

## EPA AUDIT REPORT – BODALA STATE FOREST, COMPARTMENT 3010

<b>Auditee:</b>	FORESTRY CORPORATION OF NSW (FCNSW)
<b>Audited State Forest &amp; Cpts:</b>	BODALLA STATE FOREST, COMPARTMENT 3010
<b>Region:</b>	Southern Region Integrated Forestry Operations Approval (IFOA)
<b>Date/Audit timing:</b>	19 November 2014. Audit debrief with FCNSW staff held on 13 February 2015.
<b>Type of audit:</b>	Compliance
<b>Purpose of audit:</b>	Report on the level of compliance with conditions and environmental performance in line EPA compliance priorities.
<b>Audit objectives:</b>	<ol style="list-style-type: none"> <li>1. Assess compliance against audit criteria that reflect EPA compliance priorities.</li> <li>2. Assess and categorise risk of identified non-compliance or appropriate further observations.</li> <li>3. 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>4. Promote continuous improvement of the environmental performance of forestry operations.</li> </ol>
<b>Audit scope:</b>	<ul style="list-style-type: none"> <li>• Hollow bearing and recruitment trees</li> <li>• Basal Area Retention</li> <li>• Riparian Protection Zones – Mark-up and protection</li> </ul> <p><b>Physical scope:</b> This audit was limited to the physical boundaries of compartment 3010.</p> <p><b>Temporal scope:</b> The audit period adopted for assessment of compliance with operational conditions was on the day of the audit inspection (19 November 2014).</p>
<b>Audit criteria:</b>	<p>5.6 (d)(e)(h) Hollow bearing and recruitment tree retention, selection and protection</p> <p>5.7 Riparian habitat protection</p> <p>Condition 5 of the Southern Region IFOA – Basal Area Retention</p>
<b>Summary of Operations</b>	<p>Operation commencement date: 2 October 2014</p> <p>Silvicultural practice: Spotted Gum stands – single tree selection (STS) Heavy over 23% of harvest area, STS Medium over 55%, and STS medium (visual protection) over 22% of the harvest area.</p> <p>Stand age: Regrowth Zone</p>

## **1. Audit Findings – Overview**

The EPA identified 16 non-compliances and 8 compliances with the IFOA and TSL, 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.

<b>EPA Compliance Priority 14/15</b>	<b>Audit Scope</b>	<b>Compliant</b>	<b>Non-compliant</b>	<b>Not Determined</b>	<b>Not Applicable</b>
<b>Drainage feature protection</b>	<b>Filter strip</b>	2	0	0	0
	<b>Protection zone</b>	1	0	1	0
<b>Hollow bearing and recruitment trees</b>	<b>H Retention</b>	2	0	0	0
	<b>H Selection</b>	2	0	0	0
	<b>R Retention</b>	2	0	0	0
	<b>R Selection</b>	2	0	0	0
	<b>H&amp;R Protection</b>	2	0	0	0
<b>Feed tree protection</b>	<b>Further Observations</b>	0	1	0	0
<b>Basal Area Retention</b>	<b>Further Observations</b>	0	0	1	0
	<b>TOTAL</b>	<b>13</b>	<b>1</b>	<b>2</b>	<b>0</b>

## 2. Audit Recommendations

Condition No.	Number of non-compliances	Action Details	Non-compliance Code*	Target/Action Date
5.6(d) (i)	0	<b>Hollow Bearing Tree Retention</b> No specific action required	n/a	n/a
5.6(d) (ii), (iii)	0	<b>Hollow Bearing Tree Selection</b> No specific action required	n/a	n/a
5.6(e)	0	<b>Recruitment Tree Retention</b> No specific action required.	n/a	n/a
5.6(e) (i) – (v)	0	<b>Recruitment Tree Selection</b> No specific action required	n/a	n/a
5.6 h)	0	<b>Hollow Bearing &amp; Recruitment Tree Protection</b> No specific action required	n/a	n/a
Appendix A, Schedule 4A Clause D	0	<b>Protection of drainage features</b> No specific action required	Not determined	n/a
Clause 5.6 h *	1	<b>Protection of retained trees.</b> Whilst this matter is outside the scope of the audit, the EPA draws FCNSW attention to this observation. Protection of retained feed trees was not adequately carried out with logging debris greater than 1 metre high within 5 metres of the retained tree.	Code Yellow	n/a
<b>Total</b>	<b>1</b>			

\* Further observation of audit

### **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 has responded to the findings. 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

# AUDIT FINDINGS TABLE – BODALLA STATE FOREST, COMPARTMENT 3010

Assessment of Compliance with the <i>Southern Region Integrated Forestry Operations Approval</i>																																														
Condition No.	Compliant? (Yes/No/ Not- determined)	Comment and Evidence	Number of non- compliance (sample size & unit)	Action required by licensee																																										
CONDITIONS RELATED TO THE RETENTION OF HOLLOW BEARING & RECRUITMENT TREES																																														
<i>Clause 5.6 Tree retention</i>	N/A	<p><b>Audit method and results</b></p> <p><u>Method</u> EPA officers established two randomly located transects each with five 0.2 hectare circular plots. Plots were surveyed for compliance with the following four clauses of the Southern Region IFOA:</p> <ul style="list-style-type: none"><li>• 5.6d (i) habitat tree retention</li><li>• 5.6e recruitment tree retention</li><li>• 5.6d (ii) &amp; (iii) habitat and recruitment tree selection</li><li>• 5.6h protection of retained trees</li></ul> <p><u>Results</u> <b>Transect 1, plots 1 to 5.</b></p> <p>Eight marked and three unmarked trees were retained in the one hectare assessed. The marked trees comprised of two H trees, two R tree and four E trees (Table 1).</p> <p><b>Table 1:</b> Transect 1 H &amp; R tree survey results.</p> <table><tr><th>Plot</th><th>Unmarked</th><th>H trees</th><th>R trees</th><th>E tree</th><th>Total</th></tr><tr><td>1</td><td>1</td><td>1</td><td>1</td><td></td><td>3</td></tr><tr><td>2</td><td>1</td><td>1</td><td>1</td><td></td><td>3</td></tr><tr><td>3</td><td></td><td></td><td></td><td>1</td><td>1</td></tr><tr><td>4</td><td></td><td></td><td></td><td>1</td><td>1</td></tr><tr><td>5</td><td>1</td><td></td><td></td><td>2</td><td>3</td></tr><tr><td><b>Total</b></td><td>3</td><td>2</td><td>2</td><td>4</td><td>11</td></tr></table>	Plot	Unmarked	H trees	R trees	E tree	Total	1	1	1	1		3	2	1	1	1		3	3				1	1	4				1	1	5	1			2	3	<b>Total</b>	3	2	2	4	11	N/A	N/A
Plot	Unmarked	H trees	R trees	E tree	Total																																									
1	1	1	1		3																																									
2	1	1	1		3																																									
3				1	1																																									
4				1	1																																									
5	1			2	3																																									
<b>Total</b>	3	2	2	4	11																																									


		<p><b>Transect 2, plots 1 to 5.</b></p> <p>Four marked and five unmarked trees were retained in the one hectare assessed. The marked trees comprised of zero H trees, zero R trees and four E trees (Table 2).</p> <p><b>Table 2:</b> Transect 2 H &amp; R tree survey results</p> <table><tr><th>Plot</th><th>Unmarked</th><th>H trees</th><th>R trees</th><th>E tree</th><th>Total</th></tr><tr><td>1</td><td></td><td></td><td></td><td>2</td><td>2</td></tr><tr><td>2</td><td></td><td></td><td></td><td>1</td><td>1</td></tr><tr><td>3</td><td>2</td><td></td><td></td><td></td><td>2</td></tr><tr><td>4</td><td></td><td></td><td></td><td>1</td><td>1</td></tr><tr><td>5</td><td>3</td><td></td><td></td><td></td><td>3</td></tr><tr><td></td><td></td><td></td><td></td><td>Total</td><td>9</td></tr></table> <p><b>Why is it important?</b> Hollow bearing trees provide habitat for many species and are a key component of ecologically sustainable forest management. The EPA considers that the retention of the <i>cohort of larger diameter, healthy, mature trees that represent the range of species that occur in the area</i> to be important for the maintenance of biodiversity, health and the productive capacity of these forest ecosystems.</p> <p>The EPA notes that forests of mixed age classes provide the greatest structural and habitat diversity for maintenance of biodiversity values.</p> <p>In the regrowth zone it is a requirement that for every hollow bearing tree retained in a harvesting operation one recruitment tree must also be retained. This is to provide for the long term development of hollows for habitat purposes.</p>	Plot	Unmarked	H trees	R trees	E tree	Total	1				2	2	2				1	1	3	2				2	4				1	1	5	3				3					Total	9		
Plot	Unmarked	H trees	R trees	E tree	Total																																									
1				2	2																																									
2				1	1																																									
3	2				2																																									
4				1	1																																									
5	3				3																																									
				Total	9																																									
CONDITIONS RELATING TO HOLLOW BEARING TREE - RETENTION																																														
<p><i>Clause 5.6 tree retention</i></p> <p><i>Clauses 5.6d (i) &amp; 5.6e Regrowth zone H&amp;R tree retention</i></p> <p><i>Within the regrowth zone the following requirements for retention of hollow bearing trees apply:</i></p>	Yes	<p><b>The EPA finds FCNSW compliant with clause 5.6 d (i) and 5.6e Regrowth zone H &amp; R tree retention.</b></p> <p><u>Hollow bearing trees</u></p> <p>Five hollow-bearing trees are required to be retained where they exist within the regrowth zone. Where five trees per hectare do not occur then all hollow-bearing trees in each hectare must be retained.</p>	0 (1) 1 ha assess area																																											

<p>(i) a minimum of five hollow bearing trees must be retained per hectare of net logging area. Where this density of hollow bearing trees is not available all hollow bearing trees within the net logging area must be retained.</p>		<p>FCNSW retained two hollow bearing trees per hectare in accordance with clause 5.6d (i) (Image 1).</p>  <p><b>Image 1.</b> Retained H tree, Transect 1, Plot 1.</p>		
<p><b>CONDITIONS RELATED TO HOLLOW BEARING TREE SELECTION</b></p>				
<p><u>Clause 5.6 tree retention</u></p> <p>Clauses 5.6d (ii) &amp; (iii) &amp; 5.6e Regrowth zone hollow-bearing tree selection</p> <p><i>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.</i></p> <p><i>Hollow-bearing trees must be selected with the objective of</i></p>	<p><b>Yes</b></p>	<p>The EPA finds FCNSW compliant with clause 5.6d (ii) &amp; (iii) regrowth zone hollow-bearing tree selection.</p> <p><u>Hollow bearing tree selection</u></p> <p>The two trees selected and marked as hollow bearing (H) trees meet the licence conditions for hollow bearing tree selection, as the trees:</p> <ul style="list-style-type: none"> <li>• had visible hollows, holes or cavities</li> <li>• were of the largest diameter cohort of trees</li> <li>• had good crown development</li> <li>• had minimal butt damage</li> <li>• were evenly scattered throughout the net harvest area</li> </ul>	<p>0 (2) 2 trees in 1ha assessed area</p>	

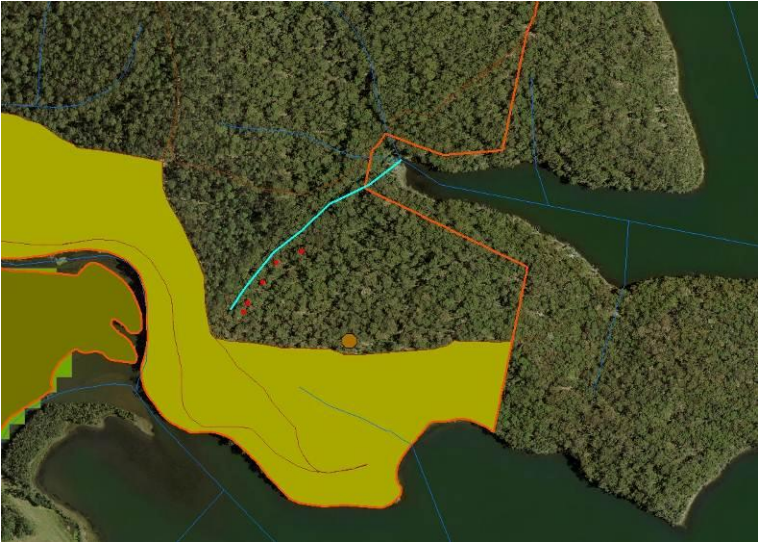
<p>retaining trees having as many of the following characteristics as possible:</p> <ul style="list-style-type: none"> <li>• belonging to a cohort of trees with the largest dbhob</li> <li>• good crown development</li> <li>• minimal butt damage</li> <li>• represent the range of hollow-bearing species that occur in the area.</li> <li>• located such that the result in retained trees being evenly scattered throughout the net logging area</li> </ul>				
<p align="center"><b>CONDITIONS RELATED TO RECRUITMENT TREE - RETENTION</b></p>				
<p><i>Clause 5.6 tree retention</i></p> <p><i>Clauses 5.6e Regrowth zone H&amp;R tree selection</i></p> <p><i>Within the regrowth zone, for each hollow bearing tree retained in (d) above a recruitment tree must be retained.</i></p>	<p><b>Yes</b></p>	<p><b>The EPA finds FCNSW compliant with clause 5.6e Regrowth zone tree retention.</b></p> <p>FCNSW retained two recruitment trees per hectare in accordance with clause 5.6e. For each hollow-bearing tree retained FCNSW retained a recruitment tree (Image 2). EPA did not obtain data on candidate R trees.</p>  <p><b>Image 2.</b> Selected, marked &amp; retained R tree, Transect 1, Plot 1.</p>	<p>0 (1) 1 ha assess area</p>	




CONDITIONS RELATED TO RECRUITMENT TREE - SELECTION				
<p><i>Clause 5.6 tree retention</i></p> <p><i>Within the regrowth zone.</i></p> <p><i>5.6 e) Recruitment trees must be selected with the objective of retaining trees having as many of the following characteristics as possible:</i></p> <p><i>i. belonging to a cohort of trees with the largest dbhob</i></p> <p><i>ii. located such that the result in retained trees being evenly scattered throughout the net logging area</i></p> <p><i>iii. good crown development</i></p> <p><i>iv. minimal butt damage</i></p> <p><i>v. represent the range of hollow-bearing species that occur in the area.</i></p>	Yes	<p><b>The EPA finds FCNSW compliant with clause 5.6e regrowth zone recruitment tree selection.</b></p> <p><u>Recruitment tree selection</u></p> <p>The two trees selected and marked as recruitment (R) trees met the licence condition for recruitment tree selection as the retained trees:</p> <ul style="list-style-type: none"> <li>were of the largest diameter cohort of trees</li> <li>had good crown development</li> <li>had minimal butt damage</li> <li>were representative of the hollow bearing species within the area</li> <li>were evenly scattered throughout the net harvest area</li> </ul>	0 (2) 2 trees in 1ha assessed area	
CONDITIONS THAT RELATE TO HOLLOW BEARING & RECRUITMENT TREE - PROTECTION				
<p><i>Clause 5.6 tree retention</i></p> <p><i>Clause 5.6h Protection of retained trees</i></p> <p><i>i. When conducting specified forestry activities and post-logging burning, damage to trees retained under conditions 5.6 a), 5.6 b), 5.6 c), 5.6 d), 5.6 e) and 5.6 f) of this licence must be minimised to the greatest extent practicable. During harvesting operations, the potential for damage to these trees must be minimised by utilising techniques of</i></p>	Yes	<p><b>The EPA finds FCNSW compliant with clause 5.6h protection of retained trees.</b></p> <p>EPA officers assessed each retained H &amp; R tree against clause 5.6 (h) of the Southern Region IFOA.</p> <p>EPA officers observed that no H &amp; R trees had excessive logging debris at the base. 20 live standing trees were retained across both transects and three retained trees were identified as having logging debris within 5 metres and up to 1 metre high fully or partially surrounding them.</p>	0 (4) 4 trees in 1ha assessed area	

<p>directional felling.</p> <p>ii. 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, Logging debris within a five metre radius of retained trees must be removed or flattened to a height of less than one metre. Mechanical 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.</p>		 <p><b>Image 3.</b> Transect 2, Plot 1. Retained R tree, no logging debris at base of tree.</p>		
		Sub-total	0 (10)	

Condition No.	Compliant? (Yes/No/ Not- determined)	Comment and Evidence	Number of non- compliance and (sample size & unit)	Action required by licensee																																																
CONDITION RELATED TO DRAINAGE FEATURE - PROTECTION																																																				
D. Protection of drainage features  Clause 6. Filter strips, protection zones and operational zones must be retained along all drainage lines, prescribed streams and watercourses as required in Table 1. and Table 1a.of the Southern Region IFOA Environment Protection License.  They must have a minimum width determined in accordance with Table 1 and Table 1a of the Southern Region IFOA Environment Protection License	N/A	<b>Audit method and results</b>  <u>Method</u>  EPA officers established transects along two unnamed first order drainage features (Image 6 and Image 7).  EPA officers measured the distance from the top of the bank of the incised channel to the boundary of the marked protection zone(Tables 3 and 4).  <u>Results</u>  <b>Table 3:</b> Transect 1, filter strip and protection zone protection <table><tr><th>Measurement point</th><th>Filter strip</th><th>Protection zone</th><th>Total</th></tr><tr><td>1</td><td>5</td><td>15.3</td><td>20.3</td></tr><tr><td>2</td><td>5</td><td>11.8</td><td>16.8</td></tr><tr><td>3</td><td>5</td><td>11.5</td><td>16.5</td></tr><tr><td>4</td><td>5</td><td>9.2</td><td>14.2</td></tr><tr><td>5</td><td>5</td><td>21.4</td><td>26.4</td></tr></table> <b>Table 4:</b> Transect 2, filter strip and protection zone protection <table><tr><th>Measurement point</th><th>Filter strip</th><th>Protection zone</th><th>Total</th></tr><tr><td>1</td><td>5</td><td>6.5</td><td>11.5</td></tr><tr><td>2</td><td>5</td><td>8</td><td>13</td></tr><tr><td>3</td><td>5</td><td>6</td><td>11</td></tr><tr><td>4</td><td>5</td><td>7.5</td><td>12.5</td></tr><tr><td>5</td><td>5</td><td>0</td><td>5</td></tr></table>	Measurement point	Filter strip	Protection zone	Total	1	5	15.3	20.3	2	5	11.8	16.8	3	5	11.5	16.5	4	5	9.2	14.2	5	5	21.4	26.4	Measurement point	Filter strip	Protection zone	Total	1	5	6.5	11.5	2	5	8	13	3	5	6	11	4	5	7.5	12.5	5	5	0	5	N/A	N/A
Measurement point	Filter strip	Protection zone	Total																																																	
1	5	15.3	20.3																																																	
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3	5	6	11																																																	
4	5	7.5	12.5																																																	
5	5	0	5																																																	

<p><i>D. Protection of drainage features</i></p>	<p><b>Yes</b></p>	<p><b>Transect 1, the EPA found FCNSW to be compliant with this condition at this location.</b></p> <p>EPA officers audited a 100m length along the unnamed first order drainage feature identified in image 6.</p> <p>EPA officers measured the distance from top of the bank of the incised channel to the boundary of the marked exclusion zone.</p> <p>It was observed that boundaries were clearly marked with flagging tape and had been observed by harvesting crews.</p>  <p><b>Image 6.</b> Location of Transect 1 drainage feature audit and location of audit measurement locations (red circles).</p> <p>The key audit findings are:</p> <ul style="list-style-type: none"> <li>• FCNSW correctly specified the filter strip and protection zone exclusions on the Harvest Plan Operational Map</li> <li>• FCNSW field staff correctly applied the exclusion zones in the field at all observed locations.</li> <li>• there were no incursions into the marked exclusion zone observed by EPA auditors</li> </ul> <p>FCNSW is compliant with clause 6 of the Southern Region IFOA as the protection of drainage feature measures have been correctly applied.</p>	<p>0 (1) 100m length assessed</p>	
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<p><i>D. Protection of drainage features</i></p>	<p>Not determined</p>	<p><b>Transect 2, the EPA recorded an audit finding of not determined with this condition at this location.</b></p> <p>EPA officers audited a 100m transect along the unnamed first order drainage feature identified in Image 7.</p> <p>EPA officers measured the distance from top of the bank of the incised channel to the boundary of the marked exclusion zone (Images 8 to 9).</p> <p>It was observed that boundaries were clearly marked with flagging tape and had been observed by harvesting crews.</p>  <p><b>Image 7.</b> Location of Transect 2 drainage feature audit and approximate location of audit measurement locations (red circles).</p> <p>The key audit findings are:</p> <ul style="list-style-type: none"> <li>From the audit evidence gathered it remains not determined whether there was an incursion into the protection zone by FCNSW contractors.</li> <li>FCNSW correctly specified the filter strip and protection zone</li> </ul>	<p>N/A 100m length assessed</p>	<p>N/A</p>
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exclusions on the Harvest Plan Operational Map

**Further observation**

- FCNSW field staff incorrectly applied the protection zone boundary in the field at one observed location.




**Image 8.** Drainage feature with incised channel within drainage feature transect 2.





**Image 9.** Drainage feature at approximately 100m along transect 2.





		 <p><b>Image 10.</b> Drainage feature blow out or gully at location 5, 100m along transect 2. Note: measured buffer (5 m filter strip plus 5 m protection strip) was only 5m at this location due to the gully not being observed at mark-up. As the distance from the mark up to the edge of the harvesting operation was not measured it is not possible to make a determination regarding compliance with condition D drainage feature protection.</p> <p><b>Why it is important?</b> The protection of drainage features is important for a number of environmental reasons. These include:</p> <ul style="list-style-type: none"> <li>• reducing the potential for water pollution, protection of threatened species and their habitat benefits overall biodiversity, used as riparian corridors for all species and protects the terrestrial ecosystem that supports the aquatic environment.</li> <li>• specifically protected drainage features in the Southern Region IFOA area provide pathways and linkages for fauna and flora to move across the landscape. It has high significance in regards to biodiversity such as providing habitat for a range of fauna.</li> <li>• correctly marking boundaries in the field is important to inform operators on the ground of the areas they need to protect and prevent actual harm.</li> </ul>		
		Sub-total	0 (1)	
		Total	0 (11)	




## FURTHER OBSERVATIONS TABLE – BODALLA STATE FOREST, COMPARTMENTS 3010 AND 3011


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

Relevant Condition	Details of matter	Recommendation
<p><a href="#">Appendix A</a> <a href="#">Schedule 4A</a> <a href="#">Clause F</a></p> <p><i>Log Dumps Runoff from log dumps must not be discharged into drainage features</i></p>	<p>Log dumps 12 and 13 were combined and moved to a new location (refer Image1). The size of the log dump appears to be excessive given the identified low volume of timber extracted from the compartment (Image 9).</p>  <p><b>Image 11.</b> Log dump 12, Compartment 3010 Bodalla State Forest.</p> <p>Excessively large log dumps are a potential source of water pollution from run off associated with large areas of exposed soil and result in the unnecessary removal of trees and groundcover.</p>	<p>Keep log dump size to the minimum size required to stockpile and sort logs by product whilst maintaining a safe working environment.</p>

Relevant Condition	Details of matter	Recommendation
<p><a href="#">Clause 5.6 tree retention</a></p> <p><i>Clause 5.6h Protection of retained trees</i></p> <p><i>iii. When conducting specified forestry activities and post-logging burning, damage to trees retained under conditions 5.6 a), 5.6 b), 5.6 c), 5.6 d), 5.6 e) and 5.6 f) of this licence must be minimised to the greatest extent practicable. During harvesting operations, the potential for damage to these trees must be minimised by utilising techniques of directional felling.</i></p> <p><i>iv. In the course of conducting specified forestry activities,</i></p>	<p>EPA officers made further observation against this criteria for trees not within the scope of this audit that were retained against clause 5.6 (h) of the Southern Region IFOA.</p> <ul style="list-style-type: none"> <li>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, <b>eucalypt feed tree</b>, or yellow bellied glider or squirrel glider sap feed tree.</li> <li>Logging debris within a 5 metre radius of retained trees must be removed or flattened to a height of less than one metre.</li> </ul> <p>20 live standing trees were retained across both transects and three retained trees were identified as having logging debris within 5 metres and up to 1 metre high fully or partially surrounding them (Images 3 to 5).</p> <p>One retained tree (feed tree) was identified as being retained for the purposes of clause 5.6h (Image 3). An attempt had been made to reduce the height of the logging debris to under one metre but this did not extend the full 5 metre width as required under Clause 5.6h.</p>  <p><b>Image 3.</b> Transect 2, Plot 1. Logging debris at base of tree within 5 metres and over 1m in</p>	<p><b>Non-compliant</b></p> <p><b>Code Yellow</b></p>



Relevant Condition	Details of matter	Recommendation
<p><i>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, Logging debris within a five metre radius of retained trees must be removed or flattened to a height of less than one metre. Mechanical 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.</i></p>	<p>height.</p>  <p><b>Image 4.</b> Transect 1, Plot 1. Logging debris at base of tree within 5 metres and over 1m in height.</p>	

Relevant Condition	Details of matter	Recommendation
	 <p><b>Image 5.</b> Transect 2, Plot 3. Logging debris at base of tree within 5 metres and over 1m in height.</p> <p><b>Risk assessment of non-compliance</b></p> <p>The EPA has made a risk assessment of tree protection in the assessed area. These were assessed against two criteria:</p> <ul style="list-style-type: none"> <li>• the likelihood of environmental harm occurring; and</li> <li>• the level of environmental impact.</li> </ul> <p>These results were used to decide the level of risk to retained trees. The risk assessment noted:</p> <ul style="list-style-type: none"> <li>• the accumulation of logging debris greater than 1 metre in height and within 5 metres of retained trees;</li> </ul>	

Relevant Condition	Details of matter	Recommendation
	<p>The EPA determined that the risk of environmental harm has been assessed as Code Yellow because:</p> <ul style="list-style-type: none"> <li>• environmental harm is likely to occur during the post logging burn due to logging debris accumulation, and</li> <li>• the level of environmental impact is low as the scale of harm is likely to be low.</li> </ul> <p><b>Why is this important?</b></p> <p>The EPA considers the protection of all retained trees to be important because the maintenance of biodiversity, forest health and the productive capacity of these forest ecosystems is vital for the long term sustainability of the forest.</p> <p>Further damage to retained trees can be a vector for disease and fungal attacks. Failing to protect all retained trees following a successful harvesting event can lead to long term decline in forest health.</p> <p>Regrowth forests contain few large trees that can support hollow dwelling species. The long term maintenance of retained trees is vital for the development of a multi age class forest.</p>	

## **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.

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

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: FCNSW SUBMISSION ON DRAFT AUDIT FINDINGS and EPA RESPONSE**

<b>Condition / Audit finding reference / page No.</b>	<b>EPA draft finding / risk category</b>	<b>Location – description GPS</b>	<b>FCNSW evidence submission</b>	<b>EPA final finding / risk category</b>	<b>EPA response to FCNSW submission</b>
TSL 5.6(h) / Pg 5	Protection of retained trees / Not Compliant Yellow	Unknown – no location information provided by EPA	<p>FCNSW has reviewed the draft audit findings.</p> <p>It is unclear from the audits findings how FCNSW has breached condition 5.6 (h). Condition TSL Condition 5.6 (h) (iii) requires that retained trees must be marked. Consequently any trees not marked are not considered retained trees under condition 5.6, thus conditions 5.6 (h) (i) &amp; 5.6 (h) (ii) does not apply to unmarked trees. Furthermore the marked “E” identified in image 3 is a tree retained under condition 6.5 of the TSL – condition 5.6 (h) is not applicable in this instance.</p> <p>FCNSW requests that the EPA remove this audit finding from the final audit report.</p>	<p>Compliant</p> <p>EPA changed its audit finding from “Not compliant” to “Compliant”</p>	<p>The EPA considered FCNSW submissions and field evidence gathered.</p> <p>The scope of the audit was restricted to H&amp;R trees. All H&amp;R trees observed in the area assessed were protected according to Condition 5.6.(h) of the TSL.</p> <p>The EPA amends its draft audit finding from not compliant code Yellow to Compliant.</p>
TSL 5.6(h) / Pg 5	Protection of retained trees / Yellow	Unknown – no location information provided by EPA	Refer to FCNSW comments above.	<p>Addition of a “Further observation”</p> <p>Code Yellow</p>	<p>A further observation outside of the scope of the audit revealed that a tree retained under clause 6.5 as a eucalypt feed tree had substantial logging debris greater than 1 metre in height and within 5 metres of the base of the tree.</p> <p>Trees retained as feed trees under condition 6.5 are required to be protected under condition 5.6 (h) (ii) as it specifically refers to</p>



					eucalypt feed trees.
IFOA clause 6 / Pg 12	Protection of drainage features	South of log dump 8	<p>FCNSW inspected this location and observed boundary marking consistent with EPA draft audit findings.</p> <p>However, the draft audit report identifies that a non-compliance with IFOA clause 6 has occurred. IFOA clause 6 sets out the terms of the licences, in this case the TSL and EPL. There is no requirement to mark drainage feature protection in the field under condition 5.7 of the TSL or EPL sched. 4 condition D. These conditions only require FCNSW to ensure protection zones and filter strips are implemented during specified forestry activities. FCNSW field observations found that at this location all specified forestry activities had been conducted in accordance with the EPL and TSL – drainage feature protection measures have been correctly implemented.</p> <p>FCNSW requests that the EPA amend its compliance finding to “not determined” in the final audit report.</p>	Addition of a “Further observation”	<p>The EPA considered FCNSW submissions and field evidence gathered.</p> <p>There is no requirement in the Southern Region IFOA or TSL to mark the boundaries of riparian protection zones.</p> <p>The licence requires only that FCNSW protect zone filter strips.</p> <p>In this instance, field marking to inform harvesting crews of exclusion zone boundaries was done but incorrect.</p> <p>Marking exclusion zone boundaries in the field is considered good practice.</p> <p>EPA staff measured the distance from the marked boundary to the drainage feature but not from the edge of the harvesting operation to the drainage feature. The EPA amends its draft finding and makes it’s field observation as a <b>“Further observation”</b></p>