# AUDIT REPORT – BULLS GROUND STATE FOREST COMPARTMENT(S) 61, 62, 63, 64, and LORNE STATE FOREST COMPARTMENT (S) 75 and 76

Auditee:	FORESTRY CORPORATION OF NSW (FCNSW)
Audited State Forest & Cpts:	Bulls Ground State Forest, compartment(s) 61, 62, 63, 64, and Lorne State Forest Compartments 75 and 76 (see <u>Map 1</u> and 2, below). The field audit took 2 day(s) to complete.
Region:	Kendall Management Area
Date/Audit timing:	14-15 July 2016
Type of audit:	Compliance
Purpose of audit:	Report on the level of compliance with conditions and environmental performance in line with EPA compliance priorities.
Audit objectives:	<ol> <li>Assess compliance against audit criteria that reflect EPA compliance priorities.</li> <li>Assess and categorise risk of identified non-compliance or appropriate further observations.</li> <li>Request action plans against key audit findings so that auditee can use risk categorisation to inform timeliness and level of risk reduction control.</li> <li>Promote continuous improvement of the environmental performance of forestry operations.</li> </ol>
Audit scope:	<ul> <li>Hollow bearing and recruitment trees – Selection, Retention and Protection</li> <li>Basal Area Retention</li> <li>Streams – Protection</li> <li>Endangered Ecological Community (EEC) – Protection</li> <li>Koala search and mark up</li> <li>Threatened species (Brush-tailed Phascogale) – Mark up and protection</li> <li>Crossing drainage and water pollution</li> </ul>
	Physical scope: This audit was limited to the physical boundaries of compartments 61, 62, 63, 64, 75 and 76.
	<b>Temporal scope</b> : The audit period adopted for assessment of compliance with operational conditions was on the days of the audit inspection (14-15 July 2016).
Audit criteria:	Cond. 5.6 (d) (e) (h) Hollow bearing and Recruitment trees Cond. 5.7 Riparian habitat protection

	Cond. 5.1 (f) marking of EZ and buffer zones
	Cond. 5.2.2 Koala mark up searches
	Cond. 6.12 and 6.12.1 Brush-tailed Phascogale (Phascogale tapoatafa)
	Section 118 National Parks and Wildlife Act 1974 (NPW Act) – Sub-tropical Coastal Floodplain
	Schedule 5 Environment Protection Licence, Clause 37
	Section 120 of Protection of the Environment Operations Act 1997 (POEO Act)
Summary of Operations	Logging contractors for Compartment 64 & 76 is Hoffmans and for Compartment 61 was Bloomfield and Jade Osbourne



Map 1: Bulls Ground State Forest, Compartments 61, 62 and 63



Map 2: Bulls Ground State Forest, Compartments 64, and Lorne State Forest Compartments 75 and 76

#### Audit Findings – Overview

A summary of EPAs findings are in the table below. Full details and evidence of audit findings can be found in the **Audit Findings Table** in **Attachment 1** including further observations made from the audit.

EPA Compliance Priority 15/16	Audit Scope	Compliant	Non-compliant	Not determined
	H Retention	1	0	
Hollow bearing and Recruitment trees	H Selection	10	1	
	R Retention	1	0	
	R Selection	5	6	
	H & R Protection	3	3	
Forest Structure	Basal Area Retention			1
	Threatened Species Mark up	1	2	
Exclusion zones	Threatened Species Protection	2	1	
	EEC Protection	2	0	
	Stream Protection	0	1	
Koalas	Koala searching	0	2	
Poads	5/30 drainage	10	2	
Nodus	Pollution (s120)	11	1	
	TOTAL	46	19	1

## Audit Recommendations – Overview

Condition No.	Number of non- compliances (and sample)	Action Details	Non-compliance Code*	Target/Action Date
5.6 d (iii)	1/11	H tree selection Action plan to be developed and implemented to ensure adequate H tree selection in accordance with this condition.		
5.6c ii	6/11	R tree selection Action plan to be developed and implemented to ensure adequate R tree selection in accordance with this condition.		
5.6h ii	3/6	<b>H&amp;R tree protection</b> Action plan to be developed and implemented to ensure adequate management of logging debris in accordance with this condition.		immediately
5.1	2/3	Threatened species mark up –Brush-tailed Phascogale Action plan to be developed and implemented to ensure exclusion zones are marked up in accordance with this condition.		
5.1, 6.12	1/3	<b>Threatened species protection – Brush-tailed Phascogale</b> Action plan to be developed and implemented to ensure adequate protection of Brush-tailed Phascogale exclusion zones in accordance with this condition.		
5.7.1 and 5.7.2	1/1	Stream protection This matter is being investigated outside the audit process.		immediately
5.2.2	2/2	Koala searching Action plan to be developed and implemented to ensure Koala searches and mark up are conducted in accordance with this condition		
37	2/12	Schedule 5 – Environment Protection Licence Action plan to be developed and implemented to ensure road drainage is constructed and maintained in accordance with EPL.		
120	1/12	Protection of the Environment Operations Act 1997120 Prohibition of pollution of waterAction plan to be developed and implemented to ensure road drainage isconstructed and maintained in accordance with EPL.		
Total	19			

### ATTACHMENT 1: EPA FINAL AUDIT FINDINGS TABLE – BULLS GROUND STATE FOREST, COMPARTMENTS 61, 62, 63, 64, and LORNE STATE FOREST COMPARTEMENTS 75 AND 76

		CONDITION	RELATED TO H			ES (REGROWTH Z	ONE) - RETENTION	
Condition No. and detail					Compliant? Yes/No/ Not determined/Not Applicable	Number of non- compliance (sample size & unit)	Action required by licensee	
5.6(d) Hollow E	Bearing Tre	e Retentior	n – Regrowth Zor	Yes	0/1			
Within the Regro apply: i. A minimu logging a hollow-be	wth Zone the Im of five holl rea. Where the earing trees v	following rec low-bearing t his density of vithin the net	uirements for reten rees must be retain hollow-bearing tree logging area must b		(3 H trees retained across 2 ha assessed area) <b>post-harvest areas</b> only			
				Commer	nt and Evide	ence		
The EPA found th Attachment 1a). The EPA Officers Table 1: H tree t	The EPA found that the area assessed was compliant with this condition. <b>Only post-harvest areas (that is, Compartment 61) were assessed (refer to Attachment 1a).</b> The EPA Officers found three (3) marked H trees retained in 2 hectares of harvested forest. Therefore, FCNSW achieved a retention rate of 3 H tree / 2ha.							
LocationStart EPA waypointEnd EPA waypointAssessment MethodArea assessed markedH trees marked			Unmarked To candidate H trees	tal Retention rate				
Compartment 61	CompartmentT1P1T1P10Plot transects (10 x randomly selected plots)2 ha3						H marked	

\*EPA officers considered trees retained to be candidate H trees only where they met the TSL criteria (despite not being marked or selected by FCNSW).

<b>CONDITION RELATED TO HOLLOW BEARING TREES (REGROWTH ZONE) – SELECTION</b>				
Condition No. and Detail	Compliant? Yes/No/Not determined/Not applicable	Number of non- compliance and (sample size)	Action required by licensee	
<ul> <li>5.6(d) Hollow Bearing Tree Selection – Regrowth Zone</li> <li>Within the Regrowth Zone the following requirements for retention of Hollow-bearing trees apply:</li> <li>ii. In selecting hollow-bearing trees for retention, priority must be given to any hollow-bearing trees which exhibit evidence of occupancy by hollow dependent fauna and trees which contain multiple hollows or hollows of various sizes.</li> <li>iii. Hollow-bearing trees must be selected with the objective of retaining trees having as many of the following characteristics as possible:</li> <li>belonging to a cohort of trees with the largest dbhob,</li> <li>good crown development,</li> <li>(Note: this does not restrict the selection of trees with broken limbs consistent with the hollow-bearing tree definition).</li> <li>minimal butt damage,</li> <li>represent the range of hollow-bearing species that occur in the area,</li> <li>located such that they result in retained trees being evenly scattered throughout the net logging area.</li> </ul>	No Code: Yellow	1/11 (3 H selected in 2 ha post-harvest assessed area; and 8 H in 3.67 ha pre- harvest assessed areas).	Action plan to be developed and implemented to ensure adequate H tree selection in accordance with condition.	
Comment and Evide	nce			
The EPA found that FCNSW selection of trees in the areas assessed were non-compliant w dump 8 in Compartment 61 (refer to Attachment 1a), and 3.67 ha in pre-harvest area r Compartment 64 (refer to Attachment 1b).	rith this condition. EP lear log dump 1 in C	A assessed 2 ha in pos Compartment 76 and lo	st-harvest area near log g dump 8 in	

#### Pre-harvest – Compartments 64 and 76

The EPA uses field marked (paint) trees as the indicator of whether a tree was selected or not. EPA also uses the element of the condition that relates to size as the key element to determine compliance *"belong to a cohort of trees with the largest DBHOB"*. All elements of the condition are considered when determining compliance. A minimum rate of 5 H trees per ha are required to be selected for retention.

The EPA found that within the pre-harvest assessed area of 3.67 ha, seven (7) marked H trees were compliant with the selection elements specified in the condition. This is well below the required TSL retention rate (5 H trees per ha), and therefore where available, H trees must be selected and marked for retention. The EPA found one (1) unmarked candidate H tree, which was of the largest cohort (DBHOB 96.3 cm) and had visible hollows. It is also noted that an identified unmarked candidate H tree had a hollow butt, and whilst may be considered an H tree, has been identified by the EPA as a candidate R tree as a minimum.

#### Post-harvest – Compartment 61

The EPA assessed 2ha post-harvest and found three (3) marked H trees were compliant with the selection elements specified in the condition. No unmarked candidate H trees were identified.

This non-compliance is considered yellow code because one non-compliance out of eleven sampled, is a relatively low incidence of non-compliance. However, there were only 10 marked H trees in nearly 6 ha of area assessed. In this regrowth forest resources are very scarce and well below the TSL licence threshold. Accordingly, it is very important that where H trees are available, they be properly selected and marked in the field for retention. This marking helps prevent these scarce and important resources from being damaged or harvested.

Location	Start EPA waypoint	End EPA waypoint	Assessment Method	Area assessed	H trees marked	Unmarked candidate H trees	Total selection rate
Compartment 76	T2	T11	Traverse	(25m each side of 165m transect) 0.82 ha	2	1	3 H marked and unmarked
Compartment 64	T1	T17	Traverse	(25m each side of 570m transect) 2.85 ha	5	0	5 H marked
Compartment 61	T1P1	T1P10	Plot transects (10 x randomly selected plots)	(10 x 0.2ha) 2 ha	3	0	3 H marked
Total					10	1	11 H marked and unmarked
*EPA officers cons	idered trees re	etained to be o	andidate H trees onl	y where they met	the TSL crite	eria (despite not be	ing marked or selected by FCNSW).

#### Table 2: H tree transects within an operation area, pre- and post-harvest assessed area



MP 4, Cpt 76: Unselected H tree in regrowth zone where the resource is scarce.



**Unmarked H tree that should have been selected.** Seven (7) H trees were selected in 3.67 ha. This is well below the required TSL retention rate (10 H trees per 2 ha) therefore where available, and this H tree was available, H trees must be selected and marked for retention up to the licence threshold with an accompanying R tree. Late mature dissipating crown

<b>CONDITION RELATED TO RECRUITMENT TREES (REGROWTH ZONE) – RETENTION</b>					
Condition No. and detail	Compliant? Yes/No/ Not determined/Not Applicable	Number of non- compliance (sample size & unit)	Action required by licensee		
<b>5.6(e) Recruitment Tree Retention – Regrowth</b> Within the Regrowth Zone, for each hollow-bearing tree retained in (d)	Yes	0/1 (3 R trees required for retention in 2 ha assessed			
		area) post-harvest areas only			
Comment and Evidence					

The EPA found that FCNSW complied with this condition in the area assessed.

The EPA found sufficient retained R trees compared to H trees retained. Three (3) R trees were required to be retained. EPA counts all live standing R trees regardless of whether they are marked in the field or not. There were a total of five (5) R trees across the post-harvest assessed area, including two (2) marked R trees and three (3) unmarked candidate R trees. Accordingly, two (2) R trees (marked) were retained and one (1) candidate unmarked and unselected R tree was retained, in the 2 ha post-harvest assessed area.

#### Table 3: R tree transects within an operation area, post-harvest assessed area

Location	Start EPA	End EPA	Assessment	Area assessed	R trees	Unmarked	Total selection rate
	waypoint	waypoint	Method		marked	candidate R	
						trees	
Transect	T1P1	T1P10	Plot transects	2 ha	2	3	5 R marked and unmarked
Three (Cpt 61)			(10 plots per				
			transect)				
*EPA officers consid	dered trees re	tained to be c	andidate R trees only	where they met	the TSL crite	ria (despite not beir	ng marked or selected by FCNSW).



Page 13 of 52 EPA Forestry Operations –Audit Report, Bulls Ground State Forest NSW EPA

<b>CONDITION RELATED TO RECRUITMENT TREES (REGROWTH ZONE) – SELECTION</b>				
Condition No. and detail	Compliant? Yes/No/ Not determined/Not Applicable	Number of non- compliance (sample size & unit)	Action required by licensee	
<ul> <li>5.6(e) Recruitment Tree Selection – Regrowth</li> <li>Recruitment trees must be selected with the objective of retaining trees having as many of the following characteristics as possible: <ul> <li>i. belong to a cohort of trees with the largest dbhob,</li> <li>ii. located such that they result in retained trees being evenly scattered throughout the net logging area</li> <li>iii. good crown development,</li> <li>iv. minimal butt damage,</li> <li>v. represent the range of hollow-bearing species that occur in the area.</li> </ul> </li> </ul>	No Code: Orange	6/11 (5.67ha of pre- and post- harvest area assessed for R tree selection) <b>Pre &amp; post-harvest areas</b>	Action plan to be developed and implemented to ensure adequate R tree selection in accordance with condition.	
Co	mment and Evidend	;e		

EPA found that FCNSW did not comply with this condition in the area assessed. Ten (10) H trees were selected (marked in the field) in the area assessed (both pre- and post-harvest) and one (1) H tree should have been selected (candidate H tree). Only five (5) R trees were selected to accompany the eleven (11) available H trees. EPA found suitable unmarked unselected R trees available in the pre- and post-harvest assessed areas. Therefore, FCNSW had 6 non-compliances when selecting R trees.

#### Pre-harvest area – Compartments 64 and 76

In 3.67ha there were 3 R trees selected by FCNSW staff. There were twelve (12) unselected unmarked candidate R trees observed by EPA officers. Cohort of trees with the largest DBHOB: One (1) of the three (3) selected R trees was located in Compartment 64 and was 43 cm DBHOB. One (1) of the twelve (12) unselected unmarked candidate R trees, also in the same traverse in Compartment 64, was 79cm DBHOB. There equates to approximately a 36cm size difference, thus not considered by the EPA as being trees belonging to the same size cohort. The unselected 79cm DBHOB tree belongs to the cohort of trees with the largest DBHOB while the selected 43cm R tree does not.

#### Post-harvest areas - Compartment 61

In the 2 ha of assessed post-harvest area, there were two (2) R trees selected by FCNSW staff. The EPA noted three (3) unmarked unselected candidate R trees.





#### WHY IS COMPLIANCE WITH THIS TSL CONDITION IMPORTANT?

Largest Size Cohort: The presence, abundance and size of hollows are positively correlated with tree basal diameter, which is an index of age (Lindenmayer *et al.* 1991a, Bennett *et al.* 1994, Ross 1999, Soderquist 1999, Gibbons *et al.* 2000, Shelly 2005). Tree diameter at breast height (DBH) is, in turn, a strong predictor of occupancy by vertebrate fauna (Mackowski 1984, Saunders *et al.* 1982, Smith and Lindenmayer 1988, Gibbons *et al.* 2002, Kalcounis-Rüppell *et al.* 2006). The minimum size-class at which trees consistently (>50% of trees) contain hollows varies depending on the species and environmental conditions, yet is always skewed toward the larger, more mature trees. (Reference: Loss of Hollow-bearing Trees key threatening process determination NSW Scientific Committee - final determination (2007))

CC	<b>CONDITIONS RELATED TO HOLLOW-BEARING &amp; RECRUITMENT TREES – PROTECTION</b>						
C	ondition No. and detail	Compliant? Yes/No/ Not determined/Not Applicable	Number of non- compliance (sample size & unit)	Action required by lice	nsee		
5.6(h)(i)&(ii) Protection of r	etained trees	No	3/6	Action plan to be develope	ed and		
In the course of conducting spec greatest extent practicable, be a hollow-bearing tree, recruitment cones beneath, eucalypt feed tre tree. Logging debris within a five flattened to a height of less than must be minimised to the greate Habitat and recruitment trees m operations.	In the course of conducting specified forestry activities, logging debris must not, to the greatest extent practicable, be allowed to accumulate within five metres of a retained hollow-bearing tree, recruitment tree, stag, <i>Allocasuarina</i> with more than 30 crushed cones beneath, eucalypt feed tree, or Yellow-bellied Glider or Squirrel Glider sap feed tree. Logging debris within a five metre radius of retained trees must be removed or flattened to a height of less than one metre. Disturbance to ground and understorey must be minimised to the greatest extent practicable within this five metre radius. Habitat and recruitment trees must not be used as bumper trees during harvesting operations.						
	Comment and Ev	idence					
The EPA found that FCNSW was the trees that were retained and instances of non-compliance we This is a red code as the scarcit extent of logging debris around during harvesting; and in some	The EPA found that FCNSW was non-compliant with this condition. Assessments were completed only in post-harvested areas (Compartment 61), and considered the trees that were retained and counted for retention (marked and unmarked). Three (3) of the six (6) H and R trees required for retention were non-compliant. All nstances of non-compliance were associated with FCNSW marked and selected H and R trees. This is a red code as the scarcity of the resource is significant in this regrowth forest (that is, 6 H & R trees in 2ha). The rate of non-compliance is high and the extent of logging debris around each tree that was not compliant was also significant including logs, tree heads, and mid storey vegetation that was pushed over during harvesting; and in some instances, logging debris at the tree base was connected to other logging debris on the general forest floor.						
Table 5: Logging debris, H an							
Map point Tree (Plot centre)	Map point     Tree     Logging debris       (Plot centre)						
30 Marked H	30 Marked H Excessive logging debris around base (within 5m, and extending beyond to further logging debris on general forest floor), height of debris at base of H tree was 1.3m and including large logs.						

35	Candidate R	Height of logging debris at base less than 1m.	Yes
37	Marked H	Logging debris within 5m of base, height of debris less than 1m (90cm).	Yes
37	Marked R	Excessive logging debris around base (within 5m), height of debris 1.8m (including logs 20-40cm) and extends to log piles outside 5m from base.	No
56	Marked H	Logging debris within 5m of base at height of 1.5m, however it is noted that this has been minimised to the greatest extent practicable.	Yes
56	Marked R	Logging debris height of 1.2m at base and 1.1m at 1m from base.	No

#### WHY IS MINIMISING DEBRIS IMPORTANT?

Excessive debris at the immediate base of retained hollow bearing and recruitment trees, significantly increases the risk of harm to the tree during fire. Excessive debris increases the residence time and intensity of fire at the base of a retained resource. Such damage caused by fire reduces the longevity of these forest resources thus reducing habitat continuity across the forest. These resources are critical to maintaining biodiversity, a key element of effective ecological sustainable forest management.







CONDITION RELATED TO FOREST STRUCTUR	RE – BASAL AREA	RETENTION	
Condition No. and detail	Compliant? Yes/No/ Not determined/Not Applicable	Number of non- compliance (sample size & unit)	Action required by licensee
	Not determined		

Page 21 of 52 EPA Forestry Operations – Audit Report, Bulls Ground State Forest NSW EPA



CONDITIONS RELATED TO THREATENED SPEC	IES EXCLUSION	ZONES – MARK UF											
Condition No. and detail	Compliant? Yes/No/ Not determined/Not Applicable	Number of non- compliance (sample size & unit)	Action required by licensee										
5.1 Operational requirements – Threatened species exclusion zone mark up No 2/3 Action plan to be developed													
f) 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. The outer edge of lines shown on the map is considered to represent the boundary of the mapped feature when marking the feature in the field.	Code: Orange	(3 separate locations assessed)	and implemented to ensure exclusion zones are identified in accordance with this condition.										
Comment and Evic	lence												
EPA officers assessed boundaries across three separate areas of the mapped Brush-taile 55). EPA found that FCNSW did not comply with conditions. There were no field marking to the post-harvest assessment area. The EPA Officers found an exclusion zone marking It is also noted that the prescription within the Harvest Operation Plan is for 'crew to identit	ed Phascogale Exclusion z s for the exclusion z on the western edg fy and implement m Examp	usion Zone boundary (l cone boundary in two o e of Milligans Road (co apped exclusion zone le of field mark up for Ex	MP 45-49; MP 53-54; and MP f the assessed areas adjacent prresponding with MP 55). using GPS/iPad'.										



CONDITIONS RELATED TO THREATENED SPECIE	<b>CONDITIONS RELATED TO THREATENED SPECIES EXCLUSION ZONES – PROTECTION</b>											
Condition No. and Detail	Compliant? Yes/No/Not determined/Not applicable	Number of non- compliance and (sample size)	Action required by licensee									
5.1 Operational Requirements	No	1/3	Action plan to be developed and									
a) For all exclusion zones implemented under the conditions of this licence the following must apply:	Code: Yellow	(3 separate locations	implemented to ensure adequate protection of threatened species exclusion zones in accordance with									
i) All specified forestry activities are prohibited in exclusion zones.		assessed)	this condition.									
ii) Trees must not be felled into exclusion zones. If a tree accidentally falls into an exclusion zone, then no part of that tree can be removed, except as referred to in condition 5.1 (a2).												
6.12 Brush-tailed Phascogale (Phascogale tapoatafa)												
a) Where there is a Brush-tailed Phascogale record in a compartment or within 500 metres outside the boundary of a compartment SFNSW must, for the purpose of protecting the Brush-tailed Phascogale and its habitat, apply either the Site Based Approach as set out in condition 6.12.1 or the Landscape Approach as set out in condition 6.12.2.												
6.12.1 Brush-tailed Phascogale: Site Based Approach												
Comment and Evi	dence											
The EPA found that this condition was non-compliant in the assessed area, being the Brus	h-tailed Phascogale	e exclusion zone ide	entified within Compartment 61.									
EPA officers assessed boundaries across three separate areas (MP 45-49; MP 53-54; and were found along the boundary and fallen into the exclusion zone across one of the assess	MP 55) of the map sed areas (that is, M	ped exclusion zone IP 45-49).	e. Logging debris and felled trees									

This non-compliance is considered yellow code as the incursions were relatively low in environmental harm, the sensitivity of the receiving receptor is moderate to high and the likelihood of environment harm occurring is relatively low.



Page 25 of 52 EPA Forestry Operations –Audit Report, Bulls Ground State Forest NSW EPA

CONDITIONS RELATED TO EEC EXCLUSION ZONES - PROTECTION												
Condition No. and Detail	Compliant? Yes/No/Not determined/Not applicable	Number of non- compliance and (sample size)	Action required by licensee									
Section 118 National Parks and Wildlife Act 1974 – Sub-tropical Coastal Floodplain	Yes	0/2										
118A Harming or picking threatened species, endangered populations or endangered ecological communities		(2 separate locations assessed)										
(2) A person must not pick any plant that is of, or is part of, a threatened species, and endangered population or an endangered ecological community.												
118D Damage to habitat of threatened species, endangered populations or endangered ecological communities												
(1) A person must not damage any habitat of a threatened species, an endangered population or an endangered ecological community if the person knows that the habitat concerned is habitat of that kind.												
Comment and Evid	lence											
The EPA found that this condition was compliant in the assessed area (that is, Compartme 33; and MP 40-43) and found both areas to be clearly marked up in the field.	nt 61). The EPA as	sessed two separat	te locations of the EEC boundary (MP									
The EPA officers found that harvesting operations were conducted adjacent to the marked to and across the marked up boundary.	up exclusion zone	for the mapped EE0	C. Some logging debris was adjacent									
<b>Further observations – Endangered Ecological Community Sub-tropical Coastal Floo</b> The boundary of this EEC was clearly marked in the field and harvesting took place up to the field and harvesting t	odplain clearly ma ne marked boundar	rked in the field. <sup>y.</sup>										





Page 28 of 52 EPA Forestry Operations –Audit Report, Bulls Ground State Forest NSW EPA

	CO	NDITIONS RELATE		- PROTECTION		
	Condition	No. and Detail	Compliant? Yes/No/Not determined/Not applicable	Number of non- compliance and (sample size)	Action required by licensee	
5.7 Riparian Habit	at Protection – protect	tion zones		No	1/1	This matter is being investigated
5.7.1 Specified for	estry activities restric	ted within protection	zones (hard)			outside the audit process.
a) The following rul (being condition 5.7	es apply to a protection 7.1), condition 5.7.3 and	zone (hard), except as condition 5.20 (relatin	varied by this condition g to beekeeping):	Code: Red		
i. specified forestry	activities are prohibited	in a protection zone (h	nard);			
ii. no tree is to be fe (hard), then no part	elled into a protection zo of the tree can be remo	one (hard). If a tree falls oved;	s into a protection zone			
iii. harvesting mach	inery is not to be used i	n a protection zone (ha	ard).			
5.7.2 Restricted or	perations in protection	n zones (soft)				
a) The following rule (being condition 5.7	es apply to a protection 7.2), condition 5.7.3 or c	zone (soft), except as ondition 5.20 (relating	varied by this condition to beekeeping):			
i. specified forestry ii. harvesting machi	activities are prohibited inery is not to be used ir	in a protection zone (son a protection zone (so	soft); ft).			
Table 1: Minimum w along the ground sur	idths of protection zones rface)	(hard and soft) for strea	ams (metres – measured			
Stream Order	Protection zone	Protection zone				
a st	(hard)	(soft)	-			
1 <sup>30</sup>	5	5	_			
2 <sup>rd</sup>	5	15				
A <sup>th</sup> or areater	5	45	_			
- or greater	5	5				

#### **Comment and Evidence**

The EPA found that FCNSW did not comply with conditions for stream protection. The EPA assessed one area of the 3rd order stream protection zone within Compartment 61 (MP 31-34), and found incursions within the mapped 30m protection zone, including a tree felled across the stream, logging debris approximately 10m from the bank, and a stump approximately 15m from the bank.

#### Further observation:

The EPA found no field mark up of the stream protection zone. The FCNSW Harvest Plan Operational Map identifies the stream adjacent to the assessed area in Compartment 61 as a 3rd order stream, with protection area of 30m. It is noted that the prescription for Riparian Habitat Protection in the Harvest Plan is that 'the crew will locate and protect all 2nd order and above streams with GPS'.



Page 30 of 52 EPA Forestry Operations -Audit Report, Bulls Ground State Forest NSW EPA





CONDITIONS RELATED TO KOALA USE – SEARCH AND MARK UP												
Condition No. and Detail	Compliant? Yes/No/Not determined/Not applicable	Number of non- compliance and (sample size)	Action required by licensee									
5.2.2 Koala Mark-up Searches	No Code: Orange	2/2	Action plan to be developed and implemented to ensure Koala									
at least 300 metres in advance of harvesting operations.	oute. Orange	locations assessed)	conducted in accordance with this condition.									
		pre-harvest areas only										
Comment and Evid	ence											
The EPA found that this condition was non-compliant in the pre-harvest assessed area. The EPA assessed two separate locations of pre-harvest area (that is, Compartments 64 and 76), searching primary koala browse trees, and found both areas did not show evidence of searching that had disturbed the ground cover. Accordingly, EPA considered at the time of the audit inspection that the ground around the primary browse trees was not thoroughly searched. There were marked H & R trees in the vicinity so FCNSW staff presence 300m ahead of operations was confirmed.												
<b>Further observation:</b> It appeared that compartment mark up at the Cpt 76 location was done quite some time ag	o and not recently.	The intent of perfor	ming the thorough koala searching									

300m ahead operations is to capture contemporary koala use.



Page 34 of 52 EPA Forestry Operations -Audit Report, Bulls Ground State Forest NSW EPA

CONDITIONS	RELATED TO ROA		S AND DRAI	NAGE FEATURES – 5	& 30 DRAINAGE
Condition No. and Det	ail	Compl Yes/No/Not de applic	liant? termined/Not cable	Number of non- compliance and (sample size)	Action required by licensee
Schedule 5 – Environment Protection	Licence	Να	D	2/12	Action plan to be developed and
I. ROAD CROSSINGS WITHIN 30 METE FEATURES	RES OF DRAINAGE	Code: \	Yellow	(12 crossings assessed)	constructed and maintained in accordance with EPL.
37. Roads must be drained using a cross spoon drain or mitre drain between 5 me from a watercourse, drainage line, wetlar crossing. This distance must be measure the bank of the incised channel, or where bank, from the edge of the channel.	sbank, relief pipe, tres and 30 metres nd or swamp ed from the top of e there is no defined				
		Comment	t and Evidenc	e	
EPA officers audited 13 marked crossing	s within compartments	s 63 and 64. Cro	ossing CP – B	in Compartment 64 was no Compart	ot applicable. nent 64
Compliant	Non-Compliant		Compliant		Non-compliant
CP – B 900mm Pipe	CP – A Bridge		CP – A 600m	nm Pipe	
CP – C 600mm Pipe	CP – G 600mm Pipe		CP – C 600n	nm Pipe	
CP – D 600mm Pipe			CP – D Bridg	je	
CP – E 600mm Pipe					
CP – I 600mm Pipe					
CP – J 600mm Pipe					
CP – F 600mm Pipe					

**Compartment 63 – non-compliant crossings** 



Crossing drainage structures consist of table drains at 30 metres in both directions. Sediment traps are located at the ends of the table drains and terminate with geotextile sediment traps, which are not effective. There is soil gouging outside of the traps. The northwest sediment trap is not functioning at all. Sediment is moving from the road into the waterway despite the sediment traps. This crossing requires maintenance.







CONDITIONS RELATED TO PROTECTION OF THE ENVIRONMENT OPERATIONS ACT – SECTION 120(1)													
Condition	No. and Detail	Compliant? Yes/No/Not determined/Not applicable	Number of non- compliance and (sample size)	Action required by licensee									
Protection of the Environment Operat	tions Act 1997		No	1/12	Action plan to be developed								
<b>120 Prohibition of pollution of water</b> ( guilty of an offence.	(1) A person who pollutes any v	vaters is		(12 crossings assessed)	road drainage is constructed and maintained in accordance								
Schedule 5 – Environment Protection	n Licence				with EPL.								
I. ROAD CROSSINGS WITHIN 30 MET	TRES OF DRAINAGE FEATUR	ES											
37. Roads must be drained using a cros drain between 5 metres and 30 metres f or swamp crossing. This distance must l incised channel, or where there is no de	ssbank, relief pipe, spoon drain from a watercourse, drainage lin be measured from the top of the efined bank, from the edge of th	or mitre ne, wetland e bank of the e channel.											
	C	comment and	Evidence										
EPA officers audited 13 marked crossing	ngs within compartments 63 and	I 64. Crossing	CP – B in Compartm	ent 64 was not applicable.									
	Compartment 63			Compartm	nent 64								
Complian	nt	Non-	Compliant	Compliant	Non-compliant								
CP – B 900mm Pipe CP	P – F 600mm Pipe	CP – A Bridg	e	CP – A 600mm Pipe									
CP – C 600mm Pipe CP	P – G 600mm Pipe			CP – D Bridge									
CP – D 600mm Pipe CP	P – I 600mm Pipe			CP – C 600mm Pipe									
CP – E 600mm Pipe CP	P – J 600mm Pipe												



Page 40 of 52 EPA Forestry Operations – Audit Report, Bulls Ground State Forest NSW EPA

## FURTHER OBSERVATIONS TABLE – BULLS GROUND STATE FOREST, COMPARTMENT 64

Number of	Details of matter	Recommendation
Non-		
compliances		
	EPA Officers found large epiphytes attached to a tree, which was also within	An action plan must be developed and
	a small rocky outcrop area. The EPA Officers marked the tree with blue field	implemented to ensure that such forest resources
	tape.	are protected from future operations in the region.
	The tree and rocky outcrop is located at map point 17 in the pre-harvest	
	assessed area of compartment 64.	
EAST AND		
ret litel		VANAL SALARY CARACTER
CHAR !		
A Marine S		
A. Jas		
11 1 200		
and A State		
Map point 17,	, <b>Compartment 64:</b> Large epiphytes on tree within a small area of rocky terrain. Marke	d by
EPA Officers w		

Page 41 of 52 EPA Forestry Operations –Audit Report, Bulls Ground State Forest NSW EPA



Page 42 of 52 EPA Forestry Operations –Audit Report, Bulls Ground State Forest NSW EPA



30	Point ZM	WAYPOIN	p3t1 14-07-2016 13:30:10	-31.55779	152.68619	-31.55779	152.68619		Flag, Blue	0		41	0	0	2016/07/14 3:30:26
31	Point ZM	WAYPOIN	s1 14-07-2016 13:50:37	-31.55763	152.68668	-31.55763	152.68668		Flag, Blue	0		25	0	0	2016/07/14 3:51:05
32	Point ZM	WAYPOIN	s2 14-07-2016 13:56:17	-31.55781	152.6868	-31.55781	152.6868		Flag, Blue	0		28	0	0	2016/07/14 3:56:28
33	Point ZM	WAYPOIN	s3 14-07-2016 14:00:08	-31.55801	152.6866	-31.55801	152.6866		Flag, Blue	0		29	0	0	2016/07/14 4:00:19
34	Point ZM	WAYPOIN	s4 14-07-2016 14:09:33	-31.55787	152.6868	-31.55787	152.6868		Flag, Blue	0		29	0	0	2016/07/14 4:09:42
35	Point ZM	WAYPOIN	t2p4 14-07-2016 14:21:15	-31.55842	152.68625	-31.55842	152.68625		Flag, Blue	0		31	0	0	2016/07/14 4:21:35
36	Point ZM	WAYPOIN	t3p5 14-07-2016 14:32:13	-31.55875	152.68571	-31.55875	152.68571		Flag, Blue	0		23	0	0	2016/07/14 4:32:33
37	Point ZM	WAYPOIN	t1p4 14-07-2016 14:42:32	-31.55956	152.68582	-31.55956	152.68582		Flag, Blue	0		23	0	0	2016/07/14 4:42:55
38	Point ZM	WAYPOIN	t1p5 14-07-2016 15:01:22	-31.55981	152.68643	-31.55981	152.68643		Flag, Blue	0		23	0	0	2016/07/14 5:01:45
39	Point ZM	WAYPOIN	t1p6 14-07-2016 15:07:32	-31.5597	152.68709	-31.5597	152.68709		Flag, Blue	0		25	0	0	2016/07/14 5:07:52
40	Point ZM	WAYPOIN	eec1 14-07-2016 15:16:50	-31.55947	152.68729	-31.55947	152.68729		Flag, Blue	0		25	0	0	2016/07/14 5:17:12
41	Point ZM	WAYPOIN	eec2 14-07-2016 15:19:57	-31.55954	152.68739	-31.55954	152.68739		Flag, Blue	0		25	0	0	2016/07/14 5:20:19
42	Point ZM	WAYPOIN	eec3 14-07-2016 15:22:47	-31.5597	152.68773	-31.5597	152.68773		Flag, Blue	0		25	0	0	2016/07/14 5:22:54
43	Point ZM	WAYPOIN	eec4 14-07-2016 15:24:35	-31.5597	152.68764	-31.5597	152.68764		Flag, Blue	0		25	0	0	2016/07/14 5:24:43
44	Point ZM	WAYPOIN	t1p7 14-07-2016 15:29:49	-31.56006	152.68602	-31.56006	152.68602		Flag, Blue	0		25	0	0	2016/07/14 5:30:00
45	Point ZM	WAYPOIN	phas1 14-07-2016 15:40:	-31.56031	152.68565	-31.56031	152.68565		Flag, Blue	0		25	0	0	2016/07/14 5:40:29
46	Point ZM	WAYPOIN	phas2 14-07-2016 15:44:	-31.56044	152.68573	-31.56044	152.68573		Flag, Blue	0		25	0	0	2016/07/14 5:44:35
47	Point ZM	WAYPOIN	phas3 14-07-2016 15:47:	-31.56017	152.6853	-31.56017	152.6853		Flag, Blue	0		25	0	0	2016/07/14 5:47:56
48	Point ZM	WAYPOIN	phas4 14-07-2016 15:50:	-31.56011	152.68523	-31.56011	152.68523		Flag, Blue	0		25	0	0	2016/07/14 5:50:31
49	Point ZM	WAYPOIN	phas5 14-07-2016 15:52:	-31.55993	152.68501	-31.55993	152.68501		Flag, Blue	0		25	0	0	2016/07/14 5:52:47
50	Point ZM	WAYPOIN	t1p8 14-07-2016 15:56:25	-31.55964	152.68483	-31.55964	152.68483		Flag, Blue	0		25	0	0	2016/07/14 5:56:37
51	Point ZM	WAYPOIN	t1p9 14-07-2016 16:05:18	-31.55961	152.68445	-31.55961	152.68445		Flag, Blue	0		25	0	0	2016/07/14 6:05:29
52	Point ZM	WAYPOIN	14-07-2016 16:12:53	-31.56006	152.68446	-31.56006	152.68446		Flag, Blue	0		25	0	0	2016/07/14 6:13:04
53	Point ZM	WAYPOIN	phas614-07-2016 16:13:06	-31.56007	152.68448	-31.56007	152.68448		Flag, Blue	0		25	0	0	2016/07/14 6:13:32
54	Point ZM	WAYPOIN	phas714-07-2016 16:18:43	-31.55942	152.68413	-31.55942	152.68413		Flag, Blue	0		25	0	0	2016/07/14 6:19:02
55	Point ZM	WAYPOIN	phas8 14-07-2016 16:20:	-31.55935	152.68408	-31.55935	152.68408		Flag, Blue	0		25	0	0	2016/07/14 6:20:23
56	Point ZM	WAYPOIN	t1p10 14-07-2016 16:26:	-31.5591	152.68477	-31.5591	152.68477		Flag, Blue	0		25	0	0	2016/07/14 6:26:36



#### Attachment 1b: Pre-harvest Assessment area, Compartments 64 and 76

Page 44 of 52 EPA Forestry Operations –Audit Report, Bulls Ground State Forest NSW EPA



## Compartment 76: Waypoints

FID	Shape	type	ident	Latitude	Longitude	y_oroj	x_proj	comment	display	symbol	dist	proximity	color	altitude	depth	temp	time
0	Point ZM	WAYPON	p1t2 14-07-2016 09:44:13	-31.56117	152,64908	-31,56117	152,64908		1200	Flag, Blue	a l		2201	31	0	0	2016/07/13 23:45:36
1	Point ZM	WAYPOIN	12	-31.56095	152,64935	-31.58095	152.64935			Flag, Blue	0.			31	0	D	2016/07/14 0:10:33
2	Point ZM	WAYPON	13 14-07-2016 10:08 47	-31,5809	152.84883	-31,5809	152 64883			Flag, Blue	Ū.	_		37	Ū.	0	2016/07/14 0:09:02
3	Point ZM	WAYPON	t4 14-07-2016 10:13:53	-31.56095	152.64844	-31.55095	152 64844	1		Flag, Blue	U I			31	0	0	2016/07/14 0:14:11
4	Post ZM	WAYPON	15 14-07-2016 10 21 32	-31.56079	152,64806	-31 58879	152 64806			Flag, Bive	0			194	0	0	2016/07/14 0/21:45
. 5	Point ZM	WAVPON	t5 14-07-2016 10:30:31	-31 56098	152,64813	-31.56098	152,64813			Flag, Blue	Ø	-		202	Ū	D	2016/07/14 0:30:47
6	Point ZM	WAYPON	17 14-07-2016 10:37 35	-31.56112	152.64803	-31,58112	152,64803			Flag, Blue	11	2		205	0	0	2016/07/14 0:37:47
7	Point ZM	WAYPON	18 14-07-2016 10 43 47	+31 56119	152,64792	-31.56119	152,64792			Flag, Blue	۵			205	0	0	2016/07/14 0.44:00
8	Point ZM	WAYPON	19 14-07-2016 10:48:39	-31.56133	152.6479	-31.56133	1.52.6479		1000	Flag, Blue	ū.			211	0	Ũ	2016/07/14 0:48:49
9	Point ZM	WAYPON	110 14-07-2018 10:52:34	-31 56135	152,84783	-31 56135	152.64783			Flag, Blue	Ø.			208	0	0	2018/07/14 0:52.54
10	Point ZM	WAYPON	14-07-2016 10:58:08	-31.55162	152,648133	-21.55162	152.648133			Flag, Blue	U			989999975239	0	U	2016/07/14 0:58:08
- 33	Point ZM	WAYPON	14-07-2018 10:58:21	-31.561745	152.848147	-31,561745	152 848147	0		Flag, Blue	0			989999976239	0	0	2016/07/14 0:58:21
12	Point ZM	WAYPON	t11 14-07 2016 10:59:04	-31.56167	152,64812	-31.58167	152,64812			Flag, Blue	0	- 1		222	0	0	2016/07/14 0:59:13



## Compartment 64: Waypoints

13 Point ZM	WAYPOIN p2t1 14-07-2016 11:53:45	-31.57882	152.66293	-31.57882	152.66293		Flag, Blue	0		172	0	0	2016/07/14 1:54:05
14 Point ZM	WAYPOIN t2 14-07-2016 12:01:58	-31.57863	152.66396	-31.57863	152.66396		Flag, Blue	0		162	0	0	2016/07/14 2:02:13
15 Point ZM	WAYPOIN t3 14-07-2016 12:05:27	-31.57857	152.66444	-31.57857	152.66444		Flag, Blue	0		154	0	0	2016/07/14 2:05:38
16 Point ZM	WAYPOIN t4 14-07-2016 12:10:39	-31.57882	152.66473	-31.57882	152.66473		Flag, Blue	0		158	0	0	2016/07/14 2:10:47
17 Point ZM	WAYPOIN t5 14-07-2016 12:14:28	-31.57929	152.66457	-31.57929	152.66457		Flag, Blue	0		171	0	0	2016/07/14 2:14:40
18 Point ZM	WAYPOIN t6 14-07-2016 12:17:43	-31.57938	152.66431	-31.57938	152.66431		Flag, Blue	0		175	0	0	2016/07/14 2:18:03
19 Point ZM	WAYPOIN t7 14-07-2016 12:20:36	-31.5795	152.66434	-31.5795	152.66434		Flag, Blue	0		175	0	0	2016/07/14 2:20:47
20 Point ZM	WAYPOIN t8 14-07-2016 12:23:27	-31.57941	152.66418	-31.57941	152.66418		Flag, Blue	0		177	0	0	2016/07/14 2:23:38
21 Point ZM	WAYPOIN t9 14-07-2016 12:27:06	-31.5795	152.66373	-31.5795	152.66373		Flag, Blue	0		182	0	0	2016/07/14 2:27:34
22 Point ZM	WAYPOIN t10 14-07-2016 12:29:00	-31.57958	152.66394	-31.57958	152.66394		Flag, Blue	0		180	0	0	2016/07/14 2:29:23
23 Point ZM	WAYPOIN t11 14-07-2016 12:31:17	-31.57982	152.66374	-31.57982	152.66374		Flag, Blue	0		177	0	0	2016/07/14 2:31:27
24 Point ZM	WAYPOIN t12 14-07-2016 12:35:28	-31.58008	152.66377	-31.58008	152.66377		Flag, Blue	0		174	0	0	2016/07/14 2:35:41
25 Point ZM	WAYPOIN t13 14-07-2016 12:41:39	-31.57974	152.66335	-31.57974	152.66335		Flag, Blue	0		186	0	0	2016/07/14 2:41:59
26 Point ZM	WAYPOIN t14 14-07-2016 12:44:48	-31.5799	152.66318	-31.5799	152.66318		Flag, Blue	0		183	0	0	2016/07/14 2:45:28
27 Point ZM	WAYPOIN t15 14-07-2016 12:48:30	-31.57977	152.66284	-31.57977	152.66284		Flag, Blue	0		186	0	0	2016/07/14 2:48:44
28 Point ZM	WAYPOIN t16 14-07-2016 12:51:26	-31.57941	152.66295	-31.57941	152.66295		Flag, Blue	0		188	0	0	2016/07/14 2:51:36
29 Point ZM	WAYPOIN t17 14-07-2016 12:58:52	-31.57897	152.66275	-31.57897	152.66275		Flag, Blue	0		186	0	0	2016/07/14 2:59:05

## ATTACHMENT 2: RISK ASSESSMENT OF NON-COMPLIANCE

The significance of any non-compliances identified during the audit process are categorised. Following risk assessment of non-compliances, an escalating response relative to the seriousness of the non-compliance is determined to ensure the non-compliance is addressed by the enterprise.

The risk assessment of non-compliances involves assessment of the non-compliance against two criteria; the likelihood of environmental harm occurring and the level of environmental impact as a result of the non-compliance. After these assessments have been made, information is transferred into the risk analysis matrix below.

	Likelihood of Environmental Harm Occurring			
		Certain	Likely	Less Likely
Level of Environmental Impact	High	Code Red	Code Red	Code Orange
	Moderate	Code Red	Code Orange	Code Yellow
	Low	Code Orange	Code Yellow	Code Yellow

The assessment of the likelihood of environmental harm occurring and the level of environmental impact allows for the risk assessment of the non-compliance via a colour coding system. A red risk assessment for non-compliance denotes that the non-compliance is of considerable environmental significance and therefore must be dealt with as a matter of priority. An orange risk assessment for non-compliance is still a significant risk of harm to the environment however can be given a lower priority than a red risk assessment. A yellow risk assessment for non-compliance indicates that the non-compliance could receive a lower priority but must be addressed.

There are also a number of licence conditions that do not have a direct environmental significance, but are still important to the integrity of the regulatory system. These conditions relate to administrative, monitoring and reporting requirements. Non-compliance of these conditions is given a blue colour code.

The colour code is used as the basis for deciding on the priority of remedial action required by the licensee and the timeframe within which the non-compliance needs to be addressed. This information is presented in the action program alongside the target/action date for the noncompliance to be addressed.

While the risk assessment of non-compliances is used to prioritise actions to be taken, the EPA considers all non-compliances are important and licensees must ensure that all non-compliances are addressed as soon as possible.

#### **ATTACHMENT 3:**

Condition No. /	EPA draft finding / risk	Location – description,	FCNSW submission	EPA response to FCNSW submission	EPA final finding &
Page No.	categorisation	GPS			risk
					on
5.6 d) (TSL)	Not Compliant / Code Yellow	Various	5.6(d) Hollow Bearing Tree Selection Based on the photo on page 11 of the EPA's audit report, it does appear that a habitat tree was not marked for retention. FCNSW will investigate this matter. Like EPA, FCNSW consider the selection and retention of retained trees as a very important component of maintaining essential habitat within the net harvest area.	EPA's audit finding is retained.	Not Compliant / Code Yellow
5.6 e (TSL)	Not Compliant / Code Orange	Various	<ul> <li>5.6(e) Recruitment Tree Selection – Regrowth</li> <li>As EPA may be aware, FCNSW collect the locations of marked retained trees on iPads. This is primarily to assist in the location of these trees by the Harvesting Operators, as they also have an iPad in their harvesters.</li> <li>The other benefit of this data capture is to ensure that FCNSW is marking the appropriate number of retained trees during the mark-up search. In compartment</li> </ul>	The TSL condition refers to a number of elements that a tree must have to be considered a recruitment Tree. The EPA considers that the <b>key and</b> <b>dominant element is size</b> , i.e. "belonging to the cohort of trees with the largest DBHOB". If a tree is not a tree that belongs to the cohort trees with the largest DBHOB then it doesn't comply with the selection criteria. This element is important. We consider it as a key element as retaining trees belonging to the cohort of trees with the largest	Not Compliant / Code Orange

76, 234 habitat trees were marked for	DBHOB represents the best chance	
retention, and 345 recruitment trees were	of getting habitat continuity over	
marked for retention. As found during the	space and time once existing hollow	
EPOA audit, there is not 5 habitat trees per	bearing tree resources cease. Size is	
hectare available for marking, and so an	easily measured and assessed. EPA	
equal number of recruitment trees have	uses it as a first screen to determine	
been marked.	whether selection criteria is	
	compliant or not. If a tree is selected	
I understand that this information will be	and belongs to the cohort of trees	
made available to the EPA for upcoming	with the largest DBHOB, then other	
audits, which should assist in addressing	elements of the condition are	
any issues with evaluating compliance.	assessed in conjunction with size.	
With regard to the alleged non-compliance	EPA will continue to use size as a key	
associated with the selection of	element and not complying with the	
recruitment trees, it is noted that EPA	size element of the condition will	
found compliance with the selection of	represent a non compliance with the	
recruitment trees in all attributes, with the	TSL condition.	
exclusion of the trees belonging to a cohort		
of trees with the largest DBHOB. When	The audit data shows a consistent	
marking trees for recruitment tree	pattern of cut stump diameters	
retention, FCNSW must consider retaining	being larger than selected R tree	
trees with as many of the characteristics as	diameters. If R tree selection was	
possible. Selecting trees from a cohort with	based on a range of characteristics,	
the largest DBHOB is only one of these	a much more random and less	
characteristics, and cannot be treated in	consistent pattern would be	
isolation to other characteristics.	expected in the data. EPA therefore	
	views this as evidence of non-	
FCNSW request that the 6 alleged non-	compliance and the audit finding	
compliances associated with this condition	stands.	
be withdrawn.		

5.6 h i & ii	Not Compliant	Various	5.6(h)(i)&(ii) Protection of retained trees	The EPAs concern is that retained H	Not
(TSL)	/ Red			& R trees are appropriately	Compliant /
			Protection of Retained Trees has been	protected to ensure longevity of the	Red
			raised in various EPA audits and also by	resources. TSL Condition 5.6 (h)	
			internal audits. A program has begun to	states: When conducting specified	
			raise awareness of the requirements of the	forestry activities and post-logging	
			TSL with harvesting crews and FCNSW staff,	burning, damage to trees retained	
			and to target compliance in our internal	under conditions 5.6 a), 5.6 b), 5.6	
			checking.	c), 5.6 d), 5.6 e) and 5.6 f) of this	
				licence must be minimised to the	
				greatest extent practicable. EPA	
				retains its audit finding.	
5.1a) i & ii	Not Compliant	Various	5.1 Operational requirements – Threatened	This non-compliance is not	Not
(TSL)	/ Code Orange		species exclusion zone mark up	administrative and really should not	Compliant /
				be taken as administrative. This TSL	Code
			FCNSW have conducted a root-cause	condition is designed to operate	Orange
			analysis on boundary management and	alongside other TSL conditions to	
			identified that boundary identification in	minimise the risk of logging in	
			the field using GPS is an accurate approach	protected areas. Not complying with	
			to delivering compliance and is now widely	it increases the risk, so it is a risk	
			considered best practice. FCNSW is happy	reduction condition, not	
			to formally discuss the results of the root	administrative. EPA retains its audit	
			cause analysis and procedure development	finding.	
			regarding boundary identification with the		
			EPA to avoid administrative non-		
			compliance findings in future audits.		
6.12 (TSL)	Not Compliant	Various	6.12 Brush-tailed Phascogale (Phascogale	The TSL clearly requires exclusion	Not
	/ Code Yellow		tapoatafa)	zone boundaries to be marked in the	Compliant /
				field. This is marking the boundary in	Code Yellow
			The operating conditions for Brush-tailed	the field. There are a number of	
			Phascogale enable the felling of 6 trees in	exclusion zone boundaries that are	
			200 across the boundary of the exclusion	marked in the field (paint on trees)	
			zone. FCNSW acknowledges the boundary	and a number of exclusion zone	
			was not marked in the field with paint,	boundaries that are frequently not	

Page 50 of 52 EPA Forestry Operations -Audit Report, Bulls Ground State Forest NSW EPA

			however, the boundary was clearly visible to the harvesting machine operator in the field on an Apple iPad screen running FCNSW's 'FC Map App' software. FCNSW view this approach as best practice.	marked in the field (no paint on trees). All exclusion zone boundaries should be treated as equally important to protect. Field marking and record keeping are needed for the benefit of harvest contractors so they know their boundaries and what to protect. Having a visual on the ground (in the field) combined with proper record keeping is legally required by the TSL. EPA retains its audit finding.	
5.2.2	Not Compliant / Code Orange	Various	<ul> <li>5.2.2 Koala Mark-up Searches</li> <li>FCNSW have conducted thorough Koala mark-up searches with compartments 64 and 76 as required under the TSL. The suggestion that thorough searches were not conducted as required are unfounded.</li> <li>The photos on page 34 of the audit report do not, in FCNSW view represent how Koala mark-up searches must be conducted. FCNSW view with regard to this issue has been described in previous audit responses. FCNSW have developed a Standard Operating Procedure (SOP) outlining the instruction to undertaking Koala mark-up searches, and have conducted training to these requirements.</li> <li>FCNSW request that the 2 non compliances recorded associated with this condition be withdrawn.</li> </ul>	While FCNSW ensures that Koala mark-up searches were conducted EPA auditors did not find evidence the ground around the primary browse trees was thoroughly searched. A thorough search for koala scats that are approximately 2cm long would require moving leaf litter that can cover scats, such as in photos of leaf litter on page 34. The mark-up of trees for other purposes in the area surveyed shows that technicians did move through the area but did not thoroughly search for koala scats in the process. The EPA retains its audit finding.	Not Compliant / Code Orange

EPL Schedule 5, 37	Not Compliant / Code Yellow	Cpt 63 Crossings CP – A and G	Schedule 5 – Environment Protection Licence Road drainage within 30m of a drainage feature Crossing A and G had site specific measures implemented for 5-30m approach drainage. Crossing A – both approaches have a box cut into the creek. Site specific measures for both approaches were to armour the approach and table drains with grave and install silt fence at the outlet of drains to assist with any minor sediment displaced from this armoured pavement. On the western approach drainage was a mitre and crown at the most practical position above the box cut. The eastern approach is managed by Port Macquarie Hastings Council. Section 120 POEOA – remediation work was undertaken by FCNSW and this has been sent through as part of response to Corrective Action Notice 8/9/2016. Crossing G – relief pipe installed at location that best fits the site. Outlet is into 4 <sup>th</sup> Order Cedar Creek and as such outlet position is integral to overall environmental impact.	EPA acknowledges the remediation work undertaken by FCNSW in response to the Corrective Action Request. However, EPA retains its audit findings in the report as an accurate record of observations on the dates of the audit.	Not Compliant / Code Yellow