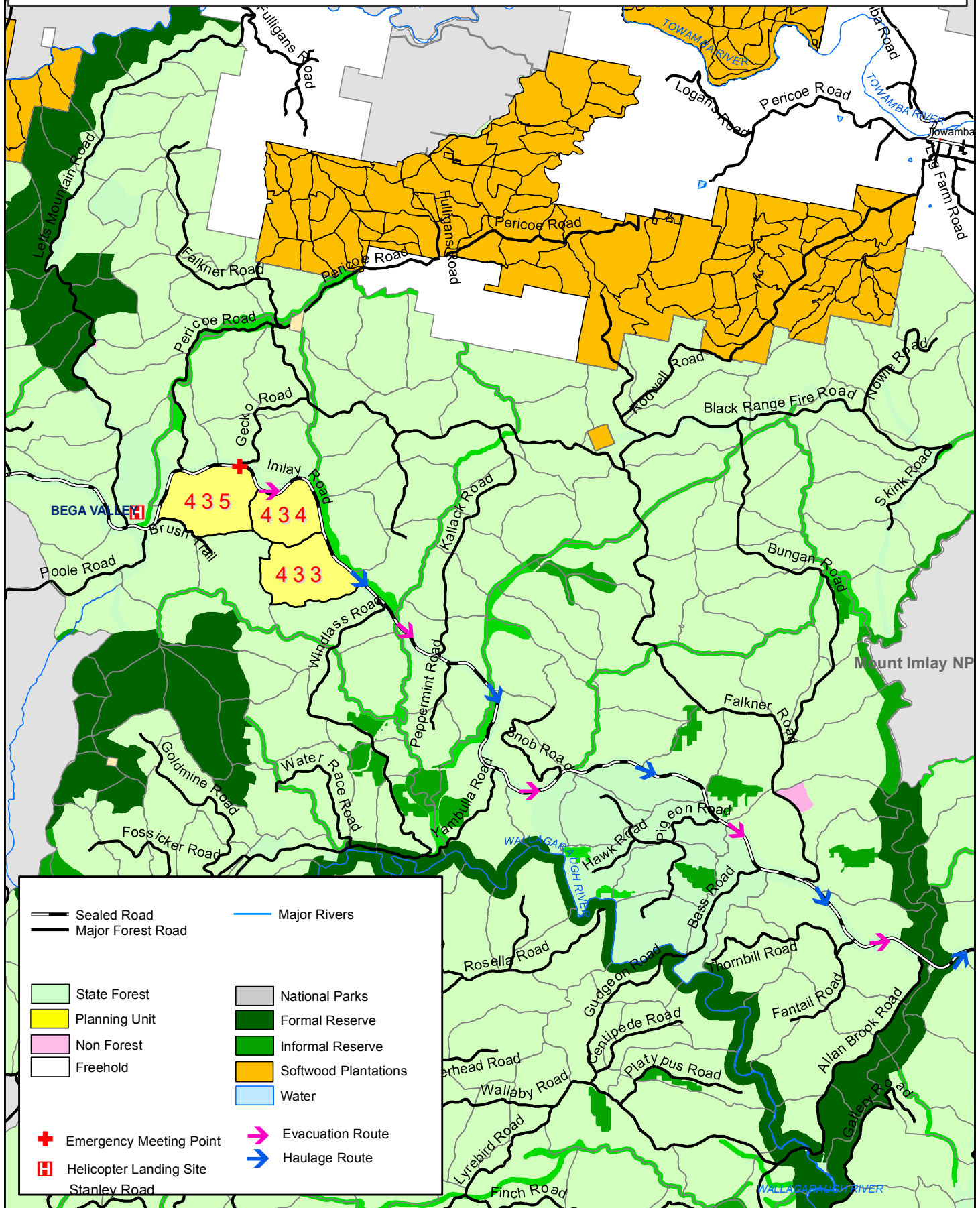
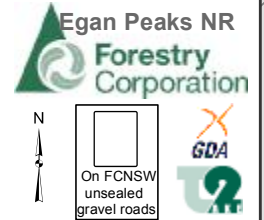
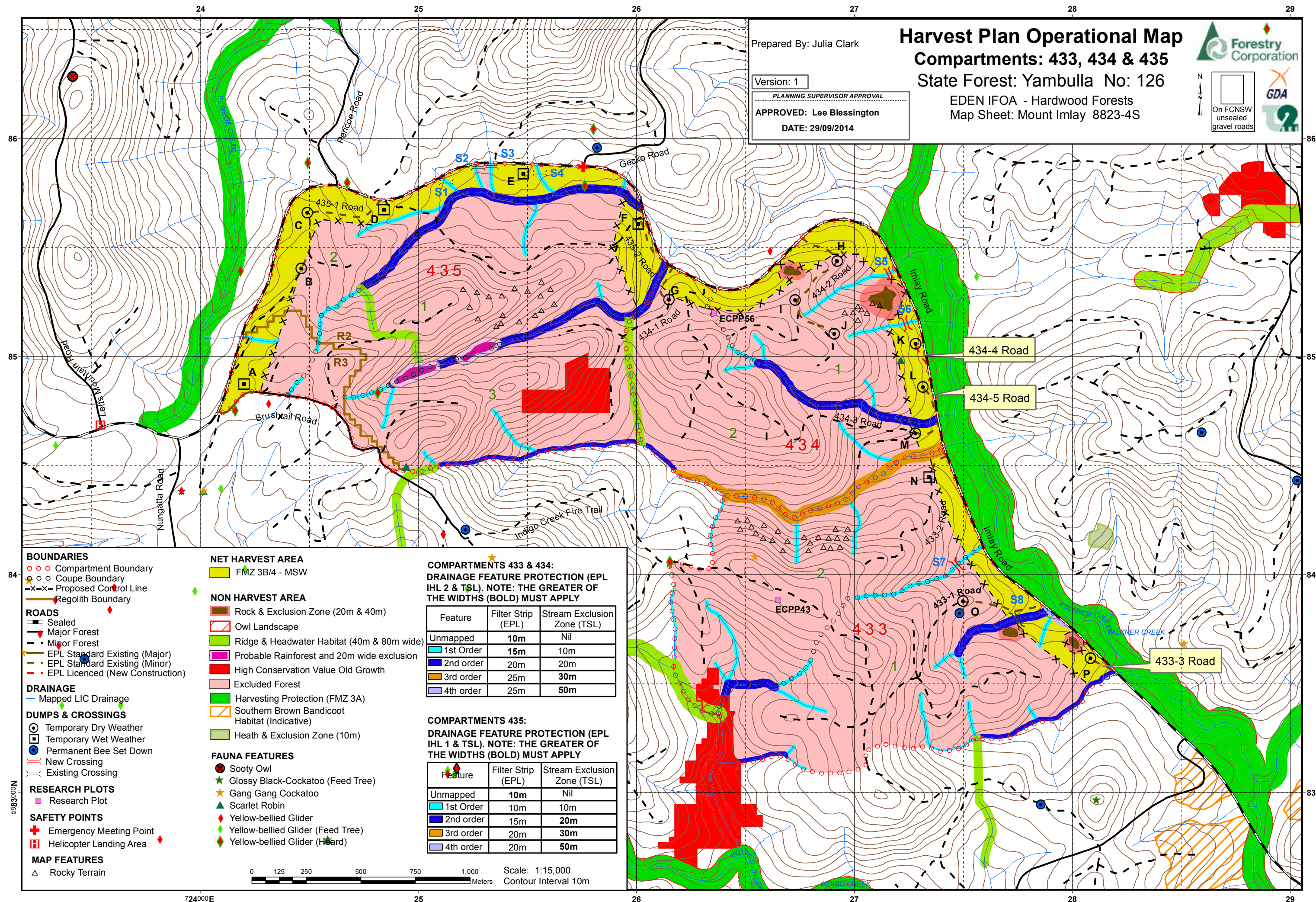


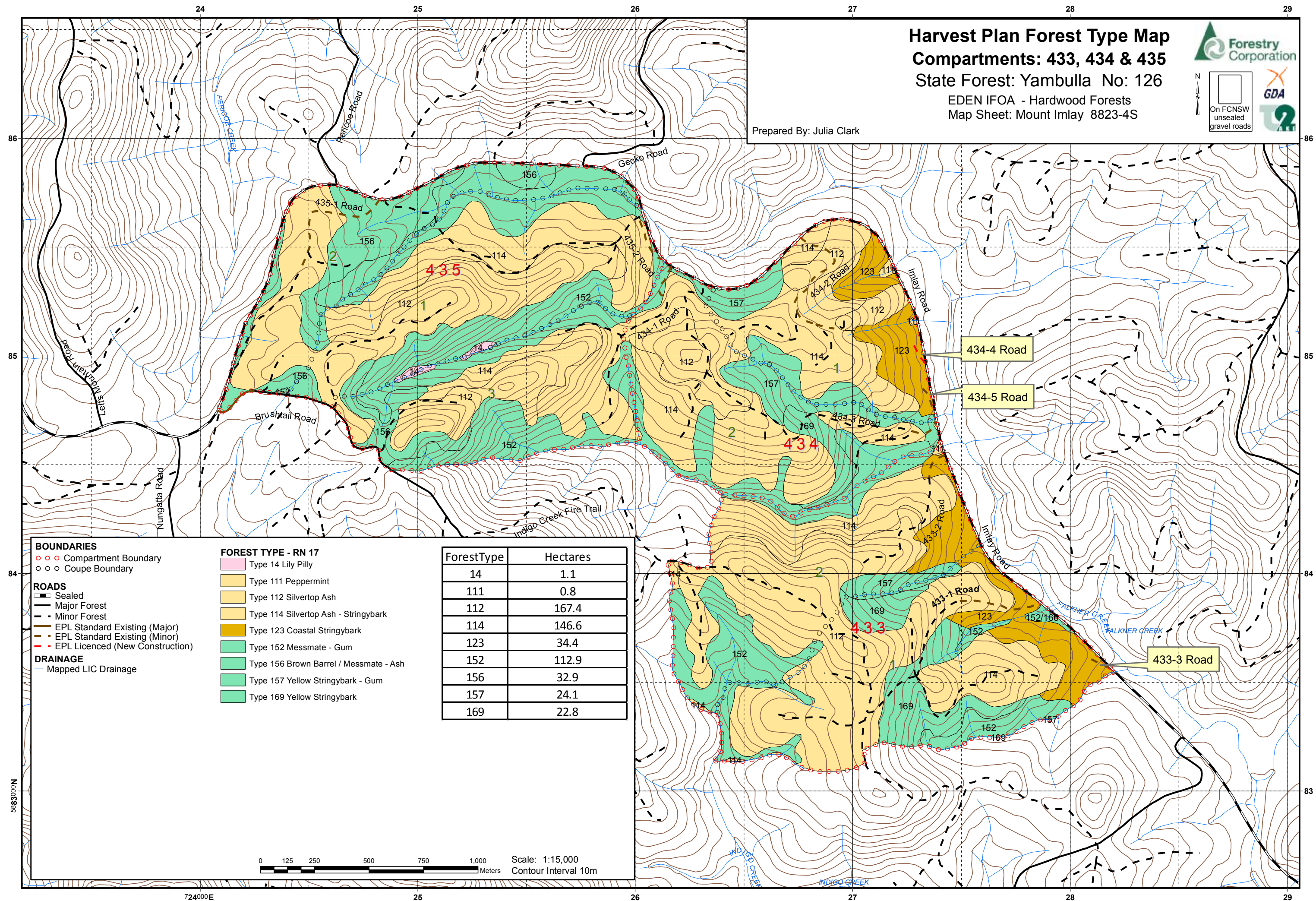
LOCALITY MAP

Compartments 433, 434 & 435
Yambulla State Forest No.126

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









HARDWOOD FORESTS- EDEN IFOA HARVESTING PLAN

Yambulla State Forest - Compartments 433, 434 & 435

Certification

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

Prepared By: Harvest Planner	Julia Clark	Approved By: Planning Supervisor	Lee Blessington
Signature	Julia Clark	Signature	Lee Blessington
Date	29.09.2014.	Date	29.09.2014.

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

Other maps included with this plan are Locality, Forest Type and Roding.

Description of Proposal

Harvesting of hardwood forest

(a) Integrated Harvesting of Hardwood Forest:

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

(b) Roadside Vegetation Control of Native Forest

Imlay Road is classed as Strategic Fire Advantage Zone (SFAZ) in accordance with the Bega Valley Bush Fire Management Committee, Bush Fire Risk Management Plan. For the strip of area along the length of Imlay Road within these compartments, roadside vegetation control will occur up to a maximum of 10m along the southern side of Imlay Road in accordance with the values of the SFAZ. In addition, the vegetation control will improve the safety conditions of Imlay Road by improving sight distances of road intersections and the removal of hazardous trees overhanging Imlay Road.

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

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

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

Abbreviations used in this plan

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

Area Identification and Yield Estimates

State Forest	Compartments	Coupes	IFOA Region	Management Area	Certification
Yambulla	433	1 (part) 2 (part)	Eden	Eden	AS4708:2007 ISO 14001
Yambulla	434	1 (part) 2 (part)	Eden	Eden	AS4708:2007 ISO 14001
Yambulla	435	1 (part) 2 (part)	Eden	Eden	AS4708:2007 ISO 14001

	Cpt 433	Cpt 434	Cpt 435	Total
Plan Compartment ID	20866	20867	20868	NA
Gross Area (ha)	191.6	137.9	213.7	543.2
Net Harvest Area (ha)	13.0	21.4	35.2	69.6
Estimated Yield Pulp (t)	676t	1,070t	2,042t	3,788t
Estimated Yield Sawlog (m3)	216 m3	274 m3	1056 m3	1546 m3

Slope Classes (percent of harvest area)

Slope Class	Cpt 433 % of harvest area	Cpt 434 % of harvest area	Cpt 435 % of harvest area
0-20°	100	100.0	100
20-25 °	0.0	0.0	0.0
25-30 °	0.0	0.0	0.0



ATTACHMENT 1: SITE SAFETY PLAN

Worksite Information		
Is this Declared Hunting Area: Yes	Comments: Compartments covered by hunting exclusion zone.	
Have Exclusion Zone signs been erected or checked prior to starting work daily.	N/A	
Comments: No signage required.		
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>The logging contractor is responsible for traffic control on all roads when felling is within two tree lengths of the tallest tree to be felled of the road, or snagging on roads or loading is occurring within 10 metres of a road. Warning of trucks entering must be displayed 200 metres on either side of the junction/intersection of Brushtail Road, 433-1 Road, 433-2 Road, 433-3 Road, 434-1 Road, 434-2 Road, 434-3 Road, 434-4 Road, 434-5 Road, 435-1 Road and 435-2 Road onto Imlay Road to warn motorists of emerging log trucks.</p> <p>In addition to the above, when harvesting within two tree lengths of Imlay Road, traffic must be temporarily stopped in accordance with a Traffic Control Plan. The Forestry Corporation of NSW will provide suitably accredited traffic controls to implement "TCP78: Compartments 433, 434 & 435 – Imlay Road" when harvesting these areas. When implementing this traffic control plan, Production Supervisor are to notify Snowy Region, Bombala office, a week prior to traffic control on Gecko Road.</p> <p>This plan identifies haulage from the compartments will be via Brushtail Road, 433-1 Road, 433-2 Road, 433-3 Road, 434-1 Road, 434-2 Road, 434-3 Road, 434-4 Road, 434-5 Road, 435-1 Road and 435-2 Road turning right onto Imlay Road (100km/hr Road) and then onto Princess Hwy turning right onto Edrom Road (100km/hr Road).</p> <p>The intersections of Brushtail Road, 433-1 Road, 433-2 Road, 434-4 Road, 434-5 Road, 435-1 Road, 435-2 Road and Imlay Road have been assessed as achieving a minimum of 200m sight distance on both approaches. Therefore, at these intersections additional signage in accordance with a Traffic Control Plan is not required.</p> <p>The intersection of 433-3 Road and Imlay Road has been assessed as achieving a minimum sight distance of 200m for vehicles travelling on Imlay Road in the westerly direction but not for vehicles travelling in the easterly direction. Therefore, prior to haulage commencing, a suitably qualified person must implement "TCP195: 433-3 Road – Imlay Road (attached to this harvest plan) at this intersection.</p> <p>The intersection of 434-1 Road and Imlay Road has been assessed as not achieving a minimum sight distance of 200m for vehicles travelling on Imlay Road in either direction. Therefore, prior to haulage commencing, a suitably qualified person must implement "TCP 195: 434-1 Road – Imlay Road" (attached to this harvest plan) at this intersection.</p> <p>The intersection of 434-2 Road and Imlay Road has been assessed as achieving a minimum sight distance of 200m for vehicles travelling on Imlay Road in the easterly direction but not for vehicles travelling in the westerly direction. Therefore, prior to haulage commencing, a suitably qualified person must implement "TCP195:434-2 Road – Imlay Road (attached to this harvest plan) at this intersection.</p>		

The intersection of 434-3 Road and Imlay Road has been assessed as achieving a minimum sight distance of 200m for vehicles travelling on Imlay Road in the westerly direction but not for vehicles travelling in the easterly direction. Therefore, prior to haulage commencing, a suitably qualified person must implement "TCP195: 434-3 Road – Imlay Road (attached to this harvest plan) at this intersection.

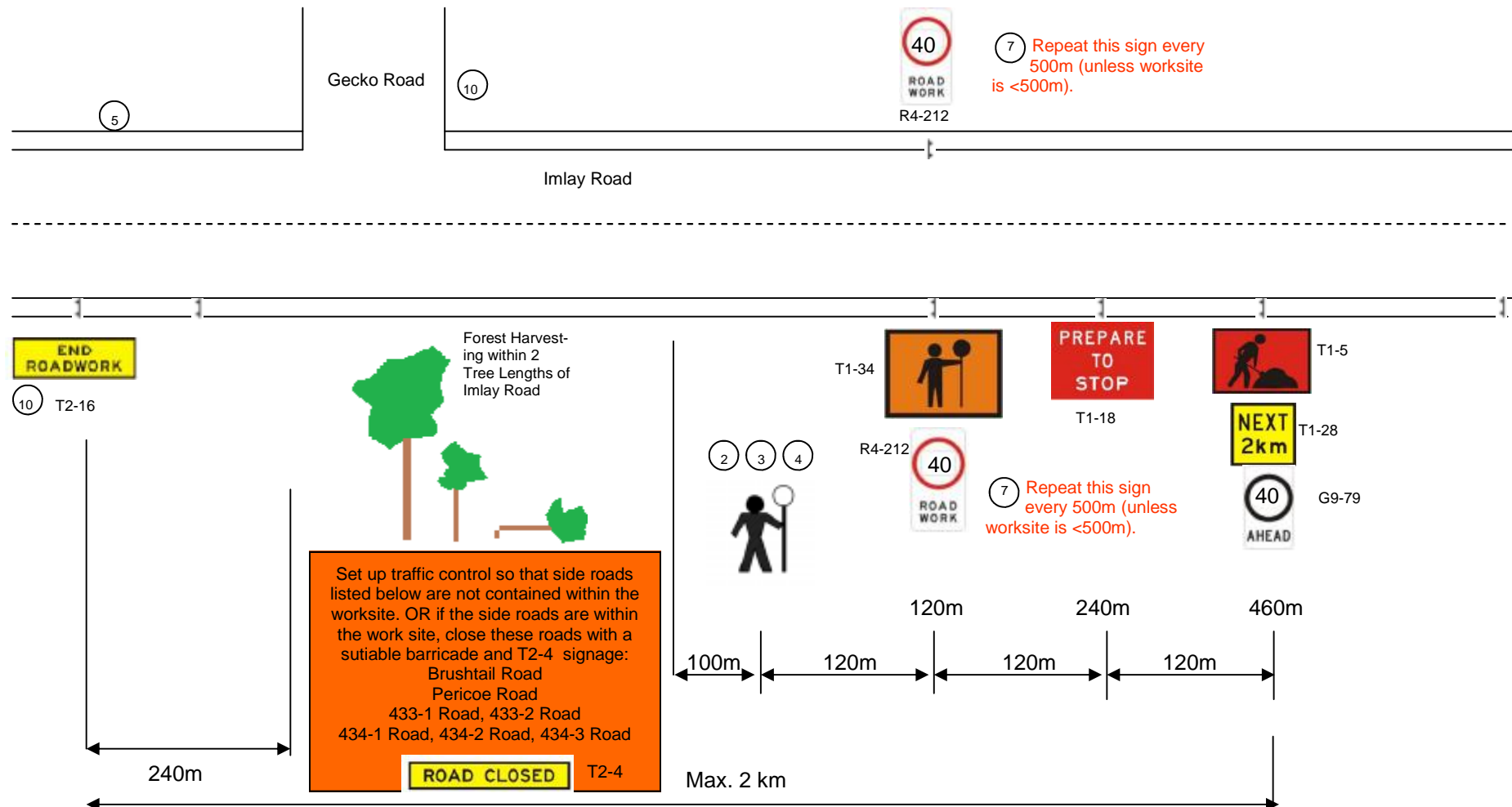
Name of on-site safety first aider/s

Location of first aid kit

SITE HAZARD & RISK ASSESSMENT NO.	CONTROL	WHO	IMPLEMENTED
1. Vehicle collision at adjoining roads of various traffic levels	Warning signs at FCNSW intersections, road closure on FCNSW roads. Implement Traffic Control plans (where specified in this harvest plan). 60km/hr speed limit on all State Forest gravel roads unless otherwise signposted. Compliance with FCNSW lights on policy.		
2. Cliff lines & rocky very steep terrain	Operators to assess work site within two tree lengths to identify immediate hazards. Communicate to other operators and mark sites.		
3. 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. Traffic Controllers on Imlay Road are to wear hard hats at all times.		
4. 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.		
5. Increased risk of trees falling onto Imlay Road after harvest due to increased wind exposure and physical disturbance.	Minimised damage to all retained trees to avoid destabilisation. Inspect area adjacent to Imlay Road for hazardous trees and remove as required.		
6.			
7.			

- **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

Forestry Corporation NSW Hardwood Forests Traffic Control Plan 78: Harvesting within 2 Tree Lengths of Imlay Road Yambulla State Forest Compartments 433, 434 & 435 (modified from RTA Traffic Control at Work Site TCP 78)



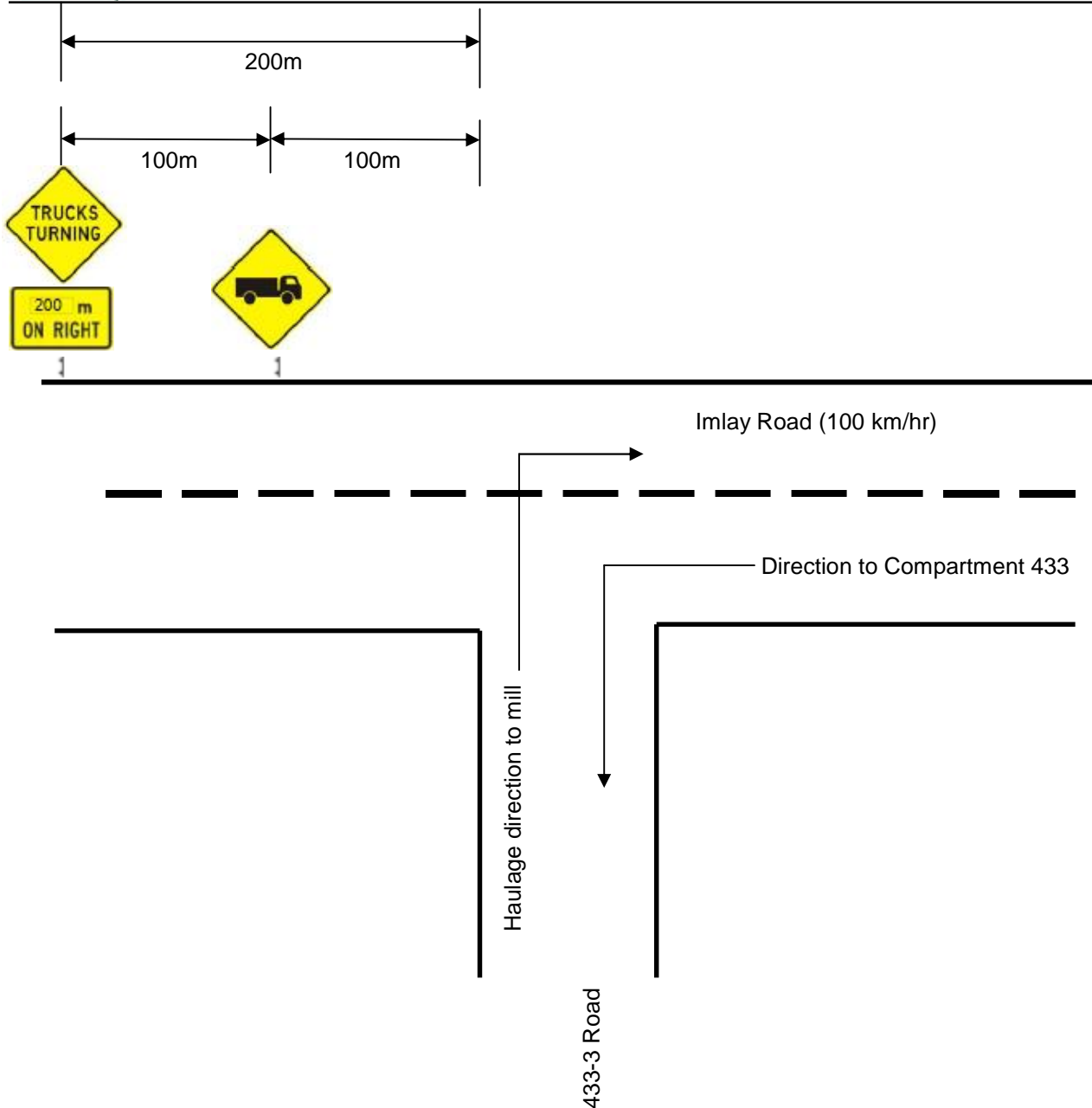
Notes:

1. Each stoppage less than 5 minutes.
2. Traffic controllers to stop traffic for duration of work and then direct traffic past work area, once tree falling has ceased and any debris has been cleared from road.
3. Traffic controllers and tree faller to maintain radio contact so that no tree felling is occurring while traffic is let through. Traffic controller to be located at least two tree length from falling operation at all times.
4. Traffic controller must have sight distance to oncoming traffic of at least 150m. Traffic controller must wear hardhat at all times.
5. Traffic control plan must be mirrored for traffic approaching from the opposite direction.
6. Where possible the worksite should be less than 500m to minimise the distance traffic is required to travel 40km/hr through the worksite. The worksite MAY be longer than 500m but only if this is the only way to set the traffic control up with adequate sight distances for the traffic controller.
7. Where worksite is more than 500m, repeater R4 212 (40km speed limit) signs are required every 500m.
8. Roadwork signs are to be covered when not in use (meal breaks and shift breaks).
9. Permanent road signs which contradict this TCP must be covered whilst TCP is in operation.
10. If Gecko Road falls within the worksite, traffic control plan must be mirrored for Gecko Road with signs at 60 m intervals.

FREQUENTLY CHANGING WORK AREA
2 LANE/2 WAY
ADT < 3000

Prepared by Julia Clark ,
Reviewed & Approved by Rob Young Red Card Certificate No. on 19/09/2014

Forestry Corporation NSW Eden IFOA TCP195: 433-3 Road—Imlay Road: (modified from RTA Traffic Control at Work Site TCP 195)



Notes:

- ① Log Haulage - Intersection of 433-3 Road and Imlay Road (100km/hr). Sight distance restricted to <200m when travelling in a easterly direction along Imlay Road.

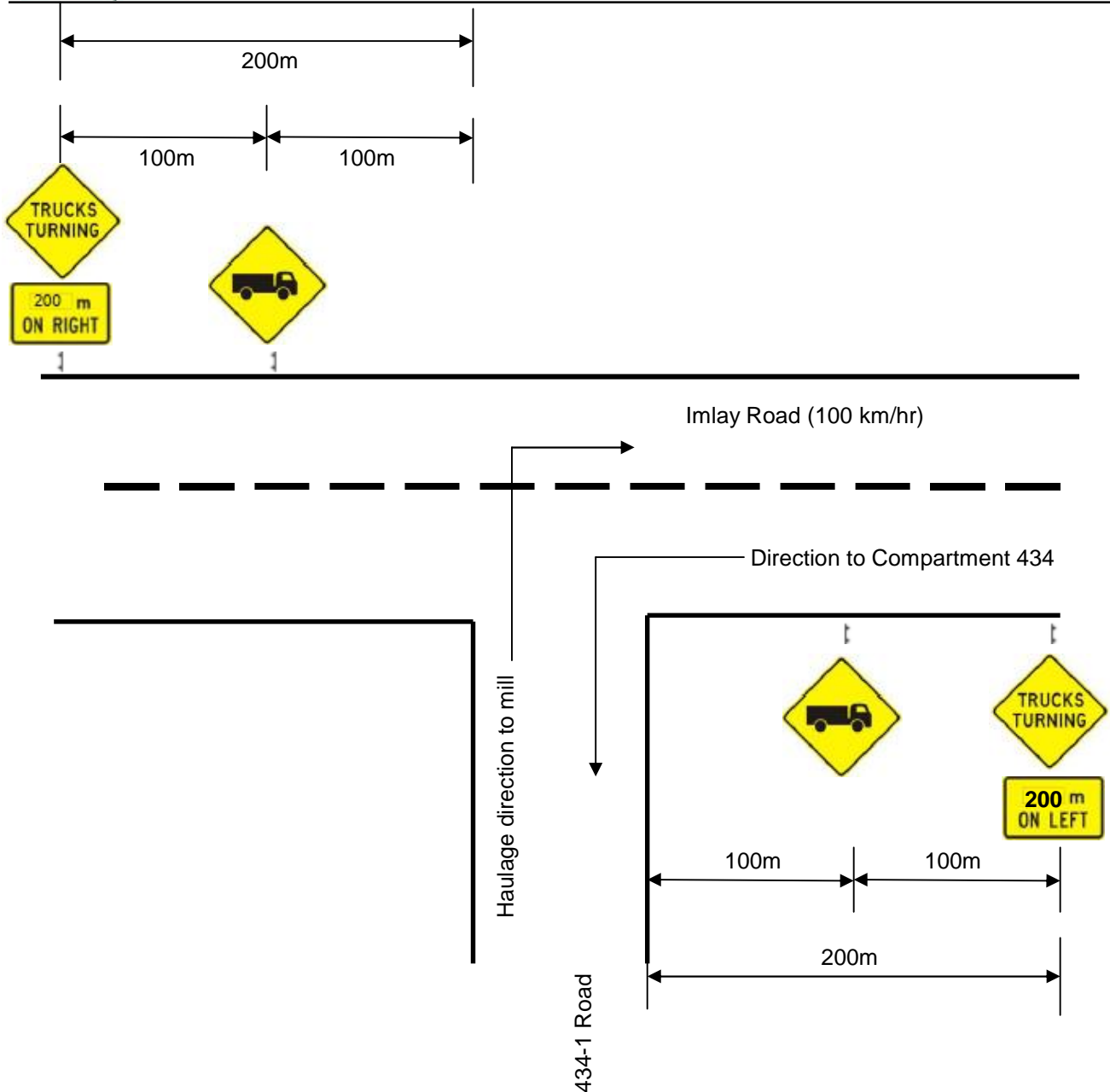
LONG TERM USE

ADT < 1500, <20 Truck Movements, Sight Distance Restricted

Prepared by Julia Clark

Reviewed & approved by Rob Young Red Card Certificate No. 5192053861 on 22/09/2014

Forestry Corporation NSW Eden IFOA TCP195: 434-1 Road—Imlay Road: (modified from RTA Traffic Control at Work Site TCP 195)



Notes:

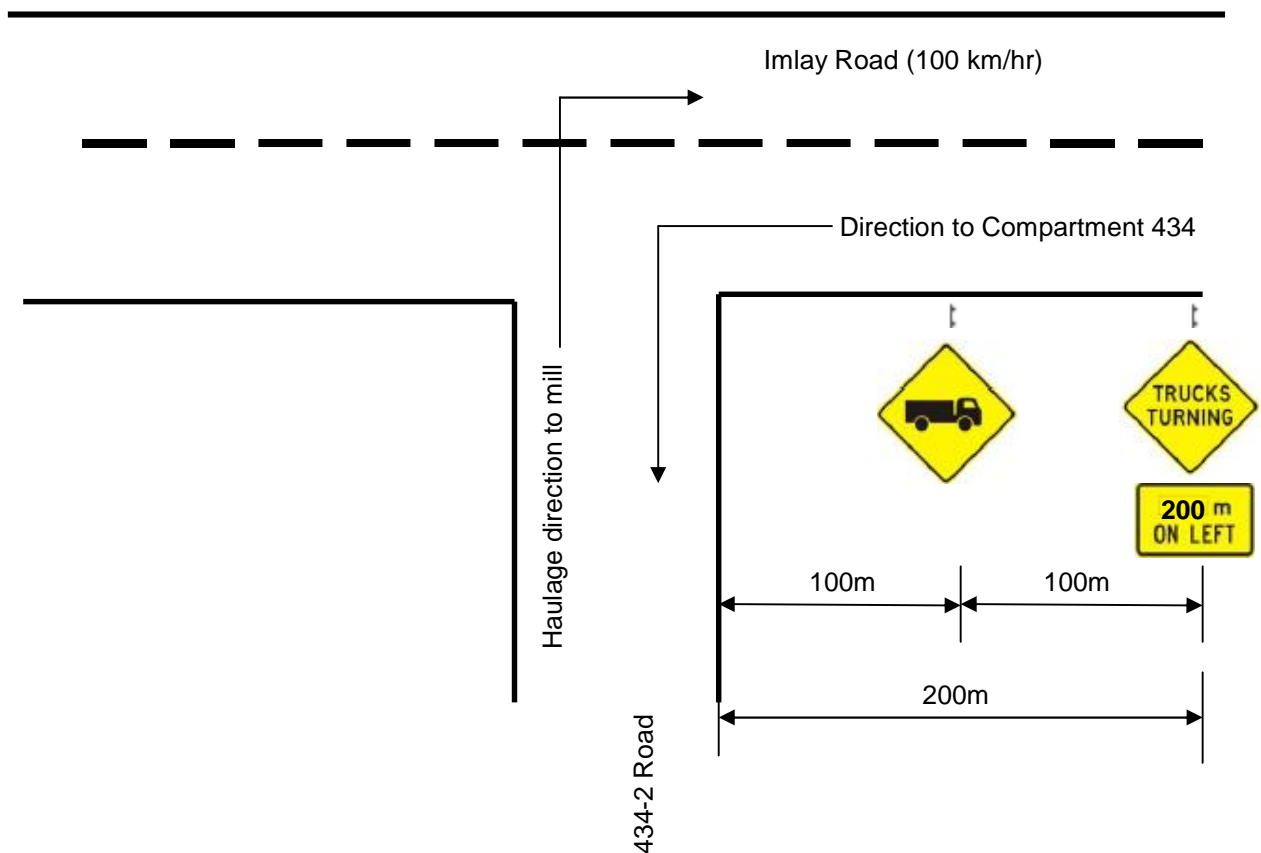
- ① Log Haulage - Intersection of 434-1 Road and Imlay Road (100km/hr). Sight distance restricted to <200m when travelling in both directions along Imlay Road.

LONG TERM USE

ADT < 1500, <20 Truck Movements, Sight Distance Restricted

Prepared by Julia Clark Reviewed & Approved by Rob Young Red Card Certificate No. 5192053861
on /21/08/2014

Forestry Corporation NSW Eden IFOA TCP195: 434-2 Road—Imlay Road: (modified from RTA Traffic Control at Work Site TCP 195)



Notes:

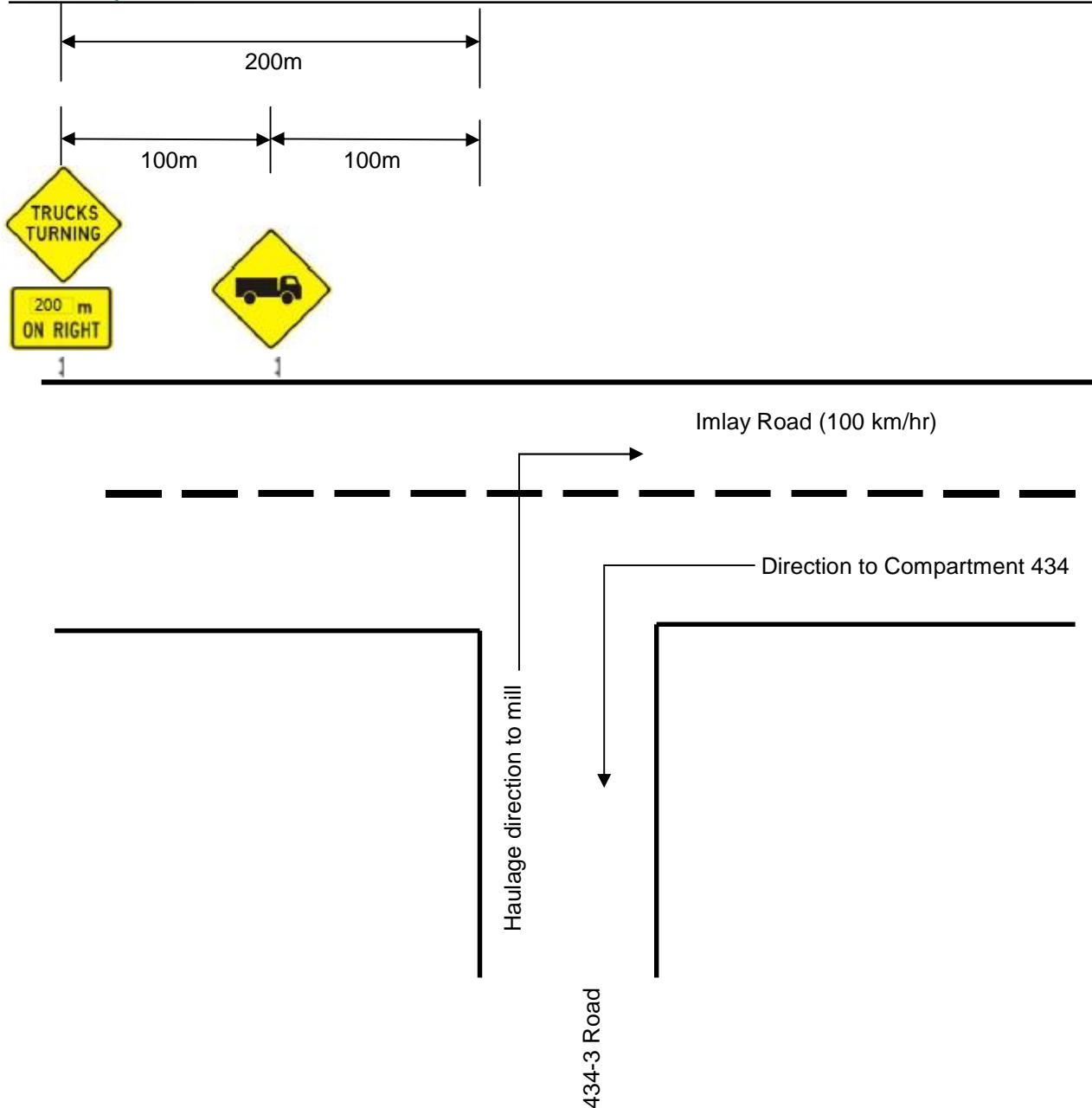
- ① Log Haulage - Intersection of 434-2 Road and Imlay Road (100km/hr). Sight distance restricted to <200m when travelling in a westerly directions along Imlay Road.

LONG TERM USE

ADT < 1500, <20 Truck Movements, Sight Distance Restricted

Prepared by Julia Clark Reviewed & approved by Rob Young Red Card Certificate No. 5192053861 on /21/08/2014

Forestry Corporation NSW Eden IFOA TCP195: 434-3 Road—Imlay Road: (modified from RTA Traffic Control at Work Site TCP 195)



Notes:

- ① Log Haulage - Intersection of 434-3 Road and Imlay Road (100km/hr). Sight distance restricted to <200m when travelling in a easterly direction along Imlay Road.

LONG TERM USE

ADT < 1500, <20 Truck Movements, Sight Distance Restricted

Prepared by Julia Clark Reviewed & approved by Rob Young Red Card Certificate No. 5192053861 on /21/08/2014



MEDICAL EMERGENCY EVACUATION PLAN

Nearest reliable mobile phone reception (describe location)			
Next G Network: Poor	GSM: N/A		Satellite: N/A
GPS Lat/Long:	MGA:	Datum: GDA 94	Zone: 55
Location description: Higher points along Imlay Road with vehicle mounted antenna.			
Emergency meeting point for ambulance / police (refer to attached safety map)			
GPS Lat/Long: 37° 8' 46" S / 149° 32' 31" E	MGA: 725766E 5885875N	Datum: GDA 94	Zone: 55
Location description: Intersection of Gecko Road and Imlay Road.			
Helicopter landing place (refer to attached safety map)			
GPS Lat/Long: 37° 9' 28" S / 149° 31' 3" E			
Location description: Intersection of Letts Mountain Road and Imlay Road.			
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: Eden Nearest ambulance station: Eden	
3. Address?		Imlay Road	
4. Nearest road junction/cross street?		Gecko 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 and travel approx. 24km to intersection with Imlay Road (on right). Turn right onto Imlay Road and travel for approx. 33km to Gecko Road intersection.			
8. 4WD ambulance required Y / N		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 433

Year	1987	1994	1997	2002	2003
TSI	X	X	X	X	Ö
HR Burning	X	Ö	Ö	X	X
Wildfires	X	X	X	X	X
Logging m³	11,177	X	X	4,942	2,395

Ö - applies, **X** – not applicable

Compartment 434

Year	1988	1993	1997	2003
TSI	X	X	X	X
HR Burning	X	X	Ö	X
Wildfires	X	X	X	X
Logging m³	8,678	1,018	X	8,617

Ö - applies, **X** – not applicable

Compartment 435

Year	186/88	1997	2000
TSI	X	Ö	X
HR Burning	X	Ö	X
Wildfires	X	X	X
Logging m³	13,402	X	11,160

Ö - applies, **X** – not applicable

Silvicultural Planning

The stands to be harvested consist primarily of mature to over-mature Silvertop Ash (*E. siberi*), Brown Barrel (*E. fastigata*), Yellow Stringybark (*E. muelleriana*), Messmate (*E. obliqua*) and Mountain Grey Gum (*E. cypellocarpa*) along the strip of unlogged stand within the area of FMZ 4 – general management and FMZ 3b-visual protection adjacent to Imlay Road within the Compartments 433, 434 and 435.

Mixed-age stands described above will be harvested in a modified shelter-wood silvicultural system in accordance with the Eden IFOA. It is proposed that the mixed-aged stands will next be available for commercial thinning operations in approximately 15-20 years time.

Harvesting Prescription

Stand type	% of net area	Area (refer to HPOM for details)	Treatment (% INT, THIN)
Mature (even aged/ mixed aged)	80%	Majority of NHA (FMZ 3B/4)	<ul style="list-style-type: none"> • 100% Integrated (modified shelter-wood) • Target sawlogs, pulpwood and other miscellaneous products as markets allow in line with TSL and EPL requirements. • Retain potential sawlog growers. • Refer to Standard Harvest Planning Conditions for more detail.
Mature (mixed age)	~20%	Up to max. of 10 m strip along Imlay Road. (FMZ 3B)	<p>Roadside vegetation control:</p> <ul style="list-style-type: none"> • The 10 m roadside vegetation control distance is to be measured from the edge of the road prism (road prism as defined in EPL definitions). Any merchantable timber located within the road prism is also to be removed. • Retain Habitat and Recruitment trees and stags as per TSL. Note these trees do not have to occur within the vegetation control area provided sufficient additional trees are retained in the net harvest area outside the 10 m strip along Imlay Road. • Indicative spacings between retained stems within this strip are for: <ul style="list-style-type: none"> 4 Retained Trees/ha - 50 m 8 Retained Trees/ha - 35 m 12 Retained Trees/ha - 29 m 14 Retained Trees/ha – 27 m • Retained stems should be in the dominant, or best of the co-dominant classes, with the greatest potential to yield either sawlogs or future habitat trees. • Remove all stems not required to be retained under the TSL. • All merchantable stems not required to be retained under the TSL will be harvested for sawlogs and pulp. • Where possible and safe to do so, trees are to be pushed, rather than cut, in order to remove root ball. This will facilitate future grooming of road edges and enable maintenance of breaks with slashing. • All stems are to be assessed for future hazard potential. Any tree that is deemed to be a potential safety risk or overhanging Imlay Road should be removed for safety and to allow for better drying of Imlay Road. • Where operationally possible all harvesting debris (root balls, tree heads and unmerchantable stems) is to be windrowed in the area outside of this strip. • To facilitate the burning of the windrow, tree heads are to be compacted with the windrow height and width not exceeding 3 m and the pushing of mineral earth into the windrow is to be minimised as far as

			<p>operationally practical. As far as operationally practicable, avoid pushing windrow within 5 m of retained trees.</p> <ul style="list-style-type: none"> • Ensure that there is a minimum of 70% ground cover, either with a cover of logging slash or seed area within 5 days of the completion of the operation. • Note within this vegetation control strip conditions and exclusion zones specified within the following sections of this plan must apply: "Tree retention non-regrowth area", "General exclusion zone", "General Threatened Flora and Fauna Prescriptions", "Species & Site-Specific Threatened Flora and Fauna Prescriptions", "Fisheries Licence Conditions" and "Site-specific EPL Conditions".
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Note: The area of each silvicultural treatment must be mapped and recorded in the Post logging information section of this plan.

IFOA Limits

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

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

The PA (Production Assistant) 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 433, 434 and 435 is 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 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 compartments.

Permanent Growth and Research Plots

Eden Coastal Permanent Plot - (ECP56) is located east of Dump G in Compartment 434. This plot plus a two tree length buffer (measured from the edge of the plot) is to be excluded from harvesting.

Any other inventory plots located during the harvesting operation which are not shown on the HPOM are to be treated the same as the surrounding area.

Occupation Permits

Apiary

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

Name	Site Number	Contact number	Pre burn notification complete?

- The PA must provide the apiary permittees with at least two weeks advance notice when bee boxes need to be removed or relocated.
- Permanent apiary set down site located close to Dump O within Compartment 433 (see HPOM), must be levelled and free of debris at the completion of logging.
- Permanent sites must not be ripped.

Rocky Terrain

Rocky terrain occurs within the net planned area. Rocky outcrops are located within Coupe 1 of Compartments 433 and 434 as shown on the HPOM. 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 3B (visual) and FMZ 4- General Management (normal harvesting prescriptions apply) occur within the compartments. Refer to HPOM for more detail.

FMZ 3B (Visual) – The majority of the NHA is zoned FMZ3B (visual). The harvest area is not visible at a landscape level normal integrated harvesting prescriptions (as per harvesting prescription section) will apply to this operation.

IFOA Required Approval of Forestry Activities

Planning Supervisor approvals have been obtained for snig track crossing constructions and/or use and their locations are indicated on the HPOM by S1, S2, S3, S4, S5, S6, S7 and S8 on the relevant drainage feature and stream exclusion zones. No other crossings of these features are approved. Forestry Operations within the plan area must minimise impacts to the

exclusion zones and meet the requirements of the EPL and General Exclusion Zones in section of this plan.

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

Cultural Heritage

Cultural Heritage - Due to the confidentiality of the Cultural Heritage sites, a Cultural Heritage site map will only be attached to the specific copies of the plan. All 10 metre radius exclusion buffers are to be marked in the field as **hard exclusion zones (i.e. pink & yellow tape)** where logging and/or road works are scheduled to be undertaken. **All operators must be taken to each site within the planned area before any activities are commenced.**

Flora and Fauna

Refer to TSL Booklet for Conditions

Mark-Up Conditions

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

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

The following species have been recorded in or around the compartments and are adequately covered by the general prescriptions. No further protection measures are required for these species: **Olive Whistler** (*Pachycephala olivacea*), **Glossy Black-Cockatoo** (*Calyptorhynchus lathami*), **Square-tailed Kite** (*Lophoictinia isura*), **Varied Sittella** (*Daphoenositta chrysoptera*), **Flame Robin** (*Petroica phoenicea*), **Scarlet Robin** (*Petroica boodang*) and **Gang Gang Cockatoo** (*Callocephalon fimbriatum*).

Tree Retention-Non-Regrowth Zone

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

Habitat Quality	Hollow Bearing Tree/ 2ha	TSL Condition	Recruitment Trees/ 2ha	TSL Condition	Protection of Retained Trees	TSL Condition	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	5.6 l	0	5.6j	0	5.6 k
Low	4	5.6g)iii	4	5.6 h)iii	0	5.6 l	0	5.6j	0	5.6 k

0 - Condition applies

General exclusion zones

General exclusions as listed below are shown on the HPOM.

Feature/Condition	TSL cond'n	Occurs within Planning Unit
High Conservation Value Old Growth Forest Communities	5.3	Yes
Rainforest	5.4	Has been assessed as a risk that rainforest may occur in the field. May require further investigation#.
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 & is unlikely to occur in the field. May require further investigation#.
Rocky Outcrops and Cliffs	5.11	Has been assessed as a risk that it may occur in the field. May require further investigation#.
Endangered Ecological Community	NA	Has been assessed & is unlikely to occur in the field. May require further investigation#. Harvesting, 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 433, 434 & 435	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 433, 434 & 435	Licence conditions under the TSC Act or relevant Site-specific prescription
Yellow-bellied Glider <i>Petaurus australis</i>	Yes	6.13

Fisheries Licence Conditions

There are no known records of threatened fish species or class 1 or 2 aquatic habitat relevant to this operation. The conditions of the fisheries licence are not triggered for this operation.

Soils and Water Protection**Refer to EPL Booklet & Standard Plan Conditions****Site-specific EPL Conditions**

The harvest area within Compartments 433 and 434 is situated on low coherence (but non dispersible) Wallagaraugh Adamellite soils which have been verified as soil regolith 2. The southern portion of the harvest area within Coupe 2 of Compartment 435 is situated on moderate coherence (and non dispersible) Glenbog – Coolangubra Granodiorite which have been verified as soil regolith 3, while the remaining harvest area within Coupe 2 of Compartment 435 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	2 (Compartments 433 & 434) & 1 (Compartment 435)
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	<p>Special prescription for Wallagaraugh Adamellite R2 soils: No harvesting on slopes greater than 25 degrees.</p> <p>Note: EPL conditions relating no harvesting on IHL 4 also still apply (Schedule 4- B-Maximum Slope Limits).</p> <p>For Glenbog – Coolangubra Granodiorite R3 soils: REFER TO SCHEDULE 4B.3 OF EPL</p>
Slope limits for snig tracks	<p>Special prescription for Wallagaraugh Adamellite R2 soils: Where practicable grade of snig track must not exceed 20 degrees.</p> <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> <p>For Glenbog – Coolangubra Granodiorite R3 soils: REFER RELEVANT CONDITIONS, SCHEDULE 4H FOR SNIG TRACKS</p>
Snig Drainage Spacing	<p>For snig track grades less than 20 degrees apply EPL spacing.</p> <p>Special prescription for Wallagaraugh Adamellite R2 soils: For snig track grades greater than 20 degrees, install snig track drainage at half the EPL recommended spacing.</p> <p>For Glenbog – Coolangubra Granodiorite R3 soils: REFER RELEVANT CONDITIONS, SCHEDULE 4H FOR SNIG TRACKS</p>

Log Dump Location

16 log dumps are indicated on the HPOM. The dump sites within Compartments 433 and 434 that are within the excluded forest are located in those sites due to the convenience of using

previous old dump sites, inaccessibility due to embankment on Imlay Road and to avoid a dump side right on Imlay Road. Snigging disturbance through the excluded forest to these dump sites must be minimised. Field location of log dumps must utilise the most level site available consistent with the location indicated on the HPOM. Inherent hazard level 1 Conditions 26, 27, 30, and 33 of Schedule 4 of the EPL must apply to Compartment 435. Inherent hazard level 2 Conditions 26, 27, 28, 30, 31 and 33 of Schedule 4 of the EPL must apply to Compartments 433 and 434.

Expected Felling/ Extraction & Loading Method

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

Drainage Feature Crossings

Eight snig track crossings (S1, S2, S3, S4, S5, S6, S7 and S8) are approved for use on drainage features. (Refer to HPOM). Crossing details are contained in Attachment 2 of this Plan. Snig track crossing details are provided below:

Crossing Name & Coordinates	Crossing details	Required Works
S1-existing Easting 725100 Northing 5885805	Mapped 1 st order drainage line, occurs as a drainage depression in the field. Natural Causeway crossing. Not class 1 or 2 Fisheries Licence aquatic habitat. Class 4 fish passage class: unlikely fish habitat.	Armour depression with rock/gravel if required in wet conditions. Drain within 5 – 20 m on both approaches. Install cross banks/rollovers on completion of use within timeframes and spacing's specified in EPL. Minimised track side clearing as far as practicable within the Stream Exclusion Zone.
S2-existing Easting 725273 Northing 5885871	Mapped 1 st order drainage line. Natural Causeway crossing. Not class 1 or 2 Fisheries Licence aquatic habitat. Class 4 fish passage class: unlikely fish habitat.	Armour depression with rock/gravel if required in wet conditions. Drain within 5 – 20 m on both approaches. Install cross banks/rollovers on completion of use within timeframes and spacing's specified in EPL. Minimised track side clearing as far as practicable within the Stream Exclusion Zone.
S3-existing Easting 725343 Northing 5885884	Mapped 1 st order drainage line, occurs as a drainage depression in the field. Natural Causeway crossing. Not class 1 or 2 Fisheries Licence aquatic habitat. Class 4 fish passage class: unlikely fish habitat.	Armour depression with rock/gravel if required in wet conditions. Drain within 5 – 20 m on both approaches. Install cross banks/rollovers on completion of use within timeframes and spacing's specified in EPL. Minimised track side clearing as far as practicable within the Stream Exclusion Zone.
S4-existing Easting 725588 Northing 5885866	Mapped 1 st order drainage line. Natural Causeway Crossing. Not class 1 or 2 Fisheries Licence aquatic habitat.	Armour depression with rock/gravel if required in wet conditions. Drain within 5 – 20 m on both approaches. Install cross banks/rollovers on completion of use within timeframes

	Class 4 fish passage class: unlikely fish habitat.	and spacing's specified in EPL. Minimised track side clearing as far as practicable within the Stream Exclusion Zone.
S5-new Easting 727155 Northing 5885390	Mapped 1 st order drainage line, occurs as a drainage depression in the field. Natural Causeway Crossing. Not class 1 or 2 Fisheries Licence aquatic habitat. Class 4 fish passage class: unlikely fish habitat.	Construct natural causeway crossing (expected side cut <0.5m) as per EPL. Construction should minimise disturbance and clearing and be at right angles to the flow unless and angled approach results in reduced disturbance. Armour depression with rock/gravel if required in wet conditions. Install cross banks/rollovers on completion of use within timeframes and spacing's specified in EPL. Seed and mulch disturbed areas on either side of crossing.
S6-new Easting 727236 Northing 5885152	Mapped 1 st order drainage line, occurs as a drainage depression in the field. Natural Causeway Crossing. Not class 1 or 2 Fisheries Licence aquatic habitat. Class 4 fish passage class: unlikely fish habitat.	Construct natural causeway crossing (expected side cut <0.5m) as per EPL. Construction should minimise disturbance and clearing and be at right angles to the flow unless and angled approach results in reduced disturbance. Armour depression with rock/gravel if required in wet conditions. Install cross banks/rollovers on completion of use within timeframes and spacing's specified in EPL. Seed and mulch disturbed areas on either side of crossing.
S7-new Easting 727467 Northing 5884044	Mapped 1 st order drainage line, occurs as a drainage depression in the field. Natural Causeway Crossing. Not class 1 or 2 Fisheries Licence aquatic habitat. Class 4 fish passage class: unlikely fish habitat.	Construct natural causeway crossing (expected side cut <0.5m) as per EPL. Construction should minimise disturbance and clearing and be at right angles to the flow unless and angled approach results in reduced disturbance. Armour depression with rock/gravel if required in wet conditions. Install cross banks/rollovers on completion of use within timeframes and spacing's specified in EPL. Seed and mulch disturbed areas on either side of crossing.
S8-existing Easting 727745 Northing 5883793	Mapped 2 nd order drainage line. Natural Causeway crossing. Not class 1 or 2 Fisheries Licence aquatic habitat.	Armour depression with rock/gravel if required in wet conditions. Drain within 5 – 20 m on both approaches. Install cross banks/rollovers on completion of use within timeframes

	Class 4 fish passage class: unlikely fish habitat.	and spacing's specified in EPL. Minimised track side clearing as far as practicable within the Stream Exclusion Zone.
--	---	--

Mass Movement

Compartments 433, 434 & 435 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 is an existing gully stuffer on a road crossing in Compartment 435. This road and the gully stuffer crossing will not be used during this harvesting operation.

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

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

Post Log Burning Control Lines

To assist the post log burning crews prevent fire from entering areas to be excluded from burning, control line construction must be undertaken concurrently with harvesting. Where possible snig tracks patterns should be designed to double as control lines. Control lines must be located as close as reasonably practical to the feature to be excluded from burning. The PA must assess the areas harvested, snig track network and existing roads to determine if there are sufficient control lines in place and where required instruct the contractor to construct additional mineral earth control lines to supplement these. The PA must record instances where it was not possible to construct a suitable control line close to the feature to be excluded and recommend harvest areas which should be excluded from the post log burning operation due to inadequate control lines.

The table below lists critical boundaries in Compartments 433, 434 and 435. Where possible design snig track patterns so they double as bare earth containment lines as close as possible to these boundaries. Where this is not practical, it is NOT necessary to construct a bare earth break along boundary of the exclusion; the practice of no direct ignition will be followed.

Critical boundary	Completed Yes /No
Probable rocky outcrops	
Exclude Forests	

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 433, 434 and 435 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	Yes	New			
Wetlands	No				
Cultural Heritage	No				
Existing Roads	Yes	Error & New	Yes		
New Roads	Yes	New	Yes		
Heath	No				
Powerlines etc	No				
Other - Research Plot ECPP56	Yes	Error	Yes		

Snig/Extraction Track Crossing Record

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

[illegible]

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

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

[illegible]

[illegible]

[illegible]

[illegible]

PA Notes (continued)

[illegible]

Clearance Certificate

COMPARTMENTS: 433, 434 & 435

YAMBULLA STATE FOREST, EDEN IFOA

ToProduction Assistant

I request approval for me to move my logging crew and all associated machinery from the above-mentioned area to the next compartment in accordance with Section 3.5 of the Forest Practices Code.

I certify that:

- (a) all permanent roads, trails and mitre drains have been cleared of harvesting debris;
- (b) butt damage to retained trees has been kept to acceptable limits;
- (c) all trees marked for removal have been felled;
- (d) utilisation limits have been satisfactorily met;
- (e) stump heights conform to requirements;
- (f) all hanging trees have been felled and brought down;
- (g) all log dumpsites have been satisfactorily restored as required;
- (h) harvesting debris is not accumulated around retained trees;
- (i) all accumulated litter has been disposed of properly;
- (j) all filter and buffer strip requirements have been complied with;
- (k) all snig track, extraction track and temporary logging road drainage has been installed satisfactorily and other required rehabilitation work has been completed;
- (l) all necessary repairs to damaged roads, signs, fences and other structures have been carried out.
- (m) _____ **(insert quantity) rubber flaps have been recovered in a satisfactory condition and reported to Operations Branch for collection.**
- (n) all machinery, equipment and vehicles have been checked and are free of noxious weeds, diseases and pests.

I believe that I have met all my obligations under the conditions of the Contractors Licence, the EPL and TSL which apply to the compartment just completed, as stated in this Harvesting Plan.

Signature.....Name.....Date
Contractor

As a result of inspections of the logging operations made in accordance with this Harvesting Plan, I am satisfied that, to the best of my knowledge, the contractor responsible for this harvesting operation has satisfactorily completed all work and approval is given for her/him to remove her/his machinery and equipment and leave the area/commence operations in another compartment.

This clearance does not release the contractor from any obligation to undertake any remedial work if subsequent deficiencies are shown to result from inadequate practices during the harvesting operation, which are found during any inspections of the area made within 12 months of the date of this post-harvesting inspection.

Last inspection was made on(Date)

Signed(Date).....
Production Assistant

Post Logging Information

Record any circumstances of significance relating to the harvesting of these compartments. 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.

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
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Summary of Roding Requirements

Feature	Details	Works Required
Existing roads to be used.	2720m/10	Yes
New roads to be constructed	95m/1	Yes
Existing crossings used	0	NA
New crossings to be constructed	0	NA
Length of road >10°	20 m at 13°	NA
Borrow pits and gravel pits	0	NA
Mass movement prescriptions apply	No	NA
Dispersible soil conditions apply	No	NA
Seasonality provisions apply	No	NA

Note: Maintenance works not completed by RC must be recorded and passed onto the PA Harvesting for completion and documentation.

The start and finish dates of all maintenance and construction must be recorded on the individual roding 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
Brushtail Road (150 m) <i>FCNSW Responsibility</i>	Minor roadside clearing for the entire length. RC (Roding Coordinator)/PA Comments:			
433-1 Road (380 m) <i>Contractor Responsibility</i>	Clear and reshape entire length. Clear up to 3 m on either side to facilitate truck movement. RC (Roding Coordinator)/PA Comments:			
433-2 Road (100 m) <i>Contractor Responsibility</i>	Clear and reshape entire length. Clear up to 3 m on either side to facilitate truck movement. RC (Roding Coordinator)/PA Comments:			

433-3 Road (110 m) <i>Contractor Responsibility</i>	Clear and reshape entire length. Clear up to 3 m on either side to facilitate truck movement. RC (Roding Coordinator)/PA Comments:			
434-1 Road (180 m) <i>Contractor Responsibility</i>	Clear and reshape entire length. Clear up to 3 m on either side to facilitate truck movement. Clear vegetation on either side of the entrance on Imlay Road for better visibility. RC (Roding Coordinator)/PA Comments:			
434-2 Road (720 m) <i>Contractor Responsibility</i>	Clear and reshape entire length. Clear up to 3 m on either side to facilitate truck movement. RC (Roding Coordinator)/PA Comments:			
434-3 Road (120 m) <i>Contractor Responsibility</i>	Clear and reshape entire length. Clear up to 3 m on either side to facilitate truck movement. Clear vegetation on either side of the entrance on Imlay Road for better visibility. RC (Roding Coordinator)/PA Comments:			
434-4 Road (95 m) <i>Contractor Responsibility</i>	Refer to New Road Construction. RC (Roding Coordinator)/PA Comments:			
435-5 Road (130 m) <i>Contractor Responsibility</i>	Clear and reshape entire length. Clear up to 3 m on either side to facilitate truck movement. RC (Roding Coordinator)/PA Comments:			

435-1 Road (620 m) <i>Contractor Responsibility</i>	Clear and reshape entire length. Clear up to 3 m on either side to facilitate truck movement. RC (Roothing Coordinator)/PA Comments:			
435-2 Road (210 m) <i>Contractor Responsibility</i>	Clear and reshape entire length. Clear up to 3 m on either side to facilitate truck movement. Clear up to 3 m on either side to facilitate truck movement. RC (Roothing Coordinator)/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
434-5. Rd	95m	7m	9°	9°	<1m	95m	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. SFO 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 RC must be recorded and passed on to the PA.

Cpt:435 Date:07.07.2014 WAYPOINT#:E725100 N5885805 Photo: N

CROSSING NAME: S1 (mapped DL)

Waterway Classification: Fish Passage Class 4- Unlikely fish habitat.

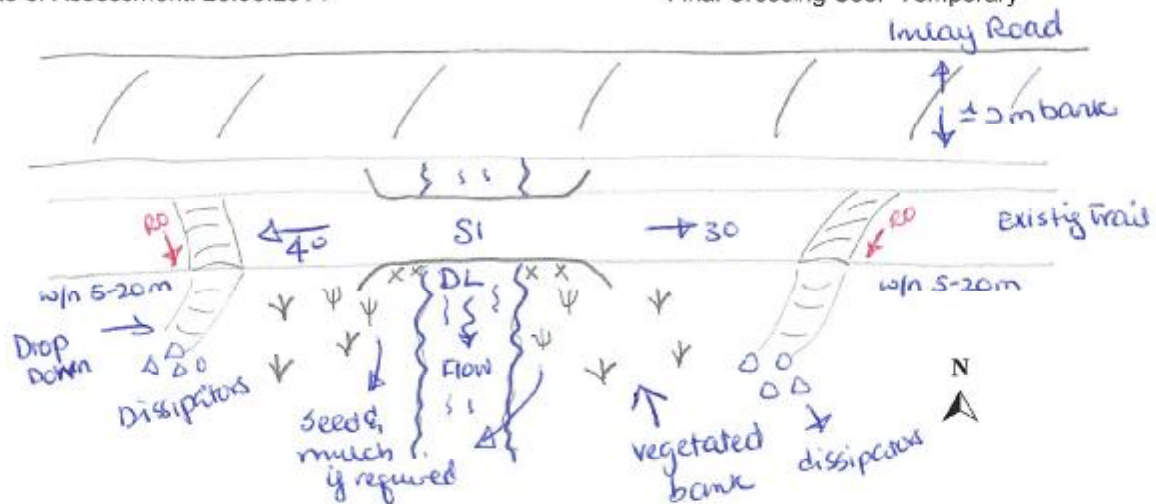
Fisheries Licence Aquatic Habitat: Not class 1 or 2

Assessors Name: Ron Douch **Crossing Type:** Snig Track Natural Causeway (Existing)

Features	Works (As per EPL Schedule 5)	Plant/Materials
Structure	Stable at time of assessment? y	NA.
Bed and Banks	Stable at time of assessment? y	NA.
Erosion and Sediment Control	<ul style="list-style-type: none"> - Minimize roadside clearing and soil disturbance to the greatest extent practicable. - Seed and mulch as required. Install rock if required in wet conditions. 	Seed & mulch. 100mm rock.
Disposal of excess spoil	<ul style="list-style-type: none"> - All excess spoil to be removed outside of SEZ and/or re-spread & consolidated onto crossing and fill batter. 	Dozer/Excavator.
Soil Stabilisation within 20m	<ul style="list-style-type: none"> - Seed and mulch disturbed areas. 	Manual labour/Seed & mulch.
Road drainage within 5-20m <ul style="list-style-type: none"> • Type • outlet control • table drain checking devices 	<ul style="list-style-type: none"> • Upon completion of crossing usage install rollovers on both approaches within timeframes specified in EPL sch 4, 79 & 80. • Install dropdown & dissipaters/slash at outlets of rollovers. • If possible utilise cross fall drainage, if not install hay bales or natural (rock/logs) checking devices. 	Dozer/Excavator

Date of Assessment: 26.06.2014

Final Crossing Use: Temporary



Date Work Started: _____

Date Work Finished: _____

Soil stabilisation must be completed within 5 days

Record implementation date here: _____

Key

→Ru	Rubber strip
→M	Mitre drain
xxx	Roadside clearing
→R0	Roller drain
I	Sill Log
oooo	Rock
ψ	Seeding
▽	Silt trapping
::	Gravel

Cpt:435 **Date:**03.09.2014 **WAYPOINT#:** E725273 N5885871 **Photo:** N**CROSSING NAME:** S2 (mapped DL)

Waterway Classification: Fish Passage Class 4- Unlikely fish habitat.

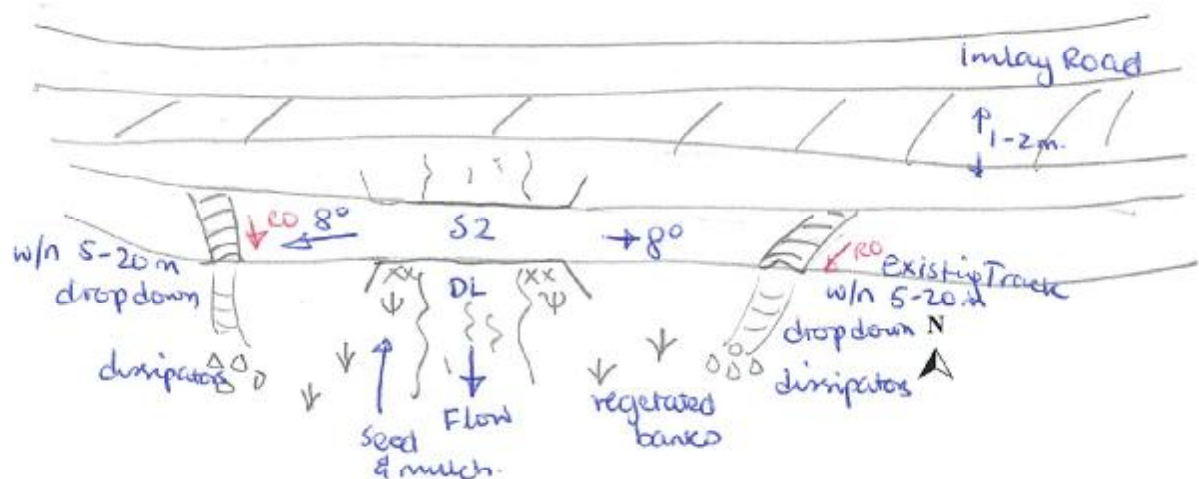
Fisheries Licence Aquatic Habitat: Not class 1 or 2

Assessors Name: Ron Douch **Crossing Type:** Snig Track Natural Causeway (Existing)

Features	Works (As per EPL Schedule 5)	Plant/Materials
Structure	Stable at time of assessment? y	NA.
Bed and Banks	Stable at time of assessment? y	NA.
Erosion and Sediment Control	<ul style="list-style-type: none"> - Minimize roadside clearing and soil disturbance to the greatest extent practicable. - Seed and mulch as required. - Install rock if required in wet conditions. 	Seed & mulch. 100mm rock.
Disposal of excess spoil	<ul style="list-style-type: none"> - All excess spoil to be removed outside of SEZ and/or re-spread & consolidated onto crossing and fill batter. 	Dozer/Excavator.
Soil Stabilisation within 20m	<ul style="list-style-type: none"> - Seed and mulch disturbed areas. 	Manual labour/Seed & mulch.
Road drainage within 5-20m <ul style="list-style-type: none"> • Type • outlet control • table drain checking devices 	<ul style="list-style-type: none"> • Upon completion of crossing usage install rollovers on both approaches within timeframes specified in EPL sch 4, 79 & 80. • Install dropdown & dissipaters/slash at outlets of rollovers. • If possible utilise cross fall drainage, if not install hay bales or natural (rock/logs) checking devices. 	Dozer/Excavator

Date of Assessment: 21.08.2014

Final Crossing Use: Temporary



Date Work Started: _____

Date Work Finished: _____

Soil stabilisation must be completed within 5 days

Record implementation date here: _____

Key

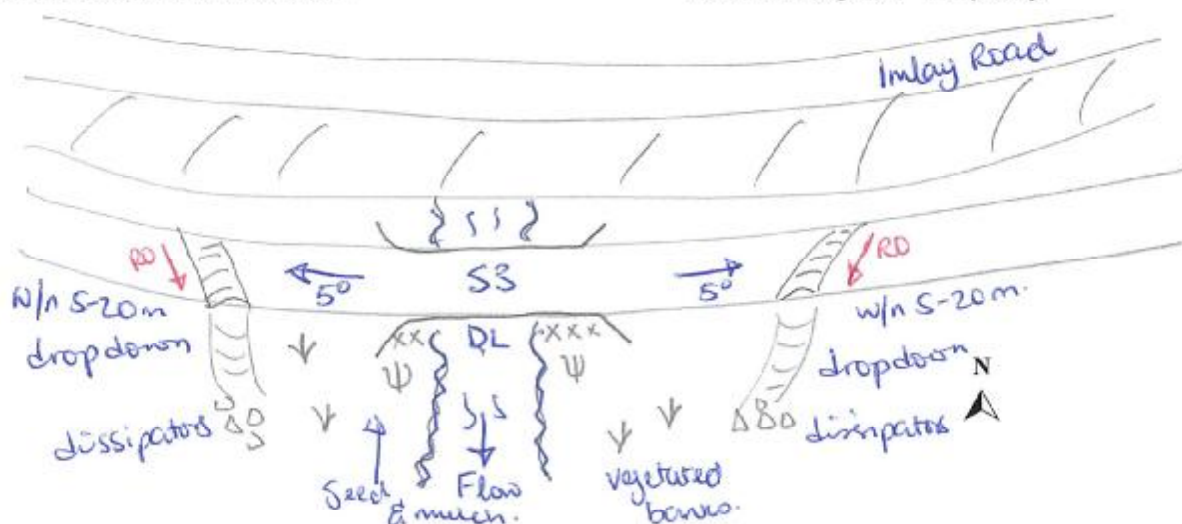
→Ru	Rubber strip
→M	Mitre drain
xxx	Roadside clearing
→Ro	Rollover drain
I	Sill Log
ooooo	Rock
ψ	Seeding
▽	Silt trapping
∴	Gravel

Cpt:435 **Date:**03.09.2014 **WAYPOINT#:** E725343 N5885884 **Photo:** N**CROSSING NAME:** S3 (mapped DL)Waterway Classification: Fish Passage Class 4- Unlikely fish habitat.
Fisheries Licence Aquatic Habitat: Not class 1 or 2**Assessors Name:** Ron Douch **Crossing Type:** Snig Track Natural Causeway (Existing)

Features	Works (As per EPL Schedule 5)	Plant/Materials
Structure	Stable at time of assessment? y	NA.
Bed and Banks	Stable at time of assessment? y	NA.
Erosion and Sediment Control	<ul style="list-style-type: none"> - Minimize roadside clearing and soil disturbance to the greatest extent practicable. - Seed and mulch as required. - Install rock if required in wet conditions. 	Seed & mulch. 100mm rock.
Disposal of excess spoil	- All excess spoil to be removed outside of SEZ and/or re-spread & consolidated onto crossing and fill batter.	Dozer/Excavator.
Soil Stabilisation within 20m	- Seed and mulch disturbed areas.	Manual labour/Seed & mulch.
Road drainage within 5-20m <ul style="list-style-type: none"> • Type • outlet control • table drain checking devices 	<ul style="list-style-type: none"> • Upon completion of crossing usage install rollovers on both approaches within timeframes specified in EPL sch 4, 79 & 80. • Install dropdown & dissipaters/slash at outlets of rollovers. • If possible utilise cross fall drainage, if not install hay bales or natural (rock/logs) checking devices. 	Dozer/Excavator

Date of Assessment: 21.08.2014

Final Crossing Use: Temporary



Date Work Started: _____

Date Work Finished: _____

Soil stabilisation must be completed within 5 days

Record implementation date here: _____

Key

→Ru	Rubber strip
→M	Mitre drain
xxx	Roadside clearing
→Ro	Rollover drain
I	Sill Log
ooooo	Rock
ψ	Seeding
▽	Silt trapping
::	Gravel

Cpt:435 **Date:**07.07.2014 **WAYPOINT#:** E725588 N5885866 **Photo:** N**CROSSING NAME:** S4 (mapped DL)

Waterway Classification: Fish Passage Class 4- Unlikely fish habitat.

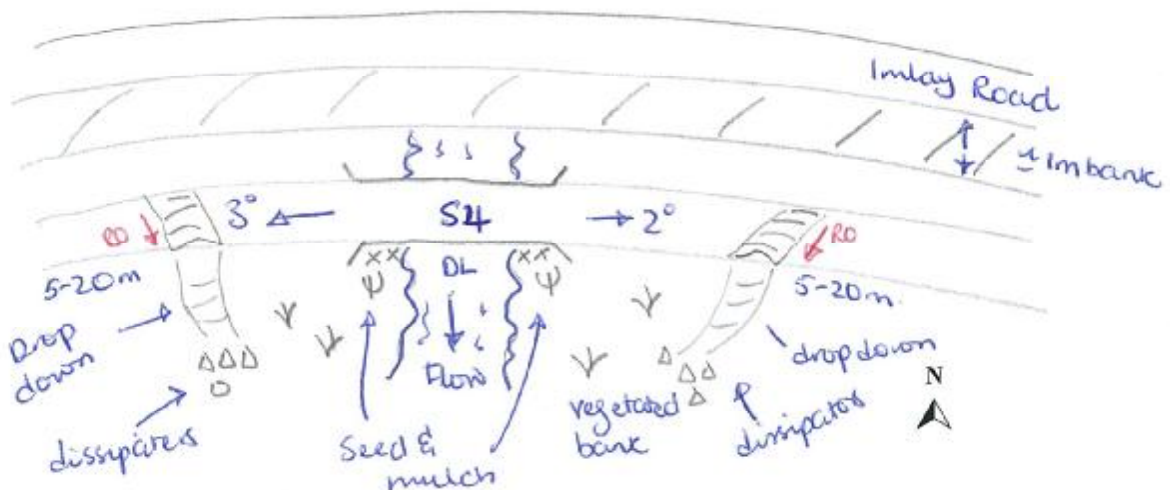
Fisheries Licence Aquatic Habitat: Not class 1 or 2

Assessors Name: Ron Douch **Crossing Type:** Snig Track Natural Causeway (Existing)

Features	Works (As per EPL Schedule 5)	Plant/Materials
Structure	Stable at time of assessment? y	NA.
Bed and Banks	Stable at time of assessment? y	NA.
Erosion and Sediment Control	<ul style="list-style-type: none"> - Minimize roadside clearing and soil disturbance to the greatest extent practicable. - Seed and mulch as required. - Install rock if required in wet conditions. 	Seed & mulch. 100mm rock.
Disposal of excess spoil	- All excess spoil to be removed outside of SEZ and/or re-spread & consolidated onto crossing and fill batter.	Dozer/Excavator.
Soil Stabilisation within 20m	- Seed and mulch disturbed areas.	Manual labour/Seed & mulch.
Road drainage within 5-20m <ul style="list-style-type: none"> • Type • outlet control • table drain checking devices 	<ul style="list-style-type: none"> • Upon completion of crossing usage install rollovers on both approaches within timeframes specified in EPL sch 4, 79 & 80. • Install dropdown & dissipaters/slash at outlets of rollovers. • If possible utilise cross fall drainage, if not install hay bales or natural (rock/logs) checking devices. 	Dozer/Excavator

Date of Assessment: 26.06.2014

Final Crossing Use: Temporary



Date Work Started: _____

Date Work Finished: _____

Soil stabilisation must be completed within 5 days

Record implementation date here: _____

Key

→Ru	Rubber strip
→M	Mitre drain
xxx	Roadside clearing
→Ro	Rollover drain
I	Sill Log
oooo	Rock
psi	Seeding
V	Silt trapping
..	Gravel

Cpt:435 **Date:**03.09.2014 **WAYPOINT#:** E727155 N5885390**Photo:** N**CROSSING NAME:** S5 (mapped DL)

Waterway Classification: Fish Passage Class 4- Unlikely fish habitat.

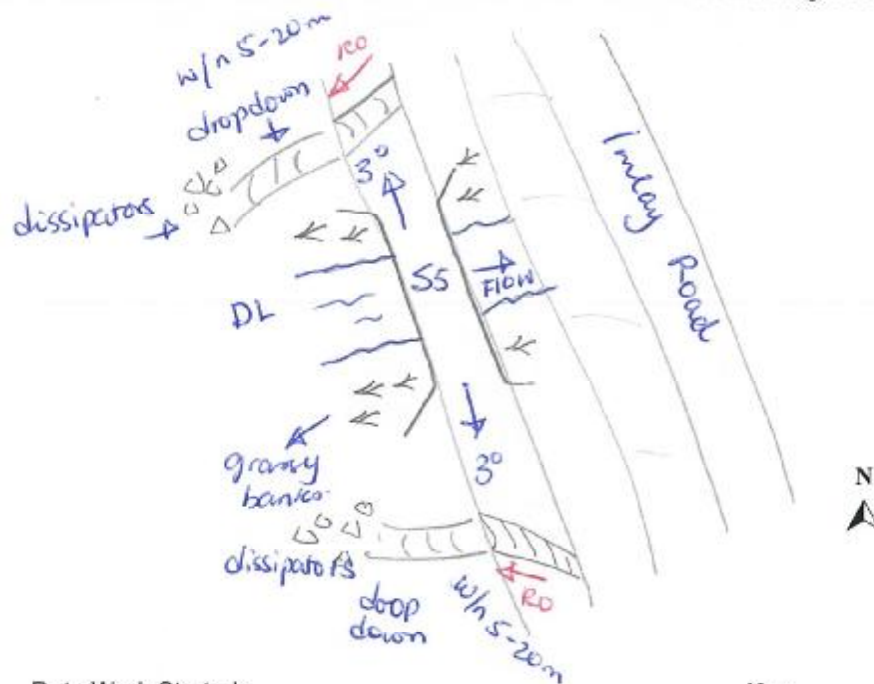
Fisheries Licence Aquatic Habitat: Not class 1 or 2

Assessors Name: Ron Douch **Crossing Type:** Snig Track Natural Causeway (New Construction)

Features	Works (As per EPL Schedule 5)	Plant/Materials
Structure	Construct side cut causeway crossing. - If possible construct at right angles to flow. If possible construct with cross fall drainage to avoid the need for table drain checking devices.	Dozer/Excavator
Bed and Banks	Reshape disturbed areas to achieve stable cross section.	Dozer/Excavator
Erosion and Sediment Control	- Minimize roadside clearing and soil disturbance to the greatest extent practicable. - Seed and mulch as required. Install rock if required in wet conditions.	Seed & mulch. 100mm rock.
Disposal of excess spoil	- All excess spoil to be removed outside of SEZ and/or re-spread & consolidated onto crossing and fill batter.	Dozer/Excavator.
Soil Stabilisation within 20m	- Seed and mulch disturbed areas.	Manual labour/Seed & mulch.
Road drainage within 5-20m • Type • outlet control • table drain checking devices	<ul style="list-style-type: none"> Upon completion of crossing usage install rollovers on both approaches within timeframes specified in EPL sch 4, 79 & 80. Install dropdown & dissipaters/slash at outlets of rollovers. If possible utilise cross fall drainage, if not install hay bales or natural (rock/logs) checking devices. 	Dozer/Excavator

Date of Assessment: 21.08.2014

Final Crossing Use: Temporary



Date Work Started: _____

Date Work Finished: _____

Soil stabilisation must be completed within 5 days

Record implementation date here: _____

Key

→Ru	Rubber strip
→M	Mitre drain
xxx	Roadside clearing
→Ro	Rollover drain
I	Sill Log
oooo	Rock
ψ	Seeding
▽	Silt trapping
∴	Gravel

Cpt: 435 **Date:** 03.09.2014 **WAYPOINT#:** E727236 N5885152 **Photo:** N
CROSSING NAME: S6 (mapped DD)

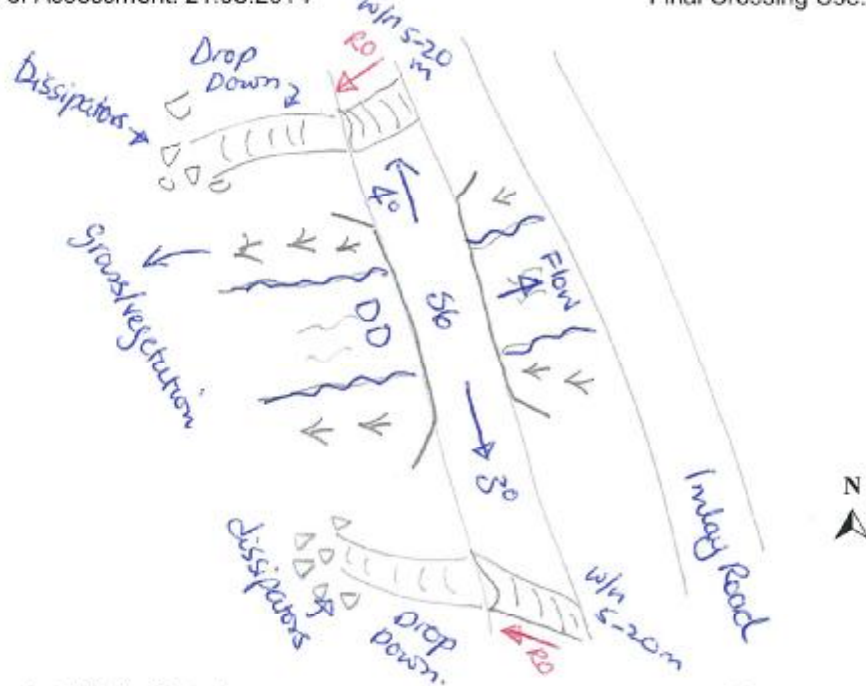
Waterway Classification: Fish Passage Class 4- Unlikely fish habitat.
 Fisheries Licence Aquatic Habitat: Not class 1 or 2

Assessors Name: Ron Douch **Crossing Type:** Snig Track Natural Causeway (New Construction)

Features	Works (As per EPL Schedule 5)	Plant/Materials
Structure	Construct side cut causeway crossing. - If possible construct at right angles to flow. If possible construct with cross fall drainage to avoid the need for table drain checking devices.	Dozer/Excavator
Bed and Banks	Reshape disturbed areas to achieve stable cross section.	Dozer/Excavator
Erosion and Sediment Control	- Minimize roadside clearing and soil disturbance to the greatest extent practicable. - Seed and mulch as required. Install rock if required in wet conditions.	Seed & mulch, 100mm rock.
Disposal of excess spoil	- All excess spoil to be removed outside of SEZ and/or re-spread & consolidated onto crossing and fill batter.	Dozer/Excavator.
Soil Stabilisation within 20m	- Seed and mulch disturbed areas.	Manual labour/Seed & mulch.
Road drainage within 5-20m • Type • outlet control • table drain checking devices	• Upon completion of crossing usage install rollovers on both approaches within timeframes specified in EPL sch 4, 79 & 80. • Install dropdown & dissipaters/slash at outlets of rollovers. • If possible utilise cross fall drainage, if not install hay bales or natural (rock/logs) checking devices.	Dozer/Excavator

Date of Assessment: 21.08.2014

Final Crossing Use: Temporary



Date Work Started: _____

Date Work Finished: _____

Soil stabilisation must be completed within 5 days

Record implementation date here: _____

Key

→Ru	Rubber strip
→M	Mitre drain
xxx	Roadside clearing
→Ro	Rollover drain
I	Sill Log
oooo	Rock
ψ	Seeding
▽	Silt trapping
∴	Gravel

Cpt:435 **Date:**03.09.2014 **WAYPOINT#:** E727467 N5884044**Photo:** N**CROSSING NAME:** S7 (mapped DD)

Waterway Classification: Fish Passage Class 4- Unlikely fish habitat.

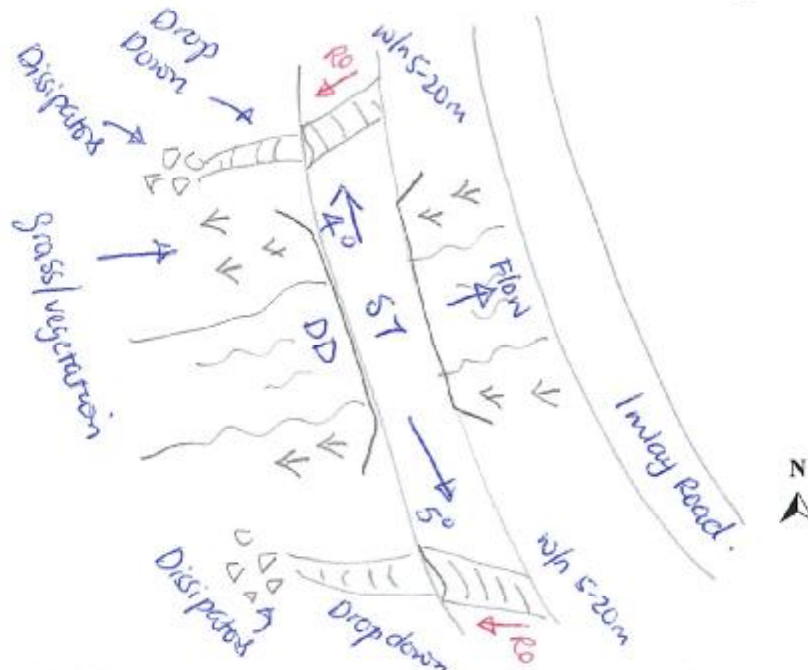
Fisheries Licence Aquatic Habitat: Not class 1 or 2

Assessors Name: Ron Douch **Crossing Type:** Snig Track Natural Causeway (New Construction)

Features	Works (As per EPL Schedule 5)	Plant/Materials
Structure	Construct side cut causeway crossing. - If possible construct at right angles to flow. If possible construct with cross fall drainage to avoid the need for table drain checking devices.	Dozer/Excavator
Bed and Banks	Reshape disturbed areas to achieve stable cross section.	Dozer/Excavator
Erosion and Sediment Control	- Minimize roadside clearing and soil disturbance to the greatest extent practicable. - Seed and mulch as required. Install rock if required in wet conditions.	Seed & mulch. 100mm rock.
Disposal of excess spoil	- All excess spoil to be removed outside of SEZ and/or re-spread & consolidated onto crossing and fill batter.	Dozer/Excavator.
Soil Stabilisation within 20m	- Seed and mulch disturbed areas.	Manual labour/Seed & mulch.
Road drainage within 5-20m • Type • outlet control • table drain checking devices	• Upon completion of crossing usage install rollovers on both approaches within timeframes specified in EPL sch 4, 79 & 80. • Install dropdown & dissipaters/slash at outlets of rollovers. • If possible utilise cross fall drainage, if not install hay bales or natural (rock/logs) checking devices.	Dozer/Excavator

Date of Assessment: 21.08.2014

Final Crossing Use: Temporary



Date Work Started: _____

Date Work Finished: _____

Soil stabilisation must be completed within 5 days

Record implementation date here: _____

Key

→Ru	Rubber strip
→M	Mitre drain
xxx	Roadside clearing
→Ro	Rollover drain
I	Sill Log
oooo	Rock
ψ	Seeding
▽	Silt trapping
∴	Gravel

Cpt: 435 **Date:** 03.09.2014 **WAYPOINT#:** E727745 N5883793**Photo:** N**CROSSING NAME:** S8 (mapped DL)

Waterway Classification: Fish Passage Class 4- Unlikely fish habitat.

Fisheries Licence Aquatic Habitat: Not class 1 or 2

Assessors Name: Ron Douch **Crossing Type:** Snig Track Natural Causeway (Existing)

Features	Works (As per EPL Schedule 5)	Plant/Materials
Structure	Stable at time of assessment? y	NA.
Bed and Banks	Stable at time of assessment? y	NA.
Erosion and Sediment Control	<ul style="list-style-type: none"> - Minimize roadside clearing and soil disturbance to the greatest extent practicable. - Seed and mulch as required. Install rock if required in wet conditions. 	Seed & mulch. 100mm rock.
Disposal of excess spoil	<ul style="list-style-type: none"> - All excess spoil to be removed outside of SEZ and/or re-spread & consolidated onto crossing and fill batter. 	Dozer/Excavator.
Soil Stabilisation within 20m	<ul style="list-style-type: none"> - Seed and mulch disturbed areas. 	Manual labour/Seed & mulch.
Road drainage within 5-20m <ul style="list-style-type: none"> • Type • outlet control • table drain checking devices 	<ul style="list-style-type: none"> • Upon completion of crossing usage install rollovers on both approaches within timeframes specified in EPL sch 4, 79 & 80. • Install dropdown & dissipaters/slash at outlets of rollovers. • If possible utilise cross fall drainage, if not install hay bales or natural (rock/logs) checking devices. 	Dozer/Excavator

Date of Assessment: 21.08.2014

Final Crossing Use: Temporary

