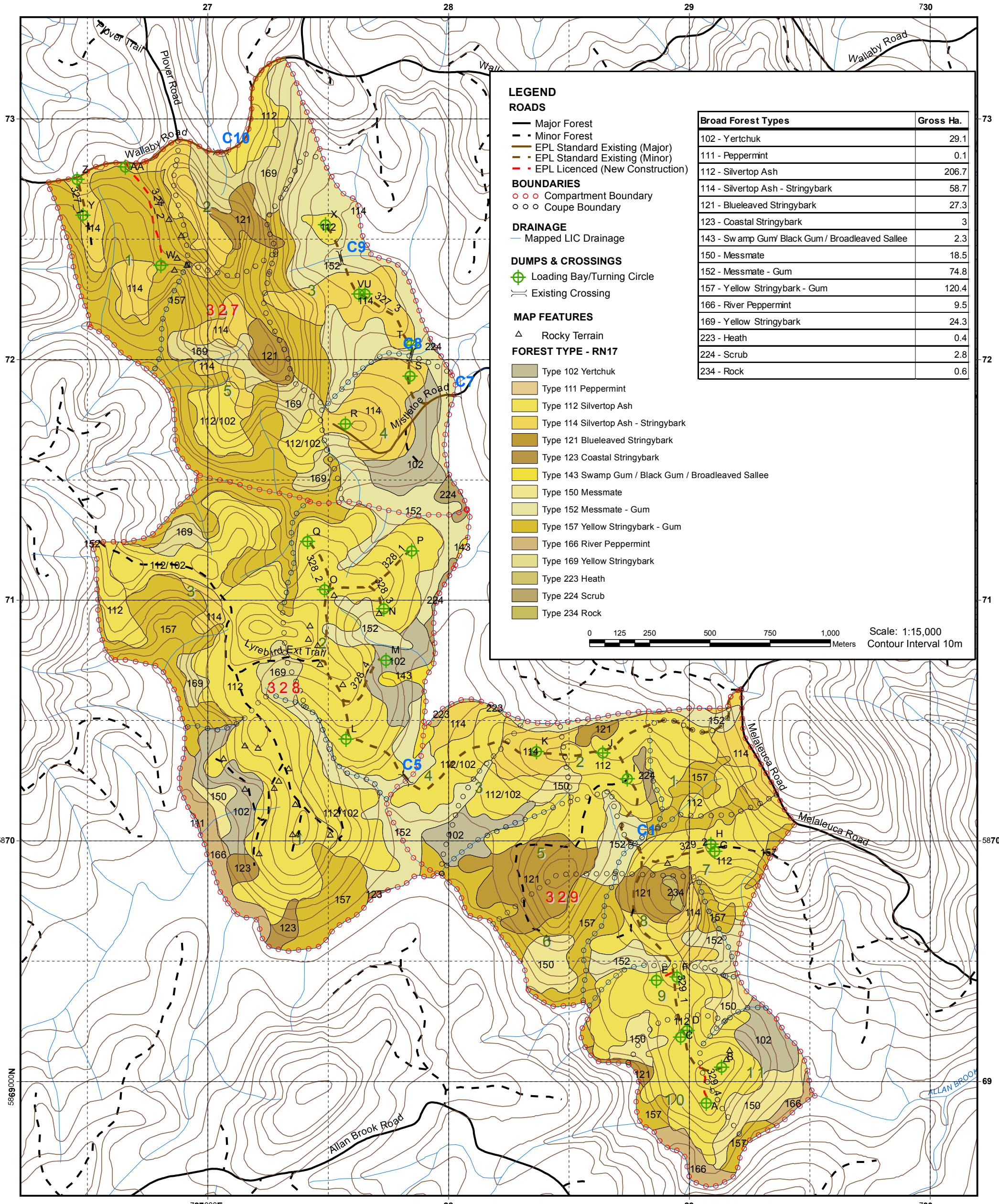
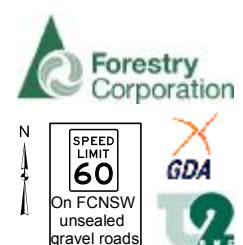
Compartments: 327,328,329

State Forest: YAMBULLA No: 126

Prepared By: Megan Costello

Eden IFOA - Hardwood Forests

Map Sheet: TIMBILICA 8823-3N



Harvest Plan Habitat Class Map (Indicative)

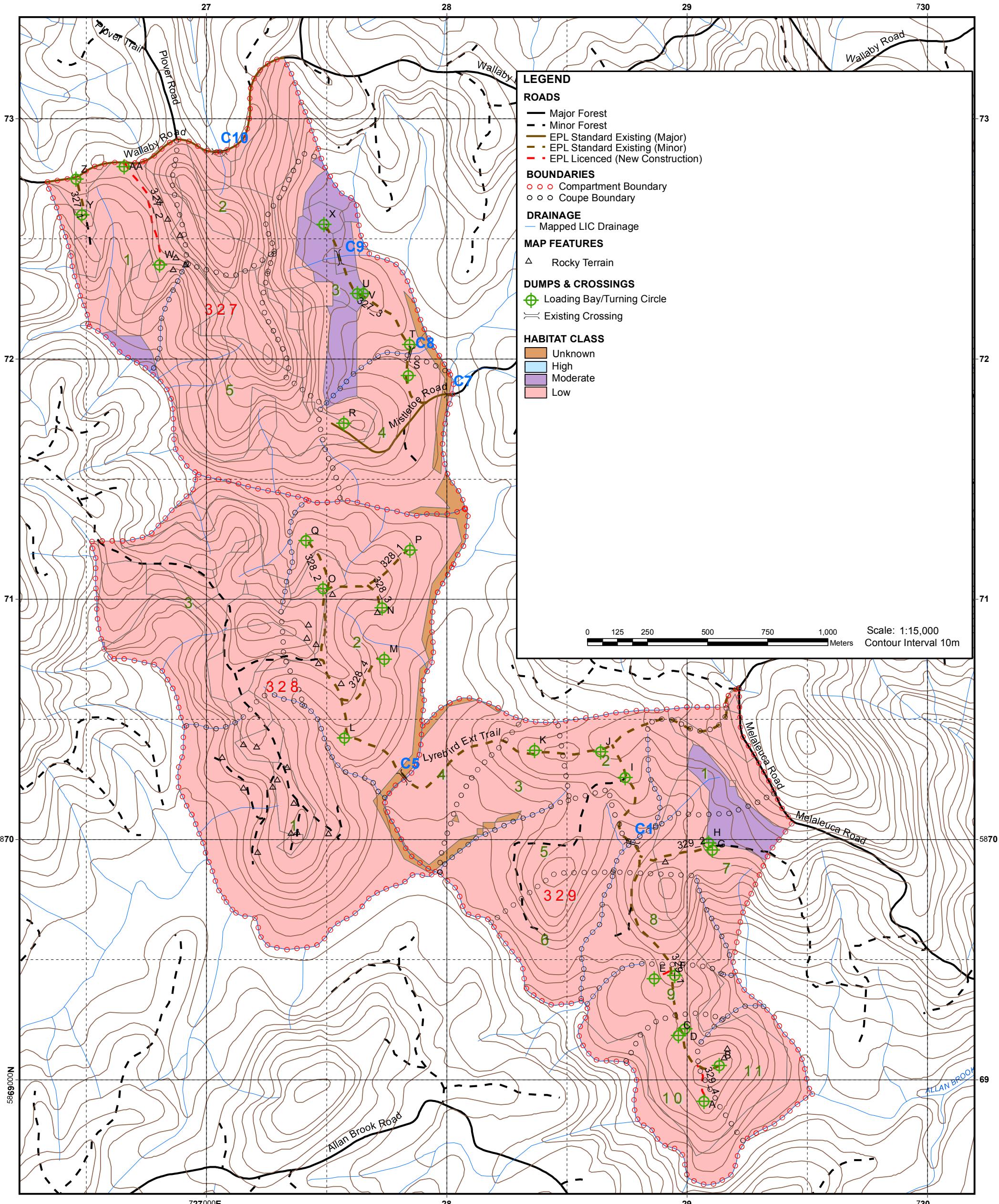
Compartments: 327,328,329

State Forest: YAMBULLA No: 126

Prepared By: Megan Costello

Eden IFOA - Hardwood Forests

Map Sheet: TIMBILICA 8823-3N



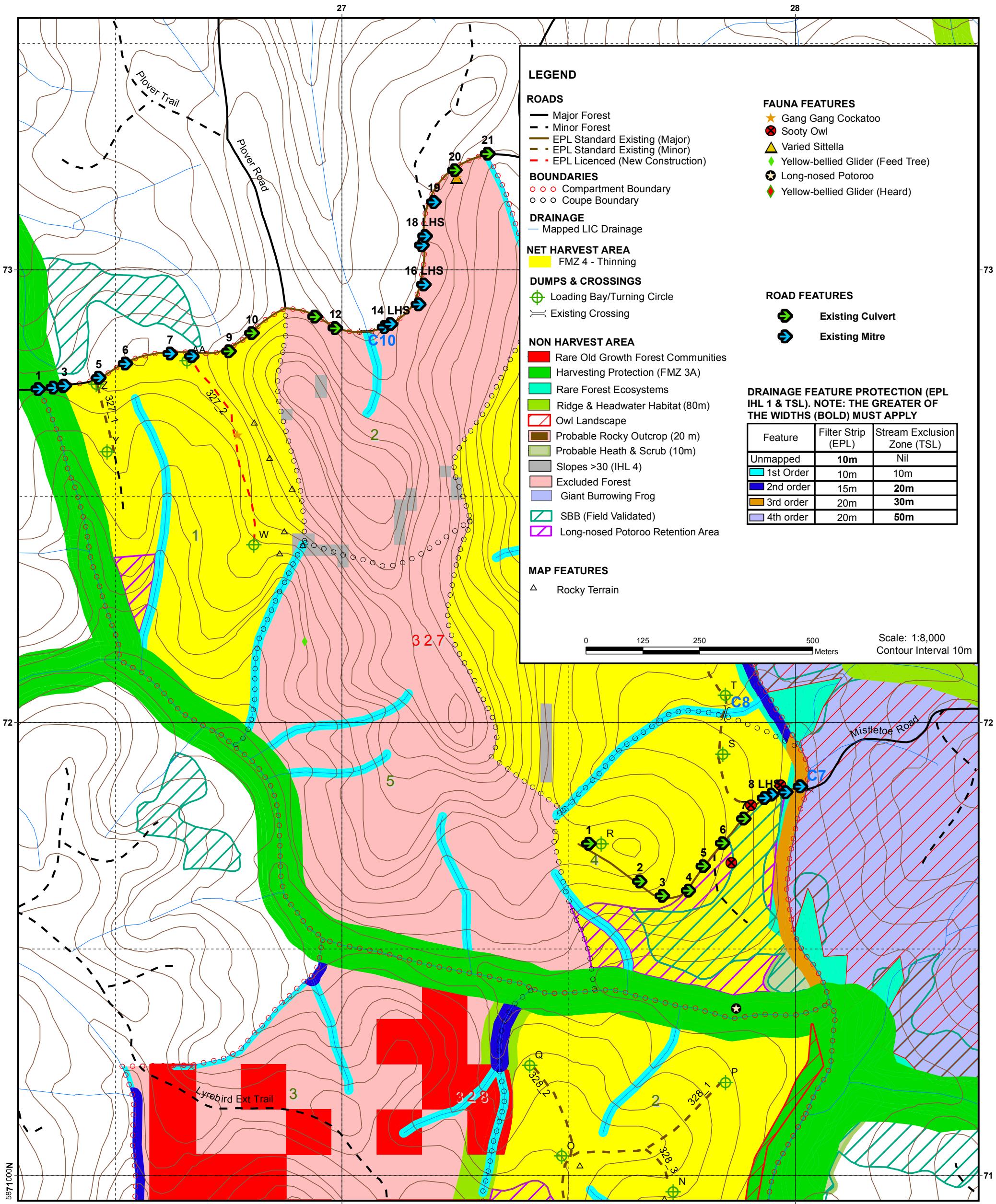
Road Plan Operational Map

Compartments: 327,328,329

State Forest: YAMBULLA No: 126

Eden IFOA - Hardwood Forests

Map Sheet: TIMBILICA 8823-3N





HARDWOOD FORESTS- EDEN IFOA HARVESTING PLAN

Yambulla State Forest - Compartments 327,328 & 329

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	08/04/2015	Date	08/04/2015

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, Roading and Cultural Heritage (limited distribution).

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: Roading plan prescribes roading requirements for this harvesting operation.

Abbreviations used in this plan

PA = Production Assistant, PtS= Protection Supervisor, PS = Production Supervisor, RC = Roading Coordinator, IFOA = Integrated Forestry Operations Approval, EPL = Environment Protection Licence, OEH = Office of Environment and Heritage.

Area Identification and Yield Estimates

State Forest	Compartment/s	Coupe/s	IFOA Region	Management Area	Certification
Yambulla	327	1,3, & 4	Eden	Eden	AS4708:2007 ISO 14001
Yambulla	328	2	Eden	Eden	AS4708:2007 ISO 14001
Yambulla	329	2, 3, 7, 9, 10, & 11	Eden	Eden	AS4708:2007 ISO 14001

	Cpt	Cpt	Cpt	Total
Plan Compartment ID	327	328	329	NA
Gross Area (ha)	183.6	192.9	201.9	578.4
Net Harvest Area (ha)	89.6	50.7	106.2	260.4
Estimated Yield Pulp (t)	4,774 t	4,410 t	8,496 t	17,680 t
Estimated Yield Sawlog (m3)	0 m3	0 m3	0 m3	0 m3

Slope Classes (percent of harvest area)

Slope Class	Cpt 327	Cpt 328	Cpt 329
	% of harvest area	% of harvest area	% of harvest area
0-20°	84.2	100	97.8
20-25 °	9.7	0	1.5
25-30 °	5.5	0	0.6



ATTACHMENT 1: SITE SAFETY PLAN

Worksite Information											
Is this Declared Hunting Area: Yes		Comments: To be placed in exclusion as of 01/04/2015									
Have Exclusion Zone signs been erected or checked prior to starting work daily.		Yes / No									
Comments: Prior to commencement of pre-harvest markup and thinning PA must check hunting exclusion has been implemented											
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 compartments will be:</p> <p>From Compartment 327: east via Mistletoe and Wallaby Roads (FCNSW owned) turning left onto Allan Brook Road before turning right onto Imlay Road (FCNSW owned road) then onto Princes Hwy, and finally right onto Edrom Road (100km/hr Road).</p> <p>From Compartments 328 & 329: east via Lyrebird Road onto Wallaby Road (FCNSW owned) turning left onto Allan Brook Road before turning right onto Imlay Road (FCNSW owned road) then onto Princes Hwy, and finally right onto Edrom Road (100km/hr Road).</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>Dust and noise – Where log haulage routes pass close to rural housing along natural surface/gravel roads dust and noise must be minimised to the greatest extent practicable. Trucks should reduce speed, restrict use to daylight hours and minimise the use of engine brakes through these areas.</p>											
Name of on-site safety first-aider/s											
Location of first-aid kit											
<table border="1"> <thead> <tr> <th>SITE HAZARD & RISK ASSESSMENT NO.</th> <th>CONTROL</th> <th>WHO</th> <th>IMPLEMENTED</th> </tr> </thead> <tbody> <tr> <td>1. Vehicle collision at</td> <td>Warning signs at FCNSW intersections, road</td> <td></td> <td></td> </tr> </tbody> </table>				SITE HAZARD & RISK ASSESSMENT NO.	CONTROL	WHO	IMPLEMENTED	1. Vehicle collision at	Warning signs at FCNSW intersections, road		
SITE HAZARD & RISK ASSESSMENT NO.	CONTROL	WHO	IMPLEMENTED								
1. Vehicle collision at	Warning signs at FCNSW intersections, road										

adjoining roads of various traffic levels	<p>closure on FCNSW roads.</p> <p>Implement Traffic Control plans (where specified in this harvest plan).</p> <p>60km/hr speed limit on all State Forest natural surface/gravel roads unless otherwise signposted.</p> <p>Compliance with FCNSW lights on policy.</p>		
2. Hazardous or dead trees	<p>Refer to FCNSW operational safety standard OSS010. Assess area within two tree lengths of work site. Assess risk, mark any Distinctly Dangerous Trees with the symbol Ø & if necessary remove hazard or move work site. Use machinery to assist with hazard removal if possible Contractor is responsible for implementing control strategies during harvesting.</p>		
3. Overhead hazards associated with dumps	<p>Refer to FCNSW operational safety standard OSS010. Assess overhead hazard within two tree lengths of the dump. Assess risk, & if necessary remove hazard or relocate dump site. Contractor is responsible for implementing control strategies during harvesting.</p>		
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.		

- 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° 15' 49.56" S / 149° 33' 17.39" E	MGA: 726551E 5872807N	Datum: GDA 94	Zone: 55
Location description: Higher points on Wallaby Rd (Cpt 327)			
Emergency meeting point for ambulance / police (refer to attached locality map)			
GPS Lat/Long: 37° 15' 30.90" S / 149° 36' 55.56" E	MGA: 731942E 5873235N	Datum: GDA 94	Zone: 55
Location description: Intersection of Wallaby and Lyrebird Roads			
Helicopter landing place (refer to attached locality map)			
GPS Lat/Long: 37° 15' 49.58" S / 149° 32' 52.53" E			
Location description: Intersection of Wallaby and Yambulla Roads			
Procedures to obtain ambulance assistance			
<ol style="list-style-type: none"> 1. Dial 000 2. If there is no mobile coverage, dial 112 (which will work on any mobile phone system). 3. If no response on 112: <ul style="list-style-type: none"> • use a radio link (TARA, be discrete with personal information) • move to an area with mobile coverage • find a landline • use another network (e.g. a contractor's VHF radio) 		<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:	Yambulla
		Nearest town or locality:	Kiah
		Nearest ambulance station:	Eden
3. Address?		Wallaby Road	
4. Nearest road junction/cross street?		Allan Brook Road and Imlay 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. 25km to intersection with Imlay Road (on right), then travel approx 13km to intersection with Allan Brook Road (on left). Travel 6km to intersection with Wallaby Road (on right) then 5km to the intersection with Lyrebird 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:			

Silviculture and Harvesting Prescriptions

Compartment 327

Year	1972	1982	1986	1994	2003	2010
TSI	X	X	X	X	X	X
HR Burning	X	X	X	Ö	X	X
Wildfires	Ö	Ö	X	X	X	X
Logging m³	0	0	20,493	0	1,676	4,836

Ö - applies, X – not applicable

Compartment 328

Year	1972	1986	1994	2003
TSI	X	X	X	X
HR Burning	X	X	Ö	X
Wildfires	Ö	X	X	X
Logging m³	0	20,367	0	1,165

Ö - applies, X – not applicable

Compartment 329

Year	1972	1982	1995
TSI	X	X	X
HR Burning	X	X	X
Wildfires	Ö	Ö	X
Logging m³	0	15,256	12,936

Ö - applies, X – not applicable

Cmpt No.	Indicative Thinnable Area (ha)	Pre-thinning			Removed			Post-thinning	
		Stock (stems/ha)	B.A. (m ² /ha)	Vol/Ha (m ³ /ha)	Stock (stems/ha)	B.A. (m ² /ha)	Vol/Ha (m ³ /ha)	Stock (stems/ha)	B.A. (m ² /ha)
327	89.6	925	35.3	202.2	675	14.9	63.9	250	20.1
328	50.7	769	54.0	360.0	519	20.3	104.4	250	33.7
329	106.2	1184	37.0	228.2	934	18.0	96.0	250	19.0

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

Silvicultural Planning

Compartments 327, 328 and 329 were harvested under a modified shelterwood system in 1982 (Cpt 329) and 1986 (Cpts 327 & 328) in alternate coupes. These areas have also been affected by wildfire in 1972 and 1982 and a hazard reduction burn in 1994. Most recently, alternate coupe harvesting was conducted in these compartments in 2010 (Cpt 327), 2003 (Cpts 327 & 328), and 1995 (Cpt 329). This has resulted in a multi-aged forest consisting of a mosaic of wildfire burned, logged, thinned, and unlogged areas. The regrowth ranges from 100mm to a maximum of 515mm in diameter, 9m-32.5m in height and is well stocked.

The coupes proposed for thinning are regenerated Silvertop Ash- Stringybarks from the logging in 1982/1986 and are located predominately on the ridge tops with Yellow Stringybark – Gum on the mid-slopes and Messmate-Gum in the riparian areas.

The even-aged stands of advanced 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 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">• Thinning from below.• 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 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

Compartments 327, 328 and 329 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.

Occupation Permits

Apiary

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

Name	Site Number	Contact number	Pre burn notification complete?
	AF6 and AF7		no
	AD7, AD8, AE4, AF5 and AE5		no

- 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.

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).

IFOA Required Approval of Forestry Activities

Planning Supervisor approvals have been obtained for snig track construction and/or use, road construction, road re-opening, routine road maintenance and log haulage in FMZ 3A and the location is indicated on the HPOM by FMZ approved crossing C5 and stream crossings C1,C7, C8 and C9. 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 Rare Old Growth Forest Communities and Rare Forest Ecosystems require prior OEH approval and 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 Compartments 327, 328 and 329. 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 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 (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*), **Common Bent-wing Bat** (*Miniopterus schreibersii*), **Greater Broad-nosed Bat** (*Scoteanax rueppellii*), **Varied Sittella** (*Daphoenositta chrysoptera*), **Little Lorikeet** (*Glossopsitta pusilla*), **Little Eagle** (*Hieraetus morphnoides*), **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	Recruitment Trees/ 2ha	TSL Condition	Protection of Retained Trees	TSL Condition	Dead Standing Tree (only if safe)	TSL Condition	Significant Food Resource	TSL Condition	TSL Condition
High	12	5.6g(i)	12	5.6h(i)	ö	5.6l	ö	5.6j	ö	5.6 k
Medium	8	5.6g(ii)	8	5.6 h(ii)	ö	5.6l	ö	5.6j	ö	5.6 k
Low	4	5.6g(iii)	4	5.6 h(iii)	ö	5.6l	ö	5.6j	ö	5.6 k

ö - Condition applies

General exclusion zones

General exclusions as listed below are shown on the HPOM.

Feature/Condition	TSL cond'n	Occurs within Planning Unit
Rare Old Growth Forest Communities	5.3	Yes
Rainforest	5.4	Rainforest is not mapped within the compartment(s) #.
Rare Forest Ecosystems	5.5	Yes
Riparian Protection Zones	5.7	Yes
Ridge & Headwater Habitat	5.8	Yes (80m total width)
Wetlands	5.9	Has been assessed & is unlikely to occur in the field. May require further investigation#.
Heath and Scrub	5.10	Has been assessed as a risk that it may 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 & is unlikely to occur in the field. May require further investigation#. Removal of timber, harvesting machinery and post harvest burning must be excluded from all areas of EEC.

#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

Feature	Records in Cpts 327, 328 & 329	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 Cpts 327, 328 & 329	Licence conditions under the TSC Act or relevant Site-specific prescription
Giant Burrowing Frog <i>Heleioporus australiacus</i>	No	Species Management Plan
Powerful Owl <i>Ninox strenua</i> , Barking Owl <i>Ninox connivens</i> Masked Owl <i>Tyto novaehollandie</i> , Sooty Owl <i>Tyto tenebricosa</i>	Yes Cpt 327	6.3 Owl Landscape Exclusion Zones occur in compartments 328 & 329. (Refer to HPOM).
Southern Brown Bandicoot <i>Isodon obesulus</i>	No	6.5A & Species Management Plan
Long-nosed Potoroo <i>Potorous tridactylus</i>	Yes Cpts 327 & 328	6.7 Long-nosed Potoroo retained tree buffer is shown on the HPOM. Harvesting and burning must be excluded from these areas.
Spotted tailed Quoll <i>Dasyurus maculatus</i>	No	6.10
Yellow-bellied Glider <i>Petaurus australis</i>	Yes Cpts 327 & 329	6.13
Eastern Pygmy Possum <i>Cercartetus nanus</i>	No	If this species is identified in the compartment/s or within 100m of the compartment boundary/boundaries cease operations immediately and contact the PS.

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

The harvest area is situated on low coherence (but non dispersible) Wallagaraugh Adamellite soils which have been verified as soil regolith 2. For this harvest plan, special conditions for harvesting and snigging apply (details in table below).

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
Roads	See Schedule 5 of EPL Booklet
Slope limits for harvesting	Note: EPL conditions relating no harvesting on IHL 4 apply (Schedule 4- B-Maximum Slope Limits).
Slope limits for snig tracks	<p>Snig track grades 20-25 degrees are permitted in accordance with EPL Schedule 4. Clause 41 a) and b) but not 41. c)*, if:</p> <ul style="list-style-type: none"> • There is no other practical alternative route and • PA approval has been granted. <p>*The highly erodible nature of the R2 soil, means it is not appropriate to implement condition 41.c) in these compartments.</p>
Snig Drainage Spacing	For snig track grades less than 20 degrees apply EPL spacing.

Log Dump Location

27 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.

Expected Felling/ Extraction & Loading Method

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

Drainage Feature Crossings

Six road crossings (C1, C5, C7, C8, C9 and C10) are approved for use on drainage features. (Refer to HPOM). Crossing details are contained in Attachment 2 of this Plan.

Mass Movement

Compartments 327, 328 and 329 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 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 Compartments 327, 328 & 329 in Yambulla 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					
Mapped Drainage					
Rainforest					
Rocky outcrops					
Wetlands					
Cultural Heritage					
Existing Roads					
New Roads	Yes	New			
Heath					
Powerlines etc					
Other (state what it is)					

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 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	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: 327, 328 & 329 YAMBULLA 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

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	

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

Feature	Details	Works Required
Existing roads to be used.	8,545 m/11	Yes
New roads to be constructed	691 m/3	Yes
Existing crossings used	6	Yes
New crossings to be constructed	0	NA
Length of road >10°	75m	Yes
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.

CHECKLIST OF WORKS REQUIRED ON ROADS & CROSSINGS

Road/Crossing Name	Works Required	Date Started	Date finished	Signature
Mistletoe Road (length = 642m) <i>FCNSW responsibility</i>	Clear up to 3m either side of road to facilitate truck movements. Clear inlets and outlets of culverts. Drainage structures meet EPL road drainage spacing conditions. Refer to Road Plan map RC/PA Comments:			
C7 E 728023 N 5871852 <i>FCNSW responsibility</i>	No works required. RC/PA Comments:			
Wallaby Road (length = 1.3 km) <i>FCNSW responsibility</i>	Clear inlets and outlets of culverts. Drainage structures meet EPL road drainage spacing conditions. Grade road and re-instate mitre drains. Refer to Road Plan map RC/PA Comments:			
C10	Clear inlet and outlet. Install culvert marker posts.			

E 727055 N 5872863 <i>FCNSW responsibility</i>	RC/PA Comments:			
Lyrebird Ext. Trail (length = 2.3 km) <i>Contractor responsibility</i>	Clear up to 3m either side of road to facilitate truck movements. Shape road, re-establish table drains and drainage. RC/PA Comments:			
C5 E 727823 N 5870257 <i>Contractor responsibility</i>	Refer to attached Crossing Form RC/PA Comments:			
327_1 (length = 166m) <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. RC/PA Comments:			
327_2 (length = 465m) <i>Contractor responsibility</i>	Refer to New Road Construction Form RC/PA Comments:			
327_3 (length = 935m) <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. RC/PA Comments:			
C8 E 727845 N 5872019 <i>Contractor responsibility</i>	Refer to attached Crossing Form RC/PA Comments:			
C9 E 727552 N 5872422	Refer to attached Crossing Form RC/PA Comments:			

<i>Contractor responsibility</i>				
328_1 (length = 691m) <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. RC/PA Comments:			
328_2 (length = 220m) <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. RC/PA Comments:			
328_3 (length = 101m) <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. RC/PA Comments:			
328_4 (length = 263m) <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. RC/PA Comments:			
329_1 (length 1,603m) <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. RC/PA Comments:			
C1 E 728773 N 5869987 <i>Contractor responsibility</i>	Refer to attached Crossing Form RC/PA Comments:			
329_2 (length = 311m) <i>Contractor</i>	Remove vegetation up to 3m either side of road to facilitate truck movements. Grade and shape road. Re-establish table drains and drainage. RC/PA Comments:			

<i>responsibility</i>			
329_3 (length = 57m) <i>Contractor responsibility</i>	Refer to New Road Construction Form RC/PA Comments:		
329_4 (length = 169m) <i>Contractor responsibility</i>	Refer to New Road Construction Form 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
327_2	465m	4m	8°	22°	1m	465m	No	Retain	Contractor		
329_3	57m	4m	2°	7°	-	-	No	Retain	Contractor		
329_4	169m	4m	3°	7°	-	-	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	Rubber flaps during operation. Permanent trafficable rollovers to be installed upon completion of use.

	completion	
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 Roading Coordinator must be recorded and passed on to the PA.

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HP ED 327 328 329_15

3/3/15

Cpt: Yambulla Date 12/3/15 Location: 728774 5869990 photo Y

CROSSING NAME: C1 DL, (mapped DL)

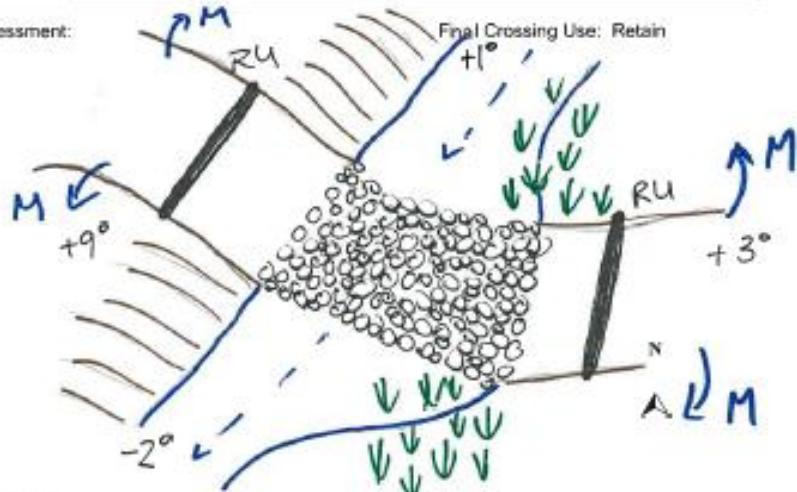
Waterway Classification: Fish Passage Class 4 – unlikely fish habitat

Fisheries Licence Aquatic Habitat: Not class 1 or 2

Assessors Name: M. CostelloCrossing Type: Existing Causeway

Features	Works (As per EPL Schedule 5)	Plant/Materials
Structure	Stable at time of assessment? Y Pull back compacted earth to natural slope. Install crushed rock surface as required.	Dump truck Dozer Crushed rock (8m ³)
Bed and Banks	Stable at time of assessment? yes	
Erosion and Sediment Control	Establish drainage either side of crossing Apply seed and mulch as required to disturbed areas	Seed mulch
Disposal of excess spoil	Outside Stream Exclusion Zone.	
Soil Stabilisation within 20m	NA.	NA.
Road drainage within 5-30m	<ul style="list-style-type: none"> Type outlet control table drain checking devices 	Mitre drains and rubber flaps Vegetation Vegetation and hay bales as required
		2x rubber flaps excavator

Date of Assessment:



Date Work Started: _____

Date Work Finished: _____

Soil stabilisation must be completed within 5 days

Record implementation date here: _____

→ Ru	Rubber strip
→ M	Mitre drain
xxx	Roadside clearing
→ Ro	Rollover drain
I	Sill Log
oooo	Rock
▼	Seeding
▽	Sediment control
..	Gravel

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24/3/15

Cpt: Yambulla Date 12/3/15 Location: 727821 5870262 photo Y
CROSSING NAME: C5 DL, (mapped DL)

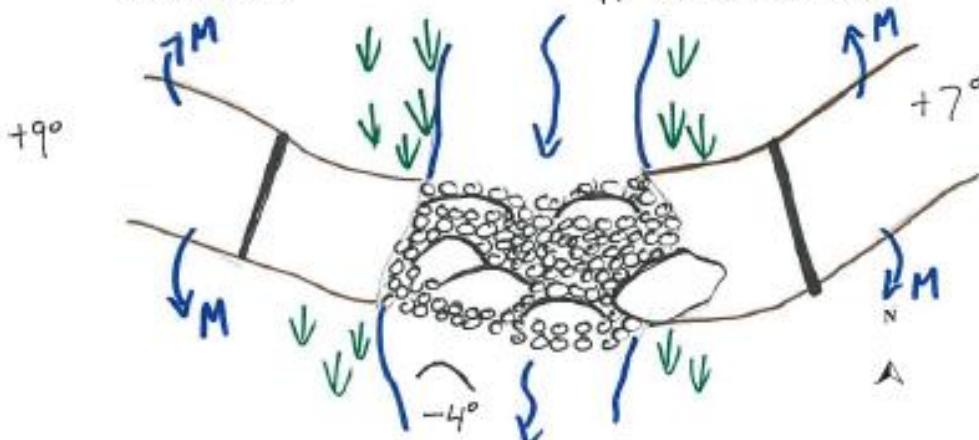
Waterway Classification: Fish Passage Class 2 – moderate fish habitat
Fisheries Licence Aquatic Habitat: Not class 1 or 2

Assessors Name: M. CostelloCrossing Type: Existing Causeway

Features	Works (As per EPL Schedule 5)	Plant/Materials
Structure	Stable at time of assessment? Y Install gabion rock in depressions between raised bedrock	Dump truck Crushed rock (20m ³)
Bed and Banks	Stable at time of assessment? yes	
Erosion and Sediment Control	Establish drainage either side of crossing Apply seed and mulch as required to disturbed areas	Seed mulch
Disposal of excess spoil	Outside Stream Exclusion Zone.	
Soil Stabilisation within 20m	NA.	NA.
Road drainage within 5-30m	<ul style="list-style-type: none"> Type outlet control table drain checking devices Mitre drains and rubber flaps Vegetation Vegetation and hay bales as required	2x rubber flaps excavator

Date of Assessment:

+1° Final Crossing Use: Retain



Date Work Started: _____

Key

Date Work Finished: _____

→Ru	Rubber strip
→M	Mitre drain
xxx	Roadside clearing
→Ro	Rollover drain
I	Sill Log
	Rock
W	Seeding
▽	Sediment control
..	Gravel

Soil stabilisation must be completed within 5 days

Record implementation date here: _____

Cpt: Yambulla Date 4/3/15 Location: 727 846 5872019 photo Y

CROSSING NAME: C8 DL, (mapped DL)

Waterway Classification: Fish Passage Class 4 – unlikely fish habitat

Fisheries Licence Aquatic Habitat: /Not class 1 or 2

Assessors Name: M. Costello

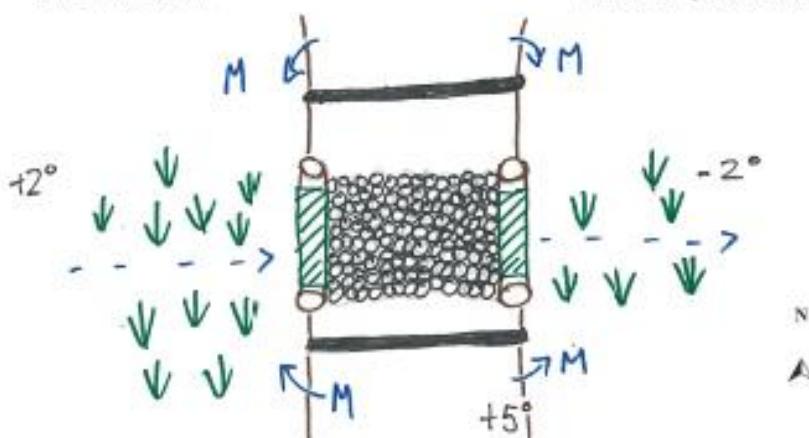
Crossing Type: Existing Causeway

Features	Works (As per EPL Schedule 5)	Plant/Materials
Structure	Stable at time of assessment? Y Install crushed rock and sill logs as required over crossing	Dump truck Crushed rock (2m ³) Sill logs (up to 2 if required; 3m)
Bed and Banks	Stable at time of assessment? yes	Geo-textile under crushed rock
Erosion and Sediment Control	Drainage either side of crossing Apply seed and mulch as required to disturbed areas	Seed mulch
Disposal of excess spoil	Outside Stream Exclusion Zone	
Soil Stabilisation within 20m	NA	NA
Road drainage within 5-30m	<ul style="list-style-type: none"> Type outlet control table drain checking devices 	Mitre drains and rubber flaps Vegetation Vegetation and hay bales as required
		2x rubber flaps excavator

Date of Assessment:

+7°

Final Crossing Use: Retain



Date Work Started: _____

Key

Date Work Finished: _____

→Ru	Rubber strip
→M	Mitre drain
xxx	Roadside clearing
→Ro	Rollover drain
I	Sill Log
oooo	Rock
ψ	Seeding
▽	Sediment control
□	Gravel

Soil stabilisation must be completed within 5 days

Record implementation date here: _____

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11/3/15

Cpt: Yambulla Date 4/3/15 Location: 727552 5872422 photo Y
CROSSING NAME: C9 DL, (mapped DL)

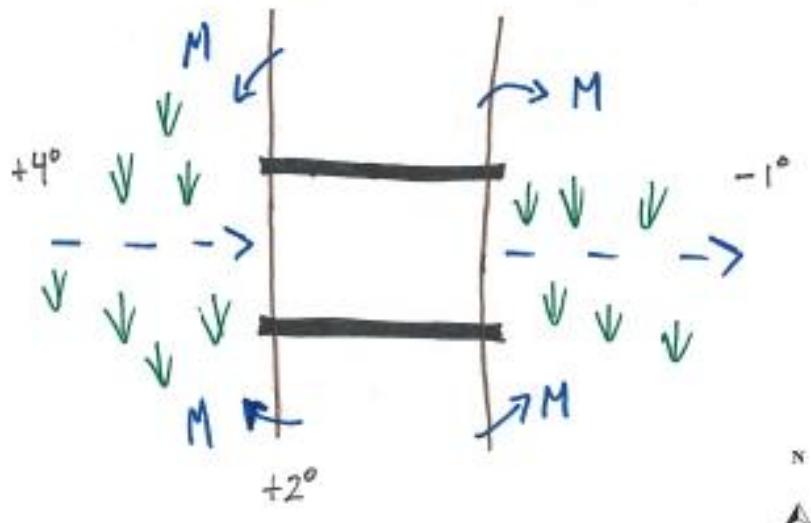
Waterway Classification: Fish Passage Class 4 – unlikely fish habitat
Fisheries Licence Aquatic Habitat: Not class 1 or 2

Assessor's Name: M. Costello**Crossing Type:** Existing Causeway

Features	Works (As per EPL Schedule 5)	Plant/Materials
Structure	Stable at time of assessment? Y No works required	
Bed and Banks	Stable at time of assessment? yes	
Erosion and Sediment Control	Drainage either side of crossing Apply seed and mulch as required to disturbed areas	Seed mulch
Disposal of excess spoil	Outside Stream Exclusion Zone.	
Soil Stabilisation within 20m	NA.	NA.
Road drainage within 5-30m	<ul style="list-style-type: none"> Type outlet control table drain checking devices Mitre drains and rubber flaps Vegetation Vegetation and hay bales as required	2x rubber flaps excavator

Date of Assessment: +1/3/15

Final Crossing Use: Retain



Date Work Started: _____

Key

Date Work Finished: _____

→Ru	Rubber strip
→M	Mitre drain
xxx	Roadside clearing
→Ro	Rollover drain
I	Sill Log
.....	Rock
ψ	Seeding
▽	Sediment control
□	Gravel

Soil stabilisation must be completed within 5 days

Record implementation date here: _____