Submission No 2

INQUIRY INTO LONG TERM SUSTAINABILITY AND FUTURE OF THE TIMBER AND FOREST PRODUCTS INDUSTRY

Name: Dr Timothy Cadman

Date Received: 13 April 2021

Bellingen
NSW
2454
13/04/2021

Dear Committee,

I am writing both in my capacity as research fellow with expertise in forest management and governance, and as a resident of Bellingen Shire.

I am deeply concerned about the forest industry in the mid north coast of NSW and across NSW.

I have been seeking, on behalf of the community, with a mandated task, to obtain a level of meaningful participation on behalf of the community with FCNSW within its consultation processes.

Community participation in forest management and planning is a core component of the sustainable management of forests, as it both helps build industry capacity around issues of sustainable management in a situated (local) context, and builds social license.

FCNSW itself states in its forestry consultation protocol that consultation in 'all' forestry activities helps build that license.

Yet plantation management is entirely exempt from community consultation provisions, and anything FCNSW does is voluntary. This gives it carte blanche to engage, not engage, enter individuals' properties at will, choose to do or not to do consultation, give concessions to the community, or withhold concessions. In Tarkeeth State Forest for example, fire trails and public access have been closed or controlled, native forest remnants on roadside reserves have been cleared, koala habitat has been removed, First Nations' cultural heritage impacted, and entire ecosystems classified as 'forest residues' and burnt for 'green energy'. At no stage has the community given any consent to this. DPI states explicitly that the community has no formal role in consultation.

Natural forest management is also subject to arbitrary types of what FCNSW calls 'meaningful engagement' – but this term has no real definition, and again FCNSW does what it likes. Engagement does not mean consultation, and is not even a stage in formal consultation. The most FCNSW ever does is 'inform' the public of its intent to commence extractive forest management. It must release plans, but these are often only made public a matter of hours before extractive forest management starts. This is not consultation. The community's options for improving plans, or opposing plans, do not exist.

This is both a cultural issue in FCNSW, and its contractors, and a choice. FCNSW's main venue for informing the public, Plan Portal has in fact become a tool for manipulation. Extractive forest management activities appear and disappear from the site randomly; status is upgraded or downgraded at will; extractive forest management maps and plans are

out of date, or not present at all, and at times, incorrect boundaries and compartment numbers are displayed.

I have complained about this lack of meaningful community participation to FCNSW for over twelve months. The only real concession has been to change the term 'scheduled' for extractive forest management, to 'proposed' for extractive forest management – but with no real consultation methods, even proposing extractive forest management does not give the community any options for real input.

Specifically, the community has been opposing extractive forest management for the Kalang River headwater forests and environs for several years. The region provides water to the towns of Nambucca, Bellingen, and Urunga, contains a significant amount of threatened subtropical rainforest, old growth forest, many endangered species, and quite possibly the largest remaining population of wild koalas on the east coast. Clearly, the area is worth more for non-extractive forest management (water and other ecosystem services). FCNSW refuses to recognise non-extractive forest management, and only promotes the area's values for either telegraph poles (2019) or 'high quality sawlogs' (2020/21). FCNSW could actually earn more money if the area was set aside for non-extractive values, and would do a lot less damage to a critical set of forest ecosystems.

Out of frustration, the community has now launched a reserve proposal (http://friendsofkalangheadwaters.com.au/index.php/headwaters-conservation-proposal/). This has been submitted to the Environment Minister, Matt Kean, as FCNSW will not recognise the area's values. In turn the Minister will not examine setting production forest aside for conservation and non-extractive management. The Forest Minister, the Deputy Premier, and the Minister for Water and Crown Lands (the region's representative) are actively hostile. This is what has contributed to FCNSW's culture.

An examination of recent proposals for logging also shows how FCNSW ignores or 'tweaks' existing data when it comes to its plans for extractive management. Attached is a visual analysis of the impacts extractive forest management would have on old growth, rainforests, and threatened species. Bushfire management has equally heavily impacted the region through unnecessary roading and burning, which has resulted in significant erosion. See attached materials.

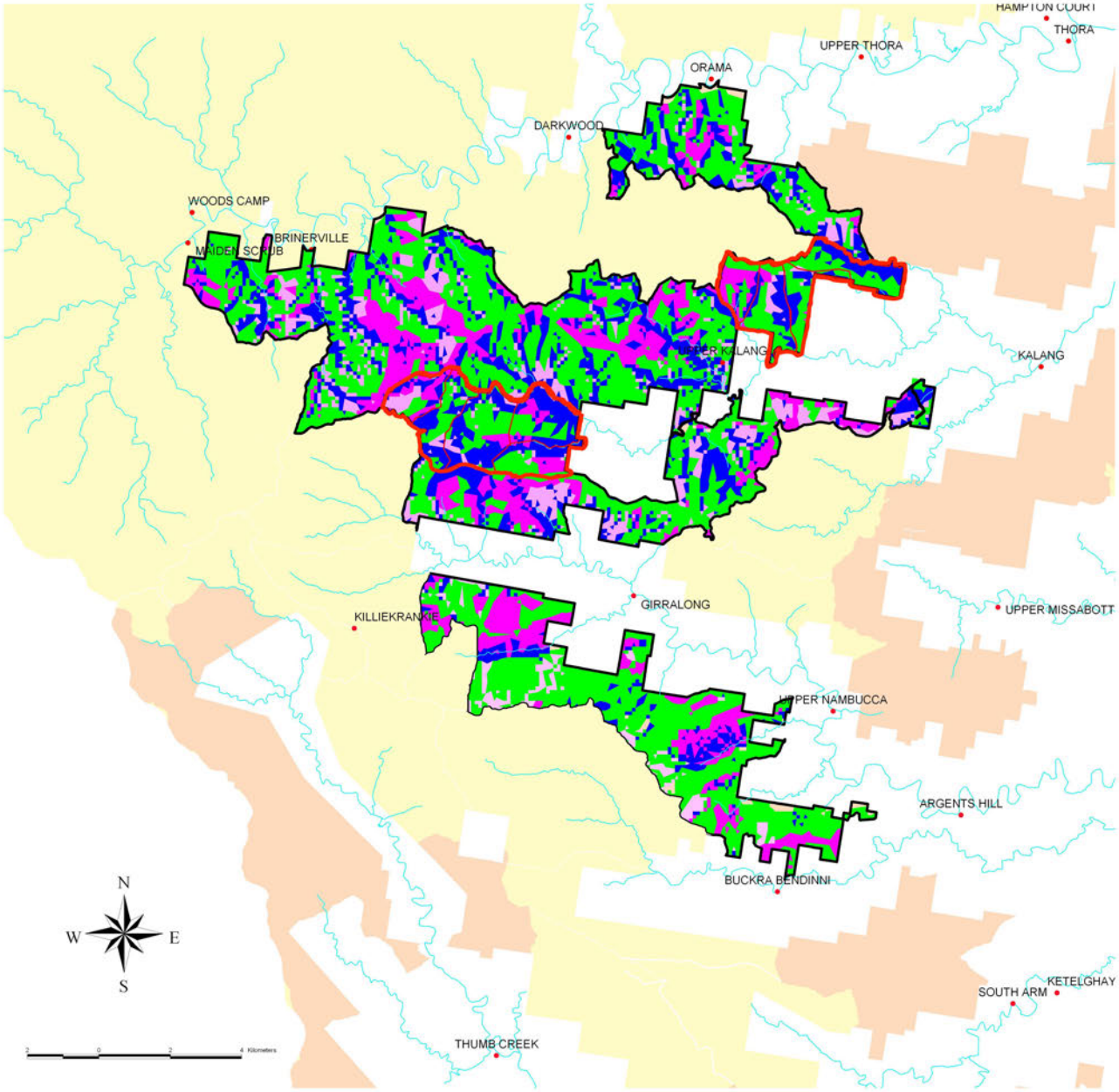
The NSW government, and FCNSW have now rolled over the Regional Forest Agreements for another twenty years. No account has been taken of the certainty of climate change. In addition, the mid north coast of NSW has been identified as a significant source area not of ecosystem services from forests (climate, water, biodiversity) but a supply region for non-commercial thinning and forest residues for low-quality wood products and bio-energy. This kind of use of forests is incompatible with climate change adaptation and mitigation, and will in fact exacerbate the climate, water and biodiversity crises confronting this region, the state, the continent, and the planet.

In this new environment, FCNSW should not be facilitating the extractive management of forests. It should be focussing on climate change, water and biodiversity management. These are the industries of the future. Pro-forestation for increasing, not reducing forest

coverage, and protecting resilient (high conservation value) forests will mitigate bushfire risk and climate change. Wood production should be moved to the agricultural sector. Forest and forest areas now being converted to plantations are no longer the appropriate locations for timber cultivation. In addition, FCNSW should be required to consult meaningfully with the community, and change its management, in the light of that community participation – and demonstrate how management has changed. Plan Portal should be drastically reformed to be a tool of transparency, not obfuscation. Finally, there is no reason why FCNSW should not manage for conservation. It already does through its Flora Reserves. These activities should increase.

Tim Cadman BA (Hons) MA (Cantab.), PhD (UTas), Grad. Cert. Theol. (CSU)
Research Fellow
Institute for Ethics, Governance and Law
Griffith University

Headwaters Reserve Proposal



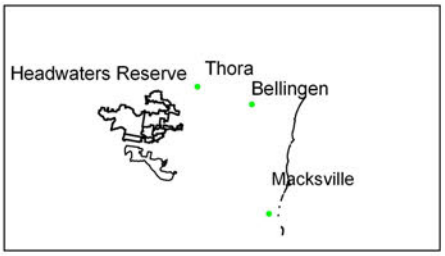
Legend

- Headwaters Reserve
- Logging compartments
- Secondary Forests
- Rainforest
- Old-growth
- Disturbed Old-growth

Perenial Streams

- NonPerennial
- Perennial

- NPWS Reserves
- Stateforests



LOCATION

Copy Plan Id to Clipboard

Plan Status
Planning Status History

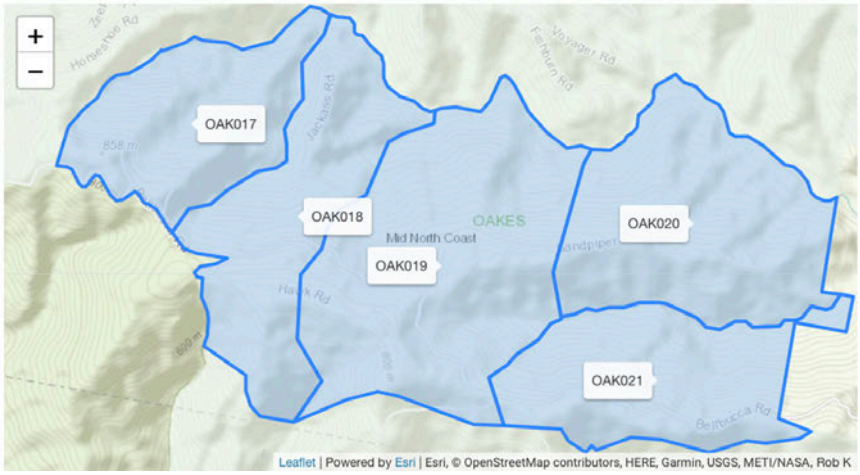
Division
HFD

Plan Type
Harvest Plan

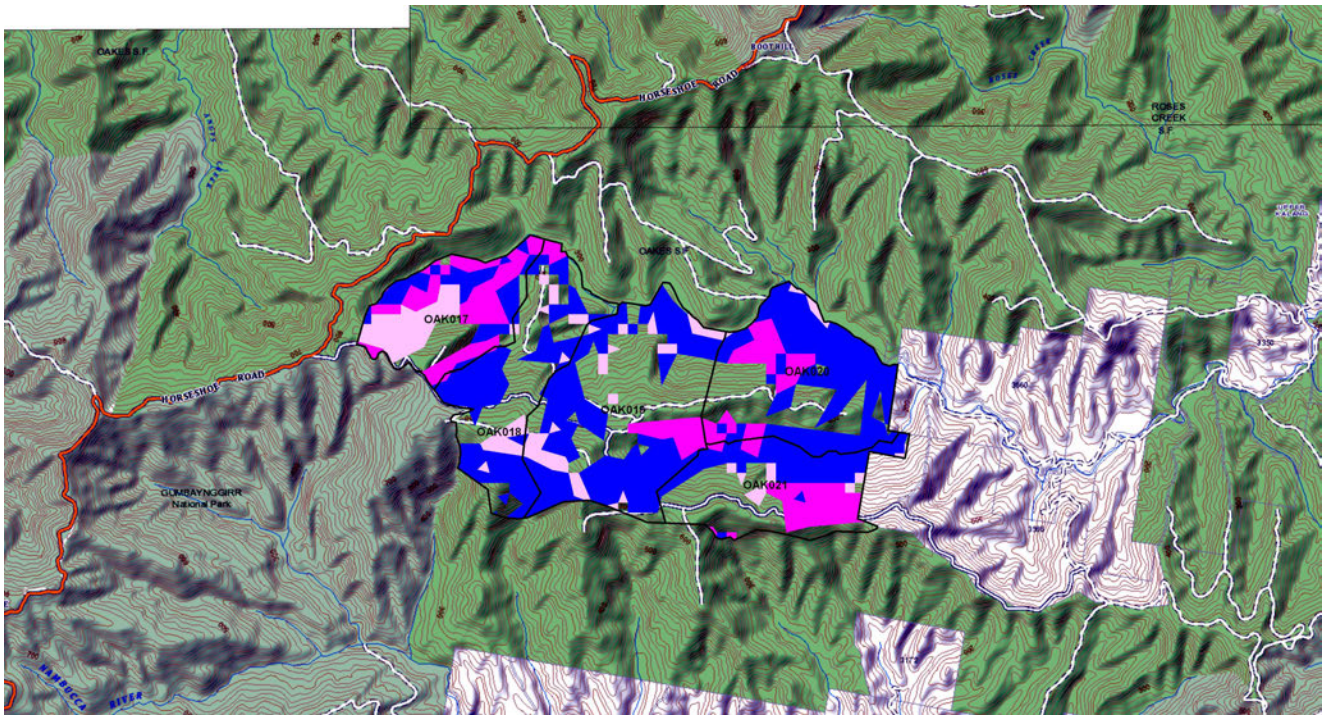
Region
North

Plan Number
200000557

Plan Name
HP_OAKES_17_18_19_20_21_2020



Compartments planned for Oakes SF (1072.49 ha; 65% high conservation values forests)



Compartments planned for Oakes SF with reserve forest types overlaid
(42% endangered ecological community sub-tropical rainforest; 23% old growth)

Copy Plan Id to Clipboard

Plan Status
Proposed Status History

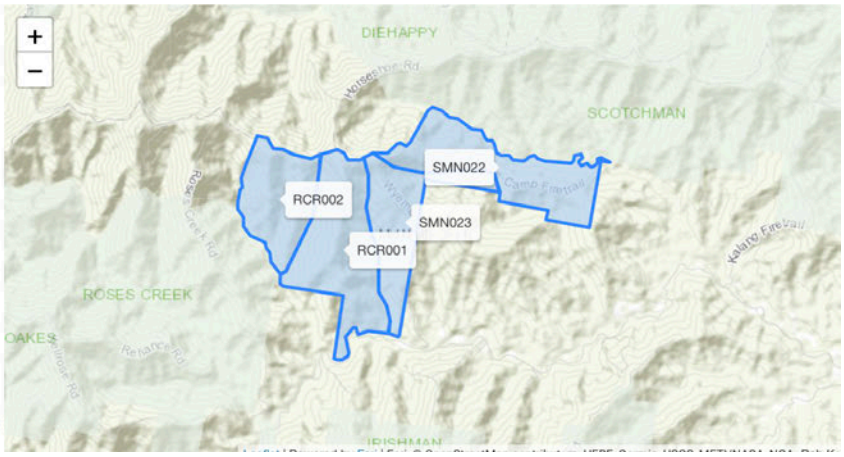
Division
HFD

Plan Type
Harvest Plan

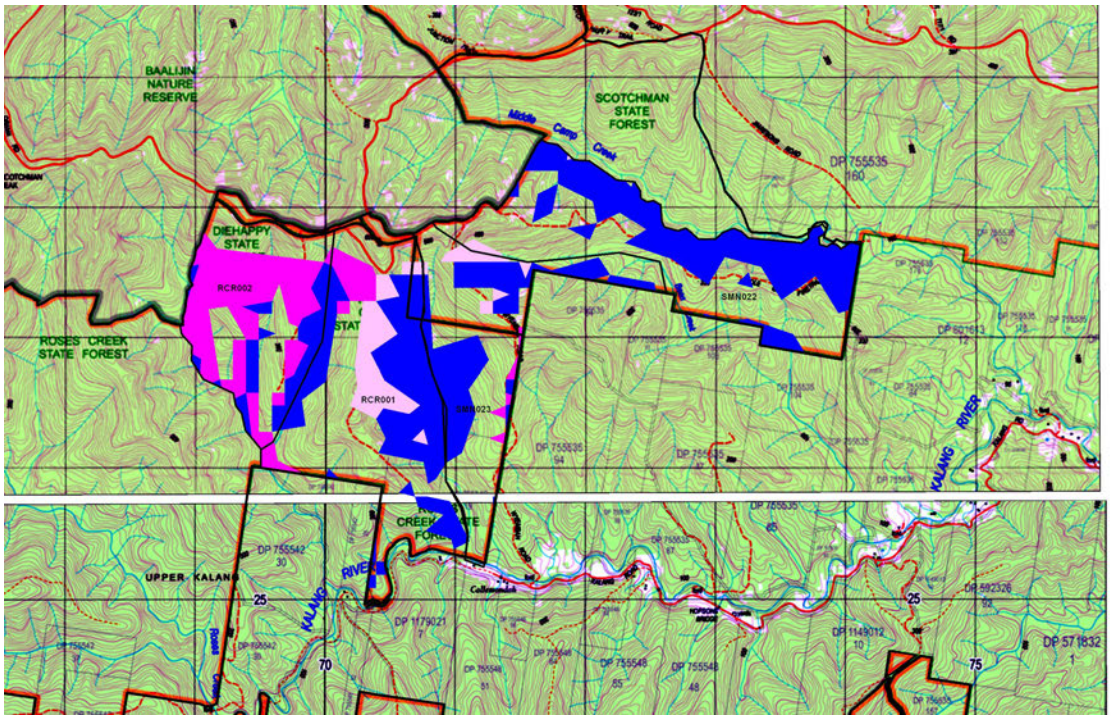
Region
North

Plan Number
200000558

Plan Name
HP_ROSES_CREEK_SCOTCHMAN_1_2_22_23_2021



Compartments proposed for Roses Creek and Scotchman SF (775.17 ha; 46% high conservation values forests)



Compartments planned for Roses Creek and Scotchman SF with reserve forest types overlaid (31% endangered ecological community sub-tropical rainforest; 15% old growth)

Forestry Corporation
1:15,000
Contour Interval 10m
GDA_1994_MGA_Zone_56

SCOTCHMAN & ROSES CREEK STATE FOREST
NO. 486 & 829
Cpt No: 125, 126, 127 & 128
Management Area:URUNGA
Mapsheet: DORRIGO - 9437 1:100,000

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

Plan Name: U_125_126_127_128

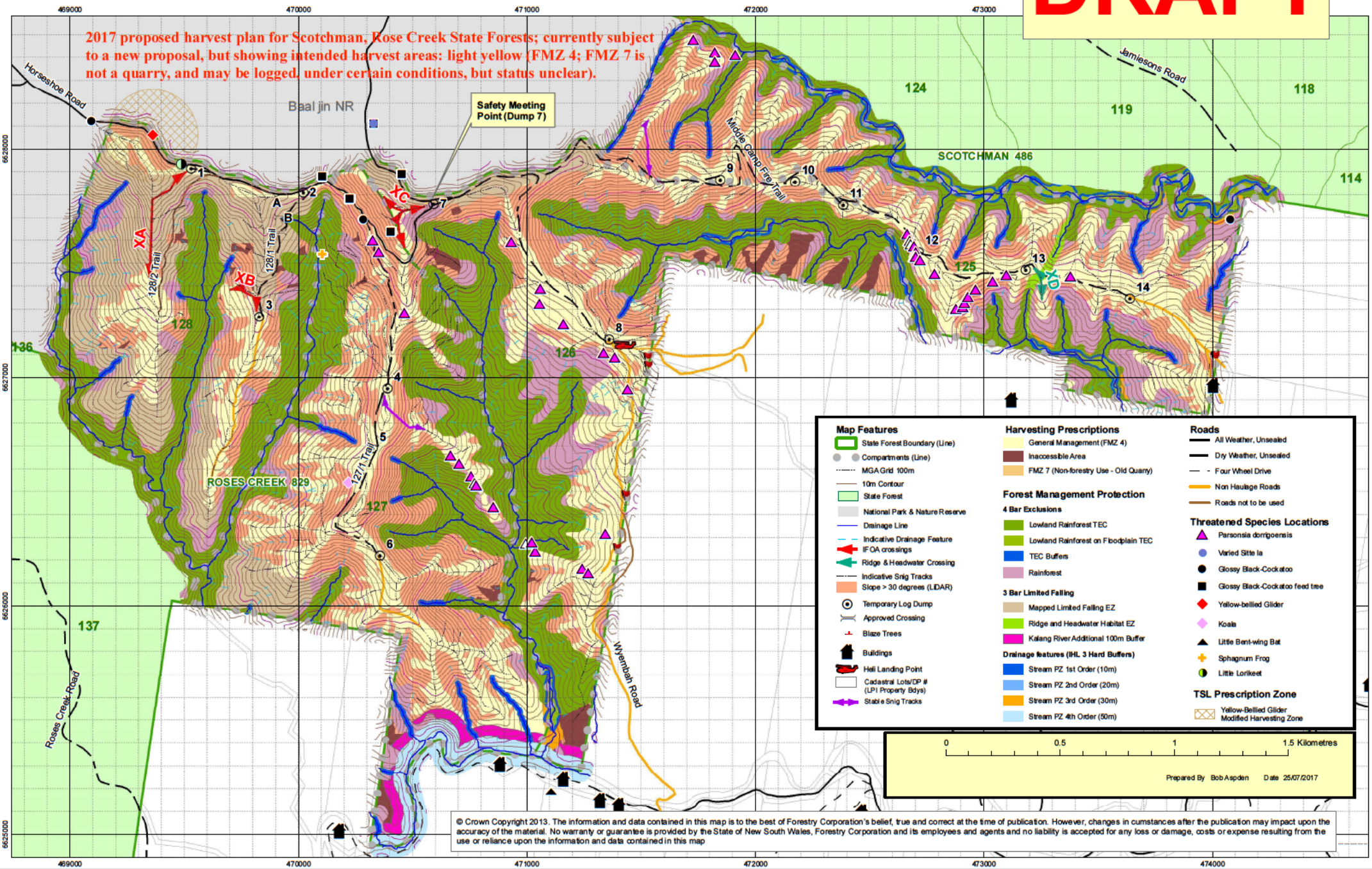
Plan No:58797

VERSION:

08/2017

DRAFT

2017 proposed harvest plan for Scotchman, Rose Creek State Forests; currently subject to a new proposal, but showing intended harvest areas: light yellow (FMZ 4; FMZ 7 is not a quarry, and may be logged, under certain conditions, but status unclear).



Map Features
- State Forest Boundary (Line)
- Compartments (Line)
- MGA Grid 100m
- 10m Contour
- State Forest
- National Park & Nature Reserve
- Drainage Line
- Indicative Drainage Feature
- IFOA crossings
- Ridge & Headwater Crossing
- Indicative Snig Tracks
- Slope > 30 degrees (LiDAR)
- Temporary Log Dump
- Approved Crossing
- Blaze Trees
- Buildings
- Heli Landing Point
- Cadastral Lots/DP # (LPI Property Bdys)
- Stable Snig Tracks

Harvesting Prescriptions
- General Management (FMZ 4)
- Inaccessible Area
- FMZ 7 (Non-forestry Use - Old Quarry)

Forest Management Protection

4 Bar Exclusions
- Lowland Rainforest TEC
- Lowland Rainforest on Floodplain TEC
- TEC Buffers
- Rainforest

3 Bar Limited Falling
- Mapped Limited Falling EZ
- Ridge and Headwater Habitat EZ
- Kalang River Additional 100m Buffer

Drainage features (IHL 3 Hard Buffers)
- Stream PZ 1st Order (10m)
- Stream PZ 2nd Order (20m)
- Stream PZ 3rd Order (30m)
- Stream PZ 4th Order (50m)

Roads
- All Weather, Unsealed
- Dry Weather, Unsealed
- Four Wheel Drive
- Non Haulage Roads
- Roads not to be used

Threatened Species Locations
- Parsonsia dorrigoensis
- Varied Sitte la
- Glossy Black-Cockatoo
- Glossy Black-Cockatoo feed tree
- Yellow-bellied Glider
- Koala
- Little Bent-wing Bat
- Sphagnum Frog
- Little Lorikeet

TSL Prescription Zone
- Yellow-Bellied Glider Modified Harvesting Zone

0 0.5 1 1.5 Kilometres

Prepared By Bob Aspden Date 25/07/2017

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F20/671

Mr Michael Coulter
General Manager
Nambucca Valley Council
Via email: council@nambucca.nsw.gov.au

Dear Mr Coulter

Thank you for your letter of 2 December 2020 seeking information on a proposal you have received from the Friends of Kalang Headwaters and affiliated groups seeking the Council's support for a Headwaters Conservation Proposal. I am responding to you in my capacity as Senior Manager, Planning, with Forestry Corporation of NSW.

Forestry Corporation has not previously been provided or approached for information about the proposal you have referred to, so all the information we have in relation to this proposal is the published information on the website you have provided.

In this letter, I have sought to provide background information on ongoing sustainable forest management as well as some detail in relation to the specific questions you have asked. I would welcome the opportunity to address council in person to discuss our work across the region in more detail.

Background – sustainable forest management and existing protection measures
The areas of public native forest that are set aside for conservation and those that are managed for multiple uses including renewable timber production have been identified through the Regional Forest Agreement (RFA) process, which is managed by the State and Commonwealth Governments and reviewed every five years. Under the RFAs, approximately 83 per cent of public forests in NSW are permanently set aside for conservation, largely in the formal national park estate. An additional 43 per cent of the State forest estate is protected via permanent retention of areas such as rainforest and old growth forests, wetlands and riparian zones, threatened ecological communities, ridge and headwater habitat and rocky outcrops.

Operations within the areas available for timber production take place in line with the Coastal Integrated Forestry Operations Approval (CIFOA), which ensures a further 10-13 per cent of the available harvest area in Coastal State forests is also identified and permanently retained in habitat clumps containing trees with valuable habitat features.

In the areas where timber harvesting takes place, the identification and protection of habitat for threatened and endangered species is a priority. Surveys and broad area habitat searches are carried out prior to every forestry operation to identify records and ensure suitable habitat is set aside. Within the harvest area, protection is afforded mature trees via identification and retention of hollow-bearing trees, giant-trees and various nest, den, roost trees and nectar or feed trees. There are also strict conditions relating to return times and adjacency that spread operations across time and space to maintain a mosaic of forest ages across the landscape.

Protecting the health of waterways such as the Kalang River is also a priority and there are a number of environmental protections in place to ensure this is properly managed in all forestry operations, with the

…/3

measures put in place to protect waterways developed by expert scientific panels following extensive research. Recent research published by the University of New England has demonstrated that the best practice measures used by Forestry Corporation to protect water quality during our operations are effective. This reinforces more than four decades of monitoring data that has consistently demonstrated the water from State forests is among the best in the landscape.

As a result of all these protection measures, less than one per cent of the public forest is harvested for renewable timber products in any one year, forest values and habitat are maintained throughout each harvest area as well as across the landscape. Importantly, every harvest area is regrown to ensure the same forests continue to provide habitat, protect waterways and produce renewable timber for future generations.

As the appointed land manager for the NSW State Forest estate, Forestry Corporation works collaboratively with other areas of Government to achieve positive land management outcomes. As a fire authority Forestry Corporation collaborates with the RFS and NPWS on fire management for the state and works closely with NPWS and LLS on managing pests and weeds. Forestry Corporation employs ecologists and other professional staff to ensure that land management practices focus on conservation for the areas of State forests designated for that purpose and quality multiple-use forest management for areas subject to timber harvesting.

Forestry Corporation's operations are independently regulated, regularly audited and certified to the Australian Standard for Sustainable Forest Management, Responsible Wood. The strict environmental framework regulating forestry operations in NSW is also underpinned by monitoring and adaptive management approach, and to this end a detailed long-term monitoring program is currently being developed by the Natural Resources Committee (NRC). The NRC is working to develop monitoring programs and, in line with adaptive management principles, data from these monitoring programs will be used to continually assess the effectiveness of conditions and inform future management.

Questions 1 and 2 – forest classifications and spatial mapping and location of forestry activities
Forestry Corporation has not been provided with spatial data for this proposal and is therefore unable to comment on the accuracy of this data. However, it is worth noting that rainforest, old growth and threatened ecological communities are permanently protected as mapped across the landscape and are never harvested for timber. The mapped extent of these forest types is enshrined in the CIFOA and Forestry Corporation protects these areas based on the NSW Government's official mapping. A proposal to establish a reserve would therefore not offer any increased protection to these forest types, given they are already afforded the highest level of conservation protection.

Each area of State forest has been classified under the Forest Management Zoning (FMZ) system, which establishes eight separate management zones based on the conservation value of each forest area. The management intent and permitted activities in each FMZ are detailed on Forestry Corporation's website. Each State forest will generally contain a range of FMZs and Forestry Corporation maintains this information spatially and ensures at all times that its management activities and operations are consistent with those identified as suitable for the relevant FMZ.

Based on the forests identified in the map provided, the proposed reserve would encompass approximately 13,200 hectares of State forest. Of this, around 27 per cent is classified as suitable and available for timber harvesting under the FMZ system, with the remaining 73 per cent permanently protected for conservation. Those areas that are available for timber harvesting are all regrowth forest, that has been harvested in the past for timber, including operations following large-scale wildfires in 1968, and have regrown. Due to the sloped terrain in the region, it is estimated that much of the areas mapped as available for timber production is not currently considered for timber production due to being impractical to access.

Question 3 – potential addition of land within the identified area to the conservation network
NSW has a world-class reserve network that encompasses more than a quarter of the 22 million hectares of native forest found state-wide and includes the forests with the highest conservation value. State forests make up 9.1 per cent of NSW's native forest and the area subject to timber harvesting comprises less than a quarter of one per cent of the native forest in NSW.

On average, half the State forest estate is set aside for conservation in areas classified as FMZ 1 and 2 and managed solely for conservation under the FMZ system. As noted above, in this instance close to three quarters of the area proposed for inclusion in a reserve is already managed for conservation and afforded the highest level of protection in the State forest reserve network.

Changing the land manager in these areas would not result in a change in management intent or practice, as these areas are already afforded the highest level of conservation management.

Question 4 – importance of the forestry resource within the identified area
The State forests near the Kalang River are a prime example of sustainable forest management. Forestry Corporation has been continuously harvesting renewable timber from small, selected parts of the State forests in this catchment for decades and continually regrowing them for more than 100 years.

Under sustainable yield models maintained by Forestry Corporation, these forests are modelled to produce an estimated annual volume of 4,375 cubic metres of high quality logs. The majority of the timber is Blackbutt, a highly sought-after structural timber.

It is also relevant to note that timber is a renewable product used in place of alternatives derived from extractive industries. Timber uses significantly less energy to transform into building products than alternatives such as concrete or steel and it is the only major building product that stores carbon for the life of the product. The Intergovernmental Panel on Climate Change recognises that sustainably managed production forests that maintain carbon in growing trees while producing an annual yield of timber deliver a large, sustained climate change mitigation benefit.

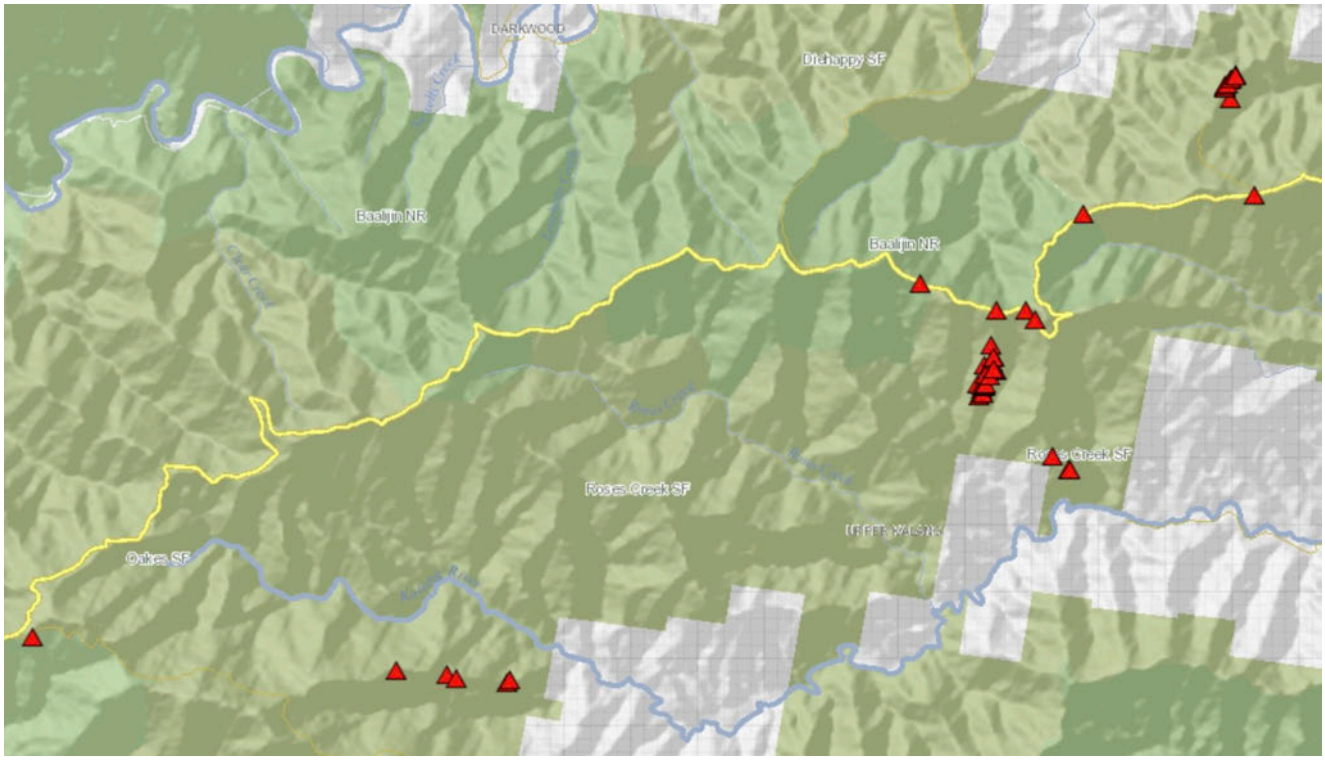
State forests are managed sustainably for a range of values including environmental conservation, tourism and recreation and renewable timber production, both complementing and contributing to NSW's world-class conservation network.

I welcome the opportunity to provide you and any interested councillors or staff with more detail about Forestry Corporation and our operations in person. Please don't hesitate to contact me on 0429 334 709 if you would like to arrange a meeting.

Yours sincerely

Dean Kearney
Senior Manager, Planning
Hardwood Forests Division

15/1/21



Screenshot of Koala sightings registered on Bionet

Text

Complete data set of old growth (undisturbed, disturbed) and threatened rainforest in the planned and proposed harvest areas

Planned

Oakes compartments OAKS017-021

Forest type	Hectares	Per Cent[1]
Secondary	371.92	35
Rainforest	454.32	42
Old-growth	152.46	14
Disturbed OG	93.79	9
Total	**1072.49**	**100**

HCV[2]= 65%

Oakes OAKS017

Forest type	Hectares	Per Cent
Secondary	25.67	17
Rainforest	36.72	24
Old-growth	56.58	36
Disturbed OG	36.37	23
Total	**155.34**	**100**

HCV= 83%

Oakes OAKS018

Forest type	Hectares	Per Cent
Secondary	84.65	43
Rainforest	87.89	45
Old-growth	4.75	2
Disturbed OG	17.56	9
Total	**194.85**	**100**

HCV= 57%

Oakes OAKS019

Forest type	Hectares	Per Cent
Secondary	122.33	39
Rainforest	146.22	47
Old-growth	17.64	6
Disturbed OG	27.72	9
Total	**313.92**	**100**

HCV= 61%

Oakes OAKS020

Forest type	Hectares	Per Cent
Secondary	68.42	29
Rainforest	126.18	54
Old-growth	34.31	15
Disturbed OG	3.35	1
Total	**232.26**	**100**

HCV= 71%

Oakes OAKS021

Forest type	Hectares	Per Cent
Secondary	70.85	40
Rainforest	57.31	33
Old-growth	39.18	22
Disturbed OG	8.78	5
Total	**176.12**	**100**

[1]Rounded [2]high conservation value **HCV= 60%**

Proposed (awaiting approval)

Roses Creek & Scotchman compartments RCR001-002, SMN022-023

Forest type	Hectares	Per Cent
Secondary	416.52	54
Rainforest	238.70	31
Old-growth	85.59	11
Disturbed OG	34.37	4
Total	**775.17**	**100**

HCV= 46%

Roses Creek RCR001

Forest type	Hectares	Per Cent
Secondary	107.01	48
Rainforest	74.6	34
Old-growth	13.42	6
Disturbed OG	25.95	12
Total	**220.98**	**100**

HCV= 52%

Roses Creek RCR002

Forest type	Hectares	Per Cent
Secondary	48.66	34
Rainforest	23.59	17
Old-growth	69.25	49
Disturbed OG	0.20	0
Total	**141.71**	**100**

HCV= 66%

Scotchman SMN022

Forest type	Hectares	Per Cent
Secondary	111.50	55
Rainforest	89.59	44
Old-growth	0.00	0
Disturbed OG	1.88	1
Total	**202.97**	**100**

HCV= 45%

Scotchman SMN023

Forest type	Hectares	Per Cent
Secondary	149.34	71
Rainforest	50.93	24
Old-growth	2.91	1
Disturbed OG	6.34	3
Total	**209.52**	**100**

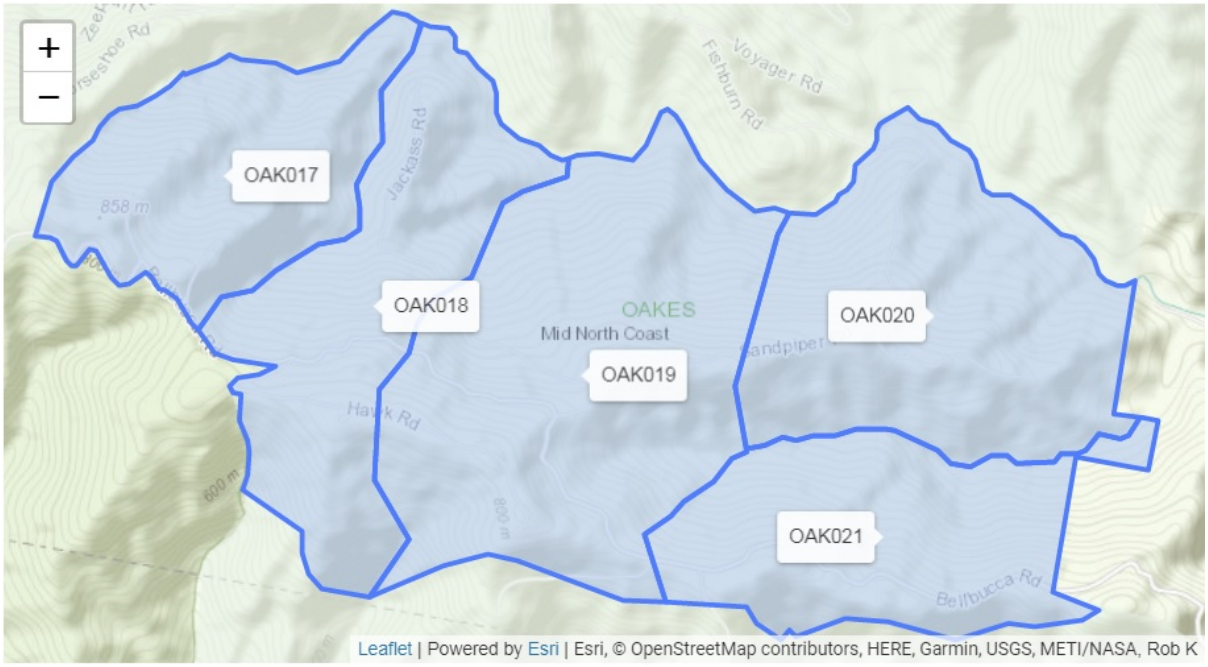
HCV= 29%

TOTAL

Forest type	Hectares	Per Cent
Secondary	788.43	43
Rainforest	693.02	38
Old-growth	238.05	13
Disturbed OG	128.16	7
Total	**1847.67**	**100**

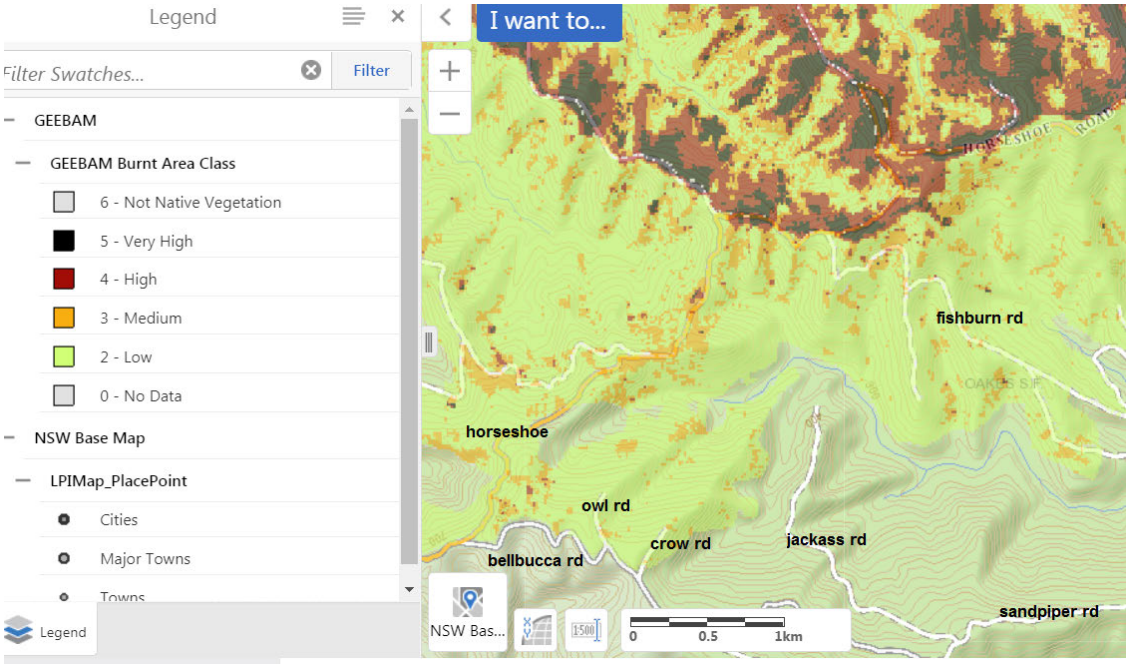
HCV= 57%, Rainforest 38%, OG (all) 20%

Visit and survey, Oakes 17, 18, 19 and 20. (21 was not inspected on this visit.)



These five compartments in Oakes state forest run along the western end of Bellbucca road near where it joins the Horseshoe. The majority of the compartments are on the Kalang side and 100 percent of the compartments are in the Bellinger shire LGA. This is steep country in the very headwaters of the Kalang River and also a small area of the Nambucca north arm headwaters.

Fire impacts: compartment 17 is fire effected, badly on crow road and also on Owl rd. though Owl road was not properly inspected as it's very over grown. This fire was a back burn done during the time of the Anderson creek fire which has heavily burnt the northern side of the Kalang valley the worst of this burn in the Kalang was directly opposite compartments 18, 19 and 20. There is less fire damage opposite 17. In short some of the most ecologically sensitive and important areas of the Kalang headwaters are badly fire effected. This alone should be enough to stop this operation.



Here are some observations that support having compartment 17 either removed from the harvest plan or harvested under the special EPA regulations for fire effected forests.

Owl road is very over grown, it's also burnt above and below. Reopening this road which is in very steep country would cause significant erosion and large amounts of debris into headwater steams. Furthermore reopening this road would directly impact and pass thru a well surveyed and important scrub bird territory on Bellbucca road. I also observed and recorded a second RSB territory on the north east side of Owl rd. there are two historic records of RSB in this same territory from 1998 and 2003. Reopening this road would shower this territory with rocks and debris and probably kill or displace the resident RSB. This second RSB territory MUST be confirmed before any official complaints are made.

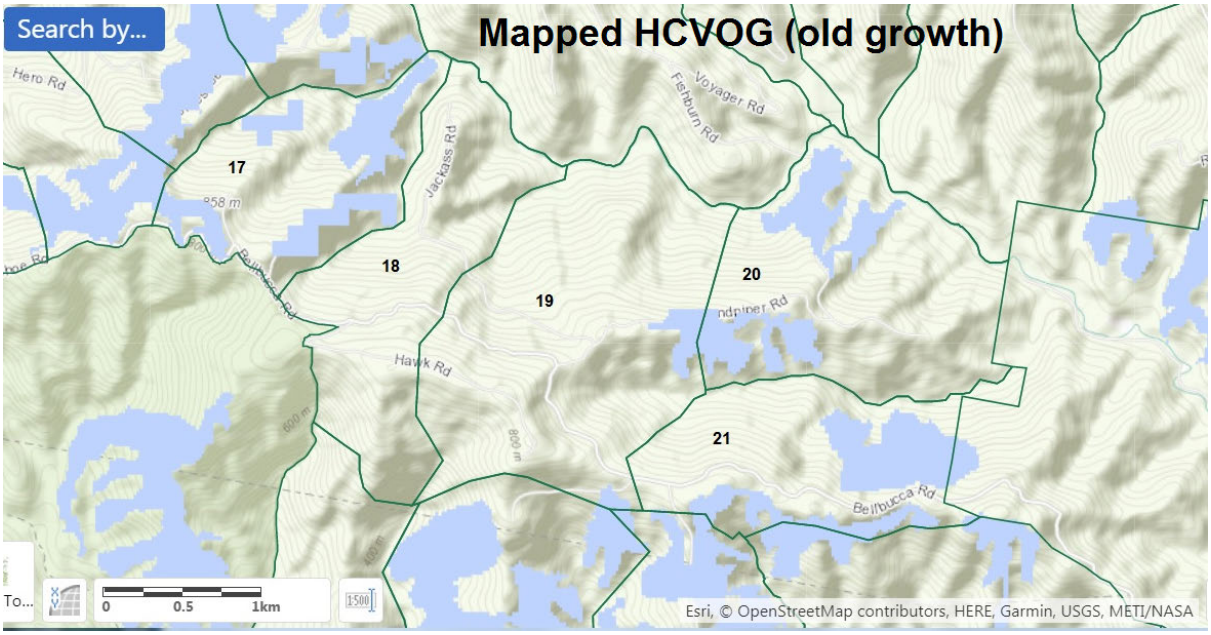
Recent university of New England surveys have identified sphagnum frogs surviving along this part of bellbucca road. This is a badly fire effected species that has also suffered from the drought. It's likely that there are more sphagnum frogs in compartment 17 and any logging disturbance would have negative impacts on the headwater streams that these frogs rely on. Key threats would be debris falling from above in very steep country and desiccation leading to less water in these very sensitive streams. We will try to gather more evidence on this and it should be treated as a priority.

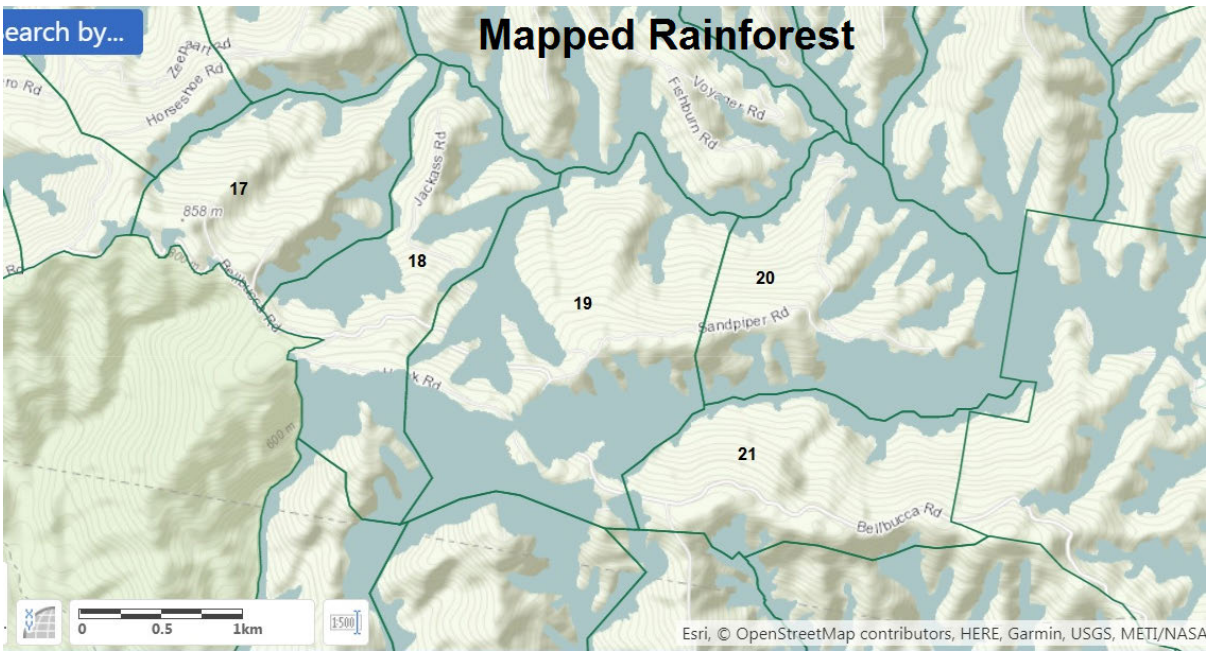
One last thing of lesser significance is fire effects on glossy black cockatoos. These birds feed exclusively on casuarina nuts and casuarinas mostly die in fire, as such any unburnt forest should be put aside in this area as it will be 5 to ten years (probably) until feed trees recover. The fire has killed thousands of casuarina along the horseshoe. Also GBs rely on very large tree hollows to breed and these have also been fire casualties, with many hundreds of hollow bearing trees in the area succumbing to fire or fire operations.

Compartments 18 and 19. These compartments in the area along bellbucca have significant bell minor infestation, as such the canopy is thinned and the understory is absolutely chocked with vines. I was unable to access the main harvest area down jackass rd. due to impenetrable vines, also the harvest area up hawk road is basically very difficult to access but not as bad as jackass. It's also quite

weedy along this section of bellbucca. More disturbance from logging will make both these issues worse.

Forestry had fun in this area destroying one of the largest trees by diameter in the whole Kalang valley on sandpiper road, they also destroyed many other old growth trees in the area, some may have been stags while others were still alive and strong. Directly below the junction of sandpiper and jackass roads is a lovely patch of giant trees, big tallowwoods and the largest brush box I have seen in the Kalang valley, probably over 8 meters CBH. Some of these trees are in the harvest area, there is no mapped old growth in the area though some is mapped as rainforest. It's difficult to assess the full area of this patch due to the walls of vines. Still, this patch would be best conserved.


Search by...
Mapped HCVOG (old growth)
Hero Rd
Voyager Rd
Fishburn Rd
Jackass Rd
17
18
19
20
21
Hawk Rd
Bellbucca Rd
0
0.5
1km
Esri, © OpenStreetMap contributors, HERE, Garmin, USGS, METI/NASA



On sandpiper road towards the bottom of compartment 19 and into compartment 20 there is lots of koala evidence and good habitat with plenty of feed trees. Currently there are no koala records in any of the five compartments. We found five trees with scat in compartment 20 along sandpiper road. This is the best area in any of the compartments for koalas found so far.

Spotlight survey: possible greater glider found in compartment 20 near sandpiper rd. it was in a New England black butt (a GG feed tree) but it was too far away to properly identify. A koala was spotted on bellbucca road, just outside the compartments near horseshoe road. Probably a young male moving about as he was in a burnt patch of forest.

Oakes water pollution and landslide report (Draft)

With photos of landslides across the kalang headwaters

Field visit on Monday the 8th and Tuesday the 9th of march 2021

Serious sedimentation in the kalang river at Fishburn road.

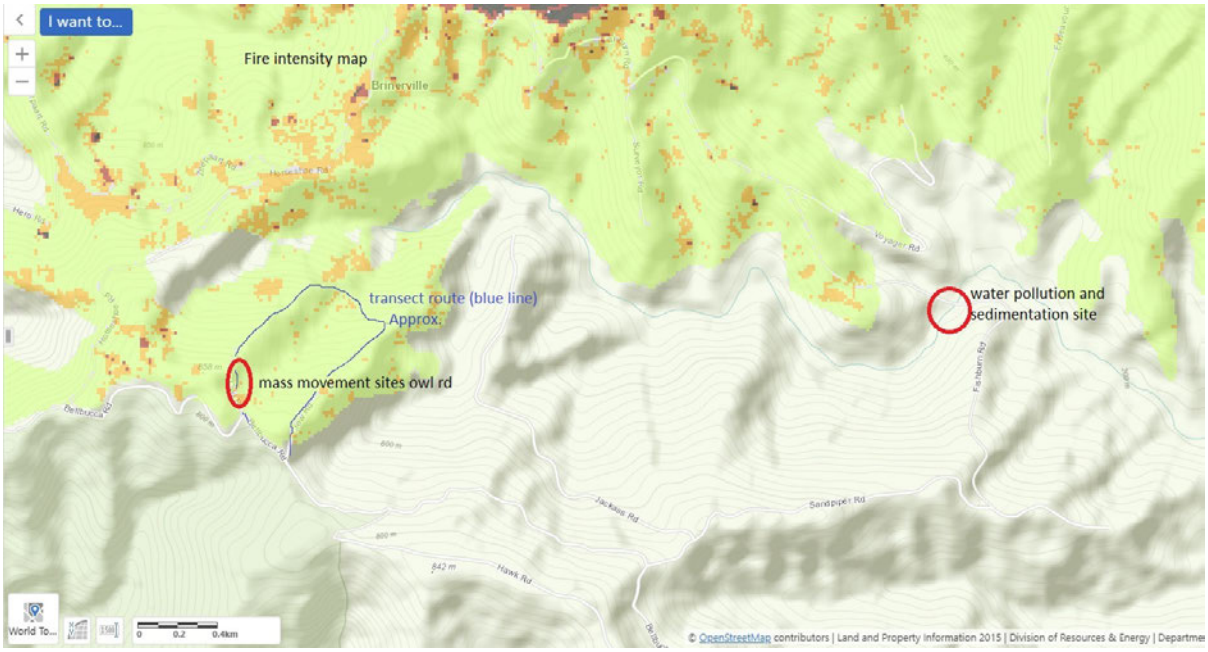
At the river crossing of the kalang on fishburn road recent rain events have led to serious sedimentation in what has previously been a near pristine area of the river that runs thru mature lowland rainforest. The cause of this pollution is the Andersons creek fire and subsequent back burning operations that burnt about two thirds (about 1500 HA) of the catchment above this area. Fire containment operations involved tree removal and heavy plant that caused significant soil disturbance on the horseshoe road, Bellbucca road, sandpiper and fishburn road.

The area in question on fishburn road has been visited regularly by BEC for the past 5 years and the current sedimentation has never been observed in this area before.

The upper kalang has well documented highly dispersible top soil and sub soils that have shown in the past to cause severe water pollution when disturbed. This area has rainfall erosivity levels of 6500 (very High). Fire activity has destroyed much of the leaf litter and soil biomass that would normally hold the soil in place. Furthermore the fire has burnt many hundreds of old trees. Some of these have fallen over creating further soil disturbance and landslides. Heavy plant has also pushed and disturbed soil all along the roads that run around the top of the kalang catchment. All this combined with very steep country and a very wet year has led to the water pollution.

Photos of fire damage and mass movement in cmpt 17 and water pollution at fishburn in drive link.

https://drive.google.com/drive/folders/1wXS9HI4iRVGGmlAu-P49Ri5xzPVReJZy?usp=sharing



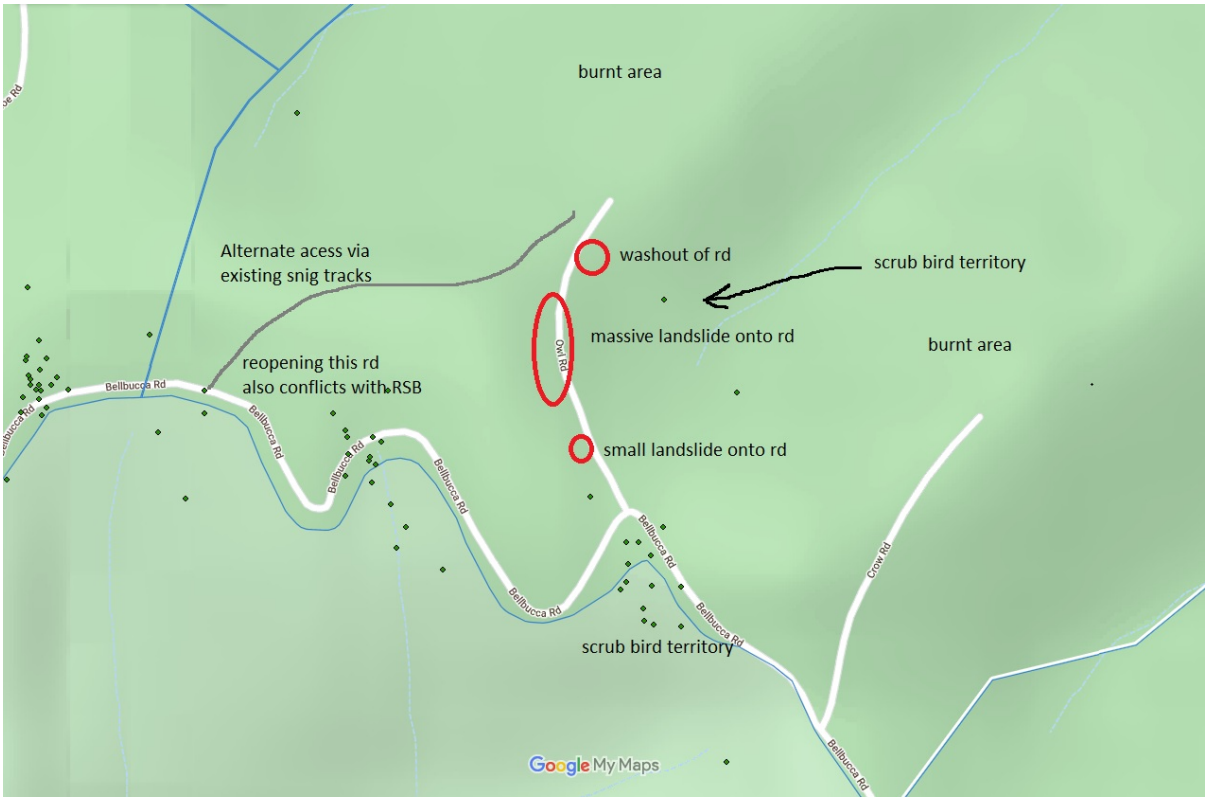
Further water pollution has been detected by locals coming from fire containment ops in roses creek state forest compartment 2 (previously 128). Visits to the fire operation in rose SF show excessive soil disturbance and destruction of tree cover. That drainage features were poorly constructed and that most had failed. No follow up earth works or remediation has been done here and the area has been left in a disgraceful mess. This runoff ends up mostly on the kalang side however some is also going into the Bellinger side.

Historic mass movement sites in Oakes state forest.

The most well-known mass movement event in this area was in the early 90's?? at catbird road? West of Killiekranke Mountain on the Bellinger side. About 10km from Owl road in Oakes SF. This event was caused by roading activity for a planned logging operation. The mass movement event caused about 80 000 tons of soil to slide into a headwater stream of the Bellinger river. This resulted in a court case and the end of the logging operation. This area is now in the New England NP.

Recent surveys of Oakes state forest have discovered another perhaps larger mass movement site on Owl road in the proposed logging compartment 17. This landslide is on a vast scale, an area of mountain side about 50 or more meters wide has slid onto owl road completely burying the road. The landslide brought down stumps 1.5 meters DBH or bigger and many thousands of tons of soil and rock. Currently the landslide is covered in very thick vegetation so its almost impossible to gain a true idea of its scale without the Lidar images. Smaller mass movement sites are also in the area with a large washout just to the north of the main site and a smaller landslide to the south. These sites are on extremely steep country on a side cut road. These sites would have caused large amounts of debris to fall into a headwater stream directly below. These sites are probably 20 to 30 or more years old however the smaller washout is still active and growing in size. Unfortunately photos do not really show the scope of these sites.

A question arises about forestry plans to access this ride line as opening owl road is now impossible without causing unacceptable environmental damage. It appears that there are old snig tracks to the west of owl road that would be reopened and used to access this ridgeline from Bellbucca road. See map.



(From the Coastal IFOA protocols)

Where the investigation and results from Module 1 or Module 2 indicate that there is an existing or potential mass movement hazard, FCNSW must **procure detailed written advice from a suitably qualified person:**

(a) **on whether the proposed forestry operation should proceed**; and

(b) if so, the site-specific conditions and mitigation measures and techniques that must be applied when carrying out the proposed forestry operation to prevent or mitigate potential or actual mass movement.

Conflicts with Rufus scrub birds (RSB)

Reopening owl road would impact two RSB territories one is in the creek directly below the mass movement sites. Reopening the alternate access would most probably also pass thru at least RSB exclusion. So how will forestry manage this??

NB this area of oakes contains almost certainly the most important area for RSB that is not protected completely in a conservation area. This area (compartment17 and 18,19,21) should be high priority for RSB conservation.

Rufous Scrub-bird, Atrichornis rufescens (costal IFOA condition)

66.1 Where there is a record of Rufous Scrub-bird within an operational area or within 300 metres outside the boundary of an operational area, FCNSW must retain:

(a) an exclusion zone that encompasses all Rufous Scrub-bird micro-**habitat within a 300- metre radius of the record**; and

(b) an additional exclusion zone that is 20 metres or greater in width around the outer edge of the exclusion zone referred to in condition 66.1(a).

I think it should be a priority to get the following documents from FC.

Documents and reports for the Oakes operation: Probably need to GIPA.

- **Inherent soil erosion and water pollution hazard assessment**
- **Lidar images of all five compartments**
- **Mass movement field assessment including mass movement mapping**
- **The written advice from a suitably qualified person on the mass movement sites in Oakes**
- **Soil dispersibility assessment**
- **Targeted survey for Rufous Scrub-bird**
- **Oakes ecology reports and related documents**

Further landslides in the Upper Kalang Valley

Horseshoe road Near the Bellbucca turn

Bellbucca Road just east of the Oakes logging area

Bellbucca road Near Missabotti

Horseshoe road compartment Roses creek SF compartment 1 (formally 127)

Roses creek SF Compartment 1 127/1 road

Roses creek SF Compartment 1 127/1 road

“samuels creek” Flowing from roses creek SF compartment 2 (128)