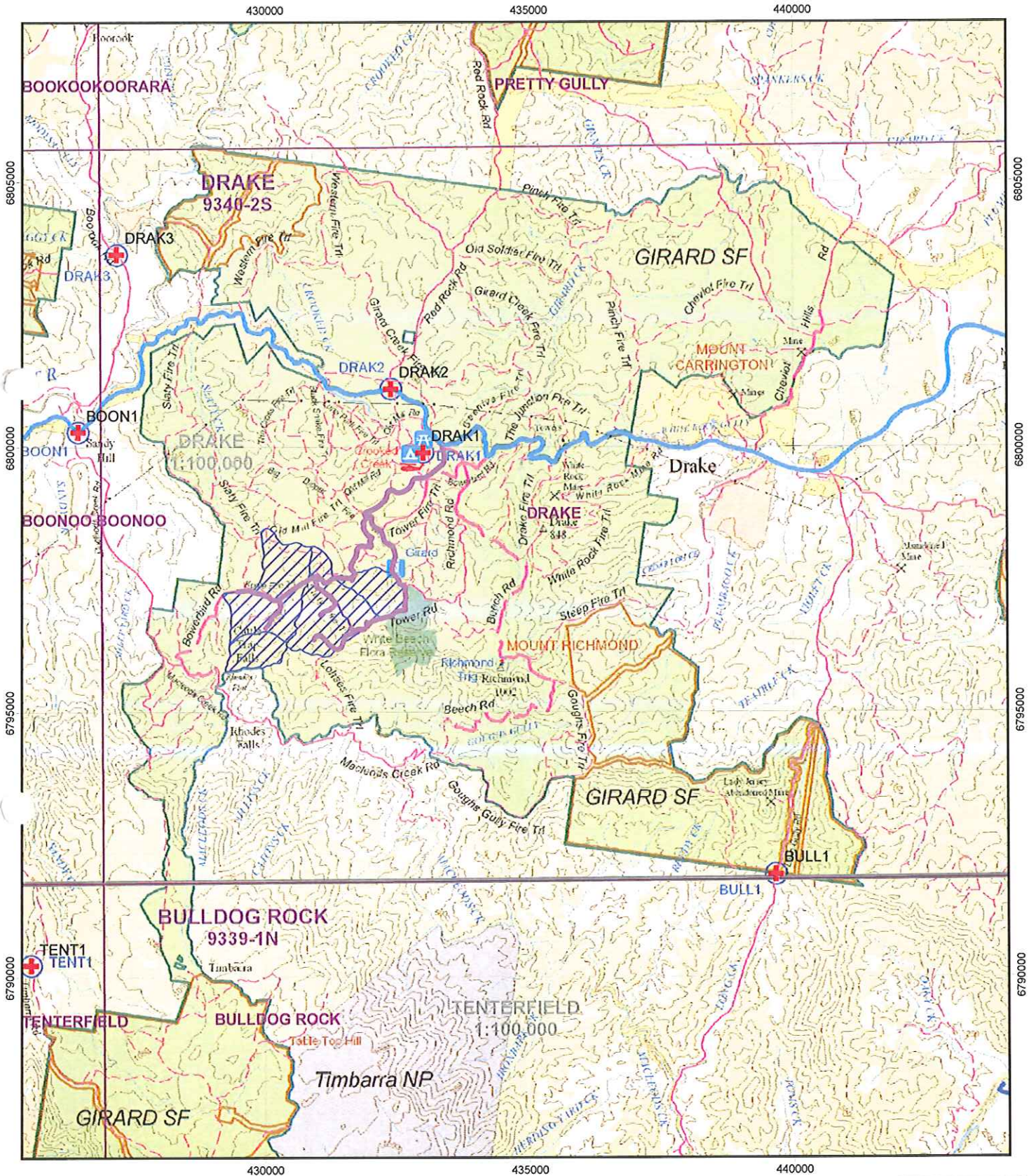




Map Sheets:
 1:25000 Drake 9340-2S
 1:100000 Drake 9340
 Scale 1:100000

North East Region - Tenterfield MA
 Locality Map
 Compartments 44, 45, 46, 53, 54 & 55
 Girard State Forest

MGA 56



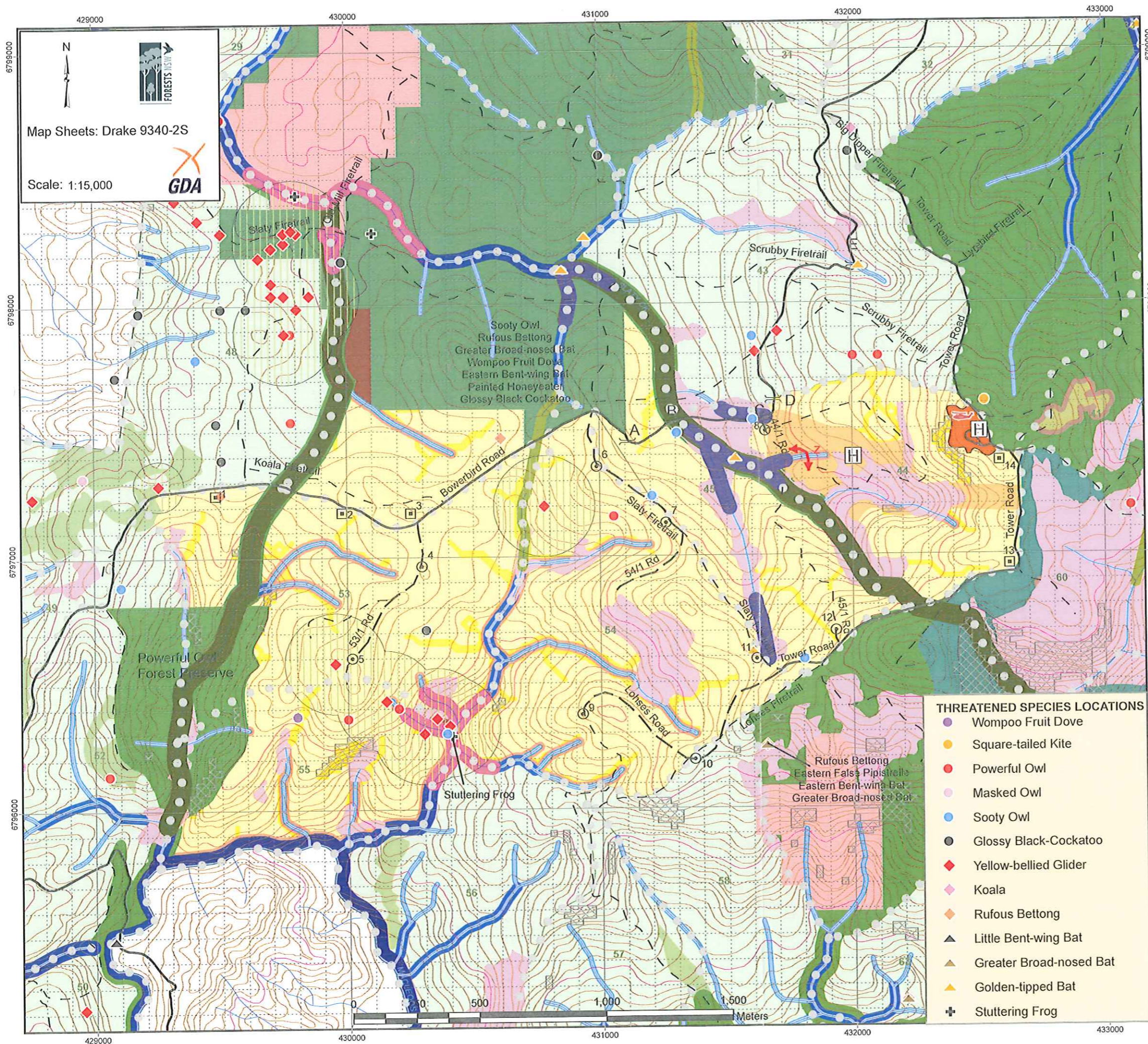
MAP FEATURES

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



Prepared by... Flavio Bugno
 Date: 19 June 2009

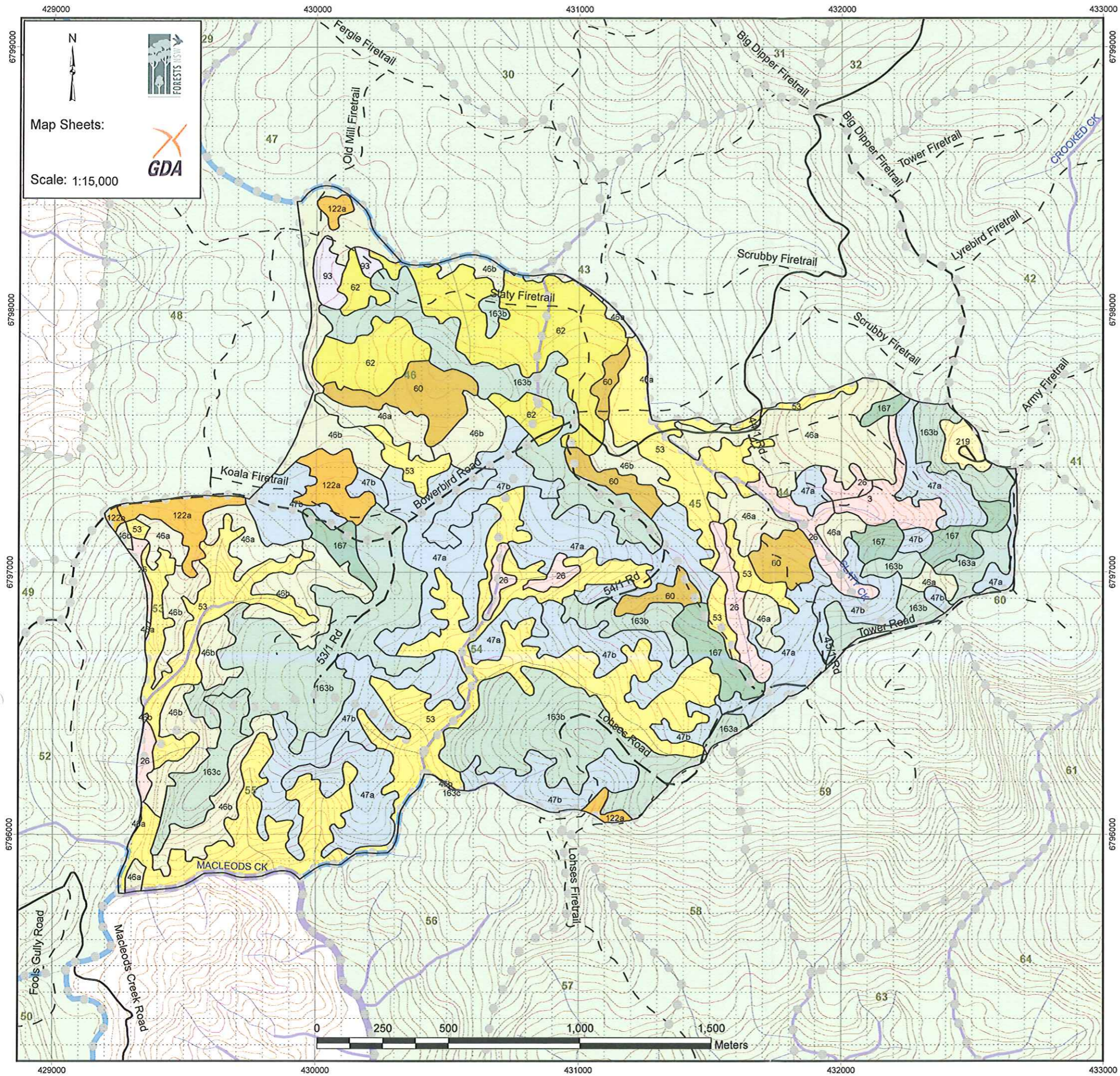
North East Region - Tenterfield MA
Compartments 44-46, 53-55
 Girard State Forest
 Harvest Plan Operational Map



- MAP FEATURES**
- State Forest Boundary
 - Compartments Boundary
 - 1 Km Grid
 - 10 / 100 m Contour
 - State Forest
 - National Park Estate
 - Swd PtI (Z6) / Non Forest (Z7)
- ROADS**
- Sealed
 - All Weather, Unsealed
 - Dry Weather, Unsealed
 - 4WD Track
- HARVESTING PRESCRIPTIONS**
- General Management (FMZ 4)
 - Areas for Further Assessment (FMZ 8)
 - Special Prescription (FMZ 3B)
 - Inaccessible
 - Tower & Transmitter Asset Protection
- HARVESTING PROTECTION (TSL, 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
- FOREST MANAGEMENT PROTECTION**
- Wildlife Corridor 50m either side and Forest Preserve (FMZ 2)
 - New England Stringybark Protection (FMZ 3A)
 - High Conservation Value Old Growth
 - Rainforest - Crafti + RN17
- RIDGE & HEADWATER HABITAT**
- 40m wide exclusion
 - 80m wide exclusion
 - Slopes > 30 degrees
- DUMPS & CROSSINGS**
- Temporary Dry
 - Temporary Wet
 - Approved Crossing
 - Quarry
 - Aboriginal Sites
 - Non Aboriginal Heritage
 - Approved IFOA exclusion crossing
 - Helipad
- THREATENED SPECIES LOCATIONS**
- Wompoo Fruit Dove
 - Square-tailed Kite
 - Powerful Owl
 - Masked Owl
 - Sooty Owl
 - Glossy Black-Cockatoo
 - Yellow-bellied Glider
 - Koala
 - Rufous Bettong
 - Little Bent-wing Bat
 - Greater Broad-nosed Bat
 - Golden-tipped Bat
 - Stuttering Frog
- TSL PRESCRIPTIONS / ZONES**
- Owl Landscape Protection
 - Golden-tipped Bat Protection 30m either side
 - Stuttering Frog Protection 30m either side
 - YBG Tree Retention Zones 200m radius

Map Sheets: Drake 9340-2S
 Scale: 1:15,000
GDA





Harvest Plan Forest Type Map

North East Region - Tenterfield MA
Compartments 44-46, 53-55
 Girard State Forest

MAP FEATURES

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

ROADS

- Sealed
- All Weather, Unsealed
- Dry Weather, Unsealed
- 4WD Track
- New Construction
- Non Haulage Roads
- Roads not to be used
- Forwarder use only

Stream Order

- 1
- 2
- 3
- 4 PLUS

Forest Types

- Type 3 Corkwood - Sassafras - Crabapple - Silver Sycamore
- Type 26 Viney Scrub
- Type 46 Sydney Blue Gum
- Type 47 Tallowood - Sydney Blue Gum
- Type 53 Brush Box
- Type 60 Narrowleaved White Mahogany - Red Mahogany - Grey Ironbark - Grey Gum
- Type 62 Grey Gum - Grey Ironbark - White Mahogany
- Type 93 Eastern Red Gums
- Type 122 New England Stringybark
- Type 163 New England Blackbutt
- Type 167 Silvertop Stringybark
- Type 219 Settlements, Roads, gravel Pits, etc.



OPERATIONAL HARVESTING PLAN

Region	North East
Management Area	Tenterfield
State Forest	Girard
Compartments	44-46 & 53-55
Harvest Plan No.	HP_3474
Harvest Plan Name	T_44-46_53-55

Plan Certification

Harvest Planner		Date: 6/8/09
Flavio Bugno		

Harvest Planning Manager		Date: 11/8/09
Steve Pickering		

Acting Regional Planning Manager		Date: 11/8/09
Brian Tolhurst		

Regional Manager		Date: 12/8/09
Craig Busby		

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SAFETY SUPPLEMENT

- 1. HAZARD ASSESSMENT
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HARVESTING DETAILS

1. Area Description

Region	North East Region
Management Area	Tenterfield
State Forest	Girard
State Forest No.	303
Pricing area	Lower Tenterfield
Tenure Details For Lease & other non state Forest tenure (Lot/DP)	NA

Compartments	44	45	46	53	54	55	TOTAL
Gross Area	71.9	71.8	91.9	107.3	109.6	62.4	514.9
Net Area	47.8	43.3	27.8	81.4	90.6	41.9	332.8

2. Description of Proposal

2.1 Integrated harvesting of native forest

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 seperately
Rehabilitation	No	na

3. Safety Considerations

- A Site Safety Plan must be completed by the site supervisor before work is carried out under this plan.
- A list of potential hazards for this work site identified during planning inspections is attached. These must be considered in preparation of the Site Safety Plan along with any other hazards identified.
- A Medical Emergency Evacuation Plan is also attached.

4. Forest Condition Description

Compartment histories indicate that Compartments 44-46 were harvested 1969-70 for sawlogs. Further harvest events took place from 1974-81 with the last harvest in Cpts 44 & 45 taking place in 1998. Compartments 53-55 were harvested during the period 1978-81 for sawlogs and last harvested in 1994-95.

The compartments consist of one distinct stand type:

Mixed Aged, Mixed Species Regrowth

Mixed age structures consisting of mature/overmature trees and patchy young spar regrowth (premerchantable) resulting from the last harvesting events. Tree species are predominantly New England Blackbutt, Sydney Blue Gum, Brushbox, Flooded Gum, Tallowwood, White Mahogany, Messmate and Silvertop Stringybark. The yield of total products expected to vary between 10 and 50 m³/ha.

5. Harvesting Prescription and Silviculture

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.

	Stand Description
	Mixed age, mixed species regrowth.
Treatment – current ops	STS
Est.% of NHA	100%
Expected BA Removal (%)	35% (1)
Max # of gaps	n/a
Future Ops (years)	
15-20	Thinning
30-40	STS

Single Tree Selection prescription:

- Harvesting will be managed with the objective of removing trees that have reached maturity.
- 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.

6. Legal Conditions

Legislation relating to the operations on State Forests & Other Crown-Timber Lands is detailed in FNSW Forest Practices Codes. This operation must specifically comply with:

- Licence conditions issued by FNSW under the Forestry Act (1916)
- FNSW Forest Practices Codes part 2 (Timber Harvesting in Native Forests February 1999) and 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), which includes the implementation of the following 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. Roading and harvesting operations are not licensed. All EPL conditions will apply to harvesting and roading operations.

7. Other Land Use Considerations

7.1 Leases, Permits, Plots

	Occurs	Details	Conditions
Crown Leases	No		
Occupation Permits (grazing)	No		
Occupation Permits (apiary)	Yes	1167, 1174, 1175	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)	Yes	14100	Transmission/radio Tower located at Girard Fire Tower. Adequately protected by cleared areas surrounding site (asset Protection Area on map).
PGP's	No		
Research Plots	No		
Special Purpose Permits	Yes	Tenterfield Endurance Horse Riding Special Purposes Permit	No events planned during 2009.

7.2 Critical Boundaries

Private Property: adjoins compartment 55 to the south, separated by MacLeods Creek.

Other critical boundaries: Boundaries with adjacent compartment boundaries are defined by roads, ridge lines and drainage lines. Part of the Owl Landscape boundary is marked by Bowerbird Road. The boundary with adjacent FMZ 1&2 is formed by Tower Road and then Lohses Fire Trail (not the Lohses Road alignment) up to the Cpt 58 boundary. The Powerful Owl Forest Preserve must be marked as mapped using GPS.

- If there is any doubt about the location of a critical boundary, assistance must be requested from the NER survey unit to determine the boundary location and mark it in the field.
- Harvesting must not impact on private property.

7.3 Underground Cables

- There is a Telstra cable that runs adjacent to Tower Road and Lohses Road.
- Site plans for the cable are held on the Harvest Plan Folder.
- Dial before you dig procedure must be followed prior any excavation or road maintenance works in this area to determine cable locations.

7.4 Haulage Considerations

- Haulage is planned to access the Bruxner Highway via Bowerbird Road northern exit (rest area turnoff). This route is not suitable for B-doubles (Bruxner Hwy is not a gazetted B-double route). Note: trucks can not exit onto the Highway from Bowerbird Road eastern exit due to insufficient sighting distance.
- Additional signage should be used on Richmond Road exit onto the Bruxner Highway to notify traffic of turning trucks.

8. Cultural Heritage Considerations

8.1 Aboriginal Cultural Heritage

There are no known Aboriginal sites or other heritage items in the compartments requiring protection. The Local Aboriginal Land Council has been consulted in regard to the proposed logging and the Regional Aboriginal Cultural Heritage Officer has inspected the compartments.

No issues were identified at the inspection.

8.2 Non Aboriginal Cultural Heritage

The Girard Fire Tower site is located within cleared asset protection area.

The other site is an old education preserve that is no longer required for this purpose (see FMZ 3B in section 10).

9. Soils and Water

	Compartments 44-46	Compartments 53-55
Inherent hazard level	1	2
Dispersible Soils	No	No
Mass Movement	No	No
Seasonality	No	No

10. Forest Management Zones

FMZ	Type	Notes
Zone 2	Special Management	Consists of Rainforest and the Powerful Owl Forest Preserve. FMZ wildlife corridor 50m either side of Slaty Creek and Macleods Creek. Also a Corridor (50m either side) that connects the Powerful Owl Forest Preserve to Owl Landscape protection areas along the western boundary tributary of Slaty Creek.
Zone 3A	Harvesting Protection	Rainforest.
Zone 3B	Special prescription	Area managed for education values in the past. Harvesting operations must aim at retaining and protecting the significant trees within the stand ie the largest overmature trees >200cm dhob.
Zone 4	General Management	Available for harvesting - see section 5 of this harvest plan.
Zone 8	Further Assessment	Cleared/semi cleared areas around Girard Fire Tower. This area has no harvestable timber and is primarily for Tower and transmitter asset protection. Modelled IHC 4 areas, mapped drainage features, modelled drainage lines requiring further assessment: Further assessment of the modelled streams is to be undertaken by the SFO. Appropriate prescriptions are to be applied and noted on the harvesting operational map.

11. Flora and Fauna Conditions

11.1 Pre-harvesting searches

- SFO must search for Threatened Flora and Fauna and habitat during pre-harvesting compartment mark-up.
- Recent and reliable records exist within close proximity of the compartments for the following threatened species, which require species-specific or site-specific prescriptions.

SPECIES GROUP	COMMON NAME	SCIENTIFIC NAME
Amphibians	Stuttering Frog	<i>Mixophyes balbus</i>
Reptiles	Nil	
Mammals	Golden-tipped Bat	<i>Kerivoula papuensis</i>
	Spotted-tailed Quoll	<i>Dasyurus maculatus</i>
	Rufous Bettong	<i>Aepyprymnus rufescens</i>
	Yellow-bellied Glider	<i>Petaurus australis</i>
Birds	Masked Owl	<i>Tyto novaehollandiae</i>
	Powerful Owl	<i>Ninox strenua</i>
	Glossy-black Cockatoo	<i>Calyptorhynchus lathami</i>
Flora	Nil	

11.2 Tree Mark-up Summary

Prescription	TSL Condition
Compartment mark-up surveys	5.1, 5.2
Hollow bearing and recruit trees	(Non-Regrowth Zone) 5.6 a, b
Greater Glider density > 1 per ha?	Yes - 6.9 d applies - 8 Hollow bearing trees/ha to be retained
Stag Retention	5.6e
Significant Food Resources	5.6f
Protection of Retained Trees	5.6g

11.3 Flora and Fauna Prescriptions

Table 1: General Prescriptions

TSL Condition	TSL Condition No.	Record Details	Prescription Summary
Koala Mark-up Searches	5.2.2	Nil Records – continue search	In compartments that 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)	Nil Records – continue search	Retain and protect glossy black cockatoo feed trees. Retain all yellow-bellied glider and squirrel glider sap feed trees.

TSL Condition	TSL Condition No.	Record Details	Prescription Summary
	6.9	>1 GRGL / ha in cpts T_44, T_45	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.)
Wetlands	5.9	Nil Records – continue search	10m protection zone on wetlands <0.5ha, 20m on 0.5-2ha, 40m on SEPP14 and >2ha wetlands.
Heath and Scrub	5.10	Nil Records – continue search	20m protection zone on feature if >0.2ha (45m x 45m).
Rocky Outcrops and Cliffs	5.11	Nil Records – continue search	SFA prohibited from feature, 20m protection buffer if > 0.1ha (approx. 30m x 30m).
Threatened Frog General Protection Measures	5.12	Nil Records – continue search	10m protection zone on all dams.
Bird Nest and Roost Site Protection	5.13	Nil Records – continue search	Species-specific protection zones on nests and roosts.
Tree Bat Roost Protection	5.14.1	Nil Records – continue search	100m protection zone on possible bat roost trees until inspected by Ecology. Notify Harvest Planner of location.
Subterranean Roost Protection	5.14.2	Nil Records – continue search	100m protection zone on all caves, rock overhangs, tunnels and disused mineshafts (>3m deep) until inspected by Ecology to determine status of roost. Notify Harvest Planner of location. 50m protection zone if bats found. 10m protection zone where no bats found.
Significant Subterranean Roost Protection	5.14.3	Nil Records – continue search	100m protection zone on all caves, rock overhangs, tunnels and disused mineshafts (>3m deep) until inspected by Ecology to determine status of roost. Notify Harvest Planner of location. 100m buffer if roost is significant.
Protection of Flying-fox Camps	5.14.4	Nil Records – continue search	50m protection zone until species confirmed by Ecology. Notify Harvest Planner of location.
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 (a)	Nil Records – continue search	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

TSL Condition	TSL Condition No.	Record Details	Prescription Summary
	5.17 (d)	Larger CWRV	Firewood licences state that timber with hollows and/or over 40 cm diameter must not be collected or damaged.
Tea-tree Melaleuca spp. Protection	5.19	Nil Records – continue search	<i>Melaleuca irbyana</i> must not be harvested.

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

TSL Condition	TSL Condition No.	Record Details	Prescription Summary
Stuttering Frog <i>(Mixophyes balbus)</i>	6.3	2 MIX BAL recorded in same location in cpt T_55 2 previous MIX BAL records in and within 200m of cpts T_46, 48 boundaries	Protection zone of 30m on both sides of all streams within 200m of record as mapped.
Powerful Owl <i>(Ninox strenua)</i> Masked Owl <i>(Tyto novaehollandiae)</i>	6.9	2 POWL detection records in cpts T_53, T_55 12 previous POWL detection records in and within 2km of cpt boundaries 1 MOWL detection record in cpt T_55 2 previous MOWL detection records within 2km of cpt boundaries	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. Landscape approach as specified in 6.9.2 will be used.

TSL Condition	TSL Condition No.	Record Details	Prescription Summary
Yellow-bellied Glider (<i>Petaurus australis</i>)	6.17	6 YEBG Call detection records in cpts T_46, T_53, T_55 5 previous call detection records & 4 previous unknown records within 200m of cpt boundaries	Protection of 50m on dens. Retention of all sap feed trees. Within 100m of above and observation records, 15 feed trees must be retained. Within 200m of call detection site, 15 feed tree must be retained. 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.
Golden-tipped Bat (<i>Kerivoula papuensis</i>)	6.20	1 GOTB recorded in cpt T_54 11 previous GOTB records at 2 locations in cpts T_46 & 44 5 previous GOTB records within 200m of cpt boundaries	Protection zones of 30m on all 1 st and 2 nd order streams within 200m of all records as mapped.

Table 3: Species Specific Prescriptions (default IFOA condition)

TSL Condition	TSL Condition No.	Record Details	Prescription Summary
n/a			All survey requirements have been completed. No default prescriptions will need to be implemented.

Protection zones outlined in Tables 1, 2 and 3 above generally exclude forestry activities. Certain activities are permitted within certain protection zones as outlined in the Threatened Species Licence. A summary of activities permitted within each protection zone is outlined in the SFO guidance notes. See also Section 14 for activities permitted in protection zones with Regional Managers approval granted under this harvesting plan.

12. Drainage features

12.1 Drainage Feature Protection

- The Operational Map indicates known mapped drainage features and widths of protective measures.
- The table below combines the conditions for the TSCL, FL and the EPL.

Riparian zone widths (IHL 1 and 2)

Stream Order	EPL Filter Strip	EPL Protection Zone	EPL Operational Zone
	TSL Protection zone (hard) FL Exclusion zone	TSL Protection zone (soft) FL Buffer Zone	FL Special Operational Zone
Unmapped	5	5	10
1 st Order	5	5	10
2 nd Order	5	15	10
3 rd order	5	25	10
4 th Order or greater	5	45	10

NOTE: Some Riparian Habitat Zones have greater protection widths due to conditions of the TSCL (See section 11). These wider Protection Zones are shown on the operational map where appropriate.

13. Snig and Extraction Tracks

The following conditions of Schedule 4 of the EPL apply to extraction and snigging:

20R & 20S	Snig tracks in operational zones
38 - 41	Snig tracks
42 - 57	Snig tracks – crossings
70 - 80	Drainage of snig tracks
81	Wet weather-snig tracks
82	Downhill snigging

13.1 Snig Track / Extraction Crossings of Drainage features

- Crossings of mapped drainage features must be approved by the Regional Manager prior to use.
- Approved crossings are detailed in section 14. Any additional crossings identified for use must be referred to the harvest planner for review and subsequent approval by Regional Manager.
- Crossings of unmapped drainage lines must be approved and documented by the SFO.
- Crossings may only be used where it is not reasonably practicable to use another route or site.

13.2 4WD Trails and Non-haulage Roads

- There are a number of 4 WD trails and non-haulage roads as indicated on the operational map that are not to be used by haulage traffic.
- SFO may approve extraction on these trails and roads provided they are drained to the appropriate specifications.
- Harvesting debris must be removed from all 4WD trails where it has accumulated during operations to allow for access for fire fighting.

14. IFOA Required Approval Of Forestry Activities

Approvals have been obtained for the following activities / locations as shown on the operational map.

Crossing No.	Activity	Type	Conditions
Z	Snigging	Riparian Habitat Protection Zone	Use existing track crossing on old logging Road. On completion of operations fill in furrows within the crossing and seed. Standard EPL conditions for track drainage either side of crossing.

- NOTE: All areas of Rainforest, HCVOG and Riparian Protection Zones require prior Regional Manager (or NPWS) approval before forest harvesting related activities can be undertaken.
- It is the responsibility of the SFO to identify any areas without such approval which will need to be crossed for harvesting and to contact the Planning Forester to obtain the necessary approval.

15. Log Dumps

Conditions 26, 27, 28, 29, 30, 31, 32 and 33 of Schedule 4 of the EPL and Sections 16.1, 16.2 and 16.3 of the Forest Practices Code must apply.

Compartments 44-46

- Dumps must be located outside the boundary of Filterstrips, Protection Zones and Bufferstrips for compartments classified as IHC 1.
- Debris from log dumps must be located outside the boundary of filter strips, riparian protection zones and buffer strips for compartments classified as IHC 1.

Compartments 53-55

- Dumps must be located at least 10 metres from the outer boundary of riparian protection zones, unless the construction of the log dumps at least 10 metres from the riparian protection zones would result in additional excavation compared to a log dump located closer to the protection zones for compartments classified as IHC 2.
- Debris from log dumps must be located at least 5 metres from the boundary of filter strips, riparian protection zones and buffer strips for compartments classified as IHC 2.

Log Dump Locations

- Locations of approved log dump sites are shown on the operational map.
- Logs dumps may relocated by the SFO up to 100m from the location shown on the operational map to make use of favourable terrain.
- If more than 50m of additional road construction or maintenance is required to service a log dump location a variation approved by the Regional Manager must be obtained.
- Where additional log dumps are required a variation approval by the harvest planner must be obtained.

16. Product Specifications and Accounting

All timber products must be graded and required accounting procedures initiated prior to the products being removed from the dump.

17. Yield Estimates**Compartment 44**

Estimated NHA: 47.8

Native forest	Yield m ³ /ha	Total Yield m ³
High Quality Large	13.7	652
High Quality Small	0.4	20
Veneer	1.4	65
Girders	1.4	65
Low Quality	10.4	494
Pulp	0.8	38
TOTAL	28.1	1333

Compartment 45

Estimated NHA: 43.3

Native forest	Yield m ³ /ha	Total Yield m ³
High Quality Large	12.7	549
High Quality Small	0.9	37
Veneer	1.2	54
Girders	1.2	54
Low Quality	10.0	436
Pulp	0.7	29
TOTAL	26.7	1160

Compartment 46

Estimated NHA: 27.8

Native forest	Yield m ³ /ha	Total Yield m ³
High Quality Large	4.9	137
High Quality Small	2.2	60
Veneer	1.2	12
Girders	0.4	12
Low Quality	5.2	145
Pulp	0.3	7
TOTAL	13.4	373

Compartment 53

Estimated NHA: 81.4

Native forest	Yield m ³ /ha	Total Yield m ³
High Quality Large	9.8	798
High Quality Small	0.8	65
Veneer	1.0	79
Girders	1.0	79
Low Quality	7.6	623
Pulp	0.6	52
TOTAL	20.8	1696

Compartment 54

Estimated NHA: 90.6

Native forest	Yield m ³ /ha	Total Yield m ³
High Quality Large	10.5	952
High Quality Small	0.7	64
Veneer	1.0	95
Girders	1.0	95
Low Quality	8.1	735
Pulp	0.7	61
TOTAL	22.0	2000

Compartment 55

Estimated NHA: 41.9

Native forest	Yield m³/ha	46
High Quality Large	10.7	454
High Quality Small	1.2	50
Veneer	1.0	43
Girders	1.0	43
Low Quality	8.8	368
Pulp	0.6	24
TOTAL	23.4	975

TOTAL

Estimated NHA: 332.8

Native forest	Yield m³/ha	Total Yield m³
High Quality Large	10.6	3533
High Quality Small	0.9	297
Veneer	1.0	348
Girders	1.0	348
Low Quality	8.4	2800
Pulp	0.6	210
TOTAL	22.7	7536

18. Pre operation briefing

- I acknowledge that I have received a copy of the Harvesting Plan for Compartments 44-46 & 53-55 in Girard State Forest and that I have been briefed on the conditions of the Plan and understand the supervision and operational control requirements as explained to me.

Signature:		Name:	
Position	Supervising Forest Officer	Date:	

Signature:		Name:	
Position:	Relieving Supervising Forest Officer	Date:	

Harvesting Contractor Acknowledgment

- I acknowledge that I have received a copy of the Harvesting Plan for Compartments 44-46 & 53-55 in Girard State and that I understand the conditions of the Plan as explained to me by a Forests NSW officer. I will brief other operators not present at this briefing prior to them starting operations and ensure that a Site Safety Plan is completed for this area prior to operations commencing

Signature:		Name:	
Position:	Principal Contractor / Other (explain)	Date:	

Personnel attending Induction

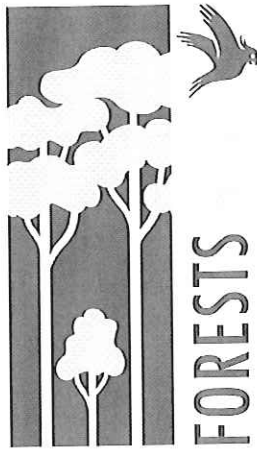
Company	Name (Print)	Signature	Date

ROAD WORKS PLAN

Compartments 44-46 & 53-55

Girard State Forest

North East Region



Prepared by: Planner

Mugna

Signature

Date:

6/8/09

Endorsed by: Works Program Supervisor

Signature

Date:

Approved by: Regional Manager

C. J. ...

Signature

Date:

17/8/09

GENERAL INFORMATION FOR MAINTENANCE/CONSTRUCTION CREW

Compartments 44-46 & 53-55, Girard State Forest

1 Need for the proposal

This proposal is required to service Native Forest harvesting operations within the above compartments. These compartments may be required for harvest later in the year due to customer timber species requirements.

2 Costs, Benefits and Material & Plant Requirements

A full breakdown of the costs, benefits and material & plant requirements is given in the Financial Analysis spreadsheet, on file in the North East Region office. An additional \$38,000 will be spent on the main access roads (Bowerbird Rd, Tower Rd, Lohses Rd and Big Dipper Fire Trail) and for works on crossings A, C, D, E & F (separate Road Maintenance Plan).

A Flat Rack steel bridge at \$4400 is a more cost effective option for Crossing 'B' than Pipe & Inlet Headwall (\$7018) or Box culvert (\$10166). A steel bridge structure will be easier to install and has less chance of blockage in the longer term.

3 Specifications/Legal Conditions

- Not EPL licenced. All roadworks must comply with Schedule 5 of the EPL unless otherwise specified.
- FNSW Forest Practices Codes part 4, Forest Roads and Fire Trails (February 1999).
- Technical Guidance Notes for Roadworks.

4 Special Conditions

Feature	Conditions
Cultural Heritage	No
Threatened Species Licence	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
National Park	No
Private Property	No
Permit To Enter required	No
Quarries and Gravel Pits	Yes Bowerbird Road gravel pit (to the west of Cpts). See attached operational plan, safety management plan and safety evacuation plan.
Underground/Overhead Utilities	Yes Underground telephone line along Tower Road and Lohses Road. See attached site plans for cable locations.
Safety Issues (includes hazards, public use of roads)	Yes See Hazard Assessment in the Site Safety Pack

NOTE 1: 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 Authorised Works

5.1 Authorised Works – Road Maintenance/Upgrade

See attached 44/1 Rd, 45/1 Rd, 53/1 Rd, 54/1 Rd and Slaty FT Road Maintenance/Upgrade sheets.

Note: Bowerbird Rd, Tower Rd, Lohses Rd and Big Dipper FT are part of Bowerbird Rd, Tower Rd, Lohses Rd and Big Dipper FT Road Maintenance Plan.

5.2 Authorised Works – Crossing maintenance

See attached Crossing B Crossing Works Sheet.

Note: Crossings A, C, D, E & F works are part of Bowerbird Rd, Tower Rd, Lohses Rd and Big Dipper FT Road Maintenance Plan.

Road Maintenance/Upgrade

Road Name 44/1 Road

Category Temporary

Location From Bowerbird Road to dump 8

Length (m) 50

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 Bowerbird Road exit Upgrade Length (m) 10 Formation Width (m) As required for truck turn Upgrade Spoil incorporated into road surface Curve Widening NA	
		Grade Lowering	<input type="checkbox"/>	NA	
		Realignment	<input type="checkbox"/>	NA	
		Reopening	<input type="checkbox"/>	NA	
	Maintenance	Clear veg/debris	<input checked="" type="checkbox"/>	NA	Maintenance Length (m) 40
		Repair surface	<input type="checkbox"/>	NA	
		Crown/Crossfall	<input checked="" type="checkbox"/>	Entire length	
	Gravel	<input type="checkbox"/>	NA	Gravel Length (m) 0	
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:No		
	Batter Repair/Upgrade	<input type="checkbox"/>	NA		
Drainage	Culverts	<input type="checkbox"/>	NA	Size: Sets:	
	Mitres	<input checked="" type="checkbox"/>			
	ROD/Spoon	<input type="checkbox"/>	Sets:		
	Belts/Channels	<input type="checkbox"/>	Sets:		
	Drop Downs	<input type="checkbox"/>	Sets:		
	Silt Trapping	<input type="checkbox"/>			
Comments: Nil					

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

Date	Event	Initial

Road Name 45/1 Road

Category Temporary

Location From Tower Road to dump 12

Length (m) 50

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 NA Formation Width (m) NA Curve Widening NA Upgrade Length (m) 0 Upgrade Spoil	
		Grade Lowering	<input type="checkbox"/>	NA	
		Realignment	<input type="checkbox"/>	NA	
		Reopening	<input type="checkbox"/>	NA	
	Maintenance	Clear veg/debris	<input checked="" type="checkbox"/>	Entire length	Maintenance Length (m) 50
		Repair surface	<input type="checkbox"/>	NA	
		Crown/Crossfall	<input checked="" type="checkbox"/>	Entire length	
		Gravel	<input type="checkbox"/>	NA	Gravel Length (m) 0
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:No		
	Batter Repair/Upgrade	<input type="checkbox"/>	NA		
Drainage	Culverts	<input type="checkbox"/>	NA	Size: Sets:	
	Mitres	<input checked="" type="checkbox"/>			
	ROD/Spoon	<input type="checkbox"/>	Sets:		
	Belts/Channels	<input type="checkbox"/>	Sets:		
	Drop Downs	<input type="checkbox"/>	Sets:		
	Silt Trapping	<input type="checkbox"/>			
Comments: Nil					

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

Date	Event	Initial

Road Name 53/1 Road

Category Temporary

Location Bowerbird Road to dump 5

Length (m) 600

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 Formation Width (m) Curve Widening NA Upgrade Length (m) Upgrade Spoil	
		Grade Lowering	<input type="checkbox"/>	NA	
		Realignment	<input type="checkbox"/>	NA	
		Reopening	<input type="checkbox"/>	NA	
	Maintenance	Clear veg/debris	<input checked="" type="checkbox"/>	Entire length	Maintenance Length (m)
		Repair surface	<input checked="" type="checkbox"/>	Level uneven surface	
		Crown/Crossfall	<input checked="" type="checkbox"/>	Entire length	
		Gravel	<input type="checkbox"/>	NA	Gravel Length (m) 0
	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:No	
Batter Repair/Upgrade		<input type="checkbox"/>	NA		
Drainage	Culverts	<input type="checkbox"/>	NA	Size: Sets:	
	Mitres	<input checked="" type="checkbox"/>			
	ROD/Spoon	<input checked="" type="checkbox"/>	Sets: 5		
	Belts/Channels	<input type="checkbox"/>	Sets:		
	Drop Downs	<input type="checkbox"/>	Sets:		
	Silt Trapping	<input type="checkbox"/>			
Comments: Nil					

Start Date:

Finish Date:

Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

Road Name 54/1 Road

Category Temporary

Location From Slaty Fire Trail to dump 7

Length (m) 400

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 NA Formation Width (m) NA Curve Widening NA Upgrade Length (m) 0 Upgrade Spoil	
		Grade Lowering	<input type="checkbox"/>	NA	
		Realignment	<input type="checkbox"/>	NA	
		Reopening	<input type="checkbox"/>	NA	
	Maintenance	Clear veg/debris	<input checked="" type="checkbox"/>	Entire length	Maintenance Length (m) 400
		Repair surface	<input type="checkbox"/>	NA	
		Crown/Crossfall	<input checked="" type="checkbox"/>	Entire length	
		Gravel	<input type="checkbox"/>	NA	Gravel Length (m) 0
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:No		
	Batter Repair/Upgrade	<input type="checkbox"/>	NA		
Drainage	Culverts	<input type="checkbox"/>	NA	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: Nil					

Start Date:

Finish Date:

Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

Road Name Slaty Fire Trail

Category Permanent

Location From Bowerbird Road to 54/1 Road. Dump 11 to Tower Rd

Length (m) 750

		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 Bowerbird Road exit Formation Width (m) As required for truck turn Curve Widening NA Upgrade Length (m) 10 Upgrade Spoil incorporated into road surface	
		Grade Lowering	<input type="checkbox"/>	NA	
		Realignment	<input type="checkbox"/>		
		Reopening	<input type="checkbox"/>	NA	
	Maintenance	Clear veg/debris	<input checked="" type="checkbox"/>	Entire length	Maintenance Length (m) 740
		Repair surface	<input type="checkbox"/>	NA	
		Crown/Crossfall	<input checked="" type="checkbox"/>	Entire length	
		Gravel	<input checked="" type="checkbox"/>	54/1 Road intersection	Gravel Length (m) 40
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:No		
	Batter Repair/Upgrade	<input checked="" type="checkbox"/>	Batter back exit 3m Disturbed cut batters layed back 1:3/4		
Drainage	Culverts	<input type="checkbox"/>	NA	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: Nil					

Start Date:

Finish Date:

Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

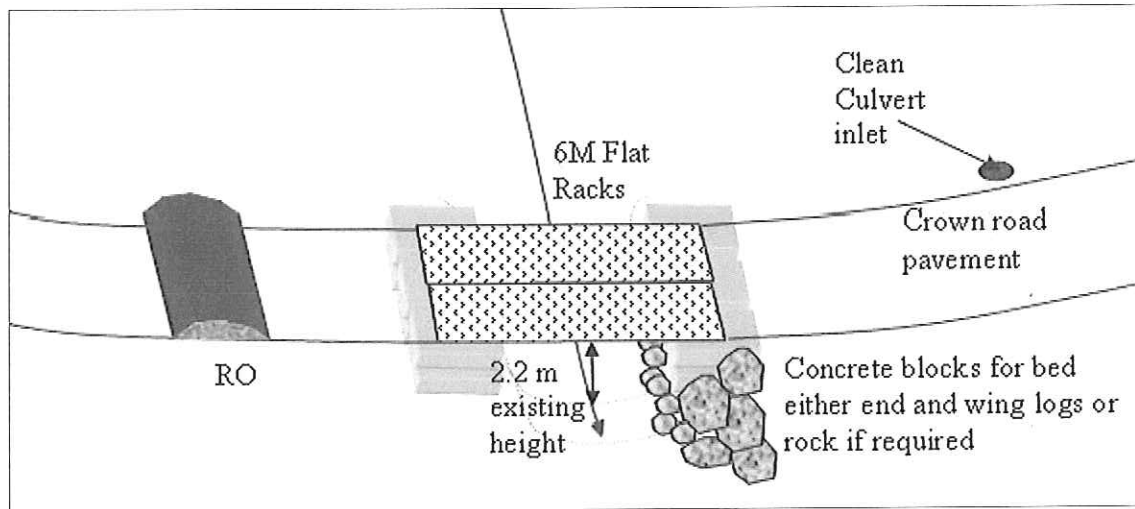
Crossing Works

Crossing Name B Road Name Bowerbird Road Location 400m from Cpt 44 Boundary

Drainage Feature 2nd order DL Stream Permanency Intermittent

Existing Crossing	Size	Stability Status	Crossing Required	Size mm/m	Future
Pipe Culvert	1200	Unstable (replace)	Steel Bridge	6	Permanent

Crossing Works		Approaches and Road Drainage	
Pavement/Structure	Remove pipe and fill. Install steel bridge on concrete blocks.	Approaches	Crown right approach
Reshape Bed/banks	Return to existing bed cross section	Temporary Drainage	Nil
Disposal of Spoil	Use in approaches	5-30m Upstream Left	Rollover
Inlet	Nil	5-30m Upstream Right	Clean existing Culvert 15m
Outlet	Nil	Practices where no 5-30	NA
Stabilisation	Concrete blocks at ends	OutletControl	Natural vegetation
ErosionControl	Jutemesh and seed	TableDrain	Natural vegetation



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

Date	Event	Initial

Pre Operational briefing

I acknowledge that I have received a copy of the Roadworks Plan for Compartments 44-46 & 53-55 Girard State Forest, and that I have been briefed on the conditions of the Plan and understand the supervision and operational control requirements as explained to me by the Forest Planner or his/her delegate.

Inducted By (Signature):		Name:	
	Harvest Planner	Date:	
Signature:		Name:	
Position	Roading Co-Ordinator	Date:	

Staff/Contractor Acknowledgment

I acknowledge that I have received a copy of the Roadworks Plan for Compartments 44-46 & 53-55 Girard State Forest and that I understand the conditions of the Plan as explained to me by a Forests NSW officer.

Personnel attending Induction

Personnel (Print Name and sign)	Date	Inducted By (Print Name and sign)	Date

This pre operation briefing must be returned to NER on completion of Operations and filed with the official copy of the plan.

FORM 8 – Roving Foreman Notes

- This diary should record general daily events that are not applicable to a specific road/crossing and any additional comments regarding this works plan.

Date	Event	Initial