

Harvest and Haul Plan

Tenure	Bryant Profit a Prendre	Lot	101 & 104 DP 751077
Management Area	Casino	IFOA Region	Upper North East
Harvest Plan No.	59838	Price Zone	Casino
Legal Conditions	Native Forest Harvesting under the UNE IFOA; expires 16/11/2020 . Ecology Survey expiry date for this plan is 19/09/2028 Profit a Prendre for Lots 101 & 104 expire 23/03/2020 & 16/08/2022 respectively No Public Access - Lots 101 & 104 are Private Property		
Certification	Timber products removed from the plan area are outside the Defined Forest Area covered by Australian Forestry Standard and ISO14001 Certificate 13761		
Prepared by	Senior Planner Flavio Bugno	SIGNATURE ON FILE	Date: 17/12/2018
Reviewed by	Senior Planner Andrew Kemsley	SIGNATURE ON FILE	Date: 27/11/2018
Approved by	Planning Supervisor Matt Kinny	SIGNATURE ON FILE	Date: 19/12/2018
Abbreviations	FT = Forest Technician, HC = Harvesting Coordinator, PtS= Protection Supervisor, HS = Harvesting Supervisor, 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, HPOM = Harvest Plan Operational Map, HCVOG = High Conservation Value Old Growth		

1. Harvest Area Details (all Slope info is LiDAR derived)

	Lot 101	Lot 104
PlanCpt ID	129315	129316
Gross Area (ha)	297	180
Harvest Area	182	152
Estimated Yield	3417	2323
Yield/ha	18.8	15.3
Slope (% 0-15 degrees)	46	46
Slope (% 15-30 degrees)	54	54
Slope (% 0-20 degrees)	61	74
Slope (% 20-25 degrees)	15	8
Slope (% 25-30 degrees)	34	18

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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
Cultural Heritage	Surveys have been conducted during October 2018. If any potential heritage sites are identified an interim 100m exclusion buffer must be applied and Planning Supervisor notified as soon as possible.
Neighbours	All planned harvest area is surrounded by private property. The boundaries with adjacent private property are delineated by fence line along the eastern boundary with Lots 102 & 103, partly along the northern boundary with Lot 69. The remaining unfenced boundary sections are marked by cliff lines. Where private property boundaries are unfenced, they must be conservatively marked by the Forest Technician using GPS.
Crown Land	There are 19m wide crown road reserve strips (shown in dark yellow on Operational Map). The crown reserve boundary is marked by fence line along the outer boundary with adjacent lots. Harvesting is permitted within the crown reserve strip. See attached Crown Lands approval conditions regarding notifying Crown Lands and adjoining landholders.

3. Expected Yields

Product Estimates	Volume (m3)
HQ Large Sawlog (Quota)	1913
HQ Small Sawlog	756
Poles, Piles and Girders	185
LQ Sawlog (Salvage)	2886
Total	5739

Species	Species Mix (Sawlog)
SPG	40
TWD	10
SBG	10
IBK, WMY, GYG	40

4. Haulage Route and Contractor Travel Route

Haul Route	Internal roads to Mount Williams Rd – then out via Duck Creek Road to Clarence Way then onto various sawmill sites. BEWARE – This haulage route is frequently used by the community accessing their properties. Please ensure that gates are left in the same condition as encountered.
School Bus Routes	School bus route along Duck Creek Road, refer to table 5 below.
Neighbors	Harvest and haulage contractors must remain aware that Haulage Access Road is used to access nearby private property and drive to the conditions. Care taken when traversing paddocks containing stock.
Traffic Control Plan	An appropriate traffic management plan must be implemented for harvesting adjacent to the Haulage Access Road. Neighbour's must be notified at least 1 day prior to operations.

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Speed Limit – Mount Williams Road	A 40km/hr speed limit applies to Mount Williams Rd. The HC must erect speed limit signage.
Permit To Enter required	Yes. A permit to enter has been obtained for road works within Lots 21, 69 & 103. Please contact owner and adjacent landholders prior to operations to ensure that their access is not restricted. After haulage has completed the owners must be consulted to determine if any remedial works are required.

5. Community

Issue	Detail	Conditions
School Bus	Local residents use.	School bus runs along Duck Creek Road with pickup/drop off times of around 7:30am and 4pm. Contractors and hauliers should note these periods and take care to avoid hauling on this road during these peak times. Ensure proper controls are in place in Contractor Safety Plans.
Notifications Required	Nil	All relevant notifications have been conducted. A notification list for FCNSW staff is available from the planner.

6. Infrastructure

Infrastructure	Conditions
All Mapped Fire Trails	Mapped roads (including 104/2 Road and track labelled snig track on map) must be reinstated to similar or better condition than prior to harvesting/snigging and comply with the EPL. Ensure that drainage structures do not impede future road use by the landholder.
Fence lines	Boundary between with adjacent private property and crown road is partly fenced. Contractor to use directional felling away from fences. Any damage done to fence lines is to be repaired immediately by the Contractor. Please ensure that gates are left in the same condition as encountered.

7. Harvesting Conditions

Silviculture Type	Harvesting Objectives and Condition for each stand condition
STS Light to Medium	In the mixed-aged mixed dry hardwood stand the objective is to harvest the merchantable component of the mature aged crop. Crew is to select trees for removal.
Monitoring	Due to low basal area removals and retained areas no basal area monitoring is required. Any changes to treatment and offset areas need to be endorsed by the Planning Supervisor.

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IFOA Limits	STS Medium
STS Tract	334ha
Pre-harvest BA	20
Post harvest BA	16
Planned Removal	20%

Note: AVG post-harvest BA in regen STS tract likely to be higher due to difficult to access areas.

8. Tree Retention - refer to TSL booklet for full conditions

Prescription	Condition/Responsibility
Mark-Up – the FT is responsible for marking up the forest ahead of harvesting operations consistent with SOP 2 Exclusion Zone Boundary Mark Up - and SOP 3 - Forest Mark Up	
Compartment Mark-Up Survey (5.1, 5.2, 5.13)	Compartment mark-up surveys must be conducted at least 300m 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. <i><u>No Koala star search triggers were identified during pre-harvest surveys.</u></i>
Hollow-bearing and Recruitment tree retention (H and R)	<u>Regrowth Zone</u> - 5.6 d), e) and f) conditions apply.
Significant Food Resources (5.6 g)	FT must mark for retention - 10 Eucalypt feed trees/2 ha where they occur (Swift Parrot & Regent Honeyeater prescription), glider sap feed trees, stands of forest oak and forest oak feed trees. White Mahogany, Bloodwood and Ironbark are suitable E tree species present in these compartments. <u>Glossy Black Cockatoo feed trees</u> – 5.6 g) (iii) FT must mark for retention.
Harvesting - Crew and HC responsibilities	
Protection of Retained Trees (5.6h)	Trees marked or selected for retention must not be felled. The crew must minimise damage to H, R and E trees by using directional felling. Harvesting debris should not accumulate within 5 m of retained trees. Where debris does accumulate the crew must remove or flatten to < 1m high. The HC must be notified of any badly damaged retained trees and they must assess and record if a replacement retained tree is required.

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Stag Retention (Dead standing trees 5.6f)	The crew should retain stags where safe to do so. The crew must record the date, DBH, risk and location of unsafe stags removed
Significant food resources	The crew should avoid damaging flowering or fruiting banksias or grass trees.
Impenetrable Understory	Areas identified as Impenetrable Understory by the FT must be managed as per the requirements of SOP3.

9. Site-Specific Flora and Fauna (see SOP 1, 2 and 3)

Present in compartment

Condition	Boundary Type	Prescription
Riparian Habitat Protection (5.7) (The HPOM indicates LIC drainage order)	2 bars	Implement filter strip (hard) and protection zone (soft) around drainage features as shown on the HPOM. Refer to SOP1. FT must mark all unmapped and mapped drainage lines as <u>LIDAR mapping is not available</u> .
Ground Habitat (5.17)	N/A	Commercial firewood collection in these compartments is <u>not</u> permitted.
HCVOG (5.3)	Limited	Mapped Exclusion zone to be located by GPS in harvester.
Threatened Ecological Community	Solid	Mapped exclusion - (Lowland Rainforest) present in compartments. Layer must be used as exclusion boundary (5m buffer for GPS error already incorporated into exclusion). FT to mark exclusion boundary in the field using GPS.
Rainforest (5.4)	Accidental	Contained within Lowland Rainforest EEC. Unmapped Rainforest may occur in the compartments. Any Rainforest located (using Rainforest Protocol) during mark-up must be marked by the FT.
Dams and Waterbodies (5.12)	Solid	10m – total exclusion on all dams or waterbodies to be marked by FT. 5 dams within the lots and 1 near crossing E.
Varied Sittella (5.13)	Machinery	FT to mark 20m exclusion from nest site if detected and no commercial fire wood collection & protect ground habitat.
Subterranean Bat Roost - occupied cave mine or tunnel (5.14)	Machinery	100m exclusion around each entrance (one cave located in northern end of Lot 104). Mapped Exclusion zone to be located by GPS in harvester.
Rocky Outcrop/Cliffs (5.11)	Limited	Potential areas identified in HPOM. These, and others located during mark-up, to be assessed and marked by FT. 20m buffer on outcrops >0.1 ha or cliffs >3m high
Squirrel Glider (6.16)	Limited	Mapped Exclusion zone to be located by GPS in harvester.

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Swift Parrot and Regent Honeyeater 7b)viii	Modified	FT must mark for retention - 10 Eucalypt feed trees/2 ha where they occur.
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Not mapped as occurring in compartments, however markup searches should target these potential prescriptions.

Condition	Boundary Type	Prescription
Yellow-bellied Glider (7b)xii)	Limited	Tree retention requirements to be implemented by FT. Mark and retain all observed feed trees & 15 trees within 100m of sap feed trees, mark and retain 15 trees within 100m of record, mark and retain 15 trees within 200m of record.

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

Issue	Assessment	Conditions
EPL Scheduled Activity	No	
EPL Licenced	Yes	Harvesting Supervisor and Roading Supervisor must update IFOA Report for commencement, suspension and completion of operations.
Unmapped drainage Line harvesting	Not Permitted	
Inherent hazard level	2	Refer SOP 1
Fisheries Aquatic Habitat	Class 1 Purple Spotted Gudgeon	<p>Fisheries Licence conditions apply:</p> <ul style="list-style-type: none"> • Condition 7 (General Aquatic Habitat Protection Conditions) of the Fisheries Licence applies. • Condition 7.9 of the Fisheries Licence applies to snig track crossings of mapped and unmapped drainage lines. • Crossings must be approved and marked in the field prior to use. • Crossings may only be used where it is not reasonably practicable to use another route or site. • Conditions 8.3 and 8.4 of the Fisheries Licence apply to crossings. <p>An aquatic habitat assessment of the site of each proposed crossing where in-stream maintenance is</p>

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		required must be completed prior to use. Consultation with the harvest planner is required prior to construction and use of such crossings. Crossings approved for use are shown on the HPOM.
Harvesting Slope Limits	30 degrees	EPL – Sch 4 Condition 3.
Dispersible Soils	No	Nil
Mass Movement / Instability	No	Nil
Acid Sulphate Soils	No	Nil
Seasonality Conditions	No	Nil
Historical or existing erosion	No	Nil
Ground cover	>70%	Nil
Burning conditions	No	Nil
Log Dumps		Refer to SOP 5 HC is responsible for authorising moving the location of a log dump.
Roading management during harvesting		Refer to SOP 6. HC is responsible for monitoring road and crossing drainage during haulage.
Wet Weather and Rutting		Refer to SOP 6. Crew is responsible for implementing automatic closures and following notified closures. HC is responsible for ensuring crew notified when notified closure is lifted.
Snigging		Refer to SOP 8 Crew is responsible for progressive drainage of snig tracks
Snig Track Crossings		Refer to SOP 8 HC is responsible to ensure snig track crossings are approved prior to use and rehabilitated upon completion.

11. Crossing Approvals

No crossing approvals are approved. Any other feature crossings must be assessed, recorded below and approved by the Planning Supervisor before use.

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

Person	Role	Nature of Briefing	Date

13. 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

Induction Questionnaire

1. Where is the Emergency meeting point and Helicopter Landing Area?
2. What is the proposed silviculture?
3. What are the requirements for operations in the crown road reserve?
4. List the exclusion zones present and the level of protection for each?
5. What issues need to be addressed to ensure road access by neighbours?

14. 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.

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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	Snig Tracks and Extraction Tracks
9	Tree Felling and Servicing Logs
10	Fire Precautions and miscellaneous requirements

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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