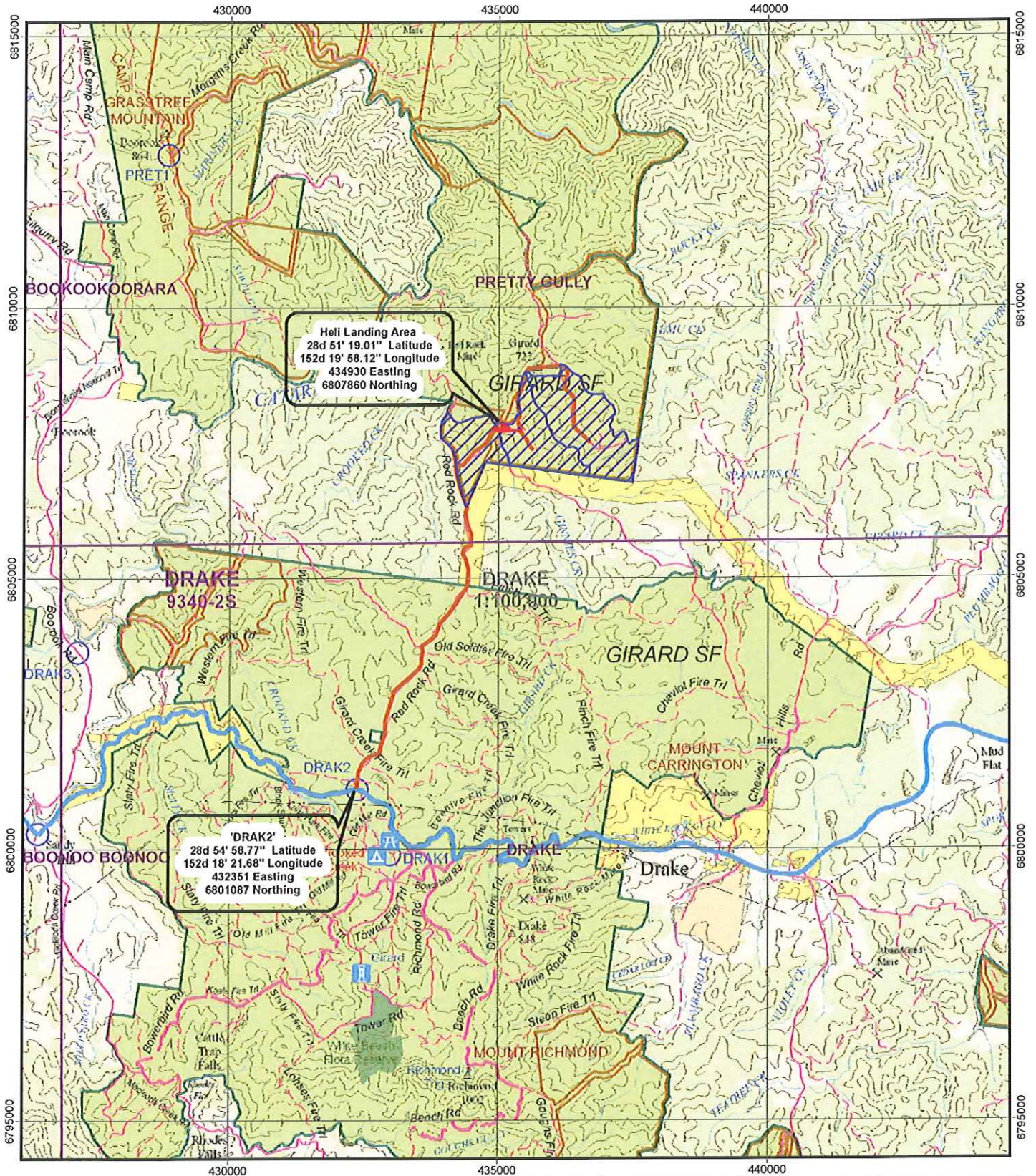




Map Sheets:  
 1:25000 Pretty Gully  
 1:100000 Drake  
 Scale: 1:100,000

North East Region - Tenterfield MA  
 Locality Map  
 Compartments 142-144  
 Girard State Forests



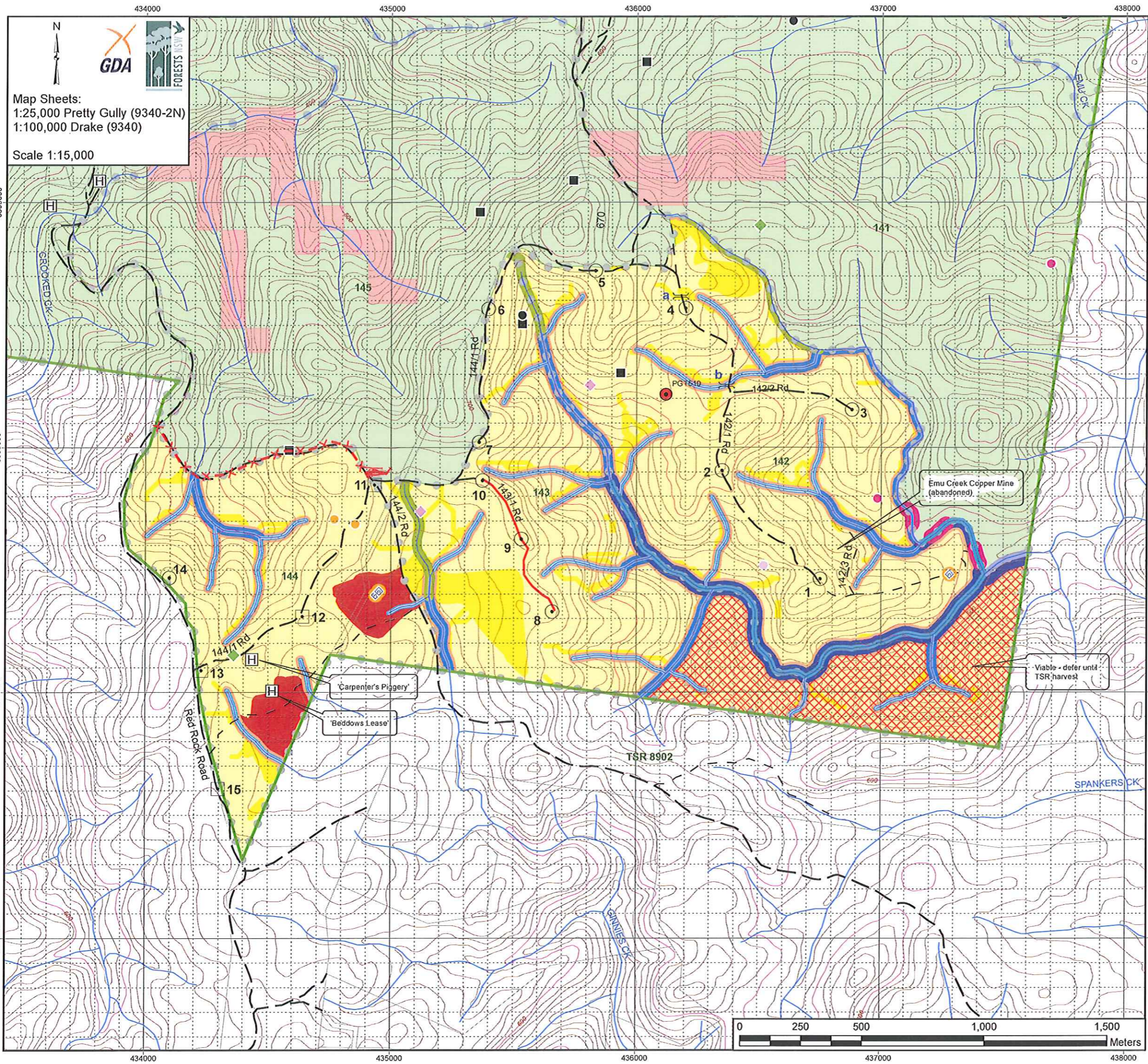
MAP FEATURES

- Subject Area
- Emergency Meeting Point (Safety Point)
- Helicopter Landing Point
- State Forest

- Haulage Route
- 1:25000 Map Sheet
- 1:100000 Map Sheet
- National Park Estate



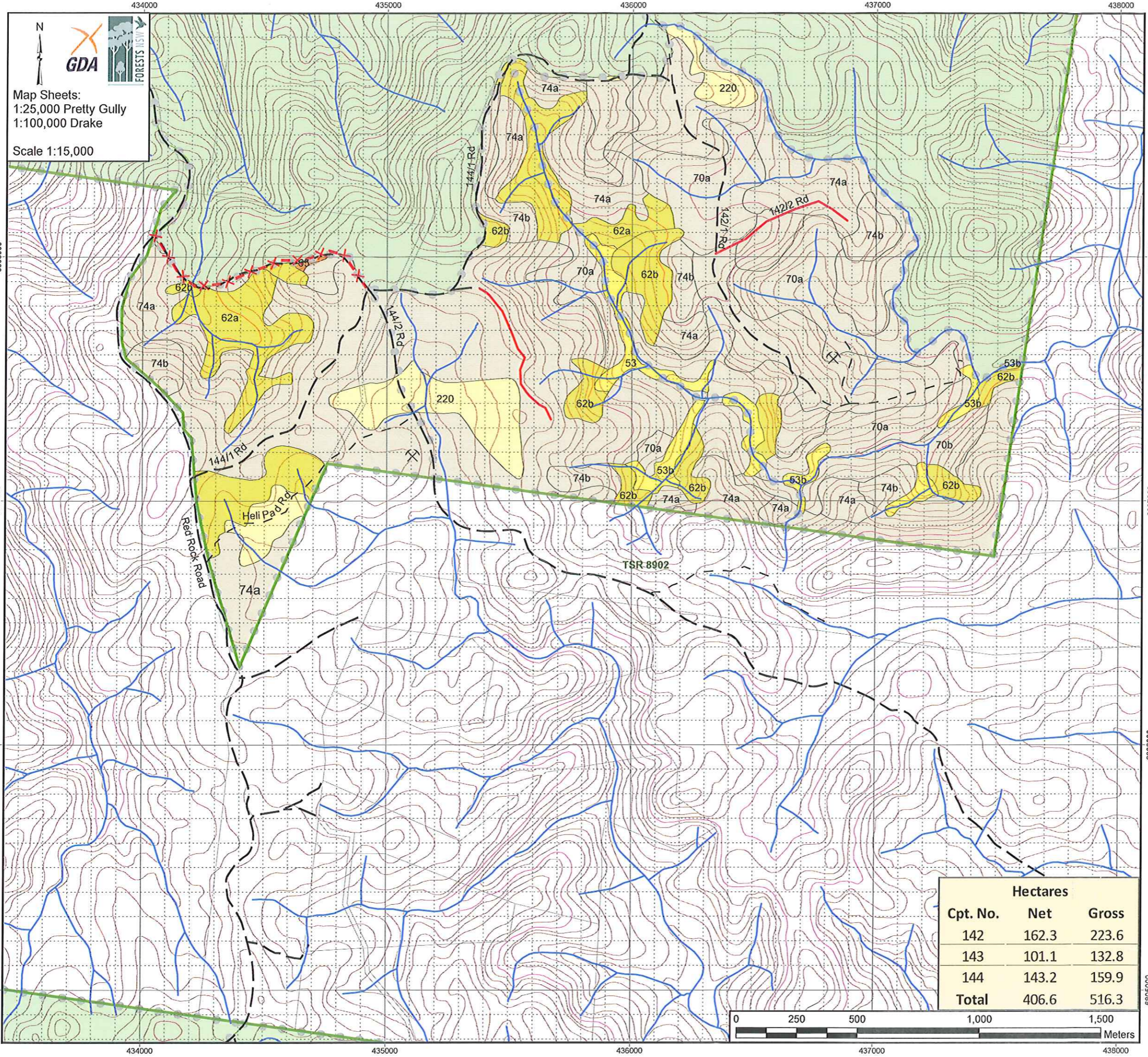
Prepared by... Dan Allen  
 Date: 13/12/2010




GDA  
 FORESTS NSW  
 Map Sheets:  
 1:25,000 Pretty Gully (9340-2N)  
 1:100,000 Drake (9340)  
 Scale 1:15,000

### North East Region - Tenterfield MA Harvest Plan Operational Map Cpts. 142, 143 & 144 Girard State Forest

- MAP FEATURES**
- State Forest Boundary
  - Compartments Boundary
  - 1 Km Grid
  - 100 m Grid
  - 10 / 100 m Contour
  - State Forest
- ROADS**
- Sealed
  - All Weather, Unsealed
  - Dry Weather, Unsealed
  - 4WD Track
  - New Construction
  - Road closed
- HARVESTING PRESCRIPTIONS**
- General Management (FMZ 4)
  - Areas for Further Assessment (FMZ 8)
  - Special Prescription (FMZ 3B)
  - Defer until TSR harvest
  - Non-viable
- HARVESTING PROTECTION (TSCL, EPL & FL)**
- Riparian (IHC 1 & 2)**
- Filter 5m either side
  - Protection 5m either side
  - Protection 15m either side
  - Protection 25m either side
  - Protection 45m either side
  - Operational zone 10m either side
  - Harvesting Protection (FMZ 3A)
  - High Conservation Value Old Growth
  - Slopes > 30 degrees
  - Aboriginal Sites
  - Non Aboriginal Heritage
  - Approved IFOA exclusion crossing
- RIDGE & HEADWATER HABITAT**
- 40m wide exclusion
  - 80m wide exclusion
- DUMPS & CROSSINGS**
- Temporary Dry
  - Temporary Wet
  - Approved Crossing
  - Quarry
  - Dams
  - Dam Protection (30m)
  - PGPs (Permanent Growth Plots)
  - Mine Sites
  - Helicopter Landing Area
- TSL PRESCRIPTIONS / ZONES**
- Mixophyes balbus Protection
- THREATENED SPECIES LOCATIONS**
- Speckled Warbler
  - Rufous Bettong
  - Little Lorikeet
  - Masked Owl
  - Glossy Black-Cockatoo
  - Glossy Black-Cockatoo feed tree
  - Koala




  
 Map Sheets:
   
 1:25,000 Pretty Gully
   
 1:100,000 Drake
   
 Scale 1:15,000

North East Region - Tenterfield MA
   
 Harvest Plan Forest Type Map
   
**Cpts. 142-144**
  
 Girard State Forest

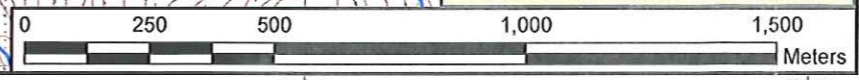
- MAP FEATURES**
- State Forest Boundary
  - Compartments Boundary
  - 1 Km Grid
  - 10 / 100 m Contour
  - State Forest
  - National Park Estate
  - Swd Plt (Z6) / Non Forest (Z7)

- ROADS**
- Sealed
  - All Weather, Unsealed
  - Dry Weather, Unsealed
  - 4WD Track
  - New Construction
  - Road closed
  - Road Maintenance

- DUMPS & CROSSINGS**
- Temporary Dry
  - Temporary Wet
  - Approved Crossing
  - Quarry

- FOREST TYPES**
- Type 53 Brush Box
  - Type 62 Grey Gum - Grey Ironbark - White Mahogany
  - Type 65 Forest Red Gum
  - Type 70 Spotted Gum
  - Type 72 Spotted Gum - Grey Box
  - Type 74 Spotted Gum - Ironbark / Grey Gum
  - Type 220 Cleared / Partially Cleared

Cpt. No.	Hectares	
	Net	Gross
142	162.3	223.6
143	101.1	132.8
144	143.2	159.9
<b>Total</b>	<b>406.6</b>	<b>516.3</b>




**FORESTS NEW SOUTH WALES - NORTH EAST REGION**  
**HARVESTING PLAN No. 3739**

**Girard State Forest - Compartments 142, 143 & 144**

**1. Certification**

This plan has been prepared in accordance with the Integrated Forestry Operations Approval 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** apply to this operation.

Prepared by:

Harvest Planner		Date: 10-5-11
Dan Allen		

Endorsed by:

Harvest Planning Team Leader		Date: 4/8/11 8/11
Steve Pickering		

Endorsed by:

Regional Planning Manager		Date: 10/10/11
John Murray		

Approved by:

Regional Manager		Date: 13/10/11
Craig Busby		

Note: Approval includes the Harvest Plan Operational Map (HPOM) version 1.

**2. Description of Proposal**

Selective harvesting of regrowth native forest stands, using Single Tree Selection

Other

	Proposed	Details
Roadworks	Yes	Roadworks Plan (attached)
Post harvest Burning	Yes	Plan to be prepared separately
Rehabilitation	No	NA

### 3. Area Identification and Yield Estimates

Region	North East Region
Management Area	Tenterfield
State Forest	Girard
State Forest No.	303
Pricing area	Tenterfield
Other Tenure Details (if applicable) For Lease & other non State Forest tenure (Lot/DP)	Cn. L. 1919/21 (entire plan area).

	Cpt 142	Cpt 143	Cpt 144	Total
Gross Area (ha)	224	133	108	465
Net Harvest Area (ha)	162	101	91	354
Estimated Yield (m3/ha)	13	13	13	13
Volume (m3) All Product	2,110	1,314	1,187	4,611

Products	Total (m3)
High Quality Large	1,419
High Quality Small	709
Low Quality	2,128
Veneer	0
Poles	355

### 4. Forest Description

#### Forest Type: (See Forest type map)

- Spotted Gum types (types 70, 72, & 74) dominate the net harvest area, particularly across ridges and within dryer drainage features with intermittent flow.
- Grey Gum – Grey Iron Bark – White Mahogany (type 62) occur on some mid to lower slopes.
- Brush Box (type 53) occurs in some moister gullies.
- Three areas of type 220 (cleared / partially cleared) also occurs throughout the harvest area. The two portions within Cpt. 144 have been excluded from harvesting as they are both completely cleared and one is of heritage significance. The remaining type 220 areas require SFO viability assessment.

#### Harvest History:

- Cpts. 142 & 143 last harvested in 1985, Cpt. 144 last harvested in 1979.
- NSW GIS disturbance records indicate that these last harvesting events were STS operations for PSM (Post/Sleepers/Misc.) products only.

**Stand Age/Size Class Description:**

- 0-10cm (dbhob) sapling component essentially confined to natural forest encroachment into historically cleared areas. Whilst there is no sign of recent fire the area is frequently burned by lessee and well grazed limiting the spread of this cohort.
- Pole/Mature 30-80cm (dbhob) component resulting from previous harvest events.
- Large senescent trees scattered throughout the harvest area
- NB: there are three historical clearings within the NHA totally approx. 20 ha. One clearing is of cultural significance (Beddows Lease – south east of dump 13) with associated building remnants and relics not to be impacted by harvesting (20 m machinery exclusion). The remaining two clearings are in varying stages of natural regeneration. The area east of dump 12 is mapped 'non-viable' being predominantly pioneer Wattle regeneration with a few large Spotted Gum seed trees. The other area to the west of dump 8 has more advanced hardwood regeneration and may be viable depending on H & R tree availability.

**Site Quality**

- Generally moderate site quality with site height 30-35m

**Stand health**

- Generally Good – few old defective trees.

**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 and the Environment Protection Licence 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
- Create suitable conditions for a regeneration event.

	Stand Description	
	Mixed age Spotted gum and Mixed aged Mixed Species	Even-aged sapling Spotted Gum / Iron Bark.
<b>Treatment – current ops</b>	Heavy STS	Light – Moderate STS (to be assessed by SFO)
<b>Est. % of NHA</b>	92%	8%
<b>Expected BA Removal (%)</b>	35%	<30%
<b>Future Ops 15-20 years</b>	STS	STS
<b>Other treatments</b>	Nil	Nil

**Single Tree Selection prescription:**

- Tree removal and ground disturbance must also maximise regeneration opportunities.
- Single Tree Selection must remove no more than 40% of the basal area across the net harvest area. Trees with dbhob <20cm must not be selected for harvesting under STS (1.5.10 IFOA).
- In areas designated for STS it is expected that the basal area removal across the

tract will fall below 40 %. BA removal will exceed 40% in some localized areas, but will be balanced by non harvest areas and tree retention across the tract.

- Harvesting of southern sections of Cpts. 143 & 144 isolated by major drainage features is to be deferred until such time as Regional Manager approval is given for TSR harvesting.

## 6. Special Conditions

### 6.1 Seasonal Harvesting and Burning Restrictions

No

### 6.2 Leases, Permits, Plots

	Occurs	Details	Conditions
Crown Leases	Yes	Cn L (1919/21) exists over the entire harvest area.	The Harvesting Forester must contact the leaseholder prior to commencing harvesting. Agreed procedures must be established for communication, gate opening/closing, fences and signage prior to commencing harvesting. These agreed procedures must form part of the plan induction and must be followed during the course of operations.
Occupation Permits (grazing)	No		
Occupation Permits (apiary)	Yes	Site # 1127 & 1128	Harvesting should aim to minimise impact on any occupied apiary site. If the presence of hives is unduly constraining harvesting, the Harvesting Forester will consult with the permittee to ensure that the impact on harvesting is minimised.
Occupation Permits (other)	No		
PGP's	Yes		There is one PGP in Cpt. 142 at grid reference, <b>436120E</b> and <b>6808217N</b> as indicated on the Harvest Plan Operational Map. The harvesting contractor must collect all tags from trees harvested or destroyed and return to the North East Region (Resources Unit).
Research Plots/Plus Trees	No		
Special Purpose Permits	No		

### 6.3 Critical Boundaries

**Private Property:** adjoins Cpt. 144 from the west, Cpt. 142 from the east while a TSR (8902) adjoins the entire southern boundary of the harvest area. These Boundaries are fenced and in varying states of repair.

- Harvesting must not impact on private property or TSR (without Regional Manager approval) and any functional fence line.
- Any damage to a fence must be immediately repaired by the contractor.

### 6.4 Underground Cables

- There is a Telstra cable that runs adjacent to Red Rock Road (until end of TSR approx. 300m south of dump 15).
- Site plans for the cable are held on the Harvest Plan Folder.
- Dial before you dig procedure must be followed prior to any excavation or road maintenance works in this area to determine cable locations.

**6.5 Haulage Considerations**

- The haulage route is south on Red Rock Road and onto the Bruxner Highway.
- Additional signage should be used on Bruxner Highway to notify traffic of turning trucks.

**6.6 IFOA Required Approval Of Forestry Activities**

No crossings have been approved

- NOTE: Any crossings of Rainforest, HCVOG and Riparian Protection Zones require prior Regional Manager (or NPWS) approval before can be undertaken.
- It is the responsibility of the SFO to identify any additional areas that need to be crossed, the location of any such crossings without approval and to contact the Planning Unit 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 Rover Park 4WD Park**

- Red Rock Road is utilised by recreational 4WDs (possibly associated with the private 'Rover Park 4WD Park' which borders Girard SF to the south west).
- Ongoing diligence is required when travelling along Red Rock Road as public traffic is to be expected at all times.
- Harvesting Forester must advise 'Rover Park' of FNSW activities prior to the commencement of harvest / haulage operations in the area.

**7. Forest Management Zoning Conditions**

The following Forest Management Zones and conditions apply:

FMZ	Type	Notes
Zone 3A	Harvesting Protection	High Conservation Old Growth Forest (HCVOG). 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. These areas must be protected as marked on the map.
Zone 8	Further Assessment	<p>These areas are to be re-zoned FMZ 4 with management by prescription (<b>Standard Harvest Plan Conditions for Native Forest Operations in North East Region</b> apply)</p> <p>These areas include</p> <ul style="list-style-type: none"> <li>• Mapped drainage features – identify in the field and apply EPL and TSL conditions based on actual field location,</li> <li>• Modelled drainage features - require further assessment: Further assessment of the modelled streams is to be undertaken by the SFO. Appropriate prescriptions (Schedule 4 of the EPL) are to be applied if required and noted on the harvesting operational map.</li> <li>• Cleared/semi cleared areas/Non commercial. These areas are to be assessed for viability by the SFO during tree mark up.</li> </ul>



## 8. Cultural Heritage Conditions

### Aboriginal Cultural Heritage

- No special conditions apply.

### Non Aboriginal Cultural Heritage

- 20 m machinery exclusion around old piggery site on 144/1 Rd between dumps 12 & 13 (grid: 434420 E 6807150 N). No machinery beyond existing road prism at this site.
- 20 m machinery exclusion around building remnants and associated relics at Beddows Lease, south east of dump 13 (grid: 434250 E 6806850 N).

## 9. Flora and Fauna Conditions

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

### 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.

### Tree retention Conditions applying:

Prescription	TSL Condition
Hollow bearing and recruit trees	(Non-Regrowth Zone) 5.6 a,b
Eucalypt Feed Trees	7 b) x (See Table 3 below)
Greater Glider density > 1 per ha?	Yes - 6.9 d applies - 8 Habitat trees/ha to be retained
Stag Retention	5.6e
Significant Food Resources	5.6f
Protection of Retained Trees	5.6g

### 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.

SPECIES GROUP	COMMON NAME	SCIENTIFIC NAME
Amphibians	Nil	
Reptiles	Nil	
Mammals	Koala	<i>Phascolarctos cinereus</i>
	Brush-tailed Rock Wallaby	<i>Petrogale pencilata</i>
	Brush-tailed Phascogale	<i>Phascogale tapoatafa</i>
	Spotted-tailed Quoll	<i>Dasyurus maculatus</i>
	Rufous Bettong	<i>Aepyprymnus rufescens</i>
	Squirrel Glider	<i>Petaurus norfolcensis</i>
	Yellow-bellied Glider	<i>Petaurus australis</i>
Birds	Masked Owl	<i>Tyto novaehollandiae</i>
	Speckled Warbler	<i>Pyrrholaemus saggitata</i>
	Glossy-black Cockatoo	<i>Calyptorhynchus lathami</i>
	Little Lorikeet	<i>(Glossopsitta pusilla)</i>
Flora	Nil	

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

Table 1: General Prescriptions

TSL Condition	TSL Condition No.	Record Details	Prescription Summary
Koala Mark-up Searches	5.2.2	2 KOAL scat detection records in cpts T_142, 143	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	5.6 (f),(g)	2 GLBC feed trees recorded in cpts T_142, 143	Retain and protect glossy black cockatoo feed trees.
	6.9	1 GRGL / ha recorded in cpts T_142, 144	8 hollow-bearing trees per hectare must be retained where Greater Glider density is >1/ha. (Retained trees may include hollow-bearing trees retained under condition 5.6 a=non c=regrowth).
Threatened Frog General Protection Measures	5.12	3 Dams recorded in cpt T_142, 144	30m protection zone on all dams.
Burning	5.16	Woodland bird records and other 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 (a)	Woodland Bird records	To the greatest extent practical, protect ground habitat from SFA. Ground habitat includes understorey vegetation, ground cover vegetation, leaf litter and fallen timber.
	5.17 (b)	CWRV + small mammals reptiles	Commercial Firewood collection is not permitted
	5.17 (d)	Larger CWRV	Firewood licences state that timber with hollows and/or over 40 cm diameter must not be collected or damaged.

Table 2: Species Specific Prescriptions (record and survey based)

TSL Condition	TSL Condition No.	Record Details	Prescription Summary
Masked Owl ( <i>Tyto novaehollandiae</i> )	6.9	2 MOWL records within 2km	Search gully lines and heads of gullies for roost and nest sites. Condition 5.13 may be applicable to protect any roosts or nests found.

TSL Condition	TSL Condition No.	Record Details	Prescription Summary
		of cpt boundaries	<b>Landscape approach as specified in 6.9.2 will be used.</b>
Little Lorikeet ( <i>Glossopsitta pusilla</i> )	5.13 (a)	1 LILO record in cpt T_142	The following exclusion zones must be applied around nest and roost sites: <u>Little Lorikeet Nest 30 metre radius</u>
Speckled Warbler ( <i>Pyrrholaemus saggitata</i> )	5.13 (a) 5.16  5.17 (b)	2 SPWA records in cpt T_144	10 m radius around nest and roost sites. <b>Hazard reduction work must consider the species ecology, promote and maintain understory mosaic, minimize impact on fallen logs &gt;40 cm diameter.</b> Commercial firewood collection is not permitted
Koala ( <i>Phascolarctos cinereus</i> )	6.14	2 KOAL scat detection records in cpts T_142, 143	Evidence of koalas was found in the compartment, but pre-logging surveys did not detect intermediate or high use areas. Compartment mark-up 5.2.2 must be completed.

Table 3: Species Specific Prescriptions (default IFOA condition)

TSL Condition	TSL Condition No.	Record Details	Prescription Summary
Swift Parrot ( <i>Lathamus discolor</i> ) Regent Honeyeater ( <i>Xanthomyza phrygia</i> )	7. b) x.	Nil records	<b>Retain 10 eucalypt feed trees (which may include habitat and recruitment feed tree species) within every 2ha of NLA. All trees where species were observed feeding must be retained.</b>
Stuttering Frog ( <i>Mixophyes balbus</i> )	7. b) iii.	Nil records	Protection zone of 30m on both sides of streams that occur within modelled habitat.
Large-footed Myotis ( <i>Myotis adversus</i> )	7.b) xv.	Nil records	Protection zones of 30m on all dams, permanent waterbodies and permanent streams in cpt.

Table 4: Other Ecological Considerations

Issue, Feature or Record	Presence	Assessment and Management Recommendations
EEC: Grey Box – Grey Gum Wet Sclerophyll Forest in the NSW North Coast bioregion.	Unlikely to be present - continue search.	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 and are shown on the operational map.** Boundary marking conditions for each exclusion zone are described on the HPOM and in the tree marking code.

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 (Eastern Freshwater Cod) has been identified as occurring within these compartments. Conditions of the Fisheries Licence apply

- A pre-logging aquatic habitat assessment of the site of each proposed crossing may be required prior to use. Consultation with the harvest planner is required prior to construction and use.

### 11. Soils and Water Protection Conditions

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

Site-specific EPL conditions –

Elements	Conditions
Unmapped Drainage Lines	EPL conditions apply
Drainage Feature Protection	See HPOM for widths
Inherent Hazard Class	1 (CPT. 144) & 2 (CPTS. 142/143)
Dispersible Soils	NO
Mass Movement	NO
Log Dumps	Refer relevant conditions for IHL
Snig Tracks	Refer relevant conditions for IHL
Roads	See schedule 5 of EPL Booklet
Non-Haulage Roads	May be used for extraction. EPL applies. Remove debris on completion of operations

## Legal Conditions

This operation must comply with:

- Standard Harvest Plan Condition 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 (TSL) issued under the Threatened Species Conservation Act (1995) as amended May 2003
  - Licence issued under section 220ZW of the Fisheries Management Act 1994 (FL) as amended May 2003
- 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 licenced. All EPL conditions will apply to harvesting and roding operations .

## 12. Attachments

- Attachment 1: Locality map
- Attachment 2: Harvest Plan Operational Map
- Attachment 3: Forest Type Map
- Attachment 4: Site Safety Plan prescribes describes safety requirements and Medical Emergency Evacuation Plan for this harvesting operation.
- Attachment 5: Roding Plan prescribes roding requirements for this harvesting operation.

**13. Pre-Operational Briefing**

I acknowledge that I have received a copy of the Harvesting Plan for Compartments 142, 143 & 143 in Girard 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.

Position	Name	Signature	Date



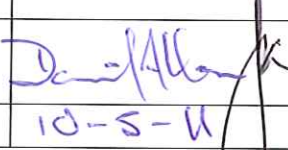
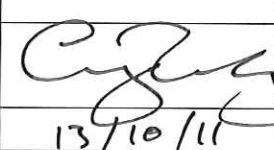
**FORESTS NEW SOUTH WALES – NORTH EAST REGION**

**ROAD WORKS PLAN**

**State Forest: Girard**

**Compartments 142-144**

**Certification**

Prepared By: Harvest Planner	Dan Allen	Approved By: Regional Manager	Craig Busby
Signature		Signature	
Date	10-5-11	Date	13/10/11

**1. Objectives**

Roadworks are required to service native forest harvesting operations within the above compartments. These compartments are scheduled for harvest in 2011.

The operational map shows the location of the proposed works.

**Attachments:** **Financial Analysis Spreadsheet** gives full details of costs, benefits, material & plant requirements

**2. 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) 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 roading operations .
- Technical Guidance Notes for Roadworks.



### 3. Special Conditions

Feature	Conditions
Cultural Heritage	Yes – 20m machinery exclusion around old piggery site on 144/1 Rd between dumps 12 & 13 (grid: 434420 E 6807150 N) and Emu Creek Copper Mine (grid: 436820 E 6807580 N). <b>No machinery disturbance beyond existing road prism at these sites.</b>
Threatened Species	See harvesting plan. Minimise disturbance within protection zones.
Dispersible Soils Hazard	No
Mass Movement Hazard	No
Seasonality	No
Engineering Design	No
Environmental impacts ie Dust, Noise, Water, Visual	No
Haulage Standards	Yes
National Park	No
Private Property	No
Permit To Enter required	No
Quarries and Gravel Pits	Yes – Over-burden gravel from open-cut Emu Creek Copper Mine in Cpt. 142 is <b>NOT</b> to be utilised for road gravelling (on advice from Mines Dept).
Underground/Overhead Utilities	Yes - There are underground Telstra utilities running parallel to Red Rock Road. Caution should be used when excavating intersections near this road. NB: no known utilities beyond TSR.
Safety Issues (includes hazards, public use of roads)	Yes – See Hazard Assessment in the Site Safety Pack

### 4. General Conditions

Remove trees in accordance with FNSW Safety Standard 1.3.9; and

Remove vegetation within 3m of the road prism **only where required** to maintain safe sight distance and passage of trucks however not within 20m of above mentioned cultural heritage sites.

**Note:** Clearing is generally permitted within 3m of the road prism for all roads. Ground disturbance and tree debris may impact outside this 3m either side of the road prism as is required to effect clearing within 3m of the road prism. Conditions 5, 6 and 47 Schedule 5 of the EPL must apply.

**5. Works Schedule**

**Road Maintenance/Upgrade**

Road Name Red Rock Rd Category Permanent

Location Start 300m sth of dump 15 through to dump 14. Length (m) 1950

	WORKS	YES	INSTRUCTIONS/SITE SPECIFIC CONDITIONS	
Site Info	Works >30 Slopes	<input type="checkbox"/>		
	Mass Movement	<input type="checkbox"/>		
	Dispersible	<input type="checkbox"/>		
Pavement	Upgrade	Widening	<input type="checkbox"/> Location Upgrade Length (m) 1950 Formation Width (m) Upgrade Spoil Curve Widening	
		Grade Lowering	<input type="checkbox"/>	
		Realignment	<input type="checkbox"/>	
		Reopening	<input type="checkbox"/>	
	Maintenance	Clear veg/debris	<input type="checkbox"/>	Maintenance Length (m) 0
		Repair surface	<input checked="" type="checkbox"/>	Where necessary.
		Crown/Crossfall	<input checked="" type="checkbox"/>	Where necessary
		Gravel	<input checked="" type="checkbox"/>	Where necessary Gravel Length (m) 150
	Roadside/Batters	Remove trees >20 cm	<input type="checkbox"/>	Remove Dangerous trees/stags only
		Remove trees <20 cm	<input type="checkbox"/>	Clearing outside the road prism:
Batter Repair/Upgrade		<input type="checkbox"/>		
Drainage	Culverts	<input type="checkbox"/>	Size: Sets:	
	Mitres	<input checked="" type="checkbox"/>		
	ROD/Spoon	<input checked="" type="checkbox"/>	Sets: 8	
	Belts/Channels	<input type="checkbox"/>	Sets:	
	Drop Downs	<input type="checkbox"/>	Sets:	
	Silt Trapping	<input type="checkbox"/>		
Comments: Drainage to EPL				

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

Date	Event	Initial

ROADING PLAN – Girard State Forest, Compartments 142-144

Road Name 144/1 Rd

Category Permanent

Location Red Rock Road to 142/1 Rd.

Length (m) 3050

		WORKS	YES	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works >30 Slopes		<input type="checkbox"/>	
	Mass Movement		<input type="checkbox"/>	
	Dispersible		<input type="checkbox"/>	
Pavement	Upgrade	Widening	<input type="checkbox"/>	Location Upgrade Length (m) 3050 Formation Width (m) Upgrade Spoil Curve Widening
		Grade Lowering	<input type="checkbox"/>	
		Reallignment	<input type="checkbox"/>	
	Maintenance	Reopening	<input type="checkbox"/>	
		Clear veg/debris	<input checked="" type="checkbox"/>	Where necessary Maintenance Length (m) 0
		Repair surface	<input checked="" type="checkbox"/>	Where necessary
		Crown/Crossfall	<input checked="" type="checkbox"/>	Where necessary
Gravel	<input checked="" type="checkbox"/>	Where necessary Gravel Length (m) 100		
Roadside/Batters	Remove trees >20 cm	<input type="checkbox"/>	Remove Dangerous trees/slugs only	
	Remove trees <20 cm	<input type="checkbox"/>	Clearing outside the road prism:	
	Batter Repair/Upgrade	<input type="checkbox"/>		
Drainage	Culverts	<input type="checkbox"/>	Size: Sets:	
	Mitres	<input checked="" type="checkbox"/>		
	ROD/Spoon	<input checked="" type="checkbox"/>	Sets: 6	
	Belts/Channels	<input type="checkbox"/>	Sets:	
	Drop Downs	<input type="checkbox"/>	Sets:	
	Silt Trapping	<input type="checkbox"/>		
Comments: Drainage to EPL				

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

Date	Event	Initial

ROADING PLAN – Girard State Forest, Compartments 142-144

Road Name 142/1 Rd

Category Permanent

Location 144/1 Rd to dump 1.

Length (m) 1900

WORKS		YES	INSTRUCTIONS/SITE SPECIFIC CONDITIONS	
Site Info	Works >30 Slopes	<input type="checkbox"/>		
	Mass Movement	<input type="checkbox"/>		
	Dispersible	<input type="checkbox"/>		
Pavement	Upgrade	Widening	<input checked="" type="checkbox"/> Location Where necessary Formation Width (m) 3.7 Curve Widening Upgrade Length (m) 1900 Upgrade Spoil	
		Grade Lowering	<input type="checkbox"/>	
		Realignment	<input type="checkbox"/>	
		Reopening	<input type="checkbox"/>	
	Maintenance	Clear veg/debris	<input checked="" type="checkbox"/>	Where necessary Maintenance Length (m) 0
		Repair surface	<input checked="" type="checkbox"/>	Where necessary
		Crown/Crossfall	<input checked="" type="checkbox"/>	Where necessary
Gravel		<input checked="" type="checkbox"/>	Where necessary Gravel Length (m) 100	
Roadside/Batters	Remove trees >20 cm	<input type="checkbox"/>	Remove Dangerous trees/slugs only	
	Remove trees <20 cm	<input checked="" type="checkbox"/>	Clearing outside the road prism: N/A	
	Batter Repair/Upgrade	<input type="checkbox"/>		
Drainage	Culverts	<input type="checkbox"/>	Size: Sets:	
	Mitres	<input checked="" type="checkbox"/>		
	ROD/Spoon	<input checked="" type="checkbox"/>	Sets:	
	Belts/Channels	<input type="checkbox"/>	Sets:	
	Drop Downs	<input type="checkbox"/>	Sets:	
	Silt Trapping	<input type="checkbox"/>		
Comments: Drainage to EPL				

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

Date	Event	Initial

ROADING PLAN – Girard State Forest, Compartments 142-144

Road Name 142/2 Rd

Category Permanent

Location 142/1 Rd to dump 3.

Length (m) 620

WORKS		YES	INSTRUCTIONS/SITE SPECIFIC CONDITIONS		
Site Info	Works >30 Slopes	<input type="checkbox"/>			
	Mass Movement	<input type="checkbox"/>			
	Dispersible	<input type="checkbox"/>			
Pavement	Upgrade	Widening	<input checked="" type="checkbox"/>	Location Where necessary Formation Width (m) 3.7 Curve Widening Upgrade Length (m) 620 Upgrade Spoil	
		Grade Lowering	<input type="checkbox"/>		
		Realignment	<input type="checkbox"/>		
	Maintenance	Reopening	<input checked="" type="checkbox"/>	Entire road	
		Clear veg/debris	<input checked="" type="checkbox"/>	Where necessary	Maintenance Length (m) 0
		Repair surface	<input checked="" type="checkbox"/>	Where necessary	
		Crown/Crossfall	<input checked="" type="checkbox"/>	Where necessary	
Gravel	<input type="checkbox"/>		Gravel Length (m)		
Roadside/Batters	Remove trees >20 cm	<input checked="" type="checkbox"/>	Remove Dangerous trees/stags only		
	Remove trees <20 cm	<input checked="" type="checkbox"/>	Clearing outside the road prism:		
	Batter Repair/Upgrade	<input type="checkbox"/>			
Drainage	Culverts	<input type="checkbox"/>		Size: Sets:	
	Mitres	<input checked="" type="checkbox"/>			
	ROD/Spoon	<input checked="" type="checkbox"/>	Sets: 4		
	Belts/Channels	<input type="checkbox"/>	Sets:		
	Drop Downs	<input type="checkbox"/>	Sets:		
	Silt Trapping	<input type="checkbox"/>			
Comments: Drainage to EPL					

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

Date	Event	Initial

# Construction

Road Name	143/1 Rd	Road Category	Temporary
Road Length (m)	680	Road Location	From dump 10 to dump 8.
<b>Site Information</b>			
Mass Movement	No		
Dispersible	No		
Ground Slope (deg)	4		
>30 deg Slopes	No		
Proximity Drainage	100		
<b>Specifications</b>			
Prism Width (m)	7.5		
Formation Width (m)	3.7		
Pavement Width (m)	3		
Roadside Width (m)	3		
Max Grade (deg)	2	Road Length > 10Deg	0
Angle Cut Batter	NA	Max Length Batter:	0
Angle Fill Batter	NA	Max Height Batter:	0
Gravel		Gravel Length	
Drainage	Drainage for >10Deg		
Rod/Spoon	<input checked="" type="checkbox"/>	Rod/Spoon No:	3
Belt/Channel	<input type="checkbox"/>	Channel/Belt No:	
Mitre	<input checked="" type="checkbox"/>		
Culvert	<input type="checkbox"/>	Culvert Size	Culvert Set Number
<b>Soil Erosion and Stabilisation Controls</b>			
Drop Down Type			
Sediment Trap			
Stabilisation	Compact fill batters >1m and grass seed, hay and jute mesh		
Stabilisation Interval	Fortnightly or after storm event		
Start Date:	Finish Date:	Soil Stabilisation Date (must be within 5 days):	
Date	Event		Initial

## Crossing Works

Crossing Name a Road Name 142/1 Rd Location Approx. 200m along 142/1 Rd  
 Drainage Feature Unmapped Drainage line Stream Permanency Temp.

Existing Crossing	Size	Stability Status	Crossing Required	Size (mm/m)	Future
Causeway	NA	Unstable	Causeway	Existing	Perm.

Crossing Works		Approaches and Road Drainage	
Pavement/Structure	Armour crossing with medium rock (20t).	Approaches	NA
Reshape Bed/banks	NA	Temporary Drainage	NA
Disposal of Spoil	NA	5-30m Upstream Left	Instal ROD
Inlet	NA	5-30m Upstream Right	Instal ROD
Outlet	NA	Practices where no 5-30	NA
Stabilisation	NA	OutletControl	NA
ErosionControl	NA	TableDrain	NA

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

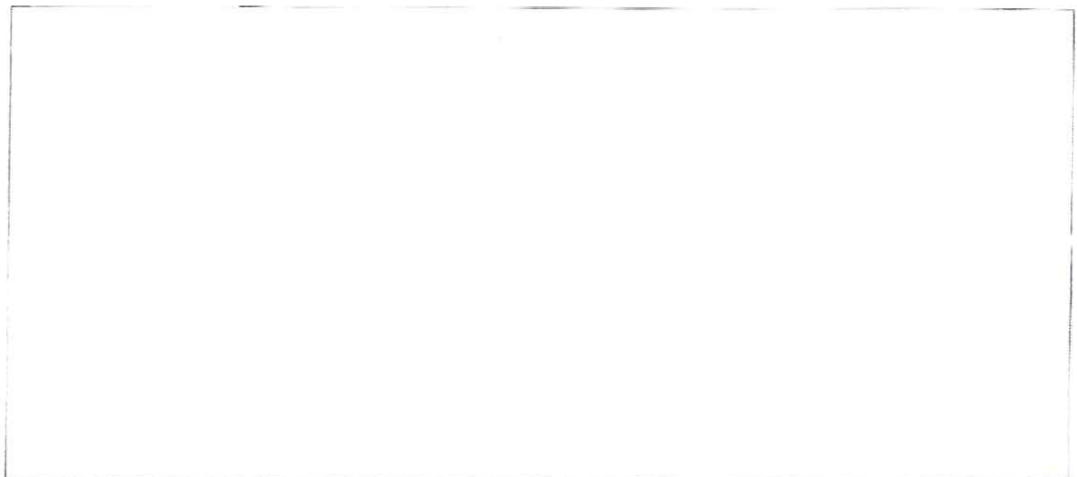
Date	Event	Initial

ROADING PLAN – Girard State Forest, Compartments 142-144

Crossing Name b                      Road Name 142/1 Rd                      Location Approx. 700m along 142/1 Rd.  
 Drainage Feature 1st order                      Stream Permanency Temp.

Existing Crossing	Size	Stability Status	Crossing Required	Size (mm/m)	Future
Causeway	NA	Unstable	Causeway	Existing	Perm.

Crossing Works		Approaches and Road Drainage	
Pavement/Structure	Armour crossing with medium rock (20l) and inlet / outlet large rock (10l).	Approaches	NA
Reshape Bed/banks	NA	Temporary Drainage	NA
Disposal of Spoil	NA	5-30m Upstream Left	Install ROD
Inlet	Armour (large rock)	5-30m Upstream Right	Install ROD
Outlet	Armour (large rock).	Practices where no 5-30	NA
Stabilisation	NA	OutletControl	NA
ErosionControl	NA	TableDrain	NA



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

Date	Event	Initial





**6. Pre-Operational Briefing**

Staff/Contractor Acknowledgment

I acknowledge that I have received a copy of the Roadworks Plan for Compartments 142, 143 & 144 in Girard State Forest and that I understand the conditions of the Plan as explained to me by a Forests NSW officer.

Name	Signature	Date