

EPA AUDIT REPORT – KIPPARA STATE FOREST, COMPARTMENTS 16, 17, 18, 19, 20, 21

Auditee:	FORESTRY CORPORATION OF NSW (FCNSW)
Audited State Forest & Cpts:	KIPPARA STATE FOREST, COMPARTMENTS 16 – 21
Region:	Lower North-east Integrated Forestry Operations Approval (IFOA)
Date/Audit timing:	19 November 2014. Audit debrief with FCNSW staff held on 3 December 2014.
Type of audit:	Compliance
Purpose of audit:	Report on the level of compliance with conditions and environmental performance in line EPA compliance priorities.
Audit objectives:	<ol style="list-style-type: none"> 1. Assess compliance against audit criteria that reflect EPA compliance priorities. 2. Assess and categorise risk of identified non-compliance or appropriate further observations. 3. Request action plans against key audit findings so that auditee can use risk categorisation to inform timeliness and level of risk reduction control 4. Promote continuous improvement of the environmental performance of forestry operations.
Audit scope:	<ul style="list-style-type: none"> • Hollow bearing and recruitment tree • Rainforest • High Conservation Value Old Growth • Rocky outcrop • Koala protection measures <p>Physical scope: This audit was limited to the physical boundaries of compartments 16 – 21.</p> <p>Temporal scope: The audit period adopted for assessment of compliance with operational conditions was on the days of the audit inspections (19 November 2014).</p>
Audit criteria:	<p>5.6 (b)(c)(h) Hollow bearing and recruitment tree retention, selection and protection</p> <p>5.4 Rainforest protection</p> <p>5.3 High Conservation Value Old Growth (HCVOG) protection</p> <p>5.11 Rocky Outcrops and Cliffs protection</p> <p>5.1 (f) Marking of exclusion and buffer zones</p> <p>5.2.2 Koala mark-up searches</p>
Summary of Operations	<p>Operation commencement date: 7 October 2014</p> <p>Stand age: Non-Regrowth Zone</p> <p>Silvicultural practice: Forest types within the Net Harvest Area (NHA) will be treated with medium single-tree-selection (STS). Forest stands in the NHA include, Regrowth dry, 80% (Blackbutt, Tallowwood and Sydney Blue Gum); Mature moist hardwood, 10%; & Brush Box, 10%.</p>

1. Audit Findings – Overview

The EPA identified 10 non-compliances and 87 compliances with the IFOA and POEO Act, including determinations of further observations.

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 14/15	Audit Scope	Compliant	Non-compliant	Not Determined	Not Applicable
Exclusion Zones	Rainforest protection	0	2*	0	0
	Rainforest mark-up	1	0	0	0
	High conservation value old growth protection	2	1*	0	0
	High conservation value old growth mark-up	0	3*	0	0
	Rocky Outcrop Protection	2	0	1	0
	Rocky outcrop mark-up	0	1	0	0
	Further observations	1	0	0	0
Koala	Identification/search	1	0	1	0
Hollow bearing and recruitment trees	H Retention	1	0	0	0
	H Selection	12	0	0	0
	R Retention	1	0	0	0
	R Selection	12	2	0	0
	H&R Protection	53	1	0	0
	H&R Mark-up	1	0	0	0
	TOTAL	87	10	2	0

* Note – six (6) matters observed during the field audit are subject to a separate investigation process. Further communications will be provided to you in the separate investigation process.

2. Audit Recommendations

Condition No.	Number of non-compliances (and sample)	Action Details	Non-compliance Code*	Target/Action Date
5.6c ii	2/14	R tree selection An action plan must be developed and implemented to ensure that recruitment trees are retained across the compartment having as many of the characteristics listed in TSL condition 5.6c ii and consistent the requirements of the R tree definition.	Yellow	End of March 2015
5.6h i	1/27	H&R tree protection An action plan must be developed and implemented to ensure that retained trees are protected as per TSL condition 5.6h (i).	Yellow	End of March 2015
5.1F	1/1	Rocky Outcrop mark up An Action Plan must be developed and implemented to ensure proper in field marking of Rocky Outcrop required by TSL 5.1F	Yellow	End of March 2015
5.3a	1/3	High conservation value old growth exclusion zone protection	Red	This matter will be investigated outside of the audit process
5.4a	2/2	Rainforest & rainforest exclusion zone protection	Red	This matter will be investigated outside of the audit process
5.1F	3/3	High conservation value old growth exclusion zone mark up	Red	This matter will be investigated outside of the audit process
Total	10			

3. Audit Conclusions

This audit achieved its audit objective by determining compliance with the specified criteria of the audit. The EPA issued FCNSW with the draft audit findings and FCNSW submitted actions to mitigate the non-compliances (Attachment 3). The EPA will follow up on the outcomes of these audits to ensure levels of compliance are enhanced for criteria that relate to this audit.

4. List of Attachments

Attachment 1) Audit Findings Table

Attachment 2) EPA Risk Matrix for Non-compliances

Attachment 3) FCNSW Submission on draft audit findings

ATTACHMENT 1: EPA FINAL AUDIT FINDINGS TABLE – KIPPARA STATE FOREST COMPARTMENTS 16-21

CONDITIONS RELATED TO HOLLOW BEARING TREES (NON-REGROWTH ZONE) – RETENTION							
Condition No. and Detail					Compliant? Yes/No/Not determined/Not applicable	Number of non- compliance and (sample size)	Action required by licensee
5.6(b): Within the Non-regrowth Zone the following requirements for retention of Hollow-bearing trees apply: i. A minimum of five hollow-bearing trees must be retained per hectare of net logging area. Where this density is not available, the existing hollow-bearing trees must be retained plus additional trees must be retained as hollow-bearing trees to meet the required rate.					YES	0/1	
Comment and Evidence							
EPA found that the area assessed was compliant with this condition.							
EPA Officers assessed two areas across the net harvest area. The total area assessed was 2 hectares. EPA officers recorded 12 marked H trees and 1 unmarked candidate H trees within the assessed areas. FCNSW achieved a retention rate of 6.5 H/ha.							
Refer to EPA Waypoints in attachment 1.							
Table 1: EPA Plot Assessments – H trees							
Location	Start EPA waypoint	End EPA waypoint	Assessment Method	Area assessed	H trees marked	Unmarked candidate H trees	Retention rate/ha
NE of Log Dump 9	1372	1378	Fixed area plots	1 ha	7	1	8 H/ha includes marked and unmarked
SSW of Log Dump 2	1391	1395	Fixed area plots	1 ha	5	0	5 H/ha includes marked and unmarked
Total				2 ha	12	1	6.5 H/ha marked and unmarked
*EPA officers considered trees retained to be candidate H trees only where they met the TSL criteria (despite not being marked).							

CONDITIONS RELATED TO HOLLOW BEARING TREES (NON-REGROWTH ZONE) – SELECTION

Condition No. and Detail	Compliant? Yes/No/Not determined/Not applicable	Number of non- compliance and (sample size)	Action required by licensee
<p>5.6 b iii.</p> <p>The remaining hollow-bearing trees and any additional trees required to be retained to meet the retention rate under this condition must be selected with the objective of retaining trees having as many of the following characteristics as possible:</p> <ul style="list-style-type: none"> - belonging to a cohort of trees with the largest dbhob, - good crown development, <p>(Note: this does not restrict the selection of trees with broken limbs consistent with the hollow-bearing tree definition).</p> <ul style="list-style-type: none"> - minimal butt damage, - represent the range of hollow-bearing species that occur in the area, - located such that they result in retained trees being evenly scattered throughout the net logging area. 	Yes	0/12	

Comment and Evidence

EPA found that FCNSW selection of trees in the area assessed were compliant with this condition.

The EPA determined that in the assessed area (2 ha) a minimum of 10 compliant H trees were required to be retained (i.e. minimum rate of 5H/ha). The EPA determined that 12 H trees marked and retained were all compliant with selection conditions.

Tree Characteristics Observations

Retained Tree Sizes: EPA officers compared data of H tree DBHOB and stump sizes of trees removed to assess the size class of trees retained versus those removed. The EPA determined that all H trees marked and retained within the assessed area belonged to cohort of trees with the largest dbhob. Please refer to Table 2 below.

Crown Development Observations: EPA officers observed that all marked H trees and candidate H trees displayed good crown developed and were not suppressed (assessed area only).

Butt Damage Observations: EPA officers observed one marked H tree that had minimal butt damage within the assessed area.

Range of Species Retained: EPA officers observed that the marked H trees comprised of Blackbutt, Tallowood, Mahogany and a Bloodwood and thus representing the range of species in the assessed area.

Location of H trees in NHA: EPA officers observed that marked H trees and candidate trees were scattered across the NHA.

Table 2: Hollow bearing tree characteristics across assessed areas

Plot	Species	DBHOB or Stump height	Hollows or Stump Diameter	Crown Damage	Logging Debris	Bumper	Ground Disturbance	Tree Features Burls and/or Protuberance	Crown Development	Tree Growth Stage
Assessment Location 1										
Plot 1	Black Butt	129	Y	N	N	N	N	Y	Dominant	Late mature
Plot 1	Mahogany	97	N	N	N	N	N	Y	Dominant	Late mature
Plot 1	Black Butt	150	Y	Y Natural	N	N	N	Y	Dominant	Mature
Plot 1	Stumps	82,75,73,70,52,33								
Plot 2	Tallowwood (Unmarked)	70	Y	N	N	N	N	N	Dominant	Mature
Plot 2	Stumps	85,73,63,60,49,49,46,40								
Plot 3	Black Butt	131	Y	N	N	N	N	Y	Co Dominant	Mature
Plot 3	Stumps	64,62,60,58,52,51,50,49,45,45,42								
Plot 4	Black Butt	97	N	N	N	N	N	Y	Dominant	Mature
Plot 4	Black Butt	95	N	Y Natural	N	N	N	Y	Co Dominant	Mature
Plot 4	Stumps	75,55,30								
Plot 5	Black Butt	84.5	N	Y Natural	N	N	N	Y	Dominant	Mature
Plot 1	Stumps	65,63,45,40								
Assessment Location 2										
Plot 1	Tallowwood	96	N	N	N	N	Y Low	Y	Co Dominant	Mature
Plot 1	Stumps	95,84,75,72,63,62								
Plot 2	Black Butt	100	N	N	N	N	N	Y	Dominant	Mature
Plot 2	Stumps	80,60,60,55,55								
Plot 3	Black Butt	85	N	N	N	Yes	Yes (Low)	Y	Dominant	Mature
Plot 3	Stumps	65,62,52,52								
Plot 4		No hollow bearing trees								
Plot 4	Stumps	89,75,55,52,40								
Plot 5	Blood Wood	125	Y	N	N	N	Y (Low) Snig track	Y	Dominant	Late mature
Plot 5	Black Butt	92.5	Y	N	Yes (Minimal)	N	N	Y	Dominant	Late Mature
Plot 5	Stumps	65,63,45,40								

CONDITIONS RELATED TO RECRUITMENT TREES (NON-REGROWTH ZONE) – RETENTION

Condition No. and Detail	Compliant? Yes/No/Not determined/Not applicable	Number of non- compliance and (sample size)	Action required by licensee
5.6c) Within the Non-regrowth Zone the following requirements for retention of Recruitment trees apply: i. A minimum of five recruitment trees must be retained per hectare of net logging area.	YES	0/1	

Comment and Evidence - R tree Retention

EPA found that the area assessed was compliant with this condition.

The EPA determined that in the assessed area (2 ha) a minimum of 10 compliant R trees were required to be retained. FCNSW retained 14. The selection of these resources is addressed in the below criteria.

Table 3: EPA Transect Assessments – R trees

Location	Start EPA waypoint	End EPA waypoint	Assessment Method	Area assessed	R trees marked	Unmarked candidate R trees	Retention rate/ha
NE of Log Dump 9	1372	1378	Fixed area plots	1 ha	7		7 H/ha includes marked and unmarked
SSW of Log Dump 2	1391	1395	Fixed area plots	1 ha	2	5	7 H/ha includes marked and unmarked
Total				2 ha	9	5	7 H/ha marked and unmarked

CONDITIONS RELATED TO RECRUITMENT TREES (NON-REGROWTH ZONE) – SELECTION

Condition No. and Detail	Compliant? Yes/No/Not determined/Not applicable	Number of non- compliance and (sample size)	Action required by licensee
5.6c ii. Recruitment trees must be selected with the objective of retaining trees having as many of the following characteristics as possible: <ul style="list-style-type: none"> - belong to a cohort of trees with the largest dbhob, - located such that they result in retained trees being evenly scattered throughout the net logging area, - good crown development, - minimal butt damage, - represent the range of hollow-bearing species that occur in the area. 	NO	2/14	An action plan must be developed and implemented to ensure that recruitment trees are retained across the compartment having as many of the characteristics listed in TSL condition 5.6c ii and consistent the requirements of the R tree definition.

Comment and Evidence – R tree Selection

EPA found that FCNSW selection of some of the trees in the area assessed were not compliant with this condition.

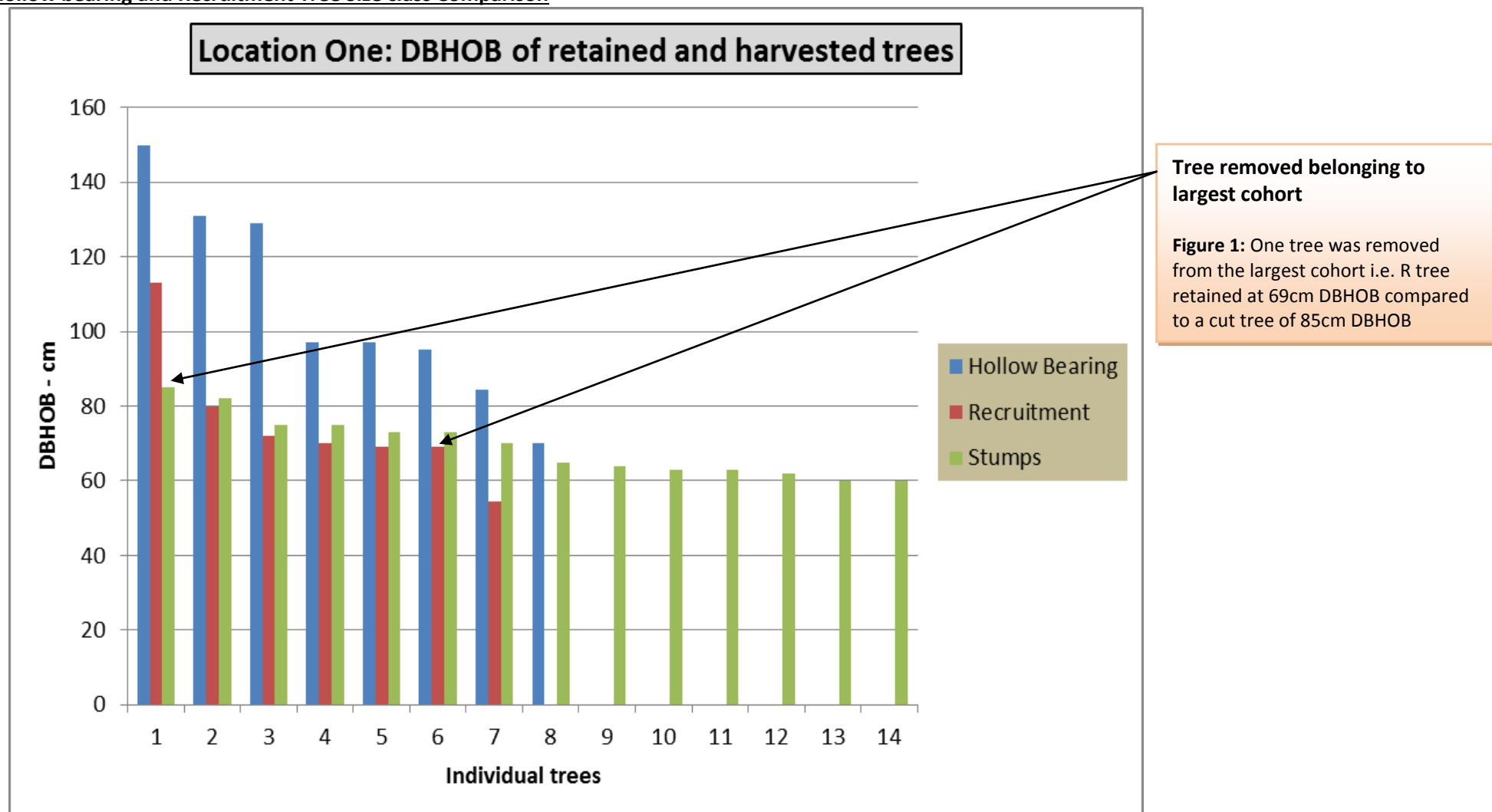
- ***Belong to a cohort of trees with the largest dbhob***: Across the two HA area assessed EPA officer found that two trees belonging to a cohort of trees with the largest DBH were removed. Location 1 one tree was removed from the largest cohort i.e. R tree retained at 69 compared to a cut tree of 85 (see table 4 and figure 1 below). Location two one tree was removed from the largest cohort i.e. R tree retained at 65 compared to a cut tree of 89 (see table 4 and figure 2 below). Cut tree diameters were calculated using a conservative taper function.
- ***located such that they result in retained trees being evenly scattered throughout the net logging area***: nine out of ten plots contained compliant R trees.
- ***good crown development***: all trees were considered to have good crown development i.e. not suppressed and mature/late mature in development
- ***minimal butt damage***: Officers didn't find any instances of butt damage to retained trees
- ***represent the range of hollow-bearing species that occur in the area*** – species represented the range of hollow bearing trees within the area

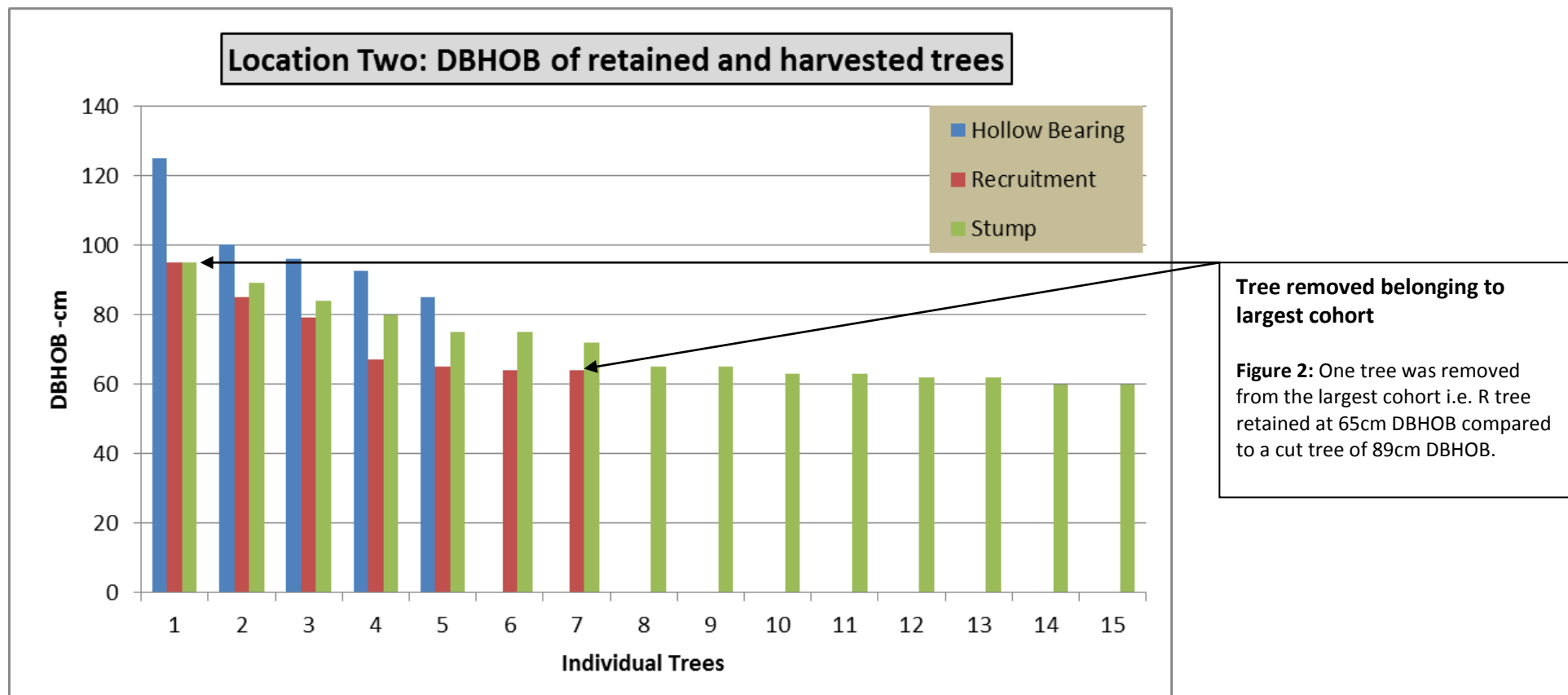
Despite FCNSW fulfilling its requirement with the retention rates (TSL 5.6ci), FCNSW have failed to select the most appropriate trees available for selection. The EPA noted that the smallest retained R tree was considered mature (Modified Jacobs Growth assessment) which in turn supports the finding that mature trees were felled, which is a key component of recruitment trees.

Table 4: Recruitment tree characteristics across assessed areas

Plot	Species	DBHOB or Stump height	Hollows or Stump Diameter	Crown Damage	Logging Debris	Bumper	Ground Disturbance	Tree Features Burls and/or Protuberance	Crown Development	Tree Growth Stage
Assessment Location 1										
Plot 1	Tallowwood	69	N	Y Operator	N	N	N	N	Co Dominant	Mature
Plot 1	Black Butt	113	Y	N	N	N	Y Low	Y	Co Dominant	Mature
Plot 1	Stumps	82,75,73,70,52,33								
Plot 2	Black Butt	69	N	Y Operator (Minimal)	N	N	N	Y	Co Dominant	Mature
Plot 2	Stumps	85,73,63,60,49,49,46,40								
Plot 3	Black Butt	70	Y	N	N	N	N	N	Dominant	Mature
Plot 3	Stumps	64,62,60,58,52,51,50,49,45,45,42								
Plot 4	Black Butt	72	N	N	N	N	N	Y	Co Dominant	Mature
Plot 4	Black Butt	80	N	N	N	N	N	Y	Co Dominant	Mature
Plot 4	Stumps	75,55,30								
Plot 5	Tallowwood	54.5	N	N	N	N	Y (Low)	Y	Co Dominant	Mature
Plot 5	Stumps	65,63,45,40								
Assessment Location 2										
Plot 1	Black Butt	95	N	N	N	N	Y Low	Y	Dominant	Mature
Plot 1	Stumps	95,84,75,72,63,62								
Plot 2	No R tree retained in this plot.									
Plot 2	Stumps	80,60,60,55,55								
Plot 3	Black Butt	67	N	Yes Natural	N	N	Yes (Low)	Y	Co Dominant	Mature
Plot 3	Black Butt	79	N	N	N	N	N	Y	Dominant	mature
Plot 3	Stumps	65,62,52,52								
Plot 4	Tallowwood	64	N	N	N	N	Yes (Moderate)	Y	Co Dominant	Mature
Plot 4	Unknown	65	N	N	N	N	N	Y	Co Dominant	Mature
Plot 4	Stumps	89,75,55,52,40								
Plot 5	Black Butt	64	N	N	N	N	Y (Low) Snig Track	Y	Co Dominant	Mature
Plot 5	Stumps	65,63,45,40								

Hollow bearing and Recruitment Tree Size class Comparison



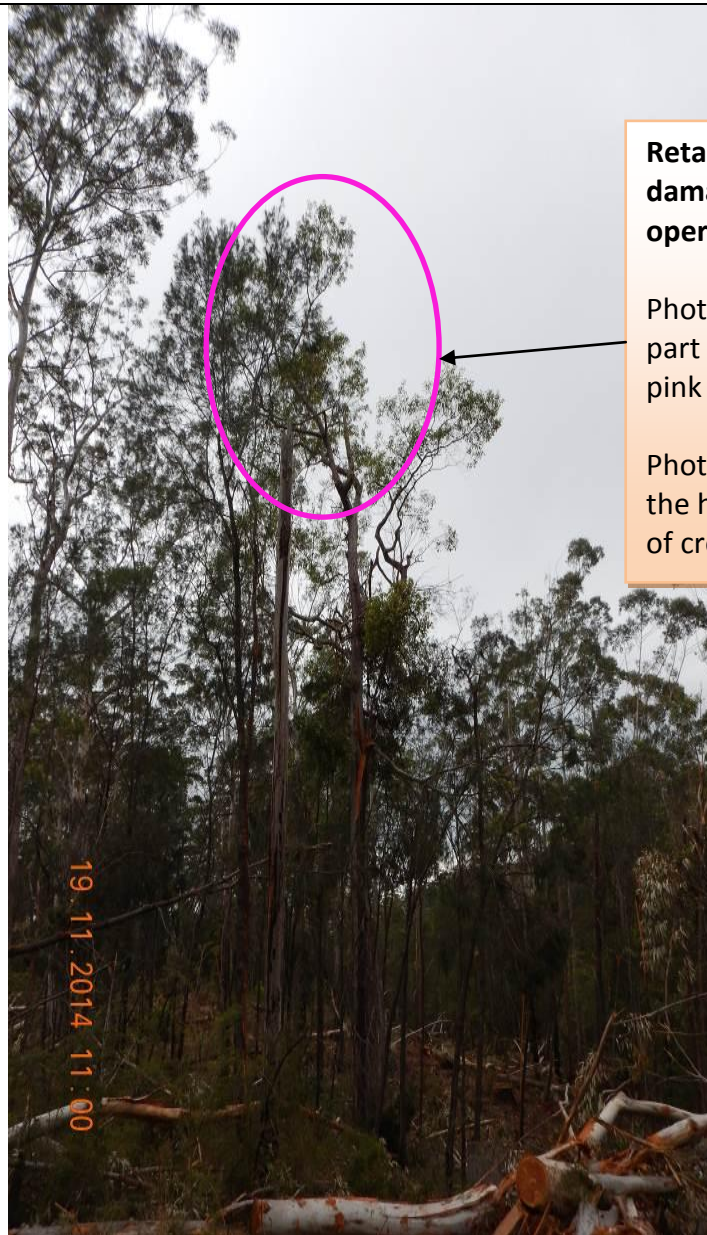


WHY IS COMPLIANCE WITH THIS TSL CONDITION IMPORTANT?

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)*)

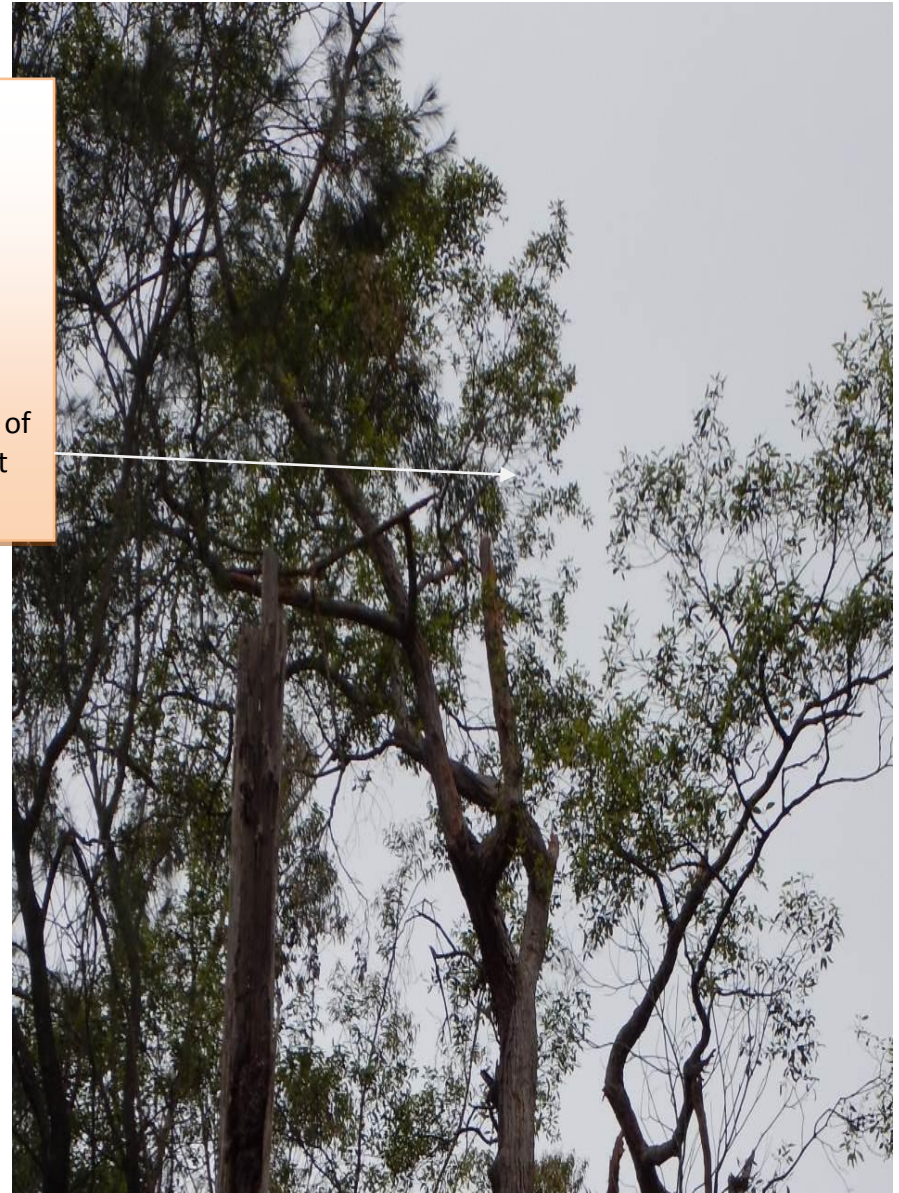
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**Retained Recruitment trees
damaged during harvest
operations**

Photo left showing tree with
part of crown missing (within
pink circle).

Photo right showing close up of
the head of the tree with part
of crown missing.



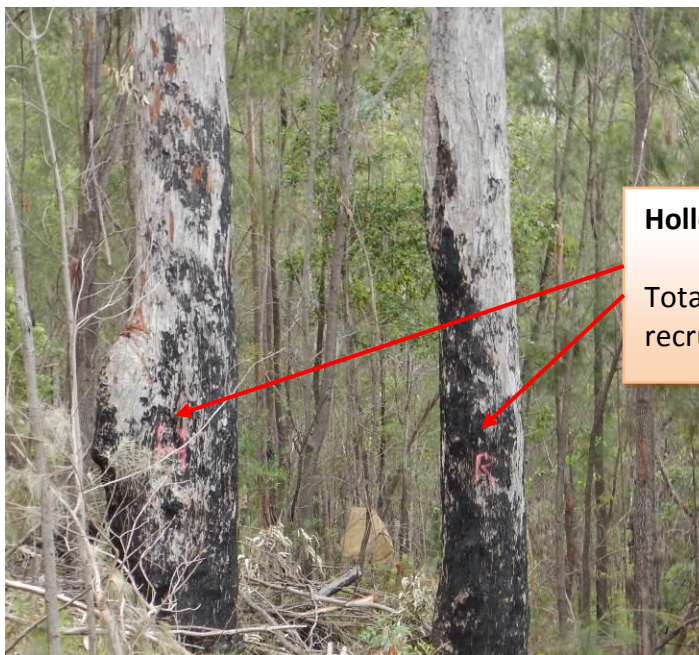
CONDITIONS RELATED TO HOLLOW BEARING & RECRUITMENT TREES (NON-REGROWTH ZONE) – PROTECTION

Condition No. and Detail	Compliant? Yes/No/Not determined/Not applicable	Number of non- compliance and (sample size)	Action required by licensee
5.6 h) Protection of retained trees iii. Retained trees referred to in conditions 5.6 (a) i., 5.6 (b) i., 5.6 (c) i., 5.6 (d) i., 5.6 (e) i., 5.6 (f) i., 5.6 (f) iii. and 5.6 (f) iv. of this licence must be marked for retention. The only exception to the marking of the retained trees can occur where the understorey consists of thick impenetrable lantana greater than one metre high or other impenetrable understorey. SFNSW must clearly document and justify such situations in harvest planning documentation either during pre-planning or as it becomes apparent during compartment mark-up.	YES	0/1	

Comment and Evidence

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

EPA officers recorded 21 hollow bearing and recruitment trees that had been marked for retention within the assessed area. EPA officers also made a further observation that other tree marking had occurred within other areas of the compartment.



Hollow bearing and recruitment trees marked

Total of 21 marked hollow bearing and recruitment trees marked in 2 hectare area

CONDITIONS RELATED TO KOALA PROTECTION – KOALA MARK UP			
Condition No. and Detail	Compliant? Yes/No/Not determined/Not applicable	Number of non- compliance and (sample size)	Action required by licensee
<p>5.2.2 Koala Mark-up Searches</p> <p>a) In compartments which contain preferred forest types, marking-up must be conducted at least 300 metres in advance of harvesting operations.</p> <p>b) During the marking up of the compartment, an adequately trained person must inspect trees at ten metres intervals. Primary browse trees must be inspected. In the event that there are no primary browse trees, secondary browse trees must be inspected. In the event that there are no primary browse trees or secondary browse trees, other trees and incidental browse trees must be inspected. Inspections must include thoroughly searching the ground for scats within at least one metre of the base of trees greater than 30 centimetres dbhob.</p>	<p>Yes</p> <p>Not determined</p>	<p>0/1</p> <p>0/1</p>	
Comment and Evidence			
<p>EPA officers determined that condition 5.2.2 (a) was compliant in the assessed area.</p> <p>EPA officers assessed compartment mark-up searches ahead of the active operations north east of log dump ten. EPA officers observed that hollow bearing and recruitment trees had been marked up to the furthest extent from harvesting which complied with the TSL requirements of 300m ahead of active operations. EPA officers were not able to determine if individual trees had been inspected for evidence of Koala activity as per the TSL requirements. As such 5.2.2b) was not determined.</p>			

CONDITIONS RELATED TO RAINFOREST AND RAINFOREST 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
<p>5.4 - Rainforest</p> <p>a) Specified forestry activities, except road and snig track construction in accordance with condition 5.4 (e), and road re-opening, are prohibited within all areas of Rainforest and exclusion zones around warm temperate Rainforest.</p>	No	2/2	*This matter will be investigated outside the audit process.

Comment and Evidence

*This matter will be progress outside the audit process.

EPA officers observed two areas south of log dump where specified forestry activities occurred within the mapped rainforest. Officers observed two snig tracks through the rainforest exclusion zone south of log dump two see figure 3 below.

- WP 1381 65 metre snig track incursion into the rainforest exclusion zone.
- WP 1383 70 metre snig track incursion into the rainforest exclusion zone.

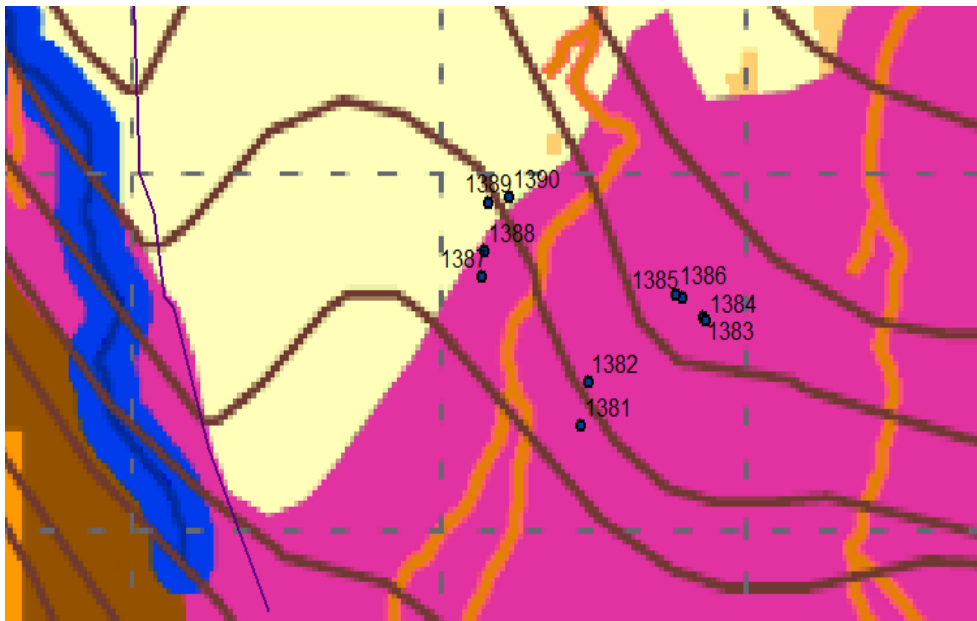


Figure 3 Waypoints showing extent of snig tracks into rainforest exclusion zone.



Snig track construction through mapped rainforest area viewing west at WP 1384.

CONDITIONS RELATED TO RAINFOREST AND RAINFOREST EXCLUSION ZONES – MARKING

Condition No. and Detail	Compliant? Yes/No/Not determined/Not applicable	Number of non- compliance and (sample size)	Action required by licensee
<p>5.1F</p> <p>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.</p>	Yes	0/1	This matter will be part of the investigation done outside the audit process.

Comment and Evidence

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

EPA officers inspected one area of rainforest south of log dump two. Rainforest exclusion zone boundaries field marking was observed and recorded in one location near the area where specified forestry activities were conducted.

Further observation: Harvesting contractors onsite suggested that field marking of Rainforest areas was generally not being conducted on ground. Some logging operators carried GPS units with harvest operational maps. Despite the marking at this location the EPA will investigate this matter outside the audit process.

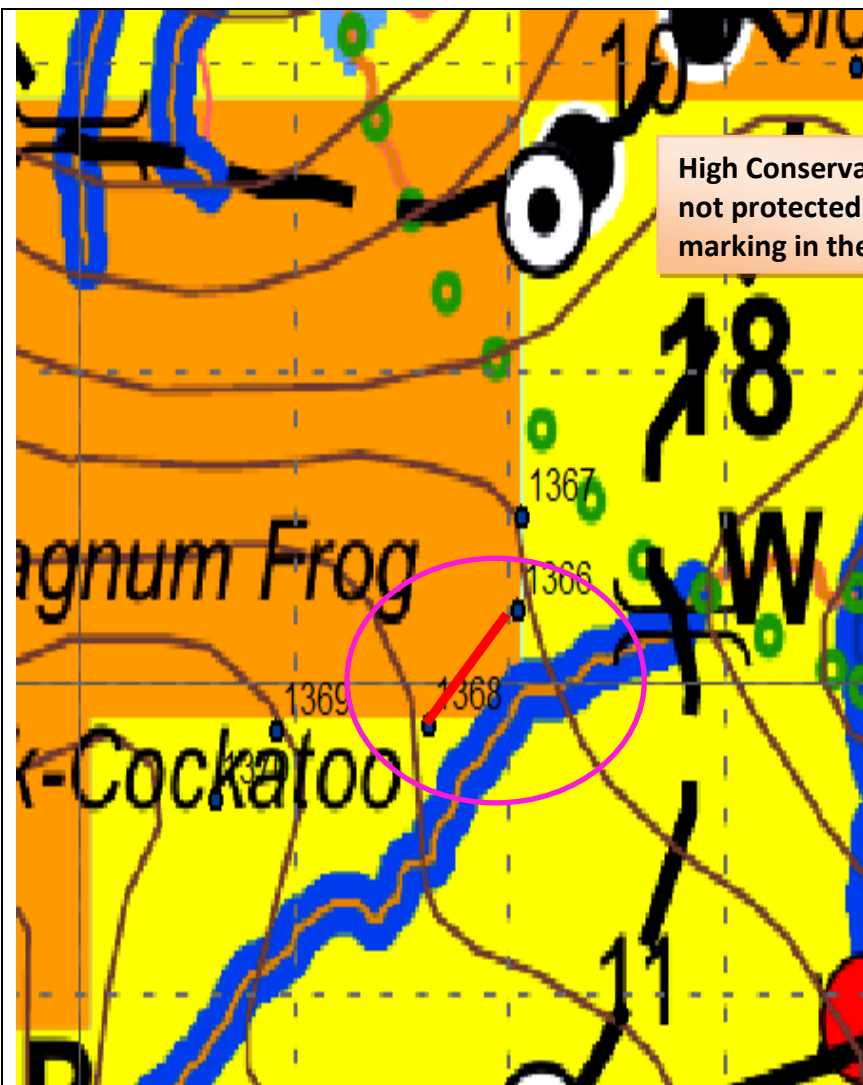


Rainforest exclusion zone boundary clearly marked in the field

Rainforest exclusion zone marking was observed and recorded in one location near the area where specified forestry activities were conducted.

CONDITIONS RELATED TO HIGH CONSERVATION VALUE OLD GROWTH – PROTECTION

Condition No. and Detail	Compliant? Yes/No/Not determined/Not applicable	Number of non- compliance and (sample size)	Action required by licensee
5.3 a) Specified forestry activities, except tree felling in accordance with condition 5.3 (b), road and snig track construction in accordance with condition 5.3 (i), and road re-opening, are prohibited within all areas of High Conservation Value Old Growth Forest.	No	1/3	This matter will be investigated outside the audit process.
Comment and Evidence			
<p>EPA inspected three locations of High Conservation Value Old Growth across the harvesting operation. EPA found that this condition was complied with at two locations and a non-compliance at one location. Location One (detailed below) will be progressed outside the audit process. Locations two and three form part of the audit findings.</p> <p><u>HCVOG Location One</u>: Not compliant - EPA officers observed a 55m length of snig track through mapped old growth south of log dump ten see figure 4 below. Officers recorded specified forestry activities within this zone, including snig track construction.</p> <p>WP 1366 start of snig track through old growth exclusion zone.</p> <p>WP 1368 end of snig track through old growth exclusion zone. The snig track through the exclusion zone was 55m in length.</p> <p>* Images shown below.</p> <p><u>HCVOG Location Two</u>: Compliant - EPA officers inspected an area north east of log dump nine (9). An area of 70 metres was assessed. No specified forestry activities were observed within the mapped high conservation old growth area. EPA officers noted that the exclusion zone was marked in the field with three bar mark up. Waypoints 1379 and 1380 is the edge of the marked HCVOG with no harvesting around that area. EPA officers note that the exclusion zone marked in the field was ranging from 7-11 metres from the mapped feature. – see image contained in marking criteria for exact location.</p> <p><u>HCVOG Location Three</u>: Compliant - EPA officers inspected an area north east of log dump ten (10). An area of 55 metres was assessed. No specified forestry activities were observed within the mapped high conservation old growth area. EPA officers noted that no harvesting occurred within the area. Evidence of tracks pushed up to the HCVOG boundary but not into the exclusion zone boundary. EPA officers noted that the exclusion zone was not marked in the field. Waypoints 1379 and 1380 is the edge of the marked HCVOG with no harvesting around that area – see image contained in marking criteria for exact location.</p>			



High Conservation Value Old Growth
not protected and no boundary
marking in the field

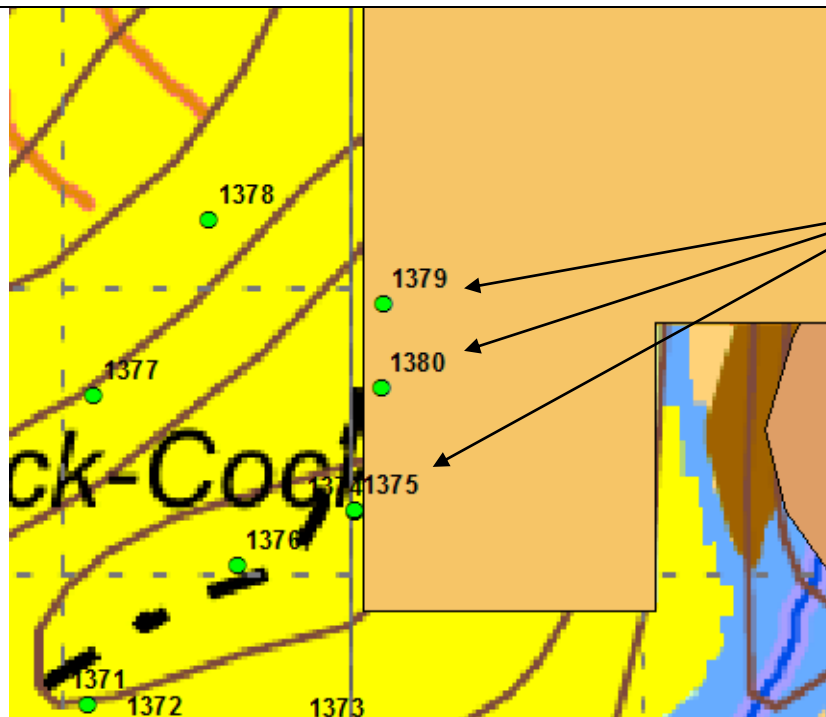


Figure 4: Location One: Snig track shown as red line within the pink circle, between WP1366 and 1368 and within old growth exclusion zone.

Location One: Snig track through high conservation value old growth exclusion zone. The track through old growth extends north east from where the photo was taken to EPA officer standing on opposite boundary of old growth.

CONDITIONS RELATED TO HIGH CONSERVATION VALUE OLD GROWTH – MARKING			
Condition No. and Detail	Compliant? Yes/No/Not determined/Not applicable	Number of non- compliance and (sample size)	Action required by licensee
5.1F 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.	No	3/3	This matter will be investigated outside the audit process.
Comment and Evidence			
<p>EPA found that this condition was not complied with in all areas assessed.</p> <p>EPA officers inspected three locations of High Conservation Value Old Growth. Location One (detailed below) will be progressed outside the audit process. Locations two and three form part of the audit findings.</p> <p><u>HCVOG Location One</u>: Not compliant - EPA officers observed no field marking of the old growth exclusion zone boundary in the area assessed. First order drainage line was marked up adjacent to the old growth exclusion zone. Discussions with harvesting crew suggested that marking of old growth areas was not being conducted on ground. Logging Operators carried GPS units which showed exclusion zones such as old growth.</p> <p><u>HCVOG Location Two</u>: Not compliant - EPA officers inspected a 70 metres length north east of log dump nine (9). EPA officers noted that marking in the field was done with three bar mark-up but it was done at the incorrect location. Trees were marked in areas ranging from 7-11 metres within the mapped feature – see images contained below. Accordingly the mapped exclusion zone boundary was not marked in the field at this location. Waypoints 1379 and 1380 is the edge of the marked HCVOG with no harvesting around that area.</p> <p><u>HCVOG Location Three</u>: Not compliant - EPA officers inspected an area north east of log dump ten (10). An area of 55 metres was assessed. EPA officers noted that the exclusion zone boundary was not marked in the field at this location. No specified forestry activities were observed within the mapped high conservation old growth area. Evidence of tracks being pushed in were present up to the HCVOG boundary but not within the exclusion zone. Waypoints 1364 and 1365 is the edge of the marked HCVOG with no harvesting around that area.</p>			

High Conservation Value Old Growth protected with incorrect or absent boundary marking in the field



Location Two:

An attempt was made to mark the boundary in the field but it was done in the incorrect location. Waypoints 1379 and 1380 were taken beside field marking of three bars. This field marking was in an incorrect location being 7 to 11 metres within mapped high conservation value old growth exclusion zone. So the actual boundary of the mapped high conservation value old growth area was not marked in the field.

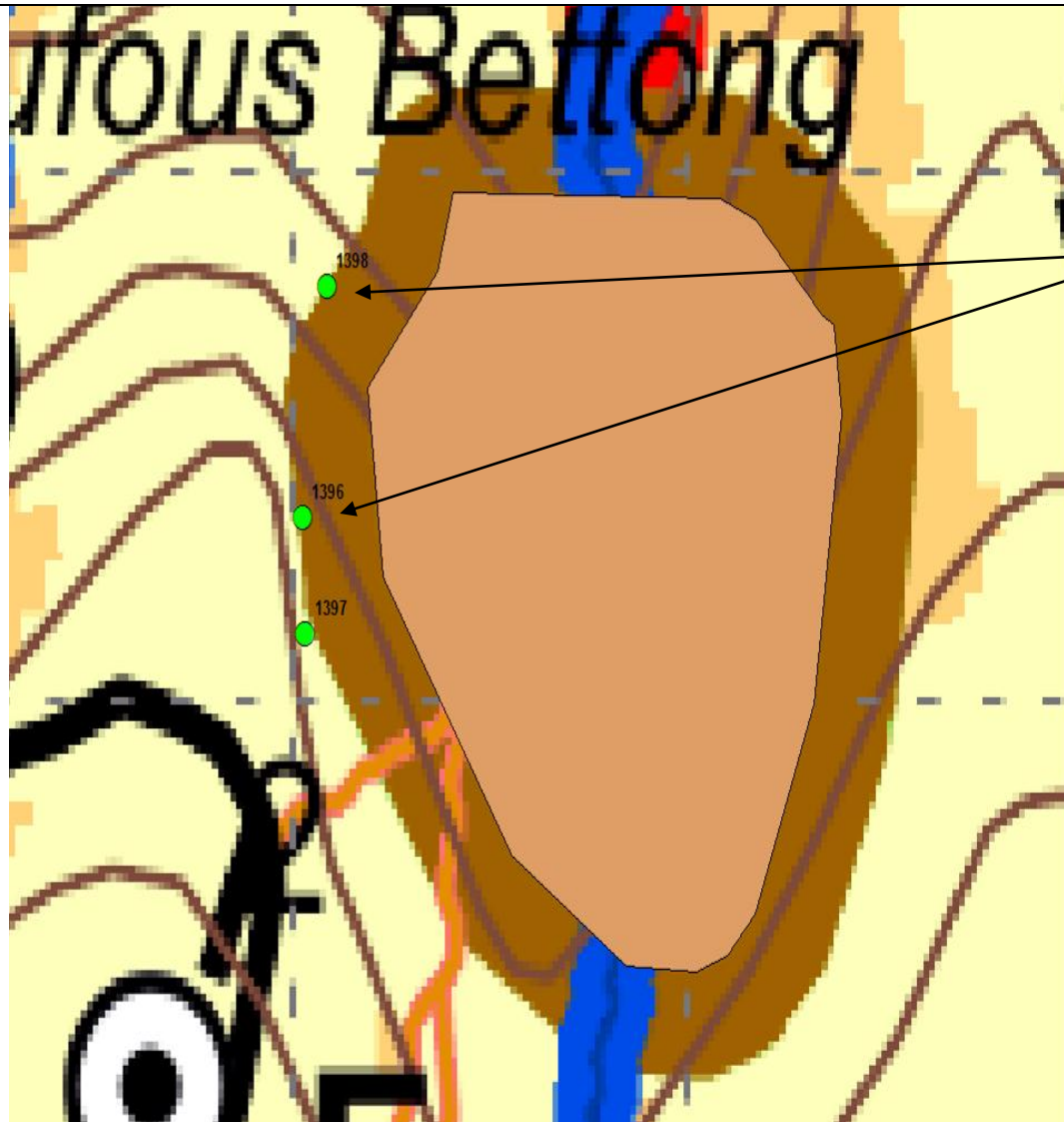


Location Three:

No field marking on the boundary of the mapped high conservation value old growth. A nearby hollow bearing tree was marked in the field but not the exclusion zone boundary.

CONDITIONS RELATED TO ROCKY OUTCROPS AND EXCLUION ZONE – PROTECTION

Condition No. and Detail	Compliant? Yes/No/Not determined/Not applicable	Number of non- compliance and (sample size)	Action required by licensee
5.11 Rocky Outcrops and Cliffs a) Specified forestry activities are prohibited within areas of rocky outcrops and cliffs. b) In addition, exclusion zones of at least 20 metres wide must be implemented around all rocky outcrops more than 0.1 hectare (approx. 30 metres x 30 metres), and all cliffs. c) The felling of trees across the boundary of exclusion zones around rocky outcrops and cliffs is prohibited except where no more than six (6) trees containing timber logs are felled across the boundary in any 200 metre length of the boundary of the exclusion zones, whatever 200 metre length of boundary is considered.	5.11 a) Yes 5.11 b) Yes 5.11 c) Not determined	0/1 0/1 0/1	
Comment and Evidence			
<p>EPA determined two compliances and one not determined within the area assessed.</p> <p>EPA officers assessed one location of Rock Outcrop north of Log Dump 2. Harvesting was observed up to the boundary of the Rocky Outcrop exclusion zone.</p> <p>A seventy metre length of the boundary was assessed. No specified forestry activities were observed within the exclusion zone. Two (2) stumps were observed on the exclusion zone boundary. Twenty (20) tree heads were observed fallen across the boundary of the exclusion zone between WP 1397-1398. The EPA has reviewed FCNSW submissions which states that six trees have been fallen across the boundary line of the rocky outcrop feature through a 70 metre section. Compliance against this condition cannot be determined as the 200 metre zone was not measured. The EPA notes that in this specific circumstance that if the trend of falling across was maintained for the 200 metre length, approximately 16 trees would have been felled across the boundary, resulting in a non-compliance. As such, the EPA did not determine compliance with this condition. The EPA noted the presence of a mapped rocky outcrop feature at the site.</p>			



Cut stumps on the boundary of the rocky outcrop exclusion zone with the crown of the fallen tree in the exclusion zone. Photo below is stump at WP 1398



Figure 5: Showing waypoints along a 70m length of inspected rocky outcrop exclusion zone. EPA officers observed twenty (20) tree heads felled into the exclusion zone along the 70m inspected boundary.

CONDITIONS RELATED TO ROCKY OUTCROP EXCLUSION ZONE – MARKING			
Condition No. and Detail	Compliant? Yes/No/Not determined/Not applicable	Number of non- compliance and (sample size)	Action required by licensee
5.1 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.	No	1/1	An Action Plan must be developed and implemented to ensure proper in field marking of Rocky Outcrop required by TSL 5.1F.
Comment and Evidence			
<p>EPA found that this condition was not complied with in the area assessed.</p> <p>EPA officers assessed one location of Rock Outcrop north of Log Dump 2. A seventy metre length of the boundary was assessed. EPA officers observed no exclusion zone boundary marking in the field. Harvesting was observed up to the boundary of the Rocky Outcrop exclusion zone. No specified forestry activities were observed within the exclusion zone noting the high rate of fallen trees across the boundary length.</p>			

FURTHER OBSERVATIONS TABLE – KIPPARA STATE FOREST, COMPARTMENT 16-21

These are matters that were recorded during the field investigation but relate to conditions outside the audit scope

Relevant Condition	Number of non-compliances and sample	Risk Code	Details of matter	Recommendation
6.27 Threatened Flora: Monitoring program	N/A	N/A	EPA officers observed mark up and protection of at least 12 <i>Melaleuca groveana</i> plant individuals at WP 1399 adjacent Marowin Brook Road, West of log dump Six.	Continue to implement practice.

ACTION PLAN – KIPPARA STATE FOREST, COMPARTMENT 16-21

Condition No.	Number of non-compliances (and sample)	Action Details	Non-compliance Code	Target/Action Date
5.6c ii	2/14	R tree selection An action plan must be developed and implemented to ensure that recruitment trees are retained across the compartment having as many of the characteristics listed in TSL condition 5.6c ii and consistent the requirements of the R tree definition.	Yellow	End of March 2015
5.6h i	1/27	H&R tree protection An action plan must be developed and implemented to ensure that retained trees are protected as per TSL condition 5.6h (i).	Yellow	End of March 2015
5.1F	1/1	Rocky Outcrop mark up An Action Plan must be developed and implemented to ensure proper in field marking of Rocky Outcrop required by TSL 5.1F	Yellow	End of March 2015
5.3a	1/3	High conservation value old growth exclusion zone protection	Red	This matter will be investigated outside of the audit process
5.4a	2/2	Rainforest & rainforest exclusion zone protection	Red	This matter will be investigated outside of the audit process
5.1F	3/3	High conservation value old growth exclusion zone mark up	Red	This matter will be investigated outside of the audit process
Total	10			

EPA Audit Locations

EPA Identifier	Easting	Northing
1363	455808	6549309
1364	456417	6549189
1365	456361	6549199
1366	456203	6549023
1367	456205	6549053
1368	456162	6548986
1369	456091	6548984
1370	456063	6548962
1371	455909	6549356
1372	455920	6549346
1373	455983	6549346
1374	456002	6549423
1375	456001	6549423
1376	455961	6549404
1377	455912	6549463
1378	455951	6549524
1379	456011	6549495
1380	456010	6549466
1381	454646	6549729
1382	454648	6549741
1383	454686	6549760
1384	454687	6549759
1385	454679	6549765
1386	454677	6549766
1387	454614	6549771
1388	454615	6549778
1389	454616	6549792
1390	454623	6549793
1391	454595	6549856
1392	454608	6549916
1393	454668	6549972
1394	454707	6550014
1395	454730	6550060
1396	454803	6550236
1397	454804	6550214
1398	454809	6550280
1399	455722	6548951

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 2: RISK ASSESSMENT OF NON-COMPLIANCE

Condition No. / Page No	EPA draft finding / risk categorisation	Location – description, GPS	FCNSW submission	EPA response to FCNSW submission	EPA final finding & risk categorisation
5.6 c ii (Page 5)	R tree selection Not Compliant Code Yellow		<p>FCNSW consider that the EPAs evidence and FCs evidence demonstrate that trees selected as recruitment trees were selected from the cohort of trees with the largest dbhob and the audit result should be changed to compliant.</p> <p>It is unclear how the EPA could consider from their results that the mark-up is non-compliant with this condition. The audit identified that 2 trees belonging to a cohort of trees with the largest dbh were removed, when in fact many trees from that cohort were removed. That cohort of trees made up the sawlog sized trees removed during the operation. The EPA allege that FCNSW has failed to select the most suitable trees available for selection, however the licence does not require selection of the most appropriate trees but rather trees that meet a set of criteria. Presumably the EPA allegation is that those two retained recruitment trees (65 cm and 69 cm) were not selected from the cohort of trees with the largest dbh.</p> <p>It was evident at the plots at both assessment sites 1 and 2, that an older late mature/senescent age-class existed that was used to select habitat and recruitment trees. The next largest size cohort existed of mature growth stage trees that were also selected for retention as recruitment trees.</p> <p>In the EPA assessment plots the hollow-bearing cohort ranged from 70-150 cm. The mature age cohort of retained trees ranged from 55-113 cm. FCNSW view trees selected from this size cohort as meeting the requirement of selected from a cohort of trees with the largest dbhob.</p>	<p>The EPA considered FCNSW submissions and field evidence gathered.</p> <p>The EPA considers that FCNSW submission focuses on a number of key elements relating to the determination of cohort, as referenced within 5.6 c ii</p> <p>FCNSW submission focusses on the terminology of age cohort. The EPA notes that the TSL condition explicitly refers to a cohort of trees with the largest dbhob. The EPA notes that there is no reference to cohort being interpreted as age cohort.</p> <p>Notwithstanding this, trees from the same regeneration event are not necessarily of the same size. The intent of the condition is clear and that the largest trees from that cohort are to be retained. As such, the EPA assesses tree retention using size comparison of trees retained versus those removed to inform this process.</p> <p>Specifically, at the sub-plot level the EPA considered that compliant selection of recruitment trees would have included recruitment trees in Area 1 Plot 2 as the trees 85cm or 73cm and not 69cm which was retained. Additionally, in Area 2 Plot</p>	<p>Unchanged finding</p> <p>Not Compliant</p> <p>Code Yellow: 5.6 c ii</p> <p>An action plan must be developed and implemented to ensure that recruitment trees are retained across the compartment having as many of the characteristics listed in TSL condition 5.6c ii and consistent the requirements of the R tree definition.</p>

		<p>FCNSW measured a un-harvested area on 9/2/2015 to assess the diameter range of age cohorts in a stand not harvested (Near Assessment Location 1: 456040; 6549400). In this plot it was evident that there were 3 age cohorts with different diameters. The cohort of the largest dbhob were over-mature and senescent growth stage trees ranging from 78 cm to 150 cm+ (dbhob 78, 110, 123, 93, 150 +), the next largest cohort of co-dominant or dominant trees were mature aged-trees clearly of the same age having regenerated from the same event which ranged from 47-84 cm in dbhob (61, 55, 47, 50, 62, 84, 76, 65, 56 cm) as well as a younger age-class of smaller dbhob trees (21, 28, 43, 26, 18, 32). FC agree if trees were selected from this younger cohort there would be a compliance issue, however this was not the case.</p> <p>The EPAs why is it important statement from each of these audits indicates that selection of trees from the oldest available cohort is important as this reduces the potential for a time-lag in hollow-availability. Hollow-development is clearly an age related process and as tree diameter is strongly correlated with age the licence requires the oldest available trees to be retained as recruitment trees, amongst a range of other criteria. FCNSW view of the condition is that the cohort of the largest dbhob refers to an age cohort, and the diameter range of this cohort will often be large. This view is consistent with the Bulahdelah action plan sent to the EPA in February 2013 and with the training Andy Stirling provided to FCNSW following negotiation and development of the condition. FC requests that in future EPA audits of recruitment tree selection, that they identify whether selected trees come from that age cohort consistent with wording and intent of the licence condition, rather than the relative size of adjacent stumps and an arbitrary view of a size range for the largest cohort.</p> <p>It was evident that the EPA audit incorrectly identified species on numerous occasions (eg. Tree ID as a Mahogany that was a tallowwood, a recruit called tallowwood that was a turpentine,</p>	<p>4 the 89cm or 75cm trees would have been considered compliant and not the 65cm retained.</p> <p>Trees removed versus retained represented a different cohort, i.e cohort of the largest dbhob. In both instances trees were felled belonging to a cohort of trees with the largest dbhob. The selection quality of R resources is just as imperative as the retention rates. Accordingly FCNSW have failed to correctly implement the recruitment tree condition on two individual occasions.</p> <p>FCNSW submissions refer to the 'next largest cohort' from hollow bearing trees. The LNE TSL has no reference to 'next largest cohort' clearly states the recruitment tree must be selected belonging to the 'cohort of trees of the largest dbhob'</p> <p>The EPA refers to research about hollow development. Research shows that the presence, abundance and size of hollows are positively correlated with tree basal diameter, which is an <u>index of age</u>. As age cannot be measured easily, size is used as a surrogate for field purposes. This is linked to the outcome of ensuring hollow development continues in production forests. 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: <i>Loss of Hollow-bearing Trees - key threatening process</i></p>	
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		<p>unidentified trees that were bloodwood) which, in conjunction with no field marking of where plots were established makes finding and responding to audit results difficult especially when waypoint locations are +/- 10 m.</p>  <p>Example of same age cohort of mature potential recruitment trees – 84, 62, 47, 61 cm dbhob left to right taken Near Assessment Location 1: 456040; 6549400. Branch of over-mature age class hollow-bearing visible in top left. Trees in this</p>	<p><i>determination - NSW Scientific Committee - final determination (2007))</i></p> <p>The EPA upholds its original audit final and requirement for an action plan.</p>	
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			cohort ranged from 78 to 150 cm + dbhob.		
5.6 h) (page 9)	Protection of retained trees Not Compliant Code Yellow		Based on the EPA audit findings there appears to be very low levels of damage to retained trees. It is FCNSW views that this level of damage is consistent with the objective of minimising damage to the greatest extend practicable. Having said this FCNSW will continue to work with contractors to ensure best practice is being achieved.	<p>The EPA accepts that FCNSW achieved a high compliance rate across the area assessed. Compliance rate does not determine whether a condition has been complied with. Compliance rate is not an element of the condition. There is not percentile of compliance. Accordingly, compliance rate is not considered when determining compliance (“Yes” or “No”) The EPA determines compliance based on the elements of the condition. Individual assessments on each tree are done. In this instance the tree was missing a large portion of its crown and limbs down the trunk.</p> <p>The EPA upholds it original decision of non-compliant.</p> <p>Please note: The extent of non-compliance and environmental harm is used when assigning the environmental risk category to a non-compliance. Extent is considered with the significance of the environmental receptor then combined with likelihood of environmental harm to obtain the overall risk category.</p> <p>The EPA upholds its original audit final and requirement for an action plan.</p>	<p>Unchanged finding</p> <p>Not Compliant</p> <p>Code: Yellow 5.6 h (i)</p> <p>An action plan must be developed and implemented to ensure that retained trees are protected as per TSL condition 5.6h (i).</p>
5.4 a) Page 13	SFA in rainforest Code Red		<p>FCNSW agree that the rainforest exclusion has been breached as outlined by the EPA</p> <p>This incident occurred on 15/10/2014 and was reported to FCNSW by the operator on 22/10/2014. FCNSW have investigated the incident. It is understood that the harvesting</p>	The EPA received your response. This matter will be investigated outside the audit process.	Not Applicable.

			<p>crew informed the EPA of the location of this breach during their audit process.</p> <p>An existing snig track through mapped rainforest exclusion was re-opened by the harvesting contractor. A contributing factor to the breach occurring was that the rainforest did not exist on the ground, and was actually Blackbutt forest type. Rainforest and Blackbutt forest types are visually very different and easily identified in the field. Forest Operators are well experienced in identification of various forest types and well aware of the requirement to reserve rainforest from harvesting. Had the rainforest being evident on the ground, this would have been a visual queue to the operator that he was approaching an exclusion boundary. In that there was no change in forest type the operator could not visually identify the boundary.</p> <p>The operator involved in this incident was not a regular member of the harvesting crew. The operator re-opened the snig track using the dozer. FCNSW had supplied a GPS for use in the dozer as this machine is often the first machine within the NHA to approach harvesting boundaries as it opens snig tracks and brushes around tree to be harvested. FCNSW also supply a GPS to the contractor for use in the harvester to locate exclusion boundaries. On this occasion the dozer operator and the crew failed to discuss the location of the exclusion boundaries prior to harvesting south of dump 2, and make appropriate plans to ensure exclusions were not breached. While a GPS was in the dozer the operator failed to use it to check his location in relation to the exclusion boundaries as he reopened the snig track. Failure to apply due diligence to the identification of the rainforest boundary was a fundamental error and the primary root cause of the incident.</p> <p>Both GPS units used by the harvesting crew contain a harvesting plan map KMZ file so that the operators can see their exact location in relation to mapped exclusions. While the Garmin GPS units are very easy to use, all operators have received on the job training in their use within the context of locating boundaries.</p>		
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			<p><u>Corrective Actions</u></p> <ul style="list-style-type: none"> • The contractor responsible for this breach has been issued with a Penalty Infringement Notice for non compliance with the harvesting plan. Any further incidents will result in issue of further penalty infringement notice, and / or suspension of his licence. • The Forest Operator responsible for this breach is not currently working on the forest, however when he returns to work on State Forest, he will be retrained in the use of GPS and its operation in locating and protecting exclusion boundaries. 		
5.3 a) Page 15	SFA in HCVOG Code Red		<p>FCNSW agree that there was a non compliance associated with High Conservation Old Growth Forest as outlined by the EPA.</p> <p>FCNSW's contractor re-opened an existing snig track through High Conservation Old Growth Forest to access a section of the net harvest area that was not accessible through the NHA. FCNSW and the harvesting contractor had discussed assessing the drainage feature to see if a snig track could be constructed between the HCVOG and the drainage feature (within the NHA). When it became evident that this was not possible, the existing snig track was re-opened by the harvesting contractor. FCNSW did not approve the re-opening of this snig track. When FCNSW became aware that the snig track had been constructed, a schedule 6 approval for the snig track was conducted and signed to enable the track to be used.</p> <p><u>Corrective Actions</u></p> <ul style="list-style-type: none"> • The harvesting contractor responsible for this breach has been issued with a warning letter for constructing a snig track through HCVOG without approval. Any further incidents will result in the issue of a penalty infringement notice, and / or suspension of contract. • While FCNSW harvesting contractors have been trained, the procedures for obtaining schedule 6 approvals under the TSL has been explained in detail 	The EPA received your response. This matter will be investigated outside the audit process.	Not Applicable.

			<p>and emphasised to this harvesting crew.</p> <ul style="list-style-type: none"> Access to isolated sections of the NHA will aim to be better investigated by FCNSW through the planning process and / or the pre harvest mark-up and survey process to identify appropriate access, and where required to gain approvals. 		
5.11c Page 19 and 20)	<p>Falling into rocky outcrop buffer</p> <p>Not Compliant</p> <p>Code: Yellow</p>		<p>FCNSW consider that only 6 trees containing timber logs were felled into the rocky outcrop buffer zone and the audit result should be changed to compliant.</p> <p>FCNSW inspected the 70 m boundary of the alleged non-compliance on 9/2/2015 and could only identify 6 trees that had been deliberately felled into the mapped rocky outcrop buffer. A number of other tree heads had fallen into the buffer as a result of the adjacent snig-track construction or resulting from being knocked in from the falling of other trees.</p> <p>Inspection above and below the 70 m section inspected by the EPA did not identify any additional trees with timber logs felled into the buffer. The trees felled into the buffer in that section were fell as there was no other practical location to fall them due to the location of the snig-track and the steep slope between that track and the buffer for that 70 m section. Above and below that section the slopes moderated and felling could be undertaken safely without falling into the buffer. Notably there was no actual rocky-outcrop present at the location.</p>	<p>The EPA reviewed FCNSW submissions which states that six trees have been fallen across the boundary line of the rocky outcrop feature through a 70 metre section. Compliance against this condition cannot be determined as the 200 metre zone was not measured. The EPA notes that in this specific circumstance that if the trend of falling across was maintained for the 200 metre length, approximately 16 trees would have been felled across the boundary, resulting in a non-compliance.</p> <p>As such, the EPA cannot determine compliance and changes its findings to not determined. The EPA noted the presence of a mapped rocky outcrop feature at the site.</p>	<p>Changed finding</p> <p>Not determined.</p>
5.1 (F) Page 21	<p>Boundary marking</p> <p>Not Compliant</p> <p>Code Yellow (Rocky Outcrop)</p>		<p>Condition 5.1F was written before the practical use of GPS technology was implemented for boundary identification. Since the introduction of GPS technology there has been considerable improvements in boundary identification and harvesting compliance associated with these boundaries. It is FCNSW view that boundary location using GPS within harvesting machines is best practice, the most accurate approach, and the safest method of locating and protecting exclusions. As there was no rocky outcrop at the site, the map is the map approach and use of GPS to locate and protect the erroneous boundary was appropriate.</p>	<p>The EPA considered Forestry Corporation submissions. FCSNSW submissions refer to the use of GPS based devices as means of locating the zones for protection. This being the FCNSW approach since May 2013. The licence condition clearly states <i>"all exclusion zone and buffer zone boundaries must be marked in the field"</i>. This means marked in the field, physical marking. Physical marking of such boundaries using pink tape or paint on</p>	<p>Unchanged finding</p> <p>Not Compliant</p> <p>Code: Yellow 5.1F</p> <p>An Action Plan must be developed and implemented to ensure proper in field marking of Rocky Outcrop required by TSL 5.1F.</p>

				<p>vegetation occurs extensively and when it does the EPA considers this action to be compliant with the licence condition. Not having this physical marking on boundaries increases the likelihood for operators to misinterpret exclusion zone boundaries and operate within exclusion zones. The EPA investigated and took action a number of times for not marking boundaries and logging within exclusion zones. These offences and associated environmental harm may have been avoided if boundaries were clearly marked in the field.</p> <p>The EPA notes that FCNSW were issued with penalty notices for operating within a rocky outcrop in Kiparra State Forest in 2014 and considered one of the root causes to be failure to mark exclusion zones.</p> <p>The EPA retains the audit finding of non-compliant and requires an action plan.</p> <p>Note: A mapped rocky outcrop feature was evident in the field.</p>	
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