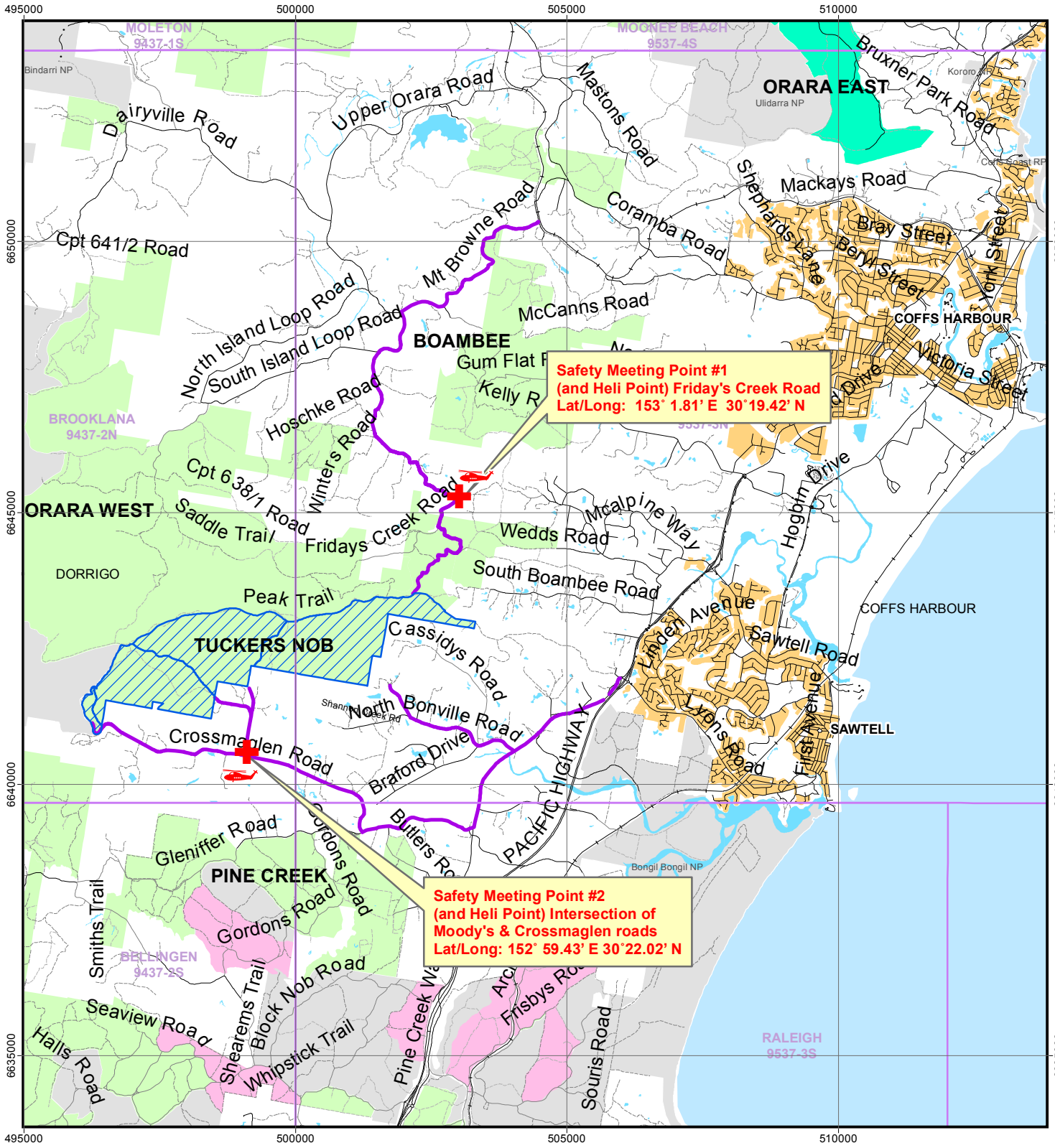
N

Map Sheets:
1:100,000 - Dorrigo 9437
- Coffs Harbour
1:25,000 - Brooklana- 9437-2N
- Coffs Harbour - 9537-3N
Scale: 100,000

North East Region - Urunga Management Area
Locality Map
Compartments 51, 52, 53 & 54
Tuckers Knob State Forest

GDA
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
- Drainage Feature

SAFETY POINTS
- Helicopter Landing Area
- Safety Points

0 625 1,250 2,500 3,750 5,000
Meters

Created By: Bob Aspden
Created: 19/02/2014
Printed: 19/02/2014

Urunga Management Area
Harvest Plan Operational Map
Compartments 51, 52, 53 & 54
Tuckers Nob State Forest

Forestry Corporation

Map Sheets:
1:25,000 - Brooklana- 9437-2N
- Coffs Harbour - 9537-3N

Scale 1:15,000

PUBLIC COPY

Truck Turnaround

Bonville Peak

Peak Trail

Frontage Creek Road

Bindarri National Park

TUCKERS NOB 612

Haulier Gully

52/1 Trail

Youngs Trail

Ellis Trail

Private Property Road

Private Property Road

Private Property Road

Private Property Road

Crossmaglen Road

Moodys Road

Bakes Road

Lowes Road

ORARA WEST 538

BOAMBEE 611

Happy Knob

Road not to be used

Scale 1:7,500

Scale 1:15,000

Created by: Bob Aspden
Created: 7/5/2015
Version: 1

HARVESTING PROTECTION (TSCL, EPL & FL)
Riparian (IHC 1 & 2)
- Filter 5m either side
- Protection 5m either side
- Protection 15m either side
- Protection 25m either side
- Protection 45m either side
- Operational zone 10m either side

MAP FEATURES
- State Forest Boundary
- Compartment Boundary
- 1 Km Grid
- 10 / 100 m Contour
- State Forest
- National Park Estate
- Drainage Line
- Indicative Drainage Feature
- Indicative Slopes >30 degrees
- Dump/Turnaround
- Crossing
- IFOA Crossing
- Ridge & Headwater Crossing
- Power line
- LPI Property Boundaries
- Potential Snig Tracks
- Farm Gate
- Haulage Route

FOREST MANAGEMENT PROTECTION
- Special Protection (FMZ 1)
- Special Management (FMZ 2)
- Harvesting Protection (FMZ 3A)
- High Conservation Value Old Growth
- Heath
- Heath buffer (20m from edge of heath)
- Rock
- Rock buffer (20m from edge of rock)
- Rainforest - Crafti + RN17

HARVESTING PRESCRIPTIONS
- General Management (FMZ 4)
- Special Prescription (FMZ 3B)
- Innacessible or Unavailable Area

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

THREATENED SPECIES LOCATIONS
- Niemeyera whitei
- Sarcochilus fitzgeraldii
- Tylophora woolsii
- Powerful Owl
- Masked Owl
- Little Bent-wing Bat
- Golden-tipped Bat
- Yellow-bellied Glider
- Koala
- Pouched Frog
- Stuttering Frog
- Giant Barred Frog
- Sphagnum Frog

TSL PRESCRIPTIONS / ZONES
- Giant Barred Frog Exclusion
- Common Blossum Bat Modelled Habitat

FORESTRY CORPORATION of NEW SOUTH WALES

HARVEST PLAN No. 10613

Tuckers Nob State Forest – Compartments 51, 52, 53 & 54

1. Certification

This plan has been prepared in accordance with the Integrated Forestry Operations Approval (IFOA) issued under the Forestry Act 2012 and addresses significant aspects and impacts identified in the planning process. The Standard Harvest Plan Conditions for Native Forest Operations in North East Region (NER) apply to this operation.

Prepared by:

Senior Planner Bob Aspden		Date:

Endorsed by:

Senior Planner Phil McKenzie		Date:

Approved by:

Planning Supervisor Matt Kinny		Date:

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), Australian Group Selection (AGS) or Thinning.

Other proposed works:

Work	*Proposed*	*Details*
Roadworks	Yes	Roadworks Plan prepared separately.
Post-harvest Burning	Yes	Plan to be prepared separately.
Rehabilitation	No	Not applicable.

3. Area Identification and Yield Estimates

Management Area	Urunga
State Forest	Tuckers Nob
State Forest No.	612
Pricing Area	Urunga Coastal
Other Tenure Details	State Forest only

Compartment Number	51	52	53	54	*Total*
Gross Area (ha)	299	238	186	13	**736**
*Net Harvest Area (ha)**	80	25	50	8	**163**
Estimated Yield (m^3/ha)	50	50	50	50	**50**
Volume (m^3) All Products	4000	1250	2500	400	**8,150**

* *Area does not include inaccessible or otherwise unavailable areas*

Products	*Total (m^3)*
High Quality Large	2934
High Quality Small	1304
Low Quality	2934
Veneer/Girders	652
Poles/Piles	326
Total	**8,150**

4. Forest Description

4.1 Forest Type (See Forest Type map)

- Dry Blackbutt type dominates the upper and mid slopes of the harvest area with moist Blackbutt type and moist types 47/48 on lower slopes.

4.2 Harvest History

- These compartment have been harvested numerous times in the last century.
- Last harvest was in 1992-1994 and was carried out using STS silviculture.

4.3 Stand Description

- Even Aged Blackbutt:
  - Advanced sapling 10-30cm diameter at breast height over bark (dbhob) regrowth from 1994 harvest event (10% of NHA)
- Mixed Age Blackbutt consisting of:
  - Pole/Mature 30-100cm dbhob component resulting from previous harvest events (50%).
- Moist mixed age mixed species forest types. (30% of NHA)
- Dry mixed age mixed species forest types (10% of NHA)

4.4 Site Quality

- Generally excellent site quality with site height 35-45m.
- Poorer forest type and quality on dryer upper slopes and ridgelines e.g. east of Dump 1.

4.5 Stand Health

- Good to very good – few old defective trees or

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

- Maximise the recovery of merchantable timber from the mature age/size cohort within the constraints of the harvest plan.
- Promote growth of retained trees.
- Remove sub-dominant trees.
- Create suitable conditions for a regeneration event.
- The table below gives proposed silvicultural treatments for the forest types within the harvest area:

Stand Description	Even-aged Blackbutt regrowth	Mixed age Blackbutt and Mixed species	Inaccessible Areas
Proposed Silviculture	None	Heavy STS	No harvesting
Est. % of NHA	10%	65%	25%
Expected BA Removal (%)	0%	50%	0%
Future Ops 15-20 years	Thinning	Thinning	NA
Other treatments		- Retain seed trees. - Mechanical disturbance. - Enrichment planting.	

5.2 Single Tree Selection

- This operation will be managed with the object of harvesting trees that have reached their maximum economic end use, and removing poorer quality and less vigorous trees to allow the remaining high-quality trees to grow on.
- 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 (inaccessible), 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).
- Areas within the mapped Inaccessible Area that are deemed otherwise must be approved for harvest by the Planning Supervisor.

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

5.5 Other Treatments

5.5.1 Seed Tree Selection

- Seed trees should be
  - as tall as possible (~30-40m), and 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.

5.5.2 Mechanical Distrubance

- Ensure ground disturbance is sufficient to create suitable seedbed for regeneration.
- Harvesting Coordinator to map areas requiring additional disturbance.

5.5.3 Enrichment Planting/Seeding

- Enrichment planting to be conducted as determined by the Harvesting Supervisor.
- 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).

5.6 Other Considerations

- The Harvesting Coordinator 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 EPL Licencing

- This operation is licensed under the EPL.
- The Harvesting Supervisor is responsible for licensing the activity
- The Harvesting Coordinator must notify the Harvesting Supervisor when operations have commenced and ceased.

6.2 Seasonal Harvesting and Burning Restrictions

- Condition 37 of Schedule 4 of the EPL applies. EPL seasonal restrictions apply to burning. During the months of February to March burning may be carried out by top disposal only.

6.3 Leases, Permits & Plots

Type	*Present*	*Details*	*Conditions*
Crown Road Reserves	Yes	Moody's Road	Consent has been given by Crown Lands to use and maintain this road for log truck haulage.
	Yes	Snig track north of Dump 11 (surrounded by private property)	This existing track occurs within a Crown Road Reserve. The adjoining PP owner has been informed of its intended use as a snig track.
Permit To Enter	Yes	Ellis Trail (on private property) & 52/1 Trail (on private property)	Both of these trails traverse both Crown Road Reserve and private property. Permission has been given from the PP owners to use these trails.
	Yes	Youngs Trail (on private property) & Dump 9 Trail (on private property)	Both of these trails occur exclusively on PP. Permission has been given from the PP owners to use these trails.

6.4 Noise

A number of residences occur in close proximity to the haulage routes and may be affected by noise. Similarly a number of residences occur in close proximity to Dump 9. Mitigative measures to lessen the impact must be developed on a site specific basis by the harvesting/haulage contractor in consultation with FCNSW. Measures may include;

- Liaising with neighbours regarding noise issues.
- Changes to the activity that would reduce the noise impact or disturbance.
- Restricting hours of operation (e.g. 6am to Sunset)

6.5 Dust

A number of residences occur in close proximity to Moody's Road and may be affected by dust. A 20km/hr speed limit is to be observed by all operational staff on the gravel section of Moody's Road. Other mitigative measures to lessen the impact must be developed on a site specific basis by the harvesting/haulage contractor in consultation with FCNSW.

6.6 Critical Boundaries

6.6.1 Private Property

Private property adjoins the southern boundary of compartments 51, 52 and 53. All of these boundaries were surveyed prior to the last harvesting operation in 1994. The yellow paint used is still visible in most boundary locations. These boundaries are mostly fenced. A copy of the precision survey is kept on the Harvest Plan folder.

6.6.2 National Park

Bindarri NP adjoins compartments 54 and 53 to the west. This boundary is formed by Western Boundary Road, as such there will be no impact on the National Park. The boundary of the NP is 20m off set from the centre line from Western Boundary Trail. No harvesting operations are permitted on the western side of Western Boundary Trail.

6.6.3 Other critical boundaries

E.g. Special Management Zone (SMZ), Flora Reserve or adjacent compartment boundaries

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

6.7 Underground Cables

- There is a Telstra cable that crosses the gravel section of Moody's Road in 2 x places.
- Site plans for the cable are held on the Harvest Plan Folder.
- Dial before you dig procedure must be followed prior any excavation or road maintenance works in this area to determine cable locations.

6.8 Elevated Transmission Lines and Telstra

- A transmission line runs parallel to the gravel section of Moody's Road as shown on the operational map. This power line comes very close to Moody's Road and care should be taken when traversing this road with high loads (e.g. harvester on float, log trucks). The power line has been measured at 5.7m high where it passes over Moody's Road. The transmission line has high voltage lines on the top row (11Kv line) and low voltage on the bottom lines (415v), and therefore will not arc. The power lines are operated by Essential Energy.
- Elevated phone lines run parallel to and across Fridays Creek Road.

6.9 Haulage Considerations

- Haulage is planned to access the Pacific Highway via the Orara Way and the Pine Creek Way. Haulage routes are not to be used by B-doubles.
- Additional signage should be used on Crossmaglen Road, Moody's Road, North Bonville Road, Yarraman Road, Friday's Creek Road, South Island Loop Road and Mt Browne Road to notify traffic of turning trucks.
- See Section 6.8 - power lines on Moody's Road.
- 20km/hr speed limit on the gravel section of Moody's Rd

6.10 IFOA Required Approval of Forestry Activities

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

Crossing /Location	*Activity*	*Feature Type*	*Conditions*
XA, Cpt 51	Snigging along existing road.	HCVOG	Apply all relevant conditions of the EPL.
XB, Cpt 51	Snigging along existing track	Riparian Habitat Protection	Apply all relevant conditions of the EPL.
XC, Cpt 51	Snigging along existing track	Riparian Habitat Protection	Apply all relevant conditions of the EPL.
XD, Cpt 51	Snigging along existing track	HCVOG	Apply all relevant conditions of the EPL.
XH, Cpt 52	Snigging along existing road and track	HCVOG	Apply all relevant conditions of the EPL.
XI, Cpt 54	Snigging along existing road.	Riparian Habitat Protection	Apply all relevant conditions of the EPL.
XK, Cpt 53	Snig track construction and use of existing snig track	Riparian Habitat Protection	Apply all relevant conditions of the EPL. Extra gravel/small rock must be placed on crossing A and approaches prior to use for snigging.
XL, Cpt 53	Snig track construction and use of existing road and crossing (gravel causeway)	Riparian Habitat Protection	Apply all relevant conditions of the EPL. Extra gravel/small rock must be placed on crossing A and approaches prior to use for snigging. Install silt mesh either side of crossing. Drain to EPL on completion. Drainage to be directed away from drainage lines as much as practicable.
XM, Cpt 53	Snigging along existing track	HCVOG	Apply all relevant conditions of the EPL.

- Any additional crossings of Rainforest, HCVOG and Riparian Protection Zones require prior Planning Supervisor (or EPA) approval before they can be implemented.
- It is the responsibility of the Harvesting Coordinator and Forest Technician 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 Supervisor to obtain the necessary approval.

6.11 Unmapped Rainforest

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

6.12 Endangered Ecological Communities

- Endangered Ecological Community (EEC) 'Lowland Rainforest in the NSW North Coast and Sydney Basin Bioregions' is potentially present within these compartments outside the mapped rainforest extent. Areas of this forest community should be identified as described in the FNSW EEC Identification Guide, and if present within the operational area, excluded from harvesting.

6.13 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.

6.14 Weeds

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

6.15 Log Dumps 9, 11 and 13

- Permission has been given by private property neighbours to use their properties for access and for log dumps 9, 11 and 13 (see operational map). The private property neighbours must be consulted prior to the setup and use of these log dumps. All bark and other residues must be removed from the dump at the end of its use.

7. Forest Management Zoning Conditions

The following Forest Management Zones and conditions apply:

FMZ	*Type*	*Notes*
Zone 2	Special Management	Rainforest and High Conservation Value Old Growth (HCVOG). These areas must be protected as marked on the map.
Zone 3A	Harvesting Protection	Rainforest and High Conservation Value Old Growth (HCVOG). These areas must be protected as marked on the map.
Zone 3B	Special Prescription	Visual protection zone across a large proportion of the operational area and all NHA on higher elevations. Harvesting operations within this area must aim at retaining the visual amenity of the forest by one or more of the following options, or an appropriate alternative: - Minimise snig tracks within visible forest areas. - Snig tracks to run perpendicular to the road where practical. - Retain understorey vegetation where practical to provide visual screening. - Limit trees removals to maximum 50 percent of canopy. Log dumps are permitted within the visual protection zone. Measures should be taken to retain the visual amenity, e.g. minimise dump size, select location not on top on ridgeline.
Zone 4	General Management	Available for harvesting in accordance with the conditions of this harvest plan.
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 - 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 FT. Appropriate prescriptions (Schedule 4 of the EPL) are to be applied if required and noted on the HPOM.

8. Cultural Heritage Conditions

8.1 Aboriginal Cultural Heritage

- No special conditions apply.

8.2 Non Aboriginal Cultural Heritage

- No special conditions apply.

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 FT 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	*TSL 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 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	5 KOAL records in and within 100m of cpt boundaries	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)(i) (h)(ii)	GLBC feed trees Nil Records – continue search	Retain and protect glossy black cockatoo feed trees. Logging debris within five metres radius of the retained tree must be removed or flattened to a height of at least 1 metre. Disturbance to ground and understorey must be minimised to this five metre radius.
	5.6 (g)(i) (h)(ii)	YEBG/SQGL feed trees Nil Records – continue search	Retain all yellow-bellied glider and squirrel glider sap feed trees. Logging debris within five metres radius of the retained tree must be removed or flattened to a height of at least 1 metre. Disturbance to ground and understorey must be minimised to this five metre radius.

TSL Condition	TSL Condition No.	Record Details	Prescription Summary
Heath and Scrub	5.10	Mapped Blossom bat habitat in cpts	20m exclusion zone on feature if >0.2ha (45m x 45m).
Rocky Outcrops and Cliffs	5.11	Mapped FT 234 ROCK in cpt U_52	SFA prohibited from feature, 20m exclusion buffer if > 0.1ha (approx. 30m x 30m).
Burning	5.16	Threatened species have been recorded in these cpts.	Burning must fulfil the responsibilities of the Rural Fires Act 1997. Hazard Reduction work must take into account the wildfire history, intensity, frequency and seasonality and reflect the ecological requirements of any Threatened species, or their habitat, known or likely to occur in the area. Hazard Reduction work must be conducted in a manner which promotes and maintains an understorey mosaic which includes signinicant areas of dense understorey vegetation. Hazard Reduction work must be conducted in a manner which minimises the impact on large fallen logs (greater than40 centimetres diameter and greater than five metres.

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

TSL Condition	TSL Condition No.	Record Details	Prescription Summary
Giant barred Frog *(Mixophyes iteratus)*	6.3	1 MIX ITE within 200m of cpt boundaries	Exclusion zone of 30m on both sides of all streams within 200m of record as mapped.
Masked Owl *(Tyto novaehollandiae)*	6.9	1 MOWL record in cpt U_53	Landscape approach as specified in 6.9.2 will be used. Condition 5.13 may be applicable to protect any roosts or nests found. **Search gully lines and heads of gullies for roost and nest sites.**
Koala *(Phascolarctos cinereus)*	6.14	5 KOAL records in and within 100m of cpt boundaries	Evidence of koalas was found in the compartment, but pre-logging surveys did not detect intermediate or high use areas. Compartment mark-up 5.2.2 must be completed.
Common Blossom Bat *(Syconycteris australis)*	6.19	4.3ha of modelled habitat in Cpts.	Within modelled habitat 75% of mature *Banksia integrifolia, Melaleuca quinquenervia, Grevillea robusta* and *Callistemon viminalis* within NLA should be protected from damage.

TSL Condition	TSL Condition No.	Record Details	Prescription Summary
Niemeyera whitei	6.27	Numerous NIEM WHIT records in and within 100m of cpt boundaries	Harvesting is permitted in populated areas. This species is managed under a threatened flora monitoring program. No burning in areas with records

Table 3: Species Specific Prescriptions (Default IFOA Conditions)

TSL Condition	TSL Condition No.	Record Details	Prescription Summary
Yellow-bellied Glider *(Petaurus australis)*	6.17	Nil records	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.

Table 4: Other Ecological Considerations

Issue, Feature or Record	Presence	Assessment and Management Recommendations
EEC: Lowland Rainforest in the NSW North Coast and Sydney bioregion.	Likely to be present - 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

Refer to Technical Guidance Note 2005-02 March 2005 (Fisheries Licence Booklet).

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	EPL applies – UDL harvesting not permitted.
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.
- 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).
- Licence conditions issued by FCNSW under the Forestry Act 2012.
- 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.
  - Environment Protection Licence **No. 3957 (LNE) for Cpt 54** and **No. 4017 (UNE) for Cpts 51-53** issued under section 55 of the Protection of the Environment Operations Act 1997.

13. Attachments

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

14. Operational Control

Contractor Team Leader to sign here

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 as the principle controller of the operation.

I will brief any other operators not present at this briefing prior to them starting any work on site and ensure that risk assessment for the Safety Management Plan is completed for this area prior to operations commencing.

Name		Signature		
Position		Date	From	
Company			To	

Principal FT/HC to sign here (handovers between principal FT/HCs also to be recorded)

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 as the principle FT/HC.

Name		Signature		
Position		Date	From	
Company			To	

Name		Signature		
Position		Date	From	
Company			To	

Name		Signature		
Position		Date	From	
Company			To	

Name		Signature		
Position		Date	From	
Company			To	

15. Handover 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.

Persons receiving a briefing and signing on this page or the Operational Control page (section 14 of this plan) are considered authorised persons for the purpose of access into any closed areas (as designated by FCNSW) in forests covered by this plan.

Company	*Name*	*Signature*	*Date*

Induction Questionnaire

1. Where are the safety meeting points and helicopter landing points?
2. What silviculture has been prescribed within the NHA?
3. What is the requirement for tree retention?
4. What are the conditions specified for the use of Moody's Road?
5. What EEC may occur within the NHA? Where is it likely to occur?
6. Is unmapped drainage line harvesting permitted in this operation?
7. What conditions must be followed in the Special Prescription - visual zone?
8. What conditions exist for IFOA XL? Where is the road "not to be used"?
9. Where does access need to be maintained for neighbours?
10. What conditions exist for the use of Dumps 9, 11 and 13? Do the PP owners need to be consulted?

FORESTRY CORPORATION OF NSW – NORTH EAST REGION

ROADWORKS PLAN

Tuckers Knob State Forest; Compartments 51, 52, 53 & 54

ASSOCIATED HARVEST PLAN NO. 10613

Certification

Prepared by:

Harvest Planner		Date:
Bob Aspden		

Road Works and Operational Expenditure Approved by:

Roading Manager		Date:
Craig Busby		

Approved by:

Planning Supervisor		Date:
Matt Kinny		

Duration of Approval:

The above approval is valid until 12 months from date of signature.

Contents

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

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1. Objectives

- Roadworks are required to service native forest harvesting operations within the above compartments. These compartments are scheduled for harvest in mid 2015.
- The operational map shows the location of the proposed works.
- **Attachments:** Financial Analysis Spreadsheet gives full details of costs, benefits, material & plant requirements.

2. Specifications and Legal Conditions

This operation must comply with:

- Standard Harvest Plan Conditions for Native Forest Operations in North East Region.
- Licence Conditions issued by Forestry Corporation of 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 (IFOA) including the associated licences:
  - Threatened Species Licence issued under the Threatened Species Conservation Act (1995).
  - Fisheries Licence issued under section 220ZW of the Fisheries Management Act 1994.
  - Environment Protection Licence No. 3957 (LNE) No. 4017 (UNE) issued under section 55 of the Protection of the Environment Operations Act 1997.
- Technical Guidance Notes for Roadworks.

3. Special Conditions

Feature	*Conditions*
Threatened Species	See harvesting plan. Minimise disturbance within protection zones.
Dispersible Soils & Mass Movement	None identified
Works on >30° slopes	Yes – Sections of Peak Trail (see operational map). • Mark out sections of road on +30˚ slopes • Minimise disturbance of cut batter (no undercutting) • No loose spoil material to be pushed over onto fill batter – must be either worked into road matrix or transported to stable area. • Ensure outlet of drainage structures falls onto stable surface, e.g. rock face, vegetation, fluming
Seasonality	No
Environmental impacts i.e. Dust, Noise, Water, Visual	Moodys Road (gravel section) is used by numerous neighbours and a number of properties are within close proximity to the road. A 20km/hr speed limit is to be observed by all FCNSW staff and contractors on this section of road. Crossmaglen Road, Yarraman Road and Moodys Road have a high volume of traffic - all operators are to remain vigilant when using these roads.
Haulage Standards	B-doubles are not permitted on Crossmaglen Road.
National Park	Yes - Western Boundary Trail marks the boundary between State Forest and National Park. This road is a joint management trail. Minimise disturbance outside the road prism on the western side of this road.

Crown Road Reserve	Yes - Moodys Road (gravel section) is a Crown Road reserve. Consent has been given to undertake road maintenance on this road.
Private Property	Yes - New road construction is to occur on private property: Dump 9 Trail, 52/1 Trail, Ellis Trail and Young's Trail. When conducting roadworks on or near private property local owners/residents must be consulted prior to commencement of roadworks. Some of these roads may require the installation of gates to prevent stock wandering.
Permit To Enter required	Yes - Permits to enter have been obtained for the four properties where new road construction will occur. See HP folder.
Underground/ Overhead Utilities	Yes - Underground/aboveground power and telephone cables cross Moodys Road, Yarraman Road and Fridays Creek Road (see attached maps).
Safety Issues (includes hazards, public use of roads)	Yes - Crossmaglen Road, North Bonville Road, Yarraman Road and Moodys Road have a high volume of traffic - all operators are to remain vigilant when using these roads.See Hazard Assessment in the Site Safety Pack

3.1 EPL Licencing

- This operation is licensed under the EPL.
- The Roading and Harvesting Supervisor is responsible for licensing the activity
- The Roading Supervisor / harvesting Coordinator must notify the Roading Manager /Harvesting Manager when operations have commenced and ceased.

4. General Conditions

- Remove trees in accordance with FNSW Safety Standard 1.3.9; and
- Remove vegetation within 3m of the road prism only where required to maintain safe sight distance and passage of trucks.
- Note: Clearing is generally permitted within 3m of the road prism for all roads. Ground disturbance and tree debris may impact outside this 3m either side of the road prism as is required to effect clearing within 3m of the road prism. Conditions 5, 6 and 47 Schedule 5 of the EPL must apply.

5. Works Schedule

Road Name: Crossmaglen Road **Road Category**: Permanent **Road Length** 150 m east from the intersection with Western Boundary Trail

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	☐	
	Mass movement conditions	☐	
	Dispersible Soils Conditions	☐	
Pavement	Widening		
	Minor Realignment	☐	
	Re-opening	☐	
	Remove vegetation / debris	☑	
	Repair surface	☑	
	Crown / Crossfall	☑	
	Gravel	☑	Full Length. Ensure solid pavement base capable of handling traffic in wet weather
Roadside & Batters	Remove trees >20 cm dbhob	☑	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	☑	
	Repair/upgrade of Batters	☐	
Drainage	Culverts	☐	
	Mitre Drains	☑	Clean
	ROD / Spoon	☑	Remove ROD and install RF (replace post haulage.)
	Belts/Channels	☑	
	Drop Downs	☐	
	Silt Trapping	☐	

1. Start Date: Finish Date:

Date	Event	Initial

Road Name: Western Boundary Trail **Road Category**: Permanent **Road Length** 300 m from the intersection with Crossmaglen Road to Dump 8

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	☐	
	Mass movement conditions	☐	
	Dispersible Soils Conditions	☐	
Pavement	Widening		
	Minor Realignment	☐	
	Re-opening	☐	
	Remove vegetation / debris	☑	
	Repair surface	☑	
	Crown / Crossfall	☑	
	Gravel	☐	
Roadside & Batters	Remove trees >20 cm dbhob	☑	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	☑	
	Repair/upgrade of Batters	☐	
Drainage	Culverts	☐	
	Mitre Drains	☑	Clean
	ROD / Spoon	☑	Maintain and install as per EPL spacing
	Belts/Channels	☑	Install as per EPL spacing
	Drop Downs	☐	
	Silt Trapping	☐	

1. Start Date: Finish Date:

Date	Event	Initial

Road Name: Dump 9 Trail (New) **Road Category**: Temporary **Road Length** 300 m from the intersection with Crossmaglen Road to Dump 9

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	☐	
	Mass movement conditions	☐	
	Gates	☑	Install 1 or 2 x gates or cattle grids in consultation with the landowner
Pavement	Widening		
	Minor Realignment	☐	
	Re-opening	☐	
	Remove vegetation / debris	☑	Decision on removing grass to be made at time of harvest in consultation with landowner. They may want permanent track.
	Repair surface	☑	Rehabilitate dump site and track if required (rip and seed)
	Crown / Crossfall	☐	
	Gravel	☐	
Roadside & Batters	Remove trees >20 cm dbhob	☐	
	Remove trees <20 cm dbhob	☐	
	Repair/upgrade of Batters	☐	
Drainage	Culverts	☐	
	Mitre Drains	☐	
	ROD / Spoon	☐	
	Belts/Channels	☐	
	Drop Downs	☐	
	Silt Trapping	☐	

1. Start Date: Finish Date:

Date	Event	Initial

Road Name: 52/1 Trail (New) **Road Category**: Temporary **Road Length** 400 m from the intersection with Moody's Road to Dump 11

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	☐	
	Mass movement conditions	☐	
	Dispersible Soils Conditions	☐	
Pavement	Widening		
	Minor Realignment	☑	Open fence and create ramp off existing road onto new paddock trail. Consult with landowner on location of new trail.
	Re-opening	☐	
	Remove vegetation / debris	☑	Decision on removing grass to be made at time of harvest in consultation with landowner.
	Repair surface	☐	
	Crown / Crossfall	☐	
	Gravel	☐	
Roadside & Batters	Remove trees >20 cm dbhob	☑	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	☑	
	Repair/upgrade of Batters	☐	
Drainage	Culverts	☐	
	Mitre Drains	☐	
	ROD / Spoon	☑	Install as per EPL spacing
	Belts/Channels	☐	
	Drop Downs	☐	
	Silt Trapping	☐	

1. Start Date: Finish Date:

Date	Event	Initial

Road Name: Moody's Trail (In SF) **Road Category**: Temporary **Road Length** 50 m from the SF boundary to Dump 10

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	☐	
	Mass movement conditions	☐	
	Dispersible Soils Conditions	☐	
Pavement	Widening		
	Minor Realignment	☑	Improve alignment of eastern approach onto Crossing A through private property. Repair fences post haulage.
	Re-opening	☐	
	Remove vegetation / debris	☑	Slope mow vegetation on road verge
	Repair surface	☑	
	Crown / Crossfall	☑	
	Gravel	☑	Gravel from Crossing A (2 loads) to entrance of Dump 10
Roadside & Batters	Remove trees >20 cm dbhob	☑	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	☑	
	Repair/upgrade of Batters	☐	
Drainage	Culverts	☐	
	Mitre Drains	☑	Clean
	ROD / Spoon	☑	Maintain and install as per EPL spacing
	Belts/Channels	☐	
	Drop Downs	☐	
	Silt Trapping	☑	Install 20m of Siltmesh between entrance of Dump 10 and crossing A.

1. Start Date: Finish Date:

Date	Event	Initial

Road Name: Moody's Road (Crown Road) **Road Category**: Permanent **Road Length** 850 m from the SF boundary to the intersection with 52/1 Trail

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	☐	
	Mass movement conditions	☐	
	Dispersible Soils Conditions	☐	
Pavement	Widening		
	Minor Realignment	☑	Improve alignment of eastern approach onto Crossing A through private property. Repair fences post haulage.
	Re-opening	☐	
	Remove vegetation / debris	☑	Slope mow vegetation on road verge - Minimise vegetation removal as much as possible - clear enough to allow safe passage of log trucks
	Repair surface	☑	May require repair during harvest/haulage operations and immediately post haulage to a pre-haulage standard.
	Crown / Crossfall	☑	
	Gravel	☑	Gravel muddy sections of road as required.
Roadside & Batters	Remove trees >20 cm dbhob	☑	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	☑	
	Repair/upgrade of Batters	☐	
Drainage	Culverts	☐	
	Mitre Drains	☑	Clean
	ROD / Spoon	☐	
	Belts/Channels	☐	
	Drop Downs	☐	
	Silt Trapping	☑	Install 10m of Siltmesh on approach to crossing A.

1. Start Date: Finish Date:

Date	Event	Initial

Road Name: Ellis Trail (In SF) **Road Category**: Temporary **Road Length** 50 m from the SF boundary to Dump 12

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	☐	
	Mass movement conditions	☐	
	Dispersible Soils Conditions	☐	
Pavement	Widening		
	Minor Realignment	☐	
	Re-opening	☑	Open up old track onto PP ridgeline rather than existing PP side cut.
	Remove vegetation / debris	☑	
	Repair surface	☑	
	Crown / Crossfall	☑	
	Gravel	☐	
Roadside & Batters	Remove trees >20 cm dbhob	☑	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	☑	
	Repair/upgrade of Batters	☐	
Drainage	Culverts	☐	
	Mitre Drains	☑	Clean
	ROD / Spoon	☑	Maintain and install as per EPL spacing
	Belts/Channels	☐	
	Drop Downs	☐	
	Silt Trapping	☐	

1. Start Date: Finish Date:

Date	Event	Initial

Road Name: Ellis Trail (New in PP) **Road Category**: Temporary **Road Length** 450 m from the intersection with Yarraman Road to the SF boundary

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	☐	
	Mass movement conditions	☐	
	Dispersible Soils Conditions	☐	
Pavement	Widening		
	Minor Realignment	☑	Open fence in consultation with PP owner at intersection with Yarraman Road - Not to use existing entrance/driveway
	Re-opening	☑	Open up new track onto PP ridgeline rather than existing PP side cut.
	Remove vegetation / debris	☑	Remove grass on paddock trail.
	Repair surface	☑	Post haulage the trail is to be ripped and sown
	Crown / Crossfall	☑	
	Gravel	☑	Spot gravel sections of PP driveway e.g. either side of crossing.
Roadside & Batters	Remove trees >20 cm dbhob	☐	
	Remove trees <20 cm dbhob	☐	
	Repair/upgrade of Batters	☐	
Drainage	Culverts	☐	
	Mitre Drains	☐	
	ROD / Spoon	☑	Install as per EPL spacing
	Belts/Channels	☐	
	Drop Downs	☐	
	Silt Trapping	☑	Siltmesh or haybale if <5m vege - eitherside of driveway crossing

Road Name: Youngs Trail (In PP) **Road Category**: Temporary **Road Length** 550 m from the intersection with Ellis Trail to Dump 13

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	☐	
	Mass movement conditions	☐	
	Dispersible Soils Conditions	☐	
Pavement	Widening		
	Minor Realignment	☑	Improve intersection alignment with Ellis Trail. Improve grade on steeper sections - do not create steep cut batters - PP owner will need to slash.
	Re-opening	☐	
	Remove vegetation / debris	☑	Clear vege back from track near intersection with Ellis Trail
	Repair surface	☑	
	Crown / Crossfall	☑	
	Gravel	☑	Gravel steep sections e.g. shady section near intersection with Ellis Trail (approx 4 loads)
Roadside & Batters	Remove trees >20 cm dbhob	☑	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	☑	
	Repair/upgrade of Batters	☐	
Drainage	Culverts	☐	
	Mitre Drains	☑	Clean
	ROD / Spoon	☑	Maintain and install in consultation with landowner post haulage
	Belts/Channels	☐	
	Drop Downs	☐	
	Silt Trapping	☐	

1. Start Date: Finish Date:

Date	Event	Initial

Road Name: Friday's Creek Road (Council Road) **Road Category**: Permanent **Road Length** 750 m from the main valley road to the intersection with Tower Road.

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	☐	
	Mass movement conditions	☐	
	Dispersible Soils Conditions	☐	
Pavement	Widening		
	Minor Realignment	☐	
	Re-opening	☐	
	Remove vegetation / debris	☑	
	Repair surface	☑	
	Crown / Crossfall	☑	
	Gravel	☐	
Roadside & Batters	Remove trees >20 cm dbhob	☑	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	☑	
	Repair/upgrade of Batters	☐	
Drainage	Culverts	☑	Clean
	Mitre Drains	☑	Clean
	ROD / Spoon	☑	Maintain and install as per EPL spacing
	Belts/Channels	☐	
	Drop Downs	☐	
	Silt Trapping	☐	

1. Start Date: Finish Date:

Date	Event	Initial

Road Name: Tower Road (SF Road) **Road Category**: Permanent **Road Length** 800 m from the intersection of Fridays Creek Road to the intersection with Peak Trail.

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	☐	
	Mass movement conditions	☐	
	Dispersible Soils Conditions	☐	
Pavement	Widening		
	Minor Realignment	☐	
	Re-opening	☐	
	Remove vegetation / debris	☑	
	Repair surface	☑	
	Crown / Crossfall	☑	
	Gravel	☑	Patch gravel steep sections (approx 10 loads)
Roadside & Batters	Remove trees >20 cm dbhob	☑	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	☑	
	Repair/upgrade of Batters	☐	
Drainage	Culverts	☑	Clean 12 x pipes (approx 2 days with backhoe)
	Mitre Drains	☑	Clean
	ROD / Spoon	☑	Maintain and install as per EPL spacing
	Belts/Channels	☑	Install as per EPL (2 x RF's)
	Drop Downs	☐	
	Silt Trapping	☑	Siltmesh or haybale if <5m vege (Crossings X1-X5))

1. Start Date: Finish Date:

Date	Event	Initial

Road Name: Peak Trail - **Section 1** **Road Category**: Permanent **Road Section Length** 1.9km (8km total) from the intersection of Tower Road to Dump 1

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	☑	
	Mass movement conditions	☐	
	Dispersible Soils Conditions	☐	
Pavement	Widening		
	Minor Realignment	☐	
	Re-opening	☐	
	Remove vegetation / debris	☑	Slope mow batter vegetation (approx 2 hours)
	Repair surface	☑	Drain and gravel boggy sections (approx 6 loads)
	Crown / Crossfall	☑	
	Gravel	☑	Patch gravel steep sections (approx 3 loads)
Roadside & Batters	Remove trees >20 cm dbhob	☑	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	☑	
	Repair/upgrade of Batters	☐	
Drainage	Culverts	☐	
	Mitre Drains	☑	Clean
	ROD / Spoon	☑	Maintain and install as per EPL spacing
	Belts/Channels	☑	Install as per EPL (approx 10 x RF's)
	Drop Downs	☐	
	Silt Trapping	☐	

1. Start Date: Finish Date:

Date	Event	Initial

Road Name: Peak Trail - **Section 2** **Road Category**: Permanent **Road Section Length** 2.7km (8km total) from Dump 1 to the truck turnaround (east of Dump 5)

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	☑	
	Mass movement conditions	☐	
	Dispersible Soils Conditions	☐	
Pavement	Widening		
	Minor Realignment	☐	
	Re-opening	☐	
	Remove vegetation / debris	☑	Slope mow batter vegetation (approx 5 hours)
	Repair surface	☑	Drain and gravel boggy sections (approx 4 loads)
	Crown / Crossfall	☑	
	Gravel	☑	Patch gravel steep sections (approx 6 loads)
Roadside & Batters	Remove trees >20 cm dbhob	☑	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	☑	
	Repair/upgrade of Batters	☐	
Drainage	Culverts	☐	
	Mitre Drains	☑	Clean
	ROD / Spoon	☑	Maintain and install as per EPL spacing
	Belts/Channels	☑	Install as per EPL (approx 16 x RF's)
	Drop Downs	☐	
	Silt Trapping	☐	

1. Start Date: Finish Date:

Date	Event	Initial

Road Name: Peak Trail - **Section 3** **Road Category**: Permanent **Road Section Length** 3.4km (8km total) from the truck turnaround (east of Dump 5) to the intersection with Frontage Creek Trail

	WORKS	REQUIRED	INSTRUCTIONS/SITE SPECIFIC CONDITIONS
Site Info	Works on >30° slopes	☑	
	Mass movement conditions	☐	
	Dispersible Soils Conditions	☐	
Pavement	Widening		
	Minor Realignment	☐	
	Re-opening	☐	
	Remove vegetation / debris	☑	Slope mow batter vegetation (approx 16 hours)
	Repair surface	☑	Drain and gravel boggy sections (approx 4 loads)
	Crown / Crossfall	☑	
	Gravel	☑	Patch gravel steep sections (approx 10 loads)
Roadside & Batters	Remove trees >20 cm dbhob	☑	Remove Dangerous trees/stags only
	Remove trees <20 cm dbhob	☑	
	Repair/upgrade of Batters	☐	
Drainage	Culverts	☐	
	Mitre Drains	☑	Clean
	ROD / Spoon	☑	Maintain and install as per EPL spacing
	Belts/Channels	☑	Install as per EPL (approx 19 x RF's)
	Drop Downs	☐	
	Silt Trapping	☐	

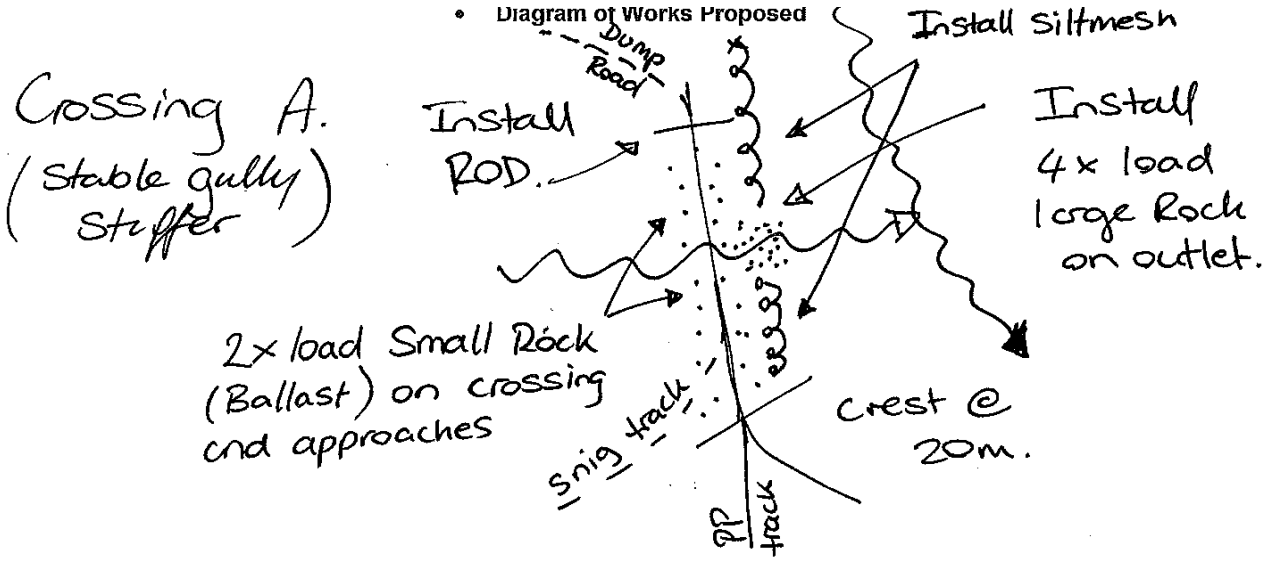
1. Start Date: Finish Date:

Date	Event	Initial

Crossing Name: A – Moody's Road (In SF)

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
Stable Gully Stuffer	Existing	Permanent	Un-mapped DL	Intermittent

Crossing		Approaches & Road Drainage	
Reshaping Bed & Banks	Nil	Approach Works	Maintain crown
Pavement/structure	2 x load ballast/small rock prior to use as snig crossing	5-30m Upstream left	Crest
Disposal of spoil	NA	5-30m Upstream right	Install ROD
Inlet/Outlet	6 x load large rock on outlet	Practices where no 5-30m	NA
Soil Stabilisation within 20m	Seed/Mulch disturbed soil	Outlet control	Existing Vege or use Silt Trapping e.g. siltmesh, haybale or siltpond if <5m vege
Soil erosion/sediment control	Existing Vegetation	Table drain silt control	Nil



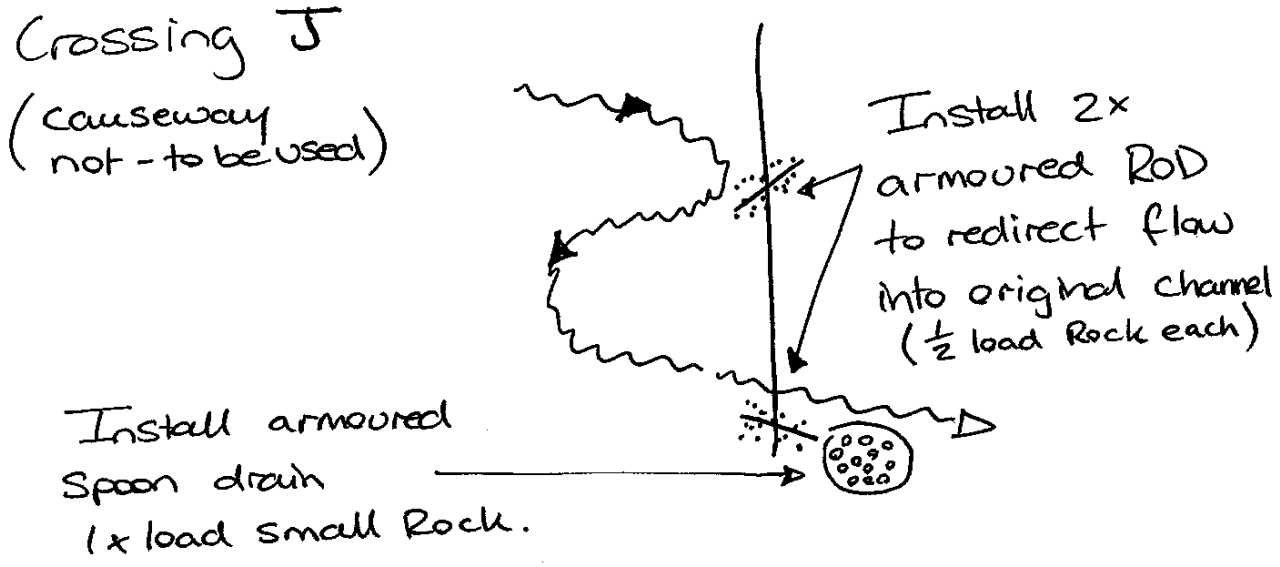
Start Date: Finish Date: Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

Crossing Name: XJ – Moody's Road (In SF) - NOT TO BE USED

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
2 x Causeway	Existing	TO BE CLOSED	1st Order DL	Intermittent

Crossing		Approaches & Road Drainage	
Reshaping Bed & Banks	Nil	Approach Works	Nil
Pavement/structure	Natural surface	5-30m Upstream left	Install armoured ROD (1/2 load gravel)
Disposal of spoil	NA	5-30m Upstream right	Install armoured ROD (1/2 load gravel)
Inlet/Outlet	Install armoured spoon drain - 1 x load small rock	Practices where no 5-30m	NA
Soil Stabilisation within 20m	Seed/Mulch disturbed soil	Outlet control	Existing Vege or use Silt Trapping e.g. siltmesh, haybale or siltpond if <5m vege
Soil erosion/sediment control	Existing Vegetation	Table drain silt control	Nil



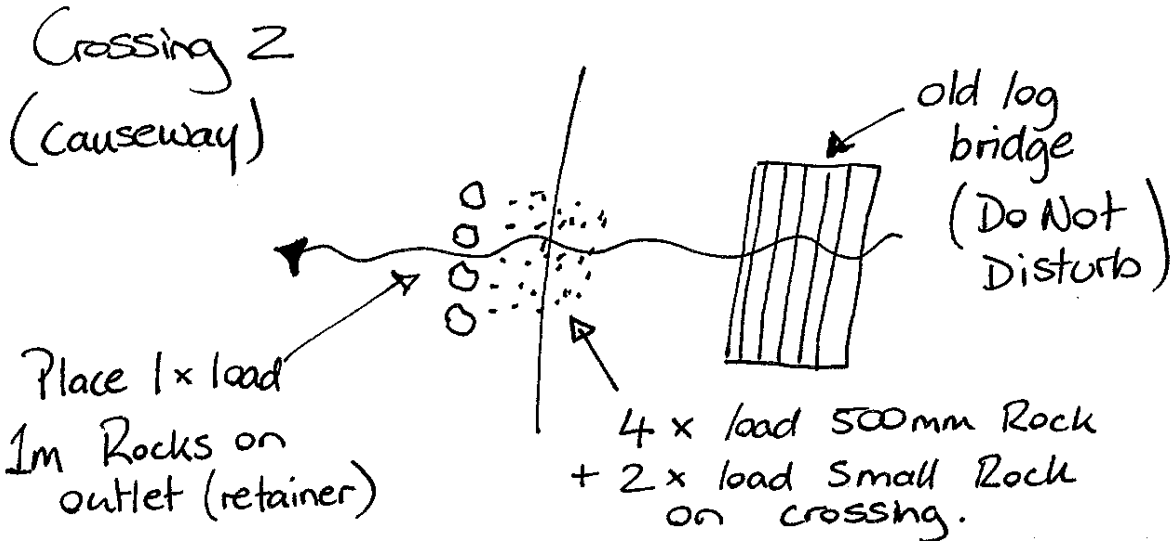
Start Date: Finish Date: Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

Crossing Name: Z – Moody's Road (Crown Road Reserve)

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
Rock causeway	Existing	Permanent	3rd Order DL	Intermittent

Crossing		Approaches & Road Drainage	
Reshaping Bed & Banks	Replacing rock	Approach Works	Maintain crown
Pavement/structure	Install 4 x load of large 500mm rock and 2 x load of small rock on crossing	5-30m Upstream left	NA
Disposal of spoil	NA	5-30m Upstream right	NA
Inlet/Outlet	Install 1 x load of large 1m rock on outlet as retainer	Practices where no 5-30m	NA
Soil Stabilisation within 20m	Seed/Mulch disturbed soil	Outlet control	Existing Vege or use Silt Trapping e.g. siltmesh, haybale or siltpond if <5m vege
Soil erosion/sediment control	Existing Vegetation or use Silt Trapping	Table drain silt control	Nil



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

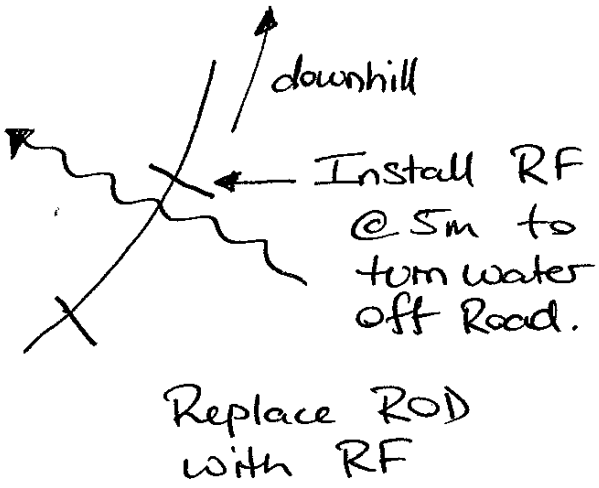
Date	Event	Initial

Crossing Name: B – Peak Trail (In SF)

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
Causeway	Existing	Permanent	Un-mapped DL	Intermittent

Crossing		Approaches & Road Drainage	
Reshaping Bed & Banks	Nil	Approach Works	Maintain crown
Pavement/structure	Gravel & natural surface	5-30m Upstream left	Install RF @ 5m
Disposal of spoil	NA	5-30m Upstream right	Replace ROD with RF
Inlet/Outlet	Nil	Practices where no 5-30m	NA
Soil Stabilisation within 20m	Seed/Mulch disturbed soil	Outlet control	Existing Vege or use Silt Trapping e.g. siltmesh, haybale or siltpond if <5m vege
Soil erosion/sediment control	Existing Vegetation	Table drain silt control	Nil

Crossing B (causeway)



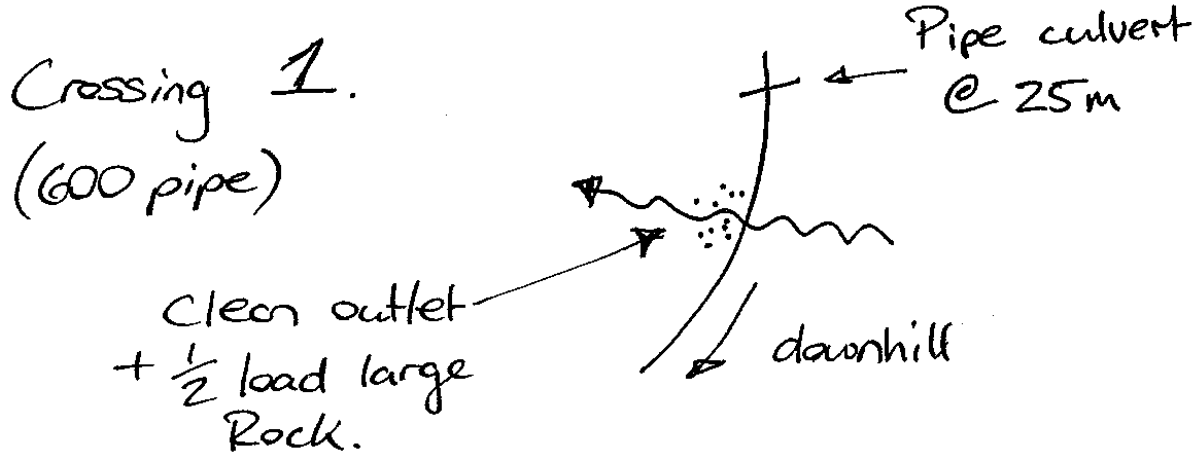
Start Date: Finish Date: Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

Crossing Name: X1 – Tower Road (In SF)

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
Pipe (600)	Existing	Permanent	Un-mapped DL	Intermittent

Crossing		Approaches & Road Drainage	
Reshaping Bed & Banks	Nil	Approach Works	Maintain crown
Pavement/structure	Gravel	5-30m Upstream left	Relief culvert
Disposal of spoil	NA	5-30m Upstream right	Downhill
Inlet/Outlet	Clean outlet plus 1/2 x load large rock on outlet	Practices where no 5-30m	NA
Soil Stabilisation within 20m	Seed/Mulch disturbed soil	Outlet control	Existing Vege or use Silt Trapping e.g. siltmesh, haybale or siltpond if <5m vege
Soil erosion/sediment control	Existing Vegetation	Table drain silt control	Nil



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

Date	Event	Initial

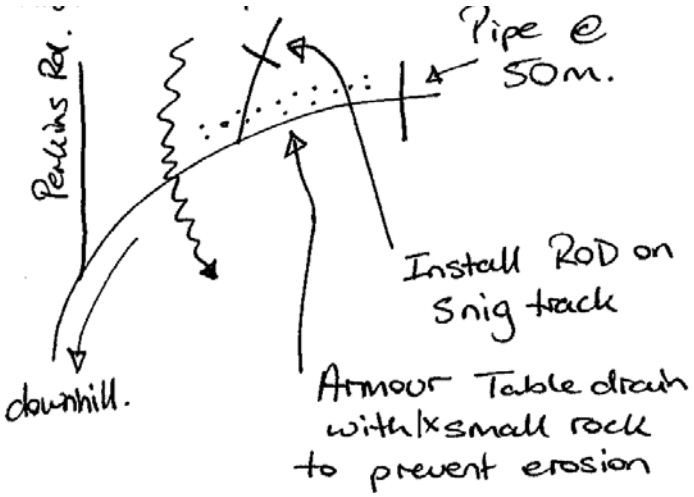
Crossing Name: X3 – Tower Road (In SF)

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
Pipe (600)	Existing	Permanent	Un-mapped DL	Intermittent

Crossing		Approaches & Road Drainage	
Reshaping Bed & Banks	Nil	Approach Works	Maintain crown
Pavement/structure	Gravel	5-30m Upstream left	Downhill
Disposal of spoil	NA	5-30m Upstream right	Construct ROD on adjacent snig track (construct ROD on Tower Road post haulage)
Inlet/Outlet		Practices where no 5-30m	Armour TD with 1 x load small rock
Soil Stabilisation within 20m	Seed/Mulch disturbed soil	Outlet control	Existing Vege or use Silt Trapping e.g. siltmesh, haybale or siltpond if <5m vege
Soil erosion/sediment control	Existing Vegetation	Table drain silt control	Nil

Crossing 3
(600 pipe)

* Construct ROD @ 5/30m post operation.



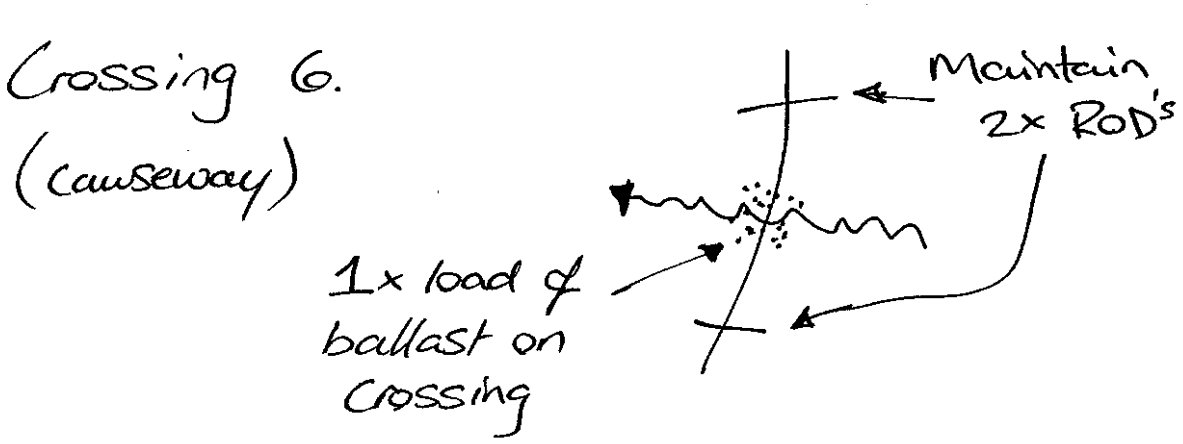
Start Date: Finish Date: Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

Crossing Name: X6 – Tower Road (In SF)

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
Causeway	Existing	Permanent	Un-mapped DL	Intermittent

Crossing		Approaches & Road Drainage	
Reshaping Bed & Banks	Nil	Approach Works	Maintain crown
Pavement/structure	1 x load of ballast 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	Seed/Mulch disturbed soil	Outlet control	Existing Vege or use Silt Trapping e.g. siltmesh, haybale or siltpond if <5m vege
Soil erosion/sediment control	Existing Vegetation	Table drain silt control	Nil



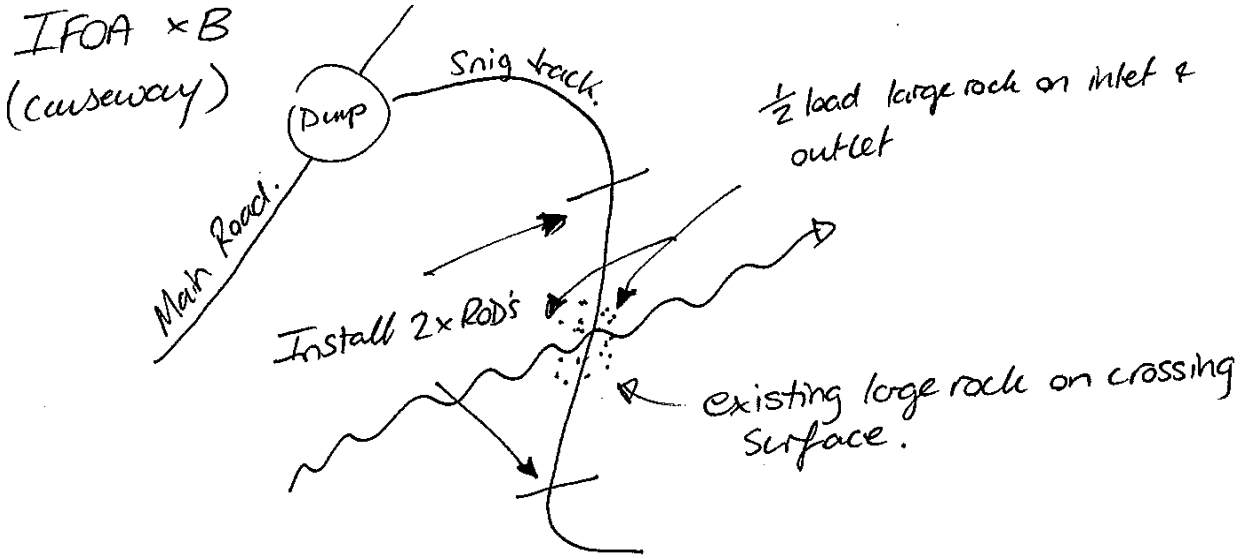
Start Date: Finish Date: Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

Crossing Name: IFOA XB – Adjacent to Dump 12 (Ellis Trail)

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
Causeway	Existing	Temporary	Un-mapped DL	Intermittent

Crossing		Approaches & Road Drainage	
Reshaping Bed & Banks	Nil	Approach Works	Nil
Pavement/structure	Existing rock	5-30m Upstream left	Install ROD
Disposal of spoil	NA	5-30m Upstream right	Install ROD
Inlet/Outlet	1/2 load large rock on inlet & outlet	Practices where no 5-30m	NA
Soil Stabilisation within 20m	Seed/Mulch disturbed soil	Outlet control	Existing Vege or use Silt Trapping e.g. siltmesh, haybale or siltpond if <5m vege
Soil erosion/sediment control	Existing Vegetation	Table drain silt control	Nil



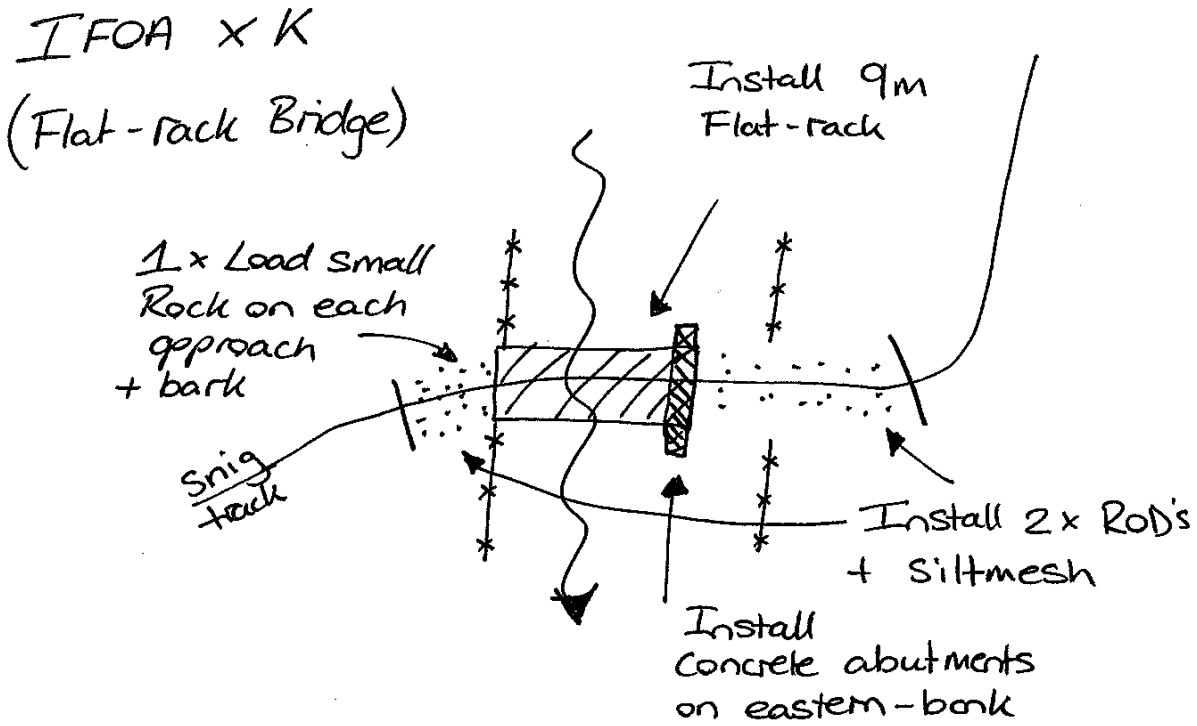
Start Date: Finish Date: Soil Stabilisation Date (must be within 5 days):

Date	Event	Initial

Crossing Name: IFOA XK– Adjacent to Dump 10 (Moody's Trail)

Crossing Type	Existing / New	Future of Crossing	Drainage Feature Type	Stream Permanency
Metal Bridge	New	Temporary	3rd Order DL	Permanent

Crossing		Approaches & Road Drainage	
Reshaping Bed & Banks	Install Concrete abutments on eastern bank	Approach Works	1 x load small rock on each approach
Pavement/structure	Install 9m metal flat -rack bridge	5-30m Upstream left	Install ROD post snig
Disposal of spoil	NA	5-30m Upstream right	Install ROD post snig
Inlet/Outlet	1 x load small rock on inlet & outlet each	Practices where no 5-30m	NA
Soil Stabilisation within 20m	Seed/Mulch disturbed soil	Outlet control	Silt Trapping e.g. siltmesh, haybale or siltpond
Soil erosion/sediment control	Install siltmesh on both approaches	Table drain silt control	Nil



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

Date	Event	Initial

6. Operational Control

Roading Supervisor to sign here

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 as the principle controller of the operation.

I will brief any other operators not present at this briefing prior to them starting any work on site and ensure that risk assessment for the Safety Management Plan is completed for this area prior to operations commencing

Name:		Signature:		
Position:		Date:	From	
Company:			To	

Name:		Signature:		
Position:		Date:	From	
Company:			To	

Name:		Signature:		
Position:		Date:	From	
Company:			To	

Name:		Signature:		
Position:		Date:	From	
Company:			To	

Name:		Signature:		
Position:		Date:	From	
Company:			To	

7. Handover 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.

Position - Company	*Name*	*Signature*	*Date*