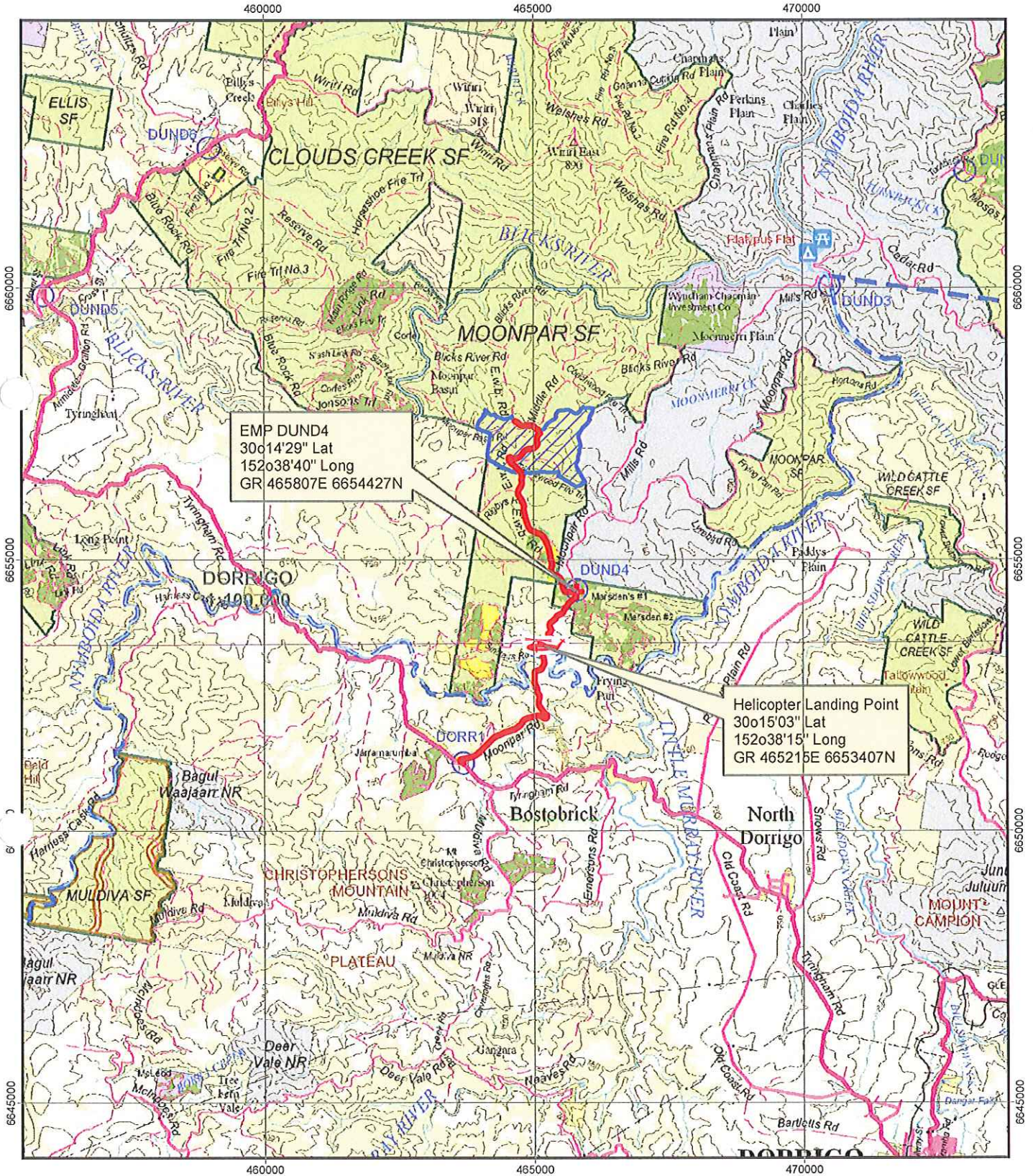




Map Sheets:
 1:25000 - Dudurrabin
 1:100000 - Dorrigo
 Scale: 1:100,000

North East Region - Dorrigo MA
 Locality Map
Compartments 109 & 110
 Moonpar State Forest

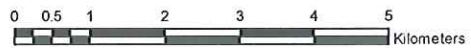


EMP DUND4
 30°14'29" Lat
 152°38'40" Long
 GR 465807E 6654427N

Helicopter Landing Point
 30°15'03" Lat
 152°38'15" Long
 GR 465215E 6653407N

MAP FEATURES

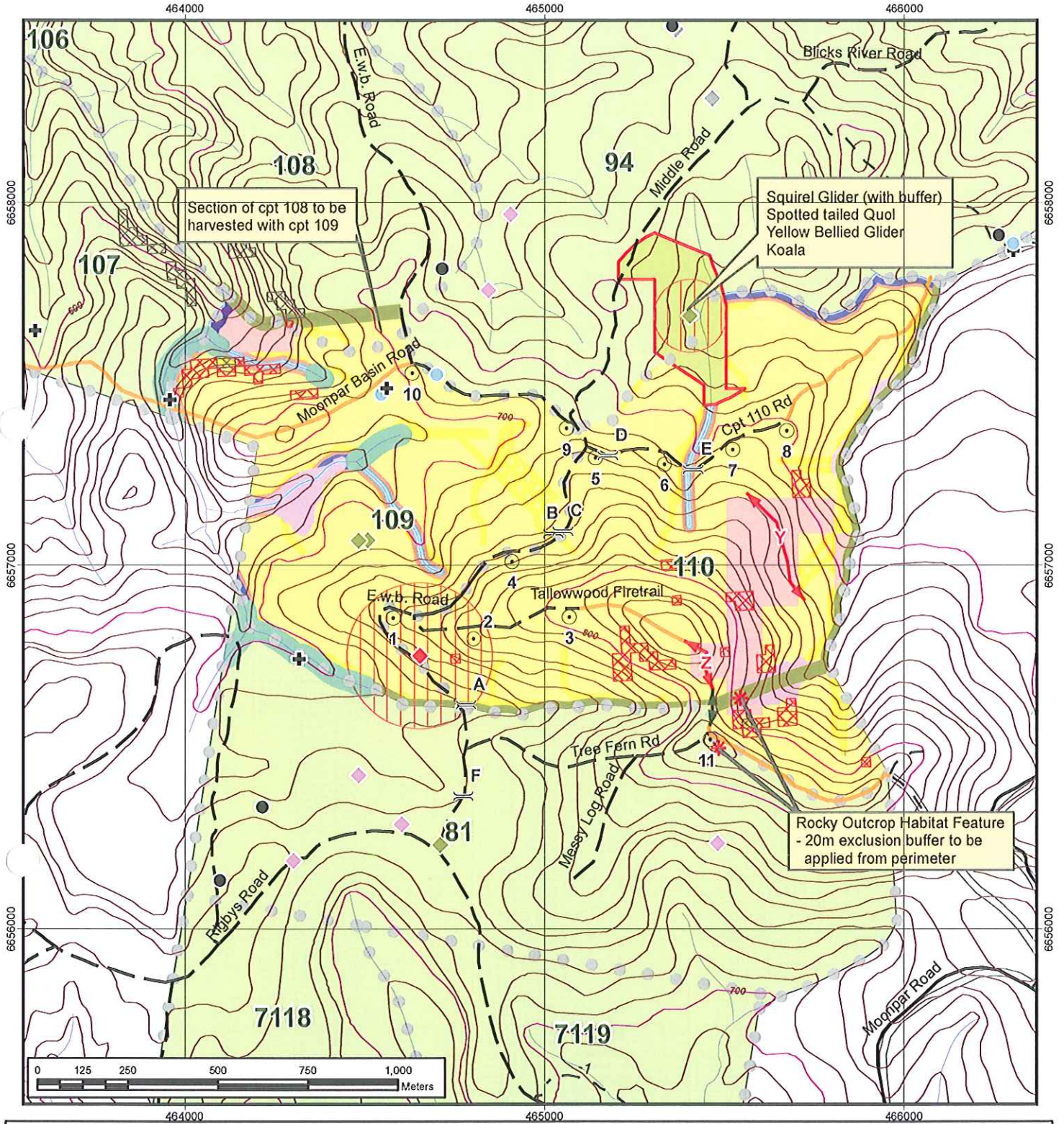
- Subject Area
- Emergency Meeting Point (Safety Point)
- Helicopter Landing Point
- State Forest
- 1:25000 Map Sheet
- 1:100000 Map Sheet
- National Park Estate
- Haulage Route



Prepared by: Matt Howat
 Date: 08/05/12

N
 Map Sheets
 1:25,000 - Dundurrabin
 1:100,000 - Dorrigo
 Scale: 1:15,000 at A4

North East Region - Dorrigo MA
 Compartments 109 & 110
 Harvest Plan Operational Map
 Moonpar State Forest

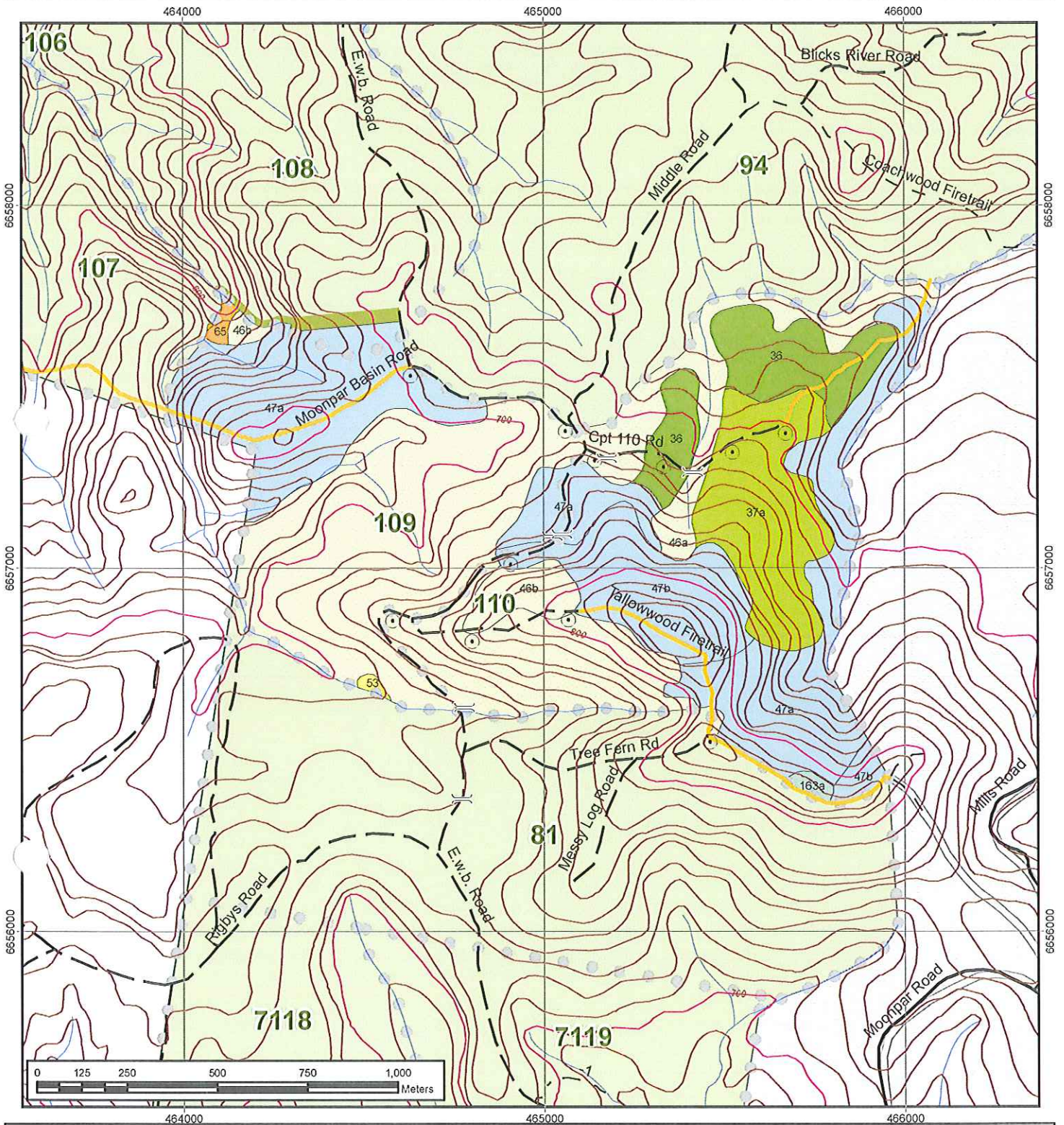


MAP FEATURES	ROADS	FOREST MANAGEMENT PROTECTION	THREATENED SPECIES LOCATIONS
<ul style="list-style-type: none"> State Forest Boundary Compartments Boundary 1 Km Grid 10 / 100 m Contour State Forest National Park Estate Drainage Feature 	<ul style="list-style-type: none"> All Weather, Unsealed Dry Weather, Unsealed 4WD Track Non Haulage Roads 	<ul style="list-style-type: none"> High Conservation Value Old Growth Rainforest - Craftl + RN17 Habitat Feature RIDGE & HEADWATER HABITAT 40m wide exclusion 	<ul style="list-style-type: none"> Spotted-tailed Quoll Yellow-bellied Glider Squirrel Glider Koala Hastings River Mouse Sooty Owl Glossy Black-Cockatoo Stuttering Frog
HARVESTING PROTECTIONS (TSL, EPL & FL) Riparian (IHC 1 & 2)	HARVESTING PRESCRIPTIONS	DUMPS & CROSSINGS	TSL PRESCRIPTIONS / ZONES
<ul style="list-style-type: none"> Filter 5m either side Protection 5m either side Protection 15m either side Protection 25m either side Operational zone 10m either side 	<ul style="list-style-type: none"> General Management (FMZ 4) Areas for Further Assessment Indicative Slopes > 30 degrees Indicative Slopes > 25 degrees - Seasonality restrictions apply 	<ul style="list-style-type: none"> Log Dumps IFOA Crossings Ridge & Headwater Habitat Crossing Drainage Line Crossings 	<ul style="list-style-type: none"> Yellow-bellied Glider modified harvest area Squirrel Glider protection area Stuttering Frog stream buffer (30m each side)

Prepared by: Matt Howat
 Date: 08/05/12

N Map Sheets
 1:25,000 - Dundurrabin
 1:100,000 - Dorrigo
 Scale: 1:15,000 at A4

North East Region - Dorrigo MA
 Compartments 109 & 110
 Forest Types Map
 Moonpar State Forest



MAP FEATURES

- State Forest Boundary
- Compartments Boundary
- 1 Km Grid
- 10 / 100 m Contour
- State Forest
- National Park Estate
- Drainage Feature

RIDGE & HEADWATER HABITAT

- 40m wide exclusion

ROADS

- All Weather, Unsealed
- Dry Weather, Unsealed
- 4WD Track
- Non Haulage Roads

DUMPS & CROSSINGS

- Log Dumps
- Drainage Line Crossings

FOREST TYPES

- Type 36 Moist Blackbutt
- Type 37 Dry Blackbutt
- Type 46 Sydney Blue Gum
- Type 47 Tallowood - Sydney Blue Gum
- Type 53 Brush Box
- Type 65 Forest Red Gum
- Type 122 New England Stringybark
- Type 163 New England Blackbutt

FORESTS NEW SOUTH WALES – NORTH EAST REGION

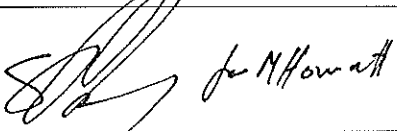
HARVESTING PLAN No. 3914

Moonpar State Forest – Compartments 109 & 110

1. Certification

This plan has been prepared in accordance with the Integrated Forestry Operations Approval (IFOA) issued under the Forestry and National Park Estate Act 1998 and addresses significant aspects and impacts in the planning process. The Standard Harvest Plan Conditions for Native Forest Operations in North East Region (NER) apply to this operation.


Prepared by:

Harvest Planner		Date: 25/5/2012
Matt Howat		

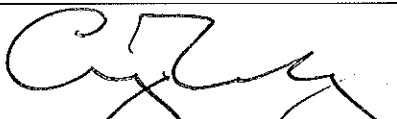
Endorsed by:

Harvest Planning Team Leader		Date: 25/5/2012
Steve Pickering		

Endorsed by:

Planning Manager		Date: 25/5/2012
Dean Kearney		

Approved by:

Regional Manager		Date: 28/5/12
Craig Busby		

Note: Approval includes the Harvest Plan Operational Map (HPOM).

2. Description of Proposal

Selective harvesting of regrowth native forest stands, Single Tree Selection (STS).

Other proposed works:

	<i>Proposed</i>	<i>Details</i>
<i>Roadworks</i>	Yes	Roadworks Plan (attached).
<i>Post-harvest Burning</i>	Yes	Plan to be prepared separately.
<i>Rehabilitation</i>	No	Not applicable.

3. Area Identification and Yield Estimates

<i>Region</i>	North East Region
<i>Management Area</i>	Dorrigo
<i>State Forest</i>	Moonpar
<i>State Forest No.</i>	489
<i>Pricing Area</i>	Dorrigo Central
<i>Other Tenure Details</i>	State Forest only

<i>Compartment Number</i>	109*	110	<i>Total</i>
<i>Gross Area (ha)</i>	71	109	180
<i>Net Harvest Area (ha)</i>	61	90	151
<i>Estimated Yield (m³/ha)</i>	50	50	50
<i>Volume (m³) All Products</i>	3057	4476	7532

*Areas and volume estimates for compartment 109 include area of compartment 108 to be harvested in conjunction (approximately 1.6ha NHA).

<i>Products</i>	<i>Total (m³)</i>
<i>High Quality Large</i>	2586
<i>High Quality Small</i>	1146
<i>Low Quality</i>	3144
<i>Veneer</i>	75
<i>Poles/Piles</i>	264
<i>Pulp</i>	NA
<i>Total</i>	7532

4. Forest Description

4.1 Forest Type

- The majority of the harvest area is dry to moist Sydney Blue Gum forest. This includes areas of Forest Type 47 that includes Tallowwood as a co-dominant
- Areas of dry and moist Blackbutt forest are present within compartment 110.
- Small areas of Brush Box Forest Type 53 are present in gullies and other wetter areas.
- See Attachment 3: Forest Type Map.

4.2 Harvest History

- These compartments have been harvested since the 1920s.
- Last harvest events were in 1988/89 using STS silviculture.

4.3 Stand Description

- Mixed age forest with Blue Gum, Tallowwood and Blackbutt dominants across various parts of the harvest area.
- Mature trees 50-100cm dbhob remaining from previous harvesting operations.

- Pole-sized regrowth 30-60cm dbhob from previous harvesting operations.
- Smaller regrowth 10-30cm dbhob from most recent harvesting operation.

4.4 Site Quality

- Site quality across the operation area is generally good to very good.
- Areas of poorer site quality are present along ridges in compartment 110.

4.5 Stand Health

- Stand health generally good to very good.
- Some defective stems remain standing from previous harvesting operations.

5. Silviculture and Harvesting Prescriptions

Notwithstanding the prescriptions detailed below, all conditions of the IFOA, including General and Species Specific conditions of the Threatened Species Licence (TSL) and the Environment Protection Licence (EPL) are to be applied, where they are described in this plan or in the respective licences.

Objectives

- Maximise the recovery of merchantable timber from the mature age/size cohort within the constraints of the harvest plan.
- Promote growth of retained trees.
- Remove sub-dominant trees.
- Create suitable conditions for a regeneration event.
- The table below gives proposed silvicultural treatments for the forest types within the harvest area:

<i>Stand Description</i>	Mixed age mixed species forest
<i>Proposed Silviculture</i>	Medium STS
<i>Est. % of NHA</i>	100%
<i>Expected BA Removal (%)</i>	40%
<i>Future Ops 15-20 years</i>	STS
<i>Other treatments</i>	NA

Single Tree Selection

- This operation will be managed with the object of harvesting trees that have reached their maximum economic end use, and removing poorer quality and less vigorous trees to allow the remaining high-quality trees to grow on.
- Tree removal and ground disturbance must also maximise regeneration opportunities.
- STS must remove no more than 40% of the basal area across the net harvest area.
- BA removal may exceed 40% in some localised areas, but will be balanced by tree retention across the tract.
- Trees with dbhob <20cm must not be selected for harvesting under STS (1.5.10 IFOA).

Other Conditions

- The SFO must monitor basal area retention under STS.
- The actual harvest areas must be recorded/mapped and retained with this plan.

6. Special Conditions

6.1 Seasonal Harvesting and Burning Restrictions

- Seasonal harvesting and burning restrictions apply to operations conducted under this plan.
- For slopes greater than or equal to 25 degrees, forestry activities are not permitted during the period 1 December to 31 March inclusive. Areas with these slopes are shown on the HPOM

however these locations are indicative only – harvesting supervisors should assess slopes in the field to determine actual areas where restrictions apply.

- Condition 37 of Schedule 4 of the EPL applies seasonal restrictions to post-harvest burning. Burning carried out during the months of December to February inclusive must use a ground burning (top disposal) method only.

6.2 Leases, Permits & Plots

<i>Type</i>	<i>Present</i>	<i>Details</i>	<i>Conditions</i>
Crown Leases	No		
Occupation Permits (Grazing)	No		
Occupation Permits (Apiary)	No		
Occupation Permits (Other)	No		
Permanent Growth Plots (PGP)	No		
Research Plots	No		
Plus Trees	No		
Special Purpose Permits	No		

6.3 Noise

Residential properties are located within 100m of the haulage route along Moonpar Road. If they are likely to be affected by noise (as determined by the SFO), mitigation measures to lessen the impact on those residences will apply. These measures are to be determined on a site specific basis by the SFO and should be discussed with the Harvesting Team Leader (HTL). The HTL must ensure affected residents along Moonpar Road are contacted prior to operations commencing as detailed in the harvesting notification list.

6.4 Dust

Residential properties are located within 100m of the haulage route along Moonpar Road. If they are likely to be affected by dust (as determined by the SFO), mitigation measures to lessen the impact on those residences will apply. These measures are to be determined on a site specific basis by the SFO and should be discussed with the Harvesting Team Leader.

6.5 Critical Boundaries

6.5.1 Private Property

Private property adjoins compartment 109 to the west and south. A fence is present along some of this boundary line.

6.5.2 National Park

Nymboi-Binderay National Park adjoins the eastern boundary of compartment 110. For the majority of its length the harvest boundary is offset from the tenure boundary by Ridge & Headwater Habitat (20m width from the state forest boundary which follows an unnamed 1st order drainage line). Where the harvest boundary is immediately adjacent to the park boundary in the south-east corner of compartment 110 it is critical that this boundary is located correctly if not evident. This section of the boundary runs in a straight line from the road junction on Tallowood Firetrail to the start of the mapped 1st order drainage line.

6.5.3 Boundary Management Conditions

- If there is any doubt about the location of a critical boundary, the Harvesting Team Leader must be consulted about requirements to adequately determine the boundary location.
- Harvesting must not impact on private property or National Park or any fence line.
- Any damage to a functional fence must be immediately repaired by the contractor.

6.5.4 Addition to Harvest Area

A section of compartment 108 (approximately 1.6ha) that joins the northern boundary of compartment 109 is available for harvest in conjunction with this operation. It is isolated from the remainder of compartment by Ridge & Headwater Habitat – see HPOM for location. For the purposes of this plan and operation it will be considered as part of compartment 109.

6.6 IFOA Required Approval of Forestry Activities

- Approvals have been obtained for the following activities. Locations as shown on the HPOM.

<i>Activity</i>	<i>Crossing/Location</i>	<i>Feature Type</i>	<i>Conditions</i>
Snigging along existing track.	IFOA Crossings Y and Z, compartment 110.	HCVOG	Apply all relevant conditions of the EPL and TSCL.

- Mitigative measures to be implemented at crossing locations:
 - Minimise size of snig track.
 - Remove debris outside exclusion zones.
 - Drain to EPL standard on completion of use.
- Any additional crossings of Rainforest, HCVOG and Riparian Protection Zones require prior Regional Manager (or the Office of Environment & Heritage (OEH)) approval before they can be implemented.
- It is the responsibility of the SFO to identify any additional areas that need to be crossed, the proposed location of any such crossings, and to contact the Planning Unit via the Harvesting Team Leader to obtain the necessary approval.

6.7 Unmapped Rainforest

Unmapped rainforest is to be identified and marked for retention in accordance with Forest Practices Circular 2005/02.

6.8 Log Dumps

Log dump 11 is located within adjacent compartment 81. This will service the harvest area bounded by Tallowood Firetrail, State Forest boundary and Ridge & Headwater Habitat. Haulage access to this dump will be along Tree Fern Road. Tree falling in this area is limited to that required for dump construction and safety reasons. There is a rocky outcrop habitat feature to the south of this dump location – apply conditions as per point 6.9 below.

6.9 Habitat Features

- The locations of two rocky outcrops are indicated on the HPOM as habitat features.
- One is contained within existing exclusion zones – Ridge & Headwater Habitat and HCVOG.
- The other is in adjoining compartment 81 but near the site of dump 11 which is located in this compartment but available for use in this operation. Log dump operations in the vicinity of this rocky outcrop will be managed as per the TSL conditions 5.11a-f.

7. Forest Management Zoning Conditions

The following Forest Management Zones and conditions apply:

<i>FMZ</i>	<i>Type</i>	<i>Notes</i>
Zone 3A	Harvesting Protection	HCVOG and Rainforest. These areas must be protected as marked on the map.
Zone 4	General Management	Available for harvesting in accordance with the conditions of this harvest plan.
Zone 8	Further Assessment	These areas are to be rezoned FMZ 4 with management by prescription (Standard Harvest Plan Conditions for Native Forest Operations in North East Region apply). These areas may include

		<ul style="list-style-type: none"> - Unmapped drainage features – identify in the field and apply EPL and TSL conditions based on actual field location. - Modelled drainage features – modeled streams are to be inspected by the SFO. Appropriate prescriptions (Schedule 4 of the EPL) are to be applied if required and noted on the HPOM. - Modelled Inherent Hazard Class (IHC) 4 areas – assess actual slope in the field and exclude areas >30 degrees in accordance with condition 3 of schedule 4 of the EPL.
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8. Cultural Heritage Conditions

8.1 Aboriginal Cultural Heritage

- No special conditions apply – or describe special conditions.

8.2 Non Aboriginal Cultural Heritage

- No special conditions apply.

9. Flora and Fauna Conditions

Refer to Technical Guidance Note 2005-3A March 2005 for conditions (TSL Booklet).

9.1 Mark-up Conditions

The SFO must search for threatened species and mark-up the block as per Conditions 5.1 (General) and 5.2 (Koala) of the TSL. The Tree Marking code is shown in the Standard Harvest Plan Conditions for Native Forest Operations in North East Region.

9.2 Applicable Tree Retention Conditions

<i>Prescription</i>	<i>TSL Conditions</i>
Hollow Bearing and Recruit Trees	Non-Regrowth Zone – 5.6 a & b
Is Greater Glider density >1 per ha	6.9d does not apply.
Stag Retention	5.6e
Significant Food Resources	5.6f
Protection of Retained Trees	5.6g

9.3 Species Known or Likely to Occur

Recent and reliable records exist within, or within close proximity of the compartments for the following threatened species. These species require species-specific or site-specific prescriptions if further records or habitat features are identified during mark-up.

<i>Species Group</i>	<i>Common Name</i>	<i>Scientific Name</i>
Amphibians	Stuttering Frog	<i>Mixophyes balbus</i>
Mammals	Golden-tipped Bat	<i>Kerivoula papuensis</i>
	Koala	<i>Phascolarctos cinereus</i>
	Parma Wallaby	<i>Macropus parma</i>
	Long-nosed Potoroo	<i>Potorous tridactylus</i>
	Spotted-tailed Quoll	<i>Dasyurus maculatus</i>
	Hastings River Mouse	<i>Pseudomys oralis</i>
	Squirrel Glider	<i>Petaurus norfolcensis</i>
Yellow-bellied Glider	<i>Petaurus australis</i>	

Birds	Masked Owl	<i>Tyto novaehollandiae</i>
	Powerful Owl	<i>Ninox strenua</i>
	Sooty Owl	<i>Tyto tenebricosa</i>
	Glossy-black Cockatoo	<i>Calyptorhynchus lathami</i>
Flora	Dorrigo Daisy Bush	<i>Olearia flocktoiae</i>
	none	<i>Tylophora woolsii</i>

9.4 Site-Specific Conditions, Exclusion Zones & Modified Harvest Areas

Table 1: General Prescriptions

TSL Condition	Condition No.	Record Details	Prescription Summary
Koala Mark-up Searches	5.2.2	1 KOAL record within 100m of cpt boundaries.	These compartments contain preferred forest types, marking-up must be conducted at least 300m in advance of harvesting operations. In the event that a koala or scats (as noted in 5.2.2(i)) are found, a koala star search will be conducted to determine koala use area/s.
Tree Retention	6 (f),(g)	Nil Records – continue search.	Retain and protect glossy black cockatoo feed trees. Retain all yellow-bellied glider and squirrel glider sap feed trees.
Rocky Outcrops and Cliffs	5.11	Two rocky outcrops recorded as shown on HPOM.	SFA prohibited from feature, 20m exclusion buffer if > 0.1ha (approx. 30m x 30m).
Burning	5.16	Threatened species have been recorded in these cpts.	The habitat requirement of threatened species must be taken into account when instigating hazard reduction burns to promote and maintain an understorey mosaic, significant areas of dense understorey vegetation and to minimise impact on large fallen logs.
Ground Habitat Protection	5.17 (b)	CWR + small mammals reptiles present.	Commercial firewood collection is not permitted.
	5.17 (d)	Larger CWR + small mammals reptiles present.	Firewood licences state that timber with hollows and/or over 40cm diameter must not be collected or damaged.

Table 2: Species Specific Prescriptions (Record and Survey Based)

TSL Condition	Condition No.	Record Details	Prescription Summary
Stuttering Frog (<i>Mixophyes balbus</i>)	6.3	3 MIX BAL records in and within 200m of cpt boundaries.	Exclusion zone of 30m on both sides of all streams within 200m of record as mapped.
Powerful Owl (<i>Ninox strenua</i>)	6.9	4 POWL records within 2km of cpt boundaries.	Landscape approach as specified in 6.9.2 will be used. Condition 5.13 may be applicable to protect any roosts or nests found.
Masked Owl (<i>Tyto novaehollandiae</i>)		5 MOWL records within 2km of cpt boundaries.	Search gully lines and heads of gullies for roost and nest sites.

Koala (<i>Phascolarctos cinereus</i>)	6.14	1 KOAL record within 100m of cpt boundaries.	Evidence of koalas was found near the compartment, but pre-logging surveys did not detect intermediate or high use areas. Compartment mark-up 5.2.2 must be completed.
Spotted-tailed Quoll (<i>Dasyurus maculatus</i>)	6.15	2 TIQU records in and within 200m of cpt boundaries.	Search for maternal dens, permanent dens and latrine sites. If found, stop all SFA immediately and notify Harvest Planner and/or Ecologist.
Squirrel Glider (<i>Petaurus norfolcensis</i>)	6.16	1 SQGL within 250m of cpt boundaries.	Exclusion zone of 8ha to be retained as mapped – includes area in adjacent compartment 94. Den records must be contained within exclusion zones.
Yellow-bellied Glider (<i>Petaurus australis</i>)	6.17	1 YEBG call detection record in cpt D_109. 1 YEBG observation record within 100m of cpt boundaries.	Exclusion of 50m on dens. Retention of all sap feed trees. Within 100m of dens, sap feed trees and observation records, 15 mature/late mature feed trees must be retained. Within 200m of call detection site, 15 feed trees must be retained. Modified harvest areas include part of adjacent compartments 81 and 94 – see HPOM. Retained trees must be of same species as tree with den, feed marks or observation or should be species that shed their bark in long strips.

Table 3: Other Ecological Considerations

<i>Issue, Feature or Record</i>	<i>Presence</i>	<i>Assessment and Management Recommendations</i>
EEC: White Gum Moist Forest in the NSW North Coast bioregion.	Unlikely to be present - continue search within NLA.	Identify and mark in field to exclude specified forestry activities. Contact FNSW ecology unit for guidance if required.

In addition to Forest Management Zone Exclusions, the following exclusion zones occur within the operation area and are shown on the operational map.

- Riparian Protection (TSL Condition 5.7)
- Ridge and Headwater Habitat (TSL Condition 5.8)

Boundary marking conditions for each exclusion zone are described on the HPOM and in the tree marking code (see Standard Harvest Plan Conditions for Native Forest Harvesting in North East Region).

10. Fisheries Licence Conditions

Refer to Technical Guidance Note 2005-02 March 2005 (Fisheries Licence Booklet).

Class 1 Aquatic Habitat has been identified as occurring within these compartments.

- Condition 7 (General Aquatic Habitat Protection Conditions) of the Fisheries Licence applies.
- The boundary of any exclusion zone or buffer zone is to be marked in the field before a specified activity is commenced where the activity will come within 50m of that boundary.
- 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.
- A pre-logging aquatic habitat assessment of the site of each proposed crossing where in-stream maintenance is required must be completed prior to use. Consultation with the harvest planner is required prior to construction and use of such crossings.

11. Soils and Water Protection Conditions

Refer to Technical Guidance Note 2005 - 1B (Environment Protection Licence Conditions booklet) and Standard Harvest Plan Conditions for Native Forest Harvesting in North East Region

Site-specific EPL conditions:

<i>Elements</i>	<i>Conditions</i>
Unmapped Drainage Lines	Apply EPL and Best Management Practice for UDL.
Drainage Feature Protection	See HPOM for widths.
Inherent Hazard Level	2
Dispersible Soils	No conditions apply.
Mass Movement	No conditions apply.
Log Dumps	Refer to relevant conditions for IHL, Schedule 4 Section F of EPL booklet.
Snig Tracks	Refer to relevant conditions for IHL, Schedule 4 Section H of EPL booklet.
Roads	See Schedule 5 (p. 18-26) of EPL booklet.
Non-Haulage Roads	May be used for extraction, EPL applies. Remove debris and reshape road to pre-harvesting condition on completion of operations.

12. Legal Conditions

This operation must comply with:

- Standard Harvest Plan Conditions for Native Forest Operations in North East Region.
- Licence Conditions issued by Forests NSW under the Forestry Act (1916).
- State Forests of NSW Forest Practices Code - Part 2 Timber Harvesting in Native Forests (February 1999) and Forest Practices Code Part 4 Forest Roads and Fire Trails (February 1999).
- Integrated Forestry Operations Approval issued under part 4 of the Forestry and National Parks Estate Act 1998 including the associated licences:
 - Threatened Species Conservation Licence issued under the Threatened Species Conservation Act (1995).
 - Fisheries Licence issued under section 220ZW of the Fisheries Management Act 1994.
 - This operation is a non-scheduled operation under the Environment Protection Licence issued under section 55 of the Protection of the Environment Operations Act 1997. Roading and harvesting operations are not licenced. All EPL conditions will apply to harvesting and roading operations.

13. Attachments

- Attachment 1: Locality map.
- Attachment 2: Harvest Plan Operational Map.
- Attachment 3: Forest Type Map.
- Attachment 4: Site Safety Plan describes the safety requirements and Medical Emergency Evacuation Plan for this harvesting operation.
- Attachment 5: Roading plan prescribes roading requirements for this harvesting operation (includes road works operational map).

Appendix 1 - Pre-Operational Briefing Record

I acknowledge that I have received a copy of the Harvesting Plan for Compartments 109 & 110 in Moonpar State Forest and that I have been briefed on the conditions of the Plan. I understand the supervision and operational control requirements as outlined in the plan.

<i>Position</i>	<i>Name</i>	<i>Signature</i>	<i>Date</i>

**D_109_110 Moonpar SF
Induction Questionnaire**

1. What is the expected basal area removal across the net harvest area?
2. What seasonality restrictions apply to operations conducted under this plan?
3. Where are the approved IFOA crossings located?
4. Where is dump 11 located?
5. What is the restriction around dump 11?
6. What three species have special prescriptions identified on the harvesting plan map?
7. What are the tree retention requirements in Yellow-bellied Glider modified harvest areas?
8. Where is the nominated emergency meeting point?
9. Where is the nominated helicopter landing place?
10. Who should be contacted before operations commence?

Hint:Noise

Appendix 2 - SFO Notes

<i>State Forest</i>	<i>Moonpar</i>	<i>Compartments</i>	<i>109 & 110</i>
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This diary should record general daily events, SFO movements, and operations visited which are not otherwise recorded in detail elsewhere.

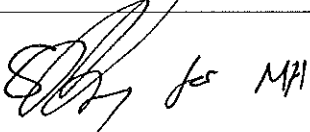
<i>Date</i>	<i>Event</i>	<i>Initial</i>

FORESTS NEW SOUTH WALES – NORTH EAST REGION
ROAD WORKS PLAN

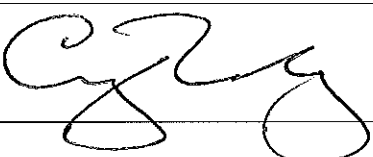
Moonpar State Forest - Compartments 109 & 110

1. Certification

Prepared by:

Harvest Planner		Date: 25/5/2012
Matt Howat		

Approved by:

Regional Manager		Date: 28/5/12
Craig Busby		

2. Objectives

- Road works are required to service native forest harvesting operations within compartments 109 & 110 scheduled for harvest in September 2012. Compartments 94, 95 & 104 which will also be accessed via EWB Road are scheduled for harvesting in November 2012. Adjoining compartments 105, 106 & 108 will also be available for harvesting in the next 1-2 years.
- This plan covers roads access to the compartments and in-compartment roading. The road works operational map shows the location of the proposed works.
- The financial analysis spreadsheet gives full details of costs, benefits, material & plant requirements.
- Attachments:
 - Road Works Operational Plan Map.
 - Financial Analysis Spreadsheet.
 - Road maintenance/upgrade and crossing assessment forms.
 - Site Safety Plan.

3. Specifications and Legal Conditions

This operation must comply with:

- Standard Harvest Plan Conditions for Native Forest Operations in North East Region.
- Licence Conditions issued by Forests NSW under the Forestry Act (1916).
- State Forests of NSW Forest Practices Code - Part 2 Timber Harvesting in Native Forests February 1999 and Forest Practices Code Part 4 Forest Roads and Fire Trails (February 1999).
- Integrated Forestry Operations Approval issued under part 4 of the Forestry and National Parks Estate Act 1998 (IFOA) as amended May 2003 including the associated licences:
 - Threatened Species Conservation Licence (TSCL) issued under the Threatened Species Conservation Act (1995).
 - Licence issued under section 220ZW of the Fisheries Management Act 1994 (FL).

- This operation is a non-scheduled operation under the Environment Protection Licence issued under section 55 of the Protection of the Environment Operations Act 1997. Roding and harvesting operations are not licensed. All EPL conditions will apply to harvesting and roding operations.
- Technical Guidance Notes for Roadworks.

4. Special Conditions

<i>Feature</i>	<i>Conditions</i>
Draining feature crossings D & E	No works to be undertaken on crossings D&E until Fisheries NSW approval has been obtained. Harvest Planning team leader will advise when approval has been obtained.
Cultural Heritage	No Special conditions
Threatened Species	Yellow-bellied Glider modified harvest zone present along EWB Road and Tallowood Fire trail – apply prescriptions as per harvest plan.
Dispersible Soils Hazard	No conditions required.
Mass Movement Hazard	No conditions required.
Seasonality	<ul style="list-style-type: none"> • Seasonal harvesting and burning restrictions apply to operations conducted under this plan. • For slopes greater than or equal to 25 degrees, roding and harvesting operations are prohibited during the period 1 December to 31 March inclusive.
Engineering Design	No conditions required.
Environmental impacts ie Dust, Noise, Water, Visual	Residential properties are located within 100m of the access route along Moonpar Road. If they are likely to be affected by noise or dust from truck or machinery movements along this road, mitigation measures to lessen the impact on those residences will apply. These measures are to be determined on a site specific basis by the road work supervisor.
National Park	No conditions apply.
Private Property	Not applicable.
Permit To Enter required	No.
Council Roads	The haulage route includes Moonpar Road from the junction with EWB Road to Tyringham Road. The section of this road between the bridge across Nymboida River north to the state forest boundary has been identified as requiring some maintenance work to ensure it is suitable for log haulage. The Roding Co-ordinator should inspect and work with the operations team and local council to determine extent of and responsibility for any works required.
Quarries and Gravel Pits	Not applicable.
Underground/Overhead Utilities	Powerlines present along access route on Moonpar Road.
Safety Issues (includes hazards, public use of roads)	See Hazard Assessment in the Site Safety Pack

4.1 EPL Licencing

This operation is not licensed under the EPL.

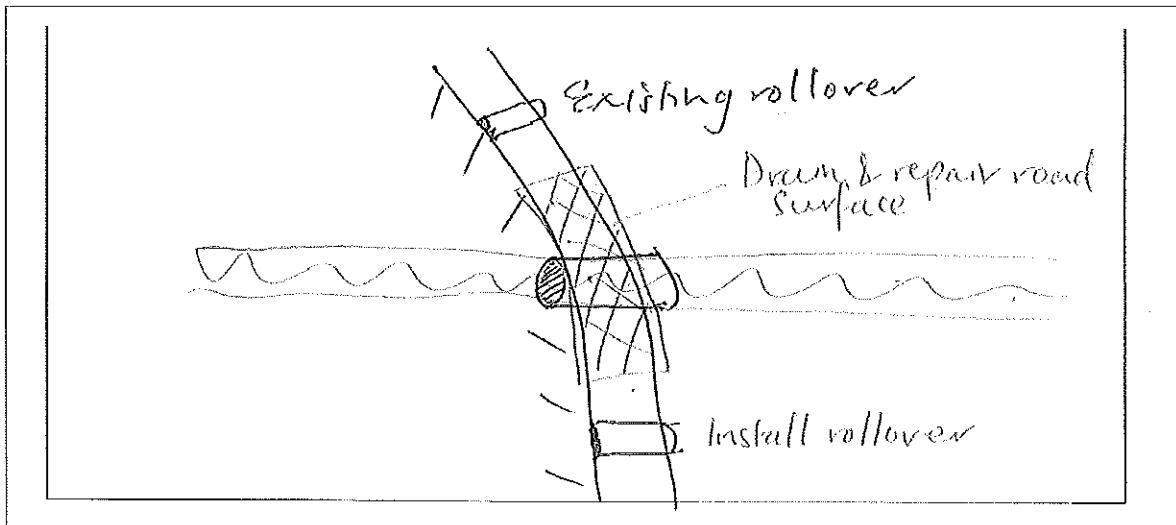
Crossing Works

Crossing Name A Road Name EWB Road Location 464780E 6656616N

Drainage Feature 1st order DL Stream Permanency yes

Existing Crossing	Size	Stability Status	Crossing Required	Size (mm/m)	Future
Culvert	600mm	Stable	Existing	NA	Permanent

Crossing Works		Approaches and Road Drainage	
Pavement/Structure	Gravel surface Drain and restore road surface	Approaches	Nil
Reshape Bed/banks	Nil	Temporary Drainage	Nil
Disposal of Spoil	na	5-30m Upstream Left	Rollover
Inlet	Nil	5-30m Upstream Right	Install rollover
Outlet	Nil	Practices where no 5-30	NA
Stabilisation	Crossing surface to be gravelled	OutletControl	Natural vegetation
ErosionControl	Nil	TableDrain	No



Start Date: Finish Date: Soil Stabilisation Date (must be within 5 days):

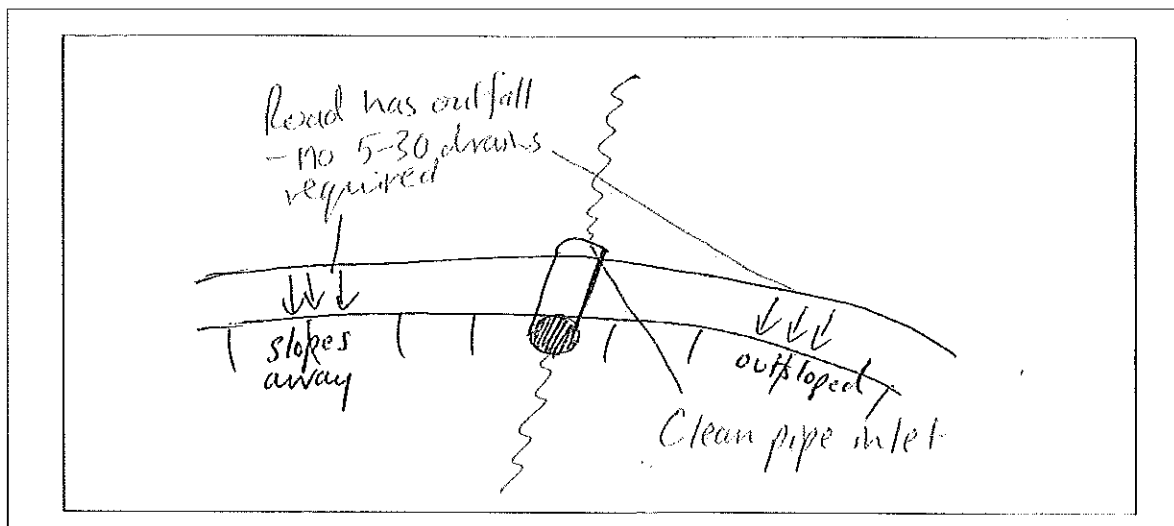
Date	Event	Initial

Crossing Name B Road Name EWB Road Location 465024E 6657088N

Drainage Feature UDL Stream Permanency no

Existing Crossing	Size	Stability Status	Crossing Required	Size (mm/m)	Future
Culvert	450mm	Stable	Existing	na	Permanent

Crossing Works		Approaches and Road Drainage	
Pavement/Structure	Nil -existing natural surface na	Approaches	ok
Reshape Bed/banks	No	Temporary Drainage	nil
Disposal of Spoil	na	5-30m Upstream Left	outslope
Inlet	Clean out	5-30m Upstream Right	outslope
Outlet	Stable	Practices where no 5-30	na
Stabilisation	Nil works - existing natural surface	OutletControl	Natural vegetation
ErosionControl		TableDrain	ok



Start Date: Finish Date: Soil Stabilisation Date (must be within 5 days):

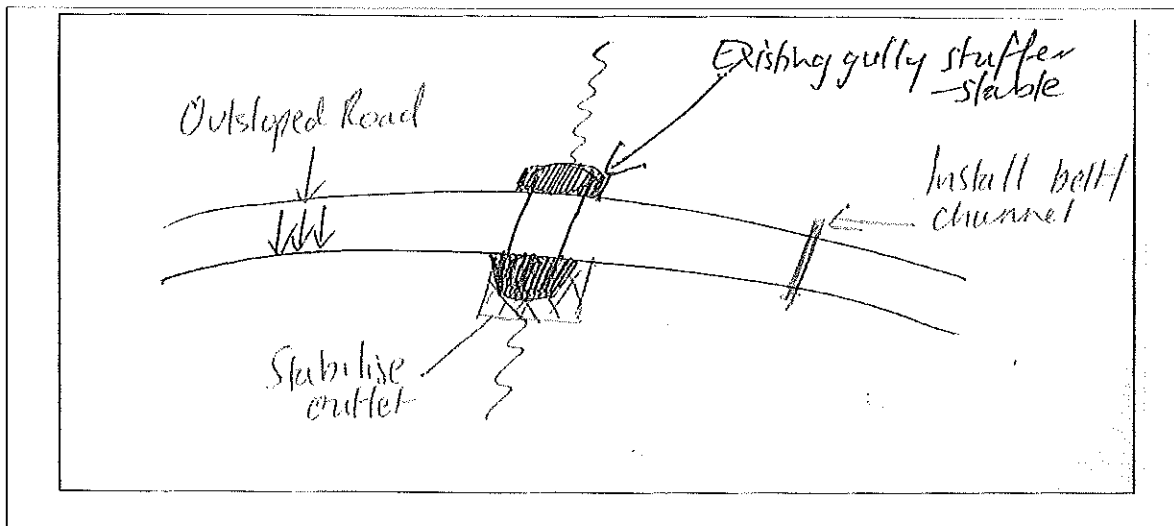
Date	Event	Initial

Crossing Name C Road Name EWB Road Location 465051E 6657095N

Drainage Feature UDL Stream Permanency no

Existing Crossing	Size	Stability Status	Crossing Required	Size (mm/m)	Future
Gully stuffer		Stable	Existing	na	Permanent

Crossing Works		Approaches and Road Drainage	
Pavement/Structure	Nil - existing natural surface Stabilise outlet	Approaches	ok
Reshape Bed/banks	no	Temporary Drainage	nil
Disposal of Spoil	na	5-30m Upstream Left	outslope
Inlet	ok	5-30m Upstream Right	inslope to table drain
Outlet	Minor erosion - stabilist with small roc	Practices where no 5-30	na
Stabilisation	Nil works - existing natural surface	OutletControl	Natural vegetation
ErosionControl	Natural vegetation	TableDrain	ok



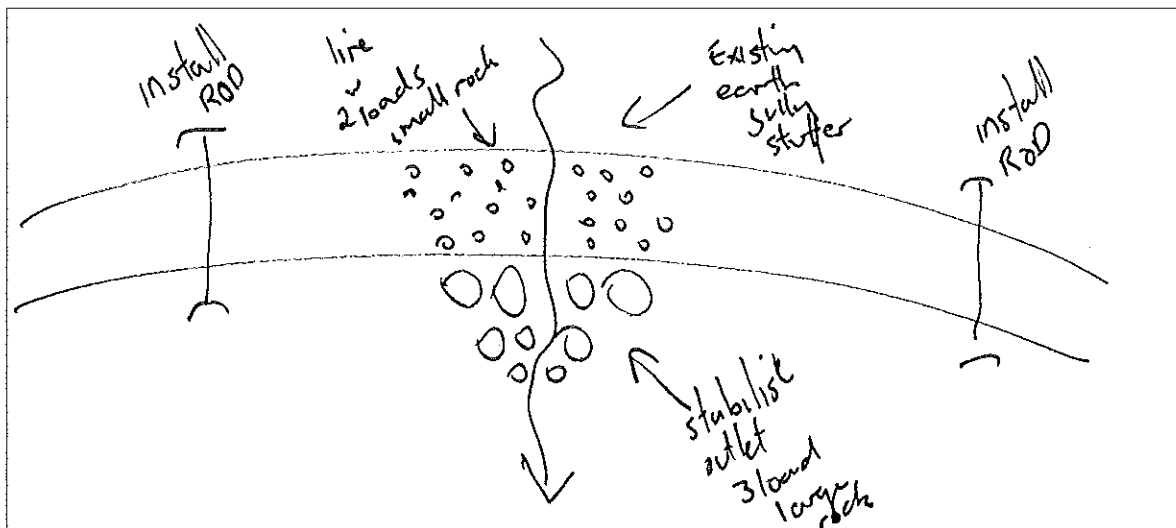
Start Date: Finish Date: Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

Crossing Name D Road Name Cpt 110 Trl Location 465175E 6657303N
 Drainage Feature UDL Stream Permanency No

Existing Crossing	Size	Stability Status	Crossing Required	Size (mm/m)	Future
Gully stuffer	N/A	Stable	Causeway	na	Permanent

Crossing Works		Approaches and Road Drainage	
Pavement/Structure	Rock/Gravel surface	Approaches	Gravel 30m either side
Reshape Bed/banks	No	Temporary Drainage	nil
Disposal of Spoil	Into road surface	5-30m Upstream Left	Install Rollover
Inlet	Stable	5-30m Upstream Right	Install drain
Outlet	Rock line outlet	Practices where no 5-30	na
Stabilisation	Nil works - existing natural vegetation	OutletControl	Natural vegetation
ErosionControl		TableDrain	ok



Start Date: Finish Date: Soil Stabilisation Date (must be within 5 days):

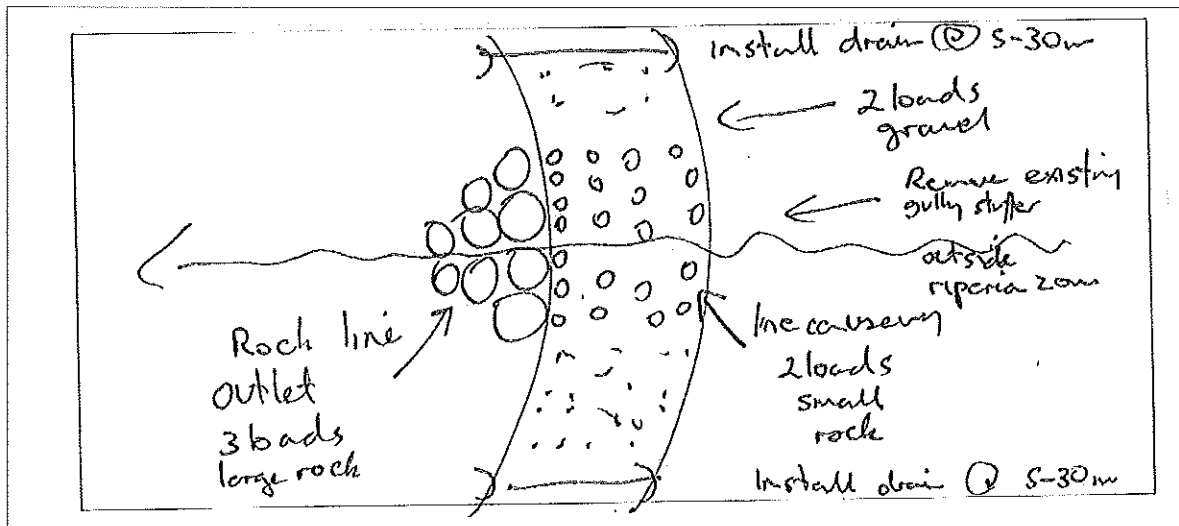
Date	Event	Initial

Crossing Name E Road Name Cpt 110 Trl Location 465412E 6657264N

Drainage Feature 1st order DL Stream Permanency No

Existing Crossing	Size	Stability Status	Crossing Required	Size (mm/m)	Future
Gully stuffer		Unstable	Causeway	n/a	Permanent

Crossing Works		Approaches and Road Drainage	
Pavement/Structure	Gravel/rock surface Remove Gully stuffer outside riparian zone, cut down approaches and rock and gravel crossing	Approaches	Gravel 30m either side
Reshape Bed/banks	no	Temporary Drainage	nil
Disposal of Spoil	Into road surface	5-30m Upstream Left	Install drain
Inlet	ok	5-30m Upstream Right	Install drain
Outlet	Stablise with rock	Practices where no 5-30	na
Stabilisation	Nil works - existing natural vegetation	OutletControl	Natural vegetation
ErosionControl		TableDrain	ok



Start Date: Finish Date: Soil Stabilisation Date (must be within 5 days):

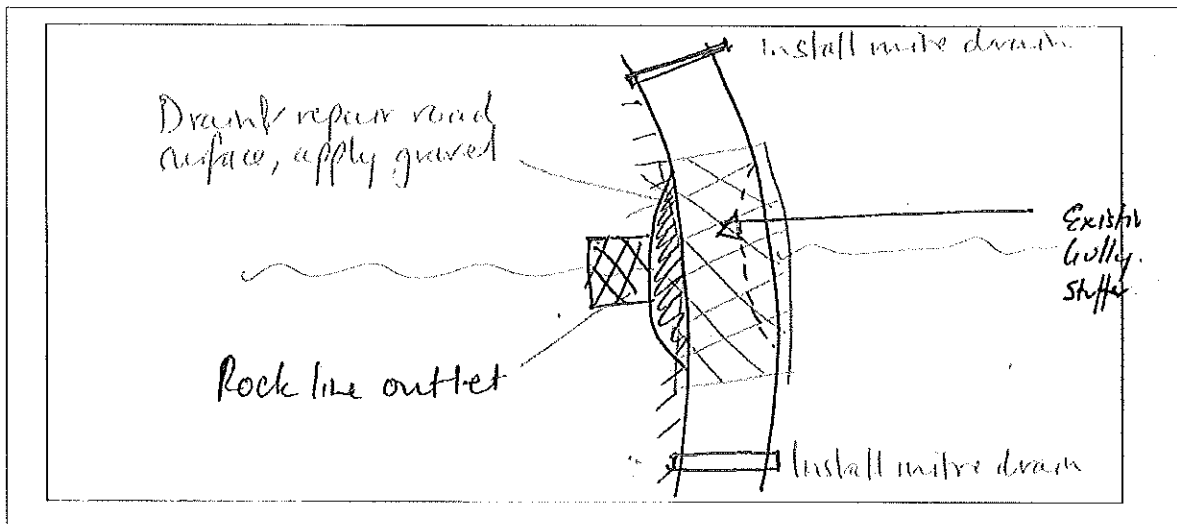
Date	Event	Initial

Crossing Name F Road Name EWB Road Location 464763E 6656364N

Drainage Feature UDL Stream Permanency no

Existing Crossing	Size	Stability Status	Crossing Required	Size (mm/m)	Future
Gully stuffer		Stable	Existing	na	Permanent

Crossing Works		Approaches and Road Drainage	
Pavement/Structure	Gravel surface Drain, reshape & gravel	Approaches	Ok
Reshape Bed/banks	No	Temporary Drainage	Na
Disposal of Spoil	NA	5-30m Upstream Left	Mitre required
Inlet	ok	5-30m Upstream Right	Mitre required
Outlet	Stabilise	Practices where no 5-30	na
Stabilisation	Gravel crossing surface	OutletControl	natural vegetation
ErosionControl	Natural vegetation	TableDrain	no



Start Date: Finish Date: Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

