EPA AUDIT REPORT – KOONDROOK STATE FOREST, COMPARTMENTS 8, 13

Auditee:	FORESTRY CORPORATION OF NSW (FCNSW)
Audited State Forest & Cpts:	KOONDROOK STATE FOREST, COMPARTMENTS 8, 13
Region:	Riverina Red Gum Integrated Forestry Operations Approval (IFOA)
Date/Audit timing:	28 May 2015. Audit debrief with FCNSW staff held on 28 May 2015.
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:	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:	• Hollow-bearing and recruitment trees prescriptions • Drainage line protections • Threatened species exclusion zones **Physical scope**: This audit was limited to the physical boundaries of compartments 13. **Temporal scope**: The audit period adopted for assessment of compliance with operational conditions was on the day of the audit inspections (28 May 2015).
Audit criteria:	**Habitat and Recruitment tree prescriptions** • *Clause 179; 190; 134(b) retention, selection, protection & mark-up* **Large Red Gums >120cm** • *Clause 180* **Drainage Feature Protection prescriptions** • 104 and 106 (Myloc Creek) **Compartment marking up surveys** • *Clause 167* **Exclusion zone mark-up for EZ and buffer zones within scope of audit** • *Clause 172*
Summary of Operations	Operation commencement date: February 2015 Silvicultural practice: • Mature to overmature stand, regeneration cohort below (50% NHA) – Single tree selection release & early thinning/ thinning below and between AGS gaps

	• Mature to overmature stand, no younger cohort below (20% NHA) - Single tree selection regeneration • Early thinning only (30% NHA) – Early thinning

1. Audit Findings – Overview

The EPA identified 1 non-compliances and 67 compliances with the IFOA and National Parks and Wildlife Act 1974, 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	**Drainage feature protection**	3	0	0	0
	Drainage feature mark-up	2	0	0	0
	Compartment mark-up surveys	0	1	0	0
Hollow bearing and recruitment trees	**H and R Retention**	2	0	0	0
	H Selection	9	0	0	0
	R Selection	5	0	0	0
	H&R Protection	30	0	0	0
	Large Red gums >120cm	13	0	0	0
Further Observations	**Glider Tree Retention**	1	0	0	0
	Aboriginal Cultural Heritage Protection	2	0	0	0
	TOTAL	**67**	**1**	**0**	**0**

2. Audit Recommendations

Condition No.	Number of non-compliances (and sample)	Action Details	Non-compliance Code*	Target/Action Date
167.(2) "Compartment mark-up survey" for nests, roosts, dens, scats etc.	1/1	**Compartment Marking-Up Surveys for Threatened Species Features** Action Plan to be developed to ensure compartment mark-up surveys are undertaken in accordance with IFOA.		1 August 2015
Total	**1**			

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.

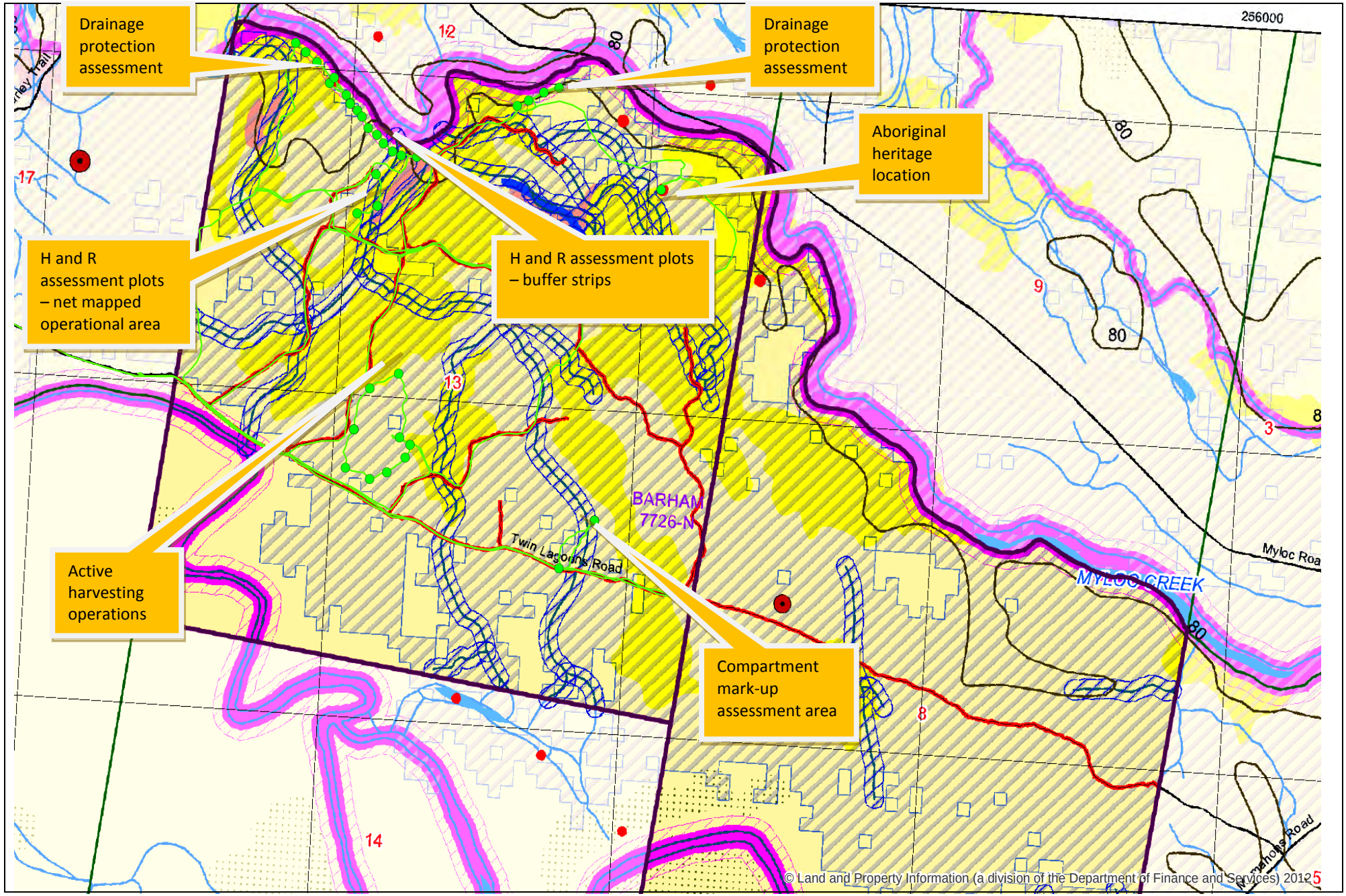
4. List of Attachments

Attachment 1) Audit Findings Table
Attachment 2) EPA Risk Matrix for Non-compliances
Attachment 3) FCNSW Submission on draft audit findings

ATTACHMENT 1 - EPA AUDIT FINDINGS TABLE – KOONDROOK STATE FOREST – COMPARTMENT 13

Assessment of Compliance with RIVERINA REDGUM Integrated Forestry Operations Approval

CONDITIONS RELATED TO RETENTION OF HABITAT AND RECRUITMENT TREES - RETENTION				
Condition No. and Detail	**Compliant? Yes/No/Not determined/ Not applicable**	**Number of non-compliance and (sample size)**	**Why it is important & Risk Ranking Code Explanation**	**Action required by licensee**
Condition 179(1) Forests NSW must ensure that, at the completion of any logging operation, an average of at least two living river red gum habitat trees (as described in subclause (2)) and at least two living river red gum recruitment trees (as described in subclause (3)) remain in each hectare of land within the net mapped operation area.	**Yes**	0\1		
Comment and Evidence				
This condition was determined as compliant. EPA officers assessed one hectare of net mapped operation area which had been harvested. EPA method used two random 40 metre radius circular plots to undertake assessment. Each plot assessed represented approx. half of one hectare. Harvested and retained tree were recorded. EPA officers determined that in the assessed areas of the Net Harvest Area sufficient numbers of Habitat and Recruitment trees had been marked for retention. Trees retained met this condition and was determined as compliant. Within the hectare assessed, 23 trees had been marked and retained. The marking of these trees was with a ring around the trees and as such did not distinguish the purpose for which that trees had been retained. Of the trees marked and retained, EPA officers determined that that 9 Habitat trees and 5 Recruitment trees had been appropriately selected, marked and retained. Retention rates were therefore 9H/ha and 5R/ha, exceeding the IFOA requirements. Further descriptions of the trees retained is contained in the clauses below.				


Drainage protection assessment
Drainage protection assessment
Aboriginal heritage location
H and R assessment plots – net mapped operational area
H and R assessment plots – buffer strips
Active harvesting operations
Compartment mark-up assessment area
256000
12
80
17
9
13
BARHAM
7726-N
Twin Lagoons Road
MYLOC CREEK
Myloc Roa
14
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Habitat Tree Marked and Retained

132 cm DBHOB habitat tree with hollows, good crown development, minimal butt damage and belonging to cohort of trees with largest DBHOB. Marked with pink ring. Tree protected during course of harvesting operations.

Waypoint - Plot 1F

S 8, 13

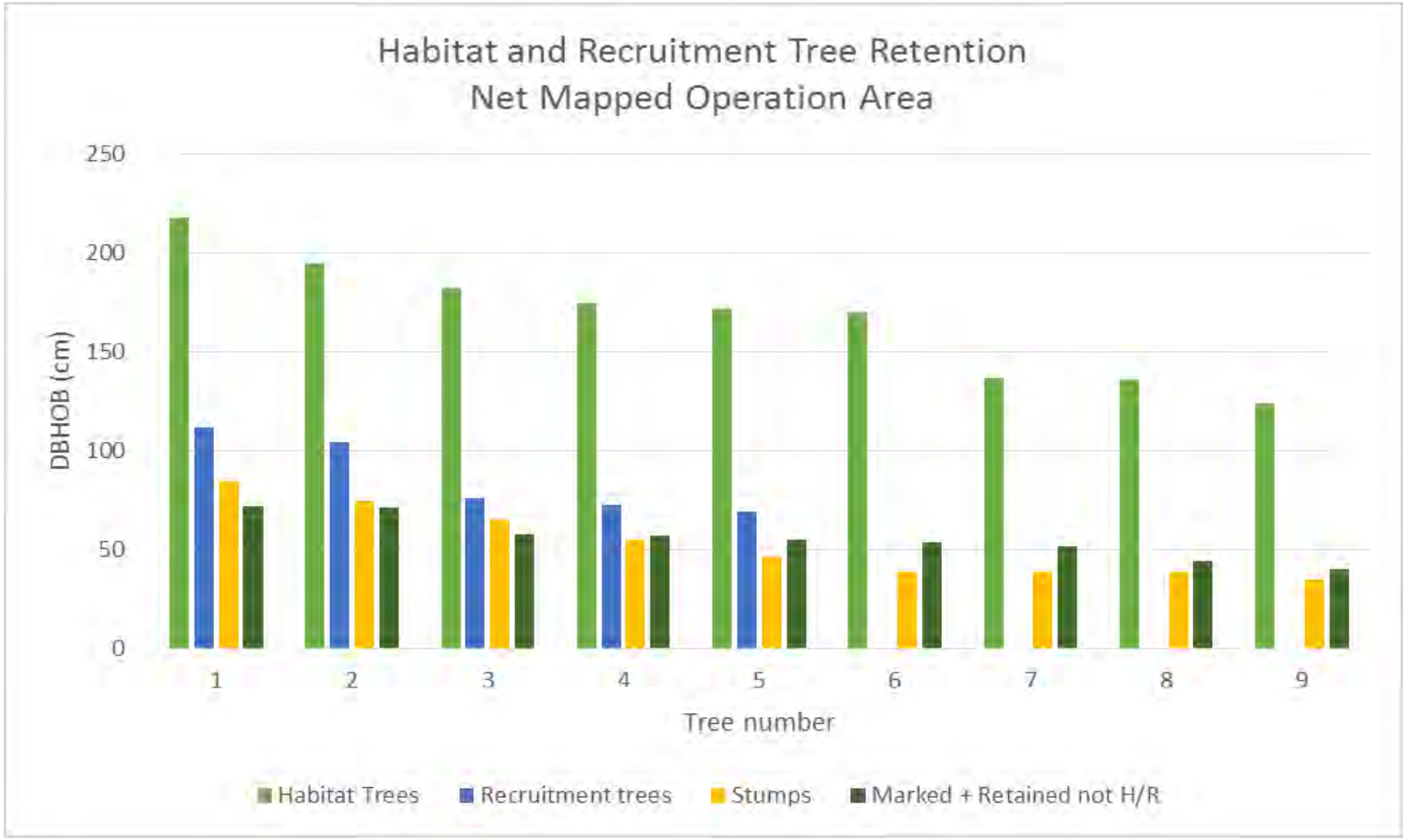
CONDITIONS RELATED TO RETENTION OF HABITAT AND RECRUITMENT TREES – HABITAT TREE SELECTION				
Condition No. and Detail	**Compliant? Yes/No/Not determined/ Not applicable**	**Number of non-compliance and (sample size)**	**Why it is important & Risk Ranking Code Explanation**	**Action required by licensee**
Condition 179(2) From among the trees in the net mapped operation area, habitat trees must be selected with the objective of retaining trees having as many of the following characteristics as possible: a) hollow-bearing, b) good crown development, c) minimal butt damage, d) belong to a cohort of trees with the largest diameters at breast height over bark. In this clause, "***hollow-bearing***", in relation to a tree, means a tree having a base, trunk or limb that contains a visible hollow, hole or cavity or a visible deformity such as a burl, protuberance or broken limb that indicates that a hollow is likely to be present.	**Yes**	0\9		

Comment and Evidence

This condition was determined as compliant.

EPA officers assessed one hectare of net mapped operation area which had been harvested. EPA method used two 40 metre radius circular plots to undertake assessment. Each plot assessed represented approx. half of one hectare. The assessment area was located east of active operations as shown in the map above.

Within the hectare assessed, 23 trees had been marked and retained. The marking of these trees was with a ring around the trees and as such did not distinguish the purpose for which that trees had been retained. Of the trees marked and retained, EPA officers determined that 9 Habitat trees had been retained in the assessed one hectare area. The trees retained were all hollowing bearing in that they had clear evidence of hollows, holes or cavity in the base, trunk or limbs. All habitat trees had good crown development (i.e. not suppressed and good crown), with minimal or no butt damage. All habitat trees also belonged to a cohort with the largest DBHOB. The size classes of habitat trees marked and retained is demonstrated in the chart below. All seven habitat trees were retained of the cohort of the largest DBHOB. EPA officers collected data on the size of trees cut (11) and removed within the assessed area to compare against tree retained for the purposes of determining the cohort of trees retained and removed. Tree retention exceeded IFOA requirements within the assessed area.


Habitat and Recruitment Tree Retention
Net Mapped Operation Area
250
200
150
100
50
0
DBHOB (cm)
1
2
3
4
5
6
7
8
9
Tree number
Habitat Trees
Recruitment trees
Stumps
Marked + Retained not H/R

Habitat Tree Marked and Retained
218cm DBHOB habitat tree with hollows, good crown development, minimal butt damage and belonging to cohort of trees with largest DBHOB. Marked with pink ring. Tree protected during course of harvesting operations.
Waypoint – Plot 2(1)

CONDITIONS RELATED TO RETENTION OF HABITAT AND RECRUITMENT TREES – RECRUITMENT TREE SELECTION				
Condition No. and Detail	**Compliant? Yes/No/Not determined/ Not applicable**	**Number of non-compliance and (sample size)**	**Why it is important & Risk Ranking Code Explanation**	**Action required by licensee**
Condition 179(3) From among the trees in the net mapped operation area, recruitment trees must be selected with the objective of retaining trees that will develop hollows, being trees having as many of the following characteristics as possible: a) be mature or late mature, b) have potential for developing hollows, c) have good crown development, d) have minimal butt damage, e) be dominant, co-dominant or sub-dominant (but not suppressed).	**Yes**	0\5		

Comment and Evidence

This condition was determined as compliant.

EPA officers assessed one hectare of net mapped operation area which had been harvested. EPA method used two 40 metre radius circular plots to undertake assessment. Each plot assessed represented approx. half of one hectare.

Within the hectare assessed, 23 trees had been marked and retained. The marking of these trees was with a ring around the trees and as such did not distinguish the purpose for which that trees had been retained. Of the trees marked and retained, EPA officers determined that that 5 Recruitment trees had been retained in the assessed one hectare area. The trees considered to be Recruitment trees by EPA were all mature; had potential for developing hollows; exhibited good crown development (i.e. not suppressed and spreading healthy crown), with minimal or no butt damage. All recruitment trees were either dominant, co-dominant or sub-dominant. EPA officers did not consider any marked trees for R tree retention purposes if that tree did not exhibit all the characteristics detailed above in the condition. The sizes of recruitment trees was also considered against the tree removed in the assessed area as demonstrated in the chart below. All six recruitment trees retained were either dominant, co-dominant or sub-dominant.

Recruitment Tree Marked and Retained

DBHOB recruitment tree considered to be mature, hollow development potential, good crown development, minimal butt damage and dominant crown structure. Marked with pink ring. Tree protected during course of harvesting operations.

Waypoint – Plot 1(1) Photo 127,128

CONDITIONS RELATED TO RETENTION OF HABITAT AND RECRUITMENT TREES – RETENTION IN BUFFER STRIPS				
Condition No. and Detail	**Compliant? Yes/No/Not determined/ Not applicable**	**Number of non-compliance and (sample size)**	**Why it is important & Risk Ranking Code Explanation**	**Action required by licensee**
134. Restrictions in buffer strips Forestry operations may be carried out in buffer strips in accordance with the other Chapters of this approval (as if it were not a buffer strip) but: a) AGS must not be used in any buffer strip; and b) if logging is carried out in a buffer strip, a minimum rate of 5 habitat trees and 5 recruitment trees must be retained per hectare of buffer strip.	**Yes** **Yes**	0\1 0\1		

Comment and Evidence

134(a) - This condition was determined as compliant. EPA officers did not record any AGS applied within buffer strips. Location of buffer strips assessed detailed below.

134(b) – This condition was determined as compliant.

EPA officers assessed half a hectare (5000m2) of buffer strips adjacent to Myloc Creek within the 30 metre buffer strip required to be applied to this zone. The area had been harvested. EPA method used ten 13 metre radius circular plots to undertake assessment. Each plot assessed represented approx. 500m2. The total area assessed was approximately 5000m2.

Within the assessed area a total of 78 trees had been removed by harvesting ranging from DBHOB (adjusted by conservative taper function) 95cm – 7cm. A total of 58 trees were marked and retained across the assessed area ranging from 209cm – 16.5cm in size. The marking of these trees was with a ring around the trees and as such did not distinguish the purpose for which those trees had been retained.

Recruitment Trees: Of the trees marked and retained, EPA officers determined that that ten (10) Recruitment trees had been retained in the assessed area. The trees considered to be recruitment trees by EPA were all mature; had potential for developing hollows; exhibited good crown development (i.e. not suppressed and spreading healthy crown), with minimal or no butt damage. All recruitment trees were either dominant, co-dominant or sub-dominant. EPA officers did not consider any marked trees for R tree retention purposes if that tree did not exhibit all the characteristics detailed above in the condition.

Habitat trees: Of the trees marked and retained, EPA officers also determined that six (6) habitat trees had been retained in the assessed area. All of the trees had evidence of hollows, and all had good crown development (i.e. not suppressed and spreading healthy crown), with minimal or no butt damage. All habitat trees also belonged to a cohort with the largest DBHOB. The size classes of habitat trees marked and retained is demonstrated in the chart below. EPA officers collected data on the size of trees cut and removed within the assessed area to compare against trees retained for the purposes of determining the cohort of trees retained and removed. All six habitat trees were retained of the cohort of the largest DBHOB.

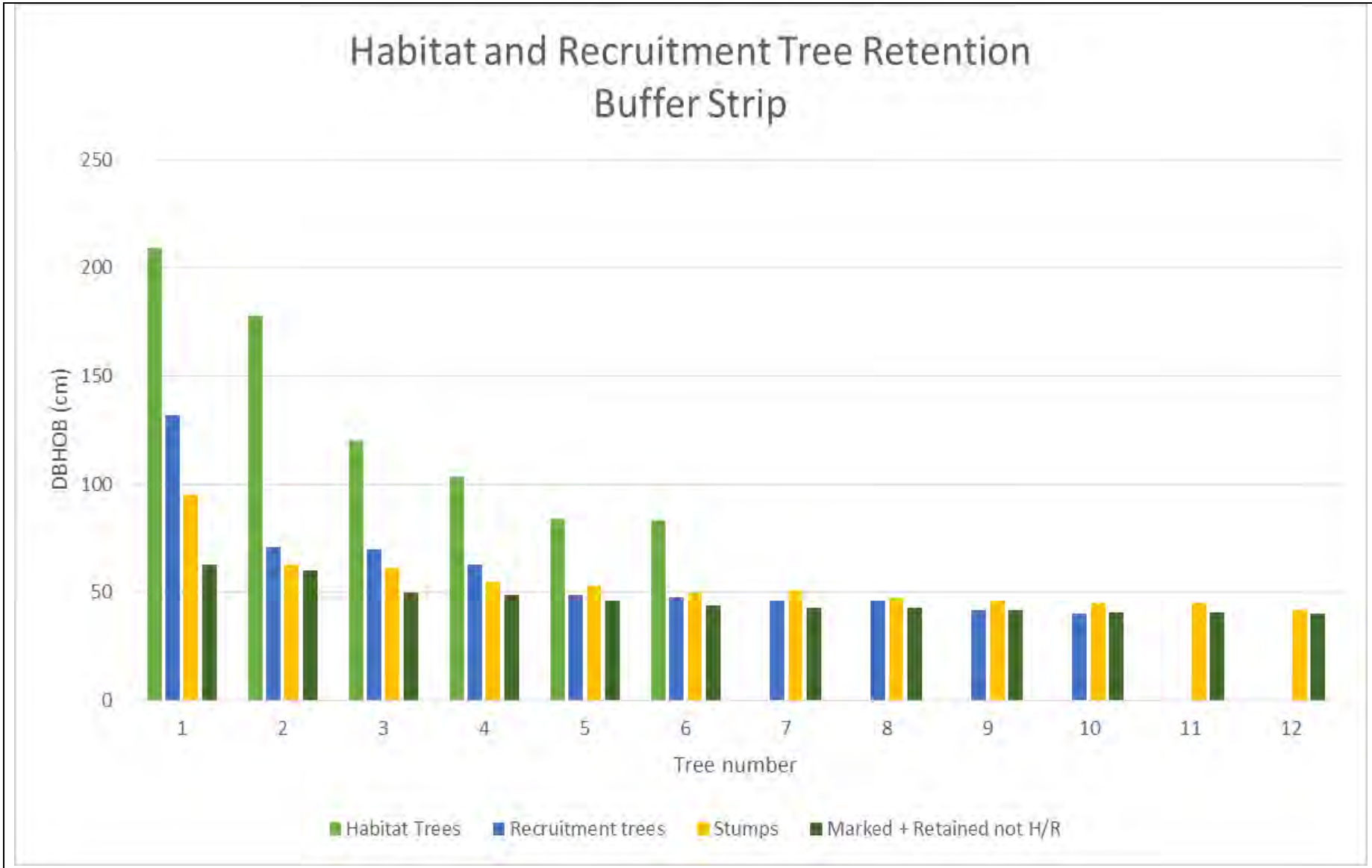
Average Retention Rates in Buffer Strips: Based retention rates achieved across the assessed area the average retention of habitat trees is 12H/ha and 20R/ha in buffer strips noting the limited area assessed. This retention rates is above the specified rates of 5 H and 5 R per hectare. Note the table below does not include trees retained and removed less than

30cm DBHOB.

Buffer Strip Habitat and Recruitment Tree Retention .

Habitat Trees (cm – DBHOB)	Recruitment Trees (cm – DBHOB)	Stumps (adjusted by conservative taper function) (cm – DBHOB)	Marked + Retained (Not H or R) (cm – DBHOB)
209	132	95	63
178	71	70	60
120	70	61	53
103.5	63	55	49
84	49	53	46
83.5	48	51	44
	46	50	43
	46	48	43
	42	46	42
	40	45	41
		45	41

Note: Table is limited to trees above 40cm DBHOB only.


Habitat and Recruitment Tree Retention
Buffer Strip
250
200
150
100
50
0
DBHOB (cm)
1
2
3
4
5
6
7
8
9
10
11
12
Tree number
Habitat Trees
Recruitment trees
Stumps
Marked + Retained not H/R

CONDITIONS RELATED TO RETENTION OF HABITAT AND RECRUITMENT TREES – PROTECTION				
Condition No. and Detail	**Compliant? Yes/No/Not determined/ Not applicable**	**Number of non-compliance and (sample size)**	**Why it is important & Risk Ranking Code Explanation**	**Action required by licensee**
189. Protection of retained trees generally 1. Damage to trees that must not be felled under, or are retained for the purposes of, this Part in a logging operation must be avoided or minimised to the greatest extent practicable in carrying out that operation or any other forestry operation (whether carried out at the same or subsequent time).	**Yes**	0/30		
Comment and Evidence				
This condition was determined to be compliant. EPA assessments recorded a total of eighty five (85) marked and retained trees across the 1.5 hectare area. The assessment areas included net mapped operational area and within buffer strips as detailed in tree retention provisions above. Of these marked and retained trees it included habitat trees (15) and recruitment trees (15) which are classed as 'protected trees'. There was damage to two trees which were marked and retained however these tree were not considered as H or R trees (protected trees).				

Damage to Retained Trees

These trees shown left were not considered 'protected' as a recruitment of habitat tree in accordance with the RRG IFOA. Accordingly, the EPA has not recorded breach of condition 189(1) in this instance. Limited damage was observed to marked and retained trees.

CONDITIONS RELATED TO RETENTION OF HABITAT AND RECRUITMENT TREES – PROTECTION				
Condition No. and Detail	**Compliant? Yes/No/Not determined/ Not applicable**	**Number of non-compliance and (sample size)**	**Why it is important & Risk Ranking Code Explanation**	**Action required by licensee**
Condition 190(6) Logging debris must be prevented, to the greatest extent practicable, from accumulating within 5 metres of any protected tree during a logging operation. If logging debris does accumulate, then it must be flattened to a height of less than one metre or removed before any post-harvest burning is carried out. However, in flattening or removing the logging debris, disturbance to the ground surface and the understorey must be avoided to the greatest extent practicable.	**Yes**	0\30		
Comment and Evidence				
This condition was determined as compliant. EPA assessments recorded a total of eighty five (85) marked and retained trees across the 1.5 hectare area. Of these marked and retained trees it included habitat trees (15) and recruitment trees (15) which are classed as 'protected trees'. The assessment areas included net mapped operational area and within buffer strips as detailed in tree retention provisions above. There was no recorded instances of tree debris accumulated greater than one metre within five metres across the 30 protected trees.				

CONDITIONS RELATED TO RETENTION OF HABITAT AND RECRUITMENT TREES – PROTECTION				
Condition No. and Detail	**Compliant? Yes/No/Not determined/ Not applicable**	**Number of non-compliance and (sample size)**	**Why it is important & Risk Ranking Code Explanation**	**Action required by licensee**
Condition 190(7) In carrying out a logging operation, disturbance to the ground surface and understorey within 5 metres of any protected tree must be avoided or minimised to the greatest extent practicable.	**Yes**	0\30		
Comment and Evidence				

This condition was determined as compliant.

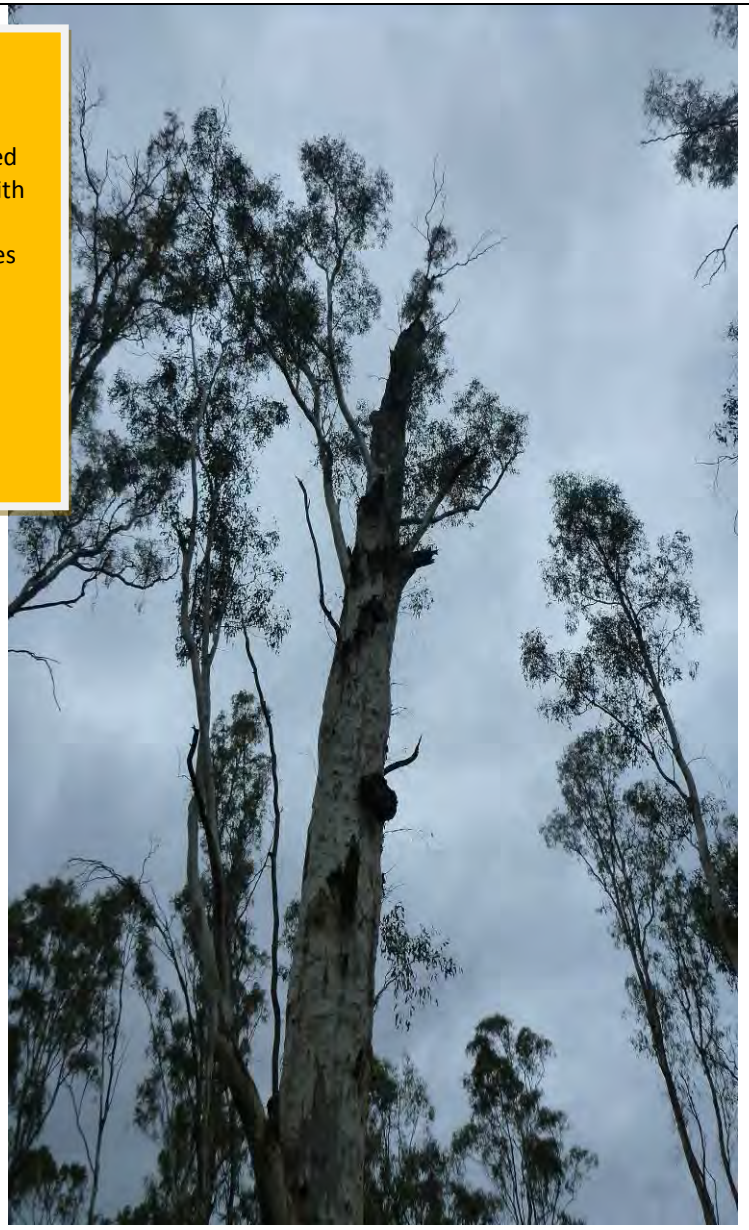
The EPA determined that for the most part logging operations had managed this condition well as no evidence of disturbance to the ground within 5 m of any retained tree had been noted during the Audit. EPA assessments recorded a total of eighty five (85) marked and retained trees across the 1.5 hectare area. Of these marked and retained trees it included habitat trees (15) and recruitment trees (15) which are classed as 'protected trees'. The assessment areas included net mapped operational area and within buffer strips as detailed in tree retention provisions above. Ground disturbance at the base of marked and retained protected trees (habitat and recruitment trees) was considered to be minimised to the greatest extent practicable. There was no evidence of moderate to severe ground disturbance.

CONDITIONS RELATED TO OF LARGE RIVER RED GUM TREES – RETENTION				
Condition No. and Detail	**Compliant? Yes/No/Not determined/Not applicable**	**Number of non-compliance and (sample size)**	**Why it is important & Risk Ranking Code Explanation**	**Action required by licensee**
CONDITION 180. Retention of large river red gum trees A river red gum tree having a dbhob of 120 cm or more must not be felled in a logging operation.	**Yes**	0\13		
Comment and Evidence				
This condition was determined to be compliant. EPA officers located thirteen (13) trees in its assessed areas (1.5 hectares) which were greater than 120cm DBHOB. Trees were marked for retention and protected. Stumps inspected across the assessed area (128 stumps) ranged from 95cm – 25cm DBHOB (adjusted by conservative taper function). No removal of trees greater than 120cm DBHOB was observed.				

Thirteen Trees greater than 120 cm DBHOB protected - Marked and Retained

Thirteen trees across assessed area protected including this 170 cm DBHOB habitat tree with hollows, good crown development, minimal butt damage and belonging to cohort of trees with largest DBHOB. Marked with pink ring. Tree protected during course of harvesting operations.

Waypoint – Plot 2.2 Net Mapped Operation Area.



CONDITIONS RELATED TO DRAINAGE PROTECTION AREAS - PROTECTION				
Condition No. and Detail	**Compliant? Yes/No/Not determined/Not applicable**	**Number of non-compliance and (sample size)**	**Why it is important & Risk Ranking Code Explanation**	**Action required by licensee**
110. Logging operations prohibited in drainage protection areas 1. A logging operation to which this Part applies must not be carried out in a drainage protection area, except as provided by this clause.	**Yes**	0/2		

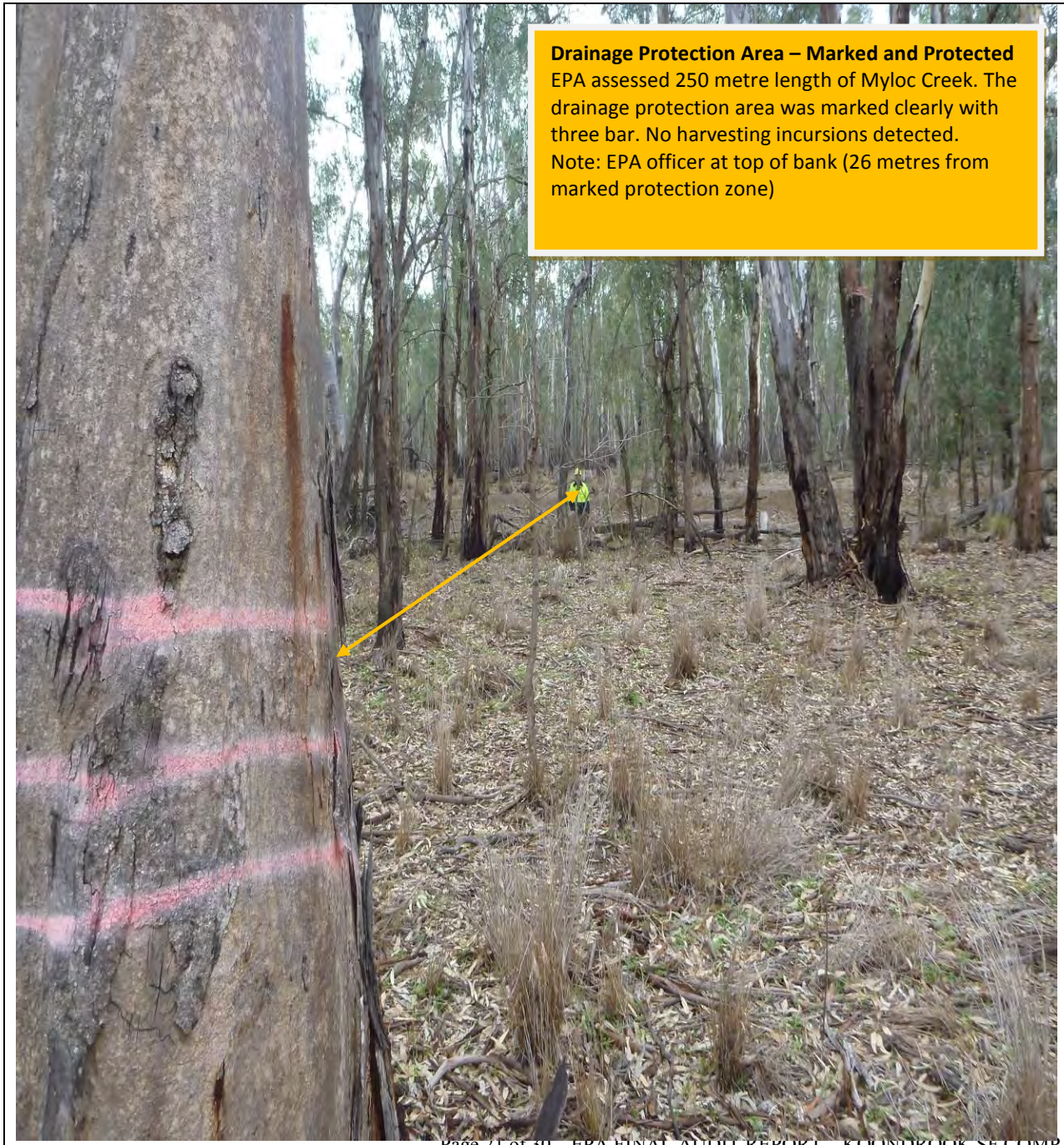
Comment and Evidence

This condition was determined as compliant.

EPA officers assessed approximately 400m of Myloc Creek in Compartment 13 of Koondrook State Forest and mark up of exclusion zone boundaries was found to be accurate .No Forest operations had been identified in the 400m assessed. EPA officers assessed one drainage protection area at two separate location adjacent to Myloc Creek.

Myloc Creek: 250 metre length assessed. No incursions into the drainage protection area detected across assessed length. Area clearly marked and identified with three bar pink marking on trees. Protection area marked ranging from 26 metres from drainage feature up to 37 metres from top of the bank of drainage feature. Requirement of 20 metre protection zone fulfilled.

Myloc Creek. 150 metre length assessed. No incursions into the drainage protection area detected across assessed length. Area clearly marked and identified with three bar pink marking on trees. Protection area marked ranging from 28 metres from drainage feature up to 38 metres from top of the bank of drainage feature. Requirement of 20 metre protection zone fulfilled.



Drainage Protection Area – Marked and Protected
EPA assessed 250 metre length of Myloc Creek. The drainage protection area was marked clearly with three bar. No harvesting incursions detected.
Note: EPA officer at top of bank (26 metres from marked protection zone)

CONDITIONS RELATED TO DRAINAGE PROTECTION AREAS – MARKING UP				
Condition No. and Detail	**Compliant? Yes/No/Not determined/Not applicable**	**Number of non-compliance and (sample size)**	**Why it is important & Risk Ranking Code Explanation**	**Action required by licensee**
172. "Marking-up" of boundaries of protected areas 1. This clause applies to a forestry operation of any of the following kinds if a site specific operational plan is required for the operation: a) a logging operation, b) ancillary road construction. 2. Forests NSW must ensure, as far as practicable, that a forestry operation to which this clause applies does not come within 50 metres of any part of a boundary of an area of land that is protected in relation to that operation (as described in subclause (4)) unless that part of the boundary has been first "marked up".	**Yes**	0/2		

Comment and Evidence

This condition was determined as compliant.

EPA officers assessed one drainage protection area at two separate locations adjacent to Myloc Creek.

Myloc Creek: 250 metre length assessed. No incursions into the drainage protection area detected across assessed length. Area clearly marked and identified with three bar pink marking on trees. Protection area marked ranging from 26 metres from drainage feature up to 37 metres from top of the bank of drainage feature. Requirement of 20 metre protection zone fulfilled. Harvesting was evident directly adjacent to drainage protection area.

Myloc Creek. 150 metre length assessed. No incursions into the drainage protection area detected across assessed length. Area clearly marked and identified with three bar pink marking on trees. Protection area marked ranging from 28 metres from drainage feature up to 38 metres from top of the bank of drainage feature. Requirement of 20 metre protection zone fulfilled. Harvesting was evident directly adjacent to drainage protection area.

CONDITIONS RELATED TO COMPARTMENT MARK-UP SURVEYS				
Condition No. and Detail	**Compliant? Yes/No/Not determined/Not applicable**	**Number of non-compliance and (sample size)**	**Why it is important & Risk Ranking Code Explanation**	**Action required by licensee**
167. "Compartment mark-up survey" for nests, roosts, dens, scats etc. 2. A forestry operation to which this clause applies must not be undertaken on any part of the compartment or other tract of land unless: a) that part, and any area within about 200 metres of that part (including land outside the compartment or other tract of land, if accessible), have first been surveyed in accordance with the requirements of this clause and clauses 155 to 158 (inclusive), and	**No**	1\1	The likelihood of environmental harm is likely and level of harm moderate. Scale was considered relatively large and sensitivity of surrounding area moderate to high.	Action Plan to be developed to ensure compartment mark up surveys are undertaken in accordance with IFOA.

Comment and Evidence

This condition was determined as not compliant.

EPA officers assessed ahead of harvesting operations within 200 metres of active harvesting. There was evidence that the area directly surrounding active harvesting had been 'marked up' as demonstrated by the marking of trees for the purpose of retention. It was considered that this area had been assessed for the likelihood of environmentally sensitive elements referred to in conditions 167/168. There was however approximately 2.5 hectare area surrounding the harvesting that was not 'marked up'. This area was up to 200 metres from the furthest extent of active harvesting. There was no evidence of tree marking within this area despite the availability of hollow bearing habitat tree resources. No timber harvesting was detected within these areas that had not been tree marked. Discussions with FCNSW staff including the SFO suggested that this area was being considered whether the area had viable timber or not. The SFO stated that the area had been surveyed but not marked. There was no demonstrable on ground evidence or GPS evidence (tracklog) to support the claim that this area had been subject to "compartment mark-up surveys". Discussions were held around the associated risks with this practice.

Why it is important: Areas which are not subject to compartment mark-up survey are at risk of threatening and/or harming environmentally significant areas. For example, potentially an environmental significant area or species requiring an exclusion zone may be located in areas deemed not viable or for further assessment potentially the exclusion may radiate back into the operational area and which requires an exclusion of forest operations. Failing to undertake compartment mark-up surveys risks significant non-compliance.

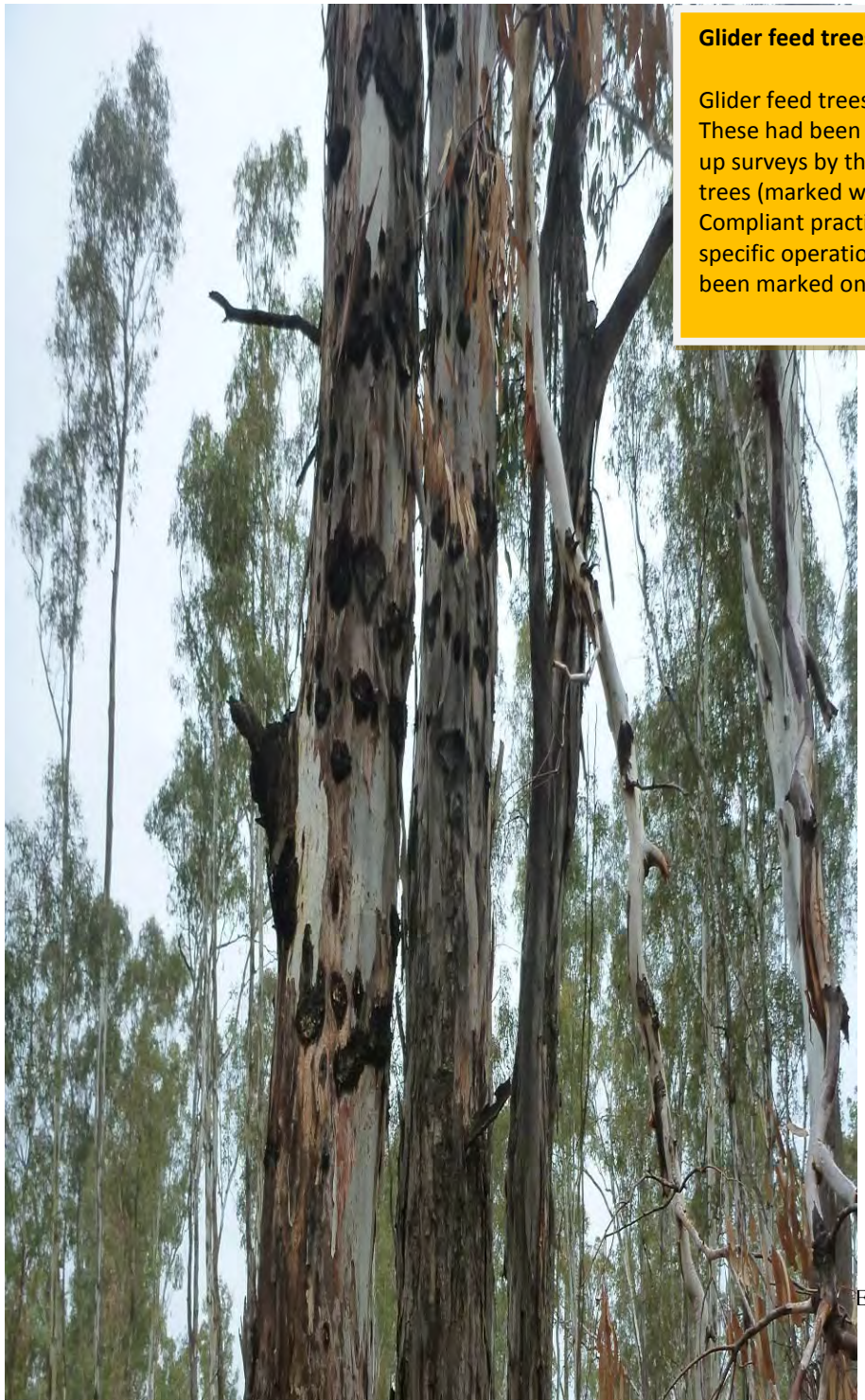

Compartment mark-up Surveys not done around active area of timber harvesting

EPA officers assessed ahead of harvesting operations within 200 metres of active harvesting. Approximately 2.5 hectare area unmarked and no evidence of survey. Evidence of hollow bearing resources unmarked as shown to left.

FURTHER OBSERVATIONS TABLE – KOONDROOK STATE FOREST – COMPARTMENT 13

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
181. Glider sap feed trees must not be felled	0\1	N/A	**Threatened Species – Glider Feed Trees Marked and Protected** Glider feed trees marked, retained and protected. These had been located during compartment mark-up surveys by the SFO. EPA officer located three feed trees (marked with 'F') throughout its assessed areas. Compliant practice. EPA officers did not inspect site specific operational map to determine if these had been marked on the map. Incisions apparent on tree.	
National Parks and Wildlife Act 1974	0/2	N/A	**Aboriginal Cultural Heritage sites** EPA officers inspected two Aboriginal cultural heritage sites within the compartment. Both sites had been protected during the course of harvesting operations. Both sites had operational buffer zones and there were no incursions detected within the sites. EPA has not released geographic coordinates or photos due to site sensitivities. 1. Site one 'midden' was adjacent to Myloc Creek. This site was situated within drainage protection zone. 2. Scar tree located within compartment (13). Area was buffer by 20 metres and no incursions into exclusion zone.	



Glider feed trees – marked, retained and protected

Glider feed trees marked, retained and protected. These had been located during compartment mark-up surveys by the SFO. EPA officer located three feed trees (marked with 'F') throughout its assessed areas. Compliant practice. EPA officers did not inspect site specific operational map to determine if these had been marked on the map. Incisions apparent on tree.

ACTION PLAN – KOONDROOK STATE FOREST, COMPARTMENT 13

Condition No.	Number of non-compliances (and sample)	Action Details	Non-compliance Code	Target/Action Date
167.(2) "Compartment mark-up survey" for nests, roosts, dens, scats etc.	1/1	**Compartment Marking-Up Surveys for Threatened Species Features** Action Plan to be developed to ensure compartment mark-up surveys are undertaken in accordance with IFOA.		1 August 2015
Total	**1**			

EPA Audit Locations

EPA Identifier	Easting	Northing
harvest extent	253221	6044874
200metre ahead ops	253206	6045073
dot 1	253113	6045022
05-28-2015 10:03:03	253068	6044892
dot2	253068	6044892
200m ahead marked up	253047	6044771
area not marked up	253129	6044741
no marking visible	253185	6044765
area not marked	253243	6044814
harvest operations	253257	6044855
EZ1	252802	6046075
EZ2	252837	6046048
EZ3	252876	6046019
EZ4	252922	6045958
EZ5	252980	6045923
05-28-2015 11:05:20	252994	6045898
1a	252994	6045898
1b	253019	6045877
1c	253035	6045861
1d	253058	6045827
1e	253088	6045808
1f	253112	6045781
1g	253144	6045759
1h	253174	6045747
1i	253225	6045746
1j	253256	6045747
plot 2(1)	253037	6045560
glider feed tree	253103	6045588
plot2(2)	253093	6045684
EZ 7	253548	6045926
EZ8	253585	6045945
EZ9	253634	6045971
EZ10	253684	6045990
harvest extent	253883	6044657
05-28-2015 14:20:43	253883	6044658

Zone 55

ATTACHMENT 2 – RISK ASSESSMENT OF NON-COMPLIANCE

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

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

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

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

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

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

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

ATTACHMENT 3 - AUDITEE SUBMISSIONS

Condition No. / Page No.	EPA draft finding / risk categorisation	Location – description, GPS	FCNSW submission	EPA response to FCNSW submission	EPA final finding & risk categorisation
167(2)	Orange	Koondrook Cpt13	**<u>Compartment Mark-up surveys for Threatened Species Features</u>** Clause 167(2) does not state the need for evidence of all surveys, only that annotations and field markings be made in the event of locating features in relation to clauses 155 to 158 and 168(2&4), 169(6) and 170(2). EPA asked SFO about this on site, SFO stated the area had been checked, and due to a decision on the commercial value, it had not been marked for harvest. During the debrief EPA stated they found no features within the 200m area that would require an action. FCNSW doesn't consider this to be a breach of the IFOA condition.	The EPA has reviewed FCNSWs submission. Compartment mark-up surveys are an important step in ensuring the protection of threatened species feature from harvesting operations. When these surveys are not conducted the risk to these features and thus the threatened species they support greatly increases. The EPA looks at all available information and evidence to determine audit compliance findings based on the balance of probabilities. In this case no evidence was provided by FCNSW or available to verify the information provided by the SFO including any annotations of an operational map to indicate areas had been searched. Furthermore, EPA officers did not actively search for threatened species features during its assessment, rather searched for evidence of compartment marking up. Based on the evidence at hand and the balance of probabilities the EPA considers that compartment mark-up searches have not been undertaken in accordance with the IFOA. No change to audit findings.	Not compliant Code Orange