

LOCALITY MAP

Compartments 333, 334, & 335

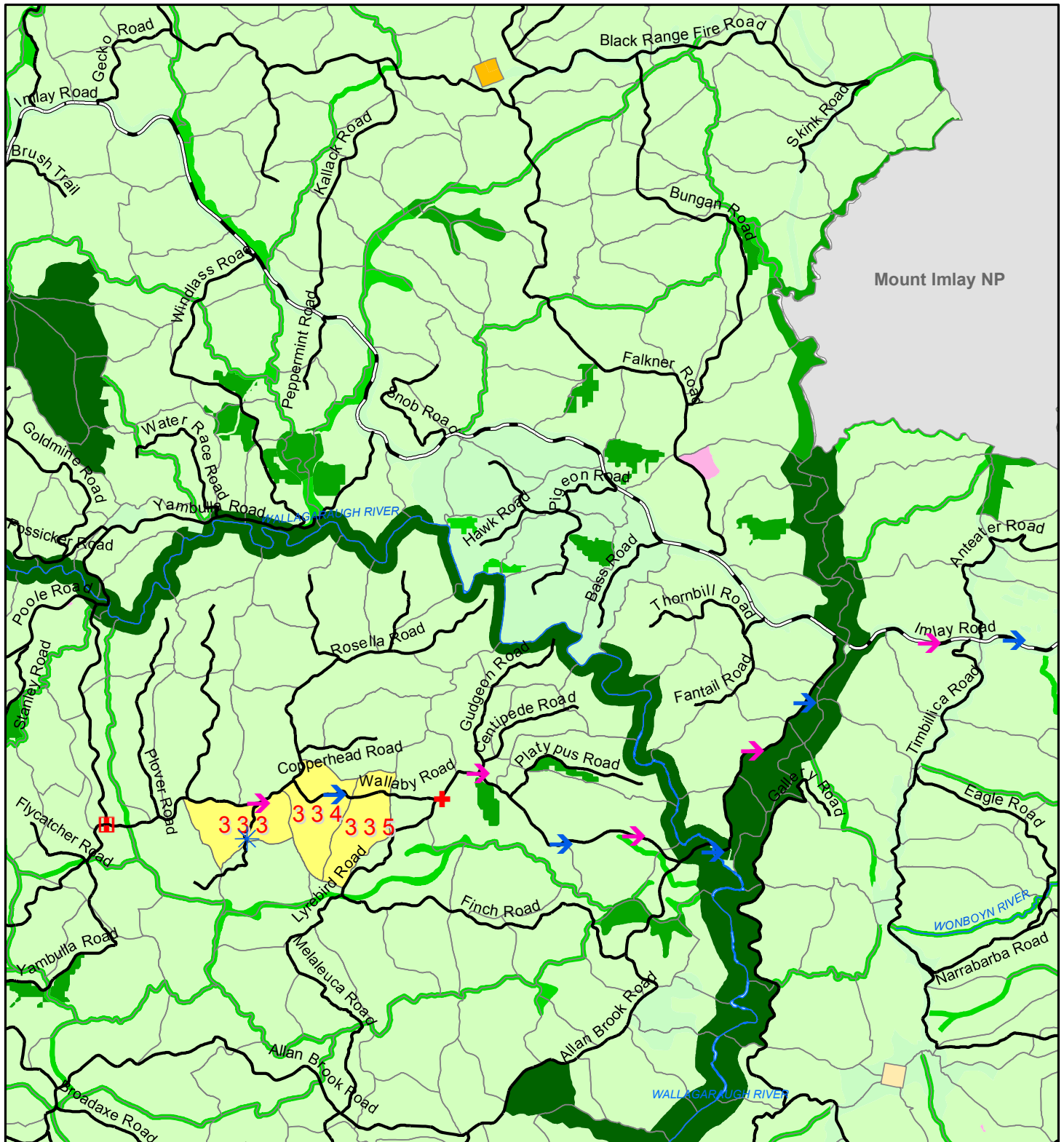
State Forest: Yambulla

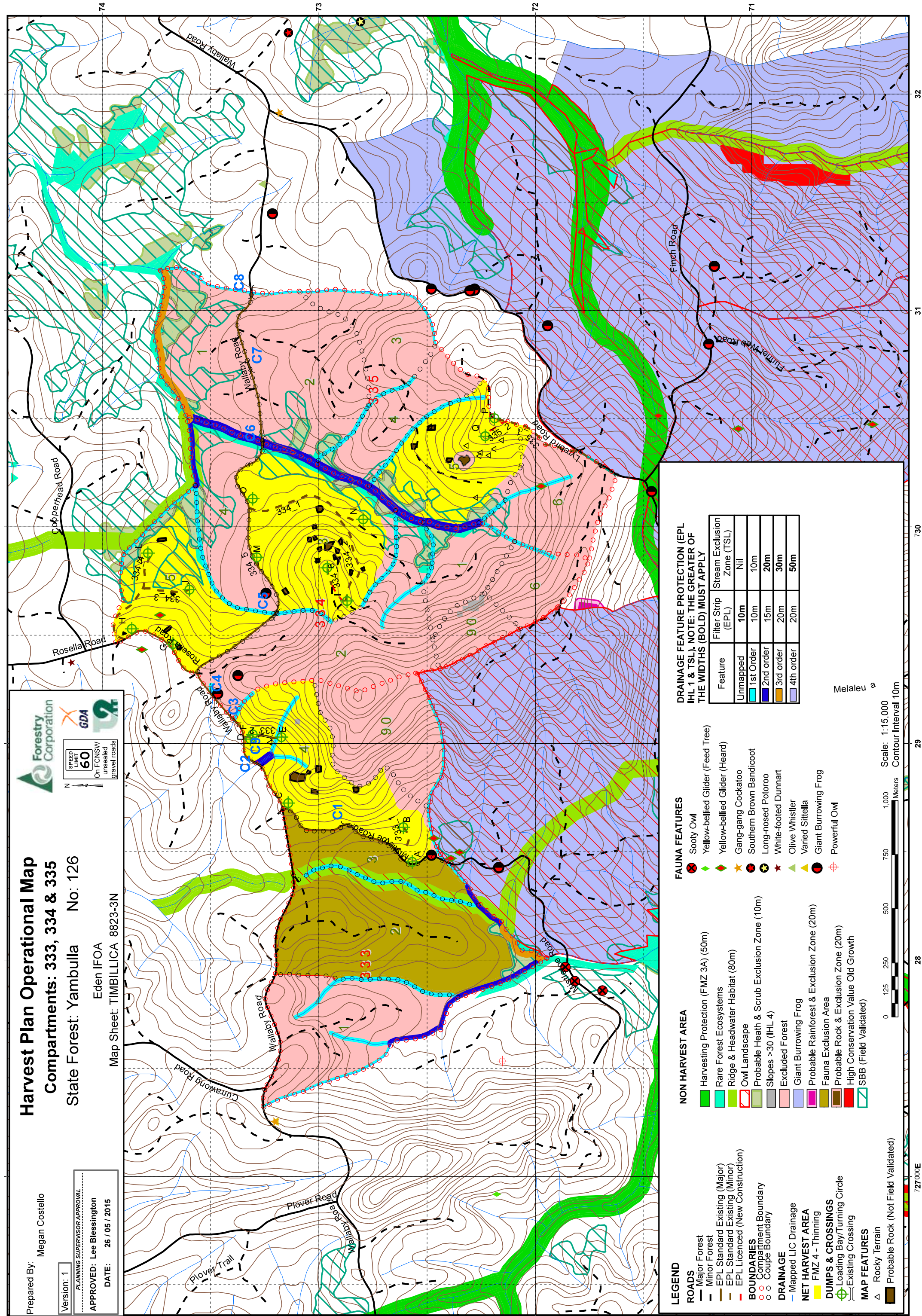
EDEN IFOA

No: 126

EDEN MANAGEMENT AREA

Scale: 1:100,000





Harvest Plan Operational Map
Compartments: 333, 334 & 335
State Forest: Yambulla No: 126

Eden IFOA
Map Sheet: TIMBILICA 8823-3N

Prepared By: Megan Costello
Version: 1
PLANNING SUPERVISOR APPROVAL
APPROVED: Lee Blessington
DATE: 26 / 05 / 2015



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

FAUNA FEATURES

- Sooty Owl
- Yellow-bellied Glider (Feed Tree)
- Yellow-bellied Glider (Heard)
- Gang-gang Cockatoo
- Southern Brown Bandicoot
- Long-nosed Potoroo
- White-footed Dunnart
- Olive Whistler
- Varied Sittella
- Giant Burrowing Frog
- Powerful Owl

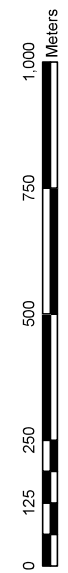
NON HARVEST AREA

- Harvesting Protection (FMZ 3A) (50m)
- Rare Forest Ecosystems
- Ridge & Headwater Habitat (80m)
- Owl Landscape
- Probable Heath & Scrub Exclusion Zone (10m)
- Slopes >30 (IHL 4)
- Excluded Forest
- Giant Burrowing Frog
- Probable Rainforest & Exclusion Zone (20m)
- Fauna Exclusion Area
- Probable Rock & Exclusion Zone (20m)
- High Conservation Value Old Growth
- SBB (Field Validated)

LEGEND

- ROADS
 - Major Forest
 - Minor Forest
 - EPL Standard Existing (Major)
 - EPL Standard Existing (Minor)
 - EPL Licenced (New Construction)
- BOUNDARIES
 - Compartment Boundary
 - Coupe Boundary
- DRAINAGE
 - Mapped LIC Drainage
- NET HARVEST AREA
 - FMZ 4 - Thinning
- DUMPS & CROSSINGS
 - Loading Bay/Turning Circle
 - Existing Crossing
- MAP FEATURES
 - Rocky Terrain
 - Probable Rock (Not Field Validated)

Scale: 1:15,000
Contour Interval 10m



727000E

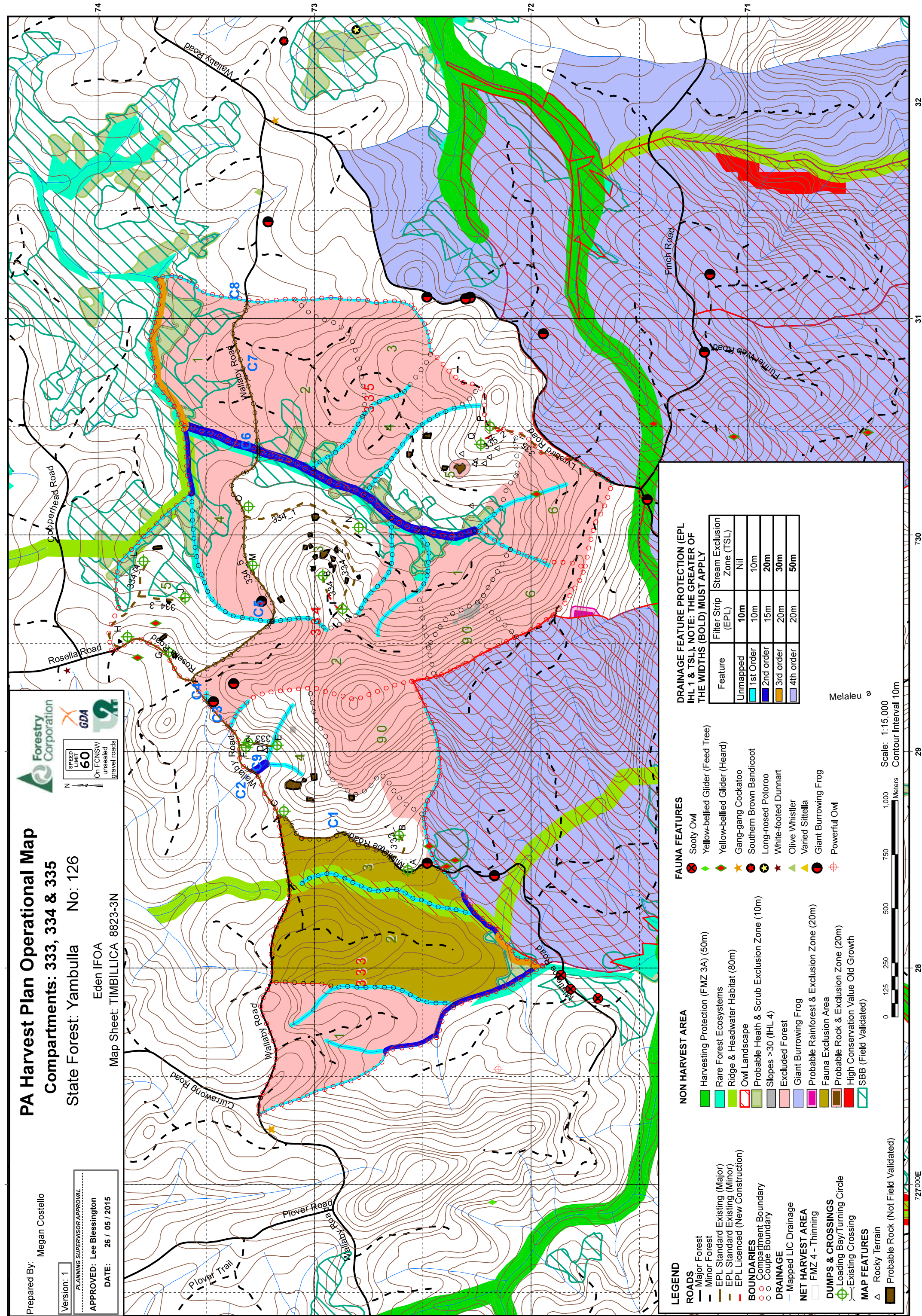
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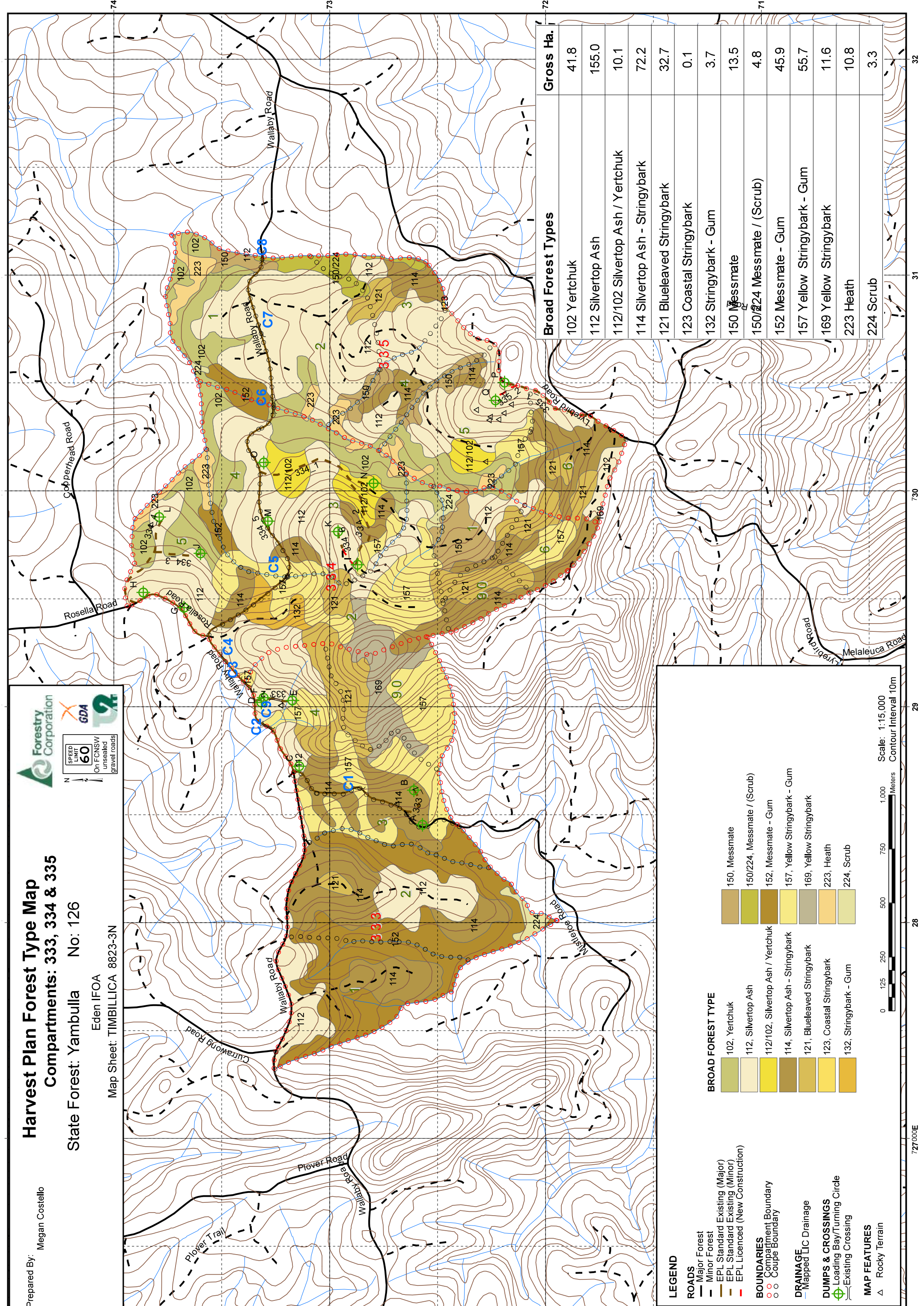
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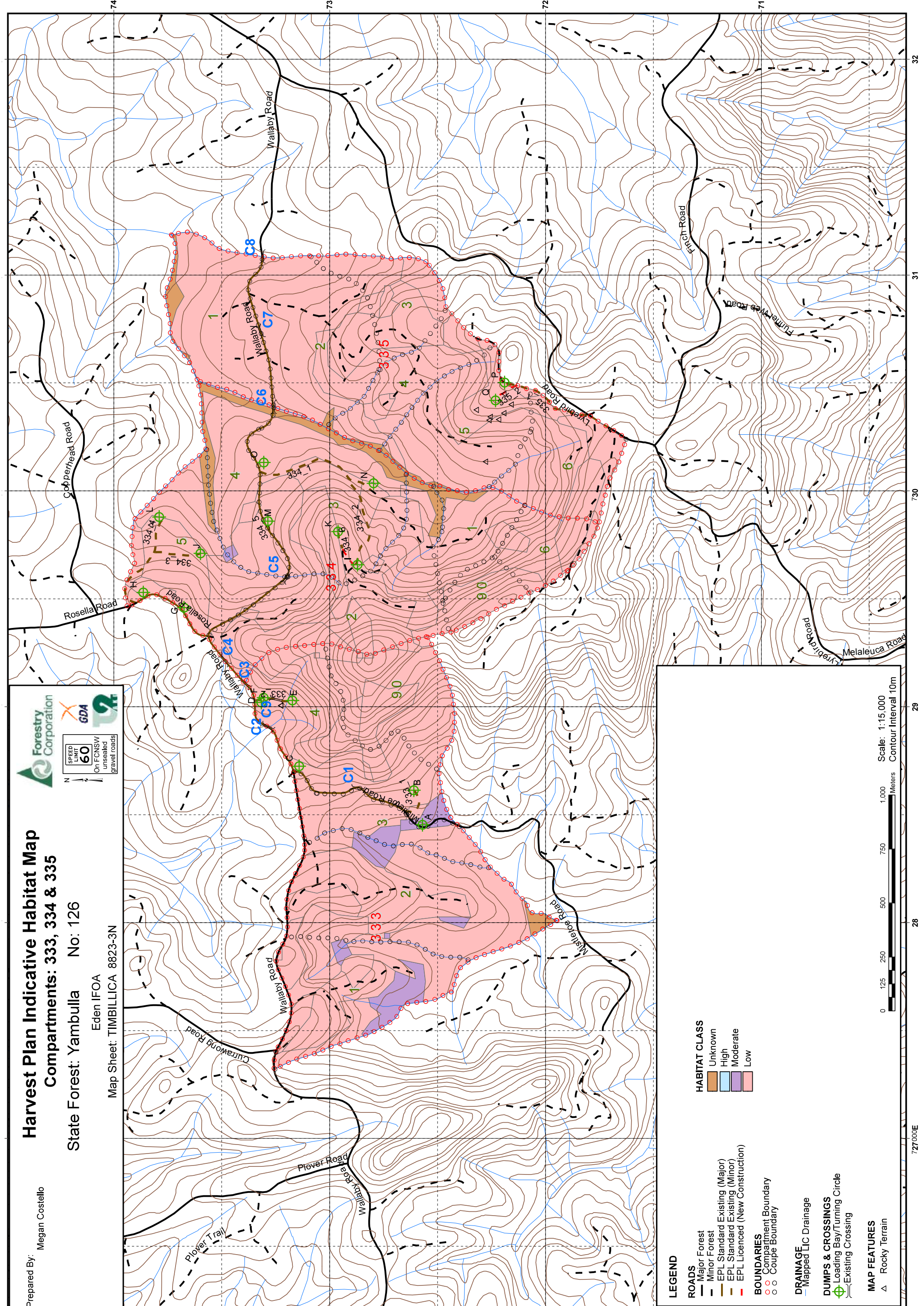
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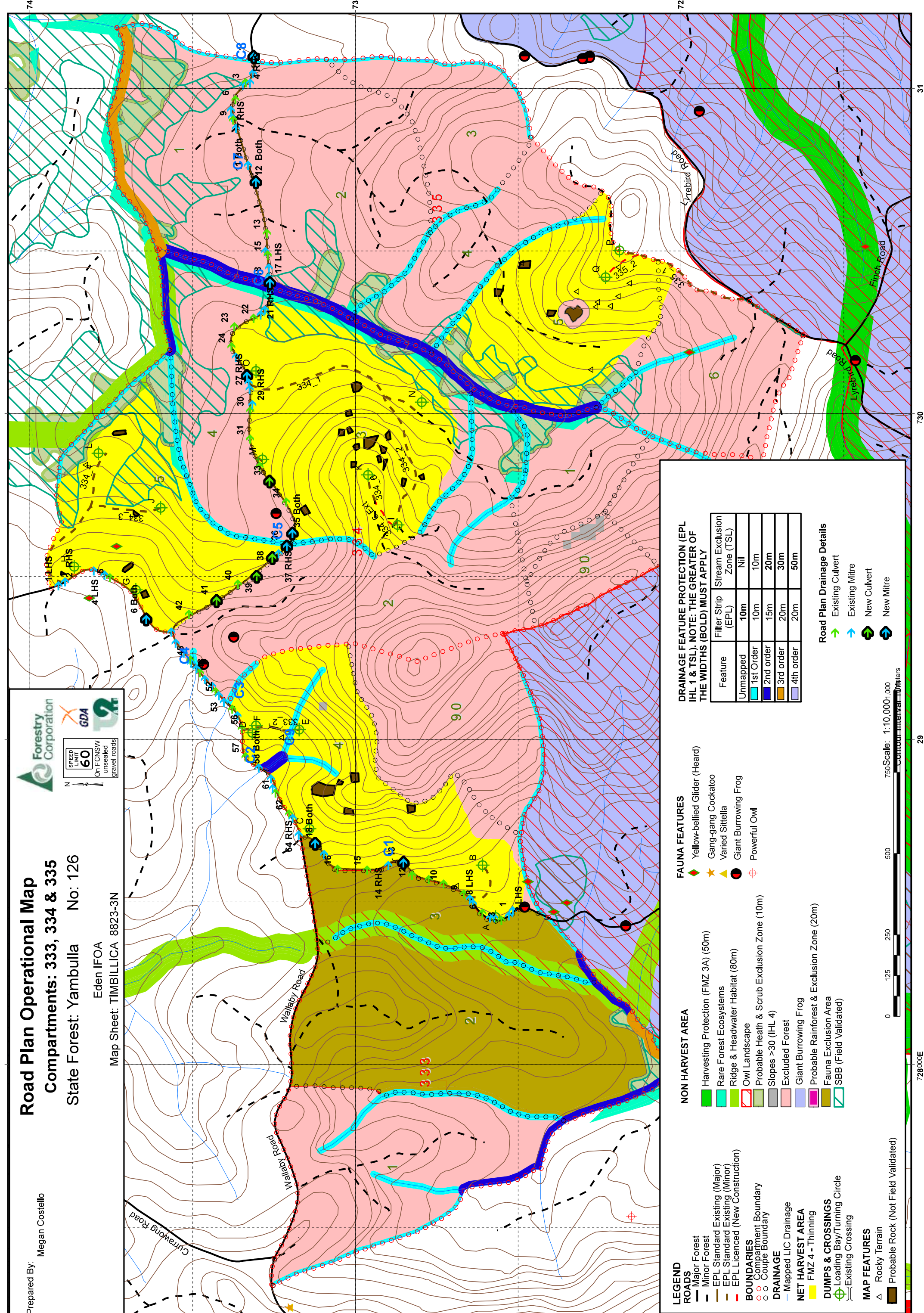
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HARDWOOD FORESTS- EDEN IFOA HARVESTING PLAN

Yambulla State Forest - Compartments 333, 334, & 335

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	26/05/2015	Date	26/05/15

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, Roding 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: Roding plan prescribes roding requirements for this harvesting operation.

Abbreviations used in this plan

PA = Production Assistant, PtS= Protection Supervisor, PS = Production Supervisor, RC = Roding 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	333	4	Eden	Eden	AS4708:2007 ISO 14001
Yambulla	334	3 & 5	Eden	Eden	AS4708:2007 ISO 14001
Yambulla	335	5	Eden	Eden	AS4708:2007 ISO 14001

	Cpt 333	Cpt 334	Cpt 335	Total
Plan Compartment ID	333	334	335	NA
Gross Area (ha)	153.7	163.1	144.6	461.4
Net Harvest Area (ha)	31.2	61.1	24.8	117.1
Estimated Yield Pulp (t)	2,590 t	8,554 t	2,001 t	13,145 t
Estimated Yield Sawlog (m3)	-	-	-	-

Slope Classes (percent of harvest area)

	Cpt 333	Cpt 334	Cpt 335
Slope Class	% of harvest area	% of harvest area	% of harvest area
0-20°	71.7	95.8	95
20-25 °	18	4.1	5
25-30 °	10	0.1	0



ATTACHMENT 1: SITE SAFETY PLAN

Worksite Information	
Is this Declared Hunting Area: Yes	Comments: Missed the exclusion deadline 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 mark up 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 333: 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 Compartment 334: south via Rosella Road then east 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>From Compartment 335: north via Lyrebird Road then east 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	

SITE HAZARD & RISK ASSESSMENT NO.	CONTROL	WHO	IMPLEMENTED
1. Vehicle collision at adjoining roads of various traffic levels	Warning signs at FCNSW intersections, road closure on FCNSW roads. Implement Traffic Control plans (where specified in this harvest plan). 60km/hr speed limit on all State Forest natural surface/gravel roads unless otherwise signposted. Compliance with FCNSW lights on policy.		
2. Hazardous or dead trees	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.		
3. Overhead hazards associated with dumps	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.		
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: Average	GSM: Telstra		Satellite: N/A
GPS Lat/Long: 37° 15' 22.6" S / 149° 35' 9.2" E	MGA: 729328E 5873562N	Datum: GDA 94	Zone: 55
Location description: Junction of Rosella and Wallaby Roads			
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**Cpt 333**

Year	1972	1982	1984	1994	2002
TSI	X	X	X	X	X
HR Burning	X	X	X	Ö	X
Wildfires	Ö	Ö	X	X	X
Logging m³			10,272		4,395

Ö - applies, **X** – not applicable

Cpt 334

Year	1972	1982	1983	1994	1995
TSI	X	X	X	X	X
HR Burning	X	X	X	Ö	X
Wildfires	Ö	Ö	X	X	X
Logging m³			9,679		13,463

Ö - applies, **X** – not applicable

Cpt 335

Year	1972	1982	1983	1994	1996	2005
TSI	X	X	X	X	X	X
HR Burning	X	X	X	Ö	X	X
Wildfires	Ö	Ö	X	X	X	X
Logging m³			13,913		7,753	4,610

Ö - applies, **X** – not applicable

		Pre-thinning			Removed			Post-thinning	
Cmpt No.	Indicative Thinnable Area (ha)	Stock (stems/ha)	B.A. (m2/ha)	Vol/Ha (m3/ha)	Stock (stems/ha)	B.A. (m2/ha)	Vol/Ha (m3/ha)	Stock (stems/ha)	B.A. (m2/ha)
333	31.2	1220	43.6	224.8	970	23.1	99.9	250	20.5
334	61.1	1181	61.6	394.1	931	30.0	168.1	250	31.6
335	24.8	995	40.3	253.8	745	17.6	96.9	250	22.7

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

Silvicultural Planning

Compartments 333, 334 and 335 were harvested under a modified shelterwood system from 1983-84 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 2005 (Cpt 335), 2002 (Cpt 333), and 1995-96 (Cpts 334 & 335). 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 470mm 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 1983-84 and are located predominately on the ridge tops with Silvertop Ash/Yertchuck on the mid-slopes and Yellow Stringybark – Gum and Yertchuck 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 harvestable 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 333, 334, & 335 are within Bega Valley/Cooma-Monaro Shire Council which is a designated red zone for Myrtle Rust. In order to prevent the spread of Myrtle Rust all harvesting machinery, equipment and vehicles heading west from BegaValley/Cooma-Monaro

Shire Council or south into Victoria must be inspected for vegetation containing Myrtle Rust. If present, the vegetation must be removed from the harvesting machinery, equipment or vehicle prior to leaving the compartment.

Occupation Permits

Apiary

Six 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?
	AF7		no
	AD7, AD8, AE8, AF9, & AG9		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. Areas of probable rock that have not yet been field verified are shown on the HPOM. The 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

Approvals have not been obtained for snig track construction and/or use, road construction, road re-opening, routine road maintenance and log haulage in FMZ 3A. If the PA identifies the need for harvesting related activities to occur within FMZ 3A during the operation, the Harvest Planner must be contacted to seek Planning Supervisor approval.

All areas of 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 334, 335 and 336. Additional Cultural Heritage surveys may be conducted by community representatives during the thinning operation. The planner will advise the PS prior to any surveys occurring. 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: **Olive Whistler** (*Pachycephala olivacea*), **White-footed Dunnart** (*Sminthopsis leucopus*), **Varied Sittella** (*Daphoenositta chrysoptera*), **Little Lorikeet** (*Glossopsitta pusilla*), **Gang Gang Cockatoo** (*Callocephalon fimbriatum*),

Tree Retention-Non-Regrowth Zone

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

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

0 - Condition applies

General exclusion zones

General exclusions as listed below are shown on the HPOM.

Feature/Condition	TSL cond'n	Occurs within Planning Unit
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
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	Licence conditions under the TSC Act
Threatened Frog General Protection Measures	Yes 333, & 334	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	Licence conditions under the TSC Act or relevant Site-specific prescription
Giant Burrowing Frog <i>Heleioporus australiacus</i>	Yes 333 & 334	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 333	6.3 Owl Landscape Exclusion Zones occur in compartment 333. (Refer to HPOM).
Southern Brown Bandicoot <i>Isodon obesulus</i>	No	6.5A & Species Management Plan
Long-footed Potoroo (<i>Potorous longipes</i>)	No	If this species is identified in the compartment or within 100m of the compartment boundary inform the Senior Field Ecologist immediately to apply for a site specific prescription.
Long-nosed Potoroo <i>Potorous tridactylus</i>	No	6.7
Spotted tailed Quoll <i>Dasyurus maculatus</i>	No	6.10
Yellow-bellied Glider <i>Petaurus australis</i>	Yes 334 & 335	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

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 snagging 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

17 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

Nine road crossings (C1, C2, C3, C4, C5, C6, C7, C8, and C9) are approved for use on drainage features. (Refer to HPOM). Crossing details are contained in Attachment 2 of this Plan.

Mass Movement

Compartments 333, 334, and 335 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 snagging 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 333, 334 and 335 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	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 (state what it is)					

Weekly and Bi-weekly inspection

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

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

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____

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	2 nd	1 st	2 nd	1 st	2 nd	1st	2 nd	1st	2 nd
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	2 nd	1 st	2 nd	1 st	2 nd	1st	2 nd	1st	2 nd
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	2 nd	1 st	2 nd	1 st	2 nd	1st	2 nd	1st	2 nd
Road drainage												
Road sediment controls												
Road causeways												
Road gully stuffers												
Snig gully stuffers												
PA initial												
PA presence												

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

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____

PA Notes

[illegible]

PA Notes (continued)

[illegible]

PA Notes (continued)

[illegible]

PA Notes (continued)

[illegible]

PA Notes (continued)

[illegible]

Clearance Certificate

COMPARTMENTS: 333, 334, & 335 YAMBULLA STATE FOREST

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 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).....

Record any circumstances of significance relating to the harvesting of this compartment. Please draw or include any annotations on the attached operation scale map.

Treatment type	Area (ha) subject to treatment (PA estimate)	Number of AGS gaps created	Comments
Integrated/Modified shelterwood			
Thinning			
Post Harvest Silviculture			

Give reasons for harvestable areas that were not harvested (eg. Too steep, defective timber). Make reference to map.

[illegible]

	m ² /ha
	52.9 m ² /ha

Y/N

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.	6,559m/12	Yes
New roads to be constructed	225m/2	Yes
Existing crossings used	9	Yes
New crossings to be constructed	Nil	NA
Length of road >10°	66m	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
Wallaby Road (length 2,857m) FCNSW responsibility	<p>Clear up to 3m either side of road to facilitate truck movements and sight distance. Clear inlets and outlets of culverts. Sites where drainage structures exceed road drainage spacing are shown on attached Road Plan map.</p> <p>New 450mm culvert to be installed at:</p> <p>E 729795 N 5873264</p> <p>It is believed that culverts may be buried under sediment in this section of the road; however if culverts are not uncovered; the following are required to meet EPL drainage spacing.</p> <p>E 729559 N 5873260</p> <p>E 729502 N 5873299</p> <p>E 729424 N 5873430</p> <p>RC/PA Comments:</p>			
C8 E 731083	<p>Establish mitre on the eastern downhill side between 5 & 30m of drainage line.</p> <p>RC/PA Comments:</p>			

N 5873315 <i>FCNSW responsibility</i>				
C7 E 730737 N 5873318 <i>FCNSW responsibility</i>	Establish drainage between 5 & 30m on west side of crossing. RC/PA Comments:			
C6 E 730388 N 5873261 <i>FCNSW responsibility</i>	Replace bridge as per attached Crossing Form RC/PA Comments:			
C5 E 729603 N 5873196 <i>FCNSW responsibility</i>	Need to install mitres on both sides of the road on the both sides of the crossing within 5 and 30m of culvert. RC/PA Comments:			
C4 E 729220 N 5873489 <i>FCNSW responsibility</i>	No works required. RC/PA Comments:			
C3 E 729112 N 5873391 <i>FCNSW responsibility</i>	Clean out inlet and outlet of culvert. RC/PA Comments:			
C2 E 728910 N 5873287 <i>FCNSW responsibility</i>	Re-establish mitre drains on both sides of crossing within 5 and 30m. RC/PA Comments:			
Rosella Road (length = 443m) <i>FCNSW responsibility</i>	Clear up to 3m either side of road to facilitate truck movements and sight distance. Clear inlets and outlets of culverts. Sites where drainage structures exceed road drainage spacing are shown on attached Road Plan map. RC/PA Comments:			
Mistletoe Road (length = 600m)	Clear up to 3m either side of road to facilitate truck movements and sight distance. Clear inlets and outlets of culverts. Sites where			

FCNSW responsibility	drainage structures exceed road drainage spacing are shown on attached Road Plan map. RC/PA Comments:			
C1 E 728626 N 5872891 FCNSW responsibility	Install mitre drain to the south of crossing between 5 & 30m of drainage feature. RC/PA Comments:			
333-1 (length = 157m) Contractor responsibility	Clear up to 3m either side of road to facilitate truck movements. Shape road, re-establish table drains and drainage. RC/PA Comments:			
333-2 (length = 178m) Contractor responsibility	Clear up to 3m either side of road to facilitate truck movements. Shape road, re-establish table drains and drainage. RC/PA Comments:			
C9 E 729029 N 5873248 Contractor responsibility	Existing natural crossing of unmapped drainage depression. Install drainage between 5 & 30m either side of crossing. Apply rock to running surface if wet conditions exist. RC/PA Comments:			
334-1 (length = 576m) Contractor responsibility	Clear up to 3m either side of road to facilitate truck movements. Shape road, re-establish table drains and drainage. RC/PA Comments:			
334-2 (length = 451m) Contractor responsibility	Clear up to 3m either side of road to facilitate truck movements. Shape road, re-establish table drains and drainage. RC/PA Comments:			
334-3 (length = 532m) Contractor responsibility	Clear up to 3m either side of road to facilitate truck movements. Shape road, re-establish table drains and drainage.			

	RC/PA Comments:			
334-4 (length = 180m) <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:			
334-5 (length = 76m) <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:			
334-6 (length = 75m) <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:			
334-6 Ext (length = 101m) <i>Contractor responsibility</i>	Refer to New Road Construction Form RC/PA Comments:			
335-1 (length = 434m) <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:			
335-2 (length = 124m) <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
334-6 Ext Rd	101m	4m	5°	8°	NA	NA	No	Retain	Contractor		
335-2 Rd	124m	4m	7°	10°	NA	NA	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 Roading Coordinator must be recorded and passed on to the PA.

G:\planning\HarvestPlans\Yambulla\CPT_333_334_335\HarvestPlan\Roads and Crossings.Crossing
form_C8.doc

HP_ED_333_334_335_15

Cpt 334 Date 5/5/15 Location: 730388 5873261

14/05/2015
photo Y

CROSSING NAME: C6 DL, (mapped DL)

Waterway Classification: Fish Passage Class 2-Moderate Fish habitat

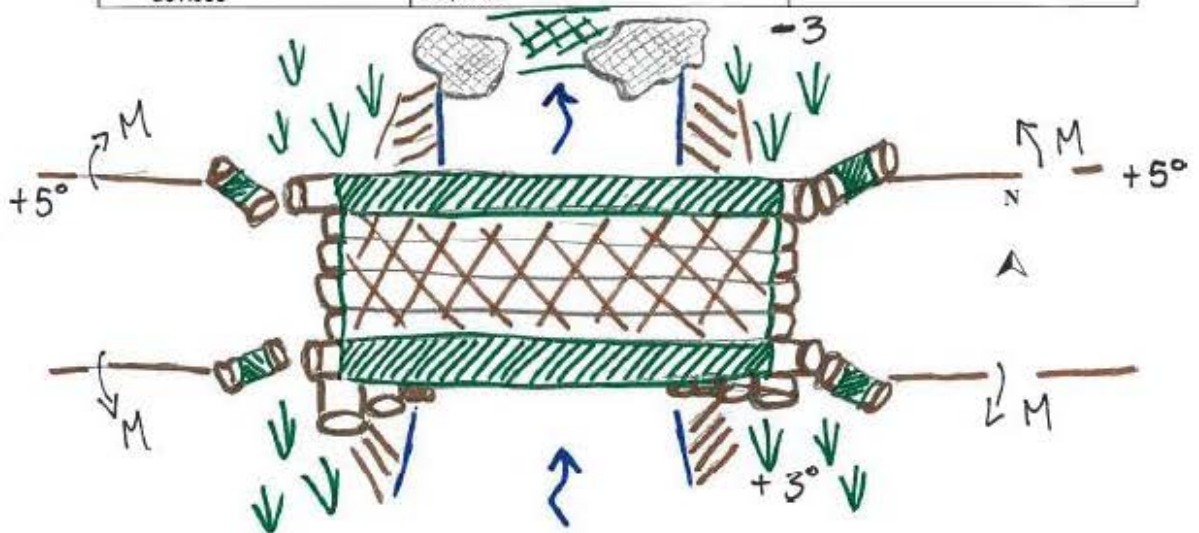
Fisheries Licence Aquatic: Not class 1 or 2

Final Crossing Use: Retain

Assessors Name: M. Costello

Crossing Type: Existing Bridge

Features	Works (As per EPL Schedule 5)	Plant/Materials
Structure	No longer stable. Remove old deck. Retain existing bedlogs. Install new bedlogs behind the existing bedlogs to minimize bank disturbance. Install new deck and apply earth surface.	6-8 stringers (8.5m) 3 bedlogs (5m) Excavator, supervision, & labour
Bed and Banks	Stable at time of assessment? Y	NA.
Erosion and Sediment Control	Install kerb and wing logs on both sides of the bridge. Cover bridge deck with geo-textile and secure to kerb logs. Install silt barriers during construction. Apply mulch and seed as required	2 kerb logs – (8m) 4 wing logs (4m) Geotextile Hay, mulch, and seed as required. Excavator, labour
Disposal of excess spoil	Outside Stream Exclusion Zone.	Excavator
Soil Stabilisation within 20m	NA.	NA.
Road drainage within 5-30m		
• Type	Mitre drains	excavator
• outlet control	Vegetation	
• table drain checking devices	Vegetation and hay bales if required	



Date Work Started: _____

Date Work Finished: _____

Soil stabilisation must be completed within 5 days

Record implementation date here: _____

Date Work Finished: _____

Soil stabilisation must be completed within 5 days

Key

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