Forestry Corporation

1:100,000

Contour Interval 10m

GDA_1994_MGA_Zone_56

# FORESTRY CORPORATION OF NSW, HARDWOOD FORESTS DIVISION
## HARVEST PLAN OPERATIONAL MAP

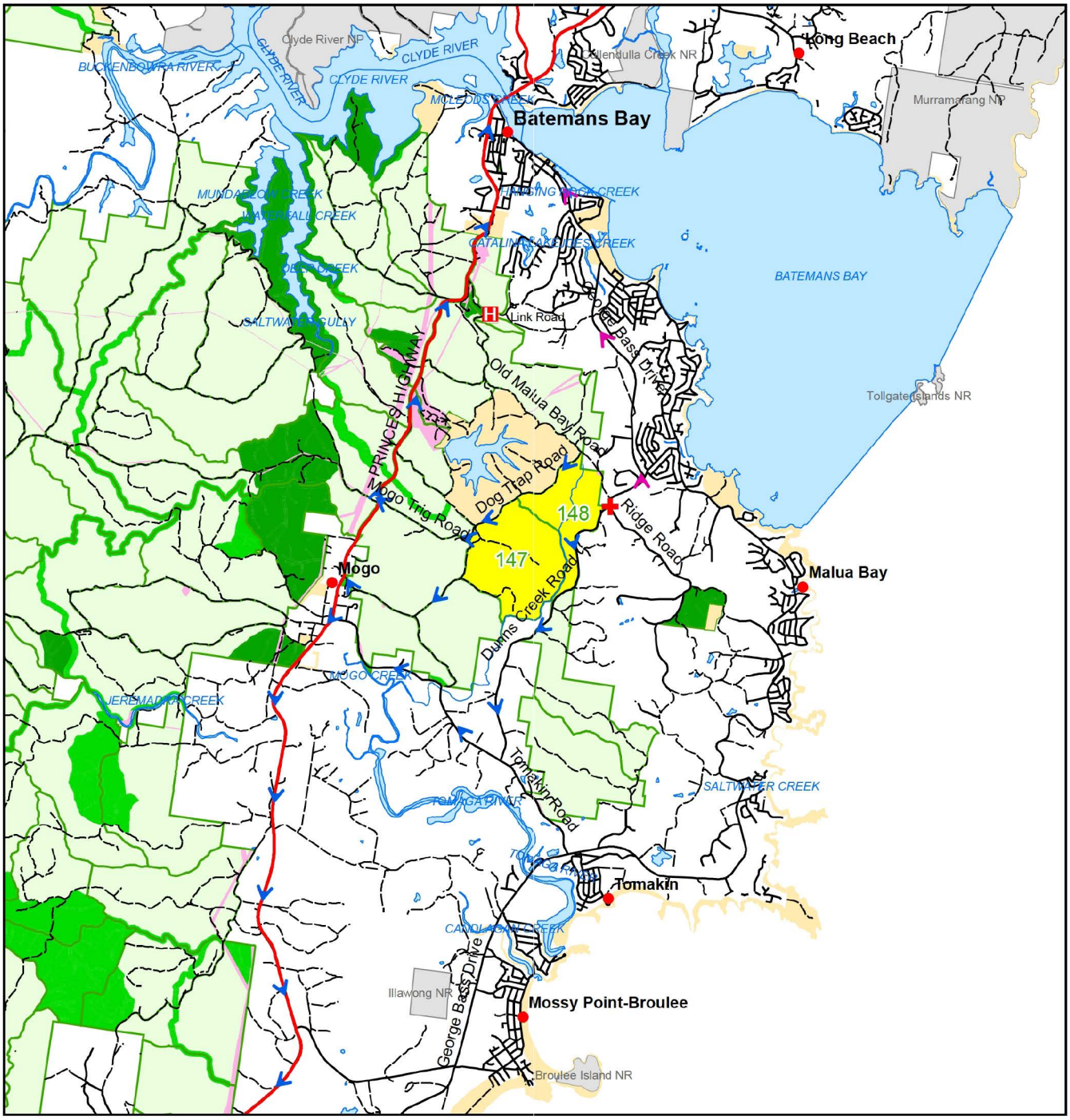
MOGO Forest
NO. 549
Cpt No:147,148
Management Area:BATEMANS BAY
Mapsheet:MOGO(8926-3N)

Plan Name: HP_BB_147_148_17

Plan No:56811

VERSION: 1

Date Printed: 29/05/2017




- Emergency Meeting Point
- Helicopter Landing Area
- Towns
- Evacuation Route
- Haulage Route
- Highways
- Natural Surface (4WD)
- Sealed
- Main Rivers
- WaterBodies
- Vacant Crown Land
- Compartment Boundary
- Special Protection (FMZ 1)
- Special Management (FMZ 2)
- Harvesting Protection (FMZ 3A)
- Hardwood Plantations (FMZ 5)
- Softwood Plantations (FMZ 6)
- Non Forest Use (FMZ 7)
- Planning Unit
- State Forest
- National Park Estate

Kilometres

0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5 5.5 6 6.5 7

# FORESTRY CORPORATION OF NSW, HARDWOOD FORESTS DIVISION
## HARVEST PLAN OPERATIONAL MAP

Forestry Corporation

1:15,000

Contour Interval 10m

GDA_1994_MGA_Zone_56

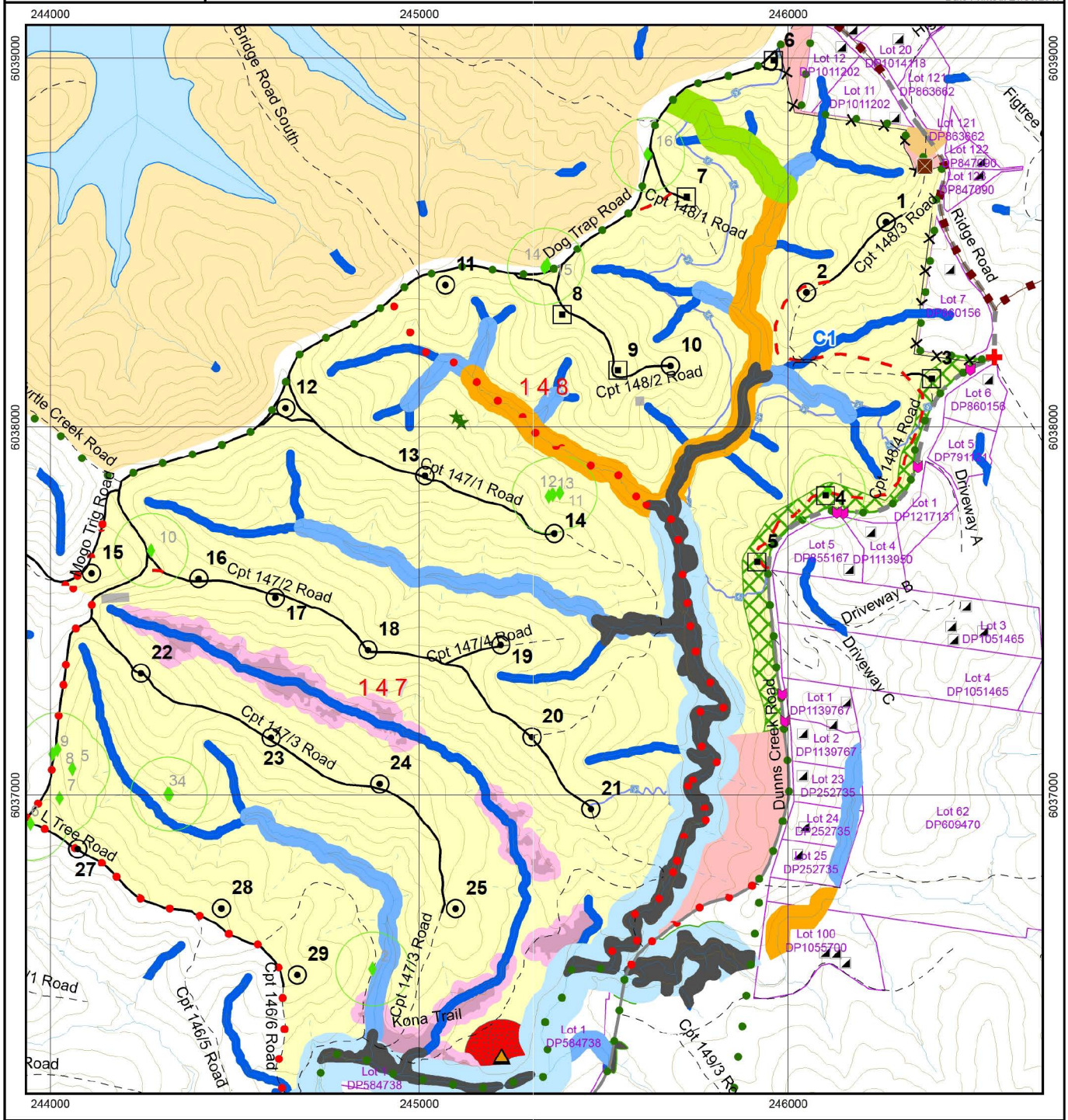
MOGO Forest
NO. 549
Cpt No:147,148
Management Area:BATEMANS BAY
Mapsheet:MOGO(8926-3N)

Plan Name:HP_BB_147_148_17

Plan No:56811

VERSION: 2

Date Printed: 21/06/2017




- Temporary Dry Weather Dump
- Temporary Wet Weather Dump
- Existing Crossing
- Emergency Meeting Point
- Yellow-bellied Glider (Feed Tree)
- Glossy Black-Cockatoo (Feed Tree)
- Square-tailed Kite Nest
- YBG Feed Tree - 100m radius
- Communications Tower
- Driveway
- House or Shed
- State Forest Boundary
- Compartment Boundary
- LiDAR Corrected Drainage
- Indicative Unmapped Drainage Features
- Underground Cable
- Proposed Control Line
- Council Road - Non Haulage
- Haulage Roads-Council Road
- Haulage Roads-Existing
- Haulage Roads-New
- Other Roads
- Contours 10m Interval
- LIC IHL4 Exclusion Zone
- TEC and Buffer
- Ridge and Headwater Habitat
- Stream PZ 1st Order (10m)
- Stream PZ 2nd Order (20m)
- Stream PZ 3rd Order (30m)
- Stream PZ 4th Order (50m)
- Rainforest
- Rainforest EZ 20m
- 100m Nest EZ
- Excluded Forest
- Mountain Bike Track
- FMZ3B: STS Heavy (modified)
- FMZ4: STS Heavy
- Zone 7 - Non Forestry Use Zone
- WaterBodies
- Vacant Crown Land
- Private Property

Kilometres
0
0.5
1

Forestry Corporation

1:15,000

Contour Interval 10m

GDA_1994_MGA_Zone_56

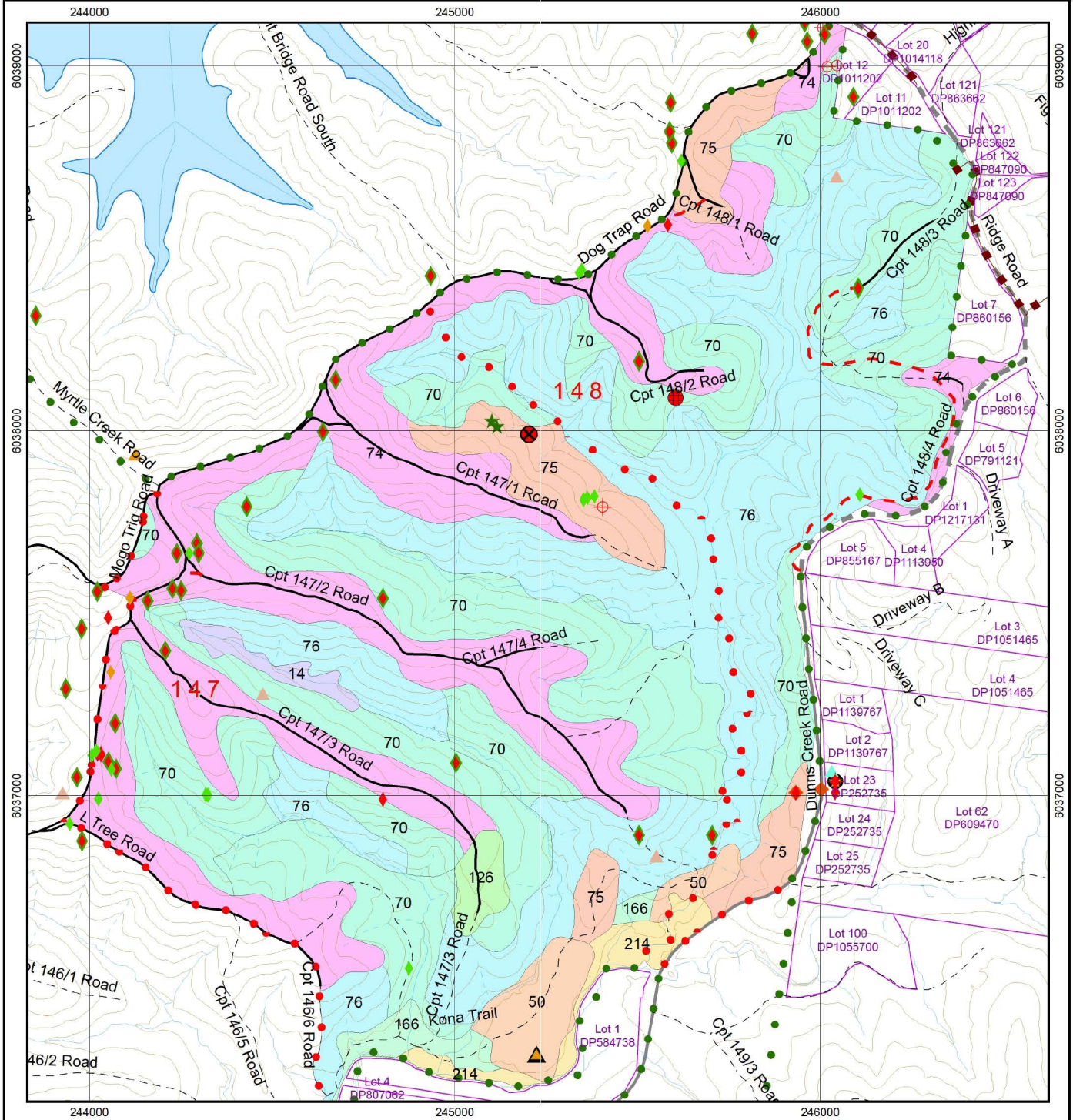
# FORESTRY CORPORATION OF NSW, HARDWOOD FORESTS DIVISION
## HARVEST PLAN FOREST TYPE MAP

MOGO Forest
NO. 549
Cpt No:147,148
Management Area:BATEMANS BAY
Mapsheet:MOGO(8926-3N)

Plan Name:HP_BB_147_148_17
Plan No:56811

VERSION: 2

Date Printed: 21/06/2017




- Square-tailed Kite Nest
- Yellow-bellied Glider (Feed Tree)
- Glossy Black-Cockatoo (Feed Tree)
- Sooty Owl
- Powerful Owl
- Masked Owl
- Yellow-bellied Glider (Heard)
- Yellow-bellied Glider
- Yellow-bellied Glider (Feed Tree)
- Glossy Black-Cockatoo (Feed Tree)
- Sqaure-tailed Kite
- Greater Glider
- Brush-tailed Phascogale
- Swift Parrot
- Little Lorikeet
- Grey-headed Flying-fox
- Yellow-bellied Glider
- State Forest Boundary
- Compartment Boundary
- LiDAR Corrected Drainage
- Indicative Unmapped Drainage Features
- Underground Cable
- Council Road - Non Haulage
- Haulage Roads - Council Road
- Haulage Roads-Existing
- Haulage Roads-New
- Other Roads
- Contours 10m Interval
- Type 14 Lily Pilly
- Type 50 Bangalay
- Type 70 Spotted Gum
- Type 74 Spotted Gum - Ironbark / Grey Gum
- Type 75 Spotted Gum - Yellow / White Stringybark
- Type 76 Spotted Gum - Blackbutt
- Type 126 Stringybark - Bloodwood
- Type 166 River Peppermint
- Type 214 Wattle
- Private Property
- WaterBodies

Kilometres
0 0.5 1

| Forest Type | Gross Area (ha) |
|---|---|
| 14 | 2.8 |
| 50 | 9.3 |
| 70 | 124.9 |
| 74 | 91.5 |
| 75 | 23.6 |
| 76 | 132.7 |
| 126 | 3.1 |
| 166 | 4.6 |
| 214 | 5.8 |

Forestry Corporation

1:12,000

Contour Interval 10m

GDA_1994_MGA_Zone_56

# FORESTRY CORPORATION OF NSW, HARDWOOD FORESTS DIVISION

## ROAD PLAN OPERATIONAL MAP

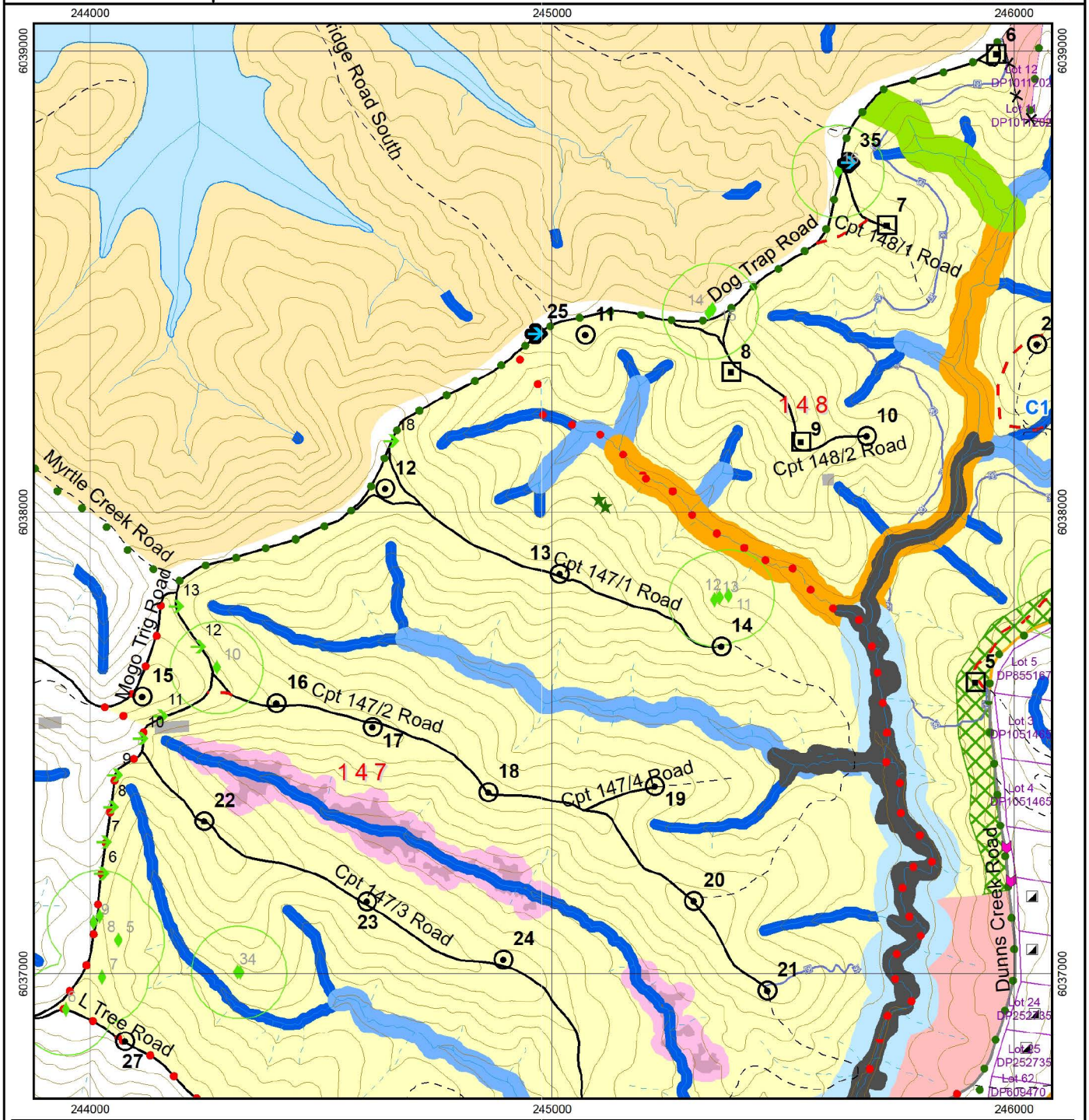
MOGO Forest
NO. 549
Cpt No:147,148
Management Area:BATEMANS BAY
Mapsheet:MOGO(8926-3N)

Plan Name: HP_BB_147_148_17

Plan No:56811

VERSION: 1

Date Printed: 30/05/2017



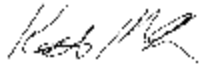

- Temporary Dry Weather Dump
- Temporary Wet Weather Dump
- Existing Crossing
- Existing Culvert
- New Mitre Drain
- Yellow-bellied Glider (Feed Tree)
- Glossy Black-Cockatoo (Feed Tree)
- YBG Feed Tree - 100m radius
- Driveway
- House or Shed
- State Forest Boundary
- Compartment Boundary
- LiDAR Corrected Drainage
- Indicative Unmapped Drainage Features
- Proposed Control Line
- Haulage Roads-Private Property
- Haulage Roads-Shire Owned
- Haulage Roads-Existing
- Haulage Roads-New
- Other Roads
- Contours 10m Interval
- LIC IHL4 Exclusion Zone
- TEC and Buffer
- Ridge and Headwater Habitat
- Stream PZ 1st Order (10m)
- Stream PZ 2nd Order (20m)
- Stream PZ 3rd Order (30m)
- Stream PZ 4th Order (50m)
- Rainforest
- Rainforest EZ 20m
- Excluded Forest
- Mountain Bike Track
- FMZ 3B: STS Heavy (modified)
- FMZ 4: STS Heavy
- WaterBodies
- Vacant Crown Land
- Private Property

Kilometres

0 0.5

Hardwood Forests Division

# Harvest and Haul Plan

| | | | |
|---|---|---|---|
| State Forest | Mogo | Compartments | 147 & 148 |
| Management Area | Batemans Bay | IFOA Region | South Coast |
| Harvest Plan No. | 56811 | Supply Zone | Coastal |
| Legal Conditions | Native Forest Harvesting in accordance with IFOA conditions.<br>Specified Forestry Activities do not have EPL coverage.<br>To implement this plan you must hold a current Contractors Licence.<br>Standard Harvest Plan Conditions and Operating Procedures apply.<br>Survey expiry date for this plan is 01/02/2026. | | |
| Certification | Timber products removed from the plan area are within the Defined Forest Area covered by Australian Forestry Standard AS4708:2013 Certificate 604224 | | |
| Prepared by | Planner<br>Megan Costello | | Date:<br>30/05/2017 |
| Approved by | Acting Operations Planning Mgr<br>Kate Halton |  | Date:<br>30/05/2017 |
| Abbreviations | FT = Forest Technician, HC = Harvesting Coordinator, PtS= Protection Supervisor, HS = Harvesting Supervisor, RC = Roading Coordinator, Crew = Harvest Contractor/Forest Operators, IFOA = Integrated Forestry Operations Approval, TSL = Threatened Species Licence, EPL = Environment Protection Licence, FL = Fisheries Licence, CH = Cultural Heritage, SOP = Standard Operating Procedure. | | |

## 1. Harvest Area Details

| | Cpt 147 | Cpt 148 | Total |
|---|---|---|---|
| Plan Compartment ID | 126230 | 126231 | |
| Gross Area (ha) | 257 | 146 | 403 |
| Harvest Area | 204 | 101 | 305 |
| Estimated Yield | 8,530 | 5,160 | 13,690 |
| Yield/ha | 41.8 | 51.1 | 44.9 |
| Slope (% 0-20 degrees) | 95.6 | 93.1 | |
| Slope (% 20-25 degrees) | 3.9 | 6.2 | |
| Slope (% 25-30 degrees) | 0.4 | 0.5 | |
| Slope (% > 30 degrees) | 0.1 | 0.1 | |

Contractor must ensure timber removed is allocated to the correct compartment when entered into Electronic Delivery Docket.

## 2. Management Conditions on Boundaries

| Boundary | Conditions |
|---|---|
| Private Property | Private property occurs immediately adjacent to the northern and the eastern boundary of the compartments, as indicated on the HPOM. There is also private property adjacent to the compartment on the opposite side of Dunns Creek Road and to the south on the opposite side of the 4th order stream. Private property owners have been notified of the scheduled harvesting and post-harvest burning. The PP boundary must be located and marked by the FT. All heads and debris are to be pulled back from the PP boundary and a mineral control line is to be constructed as close as practical to the boundary as a fire break. Refer to HPOM |
| FMZ | FMZ 3B-Special Prescriptions (visual), FMZ 7 and FMZ 4- General Management occur within the compartment and are shown on the HPOM.<br>FMZ 3B (Visual) – A visual protection zone exists parallel to Dunns Creek Road. The FT is not required to mark this boundary but must supervise implementation of modified harvesting prescriptions apply see table 7.<br>FMZ 7 – Located at the north edge of Cpt 148 for a water tower. This is buffered by an area of Excluded Forest and is not to be harvested. Where practicable a mineral earth control line is to be located adjacent to the boundary as a fire break. Refer to HPOM |
| Research | Any inventory plots located during the harvesting operation are to be treated the same as the surrounding harvesting area. |
| Cultural Heritage | Surveys have been conducted. Exclusion zones have been marked for protection.<br>Immediately prior to harvesting the marking must be checked by the HC and marked with pink/yellow/blue tape as per SOP3.<br>If any potential heritage sites are identified notify the planner immediately. |

## 3. Expected Yields

| Product Estimates | Volume (m3) |
|---|---|
| HQ Large Sawlog (Quota) | 6,050 |
| HQ Small Sawlog | 1,040 |
| Poles, Piles and Girders | 0 |
| LQ Sawlog (Salvage) | 2,060 |
| Pulp (1m3 = 1.2t) | 2,600 |
| Firewood/Misc (1m3 = 1.2t) | 1,940 |
| Total | 13,690 |

| Species | Species Mix (Sawlog) |
|---|---|
| SG | 76% |
| IBK | 16% |
| SBK | 2% |
| BBT | 6% |

## 4. Haulage

| | |
|---|---|
| Haul Route | There are three haul routes for these compartments.<br>1) South along Dog Trap Road to Princes Highway<br>2) South along Mogo Trig Road to Princes Highway. Left turn only onto Princes Highway when using this haul route. Empty trucks south bound on Princes Highway may turn left onto Mogo Trig Road; however empty north bound trucks must not turn right onto Mogo Trig Road from Princes Hwy.<br>3) South along Dunns Creek Road, turning right onto Tomakin Road, then onto Princes Highway.<br>These routes are shown as haulage roads on the HPOM.<br>Additionally empty trucks travelling south bound on Princes Hwy may turn left only onto Ridge Road in accordance with Traffic Control Plan section below. |
| School Bus Routes | Tomakin Road is used by a school buses between the hours of 7:30am to 8:30 am and 3:30pm to 4:30pm. On weekdays, to the greatest extent practicable, log haulage should avoid school bus times on the above roads. |
| Traffic Control Plan | Traffic Control Plans (TCPs) are required as detailed below. The HC is responsible for ensuring appropriately qualified personal implement the TCPs. Note all TCPs associated with Eurobodalla Shire Council Roads Ridge Road and Dunns Creek Road have been approved by Eurobodalla Shire Council. No further approvals from council are required.<br>The HC must take a video recording of each TCP once it is in place and e-mail to Kate Halton for audit purposes. The HC must notify Kate Halton via e-mail each morning that traffic control is in place.<br>Limited sight distance at the intersection of Ridge Road and Princes Hwy. Trucks may only turn left onto Ridge Road from Princes Hwy when truck warning signs in accordance with *TCP 195 Princes Hwy Ridge Road* are in place.<br>• Limited sight distance at intersection of Cpt 148/4 road and Dunns Creek Road. Truck warning signs in accordance with *TCP 195 Dunns Creek 148 4 Road* must be implemented when haulage from Cpt 148/4 Road is occurring. |

| | |
|---|---|
| | • Harvesting within two tree lengths of Dunns Creek Road. Traffic control along Dunns Creek Road in accordance with *TCP 78 57 Dunns Creek Road Cpt 148*.<br>• Harvesting within two tree lengths of Ridge Road. Traffic control along Ridge Road in accordance with *TCP 78 57 Ridge Rd Cpt 148*.<br>When hauling on Dunns Creek Road install advisory signs at either end of Dunns Creek Road alerting drivers to expect logging trucks. Advisory signs must indicate haulage times and dates. |
| Noise | Homes immediately adjacent to Dunns Creek road may be adversely impacted by noise created by log haulage. Truck drivers should reduce speed and minimise the use of engine brakes near these such homes. |
| Operating hours | Restrictions apply to haulage contractors, refer to table 5 below. |

## 5. Community

| Issue | Detail | Conditions |
|---|---|---|
| Noise | Around dumps 1-6 and close to nearby residences | When working in areas close to residential properties, machinery (including chainsaws) operating hours will be limited to between 7am and 8pm Monday to Friday, and 8am to 12pm on Saturdays. Machinery must not be operated on Sundays and Public Holidays. |
| Notifications Required | Traffic Officer<br>Eurobodalla Shire Council | HS to contact Traffic Officer one week prior to commencement of haulage on Dunns Creek Road and again upon completion of operations. |
| Private Property Neighbours | Private property owners have been notified of the scheduled harvesting | When harvesting within 2 tree lengths of a house, shed or yard the HC must contact the private property neighbour and develop a plan to ensure people are not at risk from the active operation. Contact details will be included as an Appendix to this Harvest Plan. |
| Pests/Weeds | Myrtle Rust/other weeds/pests | Is known to occur in Eurobodalla Shire. To prevent further spread the crew/haulage operators must ensure all harvesting machinery, equipment and vehicles heading west from Eurobodalla Shire or south into Victoria are checked and all infected vegetation removed. |
| Rubbish | Dumped rubbish | Drag large hard rubbish (car bodies, gas tanks, furniture, etc.) up to dump sites. The HC will liaise with the PS to have this waste removed from the compartments. |
| Forest Permits | 3 apiary ranges are occupied. | Log dumps 1-4, and 6-14 are occupied by one licence holder.<br>Log dumps 15-18, 22-25, and 27-29 are occupied by a second licence holder. |

| | | |
|---|---|---|
| | | Bee Permit holders must be contacted by the HC at least two weeks prior to use of any log dumps that are occupied by bee hives. |

## 6. Infrastructure

| Infrastructure | Conditions |
|---|---|
| Utilities Underground | Telecommunication cable is being installed by Optus to run adjacent to Ridge Road and to enter the compartment within the Excluded Forest at the end of Cpt 148/3 Road. This cable was in the process of being installed during the drafting of this plan. The intended location is shown on the HPOM and will be marked in the field with cable markers. The FT must check the field markers to ensure they are adequate if requires hang additional flagging tape to show location.<br>Any damage to the Optus Network must be reported to 1800 500 253 immediately.<br>Essential Energy Electrical underground pipe and LV underground cable is located in the same area as the Optus Telecommunication cable. Any damage to the Essential Energy Electrical cable must be reported to 13 20 80 immediately. |
| Communications Tower and Base Station | There is a Telstra Communications Tower and Base Station. This is located in Excluded Forest at the end of Cpt 148/3 Road as shown on the HPOM.<br>The crew must report all damage to the tower or base station to 13 22 03 immediately.<br>Where practicable a mineral earth control line is to be located adjacent to the Excluded Forest boundary as a fire break. Refer to HPOM |
| Jackhammer Mountain Bike Trail. | Parts of the Jackhammer Mountain Bike Track exist within compartments 147 and 148 at areas identified on the HPOM. A buffer of 2m either side of the track (4m total width) has been marked in the field with orange marking tape. During the course of the harvesting operation, trees may be felled from within the track buffer. However, the harvesting contractor must make all reasonable and practical attempts to minimise mechanical disturbance and debris accumulation within the track buffer. To facilitate this, designated track crossing points should be identified by the harvesting contractor at suitable locations prior to commencement of harvesting |
| Gravel Pits/Borrow Pits | N/A |

## 7. Harvesting Conditions

| Silviculture Type | Harvesting Objectives and Condition for each stand condition |
|---|---|
| STS Heavy<br>Dumps 1-2, 6-29 | The harvest area was affected by wildfire in 1994 and was last harvested in 2002 under a STS light regime. A hazard reduction burn was conducted in 2000.<br>It is characterized as a mixed aged mature, over-mature and advanced regrowth forest dominated by Spotted Gum with a component of Ironbark, white Stringybark and Blackbutt. The objective is to remove no more than 38% of the basal area to create canopy openings for regeneration, whilst retaining |

| | |
|---|---|
| | and minimizing damage to young regeneration, advanced re-growth; and seed, habitat and recruitment trees. A minimum BA of 10m$^2$ per hectare is to be retained. Retained trees should be evenly spaced throughout the resource unit<br>On southern moist aspects which did not regenerate well after the last harvest, ensure seed trees (can be made up of H and R trees) are retained at spacings of 40m.<br>HC to instruct crew to retain patches of quality advanced regeneration where they occur.<br>All other products should be removed markets permitting.<br>Crew to remove all merchantable stems not marked for retention and ensure mechanical disturbance creates a suitable seed bed for regeneration. |
| FMZ 3B<br>STS Heavy (modified)<br>Dumps 3-5 | STS Heavy prescription as above with 50% canopy retention. Target sawlogs for removal.<br>Larger diameter trees (i.e. Habitat trees) or the most visually pleasant trees that are within the largest 30% diameter class of the stand should be retained.<br>Tree selection should be evenly spread over the FMZ 3B area.<br>Tree heads should be felled to avoid windrows and minimise the visual effects from the Dunns Creek Road.<br>Snigging of timber should be by the shortest possible route outside the FMZ 3B area and then by the most direct route to the nearest log dump.<br>Where practicable avoid disturbing understory vegetation (i.e. clusters of wattle) immediately adjacent to Dunns Creek Road. |
| Excluded Forest | As mapped. To be retained for future harvesting treatments and to avoid disturbance to infrastructure. |
| Monitoring | The HC must conduct Basal Area monitoring in areas treated with STS Heavy.<br>Any changes to treatment and offset areas need to be endorsed by the Operations Planning Manager. |

| IFOA Limits | STS Heavy | STS Heavy (FMZ 3B) | Excluded Forest | Total |
|---|---|---|---|---|
| STS Tract | 297.7ha | 7.3ha | 9.4ha | 314.4ha |
| Pre-harvest BA | 16m$^2$ | 16m$^2$ | 16m$^2$ | 4,925m$^2$ |
| Post harvest BA | 10m$^2$ | 10m$^2$ | 16m$^2$ | 3,053m$^2$ |
| Planned Removal | 38% | 38% | 0% | 38% |

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

| Prescription | Condition/Responsibility |
|---|---|
| Mark-Up – the FT is responsible for marking up the forest ahead of harvesting operations consistent Forest Mark Up and Tree Retention SOP | |
| Compartment Mark-Up Survey<br>(5.1, 5.2) | Compartment mark-up surveys must be conducted at least 100m in advance of operations. The survey must search for threatened and protected species features listed in conditions 5.1 and 5.2 of the TSL. |

<table>
<tr><td>Hollow-bearing and Recruitment tree retention (H and R)</td><td>Regrowth Zone – TSL 5.6 conditions apply.<br><br>Additional H trees for Greater Glider condition does not apply.<br><br>FT must select and mark 5 H trees/ha where available and one R for each H retained.</td></tr>
<tr><td>Significant Food Resources<br><br>(5.6 g)</td><td>FT must mark for retention- 4 Eucalypt feed trees/2 ha where they occur. Note H & R trees may double as Eucalypt feed trees. In this instance the Eucalypt feed trees are not required to be marked with an “E”. All glider sap feed trees, stands of forest oak and forest oak feed trees must be marked for retention.<br><br>
<table>
<tr><th>Species</th><th>ID</th><th>Easting</th><th>Northing</th><th>Comment</th></tr>
<tr><td>Glossy Black-Cockatoo</td><td></td><td>245116</td><td>6038013</td><td>Marked with orange tape</td></tr>
<tr><td>Glossy Black-Cockatoo</td><td></td><td>245102</td><td>6038029</td><td>Marked with orange tape</td></tr>
<tr><td>Yellow-bellied Glider</td><td>1</td><td>246108</td><td>6037825</td><td></td></tr>
<tr><td>Yellow-bellied Glider</td><td>2</td><td>244875</td><td>6036528</td><td></td></tr>
<tr><td>Yellow-bellied Glider</td><td>3</td><td>244319</td><td>6037004</td><td>Marked with orange tape</td></tr>
<tr><td>Yellow-bellied Glider</td><td>4</td><td>244325</td><td>6037003</td><td>Marked with orange tape</td></tr>
<tr><td>Yellow-bellied Glider</td><td>5</td><td>244061</td><td>6037072</td><td>Marked with orange tape</td></tr>
<tr><td>Yellow-bellied Glider</td><td>6</td><td>243947</td><td>6036923</td><td>Marked with orange tape</td></tr>
<tr><td>Yellow-bellied Glider</td><td>7</td><td>244025</td><td>6036992</td><td></td></tr>
<tr><td>Yellow-bellied Glider</td><td>8</td><td>244020</td><td>6037124</td><td></td></tr>
<tr><td>Yellow-bellied Glider</td><td>9</td><td>244007</td><td>6037112</td><td></td></tr>
<tr><td>Yellow-bellied Glider</td><td>10</td><td>244274</td><td>6037664</td><td></td></tr>
<tr><td>Yellow-bellied Glider</td><td>11</td><td>245382</td><td>6037821</td><td>Marked with orange tape</td></tr>
<tr><td>Yellow-bellied Glider</td><td>12</td><td>245363</td><td>6037816</td><td>Marked with orange tape</td></tr>
<tr><td>Yellow-bellied Glider</td><td>13</td><td>245352</td><td>6037811</td><td>Marked with orange tape</td></tr>
<tr><td>Yellow-bellied Glider</td><td>14</td><td>245340</td><td>6038433</td><td></td></tr>
<tr><td>Yellow-bellied Glider</td><td>15</td><td>245347</td><td>6038441</td><td></td></tr>
<tr><td>Yellow-bellied Glider</td><td>16</td><td>245620</td><td>6038740</td><td></td></tr>
</table>
<br>Stringybark species, Ironbark and Spotted Gum are suitable E tree species present in these compartments.</td></tr>
<tr><td colspan="2">Harvesting - crew and HC responsibilities</td></tr>
<tr><td>Protection of Retained Trees (5.6g)</td><td>Trees marked or selected for retention must not be felled.<br><br>The crew must minimise damage to H, R and E trees must by using directional felling.<br><br>Harvesting debris should not accumulate within 5 m of retained trees. Where debris does accumulate the crew must remove or flatten to < 1m high.<br><br>The HC must be notified of any badly damaged retained trees and they must assess and record if a replacement retained tree is required.</td></tr>
<tr><td>Stag Retention (Dead standing trees 5.6e)</td><td>The crew should retain stags where safe to do so.<br><br>The crew must record the date, DBH, risk and location of unsafe stags removed</td></tr>
</table>

| | |
|---|---|
| Significant food resources | The crew should avoid damaging flowering or fruiting banksias or grass trees. |

## 9. Site-Specific Flora and Fauna

| Condition | Boundary Type | Prescription |
|---|---|---|
| Riparian Habitat Protection (5.7)<br><br>(Lidar Corrected) | Pink Tape | Implement filter strip (hard) and protection zone (soft) around drainage features as shown on the HPOM. Refer to SOP1.<br>FT must mark the location of UMDL with red (5m) tape and 1st order protection zone boundary with pink tape.<br>The crew will locate and protect all 2nd order and above streams with GPS. |
| Threatened Ecological Community (TEC) | Pink and Yellow Tape | TEC occurs adjacent to2nd, 3rd and 4th order streams in both compartments and along the compartment boundary of 147 and 148. Maximum extent of TEC is shown on HPOM.<br>The FT must mark as an exclusion the TEC boundary in the field as shown on the HPOM.<br>The crew must protect all areas of marked TEC |
| Rainforest (5.4) | Pink Tape | Rainforest is mapped in the compartment and shown on the HPOM.<br>The FT must identify the rainforest type (temperate or depauperate) and boundary then mark an exclusion zone based on the rainforest type. Changes to the rainforest boundary must be recorded by the FT<br>The FT must search for and mark all areas of unmapped rainforest.<br>The crew must protect all areas of Rainforest. |
| Ridge & Headwater Habitat (RHH) (5.8) | Pink Tape<br>(if FT decides to mark) | RHH is mapped in the compartment.<br>The crew will locate and protect RHH with GPS. |
| Feed trees for Glossy black cockatoo and Yellow Bellied Glider | Pink Tape and paint | FT must ensure mapped feed trees are marked prior to harvesting.<br>Crew must protect all marked feed trees. |
| Swift Parrot | NA | TSL condition 6.5 is not triggered for this operation, however Compartments 147 and 148 contain good quality Swift Parrot foraging habitat. The contractor must retain five eucalypt feed trees/ha (H and R trees may be counted). Eucalypt feed trees must be trees of good form and vigor with healthy crowns and evenly spaced. As Operator selection will be used to meet this condition tree marking of these trees is not required. |

| | | |
|---|---|---|
| Square-tailed Kite Nest | Pink Tape | A Square-tailed Kite Nest is located within CPT 147 at E245224 N6036291 as indicated on the HPOM.<br>FT must ensure Square-tailed Kite Nest 100m exclusion zone is marked prior to harvesting. |
| Fish | N/A | No fisheries licence conditions apply. |

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

| Issue | Assessment | Conditions |
|---|---|---|
| EPL Scheduled Activity | No | |
| Unmapped drainage Line harvesting | Permitted | Apply UMDL BMP's. The FT must mark UMDL's using pink & yellow (5m) tape |
| Inherent hazard level | 2 | Nil |
| Dispersible Soils | No | |
| Mass Movement / Instability | No | Nil |
| Seasonality Conditions | No | Nil |
| Historical or existing erosion | No | Nil |
| Ground cover | >70% | Nil |
| Seasonal Burning conditions | No | Nil |
| Log Dumps | SOP 5 | HC is responsible for authorising moving the location of a log dump. |
| Roading management during harvesting | SOP 6 | Refer to SOP 6.<br>HC is responsible for monitoring road and crossing drainage during haulage. |
| Wet Weather and Rutting | SOP 6 | Crew is responsible for implementing automatic closures and following notified closures.<br>HC is responsible for ensuring crew notified when notified closure is lifted. |
| Snigging | SOP 8 | Crew is responsible for progressive drainage of snig tracks |
| Snig Track Crossings | SOP 9 | HC is responsible to ensure snig track crossings are approved prior to use and rehabilitated upon completion. |

## 11. Crossing Approvals

All crossing approvals are shown on the operational map – any other feature crossings must be assessed, recorded below and approved by the Planning Supervisor before use.

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

| Person | Role | Nature of Briefing | Date |
|---|---|---|---|
| | | | |
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## 13. Acknowledgement of Briefing: I acknowledge that I have received a copy of the plan documents and that I have been briefed on the conditions of the Plan. I understand the operational control requirements as outlined in the plan and take responsibility for the implementation of plan conditions relevant to my responsibilities

| Name | Role | Signature | Date |
|---|---|---|---|
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14. Standard Operating Procedures: The following SOP's apply to this plan. FCNSW staff and the crew must hold a copy on site whilst operating and comply with the conditions set out in each SOP.

| Procedure Number | Title |
|---|---|
| 1 | Drainage Feature Protection |
| 2 | Exclusion Zone Boundary Management |
| 3 | Forest Mark-Up |
| 4 | Operating in Inherent Hazard Level 3 Areas |
| 5 | Log Dump Operation and Use |
| 6 | Road and Crossing Management and Wet Weather Controls |
| 7 | Safety Requirements |
| 8 | Snigging and Snig Tract Crossings |
| 9 | Tree felling and servicing of logs and products |

Operational Diary:

| Date | Issue | Action Required | Action Completed | Initials |
|---|---|---|---|---|
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| Record: Daily activities (eg tree marking, dump 2); Condition 5.2 of TSL items - TEC locations, rocky outcrops, koala scats, feed tree identification etc. Discussions with stakeholders/neighbours/ site visitors; areas of impenetrable understorey; unviable areas not marked, non-conformances; harvesting issues identified, twice weekly road and crossing drainage checks | | | | |

15. Roading Plan: Maintenance works not completed by RC must be recorded and passed onto the HC 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.

| Summary of roading requirements | | |
|---|---|---|
| Feature | Details | Works Required |
| Existing roads to be used. | 9,493m/11 | Yes |
| New roads to be constructed | 1,676m/3 | Yes |
| Existing crossings used | 1 | Yes |
| New crossings to be constructed | 0 | NA |
| Length of road >10° | 50m | NA |
| Borrow pits and gravel pits | 0 | NA |
| Mass movement prescriptions apply | No | NA |
| Dispersible soil conditions apply | No | NA |
| Seasonality provisions apply | No | NA |

<table>
<tr><th colspan="5">Checklist of works required on roads & crossings</th></tr>
<tr><th>Road/Crossing Name</th><th>Works Required</th><th>Date Started</th><th>Date Finished</th><th>Initials</th></tr>
<tr><td>Dog Trap Road (3,284m)<br><br>FCNSW Responsibility</td><td>Refer to attached Road Plan Operational Map<br>Install 2 new mitre drains at:
<table>
<tr><th>ID</th><th>Easting</th><th>Northing</th><th>Comment</th></tr>
<tr><td>25</td><td>244965</td><td>6038387</td><td>North side</td></tr>
<tr><td>35</td><td>245643</td><td>6038758</td><td>East side</td></tr>
</table>
RC/HC Comments:</td><td></td><td></td><td></td></tr>
<tr><td>148/1 Road (191m existing) (124m new)<br><br>Contractor Responsibility</td><td>Existing: Clear vegetation up to 3m either side. Planner has not assessed drainage on this road. Reshape road & maintain existing drainage structures, install new drainage as required and to meet EPL standard.<br>New: Construct left-turn access to Dog Trap Road along old track (flagged in white). Clear vegetation up to 3m either side. This access follows the ridge so mitres are sufficient and no rubber flaps are required. Excavation and compacted fill are required to transition into the intersection with Dog Trap Road.<br>RC/HC Comments:</td><td></td><td></td><td></td></tr>
<tr><td>148/2 Road (537m + 137m)</td><td>No rubber flaps required as this is a ridge road. Remove vegetation up to 3m either side to allow for trucks to exit left onto Dog Trap Road. Planner</td><td></td><td></td><td></td></tr>
</table>

| | | | | |
|---|---|---|---|---|
| *Contractor Responsibility* | has not assessed drainage on this road. Reshape road & maintain existing drainage structures, install new drainage as required and to meet EPL standard.<br><br>RC/HC Comments: | | | |
| 147/1 Road (889m + 168m)<br><br>*Contractor Responsibility* | No rubber flaps required as this is a ridge road. Remove vegetation up to 3m either side to allow for trucks to exit left onto Dog Trap Road. Planner has not assessed drainage on this road. Reshape road & maintain existing drainage structures, install new drainage as required and to meet EPL standard.<br><br>RC/HC Comments: | | | |
| 147/2 Road (1,481m existing (55m new)<br><br>*Contractor Responsibility* | Existing: No rubber flaps required as this is a ridge road. Clear vegetation up to 3m either side. Planner has not assessed drainage on this road. Reshape road & maintain existing drainage structures, install new drainage as required and to meet EPL standard.<br>New: Construct left-turn access to Dog Trap Road along old track (flagged in white). Clear vegetation up to 3m either side. This access follows the ridge so no rubber flaps are required.<br><br>RC/HC Comments: | | | |
| 147/3 Road (1,361m)<br><br>*Contractor Responsibility* | No rubber flaps required as this is a ridge road. Clear vegetation up to 3m either side. Planner has not assessed drainage on this road. Reshape road & maintain existing drainage structures, install new drainage as required and to meet EPL standard.<br><br>RC/HC Comments: | | | |
| 147/4 Road (164m)<br><br>*Contractor Responsibility* | No rubber flaps required as this is a ridge road. Clear vegetation up to 3m either side. Planner has not assessed drainage on this road. Reshape road & maintain existing drainage structures, install new drainage as required and to meet EPL standard.<br><br>RC/HC Comments: | | | |

| | | | | |
|---|---|---|---|---|
| L Tree Road (801 m)<br><br>*Contractor Responsibility* | No rubber flaps required as this is a ridge road. Clear vegetation up to 3m either side. Planner has not assessed drainage on this road. Reshape road & maintain existing drainage structures, install new drainage as required and to meet EPL standard.<br><br>RC/HC Comments: | | | |
| 146/6 Road (138 m)<br><br>*Contractor Responsibility* | No rubber flaps required as this is a ridge road. Clear vegetation up to 3m either side. Planner has not assessed drainage on this road. Reshape road & maintain existing drainage structures, install new drainage as required and to meet EPL standard.<br><br>RC/HC Comments: | | | |
| Mogo Trig Road (270m)<br><br>*Contractor Responsibility* | Road has been recently graded. No works required.<br><br>RC/HC Comments: | | | |
| 148/3 Road (270m + 72m)<br><br>*Contractor Responsibility* | No rubber flaps required as this is a ridge road. Clear vegetation up to 3m either side. Planner has not assessed drainage on this road. Reshape road & maintain existing drainage structures, install new drainage as required and to meet EPL standard.<br><br>RC/HC Comments: | | | |
| 148/4 Road (1,497m)<br><br>*Contractor Responsibility* | New construction requiring cut and fill on a maximum side slope of 21 degrees for 700m. The estimated maximum cut batter is 2.0m (section from Dump 2 to C1, and from Dump 3 to Dump 4). Maximum slope is 11 degrees for 50m (southern approach from Dump 4). No excavation of fill batter of Dunns Creek Road. Maintain drainage structure and outlets of Dunns Creek Road. Install drainage as per EPL requirements.<br><br>RC/HC Comments: | | | |

| | | | | |
|---|---|---|---|---|
| C1<br>E 246045<br>N 6038176 | Re-alignment of Existing Causeway Crossing<br>Refer to attached Crossing Form<br>RC/HC Comments: | | | |

H:\Planning\HarvestPlans\South Coast\Mogo\Cpt-147-148\Cpt-147-148\MOGO_147_148\HarvestPlan\Roads and Crossings\C1\Crossing form C1.doc
HP_BB_147_148_17 15/05/2017

**Cpt 148 Date: 15/05/2017 E 246045 N 6038176. Photo Y (on file)**

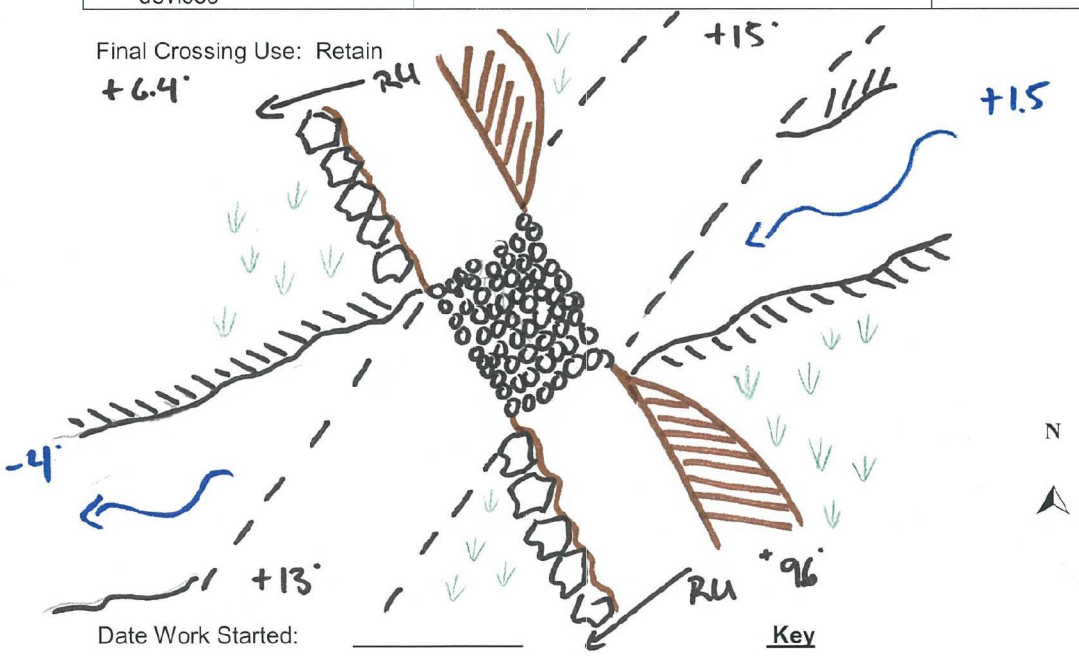
**CROSSING NAME:** C1 DL, (mapped DL)

Waterway Classification: Fish Passage Class 4- Unlikely fish habitat
Fisheries Licence Aquatic Habitat: Not class 1 or 2

**Assessors Name:** Megan Costello **Crossing Type:** Re-aligned Causeway

| Features | Works (As per EPL Schedule 5) | Plant/Materials |
|---|---|---|
| Structure | Stable at time of assessment? Y<br>Install new causeway crossing to match re-aligned road grade.<br>Install large crushed rock on downhill side of road on either side of crossing to secure fill.<br>Install crushed rock at stream crossing point. | Crushed rock<br>Large crushed rock (approx. $2m^3$)<br>excavator |
| Bed and Banks | Stable at time of assessment? Y | NA. |
| Erosion and Sediment Control | Install rubber flaps within 5 & 30m of crossing<br>Install sediment control as required | Rubber flaps (x2)<br>Hay bales, silt fences as required. |
| Disposal of excess spoil | Small area of area to be excavated on northern side of crossing to align road. Apply mulch and seed on exposed cut batter.<br>Outside Stream Exclusion Zone. | excavator<br>mulch and seed |
| Soil Stabilisation within 20m | See above | See above |
| Road drainage within 5-30m<br>• Type<br>• outlet control<br>• table drain checking devices | Rubber flaps<br>Vegetation | |

Final Crossing Use: Retain




Date Work Started: _____

Date Work Finished: _____

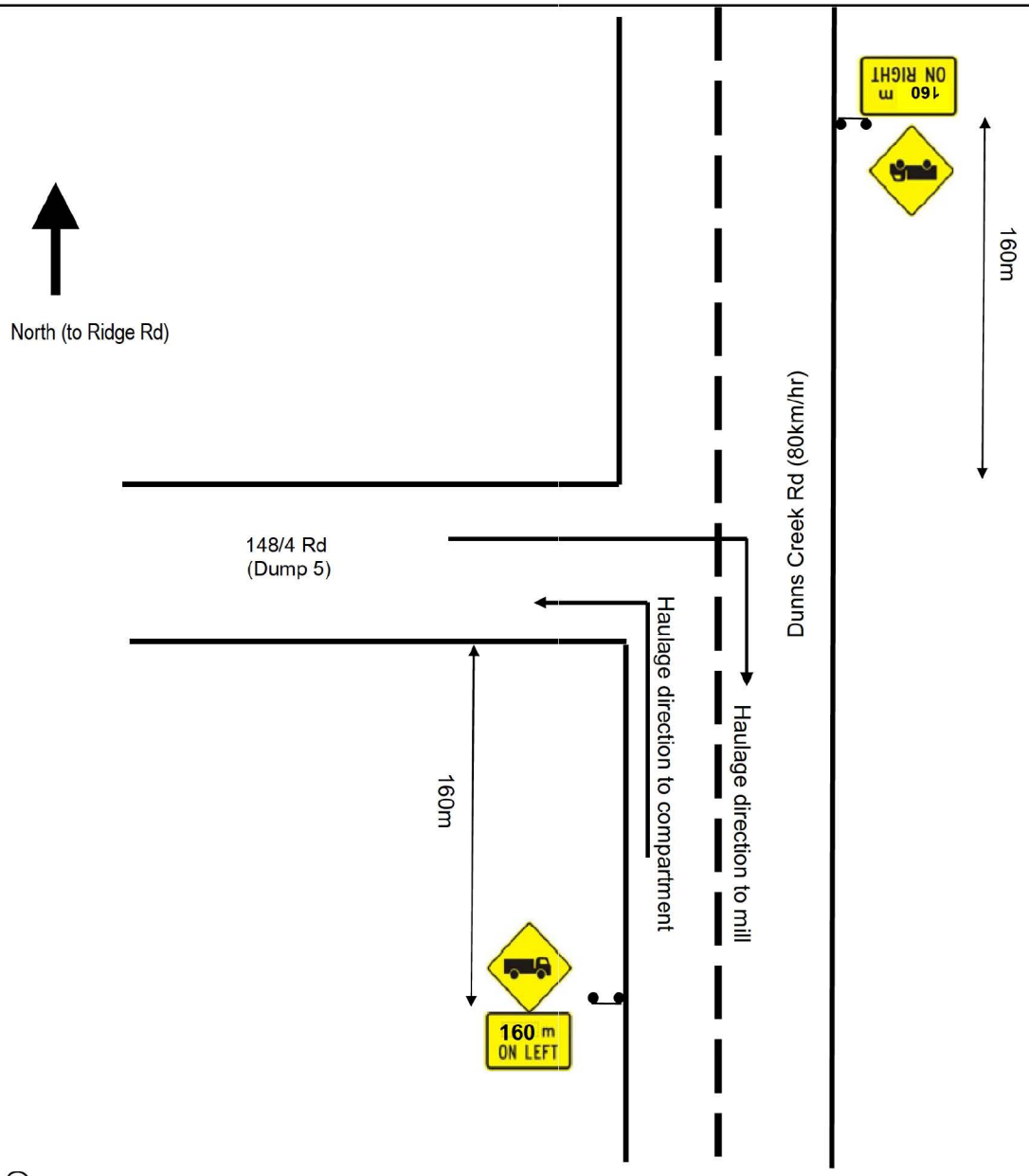
Soil stabilisation must be completed within 5 days

Record implementation date here: _____

**Key**

| | |
|---|---|
| →Ru | Rubber strip |
| →M | Mitre drain |
| xxx | Roadside clearing |
| →Ro | Rollover drain |
| ψ | Sill Log |
| ooooo | Rock |
| ψ | Seeding |
| ∇ | Sediment control |
| ∴ | Gravel |

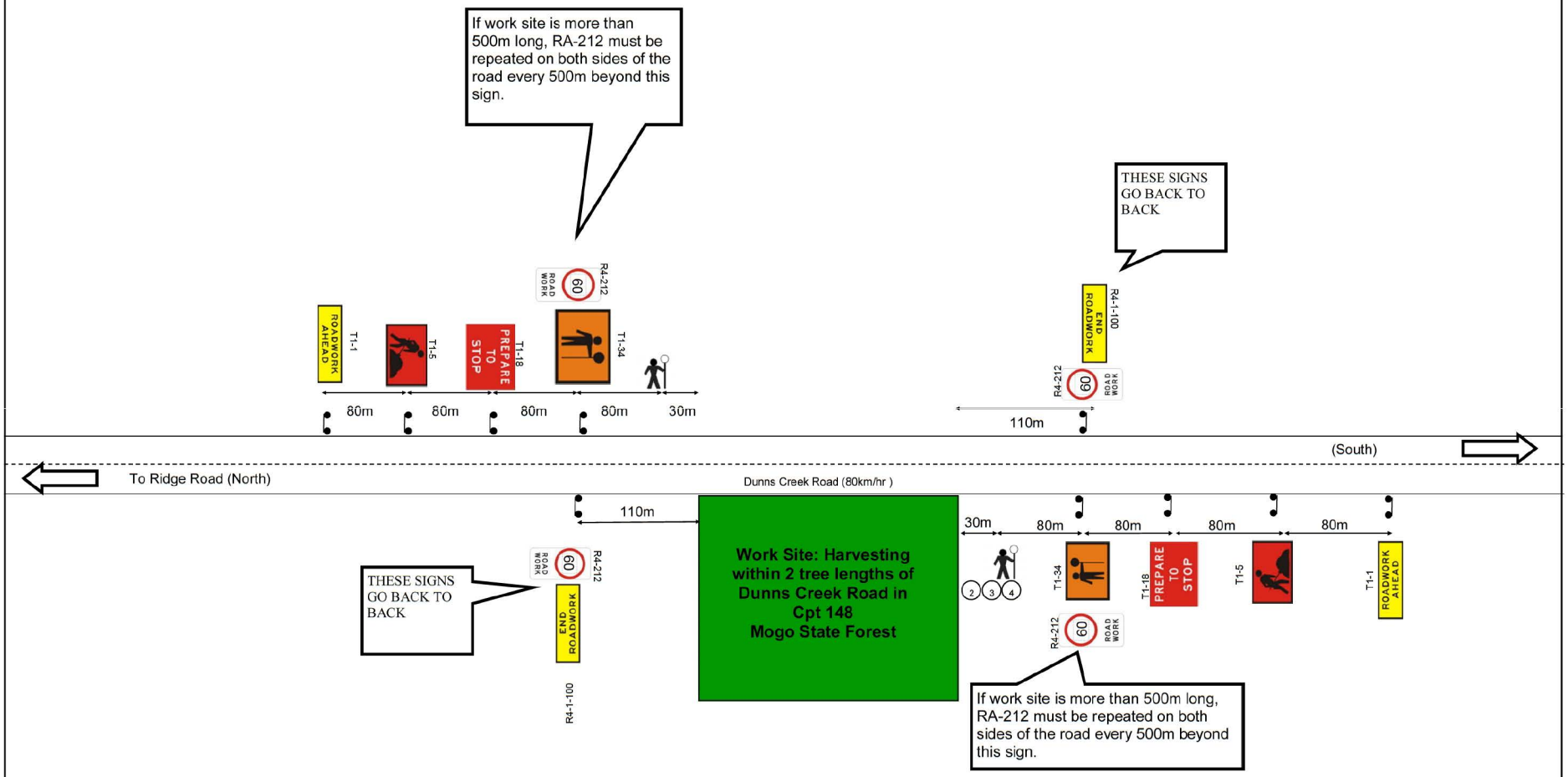
# Forestry Corporation TCP_195_DunnsCreek/148_4 Rd:
# Intersection of 148/4 Rd (FCNSW owned) with Dunns Creek Rd
# (Eurobodalla Shire Council Owned)
# Modified from RTA Traffic Control at Work Site TCP 195)
# Speed limit 80km/hr




① Notes:
Log Haulage - Intersection of Dunns Creek Road (Eurobodalla Shire Council Road) with 148/4 Road (FCNSW Road). Sight distance on southern approach is adequate (220m) but limited on northern approach (140m).

LONG TERM USE –MODIFIED FROM TCP 195
Truck Movements <10/day, Sight Distance Restricted to less than 160m on northern approach to this intersection.
Prepared by Kate Halton on 30/05/2017 Review this plan on 30/05/2019
Qualification: "Prepare Work Zone Traffic Management Plan" Card # 0036035549 Card Exp. 25/10/2019
APPROVAL FROM EUROBODALLA SHIRE COUNCIL HAS BEEN GRANTED TO IMPLEMENT THIS TCP

**Forestry Corporation NSW Hardwood Forests Traffic Control Plan 78 & 57: Harvesting within 2 Tree Lengths of Dunns Creek Road (Eurobodalla Shire Council Road) in Compartment 148 Mogo State Forest (modified from RTA Traffic Control at Work Site TCP 78 & 57) Speed limit 80km/hr, ADT >1500)**



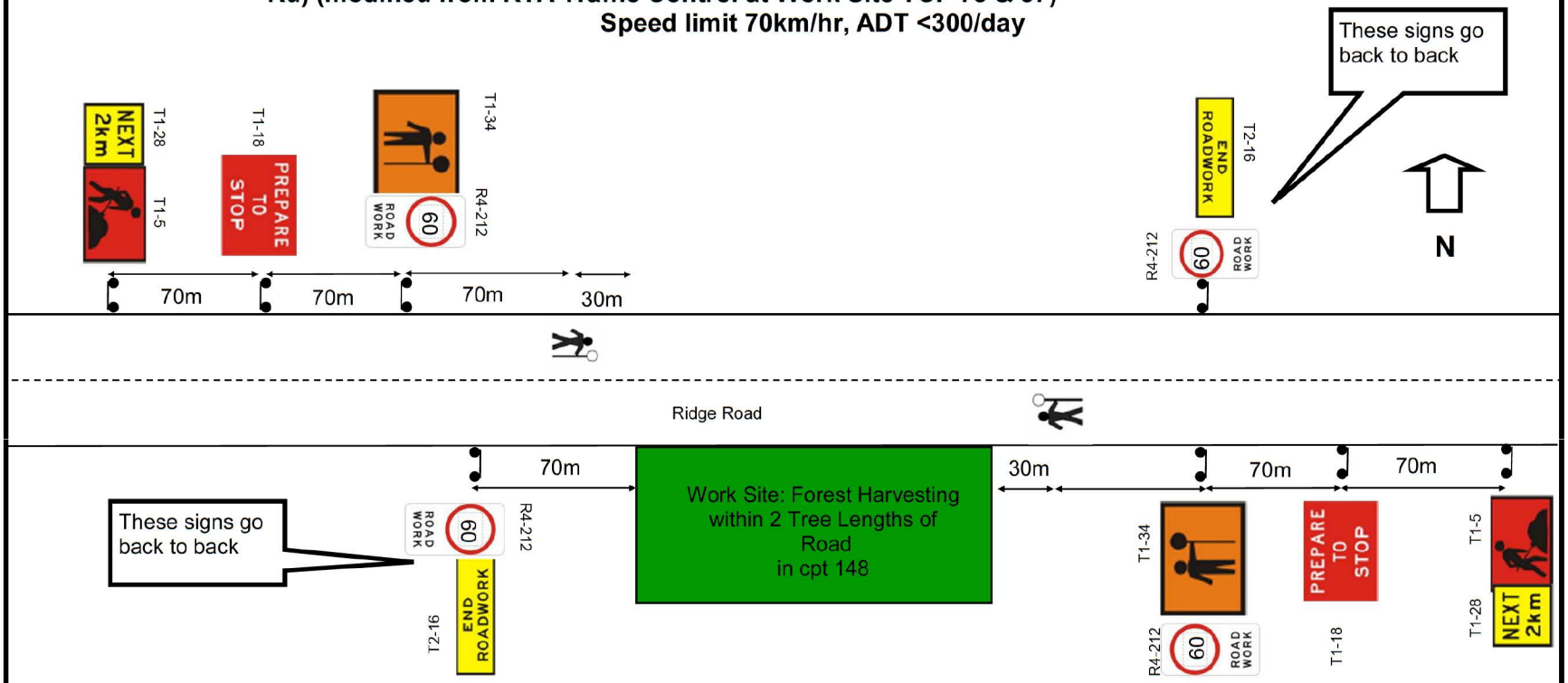

Notes:

1. Each stoppage must be 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. Note snigging and log processing is permitted whilst traffic is flowing past the worksite.
3. Traffic controllers and tree faller to maintain radio contact so that no tree felling is occurring while traffic is let through.
4. Traffic controller must have sight distance to oncoming traffic of at least 150m.
5. Roadwork signs are to be covered when not in use (meal breaks and shift breaks).
6. Where possible the worksite must be less than 500m to avoid the need to repeat RA-212 every 500m.
7. Permanent road signs which contradict this TCP must be covered whilst TCP is in operation.
8. To avoid traffic turning into an out of driveways/gates (refer to Harvest Plan Operational Map for locations) the traffic control plan must be set up either side of the driveways/gates. The reason for this is to ensure there is a traffic controller nearby the driveway/gate/road intersection to direct any local traffic which may want to turn in/out during a stoppage). As a courtesy the affected homes should be doorknocked on the morning of the first shit to explain that traffic control will be in place.
9. When 148/4 Road is within the traffic control area a road closed sign must be installed (or orange barricade erected )near this roads intersection with Dunns Creek Road. (to prevent traffic turning into it or out of it during a stoppage).

SHORT TERM WORK (UP TO 5 MINUTES)
2 LANE/2 WAY ADT >1500 (measured on 17/5/17)
Prepared by Kate Halton 30/05/17 REVIEW THIS TCP ON 30/05/19
Qualification: "Prepare Work Zone Traffic Management Plan' Card # 0036035549 Card Exp. 25/10/2019
Eurobodalla Shire Council has granted approval for use of this TCP

# Forestry Corporation Traffic Control Plan 78 & 57: Harvesting within 2 Tree Lengths of Ridge Road (Eurobodalla Shire Council Rd) (modified from RTA Traffic Control at Work Site TCP 78 & 57)

## Speed limit 70km/hr, ADT <300/day

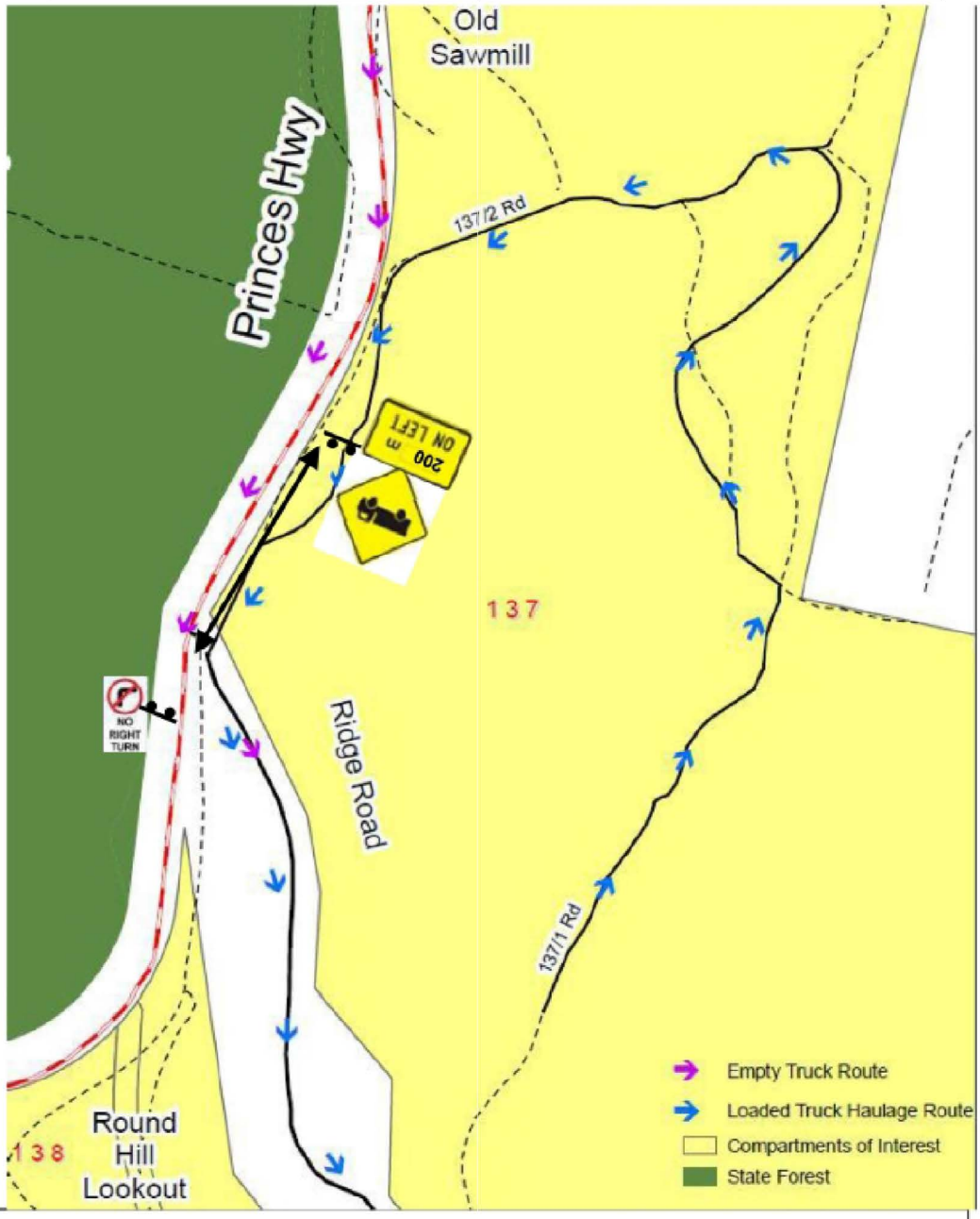



SHORT TERM WORK (UP TO 5 MINUTES)
2 LANE/2 WAY ADT <300 (measured on 17/5/17)
Prepared by Kate Halton 30/05/17 REVIEW THIS TCP ON 30/05/19
Qualification: "Prepare Work Zone Traffic Management Plan" Card # 0036035549 Card Exp. 25/10/2019
Eurobodalla Shire Council has granted approval for use of this TCP

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 felling is occurring while traffic is let through.
4. Traffic controller must have sight distance to oncoming traffic of at least 150m.
5. The worksite is less than 500m therefore repeater 60km/hr sign
6. Ensure dumps or other road intersections are not within the traffic control area, unless they are closed off with a road closure barricade.

**Forestry Corporation TCP_195_RidgeRoad_Princes Hwy:**
**Speed Limit on Princes Hwy 90km/hr**




LONG TERM USE –MODIFIED FROM TCP 195
Truck Movements <5/day (unloaded), Sight Distance Restricted to less than 250m on Southern approach to this intersection.
Truck must not turn right onto Ridge Road from Princes Highway. Trucks must not turn left or right from Ridge Road onto Princes Hwy at this intersection.
Prepared by Kate Halton on 12/01/2017
Qualification: "Prepare Work Zone Traffic Management Plan" Card # 0036035549 Card Exp. 25/10/2019
DO NOT IMPLEMENT THIS TCP WITHOUT AN APPROVED AND CURRENT ROL