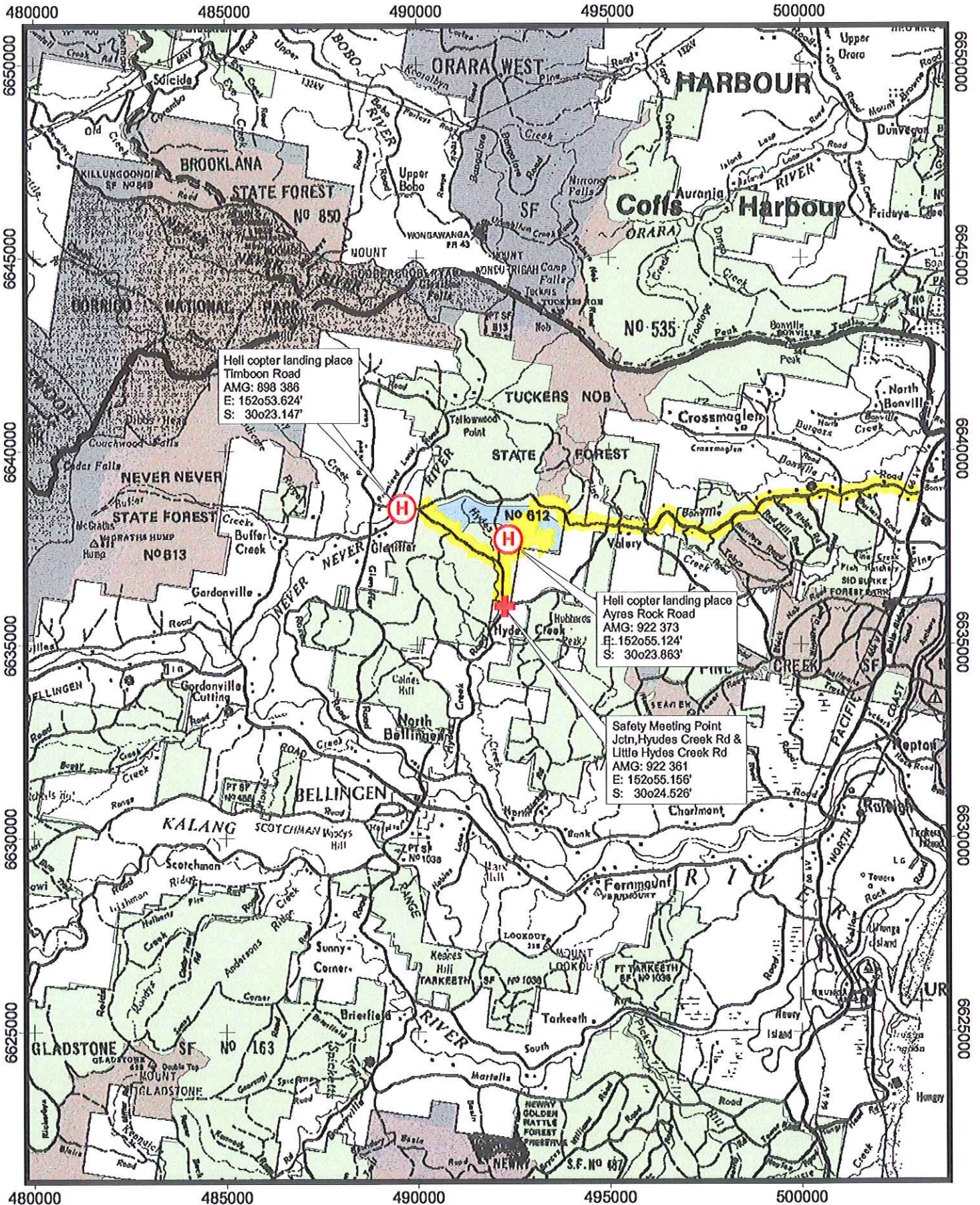


Safety Point & Locality Map
 Tuckers Nob State Forest
 Compartments 70, 71 & 72
 Plantation Thinning Operation



Map Sheet: Bellingen 9437 2S

Scale 1:125,000



Heli copter landing place
 Timboon Road
 AMG: 898 386
 E: 152053.624'
 S: 30023.147'

Heli copter landing place
 Ayres Rock Road
 AMG: 922 373
 E: 152055.124'
 S: 30023.863'

Safety Meeting Point
 Jctn, Hydes Creek Rd &
 Little Hydes Creek Rd
 AMG: 922 361
 E: 152055.156'
 S: 30024.526'

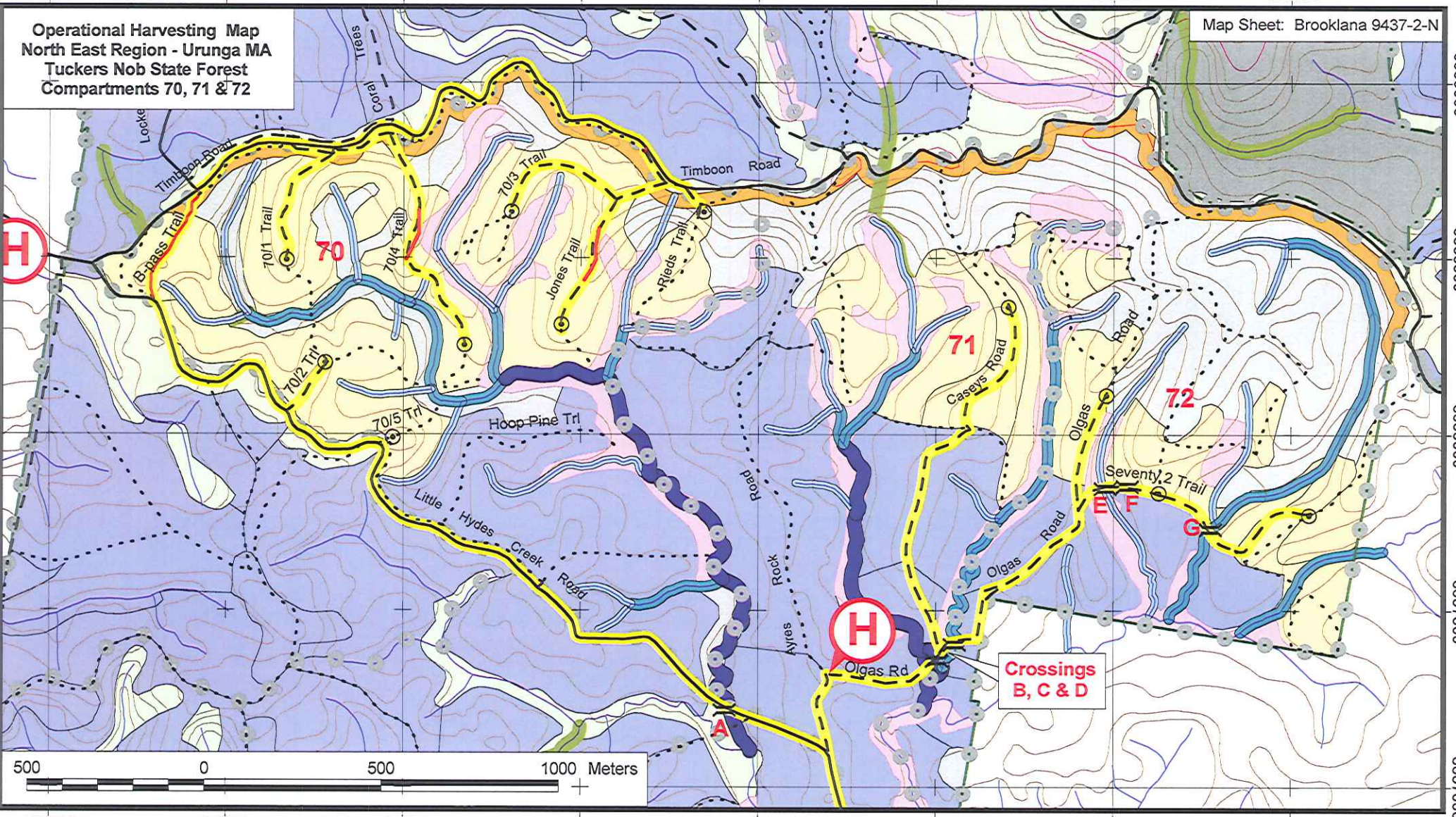
490000 490500 491000 491500 492000 492500 493000 493500

Operational Harvesting Map
North East Region - Urunga MA
Tuckers Nob State Forest
Compartments 70, 71 & 72

Map Sheet: Brooklana 9437-2-N

6639000
6638500
6638000
6637500
6637000

6639000
6638500
6638000
6637500
6637000



MAP FEATURES

- State Forest Boundary
- Compartment Boundary
- 1 Km AMG grid
- 10/100 m Contour
- State Forest
- National Park Estate
- drainage

ROADS

- All Weather, Unsealed
- Dry Weather, Unsealed
- 4WD Track
- New Construction

CROSSINGS

- Approved Crossings
- Truck turning and Loading area



Scale 1:15000

Printed by
 D.E. Kearney
 28/04/05



HARVESTING PRESCRIPTIONS

- Hardwood Plantation - Thin
- To be determined in field (FMZ 8)

HARVESTING EXCLUSIONS

- Native Forest (FMZ 4) to be harvested under a separate plan
- FMZ 2/3A - Mapped Rainforest
- Hwd plantation (not to be harvested)

MODIFIED HARVEST PRESCRIPTIONS

FILTER STRIPS

- 10m either side
- 15m either side
- 20m either side
- FMZ 3B - visual buffer



**STATE FORESTS OF NEW SOUTH WALES
NORTH EAST REGION**

**Tuckers nob State Forest
Compartments 70, 71 & 72**

**Operational Harvest Plan No. 2612
Sub – Resource Code No. C66**

Contents Page

Operational, Locality and Silvicultural Map.....1

HARVESTING DETAILS2

1. AREA IDENTIFICATION.....2

2. DESCRIPTION OF PROPOSAL.....2

3. SAFETY CONSIDERATIONS2

4. PLANTATION CONDITION AND SILVICULTURAL PRESCRIPTION.....2

5. LEGAL CONDITIONS3

6. SPECIAL CONDITIONS3

7. FOREST MANAGEMENT ZONING AND APPROVALS4

8. CULTURAL HERITAGE.....4

9. SOILS AND WATER.....5

10. DRAINAGE FEATURES5

11. TREE MARKING CONDITIONS AND CODE.....6

12. ROADS AND CROSSINGS.....6

13. LOG DUMPS6

14. EXTRACTION TRACKS7

15. PRODUCT SPECIFICATIONS AND ACCOUNTING.....7

16. YIELD ESTIMATES.....8

17. CERTIFICATION9

18. PRE OPERATION BRIEFING.....10

RECORDING FORMS11

SFO DUMP USAGE RECORD.....11

SNIG /EXTRACTION TRACK CROSSINGS RECORD13

WEEKLY AND BI-WEEKLY INSPECTIONS14

SFO NOTES17

RECORD OF THREATENED PLANTS OR THREATENED FAUNA FEATURES.....21

SILVICULTURAL REPORTING SHEET22

SFO POST LOGGING NOTES.....24

CLEARANCE CERTIFICATE.....25

HARVESTING DETAILS

1. Area Identification

Region	North East
Management Area	Urunga
State Forest	Tuckers Nob
Compartment/s	70, 71 & 72

Cmpt	Gross Area (ha)	Net Area (ha)	Pricing Area	Op Type	Avg. Yield (contract)	Avg. Removal (contract)
70	164	73	Urunga Costal	Late Thinning	60	0.25
71	153	25	Urunga Costal	Late Thinning	60	0.25
72	124	22	Urunga Costal	Late Thinning	60	0.25

2. Description of Proposal

2.1 Integrated harvesting of Plantation Areas

First thinning (late) of 1966, 1979 & 1980 age class Flooded Gum (*E.grandis*) plantation

Other

	Proposed	Details
Roadworks	Yes	Roadworks Plan (attached)
Post harvest Burning	No	
Rehabilitation	No	

3. Safety Considerations

See attached Hazard Assessment and Medical Emergency Evacuation Plan.

4. Plantation Condition and Silvicultural Prescription

4.1 Plantation Description

Plantation was established on cleared agricultural land by APM forests during 1973, 1976 and 1977 predominantly to Flooded Gum (*E.grandis*) with some areas of Blackbutt (*E.pilularis*). Additional areas of both species were established by the forestry commission in 1990.

Flooded Gum has been planted off site on upper slopes and ridge tops, where they are not vigorous and mortality rates have been high. The use of poor genetic stock has also contributed to the overall poor quality of these stands. Where blackbutt have been established form is generally good and stands are vigorous with high volume increment potential.

4.2 Silvicultural History, Stand Condition and Product Types

The original forest type would have consisted of blackbutt forest types on ridges and upper slopes, mixed hardwood forest types with wet sclerophyll and rainforest types on the lower slopes and creek side areas. The area had been cleared for agricultural production prior to establishment of the plantation by APM forests. Ingrowth of camphor laurel is considerable in parts of compartment 70 due to lack of active management since the time of planting.

No thinning or other silvicultural treatments have been applied to date.

Stands are predominantly poor, with low stocking due to high mortality rate, poor form and vigour throughout. These areas will produce various grades of sawlog, some poles, veneer and pulpwood.

4.3 Silvicultural Objectives and Prescriptions

The plantation area detailed in this plan is to be harvested and managed in the long term by Forests NSW as a plantation under the the Plantation and Reafforestation Act 1999

Thin to 12m²/ha retaining superior stems for future cutting cycles.

4.4 Desired Return Time

The return time for thinned areas is yet to be determined, and will depend on market and other wood flow considerations in the future.

4.5 Recording

- The SFO must monitor Basal Area retention levels as prescribed for thinning areas.

5. Legal Conditions

Legislation relating to the operations on State forests & Other Crown-Timber Lands is detailed in SFNSW Forest Practices Codes. In addition this operation must specifically comply with:

- Forests NSW Forest Practices Codes part 1 (Timber Harvesting in Forests NSW Plantations 2005)
- Forests NSW Forest Practices Codes part 4, Forest Roads and Fire Trails (February 1999)
- Licence Conditions issued by Forests NSW under the Forestry Act (1916)
- This operation is a non-scheduled operation under the Environment Protection Licence issued under section 55 of the Protection of the Environment Act 1997. Roding and harvesting operations are not licensed. All EPL conditions will apply to operations except where otherwise specified.

The area is to be harvested as an existing plantation under:

- Plantation and Re-afforestation Act (1999)

An EIA has been prepared under the Environmental Planning and Assessment Act 1979 (EP&A Act) for this harvesting operation.

State Forests will be seeking authorisation for this area under the:

- Plantation and Re-afforestation Act (1999)

6. Special Conditions

6.1 Non-harvest areas

The Operational Map indicates the non-harvest areas in the compartment, as detailed in the legend.

- Harvesting disturbance is not permitted in non-harvest areas without contacting the Harvest Planner to obtain the required Regional approval.
- Harvesting may take place within filterstrips (as indicated on the operational map) in accordance with the conditions outlined in section 10.2.

6.2 Permanent growth plot

There are no PGP's within the compartments to be harvested.

6.3 Research Plots

There are no research plots in the compartments

6.4 Private Property

No private property will be directly affected by harvesting

6.5 Traffic Management – Little Hydes Creek Road & Timboon Road

Appropriate traffic management must be in place when working within 2 tree lengths of a road.

Little Hydes Creek Road and Timboon Road carry various levels of local traffic, contractor should consider road closure/traffic management on these roads when working within 2 tree lengths.

Both of these roads are vested in the Bellingen Shire Council and council will need to be consulted on traffic management/road closure proposals.

7. Forest Management Zoning And Approvals

7.1 Forest Management Zones

The compartments includes the following FMZs as indicated on the operational map:

- **FMZ 3A (Harvesting Exclusion)** These exclusion zones are all contained within mapped rainforest and are excluded from harvesting disturbance.
- **FMZ 3B (visual protection buffer)** a visual protection buffer has been marked on Timboon Road. The buffer will not be harvested in this operation. It is to be delineated in the field as the boundary of the flooded gum plantation.
- **FMZ 5 (Native Species Plantation)** available for harvesting in this operation – follow silvicultural prescriptions as outlined in section 4. These areas are shown as yellow on the operational map.
- **The Zone 8 (Further Assessment)** include modelled IHC4 areas, modelled streams and areas outside of mapped plantation areas. These areas require further assessment. Zone 8 are shown as grey on the operational map.
- Areas outside of mapped plantation areas are to be assessed during compartment mark-up. Areas assessed as plantation may be harvested under the provisions of this plan.

8. Cultural Heritage

8.1 Aboriginal Cultural Heritage

There are no known Aboriginal sites or other heritage items in the compartments. The Local Aboriginal Land Council has been consulted in regard to the proposed logging and the Regional Aboriginal Cultural Heritage Officer have inspected the compartments. No issues were identified at the inspection.

8.2 Non Aboriginal Cultural Heritage

No sites of non aboriginal cultural heritage were identified in this compartment.

9. Soils and Water

	Compartment 70	Compartment 71	Compartment 72
Inherent hazard level	1	1	1
Dispersible Soils	No	No	No
Mass Movement Hazard	No	No	No
Seasonality	No	No	No

10. Drainage features

10.1 Drainage feature protection

- The Operational Map indicates known mapped drainage features and widths of protective measures.
- (note: some of the drainage features indicated on the Operational Map with filter strips may, at the time of marking, be determined as depressions).
- The minimum filter strip width for each side of drainage features is shown below.

Stream Order	Filter Strips each side of drainage feature (Haz Class 1)
Unmapped drainage lines	10
1st order	10
2nd order	15
3 rd order	20
4 th order or greater	20

10.2 Operational Conditions For Drainage Features

- Conditions 6-14, 17-27 of Schedule 4 of the Non IFOA EPL No 4016 must apply.
- 5m wide buffer strips must be retained along all drainage depressions. Conditions 15,16, 36-38 of Schedule 4 of the EPL must apply (Buffer strips).

11. Tree Marking Conditions and Code

- All exclusion zone and buffer zone boundaries must be marked in the field - except where specified forestry activities will not come within 50 metres of such boundaries. Where thick or impenetrable understorey obstructs marking UHF radio communication with operators may be used to indicate filter strips and boundaries. The SFO must document and justify such situations as it becomes apparent during compartment mark-up

STANDARD MARKINGS/SYMBOLS: Markings/Symbols that deliver key requirements on a state wide basis

Description	Symbol
Compartment boundary (Where not defined by clear features eg. Road, trail, creek)	"O" or Yellow tape
Exclusion zone (Line not to be crossed or disturbed by fallers or harvesting machinery at any time)	Three horizontal lines / rings OR Blue tape
Edge of net harvest area (eg unmerchantable) Retained trees and critical boundaries to be marked within 30m beyond the boundary Tree heads may fall across the line, provided they comply with boundary and tree retention rules (eg 5m debris)	"⊙"
Buffer Zone Areas where machinery is not permitted but there may be trees to be felled	Two horizontal lines / rings (indicate distance if required)
Drainage depression buffer strip	Not marked
Extraction System, OR Road/Track line	"I" or white tape
Dump site (with optional dump number reference)	"D" or red tape
Approved crossing site	"↓"
Slope angle Indication (commences here)	eg "25°"
Individual tree	"•" or dots
Directional felling mark	"←" over "•"
Retained trees not to be removed or damaged (eg grower)	One horizontal line or ring
Cancellation Mark (Mark to formally cancel previous marks)	"X"

12. Roads and Crossings

- There are a number of 4 WD trails as indicated on the operational map that are not to be used by supervisory vehicles or log trucks. They may be used with SFO approval for snigging or extraction provided they are drained to the appropriate specifications.

Road Maintenance/Road Construction and Road re-opening – See Roadworks Plan

13. Log Dumps

13.1 Location

Logs may be stockpiled beside roads for direct loading on to trucks. Log stockpile areas within native forest areas must be approved by the SFO prior to establishment and should be located so as to minimise disturbance to understorey elements.

13.2 Treatment

Inherent hazard level 1 Conditions 41, 42, 45, of Schedule 4 of the EPL must apply.

14. Extraction Tracks

Conditions 53 to 56 of Schedule 4 of the EPL (Snig tracks), Conditions 85 to 95 of Schedule 4 of the EPL (Drainage of snig tracks), Conditions 57 to 83 of Schedule 4 of the EPL (Snig tracks - crossings), Condition 97 of Schedule 4 of the EPL (Downhill snigging), and Prescription 96 of Schedule 4 of the EPL (Wet weather-snig tracks) must apply

14.1 Suitability of existing log dams and gully stuffers

The suitability of any existing log dam or gully stuffers must be determined by a suitably qualified person, the determination enclosed in the compartment/stand history file and any recommendations for use prescribed in the harvest instructions before the log dam or gully stuffers is used for extraction. Condition 49 of Schedule 4 of the EPL must apply.

15. Product Specifications and Accounting

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

16. Yield Estimates

Compartment	Op Type	Net (ha):	Area	Ageclass
70	DT1		7.2	1966

Products	Volume/ha (m ³ /ha)	Total Volume (m ³)
Poles	10	72
Veneer	5	36
E-logs	20	144
Salvage grade 1	30	216
Salvage grade 2	30	216
Pulpwood	20	144
TOTAL	115	828

Compartment	Op Type	Net (ha):	Area	Ageclass
70	DT1		65.8	1979/1980

Products	Volume/ha (m ³ /ha)	Total Volume (m ³)
Poles	5	329
Veneer	0	0
E-logs	5	329
Salvage grade 1	25	1645
Salvage grade 2	25	1645
Pulpwood	20	1316
TOTAL	80	5264

Compartment	Op Type	Net (ha):	Area	Ageclass
71	DT1		25	1979/1980

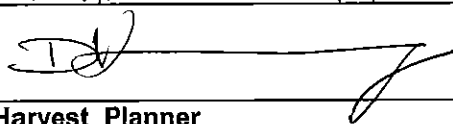
Products	Volume/ha (m ³ /ha)	Total Volume (m ³)
Poles	5	125
Veneer	0	0
E-logs	5	125
Salvage grade 1	25	625
Salvage grade 2	25	625
Pulpwood	20	500
TOTAL	80	2000

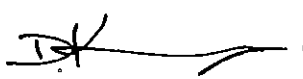
Compartment	Op Type	Net (ha):	Area	Ageclass
72	DT1		22	1979/1980


Products	Volume/ha (m ³ /ha)	Total Volume (m ³)
Poles	5	110
Veneer	0	0
E-logs	5	110
Salvage grade 1	25	550
Salvage grade 2	25	550
Pulpwood	20	440
TOTAL	80	1760

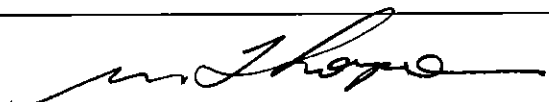
17. Certification

This plan has been prepared in accordance with the Environmental Protection Licence no. 4016 and the area is to be harvested as a plantation under the definitions of the Timber Plantations (Harvest Guarantee) Act 1995 subject to the approval of the accompanying Environmental Impact Assessment prepared under the Environmental Planning and Assessment Act 1979.

Prepared by:	DEAN KEARNEY	28/03/06.
Signature:		
Harvest Planner		

Endorsed by:	Stephen Pickering DEAN KEARNEY	Date: 28/03/06.
Signature:		
Harvest Planning Manager		

Endorsed by:	JOHN MURRAY	Date: 18/4/06
Signature:		
Regional Planning Manager		

Approved by:	STEVE RAYSON MIKE THOMPSON	Date: 17/10/06
Signature:		
Regional Manager		

18. Pre operation briefing

- I acknowledge that I have received a copy of the Harvesting Plan for Compartments 70, 71 & 72 in Tuckers Nob State Forest and that I have been briefed on the conditions of the Plan and understand the supervision and operational control requirements as explained to me by the Forest Planner or his/her delegate.

Signature:		Name:	
Position	Supervising Forest Officer	Date:	

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

Harvesting Contractor Acknowledgment

- I acknowledge that I have received a copy of the Harvesting Plan for Compartments 70, 71 & 72 in Tuckers Nob State Forest and that I understand the conditions of the Plan as explained to me by a State Forests officer. I will brief other operators not present at this briefing prior to them starting operations and ensure that risk assessment for the Safety Management Plan is completed for this area prior to operations commencing

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

Personnel attending Induction

Contractor Personnel	Date	SFNSW Personnel	Date

This pre operation briefing must be separated from the harvesting plan once the briefing is complete the signed copy of this must be filed with the official copy of the plan.

ROAD WORKS PLAN

Compartments 70, 71 & 72

Tuckers Nob State Forest

North East Region

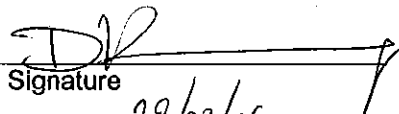
Sub – Resource Code No. C66



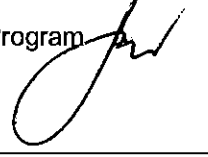
Prepared by: Planner

Endorsed by: Works Program
Supervisor

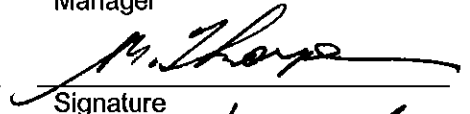
Approved by: Regional
Manager


Signature

Date: 28/03/06


Signature

Date:


Signature

Date: 17/10/06

Note: Roadworks Plan to be submitted with Harvest Plan documentation – or Due Dilligence checklist, UDL checklist and ecologist endorsement.

GENERAL INFORMATION FOR MAINTENANCE/CONSTRUCTION CREW

Compartments 70, 71 & 72

Tuckers Nob State Forest

1 Description of Proposal

This proposal is to carry out maintenance to approximately 13km of access roads and existing internal compartment roads to comply with the drainage requirements outlined in the EPL and facilitate harvesting. Five crossings are proposed for maintenance/upgrading. Exact locations of road works may be found on the attached operational plan.

2 Need for the proposal

This proposal is required to service harvesting operations within compartments 70, 71 & 72 Tucker Nob SF scheduled for harvest in June 2006.

3 Costs

The estimated total cost of the proposed road works is approximately \$15,000. A full breakdown of the costs are given in appendix 1A, on file in the North East Region office.

4 Benefits

The direct financial benefits of this proposal will be gained by royalty from timber products sold. The total revenue for the operation is estimated at \$125,000. Additional benefits include the formation of an strategic haulage route (for approval by RTA and Bellinghen council for B-double haulage).

5 Alternatives

Alternative haulage routes are via Hydes Creek Road and Timboon Road, however, both these roads are under the control of Bellinghen Shire Council and are not able to be used by B-doubles.

7 Specifications/Legal Conditions

- This operation is not licenced under the EPL
- All roadworks must comply with Schedule 5 of the EPL unless otherwise specified

8 Special Conditions

Feature	Conditions
Local traffic / Safety	Any works on or directly adjacent to Timboon Road will require traffic management. Any works on Little Hydes Creek will require road closure for the full length of the road.
Gravelled roads	Maintenance grading of gravelled roads must minimise loss of gravel from the road surface.
Construction, upgrade, re-alignment, widening - slope >30°	None Authorised
Dispersible Soils/ Mass Movement Hazard - Other	No

ROAD CATERGORIES

Permanent – a road that forms (or is likely to form) part of our permanent road and fire trail network and receive regular periodic maintenance.

Temporary – a road that will not form part of the permanent road network, will be upgraded periodically as harvesting, fire or other management needs dictate, but otherwise will not receive maintenance and will be allowed to grow over.

Closed – Roads that may or may not be used during the harvesting operation, that for some particular reason (eg safety hazard, high risk of water pollution from unstable crossings, neighbour issues etc) needs to be permanently baulked off and allowed to revegetate.

ROAD CONSTRUCTION

ROAD NAME: B-Pass Trail

Length of Construction: 400m; start at junction with Little Hydes Creek Road and finish at junction with Timboon Road (opposite Lockes Road).

Features	Works	Plant/Materials
Specifications <ul style="list-style-type: none"> • Max width of road prism • Formation width • Pavement width • Max roadside clearing width • Max road grade • Max ground slope • Max height and length of cut/fill batters • Angle of Batters 	<ul style="list-style-type: none"> • 8m • Widen road for truck use to standard design formation width 4.2m (pavement width 3m). Curve widening in accordance with Summary of Geometric Requirements for the Design of Roads (1991) • 3m • 8° • 8° • 0.5m cut batter, 50m long • ¾:1 batter grade 	Tractor
Mass movement/dispersible soils	NA	
Soil erosion and sediment control	As required	
Gravelling	As required	
Road drainage	Spacing as per EPL MD's should be appropriate for whole section	
Drop downs and dissipaters	None required	
Soil stabilisation	Grass seed on exposed soils. Gravel on pavement as necessary	
Soil stabilisation interval	As per EPL	

Future of Road: Permanent

Date Started: _____

Date Finished: _____

ROAD MAINTENANCE

ROAD NAME: Little Hydes Creek Road:

This road is vested in the Bellingen Shire and Council must advise written consent prior to road works commencing.

Length of Maintenance: 2700m; start at B-pass Road & Finish at Hydes Creek Road.

Features	Works	Plant/Materials
Pavement	<ul style="list-style-type: none">Grade to re-open drains and repair pavement where washing has occurred. Reform crown to ensure road drainage is functional.	
Roadside & Batters	<ul style="list-style-type: none">Do not disturb	
Drainage	<ul style="list-style-type: none">Re-open existing drainage (EPL does not apply on Public Road). Additional drainage can be installed as necessary.	

Future of Road: Permanent (Public Road)

Date Started: _____

Date Finished: _____

ROAD NAME: Timboon Road:

This road is vested in the Bellingen Shire and Council must advise written consent prior to road works commencing.

Length of Maintenance: 1800m; start at Junction with Rieds Trail and finish Junction with B-Pass Trail.

Features	Works	Plant/Materials
Pavement	<ul style="list-style-type: none">light grade to re-open drains and repair pavement where washing has occurred. Reform crown to ensure road drainage is functional.	
Roadside & Batters	<ul style="list-style-type: none">Cut back batter as marked in the field to improve site distance. Ensure batters are stable (¾:1 batter grade).	
Drainage	<ul style="list-style-type: none">Maintain existing drainage (EPL does not apply on Public Road).	

Future of Road: Permanent (Public Road)

Date Started: _____

Date Finished: _____

ROAD NAME: 70/1 Trail

Length of Maintenance: 400m; start at Timboon Rd and finish at dump as marked in the field.

Features	Works	Plant/Materials
Pavement	<ul style="list-style-type: none">Remove Debris & topsoils and Grade to form pavement (crown)	
Roadside & Batters	<ul style="list-style-type: none">Brush back encroaching vegetation.Improve entrance onto Timboon Road. Any road widening must be to the northern (Timboon Road) side of the road where the land slope is negligible.	
Drainage	<ul style="list-style-type: none">Additional drainage (MD's) required. Install to EPI specifications.Use rubber flaps or c-channels if MD's can not be installed.Entrance onto Timboon Road must be drained appropriately Either a pipe or spoon drain may be used to convey the table drain flow of Timboon Road at the entrance point, this may be determined once the road has been formed.	

Future of Road: Temporary

Date Started: _____

Date Finished: _____

ROAD NAME: 70/4 Trail

Length of Maintenance: 725m; start at Timboon Rd and finish at dump as marked in the field.

Features	Works	Plant/Materials
Pavement	<ul style="list-style-type: none"> Remove topsoils and Grade to form pavement (crown) Sidecut re-alignment * See instructions Below. 	D3 & grader
Roadside & Batters	<ul style="list-style-type: none"> Push back encroaching vegetation Improve entrance onto Timboon Road. Any road widening must be to the northern (Timboon Road) side of the road where the land slope is negligible. 	D3
Drainage	<ul style="list-style-type: none"> Additional drainage (MD's) required. Install to EPI specifications. Use rubber flaps or c-channels if MD's can not be installed. Entrance onto Timboon Road must be drained appropriately Either a pipe or spoon drain may be used to convey the table drain flow of Timboon Road at the entrance point, this may be determined once the road has been formed. 	

Construction: Side cut re-alignment.

Length of Construction: 100m; as marked in the field

Features	Works	Plant & Material
Specifications <ul style="list-style-type: none"> Max width of road prism Formation width Pavement width Max roadside clearing width Max road grade Max ground slope Max height and length of cut/fill batters Angle of Batters 	<ul style="list-style-type: none"> 8m Widen road for truck use to standard design formation width 4.2m (pavement width 3m). Curve widening in accordance with Summary of Geometric Requirements for the Design of Roads (1991) 3m 8° 8° 0.5m cut batter, 50m long ¾:1 batter grade 	D3/D6
Mass movement/dispersible soils	NA	
Soil erosion and sediment control	As required	
Gravelling	As required	
Road drainage	Spacing as per EPL Pavement outfall drainage and cross banks.	
Drop downs and dissipaters	Rock	
Soil stabilisation	Grass seed on exposed soils. Gravel on pavement as necessary	
Soil stabilisation interval	As per EPL	

Future of Road: Temporary

Date Started: _____

Date Finished: _____

ROAD NAME: Jones Trail

Length of Maintenance: 550m; start at Timboon Rd and finish at dump as marked in the field.

Features	Works	Plant/Materials
Pavement	<ul style="list-style-type: none"> Remove topsoils and Grade to form pavement (crown) Sidecut re-alignment * See instructions Below. 	D3 Grader
Roadside & Batters	<ul style="list-style-type: none"> Push back encroaching vegetation Re-open entrance onto Timboon Road as marked. 	
Drainage	<ul style="list-style-type: none"> Additional drainage (MD's) required. Install to EPI specifications. Use rubber flaps or c-channels if MD's can not be installed. Entrance onto Timboon Road must be drained appropriately Either a pipe or spoon drain may be used to convey the table drain flow of Timboon Road at the entrance point, this may be determined once the road has been formed. 	

Future of Road: Temporary

Date Started: _____

Date Finished: _____

Construction: Side cut re-alignment.

Length of Construction: 100m; as marked in the field

Features	Works	Plant & Material
Specifications <ul style="list-style-type: none"> Max width of road prism Formation width Pavement width Max roadside clearing width Max road grade Max ground slope Max height and length of cut/fill batters Angle of Batters 	<ul style="list-style-type: none"> 8m Widen road for truck use to standard design formation width 4.2m (pavement width 3m). Curve widening in accordance with Summary of Geometric Requirements for the Design of Roads (1991) 3m 8° 8° 0.5m cut batter, 50m long ¾:1 batter grade 	D3/D6
Mass movement/dispersible soils	NA	
Soil erosion and sediment control	As required	
Gravelling	As required	
Road drainage	Spacing as per EPL Pavement outfall drainage and cross banks.	
Drop downs and dissipaters	Rock	
Soil stabilisation	Grass seed on exposed soils. Gravel on pavement as necessary	
Soil stabilisation interval	As per EPL	

Future of Road: Temporary

Date Started: _____

Date Finished: _____

ROAD NAME: 70/3 Trail

Length of Maintenance: 400m; start at Timboon Rd and finish at dump as marked in the field.

Features	Works	Plant/Materials
Pavement	Remove topsoils and Grade to form pavement (crown)	D3 & Grader
Roadside & Batters	Brush back encroaching vegetation	
Drainage	Additional drainage (MD's) required. Install to EPI specifications. Use rubber flaps or c-channels if MD's can not be installed.	

Future of Road: Temporary

Date Started: _____

Date Finished: _____

ROAD NAME: Rieds Trail

Length of Maintenance: 50m; start at Timboon Rd and finish at dump as marked in the field.

Features	Works	Plant/Materials
Pavement	Remove topsoils and Grade to form pavement (crown)	D3 & grader
Roadside & Batters	• brush back encroaching vegetation	
Drainage	Install to EPI specifications. Use rubber flaps or c-channels if MD's can not be installed.	

Future of Road: Temporary

Date Started: _____

Date Finished: _____

ROAD NAME: 70/2 Trail

Length of Maintenance: 180m; start at Little Hydes Creek Rd and finish at dump as marked in the field.

Features	Works	Plant/Materials
Pavement	Remove topsoils and Grade to form pavement (crown)	D3 & Grader
Roadside & Batters	Brush back encroaching vegetation	
Drainage	Additional drainage (MD's) required. Install to EPI specifications. Use rubber flaps or c-channels if MD's can not be installed.	

Future of Road: Temporary

Date Started: _____

Date Finished: _____

ROAD NAME: 70/5 Trail

Length of Maintenance: 50m; start at Little Hydes Creek Rd and finish at dump as marked in the field.

Features	Works	Plant/Materials
Pavement	Remove topsoils and Grade to form pavement (crown)	D3 & grader
Roadside & Batters	<ul style="list-style-type: none">brush back encroaching vegetation	
Drainage	Install to EPI specifications. Use rubber flaps or c-channels if MD's can not be installed.	

Future of Road: Temporary

Date Started: _____

Date Finished: _____

ROAD NAME: Ayres Rock Road (Southern Section)

Length of Maintenance: 250m; start at Junction with Little Hydes Creek Rd and finish at Jctn with Olgas Road.

Features	Works	Plant/Materials
Pavement	<ul style="list-style-type: none">light grade to re-open drains and repair pavement where washing has occurred. Reform crown to ensure road drainage is functional.	
Roadside & Batters	<ul style="list-style-type: none">do not disturb	
Drainage	<ul style="list-style-type: none">Maintain existing drainage (complies with EPL)	

Future of Road: Temporary

Date Started: _____

Date Finished: _____

ROAD NAME: Olgas Road

Length of Maintenance: 1760m; start at jctn with Ayres Rock Road and finish at dump as marked in the field.

Features	Works	Plant/Materials
Pavement	<ul style="list-style-type: none">light grade to re-open drains and repair pavement where washing has occurred. Reform crown to ensure road drainage is functional.Road within filter strip (crossings B, C & D) should be graded to crown, water must be shed evenly and not concentrated at an outlet – do not install table drains – do not form windrows on road edge.	
Roadside & Batters	<ul style="list-style-type: none">Brush Back Encroaching vegetation through road sections around crossings B, C & D.	
Drainage	<ul style="list-style-type: none">0-980m Maintain existing drainage (complies with EPL). Remove rollover drains and replace with rubber flaps or c-channels on grades greater than 3°.980-1760m Additional drainage (MD's) required. Install to EPI specifications.	

Future of Road: Temporary

Date Started: _____

Date Finished: _____

ROAD NAME: Casey's Road

Length of Maintenance: 1150m; start at Junction with Olgas Rd and finish at dump as marked.

Features	Works	Plant/Materials
Pavement	<ul style="list-style-type: none">light grade to re-open drains and repair pavement where washing has occurred. Reform crown to ensure road drainage is functional.	
Roadside & Batters	<ul style="list-style-type: none">Brush back encroaching vegetation	
Drainage	<ul style="list-style-type: none">0-650m maintain existing drainage (complies with EPL)Additional drainage (MD's) required from 650-1150m. install to EPI specifications.	

Future of Road: Temporary

Date Started: _____

Date Finished: _____

ROAD NAME: Seventy Two Road

Length of Maintenance: 850m; start at junction with Olgas Road and finish at dump as marked.

Features	Works	Plant/Materials
Pavement	<ul style="list-style-type: none">Grade sections where road has been formed to minimise loss of gravel and re-instate road crown or outfall where C-channels are to be used.On sections where road is covered in grass and not formed - Remove topsoils and Grade to form pavement (crown)	
Roadside & Batters	<ul style="list-style-type: none">Brush back encroaching vegetation	
Drainage	<ul style="list-style-type: none">Re-instate c-channels where they have been removed.Additional drainage (MD's) required - Install to EPI specifications.Use rubber flaps or c-channels if MD's can not be installed.	

Future of Road: Temporary

Date Started: _____

Date Finished: _____

Crossing Point 'A', 400m along Little Hydes Creek Rd (from jctn. with Ayres Rock Road).

Drainage feature type 3rd Order Mapped Drainage Line

Permanent/Intermittent Stream Intermittent

Crossing Type Bridge

Existing or new Existing

Features	Works	Plant/Materials
Reshaping of stream bed and banks	Nil	
Structure & approaches	Brush back encroaching vegetation and install guide rails.	
Road drainage within 30m <ul style="list-style-type: none">TypeOutlet controlsilt control in table and mitre drains	MD's	

Future of Crossing: Permanent (Public Road)

No upgrade or maintenance works required.

Date Started: _____

Date Finished: _____

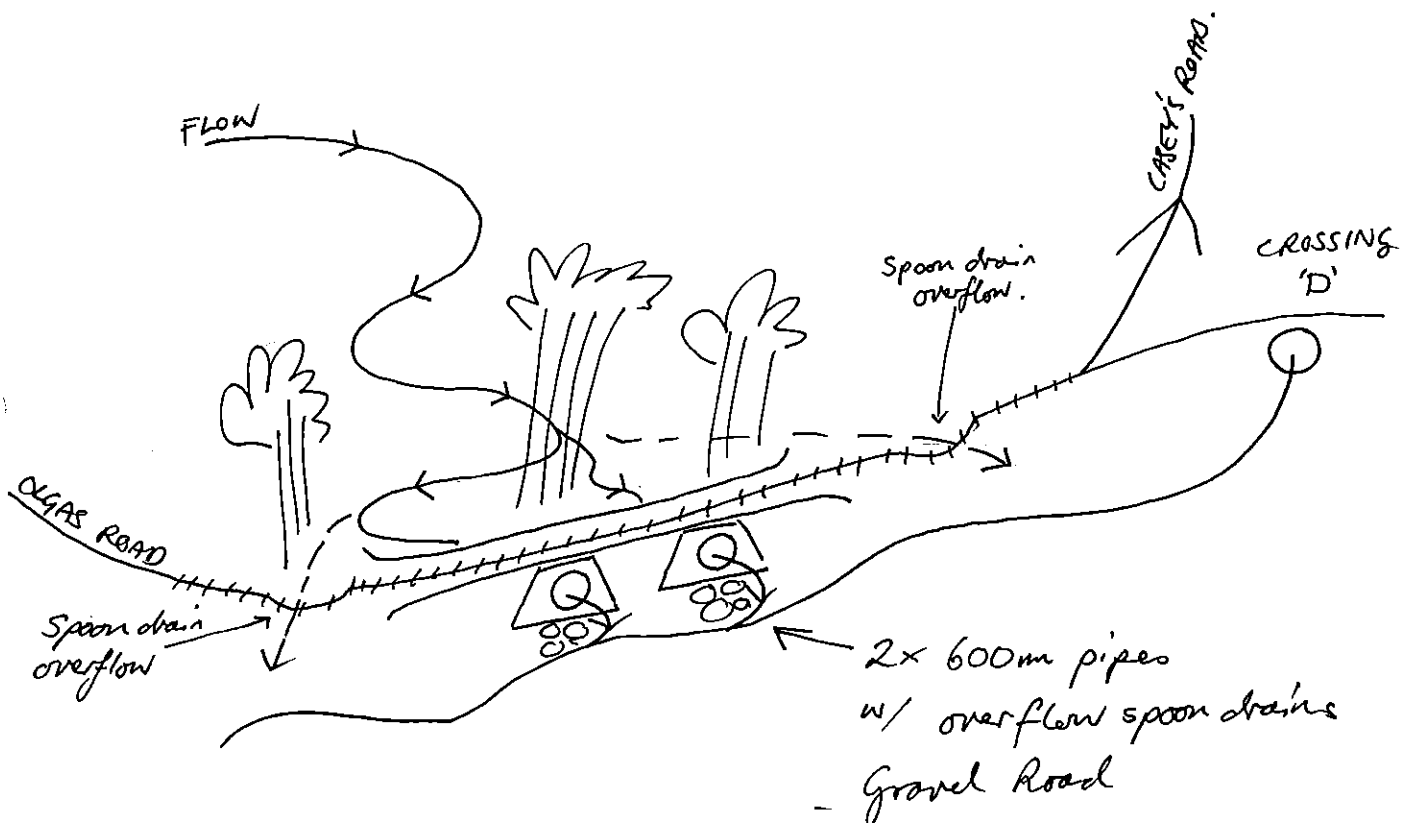
Soil stabilisation must be completed within 5 days

Record implementation date here: _____

Crossing Point 'B & C', 300m along Olgas Rd
Drainage feature type 2nd Order Mapped Drainage Line
Permanent/Intermittent Stream Intermittent
Crossing Type 2 * 600mm pipes
Existing or new Existing

Features	Works	Plant/Materials
Reshaping of stream bed and banks	Nil	
Structure & approaches	Nil	
Road drainage within 30m		
<ul style="list-style-type: none"> Type Outlet control silt control in table and mitre drains 	Existing Spoon drains Undisturbed veg Nil	

Future of Crossing: Temporary



Date Started: _____

Date Finished: _____

Soil stabilisation must be completed within 5 days

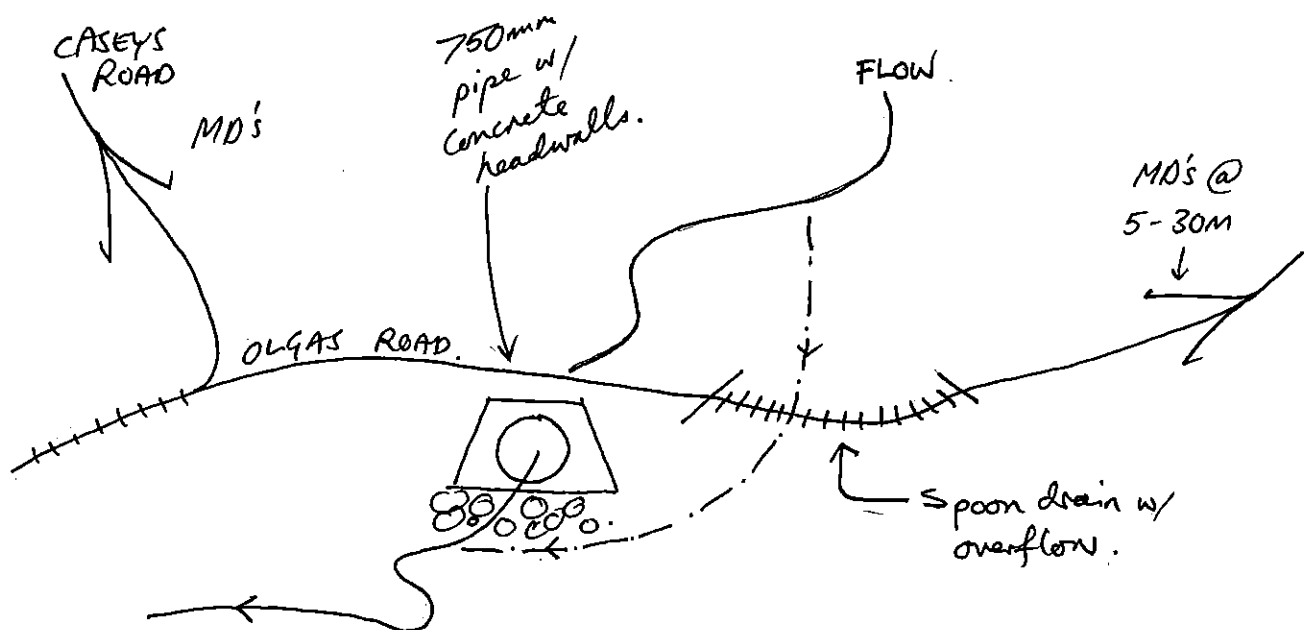
Record implementation date here: _____

- 2x 600mm pipes w/ overflow spoon drains
- Gravel Road
- Maintain Crown.
- No windrows.

Crossing Point 'D' 350m along Olgas Road
Drainage feature type 2nd Order Mapped Drainage Line
Permanent/Intermittent Stream Intermittent
Crossing Type Pipe 1 * 750mm with overflow
Existing or new Existing

Features	Works	Plant/Materials
Reshaping of stream bed and banks	Nil	
Structure & approaches	Nil	
Road drainage within 30m	MD's to west on Caseys Road MD's to east on Olgas Road Nil to south on Olgas Road (Armour with gravel) Undisturbed veg N/A	
<ul style="list-style-type: none"> Type Outlet control silt control in table and mitre drains 		

Future of Crossing: Temporary



Date Started: _____

Date Finished: _____

Soil stabilisation must be completed within 5 days

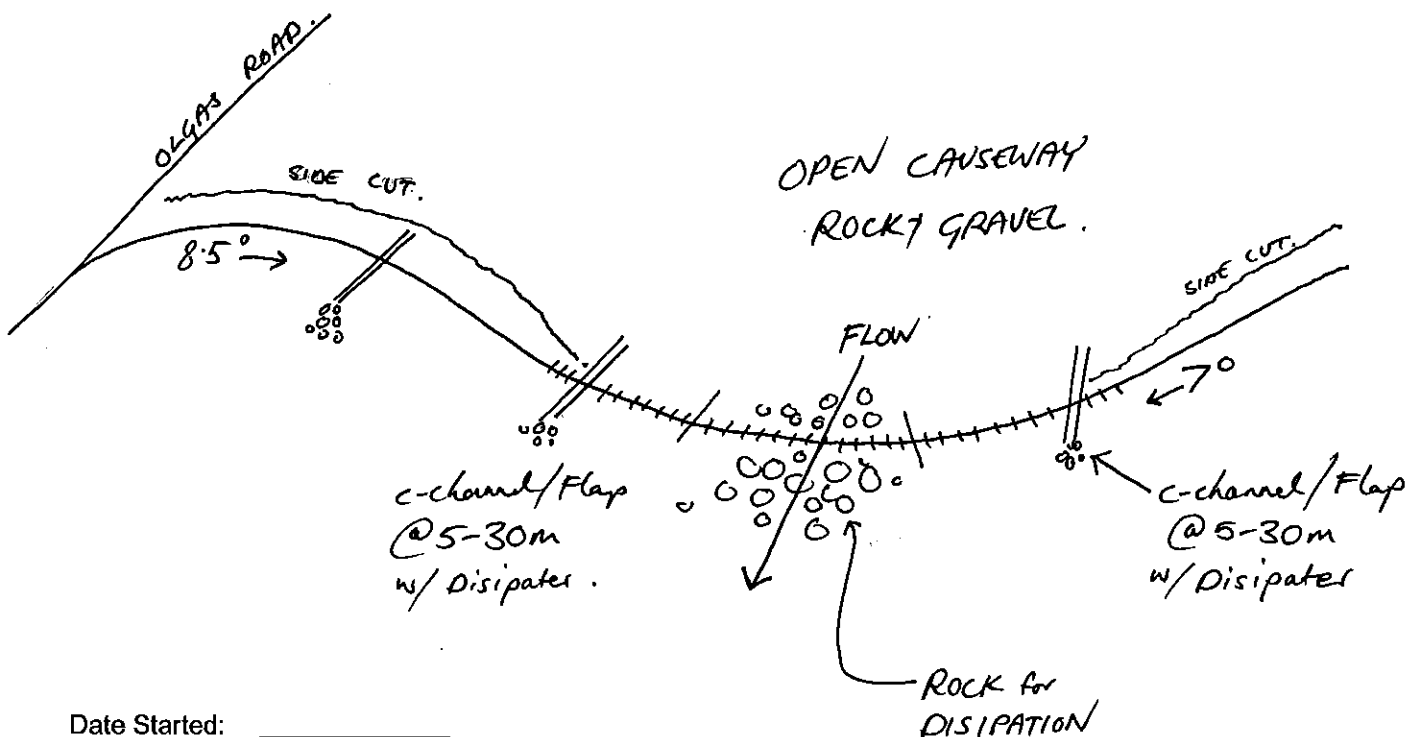
Record implementation date here: _____

X CROWN ROAD
 X NO WINDROWS.

Crossing Point 'E', 100m along Seventy Two Road
Drainage feature type 1st Order Mapped Drainage Line
Permanent/Intermittent Stream Intermittent
Crossing Type Open Causeway
Existing or new existing

Features	Works	Plant/Materials
Reshaping of stream bed and banks	Nil	
Structure & approaches	Nil	
Road drainage within 30m		
<ul style="list-style-type: none"> Type Outlet control silt control in table and mitre drains 	C-channels (replace cross-banks) Undisturbed veg outlet control	

Future of Crossing: Temporary



Date Started: _____

Date Finished: _____

Soil stabilisation must be completed within 5 days

Record implementation date here: _____

Crossing Point 'F', 160m along Seventy Two Road

Drainage feature type Unmapped Drainage Line

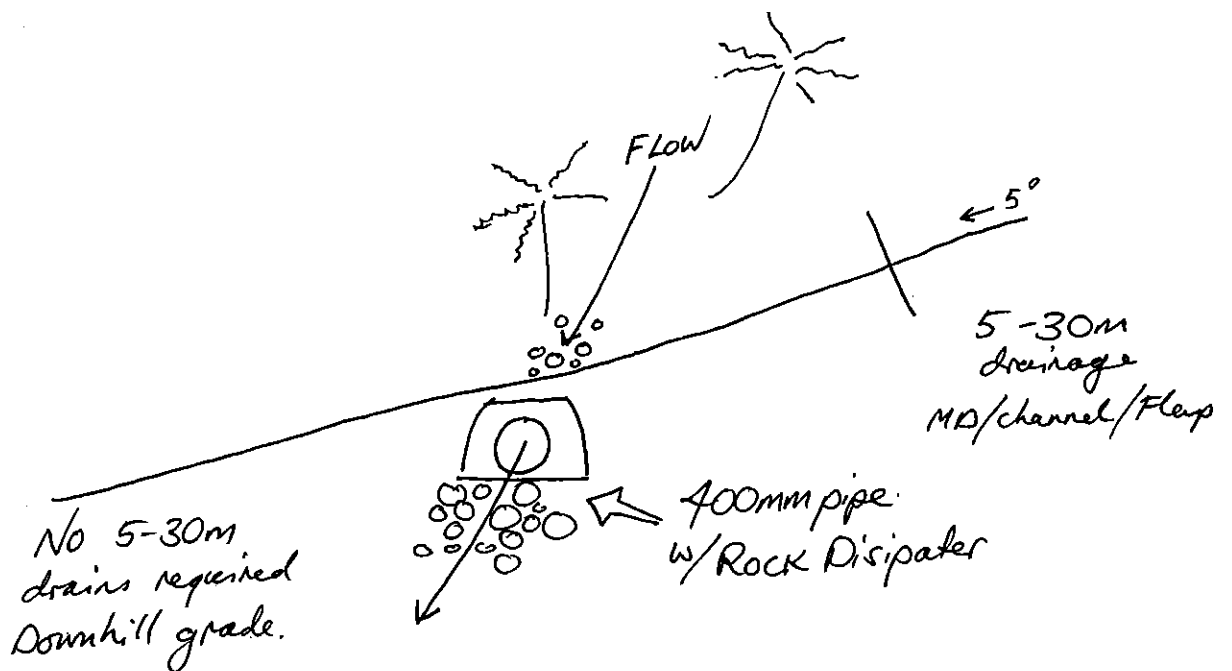
Permanent/Intermittent Stream Intermittent

Crossing Type Pipe (400mm)

Existing or new Existing

Features	Works	Plant/Materials
Reshaping of stream bed and banks	Nil	
Structure & approaches	Nil	
Road drainage within 30m	Upstream on right only	
<ul style="list-style-type: none"> Type Outlet control silt control in table and mitre drains 	MD's Undisturbed veg	

Future of Crossing: Temporary



Date Started: _____

Date Finished: _____

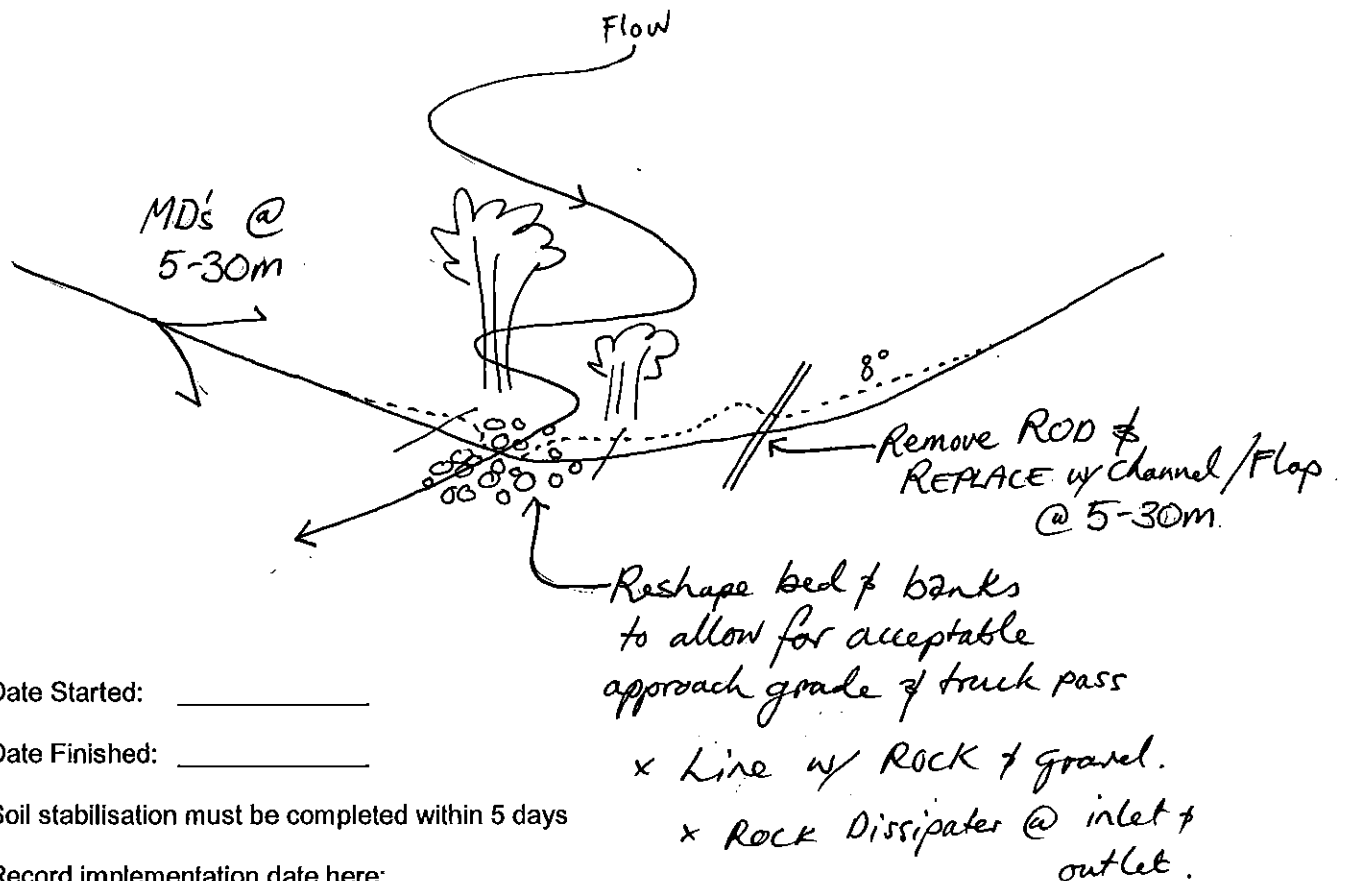
Soil stabilisation must be completed within 5 days

Record implementation date here: _____

Crossing Point 'G', Seventy 2 Road
Drainage feature type 2nd Order Mapped Drainage Line
Permanent/Intermittent Stream Intermittent
Crossing Type Causeway
Existing or new Existing

Features	Works	Plant/Materials
Reshaping of stream bed and banks	Re-shape to accommodate truck pass and fill with rock to slightly above bed level. Armour with rock and gravel	
Structure & approaches	Re-shape to accommodate truck pass and fill with rock to slightly above bed level. Armour with rock and gravel	
Road drainage within 30m <ul style="list-style-type: none"> Type Outlet control silt control in table and mitre drains 	MD's Undisturbed veg	

Future of Crossing: Temporary



Pre Operational briefing

I acknowledge that I have received a copy of the Roadworks Plan for Compartments 70, 71, 72 in Tuckers Nob State Forest, and that I have been briefed on the conditions of the Plan and understand the supervision and operational control requirements as explained to me by the Forest Planner or his/her delegate.

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

Staff/Contractor Acknowledgment

I acknowledge that I have received a copy of the Roadworks Plan for Compartments 70, 71, 72 in Tuckers Nob State Forest and that I understand the conditions of the Plan as explained to me by a State Forests officer.

Personnel attending Induction

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

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