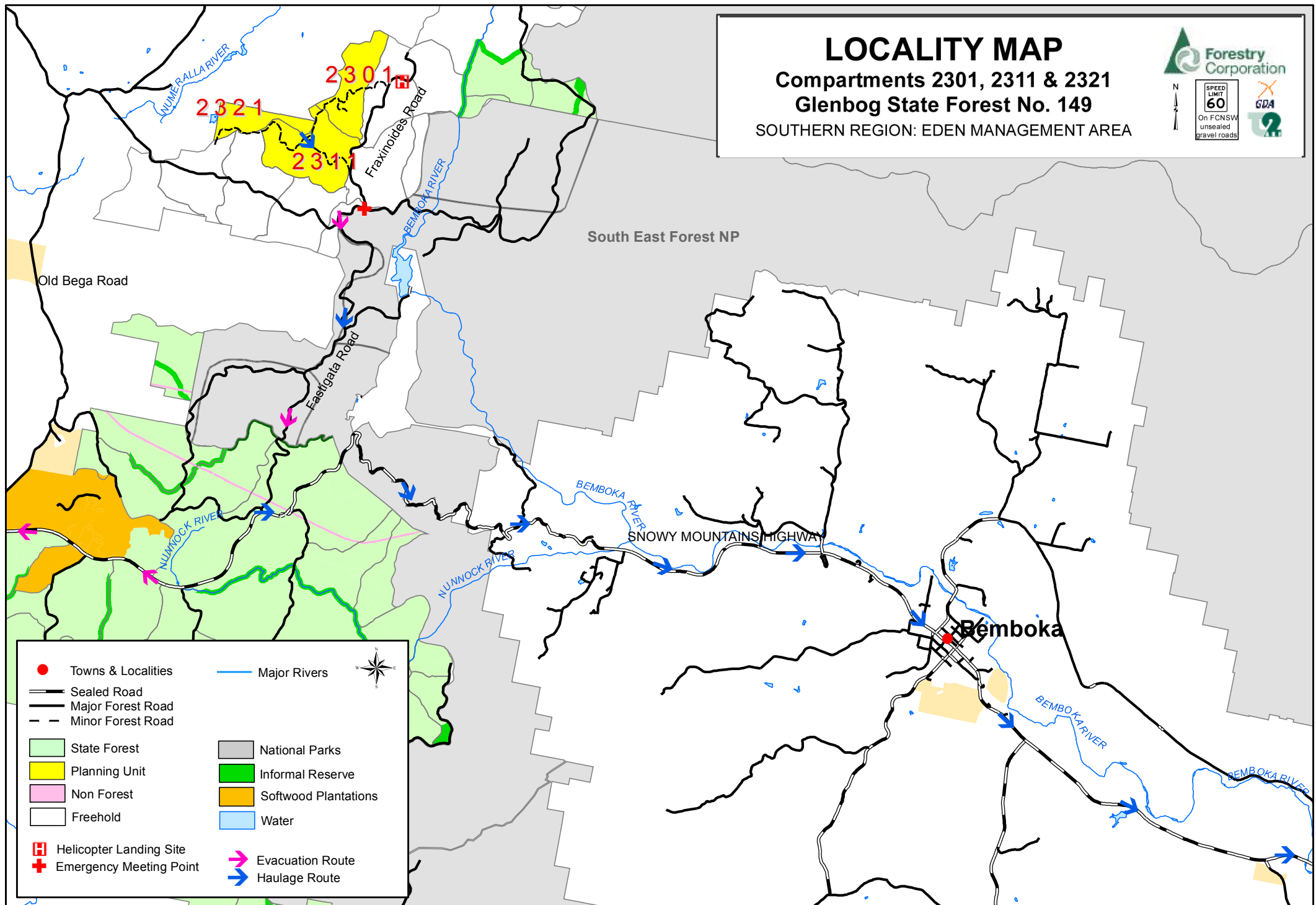


LOCALITY MAP

Compartments 2301, 2311 & 2321
Glenbog State Forest No. 149

SOUTHERN REGION: EDEN MANAGEMENT AREA



Prepared By: Shane Clohesy

Version: 1

PLANNING MANAGER APPROVAL

APPROVED: Lee Blessington

DATE: 28 / 04 / 2014

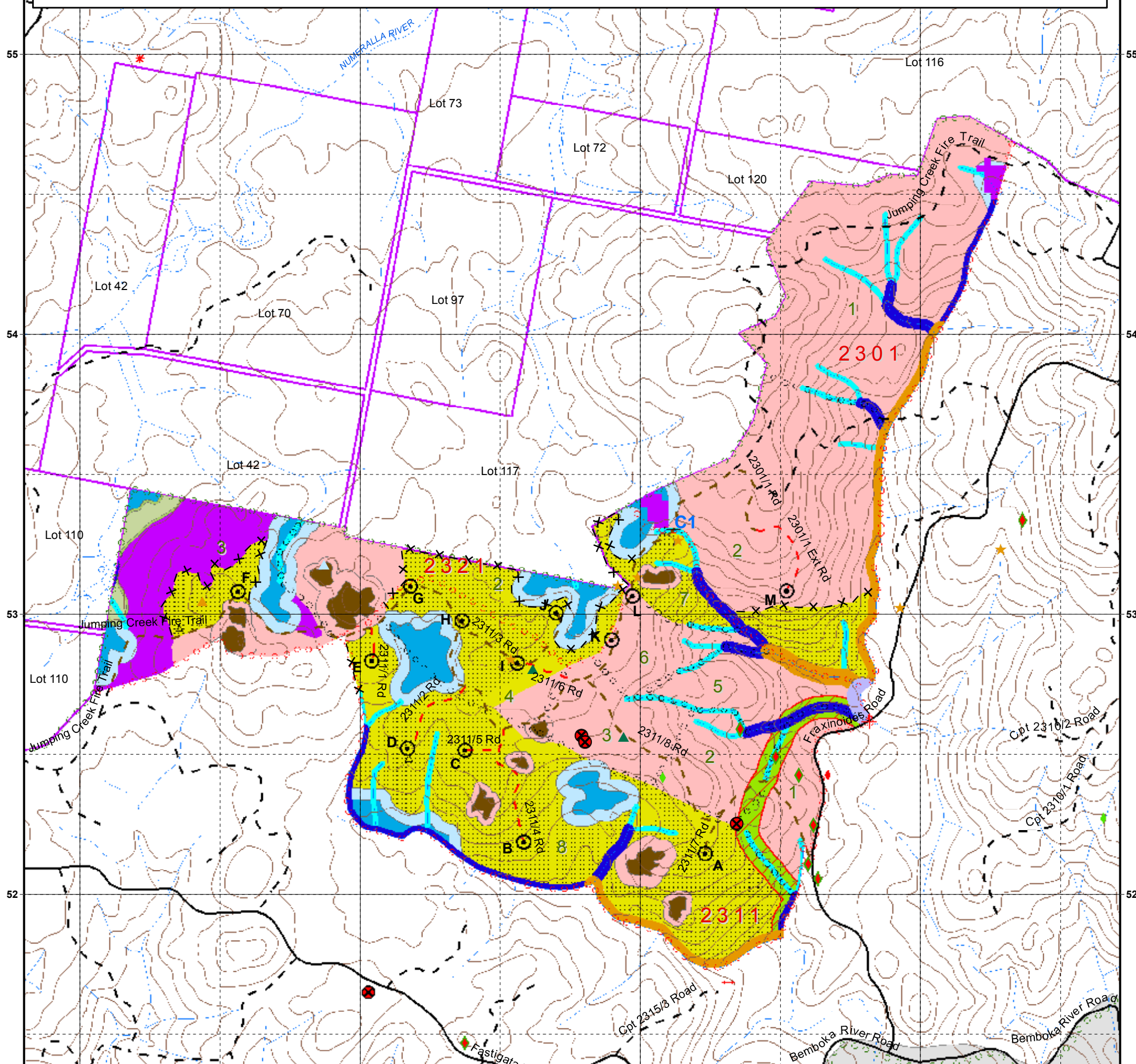
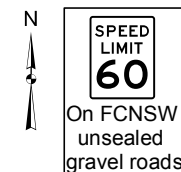
Harvest Plan Operational Map

Compartment: 2301, 2311 & 2321

State Forest: Glenbog No: 149

SOUTHERN REGION - Hardwood Forests

Map Sheet: Nimmitabel 8724-1N



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

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

DRAINAGE
- Mapped LIC Drainage

DUMPS & CROSSINGS
○ Temporary Dry Weather
- Existing Crossing

TENURE
- National Park Estate
- Private Property

NET HARVEST AREA
FMZ 4 - MSW (verified MAF)
FMZ 4 - MSW

NON HARVEST AREA
Ridge & Headwater Habitat (80m width)
Owl Landscape
Probable Heath & Buffer (10m)
Probable Wetland & Buffer (40m)
Probable Rock & Buffer (20m & 40m)
Probable EEC - Montane Peatlands & Swamp/ Tablelands Snow Gum, Black Sallee, Candlebark & Ribbon Gum Grassy Woodland
Excluded Forest

FAUNA FEATURES
Sooty Owl
Powerful Owl
Yellow-bellied Glider
Yellow-bellied Glider (Feed Tree)
Yellow-bellied Glider (Heard)
Greater Broad-nosed Bat
Koala
Swift Parrot
Scarlet Robin
Gang Gang Cockatoo
Flame Robin

DRAINAGE FEATURE PROTECTION (EPL IHL 1/2 & TSL). NOTE: THE GREATER OF THE WIDTHS (BOLD) MUST APPLY. CPT 2301 IS IHL 2 & CPTS 2311/2321 ARE IHL 1.

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

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

Prepared By: Shane Clohesy

Burning Operational Map

Compartment: 2301, 2311 & 2321

State Forest: Glenbog No: 149

SOUTHERN REGION - Hardwood Forests

Map Sheet: Nimmitabel 8724-1N

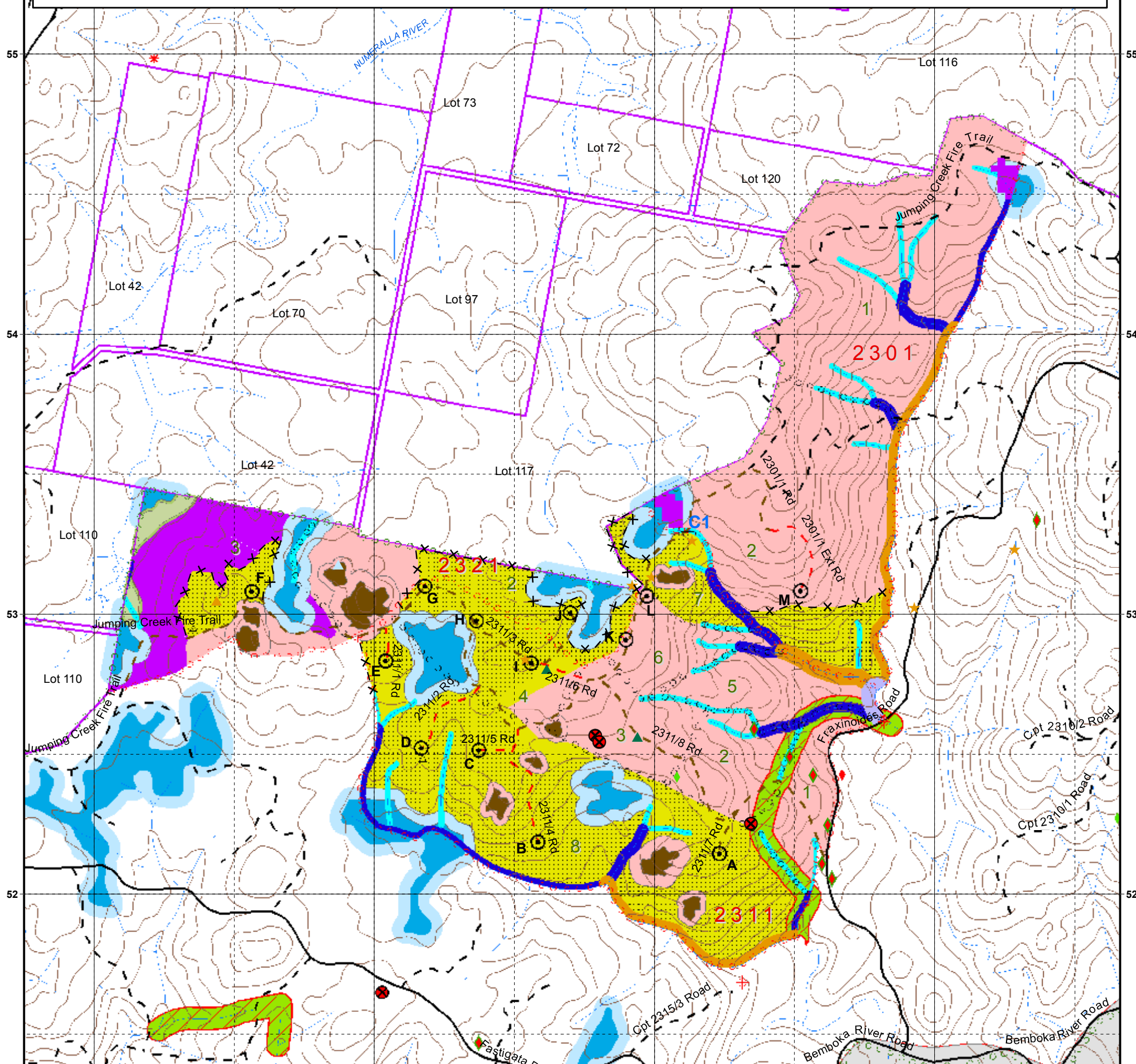


Version: 1

PLANNING MANAGER APPROVAL

APPROVED: Lee Blessington

DATE: 28 / 04 / 2014



- BOUNDARIES**
- State Forest Boundary
 - Compartment Boundary
 - Coupe Boundary
 - Proposed Control Line
- ROADS**
- Major Forest
 - Minor Forest
 - EPL Standard Existing (Minor)
 - EPL Licenced (New Construction)
- DRAINAGE**
- Mapped LIC Drainage
- DUMPS & CROSSINGS**
- Temporary Dry Weather
 - Existing Crossing
- TENURE**
- National Park Estate
 - Private Property

- NET HARVEST AREA**
- FMZ 4 - MSW (verified MAF)
 - FMZ 4 - MSW
- NON HARVEST AREA**
- Ridge & Headwater Habitat (80m width)
 - Owl Landscape
 - Probable Heath & Buffer (10m)
 - Probable Wetland & Buffer (40m)
 - Probable Rock & Buffer (20m & 40m)
 - Probable EEC - Montane Peatlands & Swamp/ Tablelands Snow Gum, Black Sallee, Candlebark & Ribbon Gum Grassy Woodland
 - Excluded Forest

- FAUNA FEATURES**
- Sooty Owl
 - Powerful Owl
 - Yellow-bellied Glider
 - Yellow-bellied Glider (Feed Tree)
 - Yellow-bellied Glider (Heard)
 - Greater Broad-nosed Bat
 - Koala
 - Swift Parrot
 - Scarlet Robin
 - Gang Gang Cockatoo
 - Flame Robin

DRAINAGE FEATURE PROTECTION (EPL IHL 1/2 & TSL). NOTE: THE GREATER OF THE WIDTHS (BOLD) MUST APPLY. CPT 2301 IS IHL 2 & CPTS 2311/2321 ARE IHL 1.

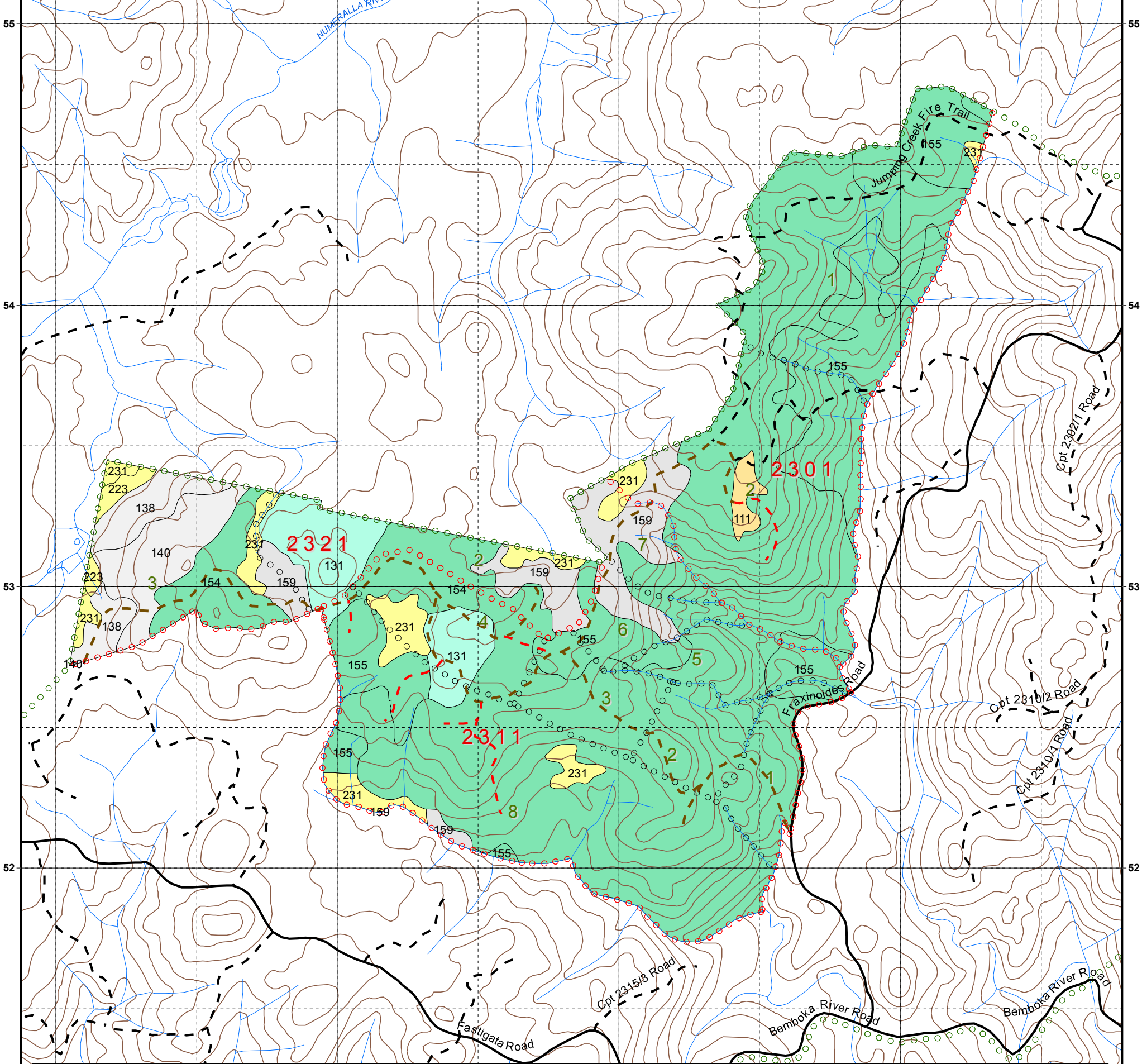
Feature	Filter Strip (EPL)	Stream Exclusion Zone (TSL)
Unmapped	10m	Nil
1st Order	10m/15m	10m
2nd order	15m/20m	20m
3rd order	20m	30m
4th order	20m	50m

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

Prepared By: Shane Clohesy

Harvest Plan Forest Type Map
Compartments: 2301, 2311 & 2321
State Forest: Glenbog No: 149
SOUTHERN REGION - Hardwood Forests
Map Sheet: Nimmitabel 8724-1N

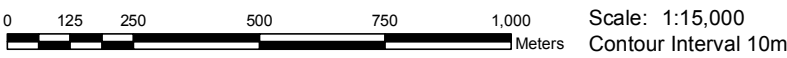




- BOUNDARIES**
- State Forest Boundary
 - Compartment Boundary
 - Coupe Boundary
- ROADS**
- Major Forest
 - Minor Forest
 - EPL Standard Existing (Major)
 - EPL Standard Existing (Minor)
 - EPL Licenced (New Construction)
- DRAINAGE**
- Mapped LIC Drainage

- BROAD FOREST TYPE**
- Type 111 Peppermint
 - Type 131 Peppermint - Mountain / Manna Gum
 - Type 138 Snow Gum
 - Type 140 Snow Gum - Mountain / Manna Gum
 - Type 154 Brown Barrel
 - Type 155 Brown Barrel - Gum
 - Type 159 Mountain / Manna Gum
 - Type 223 Heath
 - Type 231 Swamp

Broad Forest Type	Gross Ha
111 - Peppermint	2.2
131 - Peppermint - Mountain / Manna Gum	17.2
138 - Snow Gum	8.9
140 - Snow Gum - Mountain / Manna Gum	11.6
154 - Brown Barrel	215.4
155 - Brown Barrel - Gum	61.7
159 - Mountain / Manna Gum	21.5
223 - Heath	1.9
231 - Swamp	15.4



Harvest Plan Indicative Habitat Class Map

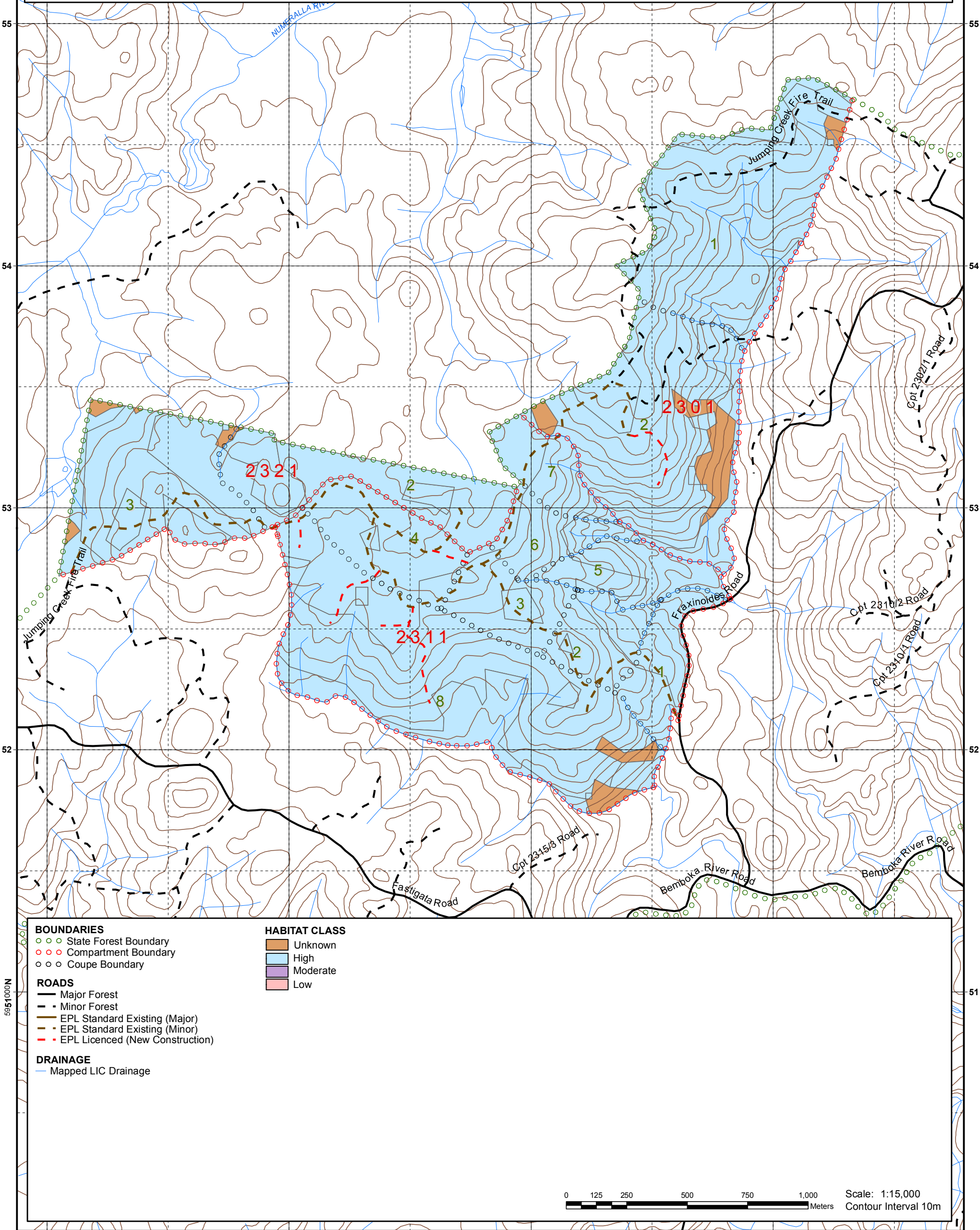
Compartments: 2301, 2311 & 2321

State Forest: Glenbog No: 149

SOUTHERN REGION - Hardwood Forests

Map Sheet: Nimmitabel 8724-1N

Prepared By: Shane Clohesy



- BOUNDARIES**
- State Forest Boundary
 - Compartment Boundary
 - Coupe Boundary
- ROADS**
- Major Forest
 - Minor Forest
 - EPL Standard Existing (Major)
 - EPL Standard Existing (Minor)
 - EPL Licenced (New Construction)
- DRAINAGE**
- Mapped LIC Drainage

- HABITAT CLASS**
- Unknown
 - High
 - Moderate
 - Low

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



HARDWOOD FORESTS- SOUTHERN REGION HARVESTING PLAN

Glenbog State Forest - Compartments 2301, 2311 & 2321

Certification

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

Prepared By: Harvest Planner	Shane Clohesy	Approved By: Planning Manager	Lee Blessington
Signature	Shane Clohesy	Signature	Lee Blessington
Date	17/04/2014	Date	28/04/2014

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

Other maps included with this plan are locality, forest type, cultural heritage (limited distribution), and habitat quality class (Supervising Forest Officer and indicative).

Description of Proposal

Harvesting of hardwood forest

Integrated Harvesting of Hardwood Forest:

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

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

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

Attachment 2: Roading plan prescribes roading requirements for this harvesting operation.

Attachment 3: Burning Plan prescribes burning requirements for this harvesting operation.

Post-harvest burning should be confined as far as practicable to the Net Harvest Area. Site specific burning exclusions associated with other tenures, regrowth patches, and exclusions (flora, fauna, cultural heritage and other exclusion zones) are explained within the relevant sections of this harvest plan, in the critical boundaries section of the burning plan and indicated on the HPOM and BOM.

The BOM and critical boundaries section of the burning plan also considers exclusion zones in compartments surrounding the planned compartments. If the post-log burn escapes the containment lines, the burn supervisor should use this information to assess if it is necessary to extinguish the fire or if it is acceptable to allow fire to burn out to a secondary control line.

During the planning stage the location and type of control lines required to contain fire within the nha are considered and listed in the control lines section of the burn plan. Snig track patterns should be designed to double as bare earth control lines for each of the proposed control lines specified in the burn plan and for any other critical boundaries identified during the operation (e.g. nest exclusions, regrowth patches). Where this is not practical, the Supervising Forest Officer is to assess the need for a bare earth break to be constructed close to harvesting exclusion boundaries and seek advice and approval from the OTL for the additional earth works.

The SFO must record the following information in the burn plan and prior to burning use this information and any other relevant information from the SFO notes to brief the Burning Supervisor:

- Any new critical boundaries identified during the operation,
- If works required for existing and proposed control lines were carried out,
- If proposed control lines were deemed to be unsuitable (e.g. a proposed new road did not get constructed or where a mapped drainage line didn't occur to the full length as mapped),
- If proposed control lines are no longer required (e.g. a section of the net harvest area did not get harvested) and will therefore not undergo post-log burning.

Area Identification and Yield Estimates

State Forest	Compartments	Coupe/s	Region	Management Area	Certification
Glenbrog	2301	2 (part)	Southern	Eden	AS4708:2007 ISO 14001
Glenbrog	2311	4 (part) 7 & 8	Southern	Eden	AS4708:2007 ISO 14001
Glenbrog	2321	2 (part) 3 (part)	Southern	Eden	AS4708:2007 ISO 14001

	Cpt 2301	Cpt 2311	Cpt 2321	Total
Plan Compartment ID	20767	20768	20769	NA
Gross Area (ha)	115.9	174.6	64.3	354.8
Net Harvest Area (ha)	7.1	68.0	15.0	90.1
Estimated Yield Pulp (t)	700 t	6,800 t	1,500 t	9,000 t
Estimated Yield Sawlog (m3)	100 m3	1000 m3	225	1,325 m3

Slope Classes (percent of harvest area)

Slope Class	Cpt 2301 % of harvest area	Cpt 2311 % of harvest area	Cpt 2321 % of harvest area
0-20°	100.0	99.9	100.0
20-25 °	0.0	0.1	0.0
25-30 °	0.0	0.0	0.0

Abbreviations used in this plan

SFO = Supervising Forest Officer, HTL = Harvesting Team Leader, OTL = Operations Team Leader IFOA = Integrated Forestry Operations Approval.

**Forestry Corporation NSW– Southern Region
Harvesting Plan HP_ED_2301_2311_2321_14
Compartments 2301, 2311 & 2321**

Attachment 1 – Site Safety Plan

SAFETY CONSIDERATIONS

Emergency Plan Information

(a) **Mobile Phone reception on work site:**

☐ Good ☒ Poor ☐ Nil

Nearest reliable reception: High point on Fraxinoides Road.

(b) **FCNSW Radio from work site:**

Channel No: 247
Call to: Eden Base
Call sign from: Your name

Contractor Radio at work site:

UHF Channel No:
Contractor Radio No:
Call to Bush Boss:

(c) **Emergency meeting point for ambulance:**

Junction of Bemboka River Road & Fraxinoides Road.

1:100000 map sheet: Bombala 8724
MGA zone: 55
MGA Grid reference: E718885 N5951449
Lat/Long for GPS: 36° 33' 26" S 149° 26' 44" E

(d) **Closest Helicopter Landing Place:**

Quarry adjacent to Fraxinoides Road to the east of compartment 2301.

1:100000 map sheet: Bombala 8724
MGA zone: 55
MGA Grid reference: E719704 N5953822
Lat/Long for GPS: 36° 32' 8" S 149° 27' 15" E

(e) **Procedure for obtaining Ambulance assistance:**

Dial "000" OR Call 1300 880 548 Batemans Bay Forestry Office for Ambulance assistance.

Dial "112" only as an alternative to "000" if you have a GSM digital mobile phone and you are outside your own provider's GSM network coverage area.

"000" Operator Question.

Response

1. Police , Fire , Ambulance? Ambulance.
2. Suburb (*State Forest name*): Glenbog
(Nearest town or named locality): Bemboka
(Nearest Ambulance station): Bombala
3. Address: (*Nearest named State forest road*): Fraxinoides Road
4. Nearest Road Junction: Fraxinoides Road and Bemboka River Road Junction
- 5 Local Government Area: Bega Valley Shire / Cooma-Monaro Shire
6. Nature of the problem: Give details of accident, number and condition of casualties.
7. Where is the accident: Work site location – (Centre of Compartments).
 MGA Grid reference: Zone 55 E717793 N5952724
 Lat/long for GPS: 36° 32' 45" S 149° 25' 59 " E
8. Directions to navigate from Ambulance Station to meeting point:
 Directions from Bombala:
 - Travel North along Monaro Highway for approximately 50km.
 - Turn right onto the Snowy Mountains Highway and travel east for approximately 12km.
 - Turn left onto Fastigata Road and travel north for approximately 8kms.
 - Turn right onto Bemboka River Road and travel east for approximately 800ms to Emergency Meeting Point.
9. Injuries?: Give detailed information about the condition of the casualty.
10. Call back No.:: Give your Mobile Number.
 or Batemans Bay Office:1300 880 548.
11. Name of Reporter: Give own name.

Site Specific Identified Hazards

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

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

IDENTIFIED HAZARD	RISK RATING (prior to implementation of control measures)	SUGGESTED CONTROL STRATEGY	RISK RATING (after implementation of control measures)
1. Vehicle collision at adjoining roads of various traffic levels	1B	Warning signs at FCNSW intersections, road closure on FCNSW roads. Implement Traffic Control plans (where specified in this harvest plan). 60km/hr speed limit on all State Forest gravel roads unless otherwise signposted. Compliance with FCNSW lights on policy.	2E
2. Cliff lines & rocky very steep terrain	3C	Operators to assess work site within two tree lengths to identify immediate hazards. Communicate to other operators and mark sites.	3E
3. Hazardous or dead trees	1B	Refer to FCNSW safety standard 1.3.9. Assess area within two tree lengths of work site. Assess risk, mark any Distinctly Dangerous Trees with the symbol Ø & if necessary remove hazard or move work site. Use machinery to assist with hazard removal if possible Contractor is responsible for implementing control strategies during harvesting.	1D
4. Overhead hazards associated with dumps	1B	Refer to FCNSW safety standard 1.3.9. Assess overhead hazard within two tree lengths of the dump. Assess risk, & if necessary remove hazard or relocate dump site. Contractor is responsible for implementing control strategies during harvesting.	1D
5. Dust from passing vehicles along dirt haulage routes	1B	Restrict speed to minimise dust generation, slow down when passing vehicles. Turn on driving and hazard lights to increase visibility.	2E
6.			
7.			

--	--	--	--

Hazard Nos. 4/5 are shown on the attached HPOM

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

Traffic management/road closures

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

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

This plan identifies haulage from the compartment will be east via Jumping Creek Fire Trail, turning right onto Fraxinoides Road, then right onto Bemboka River Road, then left onto Fastigata Road and then right onto the Princes Highway. The intersection of Fastigata Road and the Princes Highway has been assessed as achieving a minimum of 200m sight distance on both approaches. Therefore at this intersection additional signage in accordance with a Traffic Control Plan is not required.

HAULAGE TIMES

Truck movements are restricted during the early morning and late afternoon. No haulage may occur in the morning before sunrise or from one hour prior to sunset.

Silviculture and Harvesting Prescriptions

Compartment 2301

Year	1984	1995
TSI	X	X
HR Burning	X	X
Wildfires	X	X
Logging m ³	8,700	9,900

0 - applies, X – not applicable

Compartment 2311

Year	1984
TSI	X
HR Burning	X
Wildfires	X
Logging m ³	10,200

0 - applies, X – not applicable

Silvicultural Planning

The stands to be harvested are primarily comprised of mature and over-mature *E. fastigata* (Brown Barrel) with some patches of younger regeneration. The majority of the net harvest area has not been previously harvested.

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 30 years time.

Harvesting Prescription

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

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

IFOA Limits

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

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

The SFO 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 Regional Manager.

Noxious Weeds/Disease/Pests Hygiene Requirements

Compartments 2301 & 2311 are within Bega Valley Shire Council which is a designated red zone for Myrtle Rust. In order to prevent the spread of Myrtle Rust all harvesting machinery, equipment and vehicles heading west from Bega Valley Shire Council or south into Victoria must be inspected for vegetation containing Myrtle Rust. If present, the vegetation must be removed from the harvesting machinery, equipment or vehicle prior to leaving the compartment.

Permanent Growth and Research Plots

Any inventory plots located during the harvesting operation are to be treated the same as the surrounding area.

Private Property and Critical Boundaries

Private property occurs adjacent to the northern and the western boundary of the compartment, as indicated on the HPOM. Private property owners have been notified of the scheduled harvesting and post-harvest burning. Contact details are available from the Eden office. The table below lists neighbours who adjoin compartments 2301, 2311 & 2321.

Name	Lot Number

- No harvest disturbance is permitted on private property.
- Harvesting debris must not be left within five metres of the boundary fence lines.
- Any damage to fences must be repaired by the contractor.
- Access roads must be maintained free of debris and in a trafficable state.
- Boundaries must be marked in the field.

Forest Permits

Apiary

2 apiary sites provided in the table below are located within the planning unit. Contact details are available from the Eden office.

Name	Site Number

- The SFO 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. SFO will continue to conduct on the ground mark-up and searches and report back to foresters/ecologist any feature requiring further investigation.

Injured Wildlife

Private property (Lot 110) located adjacent to the western boundary of compartment 2321 is owned by . If operators identify any wildlife injured during the operation have requested that it be reported to them as soon as possible so that they can collect and treat the injured animal. Call to report any injured animals.

Forest Management Zoning

The entirety of compartments 2301, 2311 & 2321 is zoned FMZ 4 - General Management (normal harvesting prescriptions apply) occur within the compartment. Refer to HPOM 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 1/2/3A. If the SFO identifies the need for harvesting related activities to occur within FMZ1/2/3A during the operation, the Harvest Planner must be contacted to seek Regional Manager approval.

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

Cultural Heritage

Cultural Heritage -

All relevant representatives have been consulted &/or inspected compartments 2301, 2311 & 2321. 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 SFO must search for and record threatened species habitat features consistent with Conditions 5.2 and 8.6 of the TSL. Searches for threatened species features must be conducted within that portion of the net planned area where harvesting will occur, and within 50 metres outside this area (eg HCVOG, etc) (conditions 5.1, 5.2 of the TSL).

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

Species adequately covered by general prescriptions:

The following species have been recorded in or around the compartments and are adequately covered by the general prescriptions. No further protection measures are required for these species: **Eastern False Pipistrelle** (*Falsistrellus tasmaniensis*), **Flame Robin** (*Petroica phoenicea*), **Gang-gang Cockatoo** (*Callocephalon fimbriatum*), **Greater Broad-nosed Bat** (*Scoteanax rueppellii*), **Scarlet Robin** (*Petroica boodang*).

Common Wombat

As far as practicable damage to wombat burrows must be avoided. In particular, care should be taken to ensure that burrow entries are not collapsed or obstructed by large woody material, rocks, etc. Approximately 100 wombat burrows have been marked with yellow/black striped paint in the field by local representatives of the "Wombat Protection Society" to assist machine operators in identifying their location.

Tree Retention-Non-Regrowth Zone

The non-regrowth zone applies to the entire net harvest area. The SFO 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	GG density >1/ha + Habitat/ 2ha	TSL Condition	Protection of Retained Trees	TSL Condition (only if safe)	Dead Standing Tree	TSL Condition	Significant Food Resource	TSL Condition
High	12	5.6g)i	12	5.6h)i	+4	6.3.1	0	5.6l	0	5.6j	0	5.6 k
Medium	8	5.6g)ii	8	5.6 h)ii	+8	6.3.1	0	5.6 l	0	5.6j	0	5.6 k
Low	4	5.6g)iii	4	5.6 h)iii	+12	6.3.1	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
Rainforest	5.4	Has been assessed & is unlikely to occur in the field. May require further investigation#.
Riparian Protection Zones	5.7	Yes
Ridge & Headwater Habitat	5.8	Yes (80m total width)
Wetlands	5.9	Has been assessed as a risk that it may occur in the field. May require further investigation#. <i>Features on map have not yet been marked in field at the time of planning.</i>
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#. <i>Features on map were marked with pink paint during harvest planning. SFO to mark appropriate exclusion zone around the features.</i>
Endangered Ecological Community	NA	Has been assessed as a risk that <i>Montane Peatland & Swamps EEC</i> and <i>Tablelands Snow Gum, Black Sallee, Candlebark & Ribbon Gum Grassy Woodland EEC</i> may occur in the field. May require further investigation#. Harvesting, harvesting machinery and post harvest burning must be excluded from all areas of EEC. <i>Features on map have not yet been marked in the field at the time of harvest planning.</i>

#SFO/Contract coordinators will continue to conduct on the ground mark-up & searches and report back to foresters/ecologists any features requiring further investigation.

General Threatened Flora and Fauna Prescriptions

Feature	Records in 2301, 2311 & 2321	Licence conditions under the TSC Act
Threatened Frog General	No	5.12

Feature	Records in 2301, 2311 & 2321	Licence conditions under the TSC Act
Protection Measures		
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 HTL. 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 HTL.

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 2301	Records in 2311	Records in 2321	Licence conditions under the TSC Act or relevant Site-specific prescription
Powerful Owl <i>Ninox strenua</i> ,	No	No	No	6.3
Sooty Owl <i>Tyto tenebricosa</i>	No	Yes	No	Owl Landscape Exclusion Zones occur in compartments 2311. (Refer to HPOM).
Swift Parrot <i>Lathamus discolor</i>	No	No	Yes	6.4
Spotted tailed Quoll <i>Dasyurus maculatus</i>	No	No	No	6.10
Koala <i>Phascolarctos cinereus</i>	No	No	No	6.11
Yellow-bellied Glider <i>Petaurus australis</i>	No	Yes	No	6.13 Yellow-bellied Glider Feed Tree located at: E718079 N5952414
<i>Pomaderris elachophylla</i>	No	No	No	6.18 Apply 10m exclusion around individuals. If colonies of more than 5 individuals are found apply 6.18 d) additional modified harvesting zone.

Fisheries Licence Conditions

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

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

Elements	Conditions
Unmapped Drainage Lines	EPL applies
Drainage Feature Protection	See HPOM for widths
Inherent Hazard Class	IHL 2 – compartment 2301 IHL 1 – compartments 2311 & 2321
Dispersible Soils	No
Seasonality Harvesting Exclusions	No
Seasonality Burning Exclusions	No
Log Dumps	Refer relevant conditions for IHL
Snig Tracks	Refer relevant conditions for IHL
Roads	See Schedule 5 of EPL Booklet
Slope limits for harvesting	Refer to Schedule 4B.3 of EPL

Log Dump Location

13 log dumps are indicated on the HPOM. Field location of log dumps must utilise the most level site available consistent with the location indicated on the HPOM. Inherent hazard level 1 Conditions 26, 27, 30, and 33 of Schedule 4 of the EPL must apply to compartments 2311 and 2321. Inherent hazard level 2 Conditions 26, 27, 28, 30, 31 and 33 of Schedule 4 of the EPL must apply to compartment 2301.

Expected Felling/ Extraction & Loading Method

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

Drainage Feature Crossings

One road crossing (C1) is approved for use on drainage features. (Refer to HPOM). Crossing details are contained in Attachment 2 of this Plan.

Mass Movement

Compartments 2301, 2311 & 2321 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 SFO approval for snigging or extraction provided they are drained to EPL specifications.

Legal Conditions

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

- Forestry Act 2012, and
- Forestry & National Park Estate Act 1998

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

The IFOA also contains three licences issued under:

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

This harvest plan will be managed in the field under:

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

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

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

Pre Operational Briefing

I acknowledge that I have received a copy of the Harvesting Plan for Compartments 2301, 2311 & 2321 in Glenbog State Forest and that I have been briefed on the conditions of the Plan and understand the supervision and operational control requirements as explained to me by the HTL or his/her delegate.

Position	Name	Signature	Date

Details to Record in SFO 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 SFO 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	Yes		
Wetlands	Yes	New	Yes		
Cultural Heritage	No				
Existing Roads	No				
New Roads	Yes	New	Yes		
Heath	No				
Powerlines etc	No				
Mapped EEC	Yes	New	Yes		

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												
SFO initial												
SFO 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												
SFO initial												
SFO 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												
SFO initial												
SFO 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												
SFO initial												
SFO presence												

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

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

SFO Notes

[illegible]

SFO Notes (continued)

[illegible]

SFO Notes (continued)

[illegible]

SFO Notes (continued)

[illegible]

SFO Notes (continued)

[illegible]

Clearance Certificate

COMPARTMENTS: 2301, 2311 & 2311, GLENBOG STATE FOREST, SOUTHERN REGION

ToSupervising Forest Officer

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).....
Supervising Forest Officer

Post Logging Information

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

Summary of silvicultural treatment

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

Actual area harvested (record on attached HPOM)

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

Post Logging Basal Area sweeps

Dump No#	Sweep 1	Sweep 2	Sweep 3	Sweep 4	Average
Post BA				Average	m ² /ha
Pre BA				Average	m ² /ha

Comply with maximum Thinning BA removal of 75%?

Y/N

Possible next cut (tick appropriate boxes)

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

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

ATTACHMENT 2	ROADING PLAN
---------------------	---------------------

Summary of Roading Requirements

Feature	Details	Works Required
Existing roads to be used.	5,800m/5	Yes
New roads to be constructed	1,550m/6	Yes
Existing crossings used	1	Yes
New crossings to be constructed	0	NA
Length of road >10°	0	NA
Borrow pits and gravel pits	0	NA
Mass movement prescriptions apply	No	NA
Dispersible soil conditions apply	No	NA
Seasonality provisions apply	No	NA

Note: Maintenance works not completed by Operations must be recorded and passed onto the SFO Harvesting 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
Jumping Creek Fire Trail (3,480m) <i>Contractor Responsibility</i>	Clear and reshape where required. Clear up to 3m either side to facilitate truck movements (except where roads traverses EEC). May require spot gravelling if operating during wet conditions (particularly at E717532 N5952594) – SFO to monitor. Install drainage as per EPL requirements. Ops/SFO Comments:			
2301/1 Rd (290m) <i>Contractor Responsibility</i>	Clear and reshape entire length. Clear up to 3m either side to facilitate truck movements. Ops/SFO Comments:			
2301/1 Ext Rd	Refer to New Road Construction form.			

(330m) <i>Contractor Responsibility</i>	Ops/SFO Comments:			
2311/1 Rd (120m) <i>Contractor Responsibility</i>	Refer to New Road Construction form. Ops/SFO Comments:			
2311/2 Rd (330m) <i>Contractor Responsibility</i>	Refer to New Road Construction form. Ops/SFO Comments:			
2311/3 Rd (540m) <i>Contractor Responsibility</i>	Clear and reshape entire length. Clear up to 3m either side to facilitate truck movements. Install drainage as per EPL requirements. Ops/SFO Comments:			
2311/4 Rd (450m) <i>Contractor Responsibility</i>	Refer to New Road Construction form. Ops/SFO Comments:			
2311/5 Rd (130m) <i>Contractor Responsibility</i>	Refer to New Road Construction form. Ops/SFO Comments:			
2311/6 Rd (190m) <i>Contractor Responsibility</i>	Refer to New Road Construction form. Ops/SFO Comments:			
2311/7 Rd (170m) <i>Contractor</i>	Clear and reshape entire length. Clear up to 3m either side to facilitate truck movements.			

<i>Responsibility</i>	Ops/SFO Comments:			
2311/8 Rd (1,320m) <i>Contractor Responsibility</i>	<p>Clear and reshape entire length.</p> <p>Clear up to 3m either side to facilitate truck movements.</p> <p>Install drainage as per EPL requirements.</p> <p>Ops/SFO Comments:</p>			

--

--

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
2301/1 Ext Rd	330	7	9°	16°	<1.5	Entire length	No	Retain	Contractor		
2311/1 Rd	120	7	2°	2°	NA	NA	No	Retain	Contractor		
2311/2 Rd	330	7	6°	5°	<0.5	~100	No	Retain	Contractor		
2311/4 Rd	450	7	9°	22°	<2.0	~250	No	Retain	Contractor		
2311/5 Rd	130	7	4°	Nil	NA	NA	No	Retain	Contractor		
2311/6 Rd	190	7	Nil	Nil	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.	SFO 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	SFO to monitor. Mitres with rock dissipater recommended.
Soil stabilisation techniques of disturbed areas	Seed & mulch as required	

Note: Maintenance works not completed by Operations must be recorded and passed on to the SFO.

CROSSING NAME: C1 (DD)

Waterway Classification: Fish Passage Class 4 - unlikely fish habitat

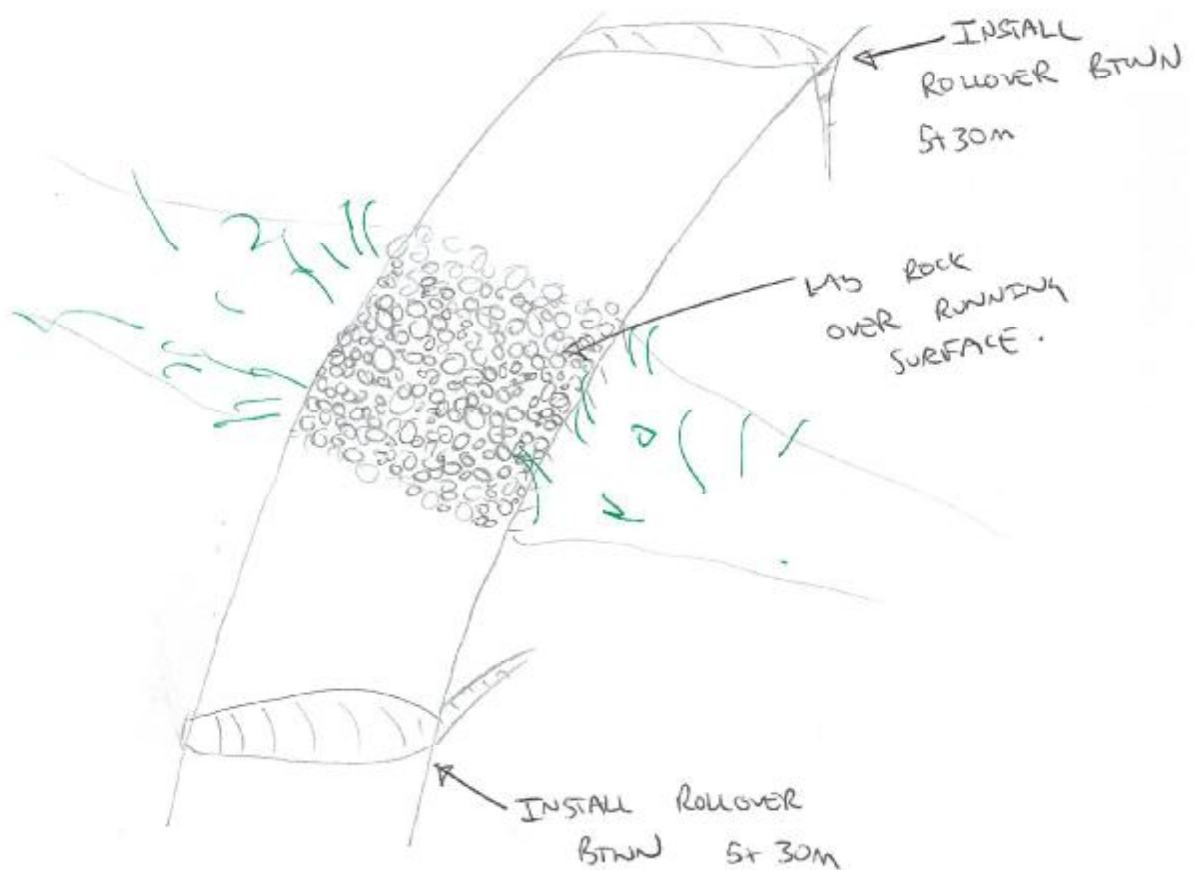
Fisheries Licence Aquatic Habitat: No Class 1 or 2

Assessors Name: Shane Clohesy**Crossing Type:** Existing Gully Stuffer

Features	Works (As per EPL Schedule 5)	Plant/Materials
Structure	Lay rock over running surface.	Rock
Bed and Banks	Nil works required	
Erosion and Sediment Control	Minimize disturbance and clearing to the greatest extent practicable. Seed & mulch on disturbed areas.	Seed & Mulch
Disposal of excess spoil	Nil works required	
Soil Stabilisation within 20m	Seed & Mulch disturbed areas.	Seed & Mulch
Road drainage within 5-30m <ul style="list-style-type: none"> Type outlet control 	Install rollover drain and mitre @ between 5m & 30m on both approaches. Avoid disturbance to vegetation at outlet of mitre drains.	

Date of Assessment: 06/03/2014

Final Crossing Use: Retain



Soil stabilisation must be completed within 5 days

Record implementation date here: _____

ATTACHMENT 3 POST-HARVEST BURNING PLAN

This burn plan has been planned and must be implemented in accordance with:

Bushfire Environmental Assessment Code (and accompanying Bush Fire Hazard Reduction Certificate).	X
Eden IFOA*	ü

*This burn plan will be managed in accordance with the principles detailed in the FCNSW Corporate Fuel Management Plan 2008. All practical measures will be taken to ensure fire is contained within predetermined control lines and to prevent entry into exclusion areas. However due to the unpredictable nature of fire from time to time fire may escape the containment lines and enter exclusion zones. In these instances the Burn Supervisor should consider suitable strategies to manage the escaped fire.

PLANNING INFORMATION

Planned Burn Area: NHA of compartments 2301, 2311 & 2321, Glenbog State Forest

LGA: Cooma Monaro/Bega Valley

Refer to Area Identification and Yield Estimates section of harvest plan.

Season: autumn / winter / spring

Bush Fire Management Zone: Land Management Zone (LMZ)

BURN OBJECTIVES

- Promote regeneration of eucalypt species
- Protect & enhance ecological communities
- To reduce fine fuel loads to 4-8 tonnes/ha. (assisting future fire suppression)
- A burn coverage between 60-80% of harvested area.
- To contain fire within harvested area.
- To minimise mortality in trees retained under condition 5.6 of TSL (H & R trees and feed trees).
- To minimise defect damage to retained regrowth stems.

CRITICAL AND NON CRITICAL BOUNDARIES

A summary of critical boundaries where burning must be excluded are listed below (refer to harvest plan and BOM for further details).

Critical boundaries within the planned compartments:

- Exclusions for probable EEC, probable wetland, probable heath and scrub, ridge and headwater, owl landscape and probable rocky outcrops and cliffs.

Critical boundaries outside the planned compartments

- Exclusions for wetland, ridge and headwater and Owl Landscape.

- National Park.
- Private Property.

Non-Critical Boundaries

Non-critical boundaries are areas within the planned compartments which are outside the nha where fire should not be deliberately introduced (through lighting patterns or direct ignition). However if fire does enter these areas, attempts to extinguish the fire are not necessary and it is acceptable to allow fire to burn out to a secondary containment line.

Snig track patterns should still aim to form a control line around these boundaries, however if this is impractical (e.g due to steep/rocky terrain) it is not necessary for SFO to seek approval for the construction a bare earth break.

- Boundary between NHA and “Excluded Forest” Area (pink on HPOM). Excluded Forest areas contain mature forest and/or advanced regrowth that will not be adversely affected by low intensity burning.

REGIONAL BURNING GUIDELINES

Max Temp (°C): 25 **Min RH (%) :** 30 **Max Wind Speed (km/h):** < 20 Southerly aspect
< 15 Northerly aspect

Max BKDI:< 70 **Max FDI:** 8 (subject to area assessment). **Scorch Height:** 0.6 x dominant tree height

Max Fuel Moisture Range: 12-25% **Max Rate of Spread:** 300m/hr. **Average Flame height:** up to 4m

BURN AREA INFORMATION

Fine Fuel loads: 50-150 tons per hectare of logging slash, 10 – 20 tons per hectare in between tree heads.

Fuel arrangement: Multi-tiered structure (litter, grasses, shrubs, eucalypt regeneration and mature trees)

Terrain (gross area): 0%>30°, 0% @ 25°-30°, 0% @ 20°-25°, 31% @10°-20°, 69% @ 0°-10° slope.

Time since last burn: Unknown

IMPORTANT BURNING PRESCRIPTIONS

- A small test burn must always be lit prior to main burn. This will assist in determining FIRE BEHAVIOUR and IGNITION PATTERNS.
- **Seek information from Harvesting Contract Coordinator on regrowth excluded burn areas.**
- Sections will be lit by drip torch to a determined ignition pattern.
- Areas will generally be burnt from ridge tops down and into the wind to minimise excessive fire behaviour.
- **Minimise fire intensity in regrowth stands.**
- Where one or more of the parameters detailed in the regional burning guidelines is not met, burning may still be conducted provided the other parameters will provide favourable conditions for burning to meet the burn objectives. Any decision to conduct burning outside of the parameters must be fully documented by the Burning Supervisor in the field copy of the burn plan.

ENVIRONMENTAL PRESCRIPTIONS

FLORA AND FAUNA:

Refer to Flora and Fauna sections of the Harvest plan document.

The burn crew should be aware of and look for any H & R trees, *Allocasuarina* feed trees, eucalypt feed trees, stags or yellow bellied glider/squirrel glider sap trees where logging debris is stacked >1m high within the 5m radius of the tree. If any are found, minimise damage to these trees by not directly lighting within 5m of the tree.

SOIL, WATER & AQUATIC HABITAT:

Refer to Soils and Water and Drainage Features sections of the Harvest plan document.

- Preferred months of burn – March to August
- Fuel moisture differentials will be utilised to minimise impacts upon drainage features within the burn area

ABORIGINAL CULTURAL HERITAGE:

Refer to the cultural heritage section of the Harvest plan document to determine if there are any sites and if so refer to the cultural heritage map for the location of the sites. Significant sites, e.g. scar trees, groove stones, should be raked around to prevent fire damage. Where practical, burning of scattered artefacts should be avoided.

CONTROL AND STRATEGY

CONTROL LINES:

EXISTING Description of each control line	Description of Work Required	Completed Yes /No
Jumping Creeks Fire Trail	Nil	
2 nd , 3 rd & 4 th Order drainage features on the southern & eastern boundaries of NHA in compartment 2301.	Near ground elevated fuel moisture content >25%	
1 st , 2 nd , & 3 rd Order drainage features on the southern, eastern & western boundaries of the NHA in coupes 1 & 8 in compartment 2311.	Near ground elevated fuel moisture content >25%	
1 st & 2 nd Order drainage features on northern boundary of coupe 7 in compartment 2311.	Near ground elevated fuel moisture content >25%	
Check for trees that could burn down and fall over any boundary roads and wet down, rake around or remove as necessary		
PROPOSED Description of each control line	Description of Work Required	Completed Yes /No
Boundary between NHA and Excluded Forest in compartment 2301.	Design snig track patterns so they double as bare earth containment lines. Where this is not practical, SFO to instruct contractor to construct a bare earth break along boundary of the exclusion (after seeking approval from OTL).	
Boundary between Private Property/Wetland and NHA in coupe 7 of compartment 2311.	Design snig track patterns so they double as bare earth containment lines. Where this is not practical, SFO to instruct contractor to construct a bare earth break along boundary of the exclusion (after seeking approval from OTL).	
Eastern boundary of compartment 2311 linking 1 st Order drainage feature control line with rocky outcrop exclusion.	Design snig track patterns so they double as bare earth containment lines. Where this is not practical, SFO to instruct contractor to construct a bare earth break along boundary of the exclusion (after	

	seeking approval from OTL).	
Boundary between probable EEC/Wetland and NHA in coupe 3 of compartment 2321.	Design snig track patterns so they double as bare earth containment lines. Where this is not practical, SFO to instruct contractor to construct a bare earth break along boundary of the exclusion (after seeking approval from OTL).	
Boundary between Private Property/Wetland/Excluded Forest and NHA in coupe 2 of compartment 2321.	Design snig track patterns so they double as bare earth containment lines. Where this is not practical, SFO to instruct contractor to construct a bare earth break along boundary of the exclusion (after seeking approval from OTL).	
Scar trees, grinding grooves, nest trees, quality regrowth discovered during the harvesting operation.	Design snig track patterns so they double as bare earth containment lines. Where this is not practical, SFO to instruct contractor to construct a bare earth break (drained as per EPL snig track conditions) along boundary of the exclusion (after seeking approval from OTL).	

SMOKE HAZARD AND MANAGEMENT: <http://www.bom.gov.au/general/reg/smoke/nsw/index.shtml>Smoke / Hazard Reduction Signs required?:..... YES NO (**R** tick to indicate)Smoke Dispersion Forecasting via BOM utilised?..... YES NO (**R** tick to indicate)

Safety Considerations (pre-burn)		DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
Personnel	Names of fire crew documented daily.							
Visitors on site	Visitor on site induction carried out							
Neighbours notified	Documented in plan							
Traffic control	Traffic control signs to regulate traffic if required							
Smoke management:	Assessment of prevailing winds at the time of burn. Road side signs warning of smoke hazard.							

PRE-BURN PREPARATION ACTIVITIES AND RESPONSIBILITIES

Activity	Specifications and tasks	Responsibility (inc date)	Signature
Fuel monitoring	Regular monitoring prior to burning		
Weather monitoring	Conducted prior to and during burning operations.		
Trail preparation <ul style="list-style-type: none"> Dozer/grader Hand tools 	Mineral earth control lines prepared prior to burning to contain fire within designated burning block.		
Neighbour liaison	Notification and communications documented.		
Liaison with fire & emergency authorities	"as above"		
Media releases	To advise local community of SF burning activities.		
Radio station notifications	"as above"		
Equipment	Ensure all required equipment is available.		
Communications	"as above"		
Visitor Safety	Burn is sign posted. All visitors to report to burn supervisor immediately		
Burn approval	Daily burn approvals given by delegated officers		
Supervisor to initial			

NOTIFICATION & RESOURCE REQUIREMENTS

Neighbours.....

Contractors.....

Lessees.....

Apiarists.....

Shire FCO.....

Govt Agencies.....

Notification Register:

RFS (Rural Fire Service)

Name	Position	Phone Number	Notified
	FCO		

NEIGHBOURS: (Refer to compartment planning folder for details prior to burning)

Owner	Postal Address	Lot / Plan	Phone	Notification Letters sent	Reply Received

APIARISTS: (Refer to compartment planning folder for details prior to burning)

Name	Site Number/s	Phone Number	Notified

DAILY CREW SMEACS BRIEFING SHEET

(tick daily when briefed)

SITUATION

DAY 1 2 3 4 5 6 7

- Burn area to be treated (location, boundaries, control line types and exclusive areas) £ £ £ £ £ £ £
- Burn area characteristics (e.g. terrain, forest cover, sensitive areas, etc) £ £ £ £ £ £ £
- Burn area access by road class (checked beforehand, dead ends, watering points etc.) £ £ £ £ £ £ £
- Fuel Loadings and fire behaviour prescriptions for the HRB area £ £ £ £ £ £ £
- Staging areas £ £ £ £ £ £ £
- Expected weather £ £ £ £ £ £ £

MISSION

- Overall aim of the hazard reduction burn £ £ £ £ £ £ £
- Site specific aims for sections of the HRB (eg, protection of patches of advanced regrowth, rainforest pockets, buildings, bridges, etc.) £ £ £ £ £ £ £
- Secondary aim/s should the HRB escape £ £ £ £ £ £ £

EXECUTION

- Plant and manpower resources (FCNSW, RFS, OEH, others) £ £ £ £ £ £ £
- Division of burn area into 'Sections' £ £ £ £ £ £ £
- Starting points, starting times, finish times (start 'down wind' if possible) £ £ £ £ £ £ £
- Safe 'approved' lighting patterns and directions £ £ £ £ £ £ £
- Work down-slope, keeping below active fire (except where good fuel breaks occur) £ £ £ £ £ £ £
- Location and activity of other burning crews £ £ £ £ £ £ £
- Personal and crew safety - buddy system when lighting up £ £ £ £ £ £ £
- Progress reports at pre-designated times £ £ £ £ £ £ £
- Maintain awareness of other burning crews (do not light up below other burning crews) £ £ £ £ £ £ £
- Expected fire behaviour, trouble points and contingency plans £ £ £ £ £ £ £
- Actions to be taken in the event of an escape e.g. to pause the light-up £ £ £ £ £ £ £
- End of burn debrief e.g. reporting areas requiring 'follow-up' patrols after burn £ £ £ £ £ £ £

ADMINISTRATION

- Reporting field fire weather to the office at regular times £ £ £ £ £ £ £
- Receiving forecast weather reports from office £ £ £ £ £ £ £
- Logistical support (fuel, food, water, heavy plant, back-up crews etc.) £ £ £ £ £ £ £

CONTROL, COMMAND, COMMUNICATIONS

- Chain of command (burn supervisor and sector bosses) £ £ £ £ £ £ £
- Communications systems for fire-ground and command (UHF & VHF radios, mobile phones) £ £ £ £ £ £ £

SAFETY

- Medical Emergency Evacuation Plan & Site Safety Plan £ £ £ £ £ £ £
- Areas of likely tree or limb falling hazards (methods to identify/mark hazards) £ £ £ £ £ £ £
- Look up and look around procedure (for self and workmates) £ £ £ £ £ £ £
- Location first aid kits and first aiders £ £ £ £ £ £ £
- Pre-burn safety actions including 'Smoke Hazard' sign locations, traffic control plan etc £ £ £ £ £ £ £
- Location of safety zones, and escape routes £ £ £ £ £ £ £
- Safe parking of SF vehicles within the burn area and vehicle speeds during the burn £ £ £ £ £ £ £
- Crew vehicles to have headlights and flashing beacons on where practicable £ £ £ £ £ £ £
- Schedule adequate rest breaks and set appropriate work pace £ £ £ £ £ £ £
- Ensure crews have access to supplies of drinking water £ £ £ £ £ £ £
- Visitors to the site are inducted into the SSP £ £ £ £ £ £ £

Day 1 - Burn Supervisor.....	Date.....	Day 2 - Burn Supervisor.....	Date.....
Day 3 - Burn Supervisor.....	Date.....	Day 4 - Burn Supervisor.....	Date.....
Day 5 - Burn Supervisor.....	Date.....	Day 6 - Burn Supervisor.....	Date.....
Day 7 - Burn Supervisor.....	Date.....	Day 8 - Burn Supervisor.....	Date.....
Day 1 - Burn Supervisor.....	Date.....	Day 2 - Burn Supervisor.....	Date.....
Day 3 - Burn Supervisor.....	Date.....	Day 4 - Burn Supervisor.....	Date.....
Day 5 - Burn Supervisor.....	Date.....	Day 6 - Burn Supervisor.....	Date.....
Day 7 - Burn Supervisor.....	Date.....	Day 8 - Burn Supervisor.....	Date.....

EMPLOYEE IDENTIFICATION

EMPLOYEE	NAME	PROOF OF ACCREDITATION (E.g. FCNSW RECORDS)	DATE	SUPERVISOR OR RELEVANT AGENCY SIGNATURE
Incident Controller				
Burn Supervisor				
Crew Leader				
Crew Leader				
Crew Member				
Crew Member				
Crew Member				
Crew Member				
Crew Member				
Crew Member				
Crew Member				
Crew Member				
Crew Member				

PERSONNEL AND EQUIPMENT REQUIREMENTS

Resource	State Forests	NPWS	Brigades	Contract Coordinator Signature
Incident Controller				
Crew Leaders				
Crew Members				
Tankers				
Slip – on Units	1+			
Dozer	n/a			
Helicopter	n/a			
Radios – handheld UHF	1 per person			
Weather monitoring equip.	1 per crew			

BURNING OPERATIONS RECORD

Forecast Weather and Indices (Obtain from Office)

See attached daily weather forecasts and relevant indices obtained from the Bureau of Meteorology.

Near Ground Fuel Moisture Content Readings

Control Line/Feature	Date	Location (Include GPS reading)	Fuel Moisture Content (%)

Burn Site Weather Readings

Take daily on site readings (hourly if possible) and note un-forecast weather changes.

Date	Time	Temp (°C)	RH (%)	Wind Direction	Wind Sp. (km/h)	FDI	FMC %	COMMENTS

FIRE BEHAVIOUR

		<i>PREDICTED</i>			<i>ACTUAL</i>		
Date	Time (hrs)	Flame Height (m)	ROS (m/hr)	Assessment Method	Flame Height (average)	ROS (m/hr)	Comments

Ignition details – DATE (s).....**Type:** Aerial / Ground **Method:** Contour / Ridge / Road edge / Top disposal **Pattern:** Line / Spots**Incendiary Capsules used:** _____ (aerial ignition only)**Ignition details – DATE (s).....****Type:** Aerial / Ground **Method:** Contour / Ridge / Road edge / Top disposal **Pattern:** Line / Spots**Incendiary Capsules used:** _____ (aerial ignition only)**Ignition details – DATE (s).....****Type:** Aerial / Ground **Method:** Contour / Ridge / Road edge / Top disposal **Pattern:** Line / Spots**Incendiary Capsules used:** _____ (aerial ignition only)**Ignition details – DATE/s****Type:** Aerial / Ground **Method:** Contour / Ridge / Road edge / Top disposal **Pattern:** Line / Spots**Incendiary Capsules used:** _____ (aerial ignition only)

POST BURN ASSESSMENT

Estimated burn coverage (% of net area):.....%

Estimated burn coverage:.....ha

Fine fuel reduced to an average of :.....t/ha

Estimated area of crown scorch :..... %

OPERATIONAL PERFORMANCE REVIEW

Burn complete? Yes/No

Follow up action required ? Yes/No

Burn contained within planned boundaries? Yes/No

Burn coverage objective met? Yes/No

Fine fuel reduction objective met? Yes/No

Environmental prescriptions met? Yes/No

Threatened Species License conditions met? Yes/No

Fisheries License conditions met? NA fisheries licence not triggered for this operation

Remedial Action required (if any):

.....

.....

.....

Remedial works certified complete.

Work Supervisor..... Date:.....

Comments:

.....

.....

.....

.....

.....

.....

Attach additional pages as required

Mapping Symbols Available in MapDesk										Version 3.9 - July 2012									
Incident Location FireIncidentConfirmed FireIncidentUnconfirmed VehicleIncidentConfirmed VehicleIncidentUnconfirmed FloodIncidentConfirmed FloodIncidentUnconfirmed OtherIncidentConfirmed OtherIncidentUnconfirmed		Other Incident OtherIncidentPoint OtherIncidentLine OtherIncidentArea FloodedPropertyConfirmed FloodedPropertyUnconfirmed BoatRescueConfirmed BoatRescueUnconfirmed FloodedAreaConfirmed FloodedAreaPredicted		Hazard Reduction BurnInProgressSign HRIgnitionDirection HRActualPoint HRProposalPoint HRActualLine HRProposalLine HRActualArea HRProposalArea		Operational Features AccessPointConfirmed AccessPointProposed AirBaseConfirmed AirBaseProposed AmbulanceLocationConfirmed AmbulanceLocationProposed AssemblyAreaConfirmed AssemblyAreaProposed BaseCampConfirmed BaseCampProposed ControlCentreConfirmed ControlCentreUnconfirmed ControlPointConfirmed ControlPointUnconfirmed CustomPoint DivisionalBoundary DivisionalCommand EscapeRouteConfirmed EscapeRouteProposed EvacuationCentreConfirmed EvacuationCentreProposed FireAppliance HelibaseConfirmed HelibaseProposed HelipadConfirmed HelipadProposed		Operational Features HydrantPoint InformationPoint LivestockReliefConfirmed LivestockReliefUnconfirmed Medical MobileWeatherStation Plant PoliceMotorVehicle PortableCommunications PropertyDamageConfirmed PropertyDamageUnconfirmed RAFTCrews RefugeAreaConfirmed RefugeAreaProposed RoadClosureConfirmed RoadClosureProposed SES Motor Vehicle SectorBoundary SectorCommand SmokeHazardSign SmokerOnGround SmokerStanding StagingAreaConfirmed StagingAreaProposed		Operational Features TreeDownConfirmed TreeDownUnconfirmed WaterPoint WaterPointHelicopter WaterPointVehicle AerialIgnitionComplete AerialIgnitionPlanned ArrowThin ArrowThick ControlLineCompleted ControlLineProposed MachineCutTrack Track EmergencyAlert DivisionName SectorName Annotation SafetyNote		Assets Asset AssetHazmat AssetDefendable AssetNotDefendable AssetPotentiallyDefendable EndangeredFauna EndangeredFlora HistoricSite IndigenousSite ThreatenedAsset		Fire Incident FireDirection FireOriginUnconfirmed Hotspot SpotFireConfirmed SpotFireUnconfirmed WindDirection BackburnLineBurning BackburnLineCompleted BackburnLineProposed FireEdgeContained FireEdgeGoing FireEdgeInactive FireEdgePredicted BurntArea PreviousBurntArea ProposedBurnArea		Flight Plan FlightPlanWaypoint FlightPlanRoute		Fire Investigation AdvancingFire BackingFire DistanceLine Evidence FenceLine FireOriginConfirmed Interest LateralFire Reference Tree Photograph FireInvestigationSmallLabel FireInvestigationMediumLabel FireInvestigationLargeLabel	