

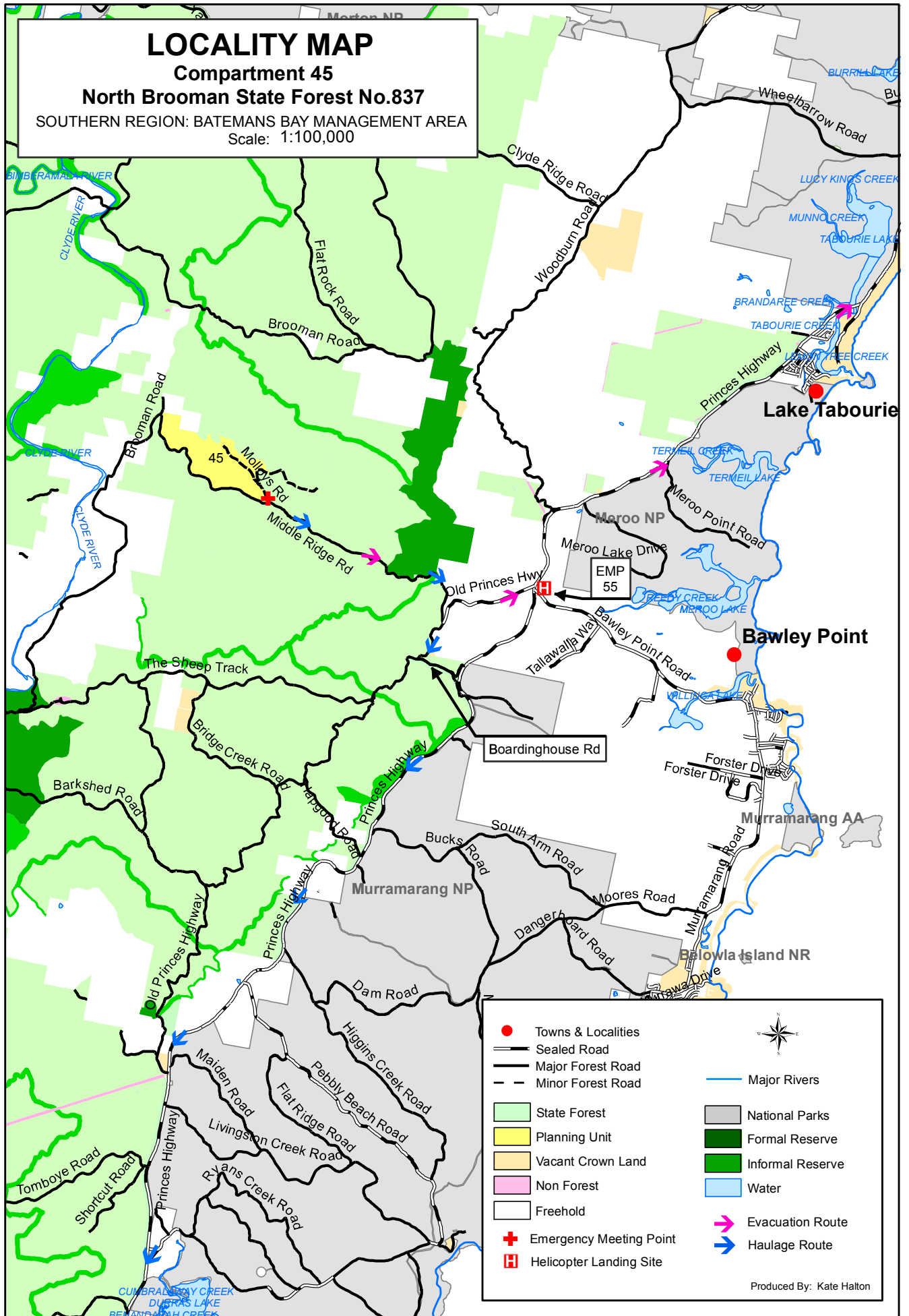
# LOCALITY MAP

Compartment 45

North Brooman State Forest No.837

SOUTHERN REGION: BATEMANS BAY MANAGEMENT AREA

Scale: 1:100,000



# Harvest Plan Operational Map

Prepared By: Kate Halton

Compartment: 45

State Forest: North Brooman No: 837

SOUTHERN REGION - Native Forests

Map Sheet: TABOURIE 8927-2S

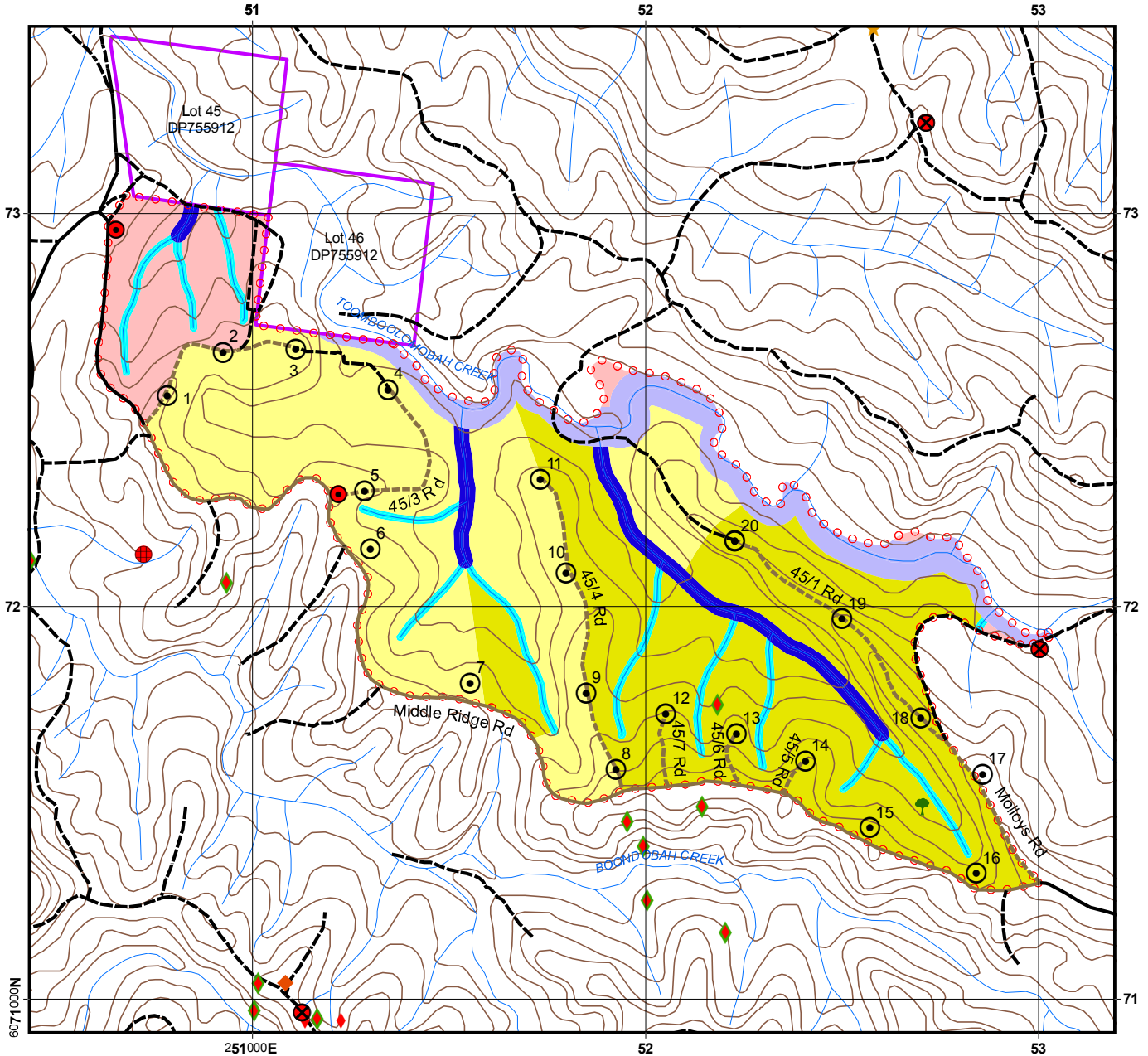


Version: 1

REGIONAL MANAGER APPROVAL

APPROVED: Daniel Tuan

DATE: 23 / 12 / 2011



## BOUNDARIES

○ ○ ○ Compartment Boundary

## ROADS

— Major Forest  
- - - Minor Forest  
— EPL Standard Existing (Major)  
- - - EPL Standard Existing (Minor)

## NET HARVEST AREA

FMZ 4 - Resource Unit 1  
STS Medium  
FMZ 4 - Resource Unit 2  
STS Heavy  
FMZ 4 - Resource Unit 3  
Retained BA Exclusion  
(Not available for harvest this operation)

## TENURE

Private Property

## FAUNA FEATURES

⊗ Sooty Owl  
◆ Yellow-bellied Glider (Heard)  
● Masked Owl  
◆ Yellow-bellied Glider  
◆ Grey Headed Flying Fox  
★ Gang-gang cockatoo

## DUMPS & CROSSINGS

⊙ Temporary Dry Weather

## DRAINAGE

— Drainage LIC

## OTHER FEATURES

● Permanent Bee Set Down  
◆ Significant Tree

## STREAM EXCLUSION ZONES (EPL IHL 2 & TSL)

| Feature   | Filter Strip | Protection Zone | Operational Zone |
|-----------|--------------|-----------------|------------------|
| Unmapped  | 5m           | 5m              | 10m              |
| 1st Order | 5m           | 5m              | 10m              |
| 2nd order | 5m           | 15m             | 10m              |
| 3rd order | 5m           | 25m             | 10m              |
| 4th order | 5m           | 45m             | 10m              |

0 125 250 500 750 1,000 Scale: 1:15,000  
Meters Contour Interval 10m

Prepared By: Kate Halton

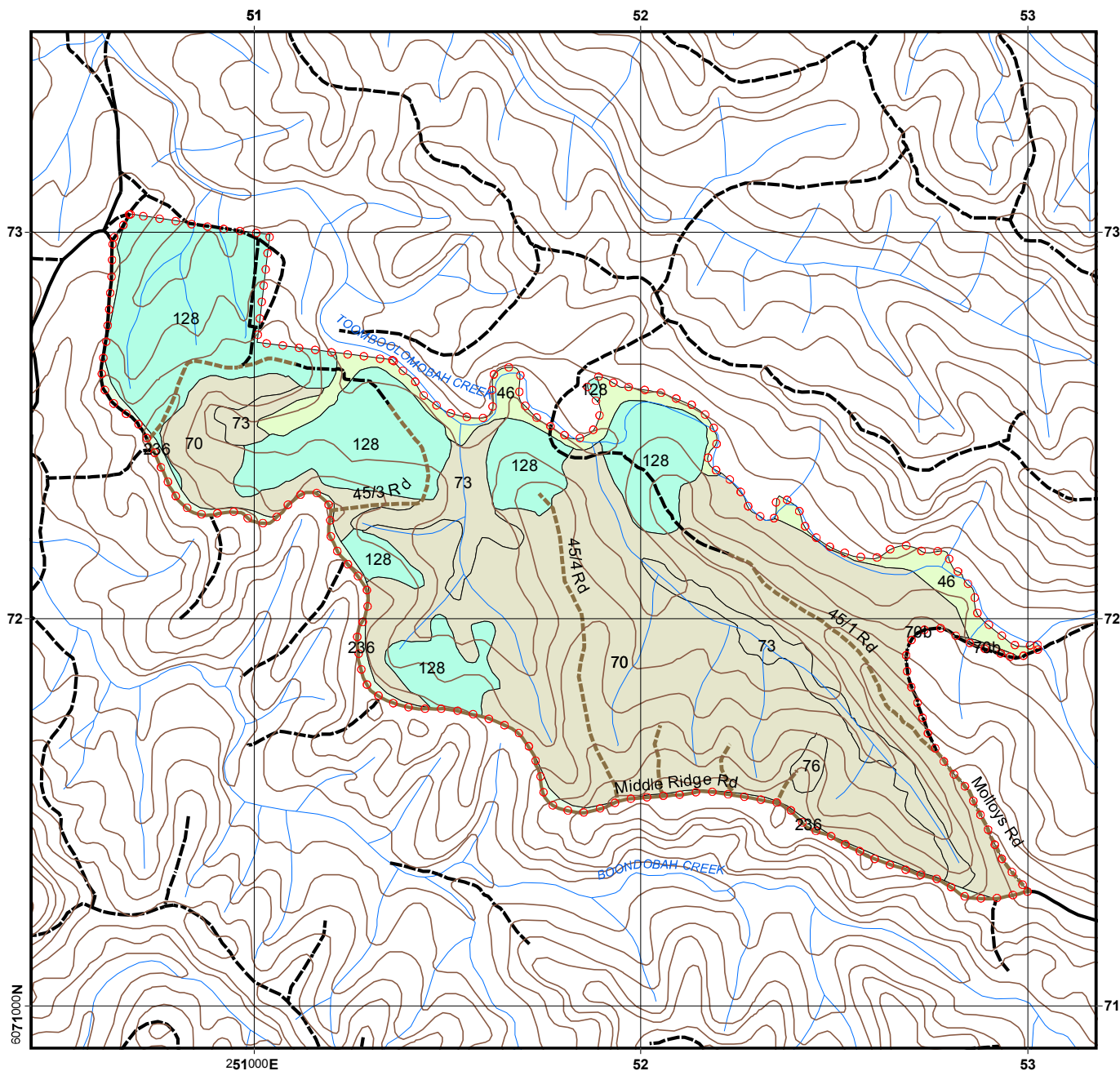
# Harvest Plan Forest Type Map

Compartment: 45

State Forest: North Brooman No: 837

SOUTHERN REGION - Native Forests

Map Sheet: TABOURIE 8927-2S



## BOUNDARIES

○ ○ ○ Compartment Boundary

## ROADS

— Major Forest  
- - Minor Forest  
— EPL Standard Existing (Major)  
- - EPL Standard Existing (Minor)

## DRAINAGE

— Drainage LIC

## FOREST TYPE

Type 46 Sydney Blue Gum  
Type 70 Spotted Gum  
Type 73 Spotted Gum - Sydney Blue Gum / Bangalay  
Type 76 Spotted Gum - Blackbutt  
Type 128 Sydney Peppermint  
Type 236 Unknown

| Main Type No | Gross Area (ha) |
|--------------|-----------------|
| 46           | 9.3             |
| 70           | 98.7            |
| 73           | 12.9            |
| 76           | 0.9             |
| 128          | 47.0            |
| 236          | 4.0             |

0 125 250 500 750 1,000 Meters Scale: 1:15,000 Contour Interval 10m



## FORESTS NEW SOUTH WALES - SOUTHERN REGION HARVESTING PLAN NATIVE FOREST

### North Brooman State Forest - Compartment 45

#### Certification

This plan has been prepared in accordance with the Integrated Forestry Operations Approval issued under the Forestry and National Park Estate Act 1998. The Standard Harvest Plan Conditions for Native Forest Operations in Southern Region, South Coast apply to this operation.

|                      |             |                             |                  |                                     |                |
|----------------------|-------------|-----------------------------|------------------|-------------------------------------|----------------|
| Prepared By:<br>HPTL | Kate Halton | Endorsed By:<br>Acting HPTL | Shane<br>Clohesy | Approved By:<br>Regional<br>Manager | Daniel<br>Tuan |
| Signature            | Kate Halton | Signature                   | Shane<br>Clohesy | Signature                           | Daniel<br>Tuan |
| Date                 | 23/12/2011  | Date                        | 23/12/2011       | Date                                | 23/12/2011     |

Note: Approval includes the Harvest Plan Operational Map (HPOM) with the corresponding approval date displayed on the map, verifying final approved version.

Other maps included with this plan are locality, forest type, roading, and cultural heritage (limited distribution).

#### Description of Proposal

##### Harvesting of native forest

Harvesting of native forest, using Single Tree Selection Silviculture subject to the Southern Region, IFOA requirements will be undertaken within this planning unit. The primary product of the harvesting is high quality large sawlogs (quota logs), small high quality sawlogs, veneer logs, girders, poles & piles where timber markets are available. Parts of felled logs that do not meet high quality log specifications are segregated and graded into other classifications such as salvage sawlogs, pulp logs & miscellaneous timbers e.g. split & round posts, firewood, mining timbers & craftwood. The availability of miscellaneous timbers depends mainly on forest types, log defectiveness & market conditions at the time of harvesting.

##### Clause 22 (IFOA) Consideration

All relevant factors have been reviewed taking into account the volume and monetary value of each forest product to supply Term Agreement Holders. The harvesting operation also complies with Clause 22 of the IFOA.

**Attachment 1:** Site Safety Plan prescribes safety requirements and Medical Emergency Evacuation Plan for this harvesting operation.

**Attachment 2:** Roading plan prescribes roading requirements for this harvesting operation.

**Attachment 3:** Burning Plan prescribes burning requirements for this harvesting operation.

Post-harvest burning should be confined as far as practicable to the Net Harvest Area. Site specific burning exclusions associated with Flora, Fauna, Cultural Heritage,

Riparian and other exclusion zones are explained within the relevant sections of this Harvest Plan and indicated on the HPOM.

Where practicable, snig track patterns should be designed to double as bare earth control lines to prevent fire entering specified burning exclusion zones and other tenures, i.e. Smoky Mouse, Southern Brown Bandicoot & significant Cultural Heritage sites.

Where this is not practical, the SFO is to assess the need for a bare earth break to be constructed close to harvesting exclusion boundaries and seek advice and approval from the Harvesting Team Leader for the additional earth works. Specific areas identified during the planning stage which require a mineral earth break are identified in the burning plan.

|  |
|--|
| <b>Area Identification and Yield Estimates</b> |
|--|

| State Forest  | Compartment/s | Region   | Management Area | Certification            | Harvest Plan ID |
|---------------|---------------|----------|-----------------|--------------------------|-----------------|
| North Brooman | 45            | Southern | Batemans Bay    | AS4708:2007<br>ISO 14001 | 3752            |

|                               | <b>45</b>                         |
|-------------------------------|-----------------------------------|
| Event ID                      | 14629                             |
| Gross Area (ha)               | 173                               |
| Net Harvest Area (ha)         | 123                               |
| Quota Logs (HQL)              | 9.5 m <sup>3</sup> /ha            |
| High Quality Small            | 0.9 m <sup>3</sup> /ha            |
| Salvage                       | 4.9 m <sup>3</sup> /ha            |
| Pulp                          | 150 t/ha (125 m <sup>3</sup> /ha) |
| Estimated Total Yield (m3/ha) | 140.3 total                       |
| Estimated Total Volume (m3)   | 17300                             |

**Forests NSW – Southern Region  
Harvesting Plan HP\_BB\_45\_11  
Compartments 45**

**Attachment 1 – Site Safety Plan**

**SAFETY CONSIDERATIONS**

**Emergency Plan Information**

(a) **Mobile Phone reception on work site:**

☒ Good ☐ Poor ☐ Nil

Nearest reliable reception: Intersection of Molloy's Road and Middle Ridge Road.

(b) **Forests NSW Radio from work site:**

Channel No: 236  
Call to: Batemans Bay  
Call sign from: Your name

**Contractor Radio at work site:**

UHF Channel No:  
Contractor Radio No:  
Call to Bush Boss:

(c) **Emergency meeting point for ambulance:**

Intersection of Molloy's Road and Middle Ridge Road.

1:100000 map sheet: Ulladulla 8927  
MGA zone: 56  
MGA Grid reference: E252998 N6071282  
Lat/Long for GPS: 35° 28' 16" S 150° 16' 40" E.

(d) **Closest Helicopter Landing Place:**

Termeil Service Station, Princes Highway Termeil (EMP 55).

1:100000 map sheet: Ulladulla 8927  
MGA zone: 56  
MGA Grid reference: E258542 N6069864  
Lat/Long for GPS: 35° 29' 13" S 145° 20' 14" E.

(e) **Procedure for obtaining Ambulance assistance:**

Dial "000" OR Call Batemans Bay Forestry Office 1300 880 548 for Ambulance assistance.

Dial "112" only as an alternative to "000" if you have a GSM digital mobile phone and you are outside your own provider's GSM network coverage area.



**"000" Operator Question.**

**Response**

1. Police , Fire , Ambulance? Ambulance Wollongong.
2. Suburb (*State Forest name*): North Brooman  
 (*Nearest town or named locality*): Termeil  
 (*Nearest Ambulance station*): Ulladulla
3. Address: (*Nearest named State forest road*): Middle Ridge Rd.
4. Nearest Road Junction: Molloy's Road and Middle Ridge Road.
5. Local Government Area: Shoalhaven
6. Nature of the problem: Give details of accident, number and  
 condition of casualties.
7. Where is the accident: Work site location – (Centre of  
Compartments).  
 MGA Grid reference: Zone 56 E251775 N6072076  
 Lat/long for GPS: 35° 27' 50" S 150° 15' 52 " E.
8. Directions to navigate from Ambulance Station to meeting point:  
 Directions from Ulladulla:
  - Head South on the Princes Highway for approx. 20km to intersection with Old Princes Hwy.
  - Turn right onto Old Princes Hwy and travel for 2.0km to intersection with Middle Ridge Rd.
  - Turn Right onto Middle Ridge Rd and travel for 5 km to Molloy's Rd.
9. Injuries?: Give detailed information about the condition  
 of the casualty.
10. Call back No.: Give your Mobile Number.  
 or Batemans Bay Office:1300 880 548.
11. Name of Reporter: Give own name.

**Site Specific Identified Hazards**

Assessment of existing hazards was undertaken at the time of planning. These hazards are in the attached table and where appropriate, control strategies have been applied. Where no control strategy has been described, the contractor must develop appropriate strategies as part of the contractor's Safety Management Plan. A copy of the hazard assessment and control strategies is provided to assist in the development of the contractor's Safety Management Plan for this harvesting area.

Identified hazards requiring risk assessment and control strategy in Safety Management Plan

| IDENTIFIED HAZARD                                       | RISK RATING | SUGGESTED CONTROL STRATEGY   |
|---|-------------|--|
| 1. Adjoining roads of various traffic levels            | 1           | Warning signs at intersections, road closure and traffic control measures.<br>60km/hr speed limit on all State Forest gravel roads unless otherwise signposted.<br>Compliance with Forests NSW lights on policy.   |
| 2. Hazardous or dead trees                              | 1           | <b>Refer to Forests NSW safety standard 1.3.9.</b> Assess area within two tree lengths of work site. Assess risk, mark any Distinctly Dangerous Trees with the symbol Ø & if necessary remove hazard or move work site. Use machinery to assist with hazard removal if possible<br><b>Contractor is responsible for implementing control strategies during harvesting.</b> |
| 3. Overhead hazards associated with dumps               | 1           | <b>Refer to Forests NSW safety standard 1.3.9.</b> Assess overhead hazard within two tree lengths of the dump. Assess risk, & if necessary remove hazard or relocate dump site.<br><b>Contractor is responsible for implementing control strategies during harvesting.</b>   |
| 4. Dust from passing vehicles along dirt haulage routes | 2           | Restrict speed to minimise dust generation, slow down when passing vehicles. Turn on driving and hazard lights to increase visibility.   |

Hazard Nos. 1 & 3 are shown on the attached HPOM

### Traffic management/road closures

The logging contractor is responsible for traffic control on all roads when felling is within two tree lengths of the tallest tree to be felled of the road or snagging on roads or loading is occurring within 10 metres of a road. Warning of trucks entering must be **displayed 200 metres either side** of all State Forest road approaches leading to areas where harvesting operations are in progress.

In addition to the above, Middle Ridge Road is frequently used by vehicles for private property access. When harvesting within two tree lengths of Middle Ridge Road this road must be temporarily closed in accordance with "TCP78\_Middle RidgeRd\_Cpt45" which is attached to this plan. Forests NSW will provide suitably accredited traffic controllers to implement this Traffic Control Plan.

Warning of timber harvesting operations must be **displayed 200 metres either side** of all thoroughfare State Forest road approaches leading to areas where harvesting operations are in progress.

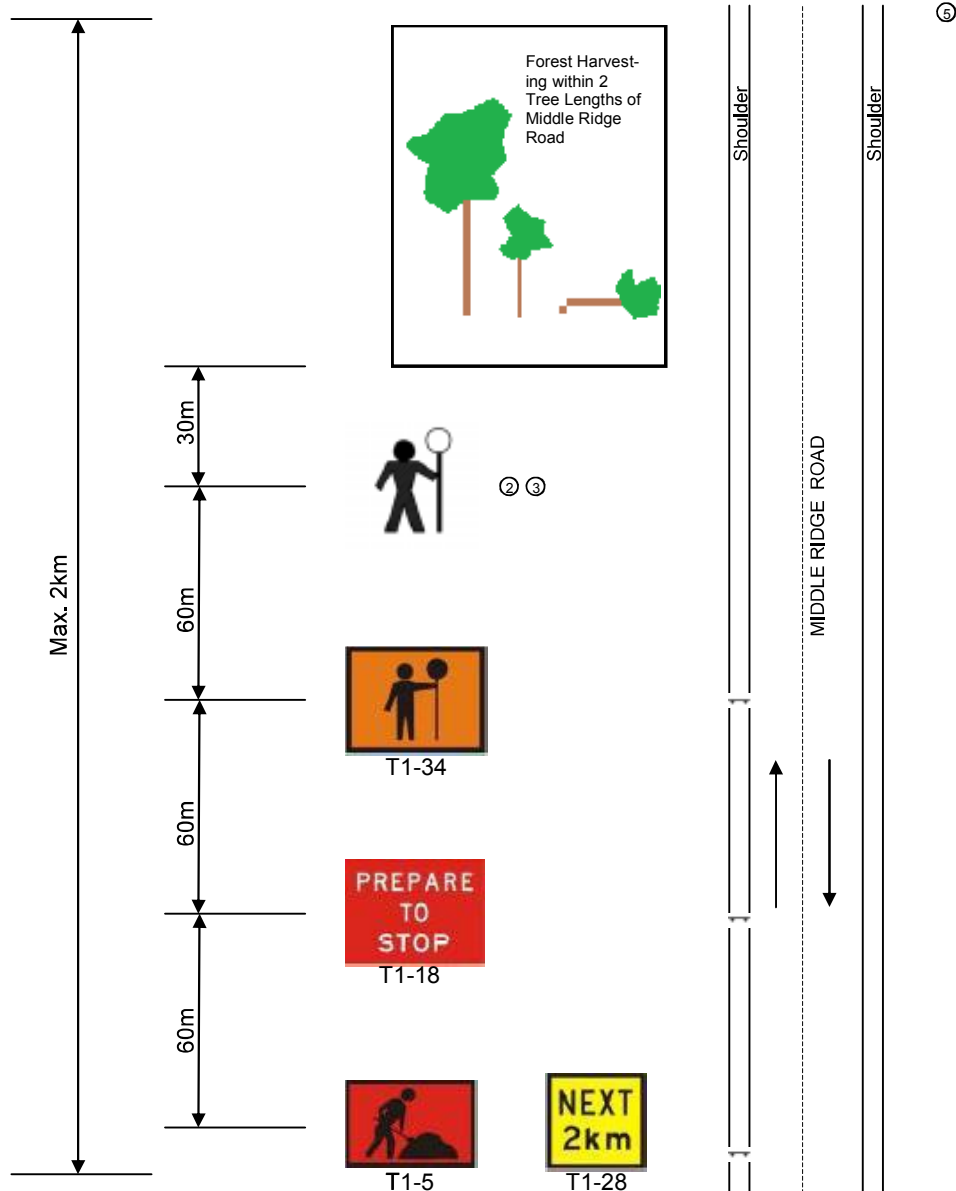
In order to cause minimal disruption to the residences along Shire owned Old Princes Hwy, trucks may travel to the compartment (empty) via Princes Highway, turning left (west) onto Old Princes Hwy then right (north-west) onto Middle Ridge Road. However when hauling from the compartment, loaded trucks must not travel east along Old Princes Hwy to the Princes Hwy.

Haulage from the compartment must be east via Middle Ridge Road turning right (west) onto Old Princess Hwy, left (east) onto Boardinghouse Road, then right (south) onto Princes Hwy. The intersection Boardinghouse Road and Princes Hwy achieves a



minimum of 200m sight distance on both approaches. Therefore at this intersection additional signage in accordance with a Traffic Control Plan is not required.

# Forests NSW Southern Region Traffic Control Plan 78: Harvesting within 2 Tree Lengths of Middle Ridge Road (modified from RTA Traffic Control at Work Site TCP 78)



## Notes:

- ① Each stoppage less than 5 minutes.
- ② Traffic controllers to stop traffic for duration of work and then direct traffic past work area, once tree falling has ceased and any debris has been cleared from road.
- ③ Traffic controllers and tree faller to maintain radio contact so that no tree falling is occurring while traffic is let through.
- ④ As ADT is less than 300 vehicles per day Traffic Controller, T1-34 & T1-18 are optional.
- ⑤ Traffic control plan must be mirrored for the other direction of traffic.

FREQUENTLY CHANGING WORK AREA  
2 LANE/2 WAY  
ADT < 300

Prepared by Kate Halton, Red Card Certificate No. 5192033076 on 22/08/2011

### Silviculture and Harvesting Prescriptions

| Year                   | 1952 | 1956 | 1960/64/<br>65/68 | 1972 | 1976 | 1986 | 1987 | 1991 | 1994 | 2008 |
|------------------------|------|------|-------------------|------|------|------|------|------|------|------|
| TSI                    | X    | X    | X                 | X    | X    | X    | √    | X    | X    | X    |
| HR Burning             | X    | X    | X                 | X    | X    | X    | X    | X    | X    | √    |
| Wildfires              | X    | √    | √                 | √    | X    | √    | X    | √    | √    | X    |
| Logging m <sup>3</sup> | √    | 0    | 0                 | 0    | 500  | 0    | 8000 | 0    | 0    | 0    |

√ - applies, X – not applicable

| Compartment | No. of Sweeps | BA Average (m <sup>2</sup> /ha) | BA Range (m <sup>2</sup> /ha) |
|-------------|---------------|---------------------------------|-------------------------------|
| 45          | 10            | 23                              | 10-36                         |

### Silvicultural Planning

#### Single Tree Selection

The STS tract (145 ha) is a predominantly even aged mature forest and will be harvested under a moderate and heavy single tree selection (STS) regime. The objective within the 123 ha net harvest area for this operation (resource unit 1 & 2) is to remove commercially mature and defective trees to create canopy openings for regeneration, whilst retaining and minimising damage to young regenerating stems, seed trees, habitat and recruitment trees.

It is envisaged that the next harvesting operation in this compartment would be on average 30 years time.

The STS tract for IFOA purposes includes the net harvest area/resource units 1, 2 & 3 of 45 as indicated on the HPOM.

**Single Tree Selection (STS) must remove no more than 45% of the basal area (BA) across the tract, while retaining a minimum BA of 10m<sup>2</sup> per hectare within resource units 1 & 2**

| Resource Unit<br>(Refer to HPOM for detail) | Species Composition  | Stand History   | Stand Structure and Condition   |
|---|--|---|---|
| 1   | Overstorey dominated by Spotted gum, Sydney Blue gum, Blackbutt and Turpentine on eastern facing slopes and towards the gullies. Some peppermints, stringybarks and woollybutt on the drier ridges and west facing slopes. | Wildfire has occurred throughout the resource unit in various years from the 1950's to the 1990's. Light selective harvesting and TSI has occurred throughout the resource unit in the 1970's and 80's. | Mixed aged stand containing mature/over-mature trees with limited growth potential interspersed with regeneration and advanced regrowth with growth potential. Good quality sawlogs throughout the resource unit. |

| Resource Unit<br>(Refer to HPOM for detail) | Species Composition   | Stand History   | Stand Structure and Condition   |
|---|---|---|---|
| 2   | Overstorey dominated by Sydney peppermint, Broad-leaved peppermint, Woollybutt and stringybarks. Eastern facing slopes and moister gullies contain some Spotted gum, Sydney blue gum and blackbutt. | Wildfire has occurred throughout the resource unit in various years from the 1950's to the 1990's. Light selective harvesting and TSI has occurred throughout the resource unit in the 1970's and 80's. | Mature\over mature even aged fully stocked forest. Little or no regrowth or potential 'growers'. Limited commercial value due to low sawlog yields and species mix. |
| 3   | Overstorey dominated by Sydney peppermint, Broad-leaved peppermint, Woollybutt and stringybarks,  | Wildfire has occurred throughout the resource unit in various years from the 1950's to the 1990's. Light selective harvesting has occurred throughout the resource unit in the 1970's and 80's.         | Mature\over mature even aged fully stocked forest. Little or no regrowth or potential 'growers'. Limited commercial value due to low sawlog yields and species mix. |

### Harvesting Prescription

| Resource Unit<br>(Refer to HPOM for detail) | % of Tract | Silvicultural Treatment  |
|---|------------|--|
| 1   | 45         | <p>STS medium:</p> <ul style="list-style-type: none"> <li>Retain and protect from fire/harvesting damage: <ul style="list-style-type: none"> <li>-poles/advanced growth (&lt;40cm DBHOB) with good form and vigour,</li> <li>-habitat and recruitment trees as per TSL,</li> <li>-retain additional dominant and co dominant trees of good form and vigour to ensure the total BA removed within the resource unit is no more than 35%, while retaining a minimum BA of 10m<sup>2</sup> per hectare.</li> </ul> </li> <li>Retained trees should be evenly spaced throughout the resource unit.</li> <li>All other products should be removed.</li> </ul> |
| 2   | 44         | <p>STS heavy:</p> <ul style="list-style-type: none"> <li>Retain and protect from harvesting/fire damage: <ul style="list-style-type: none"> <li>-poles/advanced growth (&lt;40cm DBHOB) with good form and vigour,</li> <li>-habitat and recruitment trees as per TSL.</li> </ul> </li> <li>Retained trees should be evenly spaced throughout the resource unit.</li> <li>Ensure no more than 45% of the BA within the tract is removed, while retaining a minimum BA of 10m<sup>2</sup> per hectare.</li> </ul>   |

|   |    |  |
|---|----|--|
|   |    | <ul style="list-style-type: none"> <li>All other products should be removed markets permitting. If this objective cannot be achieved the following options should be considered: <ul style="list-style-type: none"> <li>-reject tree felling (SFO must first obtain approval from harvesting team leader),</li> <li>-defer harvesting until ideal market conditions prevail,</li> <li>-consider harvesting under a light or medium STS regime</li> </ul> </li> </ul> |
| 3 | 11 | <ul style="list-style-type: none"> <li>Retained BA, exclude from harvest due to low viability and access issues.</li> </ul>  |

Note: The area of each silvicultural treatment must be mapped and recorded in the Post logging information section of this plan.

### Special Requirements

#### Non-harvest areas

The HPOM indicates the non-harvest areas in the compartments, as detailed in the legend. Harvesting disturbance is not permitted in non-harvest areas unless authorised by the Regional Manager.

#### Haulage Route

The section of Old Princess Hwy between Middle Ridge Road and Boardinghouse Road is Shire maintained. To avoid damage to this road, avoid haulage in periods of wet weather which are likely to damage the road.

#### Significant/Outstanding trees

There is a record of a significant/outstanding Spotted Gum tree (~2.6m DBHOB) in the eastern end of the compartment at GDA 252705E 6071495N. This tree must be retained. Damage to the tree must be minimised by using directional falling techniques and logging debris must not be allowed to accumulate within 5m of the tree.

#### Noxious Weeds/Disease/Pests Hygiene Requirements

Compartment 45 is within Shoalhaven Shire Council which is a designated red zone for Myrtle Rust. In order to prevent the spread of Myrtle Rust all harvesting machinery, equipment and vehicles heading south or west from Shoalhaven Shire Council must be inspected for vegetation containing Myrtle Rust and if present be washed down prior to leaving this local government area.

#### Permanent Growth and Research Plots

Any inventory plots located during the harvesting operation are to be treated the same as the surrounding area.

#### Private Property and Critical Boundaries

Private property occurs adjacent to the northern western boundary of the compartment, as indicated on the HPOM. Private property owners have been notified of the scheduled harvesting and post-harvest burning. Contact details are available from the Batemans Bay office. The table below lists neighbours who adjoin Compartment 45:

| Name | Lot Number |
|------|------------|
|      |            |

- No harvest disturbance is permitted on private property.

- Harvesting debris must not be left within five metres of the boundary fence lines.
- Any damage to fences must be repaired by the contractor.
- Access roads must be maintained free of debris and in a trafficable state.

## Occupation Permits

### Apiary

4 apiary sites provided are located within the planning unit as detailed in the table below. Contact details are available from the Batemans Bay office.

| Name | Boundary Location |
|------|-------------------|
|      |                   |
|      |                   |

- Permanent apiary set down sites are located within the compartment (see HPOM). If used for log dumps, they must be levelled and free of debris at the completion of logging.
- Permanent sites must not be ripped.
- The SFO must provide the apiary permittees with at least two weeks advance notice when bee boxes need to be removed or relocated.

## Forest Management Zoning

FMZ 4- General Management (normal harvesting prescriptions apply) occur within the entire compartment.

## IFOA Required Approval of Forestry Activities

All areas of Stream Exclusion Zones require prior Regional Manager approval before forest harvesting related activities (eg: road or snig track construction & reopening) can be undertaken. It is the responsibility of the SFO to identify any exclusion areas which will need to be crossed during harvesting. The SFO should then contact the Harvest Planner to obtain the necessary approval.

## Cultural Heritage

### Cultural Heritage

All 10 metre radius exclusion buffers are to be marked in the field as **hard exclusion zones (i.e. pink & yellow tape)** where logging and/or road works are scheduled to be undertaken. **All operators must be taken to each site within the planned area before any activities are commenced.**

## Flora and Fauna

### Refer to TSL Booklet for Conditions

#### Mark-Up Conditions

During the pre-harvest mark up the SFO must search for and record threatened species habitat features consistent with Conditions 5.2 and 8.6 of the TSL. Searches for threatened species features must be conducted within that portion of the net planned area where harvesting will occur, and within 50 metres outside this area (eg HCVOG, etc) (conditions 5.1, 5.2 of the TSL).

Where any of these features are found, the feature must be recorded, the Harvesting Plan, including the HPOM, must be amended accordingly and the appropriate condition applied.

#### Species adequately covered by general prescriptions:

The following species have been recorded in or around the compartments and are adequately covered by the general prescriptions. No further protection measures are required for these species:

**Sooty Owl** (*Tyto tenebricosa*), **Grey-headed Flying Fox** (*Pteropus poliocephalus*)

#### Tree Retention

| Zone                 | Habitat Trees/ 2ha | Recruitment Trees/ 2ha | Protection of Retained Trees | Stag Retention (only if safe) | Significant Food Resource |
|----------------------|--------------------|------------------------|------------------------------|-------------------------------|---------------------------|
| <b>Regrowth</b>      | <10                | <10                    | √                            | √                             | √                         |
| <b>TSL condition</b> | 5.6c               | 5.6d                   | 5.6g                         | 5.6e                          | 5.6 f                     |

√ - Condition applies

#### General exclusion zones

General exclusions as listed below are shown on the HPOM.

| Feature/Condition                      | TSL cond'n | Occurs within Planning Unit |
|--|------------|-----------------------------|
| <b>Rainforest</b>                      | 5.4        | No                          |
| <b>Riparian Protection Zones</b>       | 5.7        | Yes                         |
| <b>Ridge &amp; Headwater Habitat</b>   | 5.8        | No                          |
| <b>Wetlands</b>                        | 5.9        | No                          |
| <b>Heath and Scrub</b>                 | 5.10       | No                          |
| <b>Rocky Outcrops and Cliffs</b>       | 5.11       | No                          |
| <b>Endangered Ecological Community</b> | NA         | No                          |



**General Threatened Flora and Fauna Prescriptions**

| Feature                                     | Records in cpt 45 | Licence conditions under the TSC Act |
|---|-------------------|--------------------------------------|
| Threatened Frog General Protection Measures | No                | 5.12                                 |
| Bird Nest and Roost Site Protection         | No                | 5.13                                 |
| Tree Bat Roost Protection                   | No                | 5.14.1                               |
| Subterranean Roost Protection               | No                | 5.14.2                               |
| Significant Subterranean Roost Protection   | No                | 5.14.3                               |
| Protection of flying-fox Camps              | No                | 5.14.4                               |
| Burning                                     | Net planned area  | 5.16                                 |
| Ground Habitat Protection                   | Net planned area  | 5.17                                 |

**Species & Site-Specific Threatened Flora and Fauna Prescriptions**

Contractors and supervisory staff must immediately report any sightings of Schedule 1 and 2 species to the Harvesting Team Leader. The Harvesting Plan must be amended to include additional prescriptions if necessary.

The following species have been recorded within or nearby the area and the associated prescriptions must be implemented:

| Threatened species and habitat features within trigger distance                              | Records in cpt 45 | Licence conditions under the TSC Act or relevant Site-specific prescription       |
|--|-------------------|---|
| <b>Powerful Owl</b><br><i>Ninox strenua</i> ,<br>Masked Owl<br><i>Tyto novaehollandiae</i> . | No<br>No          | 6.4   |
| <b>Squirrel Glider</b><br><i>Petaurus norfolcensis</i>                                       | No                | 6.12  |
| <b>Yellow-bellied Glider</b><br><i>Petaurus australis</i>                                    | Yes               | 6.13  |
| <b>Golden-tipped Bat</b><br><i>Kerivoula papuensis</i>                                       | No                | 6.14  |
| <b>Gang Gang Cockatoo</b><br><i>Callocephalon fimbriatum</i>                                 | No                | Inform ecologist immediately if this species is detected within the compartments. |

### Fisheries Licence Conditions

Compartment 45 contains Class 1 Aquatic Habitat as defined by the Southern Region Fisheries Licence. Therefore the conditions of the fisheries licence are triggered for this operation.

Unmapped drainage lines must not be harvested within the compartment.

Riparian Exclusion Zones, Buffer Zones and Special Operational Zones must be established as per condition 7A.1 – 7A.3 of the Fisheries Licence. Operations within these zones must comply with restrictions detailed in conditions 7A.4 – 7A.10.

If a need for “in-stream works” within Class 1 Aquatic Habitat is identified during the operation (additional to any works already described within the harvest plan) the SFO must inform the Harvest Planner immediately. “In-stream works” are defined as *any activity being carried out within the incised channel or, where there is no defined bank, between the apparent edges of the watercourse.*

All “in-stream works” within Class 1 Aquatic Habitat must comply within condition 8 of the Fisheries Licence.

### Soils and Water Protection

#### Refer to EPL Booklet & Standard Plan Conditions

#### Site-specific EPL Conditions

| Elements                          | Conditions  |
|-----------------------------------|---|
| Unmapped Drainage Lines           | EPL applies (due to application of fisheries licence) |
| Drainage Feature Protection       | See HPOM for widths                                   |
| Inherent Hazard Class             | 2   |
| Dispersible Soils                 | No  |
| Seasonality Harvesting Exclusions | No  |
| Seasonality Burning Exclusions    | No  |
| Log Dumps                         | Refer relevant conditions for IHL                     |
| Snig Tracks                       | Refer relevant conditions for IHL                     |
| Roads                             | See Schedule 5 of EPL Booklet                         |
| Slope limits for harvesting       | Refer to Schedule 4B.3 of EPL                         |

#### Drainage Feature Protection

Filter strips (EPL), Protection Zones (EPL), Operational Zones (EPL), Exclusion Zones (FL), Buffer Zones (FL), Special Operational Zones (FL), Protection Zones -hard (TSL) and Protection Zones -soft (TSL) must be retained along all drainage lines, prescribed streams and watercourses within the net planned area of the compartments at minimum widths as stated in the Table below.

**Table 1: Minimum filter strip, protection zone and operational zone widths for mapped and unmapped drainage lines, prescribed streams and watercourses in native forests in Inherent Hazard Level 1 & 2 (metres – measured along the ground surface)**

| Stream Order                     | EPL Filter Strip<br>FL Exclusion Zone<br>TSL Protection<br>(hard) | EPL Protection Zone<br>FL Buffer Zone<br>TSL Protection*<br>(soft) | EPL Operational Zone<br>FL Special Operational<br>Zone |
|----------------------------------|---|--|--|
| Unmapped                         | 5   | 5  | 10   |
| 1st order                        | 5   | 5*   | 10   |
| 2nd order                        | 5   | 15*  | 10   |
| 3 <sup>rd</sup> order            | 5   | 25*  | 10   |
| 4 <sup>th</sup> order or greater | 5   | 45*  | 10   |

**Note:** \*TSL Protection zones (hard & soft) are contained within the EPL Filter strip & FL Buffer Zone, which have the greater level of protection.

#### **Log Dump Location**

20 log dumps are indicated on the HPOM. Field location of log dumps must utilise the most level site available consistent with the location indicated on the HPOM Inherent hazard level 2 Conditions 26, 27, 28, 30, 31 and 33 of Schedule 4 of the EPL must apply.

#### **Expected Felling/ Extraction & Loading Method**

The expected felling method is mechanical, extraction method by skidder, and loading method is by excavator.

#### **Drainage Feature Crossings**

There are no crossings approved for use on drainage features.

#### **Mass Movement**

Compartment 45 is not in an area identified as having a potential for mass movement. No specific prescriptions relating to mass movement/snigging are required.

#### **Suitability of existing log dams and gully stuffers**

There are no known log dams or gully stuffers on snig track crossings in the compartments.

Condition 47 of Schedule 4 of the EPL must apply.

**Road Works**

The HPOM indicates the location of existing roads and crossings.

| Feature              | Length &/or Number | Work Required |
|----------------------|--------------------|---------------|
| Existing Roads       | 6080 m (8)         | Yes           |
| New Roads            | 0                  | N/A           |
| Existing Crossings   | 0                  | N/A           |
| New Crossing         | 0                  | N/A           |
| Borrow & Gravel Pits | 0                  | N/A           |

**Roading and Crossing details are contained within Attachment 2 of this Plan.**

**The roading and crossing works must be undertaken, by contractor or Forests NSW staff, prior to the commencement of harvesting activity in the area served by the road or crossing.** Forests NSW will supervise and pay for the maintenance works.

Within the compartment boundary only roads that are shown on the HPOM as EPL standard or sealed may be used for haulage. **Refer to EPL Schedule 5 – Operating Conditions for Roads.**

Roads within the compartment boundary may be used with SFO approval for snagging or extraction provided they are drained to EPL specifications.

### Legal Conditions

In 2001, the Commonwealth and NSW Governments signed a Southern Regional Forest Agreement which, among other things, allows for the supply of timber for 20 years from public lands under the following NSW legislation:

- Forestry Act 1916, and
- Forestry & National Park Estate Act 1998

The latter Act provides for the Southern Forest Agreement and Southern Integrated Forest Operations Approval (IFOA), both approved by NSW Government Ministers in May 2002. This harvest plan is issued under the authority provided within the IFOA.

The IFOA also contains three licences issued under:

- Section 55 of the Protection of the Environment Act 1997 (EPL)
- Threatened Species Conservation Act 1995 (TSL).
- Section 220ZW of the Fisheries Management Act 1994 (FL).

This harvest plan will be managed in the field under:

- Licences issued under the Forestry Act (1916)
- Forest Practices Code part 2 (Timber Harvesting in Native Forests - 1999) and part 4 (Forest Roads and Fire Trails - 1999)
- Standard Harvest Plan Conditions for Native Forest Operations Under the IFOA, Southern Region-South Coast Area.

Harvesting operations must comply with all of the above Licences and the Code (unless otherwise specified).

Further information is available from <http://www.environment.nsw.gov.au/>

**Pre-Operational Briefing**

I acknowledge that I have received a copy of the Harvesting Plan for Compartments 45 in North Brooman 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 Harvesting Team Leader or his/her delegate.

| Position | Name | Signature | Date |
|----------|------|-----------|------|
|          |      |           |      |
|          |      |           |      |
|          |      |           |      |
|          |      |           |      |
|          |      |           |      |
|          |      |           |      |
|          |      |           |      |
|          |      |           |      |

**Details to Record in SFO Notes**

- Dates of commencement and cessation of logging
- Record the commencement and completion of harvesting at each dump
- Record the occurrence of temporary stopping of harvesting at each dump.
- Situations where drainage could not be completed due to saturated soils must be recorded in SFO Notes.
- Record the commencement and completion of each construction, upgrading or maintenance of drainage feature crossings by snig tracks or extraction tracks.
- Bi-weekly checks of road drainage structures during haulage operations.
- Record the date of checks, drainage structure compliance and the any repairs required within the specified time period.
- Records of Threatened Flora and Fauna identified during compartment markup.
- Minor variations associated with moving or adding dumps.
- Daily events of importance eg. Instructions to crew, work activity.

**Post Harvest Mapping Features Confirmation Checklist**

| Feature           | Planning Updates | Reason (Error/New) | GIS update tool completed? | Harvesting Updates | Comments |
|-------------------|------------------|--------------------|----------------------------|--------------------|----------|
| Soil Regolith     | No               |                    |                            |                    |          |
| Mapped Drainage   | No               |                    |                            |                    |          |
| Rainforest        | No               |                    |                            |                    |          |
| Rocky outcrops    | No               |                    |                            |                    |          |
| Wetlands          | No               |                    |                            |                    |          |
| Cultural Heritage | No               |                    |                            |                    |          |
| Existing Roads    | Yes              | Error              | Yes                        |                    |          |
| New Roads         | No               |                    |                            |                    |          |
| Heath             | No               |                    |                            |                    |          |
| Powerlines etc    | No               |                    |                            |                    |          |





## SFO Notes

[illegible]

## SFO Notes (continued)

[illegible]

|                              |
|------------------------------|
| <b>SFO Notes (continued)</b> |
|------------------------------|

[illegible]

|                              |
|------------------------------|
| <b>SFO Notes (continued)</b> |
|------------------------------|

[illegible]

|                              |
|------------------------------|
| <b>SFO Notes (continued)</b> |
|------------------------------|

[illegible]

**Clearance Certificate**

**COMPARTMENTS: 45**

**NORTH BROOMAN STATE FOREST, SOUTHERN REGION**

To .....Supervising Forest Officer

I request approval for me to move my logging crew and all associated machinery from the above-mentioned area to the next compartment in accordance with Section 3.5 of the Forest Practices Code.

I certify that:

- (a) all permanent roads, trails and mitre drains have been cleared of harvesting debris;
- (b) butt damage to retained trees has been kept to acceptable limits;
- (c) all trees marked for removal have been felled;
- (d) utilisation limits have been satisfactorily met;
- (e) stump heights conform to requirements;
- (f) all hanging trees have been felled and brought down;
- (g) all log dumpsites have been satisfactorily restored as required;
- (h) harvesting debris is not accumulated around retained trees;
- (i) all accumulated litter has been disposed of properly;
- (j) all filter and buffer strip requirements have been complied with;
- (k) all snig track, extraction track and temporary logging road drainage has been installed satisfactorily and other required rehabilitation work has been completed;
- (l) all necessary repairs to damaged roads, signs, fences and other structures have been carried out.
- (m) **\_\_\_\_\_ (insert quantity) rubber flaps have been recovered in a satisfactory condition and reported to Operations Branch for collection.**
- (n) all machinery, equipment and vehicles have been checked and are free of noxious weeds, diseases and pests.

I believe that I have met all my obligations under the conditions of the Timber Licence, the EPL and TSL which apply to the compartment just completed, as stated in this Harvesting Plan.

Signature.....Name.....Date .....  
Contractor

As a result of inspections of the logging operations made in accordance with this Harvesting Plan, I am satisfied that, to the best of my knowledge, the contractor responsible for this harvesting operation has satisfactorily completed all work and approval is given for her/him to remove her/his machinery and equipment and leave the area/commence operations in another compartment.

This clearance does not release the contractor from any obligation to undertake any remedial work if subsequent deficiencies are shown to result from inadequate practices during the harvesting operation, which are found during any inspections of the area made within 12 months of the date of this post-harvesting inspection.

Last inspection was made on .....(Date)

Signed .....(Date).....  
Supervising Forest Officer

**Post Logging Information**

Record any circumstances of significance relating to the harvesting of this compartment. Please draw or include any annotations on the attached operation scale map.

**Summary of silvicultural treatment**

| Treatment type             | Area (ha) subject to treatment (SFO estimate) | Number of AGS gaps created | Comments |
|----------------------------|---|----------------------------|----------|
| Australian Group Selection |   |                            |          |
| Single Tree Selection      |   |                            |          |
| Thinning/Spacing           |   |                            |          |
| Post Harvest Silviculture  |   |                            |          |

**Actual area harvested (record on attached HPOM)**

Give reasons for harvestable areas that were not harvested (eg. Too steep, defective timber). Make reference to map.

**Post Logging Basal Area sweeps**

| Dump No# | Sweep 1 | Sweep 2 | Sweep 3 | Sweep 4 | Average               |
|----------|---------|---------|---------|---------|-----------------------|
|          |         |         |         |         |                       |
|          |         |         |         |         |                       |
|          |         |         |         |         |                       |
|          |         |         |         |         |                       |
|          |         |         |         |         |                       |
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|          |         |         |         |         |                       |
|          |         |         |         |         |                       |
|          |         |         |         |         |                       |
|          |         |         |         |         |                       |
|          |         |         |         |         |                       |
|          |         |         |         |         |                       |
| Post BA  |         |         |         | Average | m <sup>2</sup> /ha    |
| Pre BA   |         |         |         | Average | 23 m <sup>2</sup> /ha |

Comply with maximum STS BA removal of 45% or Thinning BA removal of 60%

Y/N

**Possible next cut (tick appropriate boxes)**

| Main product type | Anticipated volume |   |   |
|-------------------|--------------------|---|---|
|                   | H                  | M | L |
| Girders           |                    |   |   |
| Veneer            |                    |   |   |
| Poles/piles       |                    |   |   |
| Quota             |                    |   |   |
| Smalls/Thinnings  |                    |   |   |
| Salvage           |                    |   |   |
| Pulpwood/chipwood |                    |   |   |

| Time to next harvest |  |
|----------------------|--|
| 0 to 5 years         |  |
| 5 to 10 years        |  |
| 10 to 20 years       |  |
| 20 to 30 years       |  |
| 30 plus years        |  |



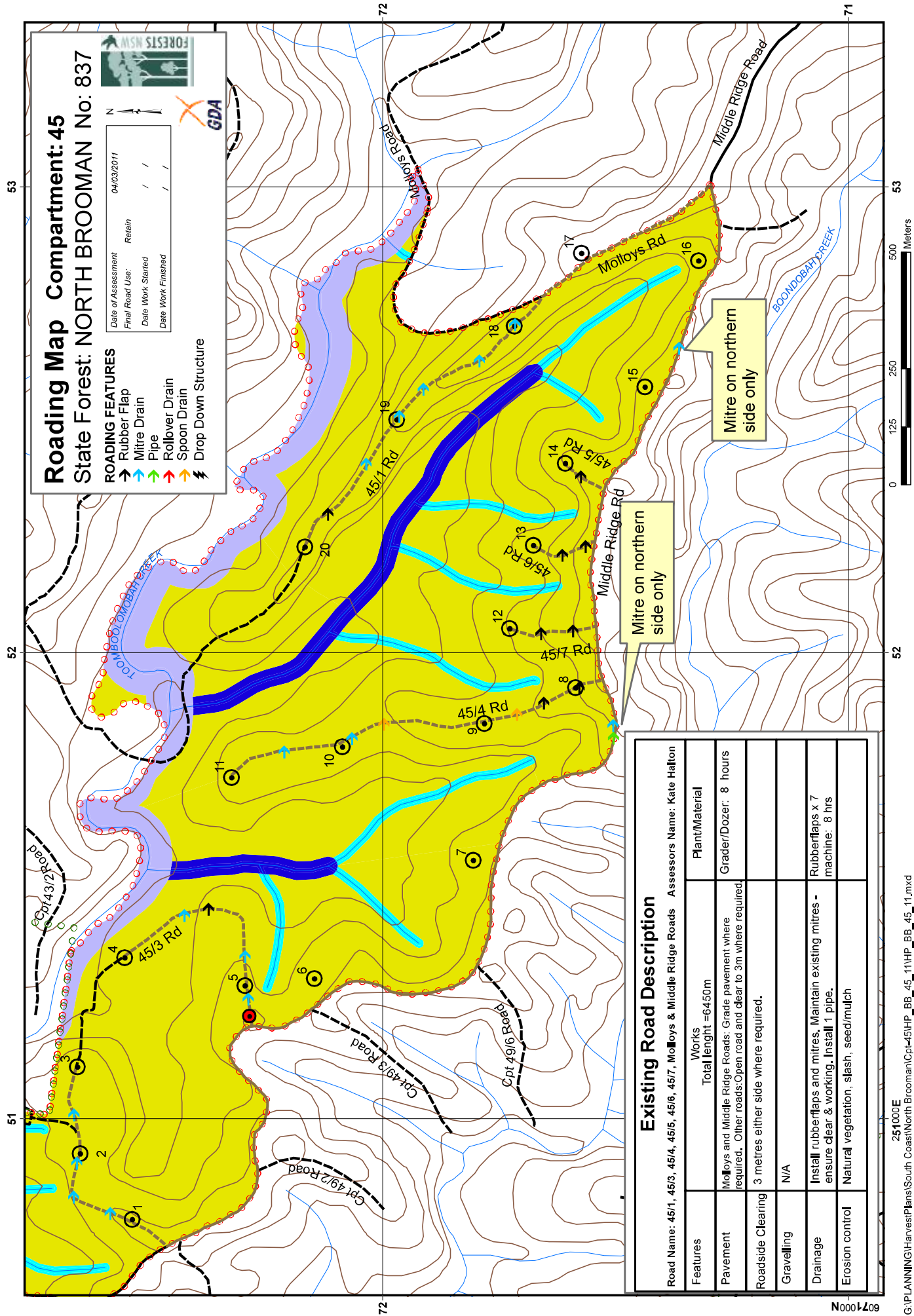


|           |  |  |  |  |
|-----------|--|--|--|--|
| 45/3 Road | Reopen/reshape road and clear to 3m where required. Install mitres and 1 rubber flap as per roading map and marked in the field.<br><br><b>Ops/SFO Comments:</b> |  |  |  |
| 45/4 Road | Reopen/reshape road and clear to 3m where required. Install mitres and 2 rubber flap as per roading map and marked in the field.<br><br><b>Ops/SFO Comments:</b> |  |  |  |
| 45/5 Road | Reopen/reshape road and clear to 3m where required.<br><br><b>Ops/SFO Comments:</b>  |  |  |  |
| 45/6 Road | Reopen/reshape road and clear to 3m where required. Install 1 rubber flap as per roading map and marked in the field.<br><br><b>Ops/SFO Comments:</b>            |  |  |  |
| 45/7 Road | Reopen/reshape road and clear to 3m where required. Install 2 rubber flap as per roading map and marked in the field.<br><br><b>Ops/SFO Comments:</b>            |  |  |  |

**Note:** Maintenance works not completed by Operations must be recorded and passed onto the SFO Harvesting for completion and documentation.

The start and finish dates of all maintenance and construction must be recorded on the individual roading sheets along with other relevant changes or explanations.

All rubber flaps on minor forest roads must be removed and replaced with trafficable rollover banks on completion of operation.



| Existing Road Description  |  |                                |
|--|--|--------------------------------|
| Road Name: 45/1, 45/3, 45/4, 45/5, 45/6, 45/7, Molloy's & Middle Ridge Roads Assessors Name: Kate Halton |  |                                |
| Features   | Works  | Plant/Material                 |
| Pavement   | Total length = 6450m<br>Molloy's and Middle Ridge Roads: Grade pavement where required. Other roads: Open road and clear to 3m where required. | Grader/Dozer: 8 hours          |
| Roadside Clearing  | 3 metres either side where required.   |                                |
| Gravelling   | N/A  |                                |
| Drainage   | Install rubberflaps and mitres. Maintain existing mitres - ensure clear & working. Install 1 pipe.   | Rubberflaps x 7 machine: 8 hrs |
| Erosion control  | Natural vegetation, slash, seed/mulch  |                                |

## ATTACHMENT 3

## POST-HARVEST BURNING PLAN



## 6.08.01 Bush Fire Mapping Symbols

DTG refers to *Date Time Group* which uses the two digits for the date and 24 hour time, eg 10:51hrs on 4 November would be: **04 1051**

| NAME   | SYMBOL                            | NOTES  |
|--|-----------------------------------|--|
| PREDICTED (fire edge)  |                                   | Show DTG   |
| GOING (fire edge)  |                                   | Show DTG   |
| CONTAINED (fire edge)  |                                   | Show DTG   |
| PROPOSED (control line)  | X—X—X—X—X—X—                      | Draw on far side of feature                              |
| COMPLETED (control line)   | X+X+X+X+X+X+                      | Show DTG   |
| PROPOSED (backburn)  |                                   | Draw on near side of feature                             |
| COMPLETED (backburn)   |                                   | Show DTG   |
| BACKBURN BURNING IN  |                                   | Lines show depth of burn at DTG                          |
| <b>RED – FIRE</b> <b>BLACK – CONTROL LINES</b> <b>BLUE – WRITING &amp; SYMBOLS</b> |                                   |  |
| △ Strategic or Tactical Significance   | ○ Command, Control & Coordination | □ Logistics Related                                      |
|  |                                   | ◇ Assets to be Protected                                 |
| Fire Origin  | Red                               | Show DTG   |
| Fire Direction   | Blue F →                          | Show DTG   |
| Wind Direction   | Blue W →                          | Show DTG   |
| Spot Fire  | Red *                             | Isolated fire ahead of main fire                         |
| Burnt Area   | Black                             | Burnt area (if old, show month and year)                 |
| Aerial Ignition  | Red ::::                          | Proposed path to be treated                              |
| Divisional Boundary  | Blue Y                            | Use geographical names                                   |
| Sector Boundary  | Blue OOOOO                        | Use alphabetical names                                   |
| Refuge Area  | Blue                              | Escape Route (Add arrow to show safe exit)               |
| Control Centre<br>(Incident Management Team location)                              | Blue                              | Staging Area (Where resources are prepared or available) |
| Divisional Command   | Blue                              | Base Camp  |
| Sector Command   | Blue                              | Airbase<br>(Fixed wing and/or helicopter base)           |
| Helipad  | Blue                              | Water Point Helicopter<br>(Helicopter water supply)      |
| Water Point Vehicle<br>(Firefighting water supply)                                 | Blue                              | Aboriginal Site or Artifacts                             |
| Ambulance Location   | Blue                              | Endangered Flora   |
| Threatened Property  | Blue                              | Endangered Fauna   |
| Historic Site<br>(Building or Structures)  | Blue                              |  |

The use of colours is optional.

## PLANNING INFORMATION

**LGA:** Shoalhaven

### Fuel Management Zone & Proposed Burn Summary

Refer to area identification and silviculture and harvesting prescription sections of harvest plan. **Season:** Winter / Spring

**Zone 3B** (Post-Harvest)

## REGIONAL BURNING GUIDELINES

**Max Temp (°C):** 25      **Min RH (%) :** 30      **Max Wind Speed (km/h):** < 20 Southerly aspect  
< 15 Northerly aspect

**Max BKDI:** < 70      **Max FDI:** 7 ( subject to area assessment). **Scorch Height:** 0.6 x dominant tree height – Post Log  
10m – Broad Area

**Max Fuel Moisture Range:** 12-25%      **Max Rate of Spread:** < 300m/hr.      **Average Flame height:** up to 4m – Post Log  
<1 – 2m – Broad Area

**Fuel Reduction Objectives:** 60 -80% of net area to be burned.      **Reduce fine fuels to:** manageable levels - Post Log  
4 – 8t/ha – Broad Area

## BURN AREA INFORMATION

**Fuel loads:** 50-150 tons per hectare of logging slash, 10 – 20 tons per hectare in between tree heads.

**Fuel arrangement:** Multi-tiered structure (litter, grasses, shrubs, eucalypt regeneration and mature trees)

**Terrain:** **Terrain:** 0% > 30°, 0% @ 25°-30°, <1% @ 20°-25°, 21% @ 10°-20°, 75% @ 0°-10° slope.

**Time since last burn:** 2008 (hazard reduction)

## IMPORTANT BURNING PRESCRIPTIONS

- A small test burn must always be lit prior to main burn. This will assist in determining FIRE BEHAVIOUR and IGNITION PATTERNS.
- **Seek information from Harvesting SFO on regrowth excluded burn areas.**
- Sections will be lit by drip torch to a determined ignition pattern.
- Areas will generally be burnt from ridge tops down and into the wind to minimise excessive fire behaviour.
- **Minimise fire intensity in regrowth stands.**

## BURN OBJECTIVES

- To reduce fuel loads to 4-8 tonnes/ha. (assisting future fire suppression)
- A burn coverage between 60-80%
- To contain fire within designated boundaries.
- To observe and record data, assisting in future high fuel load and advanced regrowth area burns.
- To minimise crown scorch; not exceeding 10% of dominant and co-dominant crowns.
- To minimise defect damage to retained regrowth stems.

## ENVIRONMENTAL PRESCRIPTIONS

**FLORA AND FAUNA:**

Refer to Flora and Fauna sections of the Harvest plan document. H & R trees should be raked around if the risk of burning is high. Logging slash collected around retained trees should not be burnt.

**SOIL, WATER & AQUATIC HABITAT:**

Refer to Soils and Water and Drainage Features sections of the Harvest plan document.

- Preferred months of burn – April to September
- Fuel moisture differentials will be utilised to minimise impacts upon drainage features within the burn area

**ABORIGINAL CULTURAL HERITAGE:**

Refer to the cultural heritage section of the Harvest plan document. Significant sites, e.g. scar trees, groove stones, should be raked around to prevent fire damage. Where practically possible, burning of scattered artefacts should be avoided.

## CONTROL AND STRATEGY

**CONTROL LINES:**

| EXISTING<br>Description of each control line   | Description of Work Required               | Completed<br>Yes /No |
|--|--|----------------------|
| Middle Ridge Road and Molloy's Road  | Nil  |                      |
| EPL Standard Minor Roads (as per HPOM)   | Nil  |                      |
| Toomboolomobah Creek   | Fuel moisture >16%                         |                      |
| Check for trees that could burn down and fall over any boundary roads and wet down or rake around as necessary |  |                      |
| PROPOSED<br>Description of each control line   | Description of Work Required               | Completed<br>Yes /No |
| Additional control lines may be required where snig track network is not adequate along boundaries of NHA      | To be determined by SFO during harvesting. |                      |
| Private Property Boundary  | To be determined by SFO during harvesting. |                      |

**SMOKE HAZARD AND MANAGEMENT:** <http://www.bom.gov.au/general/reg/smoke/nsw/index.shtml>

Smoke / Hazard Reduction Signs required?..... 5 YES 5 NO (☑ tick to indicate)

Smoke Dispersion Forecasting via BOM utilised?..... 5 YES 5 NO (☑ tick to indicate)

| Safety Considerations (pre-burn) |   | DAY 1 | DAY 2 | DAY 3 | DAY 4 | DAY 5 | DAY 6 | DAY 7 |
|----------------------------------|---|-------|-------|-------|-------|-------|-------|-------|
| Personnel                        | Names of fire crew documented daily.  |       |       |       |       |       |       |       |
| Visitors on site                 | Visitor on site induction carried out   |       |       |       |       |       |       |       |
| Neighbours notified              | Documented in plan  |       |       |       |       |       |       |       |
| Traffic control                  | Traffic control signs to regulate traffic if required   |       |       |       |       |       |       |       |
| Smoke management:                | Assessment of prevailing winds at the time of burn.<br>Road side signs warning of smoke hazard. |       |       |       |       |       |       |       |
| Supervisor to initial            |   |       |       |       |       |       |       |       |

**Pre-burn preparation activities and responsibilities.**

| Activity   | Specifications and tasks   | Responsibility<br>(inc date) | Signature |
|--|--|------------------------------|-----------|
| Fuel monitoring  | Regular monitoring prior to burning  |                              |           |
| Weather monitoring   | Conducted prior to and during burning operations.  |                              |           |
| Trail preparation <ul style="list-style-type: none"> <li>D3</li> <li>Hand tools</li> </ul> | Mineral earth control lines prepared prior to burning to contain fire within designated burning block. |                              |           |
| Neighbour liaison  | Notification and communications documented.  |                              |           |
| Liaison with fire & emergency authorities  | "as above"   |                              |           |
| Media releases   | To advise local community of SF burning activities.  |                              |           |
| Radio station notifications  | "as above"   |                              |           |
| Equipment  | Ensure all required equipment is available.  |                              |           |
| Communications   | "as above"   |                              |           |
| Visitor Safety   | Burn is sign posted. All visitors to report to burn supervisor immediately                             |                              |           |
| Burn approval  | Daily burn approvals given by delegated officers   |                              |           |

**NOTIFICATION & RESOURCE REQUIREMENTS**

Neighbours..... 5

Contractors..... 5

Lessees..... 5

Apiarists..... 5

Shire FCO..... 5

Govt Agencies..... 5

**NOTIFICATION REGISTER****RFS (Rural Fire Service) 5**

| Name | Position | Phone Number | Notified |
|------|----------|--------------|----------|
|      | FCO      |              |          |
|      |          |              |          |

**NEIGHBOURS: (Refer to compartment planning folder for details prior to burning)**

| Owner | Postal Address | Lot / Plan | Phone | Notification Letters sent | Reply Received |
|-------|----------------|------------|-------|---------------------------|----------------|
|       |                |            |       |                           |                |
|       |                |            |       |                           |                |
|       |                |            |       |                           |                |

**APIARISTS: (Refer to compartment planning folder for details prior to burning)**

| Name | Site Number/s | Phone Number | Notified |
|------|---------------|--------------|----------|
|      |               |              |          |
|      |               |              |          |
|      |               |              |          |



**DAILY CREW SMEACS BRIEFING SHEET**

(tick daily when briefed)

**SITUATION**

DAY 1 2 3 4 5 6 7

- Burn area to be treated (location, boundaries, control line types and exclusive areas) ..... ☐☐☐☐☐☐☐
- Burn area characteristics (e.g. terrain, forest cover, sensitive areas, etc) ..... ☐☐☐☐☐☐☐
- Burn area access by road class (checked beforehand, dead ends, watering points etc.) ..... ☐☐☐☐☐☐☐
- Fuel Loadings and fire behaviour prescriptions for the HRB area ..... ☐☐☐☐☐☐☐
- Staging areas ..... ☐☐☐☐☐☐☐
- Expected weather ..... ☐☐☐☐☐☐☐

**MISSION**

- Overall aim of the hazard reduction burn ..... ☐☐☐☐☐☐☐
- Site specific aims for sections of the HRB (eg, protection of patches of advanced regrowth, rainforest pockets, buildings, bridges, etc.) ..... ☐☐☐☐☐☐☐
- Secondary aim/s should the HRB escape ..... ☐☐☐☐☐☐☐

**EXECUTION**

- Plant and manpower resources (FNSW, RFS, DEC, others) ..... ☐☐☐☐☐☐☐
- Division of burn area into 'Sections' ..... ☐☐☐☐☐☐☐
- Starting points, starting times, finish times (start 'down wind' if possible) ..... ☐☐☐☐☐☐☐
- Safe 'approved' lighting patterns and directions ..... ☐☐☐☐☐☐☐
- Work down-slope, keeping below active fire (except where good fuel breaks occur) ..... ☐☐☐☐☐☐☐
- Location and activity of other burning crews ..... ☐☐☐☐☐☐☐
- Personal and crew safety - buddy system when lighting up ..... ☐☐☐☐☐☐☐
- Progress reports at pre-designated times ..... ☐☐☐☐☐☐☐
- Maintain awareness of other burning crews (do not light up below other burning crews) ..... ☐☐☐☐☐☐☐
- Expected fire behaviour, trouble points and contingency plans ..... ☐☐☐☐☐☐☐
- Actions to be taken in the event of an escape e.g. to pause the light-up ..... ☐☐☐☐☐☐☐
- End of burn debrief e.g. reporting areas requiring 'follow-up' patrols after burn ..... ☐☐☐☐☐☐☐

**ADMINISTRATION**

- Reporting field fire weather to the office at regular times ..... ☐☐☐☐☐☐☐
- Receiving forecast weather reports from office ..... ☐☐☐☐☐☐☐
- Logistical support (fuel, food, water, heavy plant, back-up crews etc.) ..... ☐☐☐☐☐☐☐

**CONTROL, COMMAND, COMMUNICATIONS**

- Chain of command (burn supervisor and sector bosses) ..... ☐☐☐☐☐☐☐
- Communications systems for fire-ground and command (UHF & VHF radios, mobile phones) ..... ☐☐☐☐☐☐☐

**SAFETY**

- Medical Emergency Evacuation Plan & Site Safety Plan ..... ☐☐☐☐☐☐☐
- Areas of likely tree or limb falling hazards (methods to identify/mark hazards) ..... ☐☐☐☐☐☐☐
- Look up and look around procedure (for self and workmates) ..... ☐☐☐☐☐☐☐
- Location first aid kits and first aiders ..... ☐☐☐☐☐☐☐
- Pre-burn safety actions including 'Smoke Hazard' sign locations, traffic control plan etc ..... ☐☐☐☐☐☐☐
- Location of safety zones, and escape routes ..... ☐☐☐☐☐☐☐
- Safe parking of SF vehicles within the burn area and vehicle speeds during the burn ..... ☐☐☐☐☐☐☐
- Crew vehicles to have headlights and flashing beacons on where practicable ..... ☐☐☐☐☐☐☐
- Schedule adequate rest breaks and set appropriate work pace ..... ☐☐☐☐☐☐☐
- Ensure crews have access to supplies of drinking water ..... ☐☐☐☐☐☐☐
- Visitors to the site are inducted into the SSP ..... ☐☐☐☐☐☐☐

|                                       |                                       |
|---------------------------------------|---------------------------------------|
| Day 1 - Burn Supervisor.....Date..... | Day 2 - Burn Supervisor.....Date..... |
| Day 3 - Burn Supervisor.....Date..... | Day 4 - Burn Supervisor.....Date..... |
| Day 5 - Burn Supervisor.....Date..... | Day 6 - Burn Supervisor.....Date..... |
| Day 7 - Burn Supervisor.....Date..... | Day 8 - Burn Supervisor.....Date..... |

**EMPLOYEE IDENTIFICATION**

| EMPLOYEE            | NAME | PROOF OF ACCREDITATION<br>(Eg. FNSW RECORDS) | DATE | SUPERVISOR OR RELEVANT AGENCY SIGNATURE |
|---------------------|------|--|------|---|
| Incident Controller |      |  |      |   |
| Burn Supervisor     |      |  |      |   |
| Crew Leader         |      |  |      |   |

|                    |  |  |  |  |
|--------------------|--|--|--|--|
| <b>Crew Leader</b> |  |  |  |  |
| <b>Crew Member</b> |  |  |  |  |
| <b>Crew Member</b> |  |  |  |  |
| <b>Crew Member</b> |  |  |  |  |
| <b>Crew Member</b> |  |  |  |  |
| <b>Crew Member</b> |  |  |  |  |
| <b>Crew Member</b> |  |  |  |  |
| <b>Crew Member</b> |  |  |  |  |
| <b>Crew Member</b> |  |  |  |  |

| Personnel and equipment requirements: |               |      |          |               |
|---------------------------------------|---------------|------|----------|---------------|
| Resource                              | State Forests | NPWS | Brigades | SFO Signature |
| Incident Controller                   |               |      |          |               |
| Crew Leaders                          |               |      |          |               |
| Crew Members                          |               |      |          |               |
| Tankers                               | 1             |      |          |               |
| Slip – on Units                       | 1+            |      |          |               |
| Dozer                                 | n/a           |      |          |               |
| Helicopter                            | n/a           |      |          |               |
| Radios – handheld UHF                 | 1 per person  |      |          |               |
| Weather monitoring equip.             | 1 per crew    |      |          |               |

Burning Operations Record**Forecast Weather and Indices** (Obtain from Office)

See attached daily weather forecasts and relevant indices obtained from the Bureau of Meteorology

**Burn Site Weather Readings**

Take daily on site readings (hourly if possible) and note un-forecast weather changes.

| Date | Time | Temp<br>(°C) | RH<br>(%) | Wind<br>Direction | Wind Sp.<br>(km/h) | FDI | FMC<br>% | COMMENTS |
|------|------|--------------|-----------|-------------------|--------------------|-----|----------|----------|
|      |      |              |           |                   |                    |     |          |          |
|      |      |              |           |                   |                    |     |          |          |
|      |      |              |           |                   |                    |     |          |          |
|      |      |              |           |                   |                    |     |          |          |
|      |      |              |           |                   |                    |     |          |          |
|      |      |              |           |                   |                    |     |          |          |
|      |      |              |           |                   |                    |     |          |          |
|      |      |              |           |                   |                    |     |          |          |

**FIRE BEHAVIOUR**

|      |            | <i>PREDICTED</i>    |               |                      | <i>ACTUAL</i>             |               |          |
|------|------------|---------------------|---------------|----------------------|---------------------------|---------------|----------|
| Date | Time (hrs) | Flame Height<br>(m) | ROS<br>(m/hr) | Assessment<br>Method | Flame Height<br>(average) | ROS<br>(m/hr) | Comments |
|      |            |                     |               |                      |                           |               |          |
|      |            |                     |               |                      |                           |               |          |
|      |            |                     |               |                      |                           |               |          |
|      |            |                     |               |                      |                           |               |          |
|      |            |                     |               |                      |                           |               |          |
|      |            |                     |               |                      |                           |               |          |
|      |            |                     |               |                      |                           |               |          |
|      |            |                     |               |                      |                           |               |          |

**Ignition details – DATE (s).....****Type:** Aerial / Ground    **Method:** Contour / Ridge / Road edge / Top disposal    **Pattern:** Line / Spots**Incendiary Capsules used:** \_\_\_\_\_ (aerial ignition only)**Ignition details – DATE (s).....****Type:** Aerial / Ground    **Method:** Contour / Ridge / Road edge / Top disposal    **Pattern:** Line / Spots**Incendiary Capsules used:** \_\_\_\_\_ (aerial ignition only)**Ignition details – DATE (s).....****Type:** Aerial / Ground    **Method:** Contour / Ridge / Road edge / Top disposal    **Pattern:** Line / Spots**Incendiary Capsules used:** \_\_\_\_\_ (aerial ignition only)**Ignition details – DATE/s****Type:** Aerial / Ground    **Method:** Contour / Ridge / Road edge / Top disposal    **Pattern:** Line / Spots**Incendiary Capsules used:** \_\_\_\_\_ (aerial ignition only)**POST BURN ASSESSMENT**

Estimated burn coverage (% of net area):.....%

Estimated burn coverage:.....ha

Fine fuel reduced to an average of :.....t/ha

Estimated area of crown scorch :..... %

**OPERATIONAL PERFORMANCE REVIEW**

Burn complete?    Yes/No

Follow up action required ?    Yes/No

Burn contained within planned boundaries?    Yes/No

Burn coverage objective met?    Yes/No

Fine fuel reduction objective met?    Yes/No

Environmental prescriptions met?    Yes/No

Threatened Species License conditions met?    Yes/No

Fisheries License conditions met?    Yes/No

Remedial Action required (if any): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Remedial works certified complete.

Work Supervisor \_\_\_\_\_ Date: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Attach additional pages as required