Forest Management Plan 001

Private Native Forestry Code of Practice

Private Native Forestry Plan Number (PNF Plan No.) that this Forest Management Plan relates to:

28704

Name of the primary landholder:

Nicholas Loane Cameron (Nick)

Contact details of the primary landholder:

Ph: 0409 442 876 Email: nicklcameron@bigpond.com

Name of the landholdings this FMP applies to (if applicable):

N/a

Property address:

517 Main Creek Road, Main Creek NSW 2420

This template sets out the information you need to record for a Forest Management Plan (FMP) that complies with the *Private Native Forestry Code of Practice (PNF Code of Practice)* relevant to your forest.

Throughout this document you will see references to the FMP Guidelines. These Guidelines accompany this FMP Template and contain background information, extra instructions, tips and examples to help you complete the FMP and explains what you have to do with the FMP once it is complete.

If you require further assistance in preparing your Forest Management Plan, contact your local Private Native Forestry Officer (see https://www.lls.nsw.gov.au/help-and-advice/private-native-forestry/private-native-forestry-officer-contacts). Alternatively you can contact a member of the team at pnf.info@lls.nsw.gov.au or on 1300 795 299.

Once you have prepared your Forest Management Plan, please email it to pnf.info@lls.nsw.gov.au for approval.

Table of Contents

1. Forest Management Plan (FMP) map

1.1. FMP map checklist

Refer to the FMP Guidelines – page 10

The FMP map includes the boundaries of the landholding(s), areas where harvest operations and/or forestry operations will occur, and areas adjacent to the area subject to the Forest Management Plan. The FMP map must also record the following features along with any associated buffer or exclusion zones if they are present within the FMP area.

Features shown on the FMP base map

1. Check that the FMP base map (supplied by LLS) shows the location of the following features, where they are present in the FMP area:

- ☒ Forested areas
- ☐ Recorded locations of any threatened species listed in Appendix A
- ☐ Recorded locations of any threatened populations
- ☐ Slope angles (where available)
- ☐ Areas mapped as PNF Core Koala Habitat (PNF Code for Northern NSW only)
- ☒ Areas identified as high koala habitat suitability
- ☐ Areas of outstanding biodiversity value
- ☐ Wetlands and surrounding 20 metre area
- ☒ Rainforest
- ☒ Old growth forest
- ☒ Mapped drainage features and associated riparian exclusion zones
- ☐ Areas where annual rainfall erosivity is equal to or greater than 6000 (PNF Code for Northern NSW only)

2. Check that the FMP base map (supplied by LLS) shows the location of the following features, where they are present adjacent to the FMP area:

- ☒ Forested areas
- ☒ Recorded locations of any threatened species listed in Appendix A
- ☐ Recorded locations of any threatened populations and communities
- ☒ Areas identified as high koala habitat suitability
- ☐ Areas mapped as PNF Core Koala Habitat (PNF Code for Northern NSW only)
- ☐ Areas of outstanding biodiversity value
- ☐ Wetlands and surrounding 20 metre area
- ☒ Mapped drainage features and associated riparian exclusion zones

Mark the following additional features on the FMP map if they are present in the FMP area (**Attachment 1**).

Before you mark roads or crossings on the FMP map(s) (**), refer to section 5 of this FMP template. The names and numbers you use on the map should be the same as the names and numbers used in the tables.

Features	Northern NSW
Threatened ecological communities	☐
Site evidence of threatened species as listed in Appendix A of the PNF Code of Practice, if you find this during forestry operations	☒
Wetlands and surrounding 20 metre area	☐
Heathlands and surrounding 20 metre area	☐
Rocky outcrops and surrounding 20 metre area	☒
Cliffs, caves, tunnels and disused mine shafts (excluding open pits less than 3m deep) and surrounding 10 metre area	☒
Steep slopes (indicative only)	☒
Aboriginal objects or places and associated protection zones	☐
Listed heritage items and surrounding 10 metre area	☐
Areas of existing mass movement	☐
Dispersible and highly erodible soils	☐
Location of silvicultural treatments outlined in the Forest Management Plan	☒
Existing and proposed roads**	☒
Existing and proposed drainage feature crossings**	☒
Log landings	☒
Portable mill sites (on log landings)	☒

Note: The PNF Code identifies the parts of the Forest Management Plan that can be amended without LLS approval. As per Clause 4.1(7) of the PNF Code, the landholder can amend the following parts of the Forest Management Plan Map:

- slope angles
- the location of silvicultural treatments outlined in the Forest Management Plan
- the indicative location of existing and proposed roads and drainage feature crossings within the FMP area
- the indicative location of log landings and portable mill sites within the FMP area

Any amendments to other parts of the FMP Map may only occur with the approval of Local Land Services.

2. Forest management

The following written section outlines the Forest Management Plan. Sections below can be amended by the landholder, however Local Land Services must be notified as soon as possible after the amendment is made.

2.1. Forest management objectives

Refer to the FMP Guidelines – page 11

The landholder(s)' forest management objectives are as follows:

1. Enhance the health and productive capacity of the forest while maintaining ecological processes and protecting environmental and cultural heritage features and values.
2. Generate sufficient income from timber sales to cover the cost of forest ownership and management.

2.2. Pre-harvest forest condition

Refer to the FMP Guidelines – page 11-13

The table below has been completed to provide a current description of the pre-harvest condition of the forest.

Forest characteristic	Description
Overstory species type and composition	Most of the forest on the property is semi-moist mixed hardwood. Tall moist hardwood forest, dominated by Sydney blue gum, occupies the more sheltered mid slopes and shelves and the less accessible drainage features in the middle section of the property. The most common overstory species are Small-fruited Grey Gum (*Eucalyptus propinqua*) and White Mahogany *(Eucalyptus acmenoides).* The next most common species are Tallowwood *(Eucalyptus microcory*s), Spotted gum *(Corymbia maculata*), and Sydney Blue Gum *(Eucalyptus saligna).* Other overstory species include Ironbark (*Eucalyptus placita* and *Eucalyptus siderophloia*), Turpentine *(Syncarpia glomulifera),* and Brush Box *(Lophostemon confertus).*
Known disturbance and harvest history (e.g. previous harvests, fire, grazing etc)	The tall semi-moist mixed hardwood is predominantly even-aged regrowth estimated to be between 40 and 70 years of age. These forests have regrown on land previously cleared for grazing. The tall moist hardwood forest has been previously harvested on more than one occasion and is dominated by mature and early mature trees.
Pre-harvest basal area	The pre-harvest basal area averages around 40m2/ha with a range mostly between 30m2/ha and 50m2/ha.
Stand height (if undertaking Australian Group Selection)	40-45 metres
Pests present in the FMP area	Wild dogs periodically traverse the property.
Weeds present in the FMP area	*Lantana* is the dominant woody weed occurring along access trails and previously disturbed areas particularly in tall moist hardwood forest stands which have been previously harvested.

2.3. Details of harvesting, silvicultural treatments and forestry operations

An overview of the harvesting and other forestry operations planned to be carried out within the Forest Management Plan is provided below:

Silvicultural techniques to be used within the FMP area:

- ☒ single tree selection
- ☒ thinning
- ☒ Australian group selection

All three silvicultural techniques will be applied. Thinning from below will be the most used technique. It will occur in the even-aged regrowth which dominates the net harvest area on the upper and lower slopes. Thinning will retain and provide more room for co-dominant trees with good form and vigour to grow and develop and remove subdominant and suppressed stems that have poor form and poor vigour. Single tree selection (STS) will occur in stands that have groups of early mature trees as well as stands with a variety of tree ages and sizes. STS will remove individual trees that have reached commercial maturity. Stands containing these trees are scattered throughout the property. Australian group selection will be limited to the tall moist forests on the shelf and slopes in the middle of the property where there are groups of large commercially mature trees. On the FMP map AGS will be limited to the area coloured yellow in the middle of the property being the forest that does not have high koala habitat suitability.

2.4. Post-harvest stand basal area objective

The basal area proposed across the FMP area following the harvest activities:

Thinning and STS aims to remove between one quarter and one third generate of the basal area. This will commonly generate post-harvest basal areas of between 25m2 and 30m2 per hectare.

Note: single tree selection and thinning operations must not reduce the stand basal area below the limit included in the relevant *PNF Code of Practice*.

2.5. Regeneration, stocking and post-harvest management

Refer to the FMP Guidelines – page 14.

Clause 5.4 of the *PNF Code of Practice* (Clause 5.3 in *PNF Code of Practice for Cypress & Western Hardwoods*) sets out the minimum stand stocking that must be achieved following a regeneration event, and the monitoring of the forest regeneration, composition and condition at 2, 6 and 10 years following the regeneration event.

Details of any post-harvest activities that will be undertaken to promote regeneration:

The need for regeneration will be limited to stands where STS and AGS is applied and where there are existing canopy gaps from past disturbance that have failed to regenerate. Post harvest burning of harvested tree heads will be undertaken across all harvested areas to reduce fuel hazard and to stimulate regeneration in areas where canopy gaps have been created.

Mechanical ground disturbance will also occur where canopy gaps from STS, AGS and past events have been created.

Exotic weeds (esp. lantana) will be sprayed if they become established in areas where regeneration is needed.

Enrichment planting may be required in tall moist forest gaps if other measures fail. Regeneration monitoring will be conducted in accordance with the Code.

2.6. Pest and weed management

Pest and weed management activities proposed in the FMP area are identified below (where applicable).

Lantana and other woody weeds will be sprayed with Grazon (Aminopyralid @ 8 g/L, Picloram @ 100 g/L & Triclopyr @ 300 g/L) and Bowsaw (Metsulfuron) where they occur along accessible tracks and roads.

Giant Parramatta Grass (*Sporobolis fertilis*) will be removed where found or sprinkled with Flurproponate pellets.

Harvesting and roading machinery will be required to be washed before entering the area to prevent the spread of new weeds.

LLS will be engaged to assist with wild dog control using bates and traps.

2.7. Fire management

Fire management activities proposed in the FMP area are identified below (where applicable).

A pre harvest burn is planned to reduce understory competition. The burn will be staged and use existing fire trails and access tracks to keep it contained on the property. Bare earth rakehoe lines may be constructed and used as control lines where there are no suitable alternatives.

Burning will commence on the upper slopes that adjoin Killarney Fire Trail and work progressively downslope until the sheltered middle gullies and slopes are reached.

Burning of lower slopes will occur when burning of the upper slopes and shelf is complete.

Burning of sheltered mid slopes and shelves is planned to occur last when burn boundaries have been secured.

Burning will not be undertaken in rainforest, old growth forest, rocky outcrops (including a 20m buffer), and cliffs (including a 10m buffer).

Felled tree heads will be burnt when harvesting is complete to remove the fuel hazard and to promote regeneration in canopy gaps.

2.8. Research and monitoring

Details of the research and monitoring plots within the FMP area are identified below (where applicable).

Refer to Forest Stewardship Pilot Plan.

3. Flora and fauna management

3.2. Listed species

Refer to the FMP Guidelines – page 15-16.

Appendix A of the *PNF Code of Practice* outlines how threatened plants and animals are protected in PNF areas. Protections differ for each species and include management actions such as exclusion zones, buffer zones, and tree retention.

Are there any known records of listed species in the FMP area?	☒ Yes	☐ No
Is there any site evidence of listed species in the FMP area?	☒ Yes	☐ No

If there are listed species within your FMP map area, please provide relevant details in the table below. *(Additional rows can be added if necessary).*

Note: Where the species is identified as a Bionet record supplied by LLS, and where required a Bionet Atlas Data Agreement has been approved, refer to the Threatened Species Map supplied by LLS for further species information/ identification. Make sure the numbers you use to describe the record sites in the table are also used on the FMP map.

Names of species identified through site evidence can be included in the table.

Table: Threatened species occurring in the FMP area

Identifying number (matching the FMP map)	Is the species fauna or flora?	What protection is this species afforded (i.e. exclusion zone, buffer zone, tree retention etc) - please provide a brief outline	Any other management actions undertaken
Refer red labels on FMP map & Lilac shading for HKHS areas	Fauna - Koala	Prescription details in 4.10 (pages 41-47) of the Code of Practice for Northern NSW will be followed. A minimum of 15 primary koala feed trees and 5 secondary koala feed trees will be retained per hectare, where available. KOALA MANAGEMENT AREA: CENTRAL COAST	Thinning will be the dominant form of silviculture applied in areas mapped as having high habitat suitability. Where single tree selection it occurs, it will be low intensity. AGS silviculture will be excluded from areas mapped as having high habitat suitability.
Refer green labels on FMP map	Fauna - Sooty Owl	Prescriptions are detailed in 6.4 (pages 54-55) of the Code of Practice for Northern NSW. As the location of the record is not where forestry operations are planned these prescriptions will not apply.	Mapped rainforest, old growth and steep slopes occupy the gully where the owl was detected. All of these areas will be protected.
Refer purple label on FMP map	Fauna - Greater Glider	Prescription details in 4.8 (page 39) of the Code of Practice for Northern NSW will be followed.	The sites where Greater Glider were detected were all located within or near mapped old growth, steep slopes, rocky outcrops, or cliffs. All these areas will be protected.

** If you find site evidence of a species listed in Appendix A during your forestry operations you need to ensure the protections in Appendix A of the PNF Code of Practice are applied. This may also prompt an update of your FMP.*

4. Tree markings

Refer to the FMP Guidelines – page 16-17.

The table below outlines which tree markings will be used in the forestry operations covered by this FMP.
(Additional rows have been provided for you to specify any other markings you will be using.)

Feature being identified	Field marking symbol	Comment	Will this marking be used (Y/N)
Forestry operations boundary (exclusion zone not to be crossed)	Line of **Pink** tape or paint on trees and shrubs	Shrubs and trees to be marked. Includes riparian and threatened species boundaries	Yes
Trees to be retained (not to be damaged)	**Pink** tape or painted ring	Trees include habitat recruitment trees, feed trees, roost trees, koala browse trees, and future growers.	Yes
Habitat trees to be retained	**Pink 'H'**		Yes
Buffer zone boundary	**Blue** tape or painted ring	Applicable to some threatened species.	Yes, if triggered by a threatened species record that requires a buffer
Boundary of Australian Group Selection Canopy opening	**Blue '*'**		Yes
Log dump or portable mill site	**Yellow D**		Yes
Proposed new road or snig track centre line	Line of **Yellow** tape or paint on trees and shrubs	Tape identifies the track centre line including through riparian zones.	Yes
Trees to be removed (Merchantable)	**Yellow** tape or painted ring		Yes
Directional felling mark	**Yellow '→'**	The arrow points in the direction which the tree should be felled.	Yes
Tree to be treated - poisoned or felled to waste (Non-merchantable)	**Fluro green** tape or painted ring	Non-merchantable regrowth less than 30 cm dbhob.	Yes

Note: Clause 8 and Appendix A of the *PNF Code of Practice* specifies exclusion zones, buffer zones and tree retention requirements.

5. Forest access, construction and maintenance of roads and drainage feature crossings

Infrastructure used in the forest operations must comply with Clause 9 and other areas of the *PNF Code of Practice* that include prescriptions for infrastructure. Infrastructure including, roads, drainage crossing features, log landings and portable mill sites must be identified on the FMP map. Snig tracks do not need to be marked on your FMP map.

Further information must also be provided for road and draining crossing features below.

5.1. Forest access, construction and maintenance of roads

Refer to the FMP Guidelines – page 19-21.

Infrastructure used in the forestry operations must comply with the *PNF Code of Practice*. Clauses 9.1. and 9.1.1. of the *PNF Code of Practice* relate specifically to the construction and maintenance of roads and their drainage.

The tables below provide details of the existing and new roads required for the forestry operations, with all of these roads identified on the FMP map (Attachment 1).

Note:

- Each road referred to on the FMP map must be included and identified the same way (i.e. road name or number).
- More than one existing road can be listed in each column of the table provided that the management actions are the same for these roads.
- Check that the roads are shown on the FMP map using the same names or numbers used in this table.
- The tables can be duplicated where more space is needed.

5.1.1. Existing roads

- Use the table below to provide details about how existing roads will be maintained or upgraded so they comply with the Code. Include all existing roads that will be used in the forest operations.

	Middle Shelf Road **Blue Gum Loop** **Glider Ridge Road** **Top Shelf Road** **Yoga Way**	**Everett's Rise** **Old Mill Track**
Does the current (pre-harvest) road condition comply with the Code? (Y/N). If no, what maintenance or upgrade work will be required to bring the road up to the standard required?	☐ Yes ☒ No All roads will be used for log haulage and or general forest management. Additional drainage structures are required to comply with Code. Sections of Middle Shelf Road and Glider Ridge Road are not suitable for log haulage due to their grade but will be otherwise be used for forest management. Slight widening and minor realignment of sharp corners will occur to permit log haulage.	☐ Yes ☒ No These tracks will not be used by log trucks but will be used on occasion for general access and other forestry operations (e.g. burning and weed control). Parts of these roads may also be used as a snig track. New drainage structures will be required to ensure compliance with Code. New structures will be installed prior to commencement and repaired upon completion of operations if damaged.
How will soil erosion on roads be prevented?	☐ Maintaining vegetation cover ☐ Establishing grass cover ☒ Crossfall or shaping ☒ Drainage structures Gravel will be used to reduce erosion and provide traction on and above the switchback on Middle Shelf Road	☐ Maintaining vegetation cover ☒ Establishing grass cover (some sections only) ☒ Crossfall or shaping ☒ Drainage structures
Is the existing drainage up to standard with the Code? (Y/N)	☐ Yes ☒ No	☐ Yes ☒ No
How will drainage be provided (i.e. what types of drainage structures will be used?	Install additional mitre drains and crossfall drainage Construct rollover drains on steeper sections that won't be used by log trucks where practicable.	Install additional rollover drains, cross fall and mitre drains where required to meet Code.
Are fill and cut batters currently stable? (Y/N) If no, what work will be carried out to stabilise them?	☒ Yes ☐ No	☐ Yes ☒ No Seeding required on batters at and near top end of Everett's Rise.

Will the road be stabilised and allowed to revegetate after this forestry operation? (Y/N)	☐ Yes ☒ No These roads will provide ongoing general access for forest management after this operation is complete.	☐ Yes ☒ In part Top section of Everett's Rise will seeded and stablised with grass. Bottom section will remain open for general access.

	Border Loop Trail	**Lookout Trail**
Does the current (pre-harvest) road condition comply with the Code? (Y/N). If no, what maintenance or upgrade work will be required to bring the road up to the standard required?	☒ Yes ☐ No Log trucks will not use this trail. This trail is stable and well vegetated. It may be used as a snig track and as a control line for burning and weed control.	☒ Yes ☐ No Log trucks will not use this trail. This trail is relatively flat, stable and well vegetated. It may be used as a snig track and as a control line for burning and weed control.
How will soil erosion on roads be prevented?	☐ Maintaining vegetation cover ☐ Establishing grass cover ☒ Crossfall or shaping ☒ Drainage structures	☒ Maintaining vegetation cover ☒ Establishing grass cover ☐ Crossfall or shaping ☐ Drainage structures
Is the existing drainage up to standard with the Code? (Y/N)	☐ Yes ☒ No	☒ Yes ☐ No
How will drainage be provided (i.e. what types of drainage structures will be used?	Install additional mitre drains and crossfall drainage where disturbed. Construct rollover drain on steeper sections if required to minimise need for future maintenance.	Not required
Are fill and cut batters currently stable? (Y/N) If no, what work will be carried out to stabilise them?	☒ Yes ☐ No	☐ Yes ☒ Not applicable
Will the road be stabilised and allowed to revegetate after this forestry operation? (Y/N)	☒ Yes ☐ No Trail will be periodically slashed to provide ongoing general access.	☒ Yes ☐ No Trail will be periodically slashed to provide ongoing general access.

5.1.2. New roads

- Use the table below to provide details about how new roads will comply with the Code. Include all new roads that will be used in forestry operations.

	Murphy's Loop Road Crosscut Road	**Cedar View Road**
Will the road grade exceed 10 degrees? (Y/N) If yes, provide the reason for the grade being 10-15 degrees. *(not applicable to the PNF Code for River Red Gum Forests)*	☒ Yes ☐ No Short sections on these road may reach 12 degrees to minimise its length and reduce the need for cut and fill.	☐ Yes ☒ No This road is to be constructed on cleared land that is located outside the PNF approval area. It is included here to guide the roading contractor.
Is any section of the road located with a slope greater than 25 degrees? (Y/N) *(not applicable to the Code for River Red Gum Forests)*	☐ Yes ☒ No	☐ Yes ☒ No
How will fill or cut batters be stabilised?	Cut and fill batters are expected to stabilise naturally. Seeding of batters will occur if required to achieve stability.	Cut and fill batters are expected to stabilise naturally. Seeding of batters will occur if required to achieve stability.
How will soil erosion on roads be prevented?	☐ Maintaining vegetation cover ☐ Establishing grass cover ☒ Crossfall or shaping ☒ Drainage structures	☐ Maintaining vegetation cover ☐ Establishing grass cover ☒ Crossfall or shaping ☒ Drainage structures
How will drainage be provided (i.e. what types of drainage structures will be used?	Mitres and crossfall. Piped culverts will be installed on drainage line crossings (refer section 5.2) and on cut and fill sections if crossfall drainage is a safety concern.	Mitres and crossfall. Piped culverts will be installed on drainage line crossing
Will the road be stabilised and allowed to revegetate after this forestry operation? (Y/N)	☐ Yes ☒ No This road will provide general access for forest management after this operation is complete.	☐ Yes ☒ No This road will provide general access for forest management after this operation is complete.

	Yoga Link Road	**Link road to Log dump 2** **Link road to Log dump 7**
Will the road grade exceed 10 degrees? (Y/N) If yes, provide the reason for the grade being 10-15 degrees. *(not applicable to the PNF Code for River Red Gum Forests)*	☐ Yes ☒ No	☐ Yes ☒ No
Is any section of the road located with a slope greater than 25 degrees? (Y/N) *(not applicable to the Code for River Red Gum Forests)*	☐ Yes ☒ No	☐ Yes ☒ No
How will fill or cut batters be stabilised?	Cut and fill batters are expected to stabilise naturally. Seeding of batters will occur if required to achieve stability.	Cut and fill batters are expected to stabilise naturally. Seeding of batters will occur if required to achieve stability.
How will soil erosion on roads be prevented?	☐ Maintaining vegetation cover ☐ Establishing grass cover ☒ Crossfall or shaping ☒ Drainage structures	☐ Maintaining vegetation cover ☐ Establishing grass cover ☒ Crossfall or shaping ☐ Drainage structures
How will drainage be provided (i.e. what types of drainage structures will be used?	Mitres and crossfall.	Mitres and crossfall.
Will the road be stabilised and allowed to revegetate after this forestry operation? (Y/N)	☒ Yes ☐ No Stabilisation is expected to occur naturally. Where required seed will be spread to encourage grass cover	☒ Yes ☐ No Stabilisation is expected to occur naturally. Where required seed will be spread to encourage grass cover

5.2. Construction and maintenance of crossings

Refer to the FMP Guidelines – page 22.

Infrastructure used in the forestry operations must comply with the *PNF Code of Practice*. Clauses 9.1.2. and 9.2.2 of the *PNF Code of Practice* relate specifically to drainage feature crossings.

The tables below provide details of the existing and new drainage feature crossings required for the forestry operations, with all of these crossing identified on the FMP map (Attachment 1).

Note: Each crossing referred to on the FMP basic map must be included and identified the same way (i.e. crossing name or number). If more than three crossings exist in each category, the tables can be duplicated.

5.2.1. Existing crossings

All existing crossings are located on first order drainage lines which only run water after rain.

	Old Mill Track (crossing 7)	**Old Mill Track (crossing 8)**	**Old Mill Track (crossing 14)**
What type of structure is it (e.g. bridge, causeway, culvert etc)?	Causeway (drainage depression)	Causeway	Causeway
If an existing gully stuffer is to be used, has it been assessed as being stable? (Note: It cannot be used if it requires additional construction to stabilise)	Not applicable	Not applicable	Not applicable
Does the crossing comply with the requirements of the Code? (Y/N) If no, what maintenance work or upgrade work will be carried out to bring the crossing up to the Code standard?	☒ Yes ☐ No	☐ Yes ☒ No Usage of this section of the Old Mill track will decline following construction of Cross Cut Road. A new crossing with a concrete culvert will be constructed 5m upstream on Cross Cut Road. The existing crossing is stable but reuires additional drainage on southern side. It may be used as a snig track crossing which will require it to be rehabilitated and stabilised.	☐ Yes ☒ No Regular use of this crossing will cease when Murphy's Loop Road (crossing 13) is constructed. In future the crossing may be used as a temporary snig track crossing
What sediment and erosion control works will be carried out?	This will enable grass cover to establish on the track surface.	Seeding and new drainage. This work will need to be repeated if used as a snig track crossing	Seeding and new drainage. This work will need to be repeated if crossing is used as a snig track
How will road drainage on the crossing approaches be provided?	Existing drainage adequate. If used as a snig track a cross bank will need to be installed within 10m of crossing	A rollover drain will be constructed on the southern side. No drainage is needed on the northern side	Construction of cross banks or rollovers on either side of crossing directing water to undisturbed veg on lower side

	Everett's Rise (crossing 6)
What type of structure is it (e.g. bridge, causeway, culvert etc)?	Causeway
If an existing gully stuffer is to be used, has it been assessed as being stable? (Note: It cannot be used if it requires additional construction to stabilise)	Not applicable
Does the crossing comply with the requirements of the Code? (Y/N) If no, what maintenance work or upgrade work will be carried out to bring the crossing up to the Code standard?	☐ Yes ☒ No This crossing will be become a new crossing (refer description under Crosscut Road (crossing 5)
What sediment and erosion control works will be carried out?	(refer description under Crosscut Road (crossing 5)
How will road drainage on the crossing approaches be provided?	(refer description under Crosscut Road (crossing 5)

	Top Shelf Road (crossing 5)	**Top Shelf Road (crossing 4)**	**Top Shelf Road (crossing 1)**
What type of structure is it (e.g. bridge, causeway, culvert etc)?	Causeway (drainage depression)	Causeway	Causeway
If an existing gully stuffer is to be used, has it been assessed as being stable? (Note: It cannot be used if it requires additional construction to stabilise)	Not applicable	Not applicable	Not applicable
Does the crossing comply with the requirements of the Code? (Y/N) If no, what maintenance work or upgrade work will be carried out to bring the crossing up to the Code standard?	☐ Yes ☒ No Drainage structure required on southern approach to crossing	☐ Yes ☒ No Drainage structures required on approach to crossing	☐ Yes ☒ No Drainage structures required on approach to crossing
What sediment and erosion control works will be carried out?	Nil required	Nil required	Nil required
How will road drainage on the crossing approaches be provided?	Crossfall and mitre drains into undisturbed veg	Crossfall and mitre drains into undisturbed veg	Crossfall and mitre drains into undisturbed veg

	Border Loop (crossing 2) **Border Loop (crossing 3)**
What type of structure is it (e.g. bridge, causeway, culvert etc)?	Causeways
If an existing gully stuffer is to be used, has it been assessed as being stable? (Note: It cannot be used if it requires additional construction to stabilise)	Not applicable
Does the crossing comply with the requirements of the Code? (Y/N) If no, what maintenance work or upgrade work will be carried out to bring the crossing up to the Code standard?	☒ Yes ☐ No Crossings are vegetated and stable and will not be used by log trucks. Maintenance may be required if vegetation is removed by more regular usage.
What sediment and erosion control works will be carried out?	None currently proposed.
How will road drainage on the crossing approaches be provided?	Additional crossfall and mitre drains and rollover drains may be required if road surface ground cover reduces.

5.2.2. New crossings

All new crossings are located on first order drainage lines which have relatively small catchments and only run water after rain.

	Murphy's Loop Road (crossing 13)	**Murphy's Loop Road (crossing 10)** **(crossing 11)** **(crossing 12)**	**Murphy's Loop Road (crossing 9)**
What type of structure will the crossing be (e.g. bridge, causeway, culvert etc)?	This crossing is to be constructed on cleared land that is located outside the PNF approval area. It is included as a guide for the roading contractor. A dam wall will be constructed that has a pipe culvert overflow on the northern side	450mm concrete pipe culvert	450mm concrete pipe culvert
What construction work will be carried out to build the crossing?	Stockpiling of topsoil, Build dam using D6 dozer with road to traverse dam wall. Respread topsoil on dam wall. Pipe to be installed on dam overflow	Stockpiling of topsoil, minor reshaping of approaches, stockpiling of fill, laying of pipe, backfilling, and respreading of topsoil on batters. Equipment to include D6 dozer and excavator.	Removal of trees, stockpiling of topsoil, reshaping of approaches, stockpiling of fill, laying of pipe, backfilling, and respreading of topsoil on batters. Equipment to include D6 dozer and excavator.

	Murphy's Loop Road (crossing 13)	**Murphy's Loop Road (crossing 10) (crossing 11) (crossing 12)**	**Murphy's Loop Road (crossing 9)**
What sediment and erosion control works will be carried out?	Stockpiling of topsoil	Seeding of batters. Instal siltstop if required to prevent loose material washing into drainage line	Seeding of batters. Instal siltstop if required to prevent loose material washing into drainage line
How will road drainage on the crossing approaches be provided?	Crossfall and mitre drains on southern and northern sides within 10m of crossings	Crossfall and mitre drains on lower side within 10m of crossings	Crossfall and mitre drains on lower side within 10m of crossings

	Crosscut Road (crossing 8)	**Crosscut Road (crossing 6)**
What type of structure will the crossing be (e.g. bridge, causeway, culvert etc)?	450mm concrete pipe culvert	450mm concrete pipe culvert
What construction work will be carried out to build the crossing?	Removal of trees, stockpiling of topsoil, reshaping of approaches, stockpiling of fill, laying of pipe, backfilling, and respreading of topsoil on batters. Equipment to include D6 dozer and excavator.	Removal of trees, stockpiling of topsoil, major reshaping of approaches, stockpiling of fill, laying of pipe, backfilling, and respreading of topsoil on batters. Equipment to include D6 dozer and excavator.
What sediment and erosion control works will be carried out?	Seeding of batters. Instal siltstop if required to prevent loose material washing into drainage line	Seeding of batters. Instal siltstop if required to prevent loose material washing into drainage line
How will road drainage on the crossing approaches be provided?	Mitre drains to be installed within 10 m either side of crossing redirecting water onto undisturbed vegetation	Mitre drains to be installed within 10 m either side of crossing redirecting water onto undisturbed vegetation

6. FMP preparation

6.1. FMP preparation

Name/s of landholder or person nominated by the landholder who prepared this FMP:

Name: Nicholas Cameron Role: landowner

7. Declarations

7.1. FMP requirements

Note: If the forestry operation is being conducted by a person(s) other than the landholder, they must be provided with the FMP to ensure that they read, sign and date the FMP and any amendments.

7.2. Landowner's declaration

I/We, the landowner/s, declare that I/we have read and understand all the requirements set out in this Forest Management Plan (FMP).

Date: 21 Jan 2023

Signature: 

Note: where there are joint landowners, this declaration may be signed by a single landowner only where that landowner has the authority to sign on behalf of all landowners.

7.3. Contractor/ third party declaration

I, the person contracted to carry out the forestry operations set out in this plan, declare that I have read and understand the requirements of this Forest Management Plan (FMP).

I will have a copy of this FMP and the PNF Plan approval on site during the operations.

I will notify the landowner immediately if there are any operational changes that require this FOP to be amended.

Name:	Signature:	Date:
Forestry Operations Start Date:	End Date:	

7.3.1. Other workers declaration

I, as an individual who will be carrying out forestry operations on the site subject to the FMP, have read this FMP.

Signature:	Date:
Signature:	Date:
Signature:	Date:
Signature:	Date:
Signature:	Date:
Signature:	Date:
Signature:	Date:

Signature:	Date:
Signature:	Date:
Signature:	Date:

Note: Any person who will work on the site during any stage of the forestry operations must read, sign and date this Forest Management Plan (FMP) and any amendments. This includes all new crew members who join the team during the operations, including workers such as haulage contractors.

8. Notes and attachments

8.1. Amendments to the FMP

Amendments to this FMP are recorded in the table below and read, signed and dated by the landholder and anyone else carrying out forestry operations. Local Land Services must be notified of amendments to Forest Management Plans within 10 days after the amendment is made. **Send all amendments to pnf.info@lls.nsw.gov.au.**

Date of amendment	Details of amendment	Which section of the FMP does this apply to?	Landholder/ contractor date and signature

Note: As per Clause 4.1(8) all amendments must be consistent with the relevant provisions of the Code. Under the PNF Codes, the written Forest Management Plan can be amended by the landholder or nominated person except for the details of ownership of the land. Amendments to details of land ownership may only occur with the approval of Local Land Services.

8.2. Additional notes and comments (optional)

Any notes and comments you wish to include about the FMP area may be recorded below, for example:

- the recording of any requirements as noted in the *PNF Code of Practice* not covered above. i.e.:
  - If any trees are accidently felled into a riparian exclusion zone (as per Clause 8.4(6))
  - If the grade of a snig track exceeds 25 degrees (see PNF Code Clause 9.2.1(10)) (not applicable to the PNF Code for River Red Gum Forests)
- the recording of any allowable activities carried out in the FMP area
- any other notes or records you wish to include

Attachment 1 – FMP map(s)

Forest Management Map

No. of Maps: 1

Date created: 5/2/2024

Koala and Vegetation Map

No. of Maps: 1

Date created: 30/1/2024

Infrastructure Map

No. of Maps: 1

Date created: 31/1/2024

Landowner supplied spatial (KML) files provided for inclusion in approved mapping:

Forest Management Map

No. of files: 1

Date received: 29/1/2024 & 1/2/2024 (Silvicultural treatment areas)

Infrastructure Map

No. of files: 1

Date received: 29/1/2024

Attachment 2 – Record of visual assessments for koalas

Note: This requirement only applies where:

- there is a record of a koala within 500m of, or within, the FMP area
- where 10 or more scats are found beneath a primary or secondary koala feed tree (or 1 scat where required by the relevant PNF Code of Practice)
- in areas mapped as high koala habitat suitability

Table: Record of visual assessment of each tree prior to being felled for koalas

Date visual assessments carried out	Person undertaking assessment	Date visual assessments carried out	Person undertaking assessment

385100 385600 386100

6424600

6424100

KILLARNEY NR

Roadside burning

TSI - Commercial thinning with chemical treatment

1

Sooty owl call

Roadside burning

Area over 30 degrees estimate

Koala bellow

Area over 30 degrees estimate

Rocky outcrops and cliffs

Roadside burning

TSI - Marked tree Thinning area

Area over 30 degrees estimate

Roadside burning

1

Greater Glider sighting

AGS area

Roadside burning

Greater Glider sighting

TSI - Chemical thinning

Roadside burning

1

Greater Glider sighting

Roadside burning

Burning along snig track

Roadside Burning

Greater Glider sighting

Area over 30 degrees estimate

Area over 30 degrees estimate

Area over 30 degrees estimate

3

385100 385600 386100

Local Land Services

NSW GOVERNMENT

Part 5B of the Local Land Services Act 2013

Private Native Forestry

PNF Plan - 28704

FOREST MANAGEMENT PLAN - 001

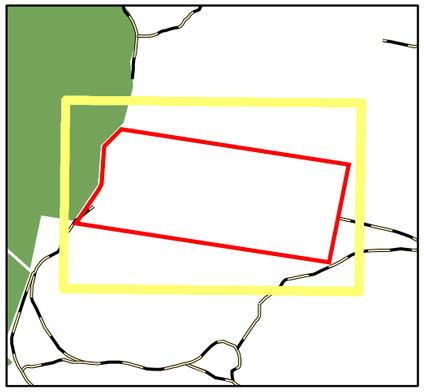
Forest Management Map
Map 1 of 1

Case No: 28704

PNF Area: 66.56 ha

Name: Nicholas Loane Cameron

Property: 517 MAIN CREEK ROAD
MAIN CREEK NSW 2420



PNF area and property boundary should be clearly identified before commencement

Landholders must notify Local Land Services witihin 30 days of the completion of the relevant forestry operations.

N

Metres

0 50 100 150 200 250

1:5,000

1 centimetre = 50 metres

Data Sources

Base cadastral, topographic and aerial imagery data supplied by
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GDA

Prepared by: Josh Barker

Date: 5/02/2024

Legend

- Property Boundary
- PNF Area
- Existing Track
- Existing Road
- Contour (intermediate)
- Contour (major)
- 1st order stream
- 3rd order stream
- 10m 1st Order Exclusion
- 30m 3rd Order and above Exclusion
- Mapped Rainforest
- Mapped Old Growth Forest
- National Parks

Threatened Species Ecological Prescriptions

- PNF Area under High Koala Habitat Suitability

Site & Landscape features provided by Landowner (29/1/24 - 1/2/24)

- Greater Glider sighting
- Koala bellow
- Sooty owl call
- Road location
- Road location
- Cliff location (Table B)
- Steep Land (Table B)
- Rocky Outcrop (Table B)
- Silvicultural treatments

385100 385600 386100

6424600 6424100

KILLARNEY NR

Killarney fire trail

Border loop track

Drainage line crossing 3

Drainage line crossing 2

Log dump 1

Drainage line crossing 4

Drainage line crossing 1

Log dump 2

Top shelf road

Drainage depression 5

Log dump 3

Log dump 4

Yoga way

Glider Ridge Road

Log dump 5

Log dump 6

Lookout trail

Cliff top

Middle shelf road

Log dump 7

Log dump 8

Blue Gum loop

Log dump 9

Log dump 10

Cross cut road

Cross Cut Road

Rat run

Drainage line crossing 6

Log dump 13

Cedar view road

Drainage line crossing 15

Drainage line crossing 7

Everett's rise

Drainage line crossing 8

Log dump 11

Old mill trail

Log dump 12

Drainage line crossing 9

Drainage line crossing 14

Drainage line crossing 12

Drainage line crossing 10

Drainage line crossing 11

Line 1

1 3

Local Land Services

Part 5B of the Local Land Services Act 2013

Private Native Forestry

PNF Plan - 28704

FOREST MANAGEMENT PLAN - 001

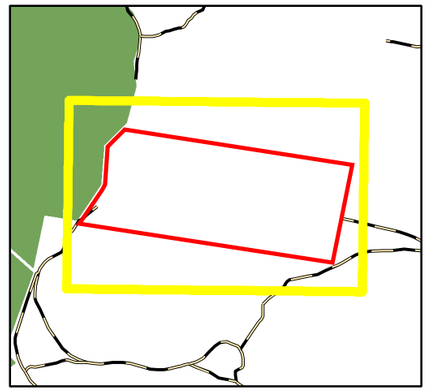
Infrastructure Map

Map 1 of 1

Case No: 28704

Name: Nicholas Loane Cameron

Property: 517 MAIN CREEK ROAD
MAIN CREEK NSW 2420



N

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GDA

Prepared by: Josh Barker

Date: 31/01/2024

Legend

- Property Boundary
- Existing Road
- Existing Track
- Contour (intermediate)
- Contour (major)
- 1st order stream
- 3rd order stream
- 10m 1st Order Exclusion
- 30m 3rd Order and above Exclusion
- Mapped Old Growth Forest
- Mapped Rainforest
- National Parks

Site features provided by Landowner (29/1/24)

- Drainage feature crossing
- Log Dump
- Rocky Outcrop (Table B)
- New road
- Existing road location
- Cliff location (Table B)

NSW GOVERNMENT Local Land Services

Part 5B of the Local Land Services Act 2013

Private Native Forestry

PNF Plan - 28704

FOREST MANAGEMENT PLAN - 001

PNF Koala and Vegetation Map

Case No: 28704

Name: Nicholas Loane Cameron

Property: 517 MAIN CREEK ROAD
MAIN CREEK NSW 2420

Legend

- Property Boundary
- Existing Road
- Existing Track
- High Koala Habitat Suitability
- PNF Core Koala Habitat Map

Koala Management Area: CENTRAL COAST

Vegetation Extent Current as of 21/04/2022

N

Metres

0 50 100 150 200 250

1:5,000
1 centimetre = 50 metres

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GDA

Prepared by: David Oleksyn

Date: 30/01/2024