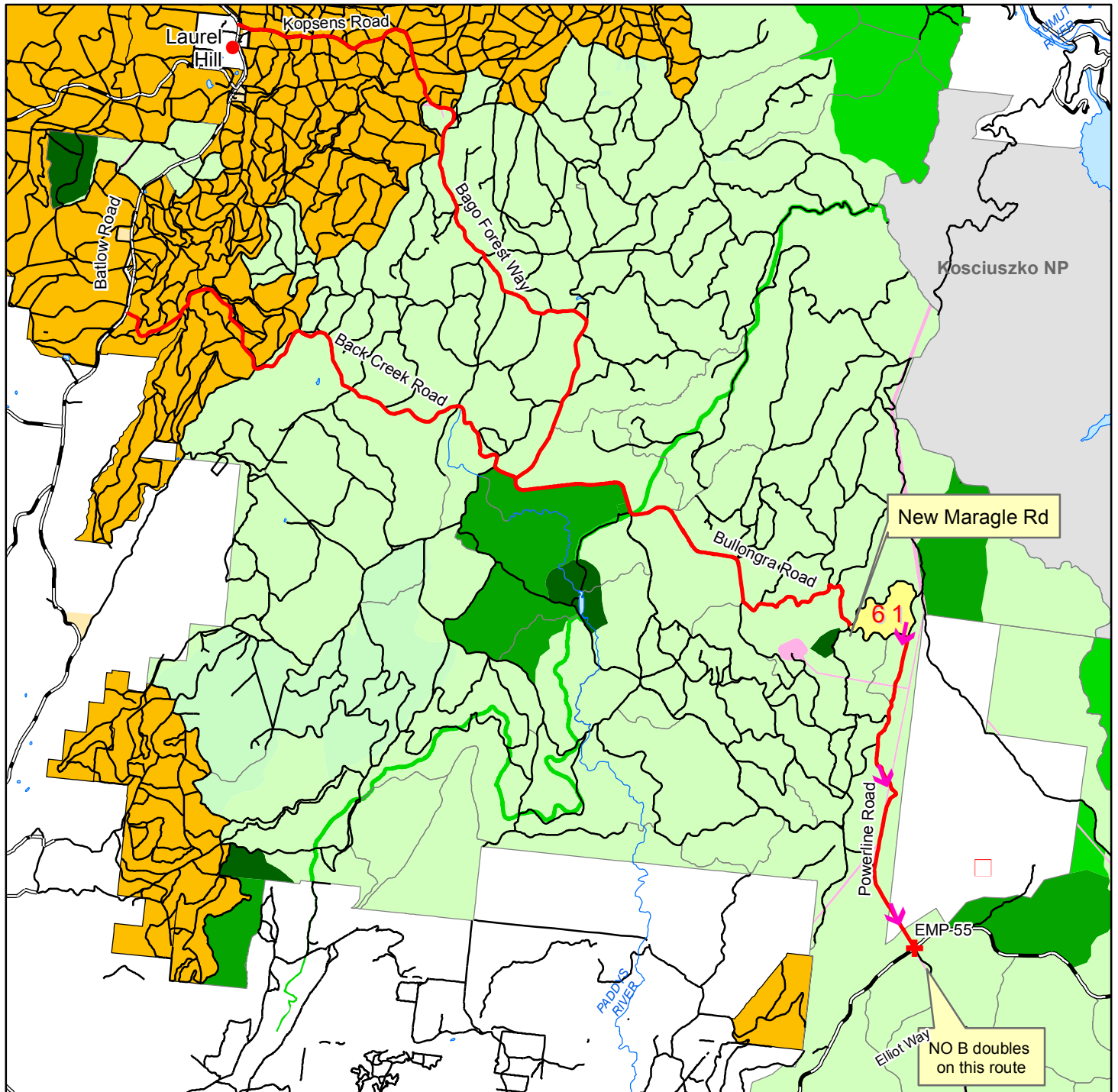





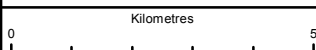
1:125,000

GDA\_1994\_MGA\_Zone\_55

Date Printed: 24/01/2018



- |  |  |   |
|--|--|---|
|  Evacuation Route         |  Major Forest Road              |  Special Prescription (Zone 3B) |
|  Emergency Meeting Points |  Compartment of Interest        |  General Management (Zone 4)    |
|  Helicopter Landing Area  |  WaterBodies                    |  Softwood Plantations (Zone 6)  |
|  Towns                    |  Planted Forests                |  Non Forestry Use (Zone 7)      |
|  Main Rivers              |  Special Protection (Zone 1)    |  National Park Estate           |
|  Haulage Route            |  Special Management (Zone 2)    |  Vacant Crown Land              |
|  Sealed Roads             |  Harvesting Exclusion (Zone 3A) |   |





**FORESTRY CORPORATION OF NSW, HARDWOOD FORESTS DIVISION  
HARVEST PLAN OPERATIONAL MAP**

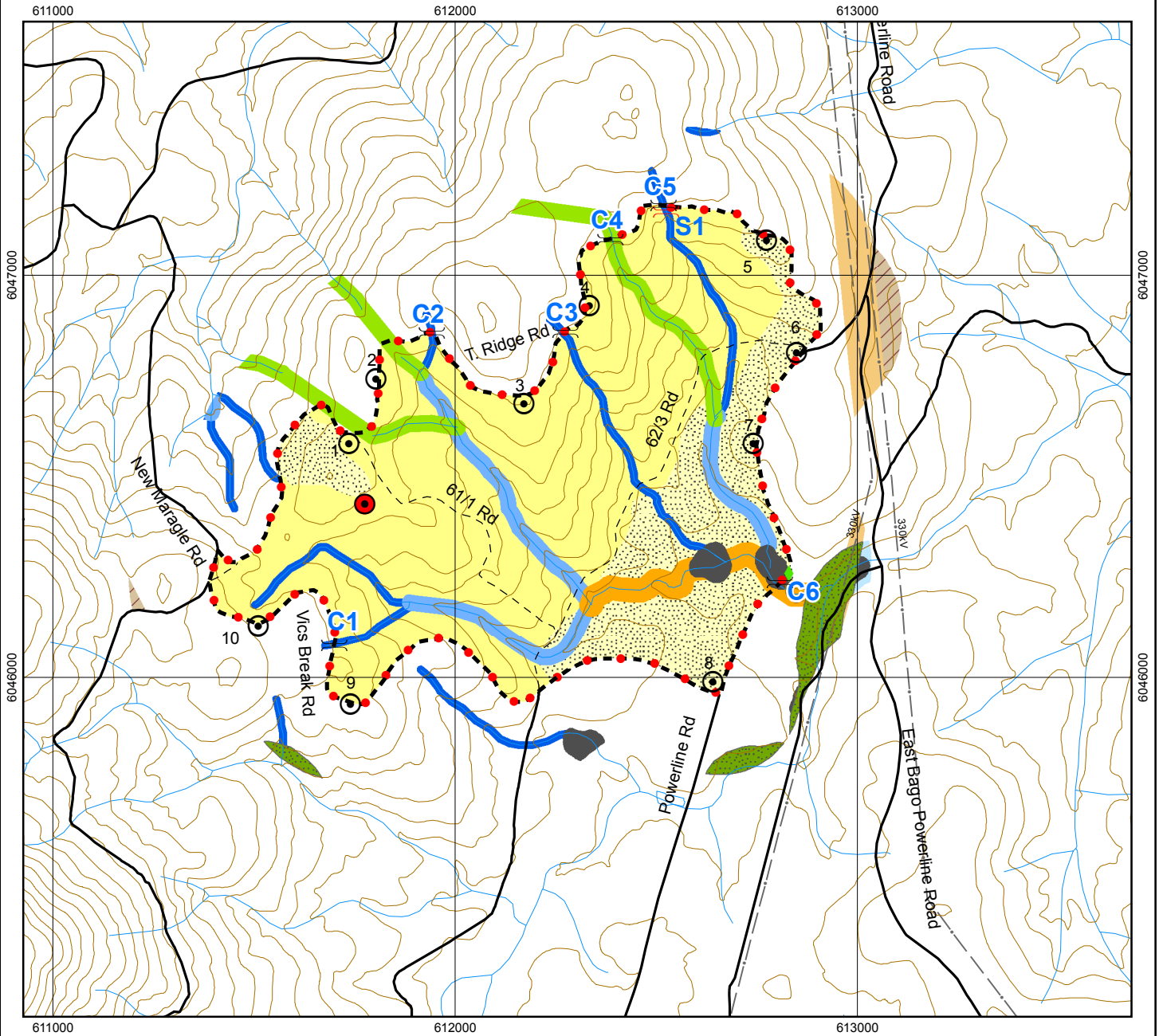
BAGO Forest  
NO. 560  
Cpt No:61  
Management Area:BAGO-MARAGLE  
Mapsheet:COURABYRA(8526-4S);YARRANGOBILLY(8526-1S)

Plan Name:HP\_TU\_B61\_17

VERSION:1

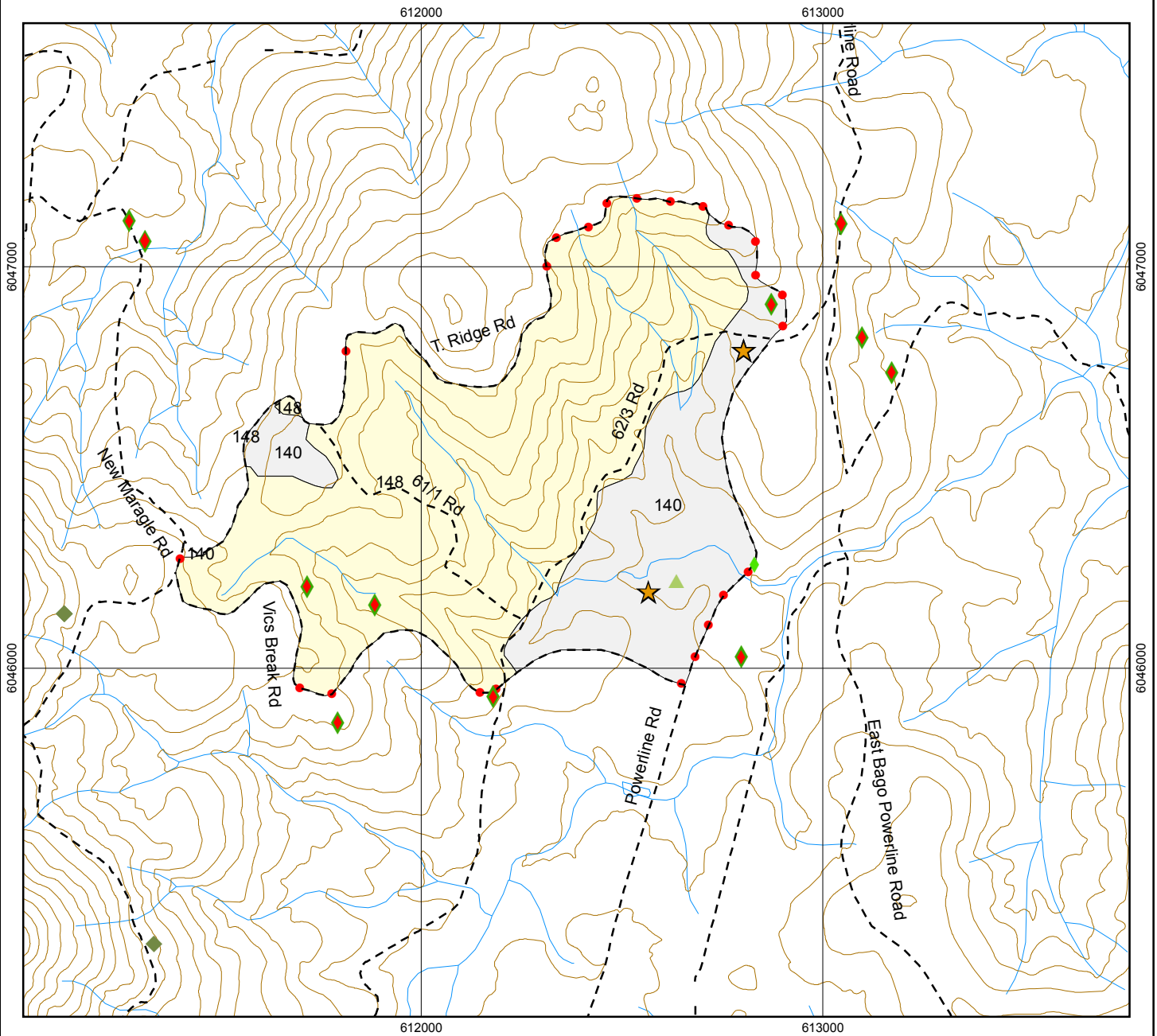
GN MN  
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Contour Interval 10m  
GDA 1994 MGA Zone 55












Date Printed: 22/01/2018

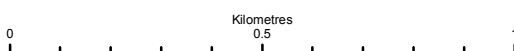


- |                                   |   |   |
|-----------------------------------|---|---|
| Yellow-bellied Glider (Feed Tree) | Compartment Boundary                        | Ridge and Headwater Habitat EZ          |
| PGPs (Permanent Growth Plots)     | Electricity Transmission Line               | Stream PZ 1st Order (10m)               |
| Temporary Dry Weather Dump        | LiDAR Corrected Drainage                    | Stream PZ 2nd Order (20m)               |
| New Crossing                      | Owl Landscape EZ                            | Stream PZ 3rd Order (30m)               |
| Existing Crossing                 | Bago-Maragle YBG EZ                         | Stream PZ 4th Order (50m)               |
| EPL Standard Roads                | FMZ4 RU1 STS Heavy (YBG Habitat = moderate) | Non-forestry Use (FMZ 7)                |
| Other Roads (Major)               | TEC and 20m buffer (Montane Peatland)       | FMZ4 RU2 STS Light (YBG Habitat = high) |
| Other Roads (Minor)               | FMZ2 EZ                                     |   |





- |   |                                   |   |   |
|---|-----------------------------------|---|---|
|  | Olive Whistler                    |  | LiDAR Corrected Drainage                          |
|  | Yellow-bellied Glider (Feed Tree) | <b>Forest Type (RN17)</b>   |   |
|  | Yellow-bellied Glider (Heard)     |  | Type 140 Snow Gum - Mountain / Manna Gum (31ha)   |
|  | Yellow-bellied Glider             |  | Type 148 Alpine Ash - Mountain / Manna Gum (78ha) |
|  | Gang-gang Cockatoo                |   |   |
|  | Eastern False Pipistrelle         |   |   |
|  | Roads                             |   |   |
|  | Compartment Boundary              |   |   |



# Harvest and Haul Plan



State Forest	Bago	Compartments	61
Management Area	Bago-Maragle	IFOA Region	Tumut
Harvest Plan No.	56854	Supply Zone	N/A
Legal Conditions	<p>Native Forest Harvesting in accordance with IFOA conditions.</p> <p>Specified Forestry Activities do not have EPL coverage.</p> <p>To implement this plan you must hold a current Contractors Licence.</p> <p>Standard Harvest Plan Conditions and Operating Procedures apply.</p> <p>Survey expiry date for this plan is 24/11/27.</p>		
Certification	<p>Timber products removed from the plan area are within the Defined Forest Area covered by Australian Forestry Standard AS4708:2013 Certificate 604224</p>		
Prepared by	Planner		Date: 24/01/2018
	Kate Halton		
Approved by	Operations Planning Mgr		Date: 01/02/2018
	Shane Clohesy		
Abbreviations	<p>PA = Production Assistant, PtS= Protection Supervisor, PC = Production Coordinator, RC = Roading Coordinator, Crew = Harvest Contractor/Forest Operators, IFOA = Integrated Forestry Operations Approval, TSL = Threatened Species Licence, EPL = Environment Protection Licence, FL = Fisheries Licence, CH = Cultural Heritage, SOP = Standard Operating Procedure.</p>		

## 1. Harvest Area Details

	Cpt 61
Event ID	<b>126323</b>
Gross Area (ha)	109
Harvest Area (ha)	91
Estimated Yield (t)	10,800
Yield/ha (t/ha)	118
Slope (% 0-20 degrees)	99.5
Slope (% 20-25 degrees)	0.5
Slope (% 25-30 degrees)	0

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Contractor must ensure timber removed is allocated to the correct compartment when entered into Electronic Delivery Docket.

## 2. Management Conditions on Boundaries

Boundary	Conditions
FMZ	FMZ 4 - General Management occurs within the compartment and is shown on the HPOM.
Research	A Permanent Growth Plot (PAB117) is located south of dump 1 (see HPOM). The plot and a two tree length wide buffer is to be excluded from harvesting.  Any other inventory plots located during the harvesting operation which are not shown on the HPOM or described above are to be treated the same as the surrounding area.

## 3. Expected Yields

Product Estimates	Volume (m3)
HQ Large Sawlog (Quota)	3,150
HQ Small Sawlog	1,500
Poles, Piles and Girders	0
LQ Sawlog (Salvage)	1,300
Firewood/Misc (1m3 = 1.17t)	0
Total	5,950

Species	Species Mix (Sawlog)
ASH	95%
DAL/VIM/PEP	5%

## 4. Haulage

Haul Route	<ol style="list-style-type: none"> <li>South on Powerline Road turning right onto Elliot Way. Note B-Doubles are not permitted on this route.</li> <li>West on New Maragle Road, Bullongra Road, and Back Creek Road turning left or Right onto Batlow Road.</li> <li>West on New Maragle Road, Bullongra Road, Bago Forest Way and Kospens Road turning left or Right onto Batlow Road.</li> </ol>
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## 5. Community

Issue	Detail	Conditions
Notifications Required	Nil	All relevant notifications have been conducted. A notification list for FCNSW staff will be provided to the PC.
Forest Permits	4 apiary ranges are occupied.	No bees were present at the time of planning.

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## 6. Harvesting Conditions

Silviculture Type	Harvesting Objectives and Condition for each stand condition		
STS Heavy  (Resource Unit 1)	<p>The harvest area is predominately mature Alpine Ash, Peppermint, Mountain Gum and Manna Gum in predominately mixed-aged stands. The objective is to harvest all commercially available trees to create canopy openings and ensure mechanical disturbance creates a suitable seed bed for regeneration of the stands.</p> <p>Crew to retain well-formed seed trees of preferred species at ~40 m spacing</p> <p>PC to instruct crew to retain patches of quality advanced regeneration where they occur.</p> <p>Crew to remove all merchantable stems not marked for retention and ensure mechanical disturbance creates a suitable seed bed for regeneration.</p> <p>The crew is responsible for selecting retained seed trees and retaining patches of advanced regeneration.</p>		
STS Light  (Resource Unit 2)	<p>The harvest area is predominately mature Mountain Gum and Manna Gum in predominately mixed-aged stands. The objective is to harvest all commercially available trees to create canopy openings and ensure mechanical disturbance creates a suitable seed bed for regeneration of the stands.</p> <p>PC to instruct crew to retain patches of quality advanced regeneration where they occur.</p> <p>Crew to remove all merchantable stems not marked for retention and ensure mechanical disturbance creates a suitable seed bed for regeneration.</p> <p>The crew is responsible for selecting retained seed trees and retaining patches of advanced regeneration.</p>		
Monitoring	<p>The PC must conduct Basal Area monitoring in areas treated with STS Heavy.</p> <p>Any changes to treatment and offset areas need to be endorsed by the Operations Planning Manager.</p>		
<b>IFOA Limits</b>	<b>STS Heavy</b>	<b>STS Light</b>	<b>Total</b>
STS Tract	67ha	24ha	91ha
Pre-harvest BA	23m <sup>2</sup>	20m <sup>2</sup>	2,021m <sup>2</sup>
Post harvest BA	13m <sup>2</sup>	16m <sup>2</sup>	1,313m <sup>2</sup>
Planned Removal	40%	20%	35%

## 7. Tree Retention - refer to TSL booklet for full conditions

Prescription	Condition/Responsibility
<b>Mark-Up</b> – the PA is responsible for marking up the forest ahead of harvesting operations consistent Forest Mark Up and Tree Retention SOP	
Compartment Mark-Up Survey (5.1, 5.2)	Compartment mark-up surveys must be conducted at least 100m in advance of operations. The survey must search for threatened and protected species features listed in conditions 5.1 and 5.2 of the TSL.

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Hollow-bearing and Recruitment tree retention (H and R)	<p><b>Regrowth Zone</b> – TSL 5.6 conditions apply.</p> <p>PA must select and mark 5 H trees/ha where available and one R for each H retained.</p> <p>Additional 3 H trees/ha in moderate YBG habitat and 5 H trees/ha in high YBG habitat must also be retained.</p> <p>Additional H trees for Greater Glider condition does not apply.</p>						
Significant Food Resources (5.3 g)	<p>PC must mark for retention- 4 Eucalypt feed trees/2 ha where they occur. All glider sap feed trees, stands of forest oak and forest oak feed trees must be marked for retention.</p> <p>The following are known to occur in compartment 61:</p> <table border="1"> <thead> <tr> <th>Species</th> <th>Coordinate</th> <th>Comments</th> </tr> </thead> <tbody> <tr> <td>YBG Feed Tree</td> <td>612831E/6046258N</td> <td>marked with orange tape (this record is within mapped TEC exclusion).</td> </tr> </tbody> </table> <p>Alpine Ash, Mountain Gum and Manna Gum are suitable E tree species present in these compartments.</p>	Species	Coordinate	Comments	YBG Feed Tree	612831E/6046258N	marked with orange tape (this record is within mapped TEC exclusion).
Species	Coordinate	Comments					
YBG Feed Tree	612831E/6046258N	marked with orange tape (this record is within mapped TEC exclusion).					
<b>Harvesting - crew and PA responsibilities</b>							
Protection of Retained Trees (5.3h)	<p>Trees marked or selected for retention must not be felled.</p> <p>The crew must minimise damage to H, R and E trees by using directional felling.</p> <p>Harvesting debris should not accumulate within 5 m of retained trees. Where debris does accumulate the crew must remove or flatten to &lt; 1m high.</p> <p>The PC must be notified of any badly damaged retained trees and they must assess and record if a replacement retained tree is required.</p>						
Stag Retention (Dead standing trees 5.3f)	<p>The crew should retain stags where safe to do so.</p> <p>The crew must record the date, DBH, risk and location of unsafe stags removed</p>						
Significant food resources	<p>The crew should avoid damaging flowering or fruiting banksias or grass trees.</p>						

## 8. Site-Specific Flora and Fauna

Condition	Boundary Type	Prescription
Riparian Habitat Protection (5.4)  (Lidar Corrected)	Pink Tape	<p>Implement filter strip (hard) and protection zone (soft) around drainage features as shown on the HPOM. Refer to SOP1.</p> <p>PA must mark the location of UMDL with pink (10m) and 1<sup>st</sup> order protection zone boundary with pink tape.</p> <p>The crew will locate and protect all 2<sup>nd</sup> order and above streams with GPS.</p>

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Threatened Ecological Community (EEC)	Pink and Yellow Tape	TEC (Montane Peatland and 20m buffer) occurs in the eastern end of compartment 61 and is shown on HPOM. The PA must mark as an exclusion the TEC boundary in the field as shown on the HPOM. The crew must protect all areas of marked TEC.
Wetlands (5.6)	Pink Tape	Wetlands are not mapped in the compartment, however unmapped wetland may occur. The PA must search for wetland during mark up and mark exclusion zones as required. The crew must protect all areas of wetland exclusion.
Ridge & Headwater Habitat (RHH) (5.5)	Pink Tape (if marked)	RHH is mapped in the compartment. The crew will locate and protect Ridge and Headwater Habitat with GPS. The crew must protect all areas of RHH.
Feed trees for Yellow Bellied Glider, Squirrel Glider	Pink Tape and paint	PC must ensure mapped feed trees are marked prior to harvesting. Crew must protect all marked feed trees.
Fish	N/A	Compartment contains Class 2 Aquatic Habitat. All streams, drainage lines, wetlands and other water bodies within the compartment are Class 2 Aquatic Habitat. Only crossings shown on the HPOM can be used.

### 9. Soil & Water – Refer to EPL Booklet for full conditions

Issue	Assessment	Conditions
EPL Scheduled Activity	No	
Unmapped drainage Line harvesting	Not Permitted	Apply UMDL BMP's. The PA must mark UMDL's with pink tape (10m).
Inherent hazard level	1	Nil
Dispersible Soils	No	Nil
Mass Movement / Instability	No	Nil
Seasonality Conditions	No	Nil
Historical or existing erosion	No	Nil
Ground cover	>70%	Nil
Seasonal Burning conditions	NA	Burning not proposed for this operation.

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Log Dumps	SOP 5	PA is responsible for authorising moving the location of a log dump.
Roading management during harvesting	SOP 6	Refer to SOP 6. PA is responsible for monitoring road and crossing drainage during haulage.
Wet Weather and Rutting	SOP 6	Crew is responsible for implementing automatic closures and following notified closures. PA is responsible for ensuring crew notified when notified closure is lifted.
Snigging	SOP 8	Crew is responsible for progressive drainage of snig tracks
Snig Track Crossings	SOP 9	PA is responsible to ensure snig track crossings are approved prior to use and rehabilitated upon completion.

## 10. Crossing Approvals

All crossing approvals are shown on the operational map – any other feature crossings must be assessed, recorded below and approved by the Planning Supervisor before use.

Crossing	EPA Approval	Conditions
S1, Mapped first order drainage line (occurs as a drainage depression in the field).	Sch. 6 Approved	Construct natural causeway crossing (no sidecut) as per EPL.

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**11. Operational Plan Briefing:** A briefing of this operational plan was conducted by

Person	Role	Nature of Briefing	Date

**12. Acknowledgement of Briefing:** I acknowledge that I have received a copy of the plan documents and that I have been briefed on the conditions of the Plan. I understand the operational control requirements as outlined in the plan and take responsibility for the implementation of plan conditions relevant to my responsibilities

Name	Role	Signature	Date

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**13. Standard Operating Procedures:** The following SOP's apply to this plan. FCNSW staff and the crew must hold a copy on site whilst operating and comply with the conditions set out in each SOP.

Procedure Number	Title
1	Drainage Feature Protection
2	Exclusion Zone Boundary Management
3	Forest Mark-Up
4	Operating in Inherent Hazard Level 3 Areas
5	Log Dump Operation and Use
6	Road and Crossing Management and Wet Weather Controls
7	Safety Requirements
8	Snigging and Snig Tract Crossings
9	Tree felling and servicing of logs and products

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**Operational Diary:**

Date	Issue	Action Required	Action Completed	Initials
Record: Daily activities (eg tree marking, dump 2); Condition 5.2 of TSL items - EEC locations, rocky outcrops, koala scats, feed tree identification etc), discussions with stakeholders/ neighbours/ site visitors; areas of impenetrable understorey; unviable areas not marked, non-conformances; harvesting issues identified, twice weekly road and crossing drainage checks				

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**14. Roding Plan:** Maintenance works not completed by RC must be recorded and passed onto the PA for completion and documentation. The start and finish dates of all maintenance and construction must be recorded on the individual 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.

Summary of roding requirements		
Feature	Details	Works Required
Existing roads to be used.	5,520m/4	Yes
New roads to be constructed	0	NA
Existing crossings used	6	NA
New crossings to be constructed	0	Yes
Length of road >10°	0m	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

Checklist of works required on roads & crossings				
Road/Crossing Name	Works Required	Date Started	Date Finished	Initials
Powerline Road (960m).	<p>Clear overhanging limbs and road edge (as required).</p> <p>Open existing mitres and spoons.</p> <p>Install additional mitres, spoons and RU's to EPL specification (spacing and drain type to be determined by the PC).</p> <p><b>PC Comments:</b></p>			
T Ridge Road (2700m).	<p>Grade Pavement.</p> <p>Clear overhanging limbs and road edge (as required).</p> <p>Remove Rollovers.</p> <p>Open existing mitres and spoons.</p> <p>Install additional mitres, spoons and RU's to EPL specification (spacing and drain type to be determined by the PC).</p> <p><b>PC Comments:</b></p>			
New Maragle Road (60m).	<p>Grade Pavement.</p> <p>Clear overhanging limbs and road edge (as required).</p> <p>Open existing mitres and spoons.</p> <p>Install additional mitres, spoons and RU's to EPL specification (spacing and drain type to be determined by the PC).</p> <p><b>PC Comments:</b></p>			

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Vic's Break Road (1800m).	<p>Grade Pavement Clear overhanging limbs and road edge (as required). Remove Rollovers. Open existing mitres and spoons. Install additional mitres, spoons and RU's to EPL specification (spacing and drain type to be determined by the PC). <b>PC Comments:</b></p>			
C1, C3, C5	<p>These crossings do not meet the EPL definition of a crossing as there is no drainage feature at these locations. The only conditions which apply are the TSL Stream Exclusion Zone conditions. <b>PC Comments:</b></p>			
C2	<p>Drainage Depression Causeway crossing. Grade pavement and carry out roadside clearing. <b>PC Comments:</b></p>			
C4	<p>Drainage Depression Causeway crossing. Grade pavement and carry out roadside clearing. <b>PC Comments:</b></p>			
C6	<p>450mm pipe. Clean pipe. Remove branch/debris from outlet. Open mitres (x4) which are within 20 of crossing. <b>PC Comments:</b></p>			

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