

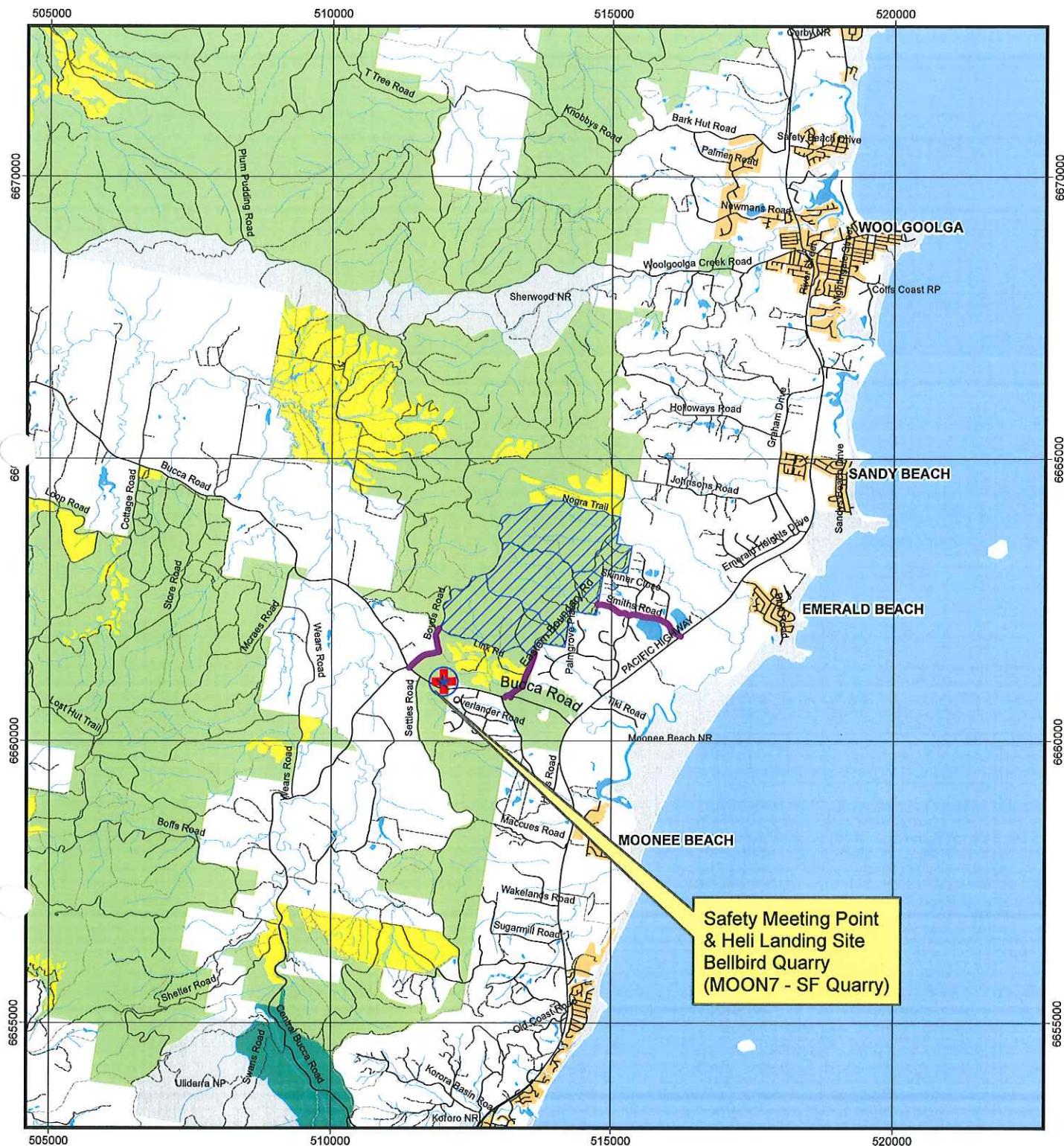


Map Sheets:
 1:25,000 Moonee Beach 9537-4S
 1:100,000 Coffs Harbour 9537
 Scale: 1:100,000

North East Region - Coffs Harbour MA
 Locality Map
 Compartment(s): 561, 562 & 563
 Orara East SF - SF No. 536



Datum: GCS_GDA_1994
 Projection: GDA_1994_MGA_Zone_56



MAP FEATURES

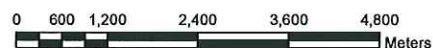
- Harvest Area
- Plantations
- Flora Reserves
- State Forest
- National Park & Nature Reserve
- Built Up Area

ROADS

- Sealed
- All Weather, Unsealed
- Dry Weather, Unsealed
- Four Wheel Drive
- Proposed Haulage

SAFETY POINTS

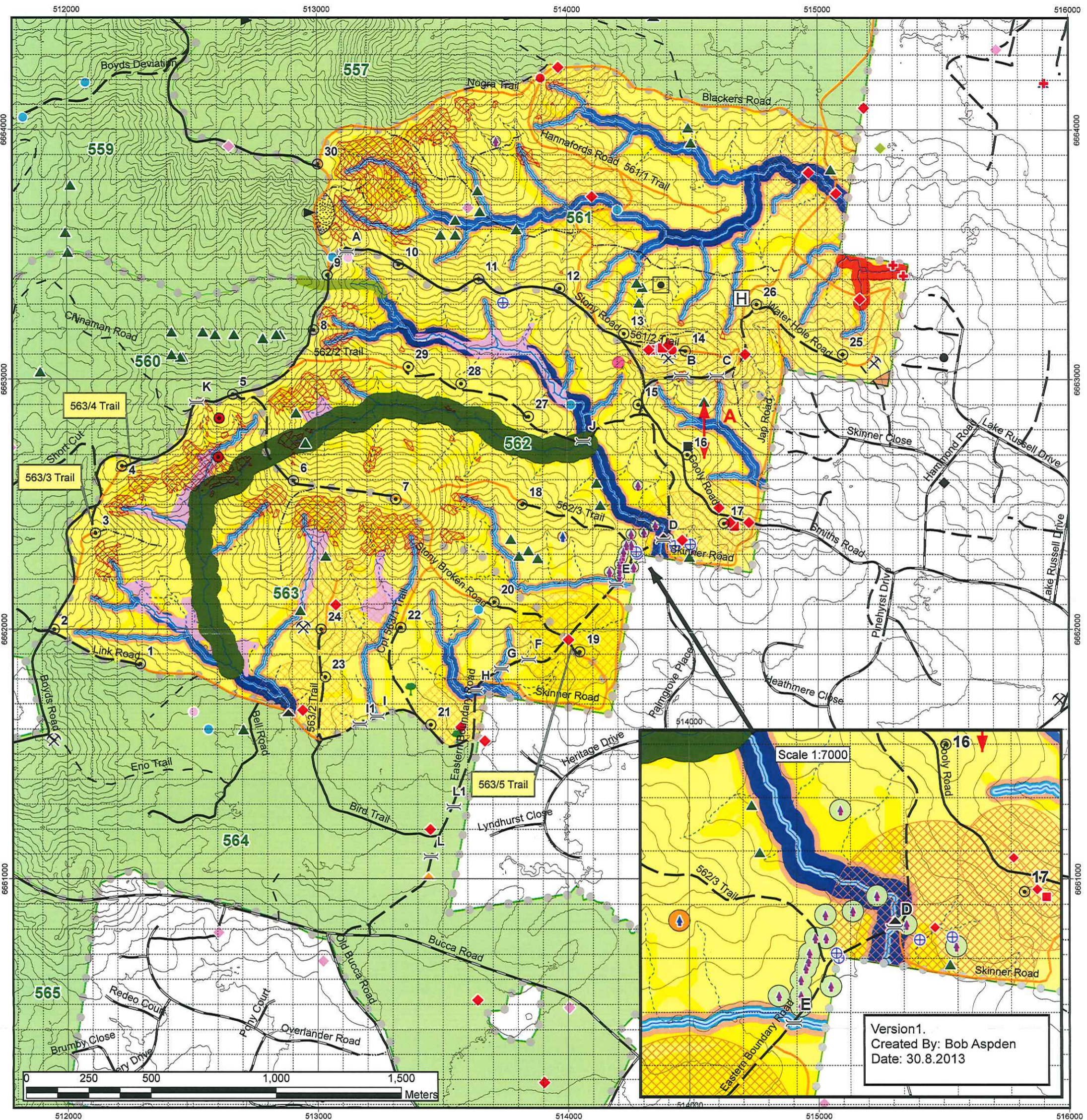
- Helicopter Landing Area
- Safety Points



Created By: Bob Aspden
 Created: 28/02/2013
 Printed: 28/02/2013

Map Sheets:
 1:25,000 - Moonee Beach - 9537-4S
 1:100,000 - Coffs Harbour - 9537
 Scale 1:15,000

North East Region - Coffs Harbour MA
 Operational Harvest Map
Compartments 561, 562 & 563
 Orara East State Forest



Version 1.
 Created By: Bob Aspden
 Date: 30.8.2013

MAP FEATURES	HARVESTING PRESCRIPTIONS	FOREST MANAGEMENT PROTECTION	THREATENED SPECIES LOCATIONS
<ul style="list-style-type: none"> State Forest Boundary Compartment Boundary 1 Km Grid 10 / 100 m Contour State Forest Indicative Slopes > 30 degrees (LiDAR derived) Mine Sites (DMR) Drainage Line Indicative Drainage Feature Permanent Growth Plot Plus Trees 	<ul style="list-style-type: none"> General Management (FMZ 4) Areas for Further Assessment <p>HARVESTING PROTECTION (TSL, EPL & FL)</p> <p>Riparian (IHC 1 & 2)</p> <ul style="list-style-type: none"> Filter 5m either side Protection 5m either side Protection 15m either side Protection 25m either side Operational zone 10m either side 	<ul style="list-style-type: none"> Non-Forestry Use (FMZ 7) Rainforest - Crafti + RN17 <p>RIDGE & HEADWATER HABITAT</p> <ul style="list-style-type: none"> 40m wide exclusion 80m wide exclusion <p>ROADS</p> <ul style="list-style-type: none"> Sealed All Weather, Unsealed Dry Weather, Unsealed 4WD Track Potential Snig Track Non Haulage Roads 	<ul style="list-style-type: none"> Niemeyera whitei Boronia umbellata Powerful Owl Masked Owl Sooty Owl Varied Sittella Golden-tipped Bat Giant Barred Frog Stephens Banded-Snake Glossy Black-Cockatoo feed tree Spotted-tailed Quoll Brush-tailed Phascogale Yellow-bellied Glider Koala Little Bent-wing Bat Large-footed Myotis (Bat) Brown Treecreeper <p>TSL PRESCRIPTIONS</p> <ul style="list-style-type: none"> Brush-tailed Phascogale Exclusion Giant-barred Frog Exclusion (30m) Yellow-bellied Glider Protection Stephen's Banded Snake Protection Tylophora woollsii (potential) (20m Exclusion) Moonee Quassia (20m Exclusion) Marsdenia longiloba (Protect 90% of individuals)



Map Sheets:

1:25,000 - Moonee Beach - 9537-4S

1:100,000 - Coffs Harbour - 9537

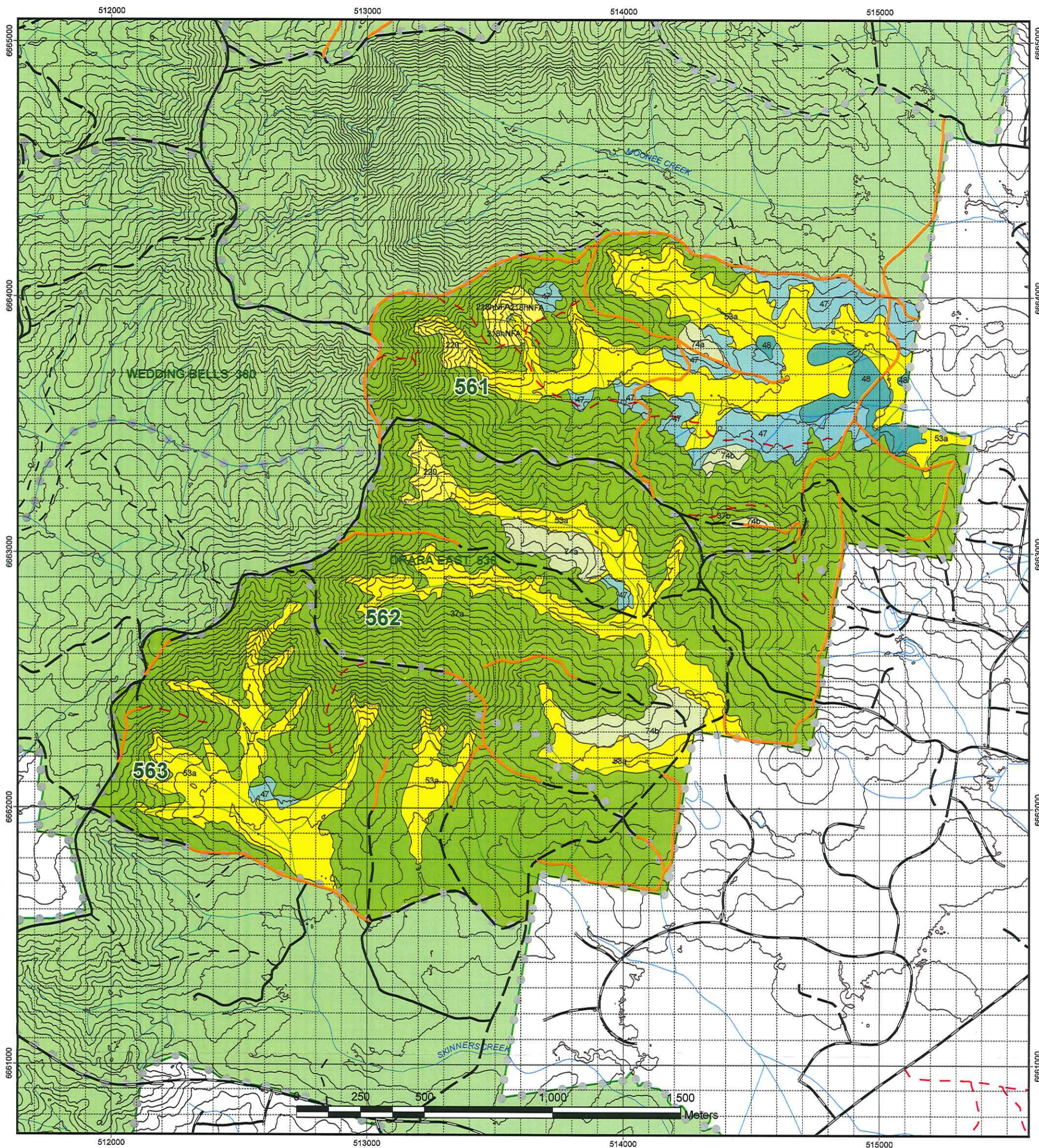
Scale 1:15,000

North East Region - Coffs Harbour MA

Operational Harvest Map

Compartments 561, 562 & 563

Orara East State Forest



MAP FEATURES

- State Forest Boundary
- Compartments Boundary
- 1 Km Grid
- 10 / 100 m Contour
- State Forest
- LIC Drainage

ROADS

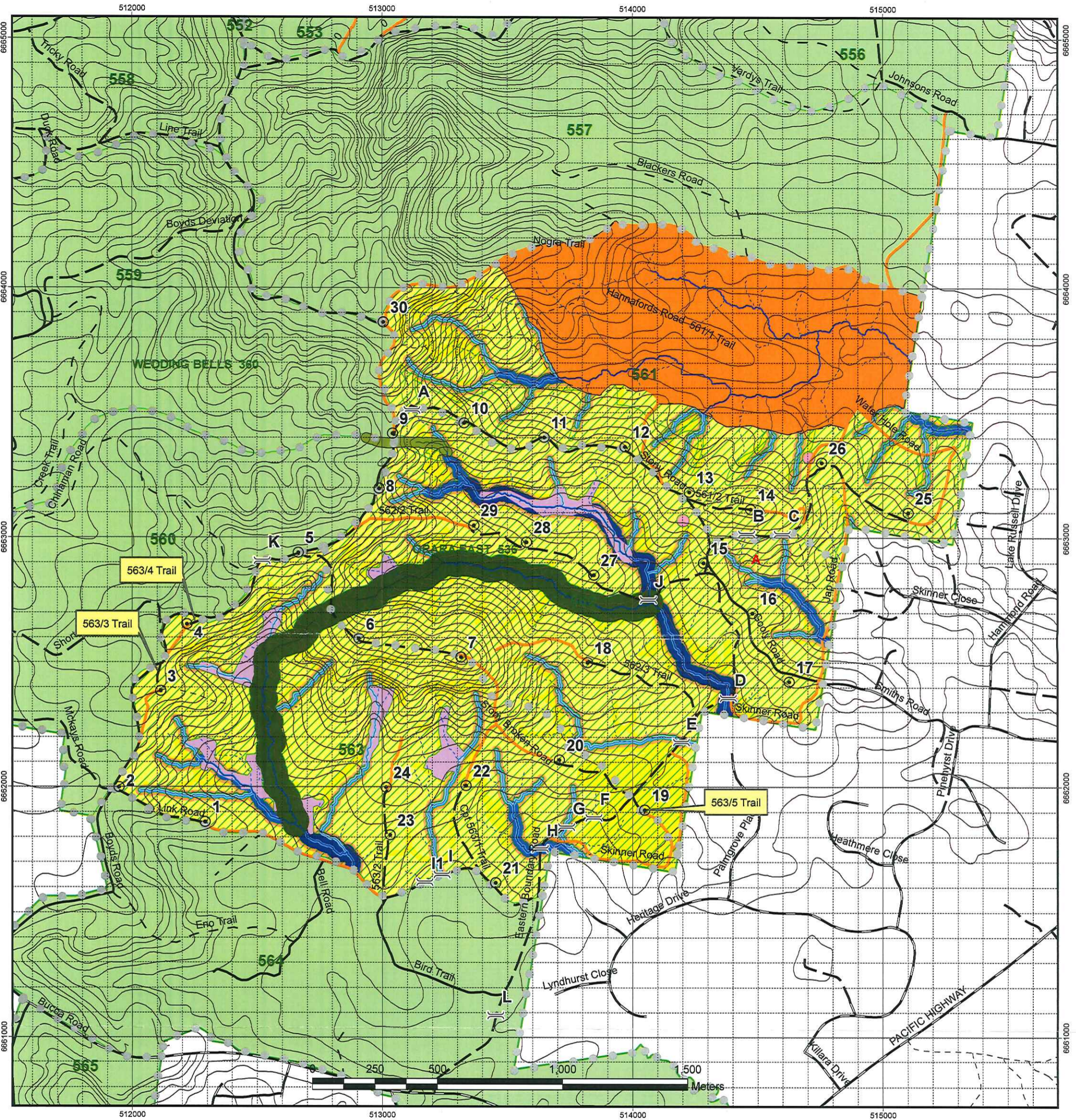
- Sealed
- All Weather, Unsealed
- Dry Weather, Unsealed
- 4WD Track
- New Construction
- Non Haulage Roads
- Roads not to be used

Forest Types

- Type 37 Dry Blackbutt
- Type 47 Tallowwood - Sydney Blue Gum
- Type 48 Flooded Gum
- Type 53 Brush Box
- Type 74 Spotted Gum - Ironbark / Grey Gum
- Type 218 Forestry Plantations
- Type 220 Cleared / Partially Cleared

Map Sheets:
 1:25,000 - Moonee Beach - 9537-4S
 1:100,000 - Coffs Harbour - 9537
 Scale 1:15,000

North East Region - Coffs Harbour MA
 Indicative Silvicultural Map
Compartment 561, 562 & 563
 Orara East State Forest



Indicative Silvicultural Treatment

- Offset Area (20% of NHA)
- Medium STS (70% of NHA) and Heavy STS (10% of NHA) Area

FORESTRY CORPORATION of NEW SOUTH WALES

NORTH EAST REGION


HARVEST PLAN No. 10401

Orara East State Forest – Compartments 561/562/563

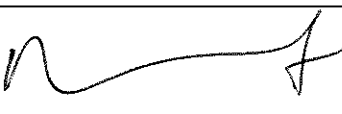
1. Certification

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

Prepared by:

Harvest Planner		Date: 2/9/13
Bob Aspden		

Endorsed by:

Harvest Planning Team Leader		Date: 05/9/13
Matt Howat		

Endorsed by:

Planning Manager		Date:

Approved by:

Regional Manager		Date: 5/9/13
Craig Busby		

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

2. Description of Proposal

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

Other proposed works:

Work	Proposed	Details
Roadworks	Yes	Roadworks Plan (attached).
Post-harvest Burning	Yes	Plan to be prepared separately.
Rehabilitation	Yes	Plan to be prepared separately.

3. Area Identification and Yield Estimates

<i>Region</i>	North East Region
<i>Management Area</i>	Coffs Harbour
<i>State Forest</i>	Orara East
<i>State Forest No.</i>	536
<i>Pricing Area</i>	Coffs Harbour

<i>Compartment Number</i>	561	562	563	<i>Total</i>
<i>Gross Area (ha)</i>	198	190	167	555
<i>Net Harvest Area (ha)*</i>	90	154	136	380
<i>Estimated Yield (m³/ha)</i>	24	24	28	Avg 25m ³ /ha
<i>Volume (m³) All Products</i>	2000	3500	3700	

*NHA does not include inaccessible or offset areas.

<i>Products</i>	<i>Total (m³)</i>
High Quality Large	2400
High Quality Small	2000
Low Quality	3000
Veneer	130
Poles/Piles	900
Firewood	1100
<i>Total</i>	9600

4. Forest Description

4.1 Forest Type (See Forest Type map)

- Dry Blackbutt type dominates the net area with moist types 47/48 (Tallowwod, Blue Gums, Flooded Gum) occurring in cpt 561 and also on lower slopes and around drainage lines elsewhere within the operational area.
- Area of forest type 53 (Brush Box) unlikely to be as extensive as indicated on forest type map.

4.2 Harvest History

- These compartments have been harvested extensively since the 1920s often using TSI operations which have produced numerous even-aged stands.
- Last harvests occurred in 1993/94 and 2006/7 and were carried out using a thinning silviculture. Cpt 561 was subjected to a further medium STS and AGS (1st cycle) operation in 2008/2009.

4.3 Stand Description

- Even Aged Blackbutt:
 - Advanced sapling 10-30cm diameter at breast height over bark (dbhob) regrowth from recent harvest events (approx 10%).
 - Pole/Mature 40-70cm dbhob component resulting from TSI operations of the 1950's (approx 70%).
- Mixed Age - Mixed Species consisting of:
 - Moister forest types occurring on lower slopes and in/around drainage lines (approx 20%).

4.4 Site Quality

- Generally very good site quality with site height 30-40m.

4.5 Stand Health

- Very Good – few old defective trees.

5. Silviculture and Harvesting Prescriptions

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

5.1 Objectives

- Remove subdominant trees with a view to promoting growth in retained stems for a regeneration STS operation in 5-10 years time.
- Create suitable conditions for a regeneration event.
- The table below gives proposed silvicultural treatments for the forest types within the harvest area:

<i>Stand Description</i>	Even-aged Blackbutt regrowth	Mature Even-aged Blackbutt and Mixed species	Offset areas - Blackbutt and mixed species forest previously treated with AGS and thinning.
<i>Proposed Silviculture</i>	Medium STS	Heavy STS	No harvesting
<i>Est. % of NHA</i>	70%	10%	20%
<i>Expected BA Removal (%)</i>	40%	80%	0%
<i>Future Ops 5-10 years</i>	Regeneration STS (5-10 years)	Thinning (15-20 years)	NA
<i>Other treatments</i>		<ul style="list-style-type: none"> - Retain seed trees. - Mechanical disturbance. - Enrichment planting. 	

5.2 Single Tree Selection

- Medium STS will be managed with the object of removing poorer quality and less vigorous trees to allow the remaining high-quality trees to grow on (approx 70% of the NHA). The occasional co-dominant (e.g. paired-poles) will be removed to allow for appropriate spacing between trees.
- Heavy STS will be managed with the object of harvesting trees that have reached their maximum economic end use (mature stands – approx 10% of the NHA).
- Tree removal and ground disturbance must also maximise regeneration opportunities.
- STS must remove no more than 40% of the basal area across the net harvest area.
- BA removal may exceed 40% in some localized areas, but will be balanced by offset areas, non harvest areas and tree retention across the tract.
- Trees with dbhob <20cm must not be selected for harvesting under STS (1.5.10 IFOA).

In areas where heavy STS is implemented, seed tree retention, mechanical disturbance and enrichment planting may be required.

5.3 Other Treatments

5.3.1 Seed Tree Selection

- Seed trees should be
 - as tall as possible (~30-40m),
 - have good form,
 - be in the size range 40-70cm dbhob, and
 - generally be spaced at 1.5 x tree height but not more than 2 x tree height (trunk to trunk).
- Trees in retention areas may also serve as seed trees.
- Seed trees may also fulfil tree retention requirements of the TSL.

5.3.2 Mechanical Disturbance

- Ensure ground disturbance is sufficient to create suitable seedbed for regeneration.
- SFO to map areas requiring additional disturbance.
- Encourage knocking over of as much non-vigorous unmerchantable material as possible.

5.3.3 Enrichment Planting/Seeding

- Seed is to be collected during the harvest operation and dispersed over suitably disturbed and/or burnt areas, preferably during the wet season (January/February).
- Enrichment planting to be conducted as determined by the Harvesting Team Leader.
- Seedlings planted must be of the same species present prior to harvest with the objective of ensuring that species proportions following planting are similar to pre-harvest proportions (IFOA Cl. 37).

5.4 Rehabilitation of previous AGS gaps

- Consideration should be given to the rehabilitation of failed AGS gaps within Cpt 561 (to the north of Stony Road and around Dump 26). The SFO is to take note of the levels of regeneration within these gaps and consider the use of contractor machinery to push up residues within the gaps and the creation of mechanical disturbance to promote regeneration. Any potential rehabilitation works must be discussed and approved by Operations Branch.

5.5 Other Considerations

- The Silviculture Map shows indicative areas for each silvicultural treatment outlined above. The boundaries of these areas are not fixed – areas for application of silvicultural regimes should be determined by the SFO in conjunction with the Harvesting FA. Significant variation from this intent requires approval from the Harvesting Team Leader.
- The SFO must monitor basal area retention under STS
- The actual harvest areas and area of each type of silvicultural treatment must be recorded/mapped and retained with this plan.

6. Special Conditions

6.1 Leases, Permits & Plots

Type	Present	Details	Conditions
Permanent Growth Plots (PGP)	Yes	2 x PGP's at GR: 512609E 6662845N and 512605E 6662689N	There are two PGP's in Cpt 563 south of Dump 5 as indicated on the HPOM. The harvesting contractor must collect all tags from trees harvested or destroyed and return to NER Resources Unit.
Plus Trees	Yes	2 x Plus Trees at GR: 5123372E 6661759N and 513558E 6661570N	Plus trees as shown on the operational harvest map are to be identified and retained.

6.2 Noise

There are residences in close proximity to the operation area and haulage routes that are likely to be affected by noise (as determined by the SFO), mitigation measures to lessen the impact on those residences will apply. These measures are to be determined on a site specific basis by the SFO and should be discussed with the Harvesting Team Leader.

6.3 Dust

There are residences in close proximity to the operation area and haulage routes that that are likely to be affected by dust (as determined by the SFO), mitigation measures to lessen the impact on those residences will apply. These measures are to be determined on a site specific basis by the SFO and should be discussed with the Harvesting Team Leader.

6.4 Critical Boundaries

6.4.1 Private Property

Private property adjoins compartments 561, 562 & 563 to the east. These boundaries are fenced.

2. Harvesting Notification List (Occupation Permit, Neighbour and Leaseholder details)**PERMITS:**

Permit Type	ID number	Name	Address	Phone
Bee sites	Nil			

NEIGHBOURS:

Name	Address	Location	Phone
Numerous Neighbours (x37) along Eastern Boundary Road (Heritage Park) – See Front Gate report and maps (x2)			
Vicki Johnson	324 Bucca Rd (corner of Bucca Rd and Boyds Rd)		

OTHER GOVERNMENT & LOCAL GOVERNMENT AGENCIES:

Department/Shire	Contact Name	Address	Phone	Fax
RMS Community Liaison Manager (Leightons)	Janice Smith	Community.enquiries@s2w.incite.com.au	6690 7119 1800 636 363	

NOTES:

- RMS was contacted with regard to the suitability of the Smiths Rd / Pacific Hwy intersection for log truck usage. Further inspection by log truck hauliers is required.
- One neighbour occurs on the intersection of Boyds and Bucca roads. The adjacent section of Boyds has been gravelled in the past for dust suppression.
- 37 neighbours occur on the eastern boundary of the operational area (including Heritage Park).

6.4.2 Other critical boundaries

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

6.5 Haulage Considerations

- Haulage is planned to access the Pacific Highway via Bucca Road. The wet weather route will be via Boyds Road. Eastern Boundary is not to be used in prolonged wet weather. These routes are not suitable for B-doubles.
- Haulage is also planned to access the Pacific Highway via Smiths Road (Gooly Road) as a secondary wet weather route for accessing the eastern side of the operational area. This route is contingent on the haulier completing a risk assessment on the route including the intersection with the Pacific Highway and assessing suitability for log truck haulage.
- Additional signage should be used on the Bucca Road and Smiths Road to notify traffic of turning trucks.

6.6 IFOA Required Approval of Forestry Activities

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

<i>Activity</i>	<i>Crossing/Location</i>	<i>Feature Type</i>	<i>Conditions</i>
Snig track construction and use.	IFOA crossing A	Riparian habitat Protection	Minimise size of snig track, remove debris outside filter strip and drain to EPL on completion of snigging.

- Any additional crossings of Rainforest, HCVOG and Riparian Protection Zones require prior Regional Manager (or the Office of Environment & Heritage (OEH)) approval before they can be implemented.
- It is the responsibility of the SFO to identify any additional areas that need to be crossed, the proposed location of any such crossings, and to contact the Planning Unit via the Harvesting Team Leader to obtain the necessary approval.

6.7 Unmapped Rainforest

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

6.8 LiDAR Corrected Drainage

- The locations of drainage lines shown on the HPOM have been altered using information available from LiDAR. This should more accurately reflect the location of mapped drainage lines.
- Also shown are Indicative Drainage Features - these may be drainage lines, drainage depressions or neither. The location of these features is indicative only and their status should be confirmed in the field before the appropriate prescriptions (if any) are applied.

6.9 Weeds

- Parts of the operational area are heavily infested with Lantana. Machinery operators are to conduct inspections and clean machinery if required when moving from weeded to non-weeded areas.

6.10 *Tylophora woolsii* Exclusion

- An unconfirmed *Tylophora woolsii* record occurs within Cpt 562, to the south-east of Dump 18 (see operational map). A 20m exclusion around this record is to be observed until such time as the record can be positively identified (during flowering – Spring to Summer). If determined as not being this species, exclusion zone does not apply and harvesting can occur in this area.

7. Forest Management Zoning Conditions

The following Forest Management Zones and conditions apply:

FMZ	Type	Notes
Zone 3A	Harvesting Protection	Rainforest. These areas must be protected as marked on the map. These areas are also likely to constitute Lowland Rainforest EEC.
Zone 4	General Management	Available for harvesting in accordance with the conditions of this harvest plan.
Zone 7	Non Forest Use	Two small areas exist within the compartment; one indicated by pink circle on the HPOM is to the north of Dump 15, west of the intersection of Stony Road and Eastern Boundary Road. The other is adjacent to Dump 26 and is associated with the heritage site (old gravel loading ramp "Chinaman"). Neither of these areas are to be harvested.
Zone 8	Further Assessment	These areas are to be rezoned FMZ 4 with management by prescription (Standard Harvest Plan Conditions for Native Forest Operations in North East Region apply). These areas may include <ul style="list-style-type: none"> - Mapped drainage features – identify in the field and apply EPL and TSL conditions based on actual field location. - Modelled drainage features – modelled streams are to be inspected by the SFO. Appropriate prescriptions (Schedule 4 of the EPL) are to be applied if required and noted on the HPOM. - Modelled Inherent Hazard Class (IHC) 4 areas – assess actual slope in the field and exclude areas >30 degrees in accordance with condition 3 of schedule 4 of the EPL.

8. Cultural Heritage Conditions

8.1 Aboriginal Cultural Heritage

- No special conditions apply.

8.2 Non Aboriginal Cultural Heritage

- A non-aboriginal heritage site (old gravel loading ramp "Chinaman") occurs adjacent to Dump 26 and is associated with an old quarry. Harvesting is to locate and mark out the site and make all operators aware of its location - the site is not to be disturbed.

9. Flora and Fauna Conditions

Refer to Technical Guidance Note 2005-3A March 2005 (TSL Booklet) and any subsequent amendments to the TSCL for conditions.

9.1 Mark-up Conditions

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

9.2 Applicable Tree Retention Conditions

Prescription	TSCL Conditions
Hollow Bearing and Recruit Trees	Regrowth Zone – 5.6d & e.
Is Greater Glider density >1 per ha	No – 6.9d does not apply.
Stag Retention	5.6f
Significant Food Resources	5.6g
Protection of Retained Trees	5.6h

9.3 Species Known or Likely to Occur

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

SPECIES GROUP	COMMON NAME	SCIENTIFIC NAME
Amphibians	Giant Barred Frog	<i>Mixophyes iteratus</i>
Mammals	Rufous Bettong	<i>Aepyprymnus rufescens</i>
	Spotted-tailed Quoll	<i>Dasyurus maculatus</i>
	Golden-tipped Bat	<i>Kerivoula papuensis</i>
	Large Footed Myotis	<i>Myotis adversus</i>
	Yellow-bellied Glider	<i>Petaurus australis</i>
	Brush-tailed Phascogale	<i>Phascogale tapoatafa</i>
	Koala	<i>Phascolarctos cinereus</i>
	Grey-headed Flying Fox	<i>Pteropus poliocephalus</i>
	Wombat	<i>Wombatus ursinus</i>
Birds	Glossy-black Cockatoo	<i>Calyptorhynchus lathami</i>
	Brown Treecreeper	<i>Climacteris picumnus picumnus</i>
	Varied Sittella	<i>Daphoenositta chrysoptera</i>
	Little Lorikeet	<i>Glossopsitta pusilla</i>
	Powerful Owl	<i>Ninox strenua</i>
	Masked Owl	<i>Tyto novaehollandiae</i>
	Sooty Owl	<i>Tyto tenebricosa</i>
Flora	Orara Boronia	<i>Boronia umbellata</i>
	Slender Screw-fern	<i>Lindsaea incisa</i>
	Slender Marsdenia	<i>Marsdenia longiloba</i>
	Rusty Plum	<i>Niemeyera whitei</i>
	Moonee Quassia	<i>Quassia</i> sp. B (Moonee Creek)

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

Table 1: General Prescriptions

TSL Condition	TSL Condition No.	Record Details	Prescription Summary
Koala Mark-up Searches	5.2.2	1 old record in Cpt 561 – continue search	These compartments contain preferred forest types, marking-up must be conducted at least 300m in advance of harvesting operations. In the event that a koala or scats (as noted in 5.2.2(i)) are found, a koala star search will be conducted to determine koala use area/s.
Tree Retention	5.6 (g)	1 GLBC feed tree	Retain and protect glossy black cockatoo feed trees.
		5 YEBG feed trees	Retain all yellow-bellied glider and squirrel glider sap feed trees.
Wetlands	5.9	Nil Records – continue search	10m exclusion zone on wetlands <0.5ha, 20m on 0.5-2ha, 40m on SEPP14 and >2ha wetlands.
Heath and Scrub	5.10	Nil Records – continue search	20m exclusion zone on feature if >0.2ha (45m x 45m).
Rocky Outcrops and Cliffs	5.11	Nil Records – continue search	SFA prohibited from feature, 20m exclusion buffer if > 0.1ha (approx. 30m x 30m).
Threatened Frog General Protection Measures	5.12	Nil Records – continue search	10m exclusion zone on all dams.
Bird Nest and Roost Site Protection	5.13	Nil Records – continue	Species related exclusion zones on nests and roosts. There are numerous relevant bird records in and

TSL Condition	TSL Condition No.	Record Details	Prescription Summary
Tree Bat Roost Protection	5.14.1	Nil Records – continue search	around compartments. 30m exclusion zone must be implemented around tree roosts.
Subterranean Roost Protection	5.14.2	Nil Records – continue search	No exclusion zone if open pit < 3m deep 10m exclusion zone where no bats found. 50m exclusion zone if bats found. 100m exclusion zone on all caves, rock overhangs, tunnels and disused mineshafts (>3m deep) until inspected by Ecology to determine status of roost. Notify Harvest Planner of location.
Significant Subterranean Roost Protection	5.14.3	Nil Records – continue search	100m exclusion zone on all caves, rock overhangs, tunnels and disused mineshafts (>3m deep) until inspected by Ecology to determine status of roost. Notify Harvest Planner of location. 100m buffer if roost is significant.
Protection of Flying-fox Camps	5.14.4	Nil Records – continue search	50m exclusion zone until species confirmed by Ecology. Notify Harvest Planner of location.
Burning	5.16	Woodland bird and other Threatened species have been recorded in these cpts.	The habitat requirement of threatened species must be taken into account when instigating hazard reduction burns to promote and maintain an understorey mosaic, significant areas of dense understorey vegetation and to minimise impact on large fallen logs.
Ground Habitat Protection	5.17 (a) 5.17 (b) 5.17 (d)	Nil Records – continue search CWRV + small mammals reptiles Larger CWRV	To the greatest extent practical, protect ground habitat from SFA. Ground habitat includes understorey vegetation, ground cover vegetation, leaf litter and fallen timber. Commercial Firewood collection is not permitted Firewood licences state that timber with hollows and/or over 40 cm diameter must not be collected or damaged.
Tea-tree <i>Melaleuca</i> spp. Protection	5.19	Nil Records – continue search	<i>Melaleuca irbyana</i> must not be harvested.

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

TSL Condition	TSL Condition No.	Record Details	Prescription Summary
Giant barred Frog (<i>Mixophyes iteratus</i>)	6.3	2 MIX ITE records in C_561	Exclusion zone of 30m on both sides of all streams within 200m of record as mapped.
Stephen's Banded Snake (<i>Holocephalus stephensii</i>)	6.6	1 STBS record within 100m of compartment (in C_557)	All hollow-bearing trees with a dbhob greater than 60cm within 100m of the record must be retained. During harvesting operations, the potential damage to these trees must be minimised by utilising directional felling techniques.
Powerful Owl (<i>Ninox strenua</i>) Masked Owl (<i>Tyto novaehollandiae</i>)	6.9	Numerous records in and within 2km of	Landscape approach as specified in 6.9.2 will be used. Condition 5.13 may be applicable to protect any roosts or nests found.

TSL Condition	TSL Condition No.	Record Details	Prescription Summary
		compartment s	Search gully lines and heads of gullies for roost and nest sites.
Brown Treecreeper (<i>Climacteris picumnus victoriae</i>)	5.13 (a), (h) 5.17 (b)	1 BRTC record in C_561	A 20m radius exclusion zone must be applied around all nests. Commercial firewood collection must not be permitted in compartments with records.
Brush-tailed Phascogale (<i>Phascogale tapoatafa</i>)	6.12	1 BRTP record within 500m of compartment boundary.	Exclusion zone of 20ha to be retained as mapped. Den records must be contained within exclusion zones.
Yellow-bellied Glider (<i>Petaurus australis</i>)	6.17	5 YEBG V-notch tree records in compartment s. 16 YEBG call detection records in compartment s. 1 YEBG record (unknown detection method) in C_562. A observation detection method will be applied to this record. 2 YEBG call detection records within 200m of compartment boundary.	Exclusion of 50m on dens. Retention of all sap feed trees. Within 100m of dens, sap feed trees and observation records, 15 mature / late mature feed trees must be retained. Within 200m of call detection site, 15 feed trees must be retained. Retained trees must be of same species as tree with den, feed marks or observation or should be species that shed their bark in long strips.
<i>Quassia</i> sp. Moonee Creek	6.25	17 Quassia record locations in compartment s. Each location has multiple records of plants.	20m Exclusion Zone, 90% of individuals
<i>Marsdenia longiloba</i>	6.26	4 MARS LONG records in C_562	Protect 90% of individuals
<i>Niemeyera whitei</i>	6.27	Numerous records in compartment s.	Harvesting is permitted in populated areas. This species is managed under a threatened flora monitoring program. No burning in areas with records

Table 3: Other Ecological Considerations

Issue, Feature or Record	Presence	Assessment and Management Recommendations
EEC: Lowland Rainforest in the NSW North Coast and Sydney bioregion.	Present in compartment - continue search within NLA.	Identify and mark in field to exclude specified forestry activities. Contact FNSW ecology unit for guidance if required.

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

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

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

10. Fisheries Licence Conditions

Conditions of the Fisheries Licence do not apply in these compartments.

11. Soils and Water Protection Conditions

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

Site-specific EPL conditions:

Elements	Conditions
Unmapped Drainage Lines	UDL harvesting permitted - Best Management Practices for UDL apply. (Refer to - "Standard_HP_Conditions_Native Forests 2011.2")
Drainage Feature Protection	See HPOM for widths.
Inherent Hazard Level	2
Dispersible Soils	No
Mass Movement	No
Log Dumps	Refer relevant conditions for IHL, Schedule 4 Section F of EPL booklet.
Snig Tracks	Refer relevant conditions for IHL, Schedule 4 Section H of EPL booklet.
Roads	See Schedule 5 (p. 18-26) of EPL booklet.
Non-Haulage Roads	May be used for extraction within net harvest area or as otherwise approved. EPL applies. Remove debris on completion of operations.

12. Legal Conditions

This operation must comply with:

- Standard Harvest Plan Conditions for Native Forest Operations in North East Region.
- Licence Conditions issued by Forests NSW under the Forestry Act (2012).
- State Forests of NSW Forest Practices Code - Part 2 Timber Harvesting in Native Forests (February 1999) and Forest Practices Code Part 4 Forest Roads and Fire Trails (February 1999).
- Integrated Forestry Operations Approval issued under part 5B of the Forestry Act 2012 including the associated licences:
 - Threatened Species Conservation Licence issued under the Threatened Species Conservation Act (1995).
 - Fisheries Licence issued under section 220ZW of the Fisheries Management Act 1994.
 - This operation is a non-scheduled operation under the Environment Protection Licence issued under section 55 of the Protection of the Environment Operations Act 1997. Roading and harvesting operations are not licenced. All EPL conditions will apply to harvesting and roading

operations except for schedule 4 condition 6 relating to filter strips, protection zones and operational zones.

13. Attachments

- Attachment 1: Locality map.
- Attachment 2: Harvest Plan Operational Map.
- Attachment 3: Forest Type Map.
- Attachment 4: Indicative Silvicultural map
- Attachment 5: Site Safety Plan describes the safety requirements and Medical Emergency Evacuation Plan for this harvesting operation.
- Attachment 6: Roading plan prescribes roading requirements for this harvesting operation.

19. Best Management Practices for Unmapped Drainage lines

1. Machinery exclusion zone: 0 to 5m from drainage line.

1.1 Machinery is excluded within 5m of the edge of drainage lines, except for the construction and use of a crossing. The edge of the drainage line is defined consistent with the EPL. This zone is marked with the θ symbol.

2. Modified harvest zone: 0 to 10m from drainage line.

This zone is marked with the θ symbol.

Ground disturbance is to be minimised within this zone and disturbance must be rehabilitated as outlined below. Machinery is only to enter the outer 5m of this zone where essential and under the following conditions:

- For mechanical harvesting operations: mechanical harvesting and shovel extraction with the harvester is permitted,
- For manual falling harvesting operations: log extraction with a grapple skidder or dozer is permitted only where machinery does not have the capacity to use a snig chain/rope
- For all operations: the construction or use of an authorised crossing.

Ground cover maintenance

2.1 Machinery operating within modified harvest zones must:

- a) Use walkover techniques wherever possible.
- b) Prevent to the greatest extent practicable the skewing of machinery tracks.
- c) Operate with blade up at all times except when conducting earthworks for the construction of a road, extraction track or snig track crossing, or for safety reasons. Crossings are to be minimised.
- d) Not snig along drainage depressions and drainage lines.
- e) Not operate when the soil is saturated.

2.2 Earthworks must not be undertaken within the modified harvest zone except for the construction of a road, extraction track or snig track crossing, consistent with EPL conditions to avoid soil disturbance.

2.3 Any crossings of unmapped drainage lines must be consistent with the conditions for crossing drainage lines in the EPL.

Ground cover rehabilitation

2.4 Soil disturbance created by machine operation in the modified harvest zone is to be rehabilitated by applying litter, twigs or mulch to achieve at least 70% surface cover on the disturbed area within one day of the creation of the disturbance (by contractor).

Log furrow rehabilitation

2.5 All log furrows produced by log extraction from the modified harvest zone must be:

- a) Infilled with soil and covered with litter, twigs or mulch to achieve at least 70% surface cover within one day of the creation of the furrow.
- b) Drained, 10m from the bank of the unmapped drainage line, so water running down any log furrow is dispersed onto undisturbed forest floor within one day of the creation of the furrow.
- c) Drained, if required, with a snig track crossbank, 10m from the bank of the unmapped drainage line, where a snig track will discharge water directly into the furrow (all by contractor).

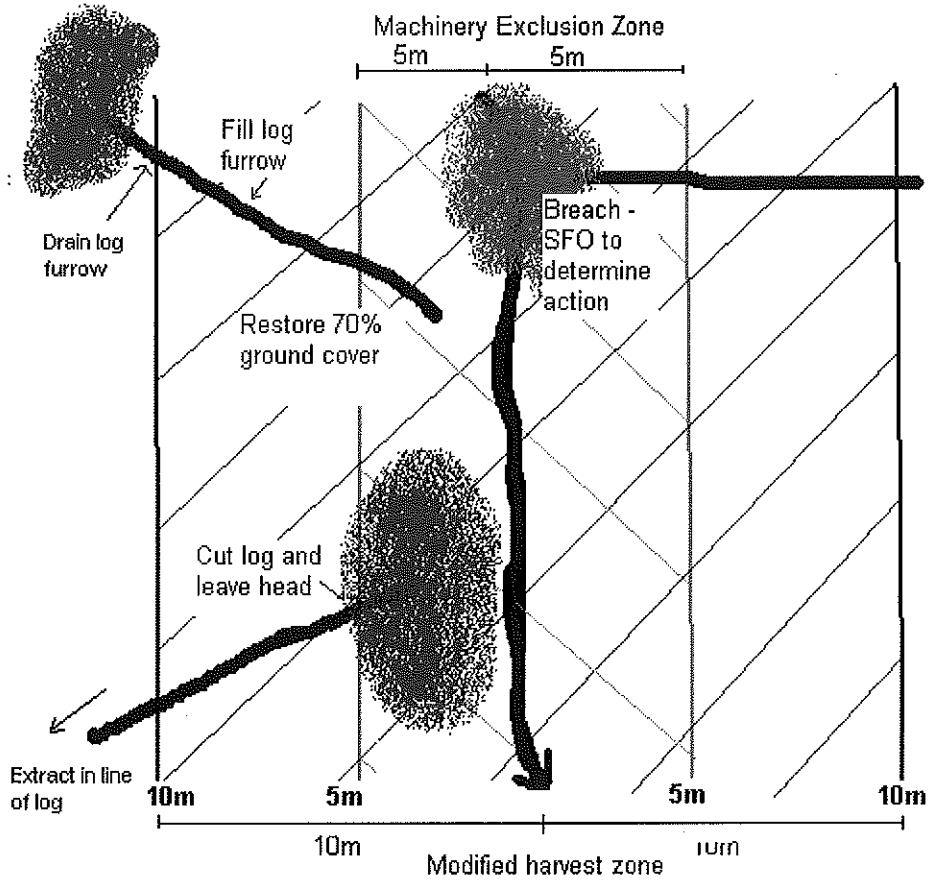
3. Tree falling conditions


Tree selection and extraction


- 3.1 Trees may be felled into and from within the modified harvest zone.
- 3.2 Tree removal within the modified harvest zone and buffer on buffer trees from adjacent areas will be targeted single tree selection of high quality products only (quota, veneer, PPG, graded smalls).
- 3.3 Trees must be marked for removal within the modified harvest zone.
- 3.4 Minor debris from understorey trees accidentally falling into or across drainage lines is acceptable.
- 3.5 Directional felling should be used where possible to direct trees located within the modified harvest zone out of the zone, for ease of straight line extraction. Any such disturbance is to be rehabilitated with 70% groundcover.
- 3.6 Trees felled from within or into the modified harvest zone must be extracted in the direction of the line of the log to minimise soil disturbance.
- 3.7 If a tree is accidentally fallen into or across a drainage line:
 - a) State Forests will take appropriate action, including the issuing of Penalty Infringement Notices, where trees are deliberately or negligently felled into or across a drainage line.
 - b) State Forests will determine appropriate action on a case by case basis, that may involve the removal of substantial debris from within the banks of the drainage line where safe to do so. Consideration will be made of the potential fire risk, potential benefits of leaving the debris in place and other factors

Excluded trees

- 3.8 Trees may not be felled from within or into the modified harvest zone where:
 - a) The ground slope in the zone of the anticipated disturbed area exceeds 21 degrees. The anticipated disturbed area is the area the SFO assesses as likely to be disturbed by tree falling and extraction (log furrow, snig track, area swept by log during extraction). The disturbed area does not include the area impacted by a tree head, ie trees may be felled into the zone where the ground slope exceeds 21 degrees only if there is to be no extraction disturbance. If trees are to be felled into the modified harvesting zone consideration should be given to the possibility of trees "spearing" into the drainage line.
 - b) The tree is growing within the banks of the unmapped drainage line.
 - c) The tree would fall into or across drainage lines to avoid disturbance to the drainage line or banks.
 - d) There is evidence of localised occurrence of mass movement, such as earth slumps, topples, falls, slides and/or flows.
 - e) There are regolith class 4 soils within the zone.
 - f) There is less than 70% groundcover from pre-harvesting burning within the modified harvesting zone
 - g) There are TSL species-specific or other exclusions, including where 200m/100m frog/bat species specific exclusions extend over unmapped drainage lines.
 - h) Threatened Fish License habitat class 1 or 2 occurs and the unmapped drainage line is unbroken (by a drainage depression) from the mapped stream.
 - i) Unmapped drainage lines can only be logged in accordance with seasonality restrictions.
 - j) The tree serves the purpose of being a retained tree under TSCL requirements (such as habitat trees, recruitment trees and eucalypt feed trees).



 Modified Harvest Zone 0-10m

 Machinery Exclusion Zone 0-5m

FORESTRY CORPORATION OF NSW – NORTH EAST REGION
ROADWORKS PLAN

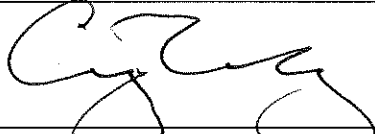
Orara East State Forest - Compartments 561, 562 & 563

Certification

Prepared by:

Harvest Planner		Date: 30/8/13
Bob Aspden		

Approved by:

Regional Manager		Date: 5/9/13
Craig Busby		

Contents

1. Cover Page
2. Operational Map
3. Costings
4. Roadworks Plan Text/Prescriptions
5. Locality Map
6. Safety Plan HAMEEP
7. Harvesting Plan
8. Harvesting Notification List (Operations Team Leader Only)

1. Objectives

- Roadworks are required to native forest harvesting operations within the above compartments. These compartments are scheduled for harvest in late 2013.
- The operational map shows the location of the proposed works.
- The financial analysis spreadsheet gives full details of costs, benefits, material & plant requirements.
- Attachments:
 - Harvest Plan Operational Map.
 - Roothing Costs Spreadsheet.

2. Specifications and Legal Conditions

This operation must comply with:

- Standard Harvest Plan Conditions for Native Forest Operations in North East Region.
- Licence Conditions issued by FCNSW under the Forestry Act (1916).
- FCNSW Forest Practices Code - Part 2 Timber Harvesting in Native Forests February 1999 and Forest Practices Code Part 4 Forest Roads and Fire Trails (February 1999).
- Integrated Forestry Operations Approval issued under part 4 of the Forestry and National Parks Estate Act 1998 (IFOA) as amended May 2003 including the associated licences:
 - Threatened Species Conservation Licence (TSCL) issued under the Threatened Species Conservation Act (1995).
 - Licence issued under section 220ZW of the Fisheries Management Act 1994 (FL).
 - This operation is a non-scheduled operation under the Environment Protection Licence issued under section 55 of the Protection of the Environment Operations Act 1997. Roothing and harvesting operations are not licensed. All EPL conditions will apply to harvesting and rooding operations.
- Technical Guidance Notes for Roadworks.
- FCNSW Forest Practices Code - Part 1 Timber Harvesting in FCNSW Plantations 2005 and Forest Practices Code Part 4 Forest Roads and Fire Trails (February 1999).

3. Special Conditions

<i>Feature</i>	<i>Conditions</i>
Threatened Species	See harvesting plan. Minimise disturbance within protection zones.
Environmental impacts ie Dust, Noise, Water, Visual	Yes – Numerous roads border private property to the east. Dust and noise must be minimized as much as possible with regard to adjoining neighbors. Numerous causeways also occur within the operational area – care must be taken to minimize soil disturbance around causeways during wet periods.
Haulage Standards	Haulage routes within the operational area are not suitable for B-doubles.
Private Property	Yes - Numerous roads border private property to the east. Dust and noise must be minimized as much as possible with regard to adjoining neighbours.
Safety Issues (includes hazards, public use of roads)	Yes - The rooding network within the operational area is often used by recreational 4WD drivers, motorbike riders and drug lords. Operators must remain vigilant to the presence of other road users. See Hazard Assessment in the Site Safety Plan.

3.1 EPL Licencing

This operation is not licensed under the EPL.

4. Scheduled Works

See attached road maintenance/upgrade and crossing assessment forms for details

Note:

- The section of Eastern Boundary Road between Gooly Road and 562/3 Road may not be required for haulage. This section will be used only as a dry weather haulage route in conjunction with access off the Bucca Road – in the event that primary access is not gained via Smiths Road and Gooly Road. Check with Roding supervisor prior to conducting roadworks.

Road Name: Boyds Road **Road Category:** Permanent **Road Length** 3300 m from the intersections with the Bucca Road to Stony Road

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	<input type="checkbox"/>	
	Mass movement conditions	<input type="checkbox"/>	
	Dispersible Soils Conditions	<input type="checkbox"/>	
Pavement	Widening	<input type="checkbox"/>	
	Minor Realignment	<input type="checkbox"/>	
	Remove vegetation / debris	<input checked="" type="checkbox"/>	
	Repair surface	<input checked="" type="checkbox"/>	
	Crown / Crossfall	<input checked="" type="checkbox"/>	
	Gravel	<input checked="" type="checkbox"/>	Gravel 500m over the red and yellow clay soils for wet weather haulage. Approx 30 loads.
Roadside & Batters	Remove trees >20 cm dbhob	<input checked="" type="checkbox"/>	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	<input checked="" type="checkbox"/>	Clearing outside the road prism exceeding 3m must comply with condition 5 Schedule 5 of the EPL. See Section 4 page 3.
	Repair/upgrade of Batters	<input type="checkbox"/>	
Drainage	Culverts	<input type="checkbox"/>	
	Mitre Drains	<input checked="" type="checkbox"/>	Clean
	ROD / Spoon	<input checked="" type="checkbox"/>	Maintain and install as per EPL spacing
	Belts/Channels	<input checked="" type="checkbox"/>	Replace ROD's with RF/MD's as required
	Drop Downs	<input type="checkbox"/>	
	Silt Trapping	<input type="checkbox"/>	

1. Start Date:

Finish Date:

Date	Event	Initial

Road Name: 563/3 Trail **Road Category:** Temp **Road Length** 110 m from the intersection with Boyds Road to Dump 3

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	<input type="checkbox"/>	
	Mass movement conditions	<input type="checkbox"/>	
	Dispersible Soils Conditions	<input type="checkbox"/>	
Pavement	Widening	<input type="checkbox"/>	
	Minor Realignment	<input type="checkbox"/>	
	Re-opening	<input type="checkbox"/>	
	Remove vegetation / debris	<input checked="" type="checkbox"/>	
	Repair surface	<input checked="" type="checkbox"/>	
	Crown / Crossfall	<input checked="" type="checkbox"/>	
	Gravel	<input type="checkbox"/>	
Roadside & Batters	Remove trees >20 cm dbhob	<input checked="" type="checkbox"/>	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	<input checked="" type="checkbox"/>	Clearing outside the road prism exceeding 3m must comply with condition 5 Schedule 5 of the EPL. See Section 4 page 3.
	Repair/upgrade of Batters	<input type="checkbox"/>	
Drainage	Culverts	<input type="checkbox"/>	
	Mitre Drains	<input checked="" type="checkbox"/>	Clean
	ROD / Spoon	<input checked="" type="checkbox"/>	Maintain and install as per EPL spacing
	Belts/Channels	<input checked="" type="checkbox"/>	Replace ROD's with RF/MD's as required
	Drop Downs	<input type="checkbox"/>	
	Silt Trapping	<input type="checkbox"/>	

1. Start Date:

Finish Date:

Date	Event	Initial

Road Name: 563/4 Trail **Road Category:** Temp **Road Length** 70 m from the intersection with Boyds Road to Dump 4

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	<input type="checkbox"/>	
	Mass movement conditions	<input type="checkbox"/>	
	Dispersible Soils Conditions	<input type="checkbox"/>	
Pavement	Widening	<input type="checkbox"/>	
	Minor Realignment	<input type="checkbox"/>	
	Re-opening	<input type="checkbox"/>	
	Remove vegetation / debris	<input checked="" type="checkbox"/>	
	Repair surface	<input checked="" type="checkbox"/>	
	Crown / Crossfall	<input checked="" type="checkbox"/>	
	Gravel	<input type="checkbox"/>	
Roadside & Batters	Remove trees >20 cm dbhob	<input checked="" type="checkbox"/>	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	<input checked="" type="checkbox"/>	Clearing outside the road prism exceeding 3m must comply with condition 5 Schedule 5 of the EPL. See Section 4 page 3.
	Repair/upgrade of Batters	<input type="checkbox"/>	
Drainage	Culverts	<input type="checkbox"/>	
	Mitre Drains	<input checked="" type="checkbox"/>	Clean
	ROD / Spoon	<input checked="" type="checkbox"/>	Maintain and install as per EPL spacing
	Belts/Channels	<input checked="" type="checkbox"/>	Replace ROD's with RF/MD's as required
	Drop Downs	<input type="checkbox"/>	
	Silt Trapping	<input type="checkbox"/>	

1. Start Date:

Finish Date:

Date	Event	Initial

Road Name: Stony Broken Road (west) **Road Category:** Temp **Road Length** 900 m from the intersection with Boyds Road to Dump 7

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	<input type="checkbox"/>	
	Mass movement conditions	<input type="checkbox"/>	
	Dispersible Soils Conditions	<input type="checkbox"/>	
Pavement	Widening	<input type="checkbox"/>	
	Minor Realignment	<input type="checkbox"/>	
	Re-opening	<input type="checkbox"/>	
	Remove vegetation / debris	<input checked="" type="checkbox"/>	
	Repair surface	<input checked="" type="checkbox"/>	
	Crown / Crossfall	<input checked="" type="checkbox"/>	
	Gravel	<input type="checkbox"/>	
Roadside & Batters	Remove trees >20 cm dbhob	<input checked="" type="checkbox"/>	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	<input checked="" type="checkbox"/>	Clearing outside the road prism exceeding 3m must comply with condition 5 Schedule 5 of the EPL. See Section 4 page 3.
	Repair/upgrade of Batters	<input type="checkbox"/>	
Drainage	Culverts	<input type="checkbox"/>	
	Mitre Drains	<input checked="" type="checkbox"/>	Clean
	ROD / Spoon	<input checked="" type="checkbox"/>	Maintain and install as per EPL spacing
	Belts/Channels	<input checked="" type="checkbox"/>	Replace ROD's with RF/MD's as required
	Drop Downs	<input type="checkbox"/>	
	Silt Trapping	<input type="checkbox"/>	

1. Start Date:

Finish Date:

Date	Event	Initial

Road Name: Stony Road **Road Category:** Permanent **Road Length** 1600 m from the intersections with Boyds Road to Eastern Boundary Road

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	<input type="checkbox"/>	
	Mass movement conditions	<input type="checkbox"/>	
	Dispersible Soils Conditions	<input type="checkbox"/>	
Pavement	Widening	<input type="checkbox"/>	
	Minor Realignment	<input type="checkbox"/>	
	Re-opening	<input type="checkbox"/>	
	Remove vegetation / debris	<input checked="" type="checkbox"/>	
	Repair surface	<input checked="" type="checkbox"/>	
	Crown / Crossfall	<input checked="" type="checkbox"/>	
	Gravel	<input checked="" type="checkbox"/>	Gravel approx 200m for wet weather access on steep/slippy sections (~15 loads) – to complement natural gravel in road surface.
Roadside & Batters	Remove trees >20 cm dbhob	<input checked="" type="checkbox"/>	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	<input checked="" type="checkbox"/>	Clearing outside the road prism exceeding 3m must comply with condition 5 Schedule 5 of the EPL. See Section 4 page 3.
	Repair/upgrade of Batters	<input type="checkbox"/>	
Drainage	Culverts	<input type="checkbox"/>	
	Mitre Drains	<input checked="" type="checkbox"/>	Clean
	ROD / Spoon	<input checked="" type="checkbox"/>	Maintain and install as per EPL spacing
	Belts/Channels	<input checked="" type="checkbox"/>	Replace ROD's with RF/MD's as required
	Drop Downs	<input type="checkbox"/>	
	Silt Trapping	<input type="checkbox"/>	

1. Start Date:

Finish Date:

Date	Event	Initial

Road Name: 561/2 Trail **Road Category:** Temp **Road Length** 260 m from the intersection
Stony Road to Dump 14

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	<input type="checkbox"/>	
	Mass movement conditions	<input type="checkbox"/>	
	Dispersible Soils Conditions	<input type="checkbox"/>	
Pavement	Widening	<input type="checkbox"/>	
	Remove vegetation / debris	<input checked="" type="checkbox"/>	
	Repair surface	<input checked="" type="checkbox"/>	
	Crown / Crossfall	<input checked="" type="checkbox"/>	
	Gravel	<input checked="" type="checkbox"/>	Gravel approx 50m for wet weather access on steep/slippy sections (~3 loads) – to complement natural gravel in road surface.
Roadside & Batters	Remove trees >20 cm dbhob	<input checked="" type="checkbox"/>	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	<input checked="" type="checkbox"/>	Clearing outside the road prism exceeding 3m must comply with condition 5 Schedule 5 of the EPL. See Section 4 page 3.
	Repair/upgrade of Batters	<input type="checkbox"/>	
Drainage	Culverts	<input type="checkbox"/>	
	Mitre Drains	<input checked="" type="checkbox"/>	Clean
	ROD / Spoon	<input checked="" type="checkbox"/>	Maintain and install as per EPL spacing
	Belts/Channels	<input checked="" type="checkbox"/>	Replace ROD's with RF/MD's as required
	Drop Downs	<input type="checkbox"/>	
	Silt Trapping	<input type="checkbox"/>	

1. Start Date:

Finish Date:

Date	Event	Initial

Road Name: Eastern Boundary Road **Road Category:** Permanent **Road Length** 4350 m from the intersections with the Bucca Road to Water Hole Road

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Special Note		The section of Eastern Boundary Road between Gooly Road and 562/3 Road may not be required for haulage. This section will be used only as a dry weather haulage route in conjunction with access off the Bucca Road – in the event that primary access is not gained via Smiths Road and Gooly Road. Check with Rooding supervisor prior to conducting roadworks.
	Heritage Sites		2 x Heritage sites occur to the east of Eastern Boundary Road. Operator must maintain awareness of the sites and works are to remain inside the road prism
	Remove vegetation / debris	<input checked="" type="checkbox"/>	
	Repair surface	<input checked="" type="checkbox"/>	
	Crown / Crossfall	<input checked="" type="checkbox"/>	
	Gravel	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> • Gravel approx 50m between Gooly Rd and Stony Rd for wet weather access (~3 loads) – to complement natural gravel in road surface. • Approx 15 loads gravel between Bucca Rd and Link Rd to improve road surface (not wet weather haulage) • 5 load small rock on causeway Crossing L (road maintenance work only)
Roadside & Batters	Remove trees >20 cm dbhob	<input checked="" type="checkbox"/>	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	<input checked="" type="checkbox"/>	Clearing outside the road prism exceeding 3m must comply with condition 5 Schedule 5 of the EPL. See Section 4 page 3.
	Repair/upgrade of Batters	<input type="checkbox"/>	
Drainage	Culverts	<input type="checkbox"/>	
	Mitre Drains	<input checked="" type="checkbox"/>	Clean
	ROD / Spoon	<input checked="" type="checkbox"/>	Maintain and install as per EPL spacing
	Belts/Channels	<input checked="" type="checkbox"/>	Replace ROD's with RF/MD's as required
	Silt Trapping	<input type="checkbox"/>	

1. Start Date:

Finish Date:

Date	Event	Initial

Road Name: Water Hole Road **Road Category:** Temp **Road Length** 500 m from the intersection Eastern Boundary Road to Dump 25

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	<input type="checkbox"/>	
	Mass movement conditions	<input type="checkbox"/>	
	Dispersible Soils Conditions	<input type="checkbox"/>	
Pavement	Widening	<input type="checkbox"/>	
	Minor Realignment	<input type="checkbox"/>	
	Re-opening	<input type="checkbox"/>	
	Remove vegetation / debris	<input checked="" type="checkbox"/>	
	Repair surface	<input checked="" type="checkbox"/>	
	Crown / Crossfall	<input checked="" type="checkbox"/>	
	Gravel	<input type="checkbox"/>	
Roadside & Batters	Remove trees >20 cm dbhob	<input checked="" type="checkbox"/>	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	<input checked="" type="checkbox"/>	Clearing outside the road prism exceeding 3m must comply with condition 5 Schedule 5 of the EPL. See Section 4 page 3.
	Repair/upgrade of Batters	<input type="checkbox"/>	
Drainage	Culverts	<input type="checkbox"/>	
	Mitre Drains	<input checked="" type="checkbox"/>	Clean
	ROD / Spoon	<input checked="" type="checkbox"/>	Maintain and install as per EPL spacing
	Belts/Channels	<input checked="" type="checkbox"/>	Replace ROD's with RF/MD's as required
	Drop Downs	<input type="checkbox"/>	
	Silt Trapping	<input type="checkbox"/>	

1. Start Date:

Finish Date:

Date	Event	Initial

Road Name: Gooly Road **Road Category:** Permanent **Road Length** 700 m from the intersections with Eastern Boundary Road to Smiths Road (bitumen)

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	<input type="checkbox"/>	
	Mass movement conditions	<input type="checkbox"/>	
	Dispersible Soils Conditions	<input type="checkbox"/>	
Pavement	Widening	<input type="checkbox"/>	
	Minor Realignment	<input type="checkbox"/>	
	Re-opening	<input type="checkbox"/>	
	Remove vegetation / debris	<input checked="" type="checkbox"/>	
	Repair surface	<input checked="" type="checkbox"/>	
	Crown / Crossfall	<input checked="" type="checkbox"/>	
	Gravel	<input checked="" type="checkbox"/>	Gravel approx 100m for wet weather access (~8 loads) – to complement natural gravel in road surface.
Roadside & Batters	Remove trees >20 cm dbhob	<input checked="" type="checkbox"/>	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	<input checked="" type="checkbox"/>	Clearing outside the road prism exceeding 3m must comply with condition 5 Schedule 5 of the EPL. See Section 4 page 3.
	Repair/upgrade of Batters	<input type="checkbox"/>	
Drainage	Culverts	<input type="checkbox"/>	
	Mitre Drains	<input checked="" type="checkbox"/>	Clean
	ROD / Spoon	<input checked="" type="checkbox"/>	Maintain and install as per EPL spacing
	Belts/Channels	<input checked="" type="checkbox"/>	Replace ROD's with RF/MD's as required
	Drop Downs	<input type="checkbox"/>	
	Silt Trapping	<input type="checkbox"/>	

1. Start Date:

Finish Date:

Date	Event	Initial

Road Name: 562/2 Trail **Road Category:** Temp **Road Length** 1150 m from the intersection Eastern Boundary Road to Dump 29

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	<input type="checkbox"/>	
	Mass movement conditions	<input type="checkbox"/>	
	Dispersible Soils Conditions	<input type="checkbox"/>	
Pavement	Widening	<input type="checkbox"/>	
	Minor Realignment	<input type="checkbox"/>	
	Re-opening	<input type="checkbox"/>	
	Remove vegetation / debris	<input checked="" type="checkbox"/>	
	Repair surface	<input checked="" type="checkbox"/>	
	Crown / Crossfall	<input checked="" type="checkbox"/>	
	Gravel	<input type="checkbox"/>	
Roadside & Batters	Remove trees >20 cm dbhob	<input checked="" type="checkbox"/>	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	<input checked="" type="checkbox"/>	Clearing outside the road prism exceeding 3m must comply with condition 5 Schedule 5 of the EPL. See Section 4 page 3.
	Repair/upgrade of Batters	<input type="checkbox"/>	
Drainage	Culverts	<input type="checkbox"/>	
	Mitre Drains	<input checked="" type="checkbox"/>	Clean
	ROD / Spoon	<input checked="" type="checkbox"/>	Maintain and install as per EPL spacing
	Belts/Channels	<input checked="" type="checkbox"/>	Replace ROD's with RF/MD's as required
	Drop Downs	<input type="checkbox"/>	
	Silt Trapping	<input type="checkbox"/>	

1. Start Date:

Finish Date:

Date	Event	Initial

Road Name: 562/3 Trail **Road Category:** Temp **Road Length** 550 m from the intersection Eastern Boundary Road to Dump 18

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	<input type="checkbox"/>	
	Mass movement conditions	<input type="checkbox"/>	
	Dispersible Soils Conditions	<input type="checkbox"/>	
Pavement	Widening	<input type="checkbox"/>	
	Minor Realignment	<input type="checkbox"/>	
	Re-opening	<input type="checkbox"/>	
	Remove vegetation / debris	<input checked="" type="checkbox"/>	
	Repair surface	<input checked="" type="checkbox"/>	
	Crown / Crossfall	<input checked="" type="checkbox"/>	
	Gravel	<input type="checkbox"/>	
Roadside & Batters	Remove trees >20 cm dbhob	<input checked="" type="checkbox"/>	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	<input checked="" type="checkbox"/>	Clearing outside the road prism exceeding 3m must comply with condition 5 Schedule 5 of the EPL. See Section 4 page 3.
	Repair/upgrade of Batters	<input type="checkbox"/>	
Drainage	Culverts	<input type="checkbox"/>	
	Mitre Drains	<input checked="" type="checkbox"/>	Clean
	ROD / Spoon	<input checked="" type="checkbox"/>	Maintain and install as per EPL spacing
	Belts/Channels	<input checked="" type="checkbox"/>	Replace ROD's with RF/MD's as required
	Drop Downs	<input type="checkbox"/>	
	Silt Trapping	<input type="checkbox"/>	

1. Start Date:

Finish Date:

Date	Event	Initial

Road Name: Stony Broken Road (east) **Road Category:** Temp **Road Length** 400 m from the intersection Eastern Boundary Road to Dump 20

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	<input type="checkbox"/>	
	Mass movement conditions	<input type="checkbox"/>	
	Dispersible Soils Conditions	<input type="checkbox"/>	
Pavement	Widening	<input type="checkbox"/>	
	Minor Realignment	<input type="checkbox"/>	
	Re-opening	<input type="checkbox"/>	
	Remove vegetation / debris	<input checked="" type="checkbox"/>	
	Repair surface	<input checked="" type="checkbox"/>	
	Crown / Crossfall	<input checked="" type="checkbox"/>	
	Gravel	<input type="checkbox"/>	
Roadside & Batters	Remove trees >20 cm dbhob	<input checked="" type="checkbox"/>	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	<input checked="" type="checkbox"/>	Clearing outside the road prism exceeding 3m must comply with condition 5 Schedule 5 of the EPL. See Section 4 page 3.
	Repair/upgrade of Batters	<input type="checkbox"/>	
Drainage	Culverts	<input type="checkbox"/>	
	Mitre Drains	<input checked="" type="checkbox"/>	Clean
	ROD / Spoon	<input checked="" type="checkbox"/>	Maintain and install as per EPL spacing
	Belts/Channels	<input checked="" type="checkbox"/>	Replace ROD's with RF/MD's as required
	Drop Downs	<input type="checkbox"/>	
	Silt Trapping	<input type="checkbox"/>	

1. Start Date:

Finish Date:

Date	Event	Initial

Road Name: 563/5 Trail **Road Category:** Temp **Road Length** 90 m from the intersection Eastern Boundary Road to Dump 19

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	<input type="checkbox"/>	
	Mass movement conditions	<input type="checkbox"/>	
	Dispersible Soils Conditions	<input type="checkbox"/>	
Pavement	Widening	<input type="checkbox"/>	
	Minor Realignment	<input type="checkbox"/>	
	Re-opening	<input type="checkbox"/>	
	Remove vegetation / debris	<input checked="" type="checkbox"/>	
	Repair surface	<input checked="" type="checkbox"/>	
	Crown / Crossfall	<input checked="" type="checkbox"/>	
	Gravel	<input type="checkbox"/>	
Roadside & Batters	Remove trees >20 cm dbhob	<input checked="" type="checkbox"/>	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	<input checked="" type="checkbox"/>	Clearing outside the road prism exceeding 3m must comply with condition 5 Schedule 5 of the EPL. See Section 4 page 3.
	Repair/upgrade of Batters	<input type="checkbox"/>	
Drainage	Culverts	<input type="checkbox"/>	
	Mitre Drains	<input checked="" type="checkbox"/>	Clean
	ROD / Spoon	<input checked="" type="checkbox"/>	Maintain and install as per EPL spacing
	Belts/Channels	<input checked="" type="checkbox"/>	Replace ROD's with RF/MD's as required
	Drop Downs	<input type="checkbox"/>	
	Silt Trapping	<input type="checkbox"/>	

1. Start Date:

Finish Date:

Date	Event	Initial

Road Name: Link Road **Road Category:** Temp **Road Length** 700 m from the intersections of Eastern Boundary Road to 563/2 Trail

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	<input type="checkbox"/>	
	Mass movement conditions	<input type="checkbox"/>	
	Dispersible Soils Conditions	<input type="checkbox"/>	
Pavement	Widening	<input type="checkbox"/>	
	Minor Realignment	<input type="checkbox"/>	
	Re-opening	<input type="checkbox"/>	
	Remove vegetation / debris	<input checked="" type="checkbox"/>	
	Repair surface	<input checked="" type="checkbox"/>	
	Crown / Crossfall	<input checked="" type="checkbox"/>	
	Gravel	<input checked="" type="checkbox"/>	4 x load small rock on boggy section
Roadside & Batters	Remove trees >20 cm dbhob	<input checked="" type="checkbox"/>	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	<input checked="" type="checkbox"/>	Clearing outside the road prism exceeding 3m must comply with condition 5 Schedule 5 of the EPL. See Section 4 page 3.
	Repair/upgrade of Batters	<input type="checkbox"/>	
Drainage	Culverts	<input type="checkbox"/>	
	Mitre Drains	<input checked="" type="checkbox"/>	Clean
	ROD / Spoon	<input checked="" type="checkbox"/>	Maintain and install as per EPL spacing
	Belts/Channels	<input checked="" type="checkbox"/>	Replace ROD's with RF/MD's as required
	Drop Downs	<input type="checkbox"/>	
	Silt Trapping	<input type="checkbox"/>	

1. Start Date:

Finish Date:

Date	Event	Initial

Road Name: 563/1 Trail **Road Category:** Temp **Road Length** 400 m from the intersection of Link Road to Dump 22

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	<input type="checkbox"/>	
	Mass movement conditions	<input type="checkbox"/>	
	Dispersible Soils Conditions	<input type="checkbox"/>	
Pavement	Widening	<input type="checkbox"/>	
	Minor Realignment	<input type="checkbox"/>	
	Re-opening	<input type="checkbox"/>	
	Remove vegetation / debris	<input checked="" type="checkbox"/>	
	Repair surface	<input checked="" type="checkbox"/>	
	Crown / Crossfall	<input checked="" type="checkbox"/>	
	Gravel	<input checked="" type="checkbox"/>	2 x load small rock on bog
Roadside & Batters	Remove trees >20 cm dbhob	<input checked="" type="checkbox"/>	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	<input checked="" type="checkbox"/>	Clearing outside the road prism exceeding 3m must comply with condition 5 Schedule 5 of the EPL. See Section 4 page 3.
	Repair/upgrade of Batters	<input type="checkbox"/>	
Drainage	Culverts	<input type="checkbox"/>	
	Mitre Drains	<input checked="" type="checkbox"/>	Clean
	ROD / Spoon	<input checked="" type="checkbox"/>	Maintain and install as per EPL spacing
	Belts/Channels	<input checked="" type="checkbox"/>	Replace ROD's with RF/MD's as required
	Drop Downs	<input type="checkbox"/>	
	Silt Trapping	<input type="checkbox"/>	

1. Start Date:

Finish Date:

Date	Event	Initial

Road Name: 563/2 Trail **Road Category:** Temp **Road Length** 450 m from the intersection of Link Road to Dump 24

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	<input type="checkbox"/>	
	Mass movement conditions	<input type="checkbox"/>	
	Dispersible Soils Conditions	<input type="checkbox"/>	
Pavement	Widening	<input type="checkbox"/>	
	Minor Realignment	<input type="checkbox"/>	
	Re-opening	<input type="checkbox"/>	
	Remove vegetation / debris	<input checked="" type="checkbox"/>	
	Repair surface	<input checked="" type="checkbox"/>	
	Crown / Crossfall	<input checked="" type="checkbox"/>	
	Gravel	<input type="checkbox"/>	
Roadside & Batters	Remove trees >20 cm dbhob	<input checked="" type="checkbox"/>	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	<input checked="" type="checkbox"/>	Clearing outside the road prism exceeding 3m must comply with condition 5 Schedule 5 of the EPL. See Section 4 page 3.
	Repair/upgrade of Batters	<input type="checkbox"/>	
Drainage	Culverts	<input type="checkbox"/>	
	Mitre Drains	<input checked="" type="checkbox"/>	Clean
	ROD / Spoon	<input checked="" type="checkbox"/>	Maintain and install as per EPL spacing
	Belts/Channels	<input checked="" type="checkbox"/>	Replace ROD's with RF/MD's as required
	Drop Downs	<input type="checkbox"/>	
	Silt Trapping	<input type="checkbox"/>	

1. Start Date:

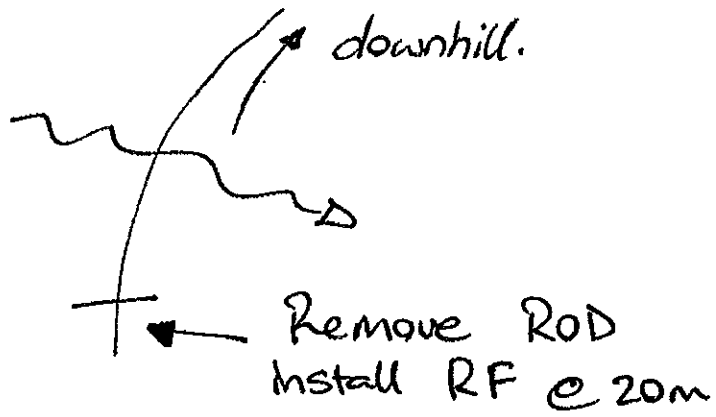
Finish Date:

Date	Event	Initial

Crossing Name: A – Stony Road.

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
Pipe (450)	Existing	Permanent	Unmapped DL	Intermittent
Crossing		Approaches & Road Drainage		
Reshaping Bed & Banks	Nil	Approach Works	Maintain crown	
Pavement/structure	Natural surface	5-30m Upstream left	RF	
Disposal of spoil	NA	5-30m Upstream right	NA	
Inlet/Outlet	Nil	Practices where no 5-30m	NA	
Soil Stabilisation within 20m	Nil	Outlet control	Existing Vege or use Silt Trapping e.g. siltmesh, haybale or siltpond if <5m vege	
Soil erosion/sediment control	Existing Vege + rock (No works required)	Table drain silt control	Nil	

Crossing A.
(450 pipe)



Start Date:

Finish Date:

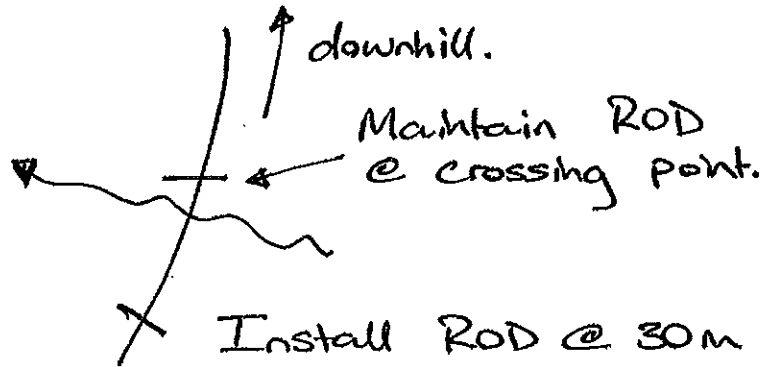
Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

Crossing Name: B – Eastern Boundary Road.

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
Causeway	Existing	Permanent	Unmapped DL	Intermittent
Crossing		Approaches & Road Drainage		
Reshaping Bed & Banks	Nil	Approach Works	Maintain crown	
Pavement/structure	ROD @ crossing point	5-30m Upstream left	NA	
Disposal of spoil	NA	5-30m Upstream right	ROD	
Inlet/Outlet	Nil	Practices where no 5-30m	NA	
Soil Stabilisation within 20m	Nil	Outlet control	Existing Vege or use Silt Trapping e.g. siltmesh, haybale or siltpond if <5m vege	
Soil erosion/sediment control	Existing Vege + rock (No works required)	Table drain silt control	Nil	

Crossing B
(causeway)



Start Date:

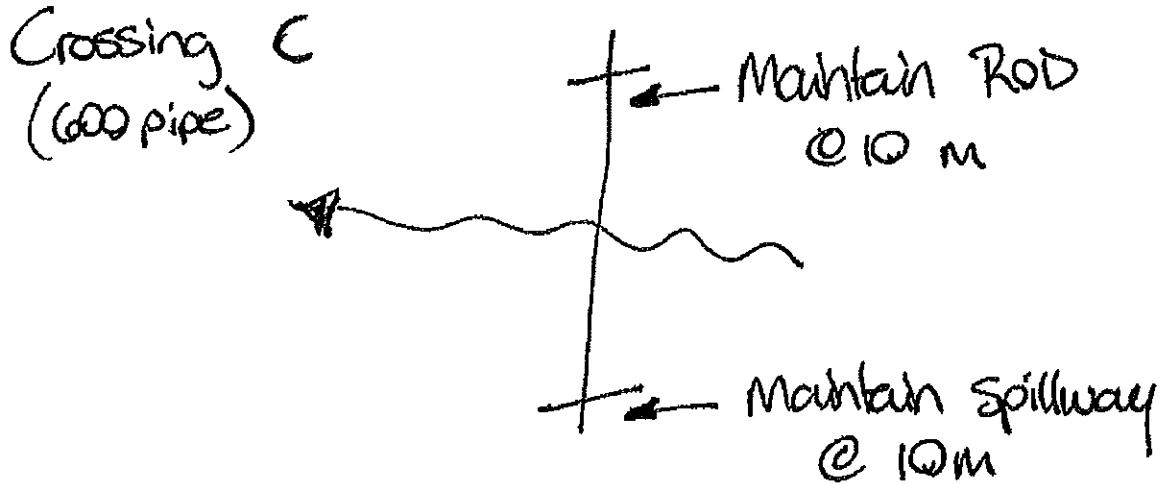
Finish Date:

Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

Crossing Name: C – Eastern Boundary Road.

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
Pipe (600)	Existing	Permanent	Unmapped DL	Intermittent
Crossing		Approaches & Road Drainage		
Reshaping Bed & Banks	Nil	Approach Works	Maintain crown	
Pavement/structure	Natural surface	5-30m Upstream left	ROD	
Disposal of spoil	NA	5-30m Upstream right	Spillway	
Inlet/Outlet	Nil	Practices where no 5-30m	NA	
Soil Stabilisation within 20m	Nil	Outlet control	Existing Vege or use Silt Trapping e.g. siltmesh, haybale or siltpond if <5m vege	
Soil erosion/sediment control	Existing Vege + rock (No works required)	Table drain silt control	Nil	



Start Date:

Finish Date:

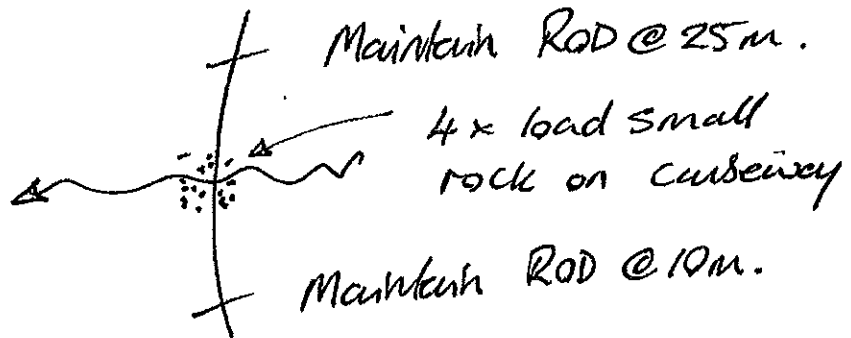
Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

Crossing Name: D – Eastern Boundary Road.

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
Causeway	Existing	Permanent	3rd Order DL	Intermittent
Crossing		Approaches & Road Drainage		
Reshaping Bed & Banks	Nil	Approach Works	Maintain crown	
Pavement/structure	4 x load small rock	5-30m Upstream left	ROD	
Disposal of spoil	NA	5-30m Upstream right	ROD	
Inlet/Outlet	Nil	Practices where no 5-30m	NA	
Soil Stabilisation within 20m	Nil	Outlet control	Existing Vege or use Silt Trapping e.g. siltmesh, haybale or siltpond if <5m vege	
Soil erosion/sediment control	Existing Vege + rock (No works required)	Table drain silt control	Nil	

Crossing D
(Causeway)



Start Date:

Finish Date:

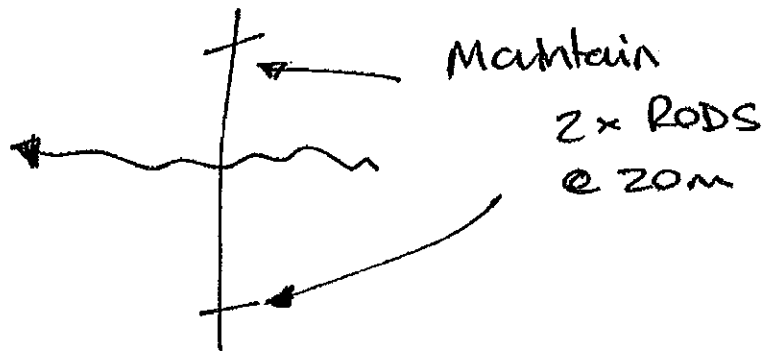
Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

Crossing Name: E – Eastern Boundary Road.

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
Box Culvert	Existing	Permanent	1st Order DL	Intermittent
Crossing		Approaches & Road Drainage		
Reshaping Bed & Banks	Nil	Approach Works	Maintain crown	
Pavement/structure	Natural surface	5-30m Upstream left	ROD	
Disposal of spoil	NA	5-30m Upstream right	ROD	
Inlet/Outlet	Nil	Practices where no 5-30m	NA	
Soil Stabilisation within 20m	Nil	Outlet control	Existing Vege or use Silt Trapping e.g. siltmesh, haybale or siltpond if <5m vege	
Soil erosion/sediment control	Existing Vege + rock (No works required)	Table drain silt control	Nil	

Crossing E
(Box culvert)



Start Date:

Finish Date:

Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

Crossing Name: F – Eastern Boundary Road.

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
Pipe (450)	Existing	Permanent	Unmapped DL	Intermittent
Crossing		Approaches & Road Drainage		
Reshaping Bed & Banks	Nil	Approach Works	Maintain crown	
Pavement/structure	Natural surface	5-30m Upstream left	NA	
Disposal of spoil	NA	5-30m Upstream right	ROD	
Inlet/Outlet	Nil	Practices where no 5-30m	NA	
Soil Stabilisation within 20m	Nil	Outlet control	Existing Vege or use Silt Trapping e.g. siltmesh, haybale or siltpond if <5m vege	
Soil erosion/sediment control	Existing Vege + rock (No works required)	Table drain silt control	Nil	

Crossing F
(450 pipe).



Maintain ROD
@ 15m.

Start Date:

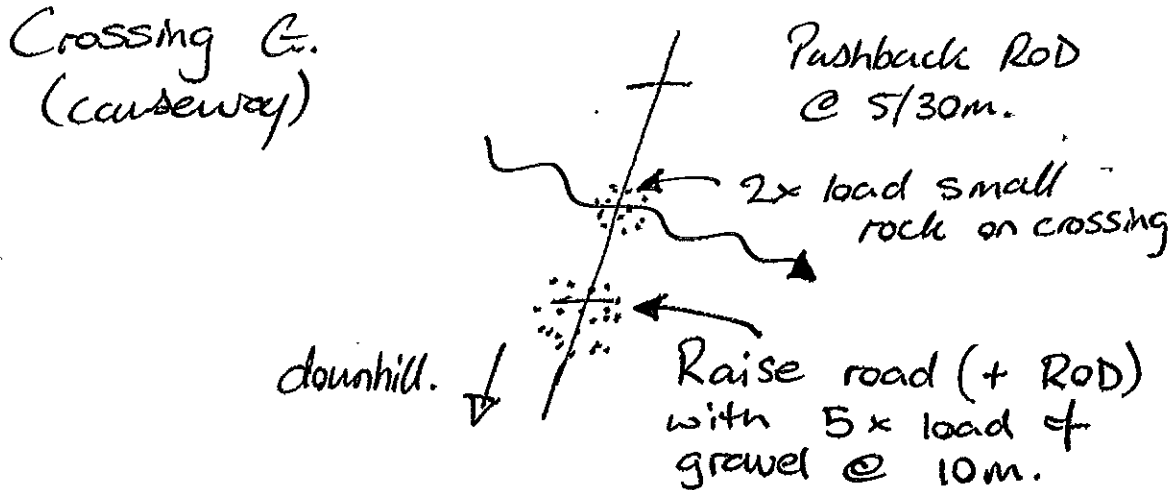
Finish Date:

Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

Crossing Name: G – Eastern Boundary Road.

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
Causeway	Existing	Permanent	1st Order DL	Intermittent
Crossing		Approaches & Road Drainage		
Reshaping Bed & Banks	Nil	Approach Works	Maintain crown	
Pavement/structure	2 x small rock on crossing	5-30m Upstream left	ROD	
Disposal of spoil	NA	5-30m Upstream right	ROD	
Inlet/Outlet	Nil	Practices where no 5-30m	NA	
Soil Stabilisation within 20m	Nil	Outlet control	Existing Vege or use Silt Trapping e.g. siltmesh, haybale or siltpond if <5m vege	
Soil erosion/sediment control	Existing Vege + rock (No works required)	Table drain silt control	Nil	



Start Date:

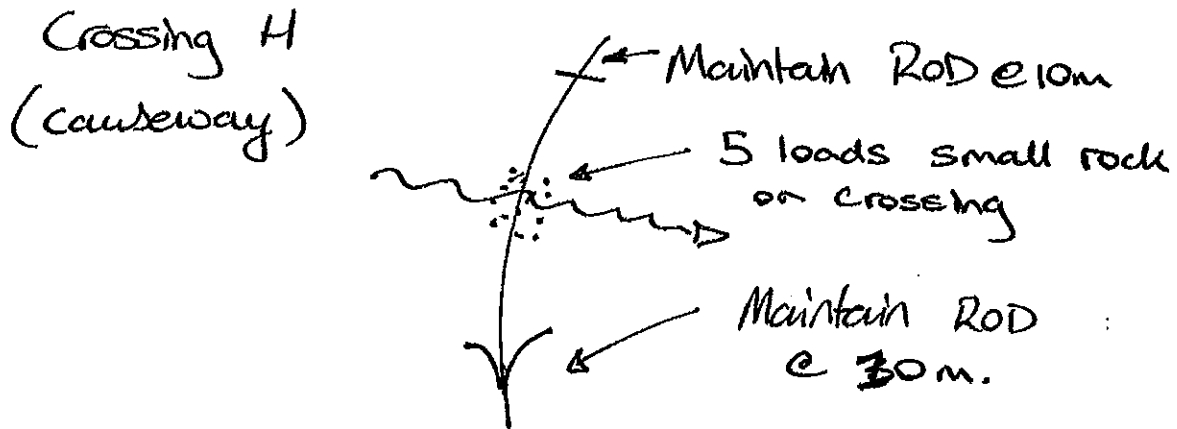
Finish Date:

Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

Crossing Name: H – Eastern Boundary Road.

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
Causeway	Existing	Permanent	2 nd Order DL	Intermittent
Crossing		Approaches & Road Drainage		
Reshaping Bed & Banks	Nil	Approach Works	Maintain crown	
Pavement/structure	5 x loads small rock on crossing	5-30m Upstream left	ROD	
Disposal of spoil	NA	5-30m Upstream right	ROD	
Inlet/Outlet	Nil	Practices where no 5-30m	NA	
Soil Stabilisation within 20m	Nil	Outlet control	Existing Vege or use Silt Trapping e.g. siltmesh, haybale or siltpond if <5m vege	
Soil erosion/sediment control	Existing Vege + rock (No works required)	Table drain silt control	Nil	



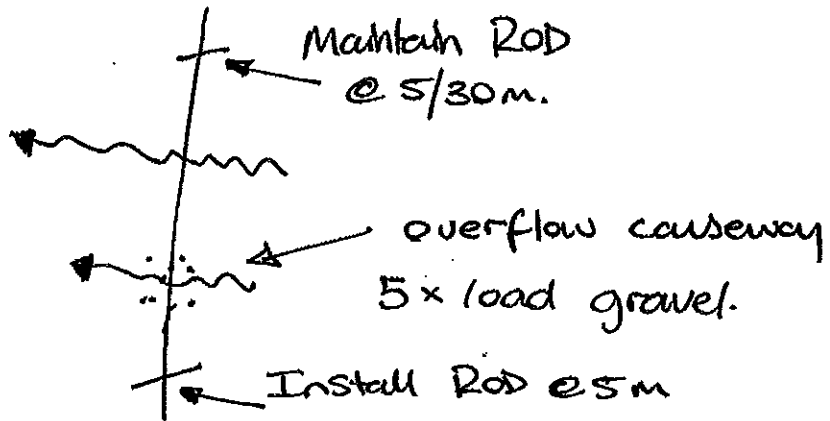
Start Date: Finish Date: Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

Crossing Name: I – Link Road.

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
Pipe (600)	Existing	Permanent	1st Order DL	Intermittent
Crossing		Approaches & Road Drainage		
Reshaping Bed & Banks	Nil	Approach Works	Maintain crown	
Pavement/structure	5 x load gravel on overflow causeway	5-30m Upstream left	ROD	
Disposal of spoil	NA	5-30m Upstream right	ROD	
Inlet/Outlet	Nil	Practices where no 5-30m	NA	
Soil Stabilisation within 20m	Nil	Outlet control	Existing Vege or use Silt Trapping e.g. siltmesh, haybale or siltpond if <5m vege	
Soil erosion/sediment control	Existing Vege + rock (No works required)	Table drain silt control	Nil	

Crossing I
(600 pipe).



Start Date:

Finish Date:

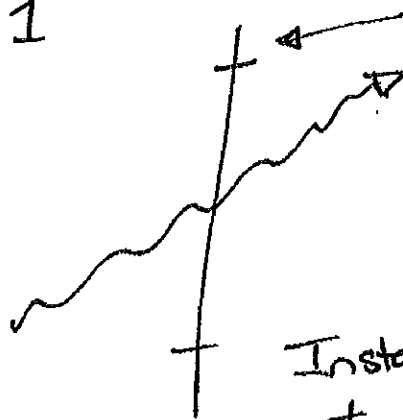
Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

Crossing Name: I1 – Link Road.

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
Pipe (375)	Existing	Permanent	Unmapped DL	Intermittent
Crossing		Approaches & Road Drainage		
Reshaping Bed & Banks	Nil	Approach Works	Maintain crown	
Pavement/structure	Natural surface	5-30m Upstream left	ROD	
Disposal of spoil	NA	5-30m Upstream right	ROD	
Inlet/Outlet	Nil	Practices where no 5-30m	NA	
Soil Stabilisation within 20m	Nil	Outlet control	Existing Vege or use Silt Trapping e.g. siltmesh, haybale or siltpond if <5m vege	
Soil erosion/sediment control	Existing Vege + rock (No works required)	Table drain silt control	Nil	

Crossing I1
(375 pipe)



Install ROD +
4 x load gravel

Install ROD @ 5/30
+ 1 load gravel.

Start Date:

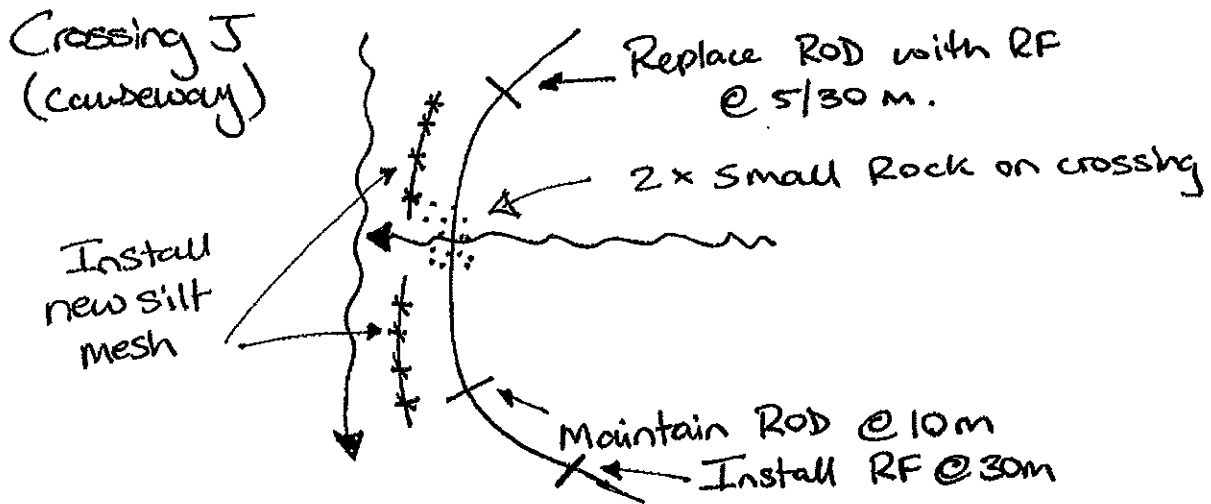
Finish Date:

Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

Crossing Name: J – 562/2 Trail

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
Causeway	Existing	Permanent	3rd Order DL	Intermittent
Crossing		Approaches & Road Drainage		
Reshaping Bed & Banks	Nil	Approach Works	Maintain crown	
Pavement/structure	2 x load small rock on crossing	5-30m Upstream left	MD's	
Disposal of spoil	NA	5-30m Upstream right	MD's	
Inlet/Outlet	Nil	Practices where no 5-30m	NA	
Soil Stabilisation within 20m	Nil	Outlet control	Existing Vege or use Silt Trapping e.g. siltmesh, haybale or siltpond if <5m vege	
Soil erosion/sediment control	Existing Vege + rock (No works required)	Table drain silt control	Nil	

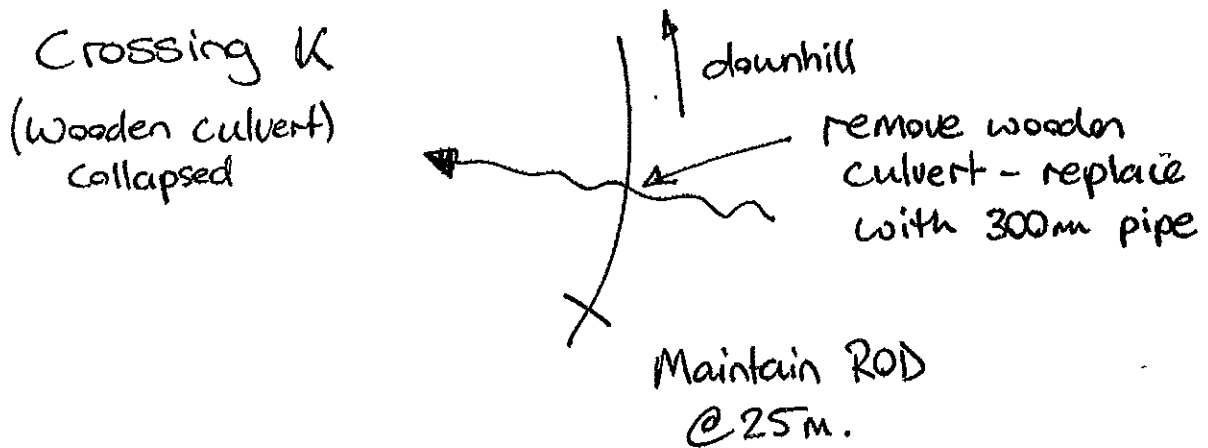


Start Date: Finish Date: Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

Crossing Name: K – Boyds Road

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
Pipe (300) New	NEW	Permanent	Unmapped DL	Intermittent
Crossing		Approaches & Road Drainage		
Reshaping Bed & Banks	Remove wooden culvert and replace with 300mm pipe	Approach Works	Maintain crown	
Pavement/structure	Natural surface	5-30m Upstream left	NA	
Disposal of spoil	NA	5-30m Upstream right	ROD	
Inlet/Outlet	Nil	Practices where no 5-30m	NA	
Soil Stabilisation within 20m	Nil	Outlet control	Existing Vege or use Silt Trapping e.g. siltmesh, haybale or siltpond if <5m vege	
Soil erosion/sediment control	Existing Vege + rock (No works required)	Table drain silt control	Nil	



Start Date:

Finish Date:

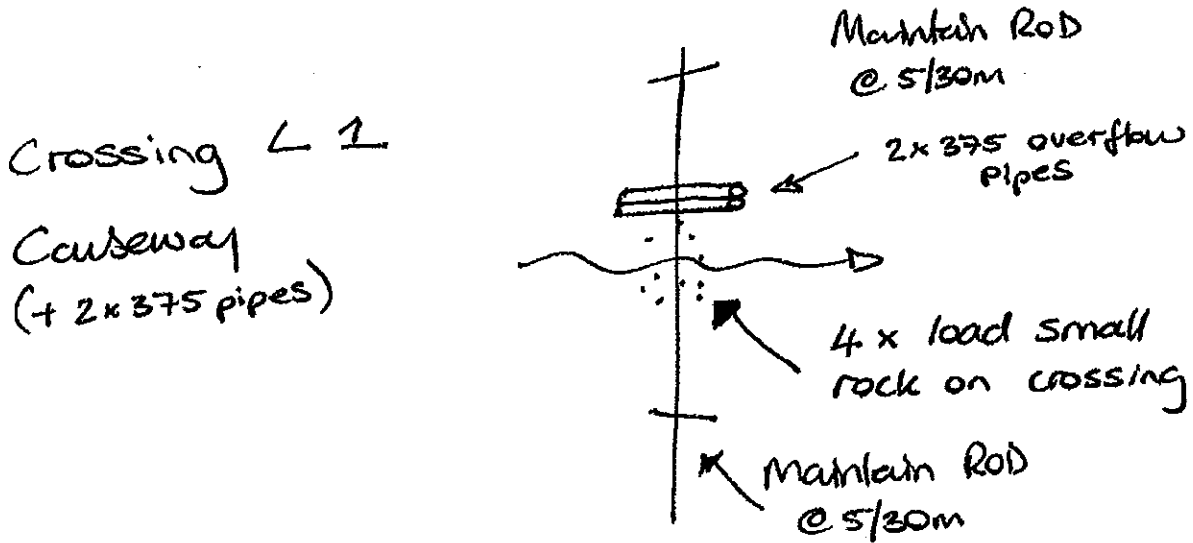
Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

Crossing Name: L1 –Eastern Boundary Road

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
Causeway + 2 x 375 pipes	Existing	Permanent	Unmapped DL	Intermittent

Crossing		Approaches & Road Drainage	
Reshaping Bed & Banks	Armour crossing with 4 x load large rock	Approach Works	Maintain ROD's
Pavement/structure	Rock	5-30m Upstream left	ROD
Disposal of spoil	NA	5-30m Upstream right	ROD
Inlet/Outlet	Nil	Practices where no 5-30m	NA
Soil Stabilisation within 20m	Nil	Outlet control	Existing Vege or use Silt Trapping e.g. siltmesh, haybale or siltpond if <5m vege
Soil erosion/sediment control	Existing Vege + rock (No works required)	Table drain silt control	Nil



Start Date:

Finish Date:

Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial