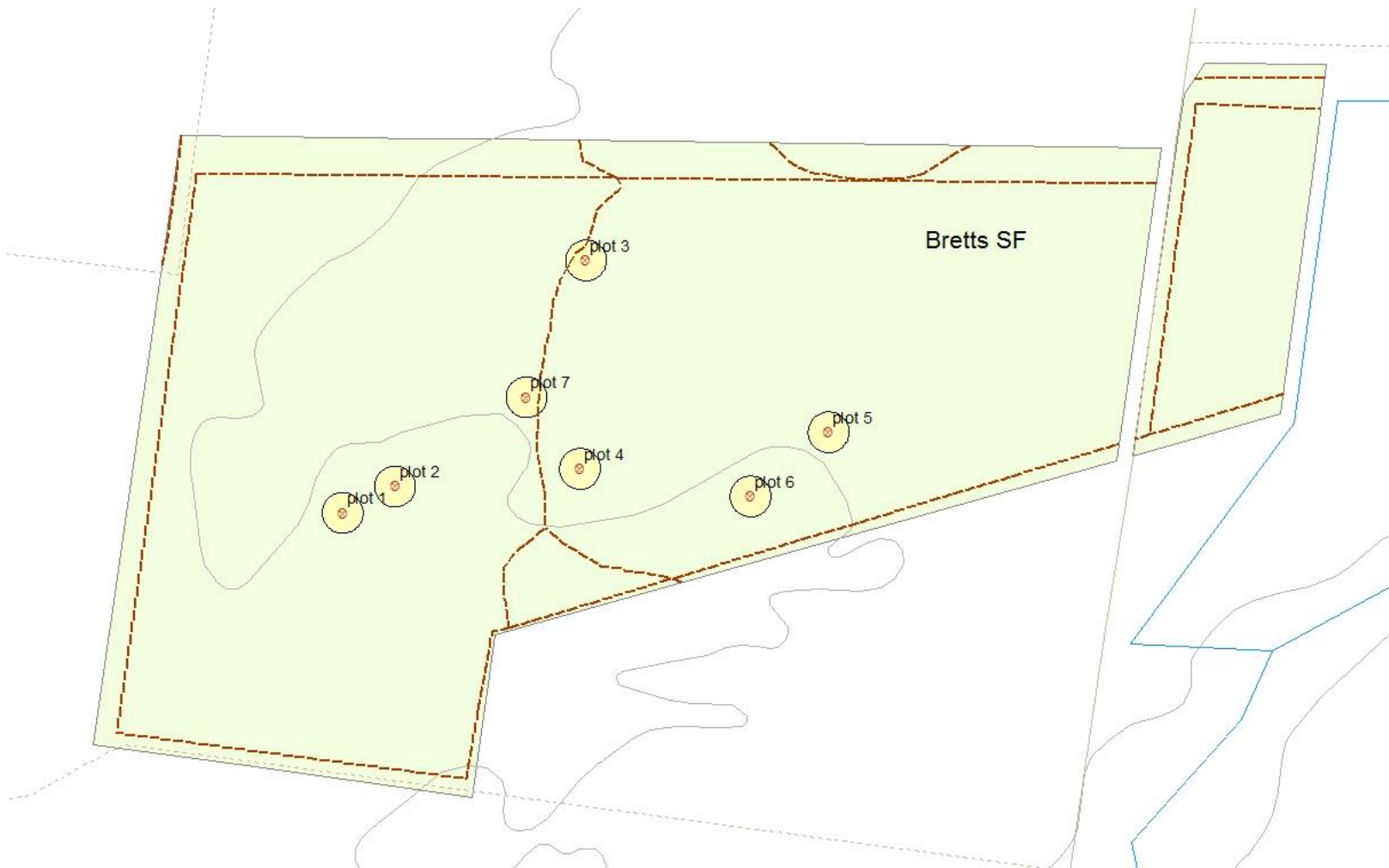


AUDIT REPORT - BRETTS STATE FOREST, COMPARTMENT 216

Auditee:	Forestry Corporation NSW
Audit scope:	Bretts State Forest, compartment 216 (see <u>Map 1</u> , below). The field audit took one day to complete.
Region:	South West Cypress Region
Date/Audit timing:	4 November 2015
Lead EPA auditor:	Pete Lezaich
Assisting EPA auditors:	Sandie Jones, Mark Rowsell, Malcom Wubbels, Dinka Dekaris, David Cordell
Justification of audit:	Initial audit in South West Cypress IFOA focussing on EPA compliance priority area
Audit objectives:	<ol style="list-style-type: none"> 1. Determine compliance with South West Cypress IFOA conditions, EEC identification and exclusion, threatened species protection zones (Sand Hill Spider Orchid), cypress retention 2. Determine compliance with relevant planning conditions that relate to EEC identification 3. Communicate compliance and non-compliances to FCNSW. 4. Outline requirements for any necessary follow-up action.
Audit criteria:	<ul style="list-style-type: none"> • White cypress tree retention (Clause 198) • Box Gum Woodland EEC (Clauses 260; 261; 265; 267) • Sand Hill Spider Orchid Protection zone (Clauses 177(1); 258(c) ; 265) • Schedule 3 - Part 1 and 2 - Environmentally Sensitive Assessments - Planning documentation only
Summary of Operations	<p>From the harvesting plan:</p> <p>“The mature cypress stands within compartments 216 were established during regeneration events in the 1890’s. They have been thinned on several occasions during the 1920’s and 1930’s, with the last harvesting event occurring in 1973/74 prior to revocation of part of the state forest. Regeneration has been negligible as a result of severe rabbit activity (control measures undertaken through to the 1990’s) and a long history of grazing. A large hailstorm in 1985/86 severely affected trees in the western and southern parts of the compartment, with many trees throughout showing malformation in the crown.”</p> <p>Operations were suspended in the compartment at the time of the audit, due to wet weather. The harvesting plan identified 95% of the area as being inadequately regenerated and requiring thinning. The remaining 5% comprised of mature Cypress with adequate regeneration. In these areas, the aim was to open up the stand and so ‘release’ the regeneration.</p>



Map 1: Locations of the plots undertaken in Brett's State Forest, compartment 216 during the EPA audit on 11 November 2016. Each plot has a radius of 56m, as shown by the yellow circles.

1. Audit Findings - Overview

A summary of EPA's findings are shown in the table below. The non-compliances are highlighted for ease of reference.

IFOA condition	Non-compliant	Compliant	Not Determined	Not Applicable
148A	0	1	0	0
198	3	4	0	0
200	0	0	0	1
207	0	1	0	0
221	0	1	0	0
222	0	1	0	0
224	0	0	0	1
225	0	0	0	1
230	0	1	0	0
231	0	1	0	0
267	1	0	0	0
268	1	0	0	0
270B	1	0	0	0
162 - 179	0	10	0	0
261A	1	0	0	0
261B	1	0	0	0
TOTAL	8	20	0	3

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ATTACHMENT 1: DRAFT AUDIT FINDINGS

Ground habitat protection (Division 3, Part 3.1 of IFOA)		
Condition No. and detail	Compliant? Yes/No/Not determined/Not Applicable	Number of non- compliances
<p>148A. Ground habitat protection</p> <p>(1) Forests NSW must endeavour to protect the ground habitat of native animals from the impact of forestry operations to the extent that the nature of those operations allows and to the extent that it is practicable to do so.</p> <p>(2) In this clause, “ground habitat” includes understorey vegetation, groundcover vegetation, thick leaf litter and fallen timber.</p>	Yes	0
Comment and Evidence		
<p>he EPA found FCNSW were compliant with the above condition.</p> <p>EPA officers inspected the ground cover in the logged areas surveyed and found it to be largely unaffected by harvesting machinery or snagging (see photo below).</p>		

Photos: Ground habitat Protection



Photo 1: Good ground habitat protection in cpt 216 Brett's State Forest (EPA Photo #144).



Photo 2: Snag track and debris in cpt 216 showing minimal ground disturbance associated with logging activities (EPA Photo #147).

Tree retention (Division 2, Part 3.4 of the IFOA)		
Condition No. and detail	Compliant? Yes/No/ Not determined/Not Applicable	Number of non- compliances
<p>198. Retention of large white cypress trees</p> <p>(1) Forests NSW must ensure that, at the completion of any logging operation in which white cypress trees are felled, at least six large white cypress trees remain, within the net mapped operation area, in each hectare of land surrounding a stump of any white cypress tree that is felled in the operation concerned. (emphasis added)</p> <p>(2) Only living trees may be selected for the purpose of subclause (1). If possible, the trees selected for retention are each to have a dbhob of more than 550 mm. If there are not enough trees having such a dbhob, surrounding the tree that is or is proposed to be felled and within the net mapped operation area, then trees are to be selected from the cohort of healthy, mature trees with the next largest diameters at breast height over bark to make up the shortfall.</p>	No	3
<p>200. Retention of bull oak</p> <p>(1) Forests NSW must ensure that, at the completion of any logging operation in which bull oak trees are felled, at least four bull oak trees remain, within the net mapped operation area, in each hectare of land surrounding a stump of any bull oak tree that is felled in the operation.</p> <p>(2) Trees must be selected, for the purpose of subclause (1), from among the larger bull oak trees that are within the net mapped operation area in the hectare of land surrounding the bull oak tree that is to be felled. Only living trees may be selected.</p>	Not applicable	0
<p>207. Retention of dead trees</p> <p>(1) This clause does not apply to a salvage logging operation following a wildfire carried out in accordance with Division 3.</p> <p>(2) A dead, dry standing tree (of whatever species) must not be felled in a logging operation.</p>	Yes	0
Comment and Evidence		
<p>The EPA found FCNSW did not comply with Condition 198 in three out of the seven areas surveyed. The EPA found FCNSW complied with condition 207. Condition 200 did not apply in this case.</p> <p>These findings are based on a measurement of 180 trees and 192 stumps (total sample size = 372) across seven 1ha plots within the net logging area (a total survey area of 7ha). Detailed findings and plot co-ordinates are shown in Tables 1, 2 and Figures 1 - 7 in Attachment 2. Based on the data gathered during the audit, the EPA found:</p> <ul style="list-style-type: none"> - Plot 1 (Figure 1): 6 trees retained, belonging to the largest and second largest size cohorts. The largest removed tree was 45.7cm dbhob (2cm smaller than the smallest retained tree). Therefore, plot 1 is compliant with condition 198 - Plot 2 (Figure 2): 7 trees retained, belonging to the two largest size classes. The largest removed tree was 45.5cm dbhob (2cm smaller than the smallest retained tree). Therefore, plot 2 is also compliant with condition 198 - Plot 3 (Figure 3): 6 trees retained, two of which belonged to the largest size class and four to the second largest size class. The EPA measured two of the removed trees 		

that belonged in the largest size class (46 and 47cm estimated dbhob). These two trees should have been retained under Condition 198. Plot 3 is **not compliant**

- **Plot 4 (Figure 4):** 7 trees retained, belonging to the second largest size cohort. In the same plot, EPA measured a stump with an estimated dbhob of 54.1cm. This tree belonged to the largest size cohort and should have been retained. Plot 4 is **not compliant**
- **Plot 5 (Figure 5):** 8 trees retained, belonging to the second largest size class. The EPA measured one stump with an estimated dbhob of 49.9cm. Although this tree was larger than most of the retained trees, it belonged to the same size class. Therefore plot 5 is compliant
- **Plot 6 (Figure 6):** 6 trees retained, one of which belonged to the largest size class and five to the second largest. The removed trees all belonged to the second largest size class, with estimated dbhob measurements equal to or smaller than the retained trees. Therefore, plot 6 is compliant
- **Plot 7 (Figure 7):** 6 trees retained, five of which belonged to the largest size class (>55cm dbhob) and one in the second largest size class. The EPA measured two stumps with estimated dbhob >55cm. At least one of these should have been retained under condition 198, above. Plot 7 is **not compliant**.

EPA officers did not observe any bull oak trees / stumps, hence condition 200 did not apply. EPA officers observed a number of retained dead trees (see **image 1**, below) and no felled dead trees in the areas assessed. Therefore, FCNSW have complied with condition 207.



Photo 4: dead tree retained as required by condition 207 of the IFOA (photo ref: 117).



Photo 3: dead tree retained as required by condition 207 of the IFOA (photo ref: 105).

Tree mark-up (part 3.4 of the IFOA)

Condition No. and detail	Compliant? Yes/No/Not determined/Not Applicable	Number of non- compliances
<p>221. Rules for marking trees in logging operations</p> <p>(1) White cypress trees must be marked, in accordance with this Division– in any logging operation in which white cypress trees that have a dbhob of 300 mm or more are to be felled.</p> <p>(2) Whether an operation is of a type described in subclause (1) is to be determined by reference to the site specific operational plan for the operation.</p>	Yes	0
<p>222. Trees may be marked for retention or removal</p> <p>(1) A requirement of clause 221 to mark white cypress trees may be satisfied either:</p> <ul style="list-style-type: none"> (a) by marking trees that are selected for felling (“marked for removal”), or (b) by marking trees that are selected for retention to meet such of the requirements of clauses 198, as may be relevant to the operation (“marked for retention”). More than one approach may be used in the same operation. <p>(2) When marking white cypress trees for retention (for the purpose of clause 198) at any stage of an operation, only those trees that have a dbhob of 300 mm or more need to be marked.</p> <p>(3) If marking is required under this Division, trees must be physically marked in the field, whether by using paint or some other physical mark. Marking for removal and marking for retention must be done in different and readily distinguishable ways.</p>	Yes	0
<p>224. Marking glider sap feed trees for retention</p> <p>(1) This clause applies to any logging operations to which clause 221 applies.</p> <p>(2) A glider sap feed tree must be marked for retention if the tree is a cypress or bull oak tree or any other tree that may be impacted by roadwork.</p>	N/A	0
<p>225. Marking raptor nest trees for retention</p> <p>A tree that must not be felled under clause 204 (trees that contain raptor nests must not be felled) must be marked for retention at any stage of a logging in which trees are being marked for retention for the purpose of clause 198.</p>	N/A	0
Comment and Evidence		
<p>The EPA found that FCNSW was compliant with the above conditions in all areas assessed. This finding is based on observations of 180 trees (total sample size = 180) across seven 1ha plots within the net logging area (a total survey area of 7ha). Trees were marked for retention in all areas surveyed. The EPA observed no glider sap trees or raptor nest trees that required marking.</p>		

Tree Protection (Division 5, Part 3.4 of the IFOA)		
Condition No. and detail	Compliant? Yes/No/Not determined/Not Applicable	Number of non- compliances
<p>230. Protection of retained trees generally</p> <p>(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).</p>	Yes	0
<p>231. Specific measures to protect retained trees</p> <p>(1) In this clause, "protected tree" means a tree that must not be felled under, or that is retained for the purposes of, this Part. However, in the case of any tree in use by a koala at the time of the operation is a tree which must not be felled under clause 205, the tree is a protected tree only for the duration of the logging operation referred to in that clause.</p> <p>(3) Directional felling is to be used so as to reduce the potential for damage to protected trees.</p> <p>(4) Routes of new roads and for the extraction of timber are to be planned so as to reduce the potential for damage to protected trees.</p> <p>(5) Such trees must not be used as bumper trees when snigging.</p> <p>(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.</p> <p>(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.</p>	Yes	0
Comment and Evidence		
<p>The EPA found that FCNSW have complied with all of the above conditions.</p> <p>EPA officers found no instances of damaged to retained trees by logging operations, or logging debris or ground disturbance near retained trees.</p>		

Logging in environmentally significant areas (part 3.7 of the IFOA)		
Condition No. and detail	Compliant? Yes/No/Not determined/Not Applicable	Number of non- compliances
<p>267. Logging operations prohibited in environmentally significant areas</p> <p>(1) A logging operation must not be carried out in an environmentally significant area.</p> <p>(2) To avoid doubt, a log dump must not be established, maintained or up-graded in an environmentally significant area for the purpose of (or as part of) a logging operation.</p>	No	0
<p>268. Felling of trees into environmentally significant areas and their removal</p> <p>(1) A tree (or part of a tree) must not be felled into an environmentally significant area in a logging operation. However, this subclause is not breached where a tree is accidentally felled into an environmentally significant area.</p> <p>(2) A tree (or part of a tree) that has been felled into an environmentally significant area in a logging operation must not be removed, unless the tree or part has been accidentally felled into that area.</p> <p>(3) Only a mechanical harvester may be used to remove a tree (or part of a tree) that has been accidentally felled into an environmentally significant area. When a mechanical harvester is used to remove a tree (or part of a tree) from the environmentally significant area, it must be operated so that the tree (or the part) is lifted off the ground and removed from the area while wholly supported off the ground. The mechanical harvester's wheels or tracks must remain outside the environmentally significant area.</p>	No	0
<p>270B. Logging operations in Sandhill Pine Woodland EEC</p> <p>(1) Despite clause 267, a logging operation to harvest timber from a stand of white cypress trees may be carried out in an environmentally significant area for Sandhill Pine Woodland EEC except if:</p> <p>(a) the stand contains 2 or more trees per hectare of <i>Callitris glaucophylla</i> with a dbhob of more than 500mm: or</p> <p>(b) the stand contains less than 25 trees per hectare of <i>Callitris glaucophylla</i>; with a dbhob of more than 200 mm .</p> <p>(2) At the completion of any logging operation under this clause, at least 25 <i>Callitris glaucophylla</i>; trees with a dbhob of 200 mm, per hectare of the stand must be retained.</p> <p>(3) The prohibition on logging under this clause extends to –</p> <p>(a) a zone of 40 metres around the stems of peripheral <i>Callitris glaucophylla</i> trees with a dbhob of more than 500 mm: and</p> <p>(b) a zone of 10 metres around the stems of peripheral <i>Callitris glaucophylla</i> trees with a dbhob of more than 200 mm.</p>	No	0
Comment and Evidence		
<p>The EPA found that FCNSW was not compliant with the above conditions in all areas assessed.</p> <p>This finding is based on a measurement 180 trees and 192 stumps (total sample size = 372) across seven 1ha plots within the net logging area (a total survey area of 7ha). The relevant data is shown in Table 3 in Attachment 2. The measurements taken during the audit show that there were, on average, four (4) <i>C. glaucophylla</i> trees >500mm DBHOB per hectare of net harvest area. Individual plot measurements show there were only 2 plots out of 7, that contained fewer than two (2) <i>C. glaucophylla</i> trees >500mm DBHOB. Condition</p>		

270B requires a 40m exclusion zone to be established around each of the peripheral *C. glaucophylla* trees >500mm DBHOB. EPA officers observed no such exclusion zones around the *C. glaucophylla* trees >500mm DBHOB. In addition, EPA officers recorded evidence of four (4) stumps with diameters exceeding 500mm DBHOB (adjusted as per condition 232 of the IFOA). In total, EPA identified 31 *C. glaucophylla* trees >500mm DBHOB that should have been protected under condition 270B.

Regarding condition 270B(1)(b), the EPA counted 364 *C. glaucophylla* trees >200mm DBHOB in the 7ha surveyed, giving an average of 52 *C. glaucophylla* trees >200mm DBHOB. In plot 7, there were only 24 *C. glaucophylla* trees >200mm DBHOB. Condition 270B(2) requires at least 25 of the *C. glaucophylla* trees >200mm DBHOB to be retained per hectare of the stand. EPA measurements detailed in **Table 3, Attachment 2**, show that FCNSW failed to achieve this retention rate in three of the seven plots surveyed (an average of 26 *C. glaucophylla* trees >200mm DBHOB was retained per hectare of the areas surveyed).

ATTACHMENT 2: DRAFT AUDIT FINDINGS (DESKTOP COMPONENT)

Plant and animal surveys before start of logging and road works (part 3.2 of IFOA)		
Condition No. and detail	Compliant? Yes/No/ Not determined/Not Applicable	Number of non- compliances
<p>162. Compliance with Part before commencement of operation</p> <p>(1) A forestry operation to which this Part applies must not be commenced in a compartment or other tract of land unless:</p> <ul style="list-style-type: none"> (a) a search of records of animal and plant species has been carried out in relation to the compartment or other tract of land (but no more than 5 years before the operation commences in the compartment or tract), and a report of the results has been prepared, and (b) a traverse survey for the compartment or other tract of land has been carried out (no more than 5 years before the operation commences in the compartment or tract), and (c) each targeted plant survey required under Division 4 for the compartment or other tract of land has been carried out , and (d) a report of surveys carried out for the compartment or other tract of land has been prepared in accordance with Division 5. 	Yes	0
<p>163. Surveys to be undertaken by experts</p> <p>Forests NSW must ensure that each traverse survey and targeted plant survey under this Part is carried out by a person or persons having the necessary skills and expertise to do so.</p>	Yes	0
<p>165. Data compilation</p> <p>(1) Forests NSW must search the Atlas of NSW Wildlife and other databases of records held or maintained by Forests NSW, for the following records relevant to the compartment or other tract of land:</p> <ul style="list-style-type: none"> (a) spotted-tailed quoll within the compartment and 5 kilometres around it, (b) flying-fox camps within the compartment and 2 kilometres around it, (c) animals and plants of other threatened species not referred to in paragraph (a) or (b) (and any proposed threatened species referred to in clause 144 (1) (d)) within the compartment or other tract of land and within 2 kilometres of it. 	Yes	0

Plant and animal surveys before start of logging and road works (part 3.2 of IFOA)

Condition No. and detail	Compliant? Yes/No/ Not determined/Not Applicable	Number of non- compliances
<p>166. Report of data found</p> <p>(1) A traverse survey or targeted plant survey must not be carried out until Forests NSW has prepared a report that contains the following:</p> <ul style="list-style-type: none"> (a) date of report and dates on which the search was carried out, (b) location of the compartment or other tract of land for which the search was carried out, (c) name of person or persons who carried out the search, (d) a list of all records found and a summary of each record. 	Yes	0
<p>168. Planning traverse route</p> <p>(1) The route of the traverse survey for the compartment or other tract of land must:</p> <ul style="list-style-type: none"> (a) cover at least the distance calculated at the rate of 1.2 kilometres per 100 hectares of the compartment or other tract of land, and (b) pass through the full range of forest types and environments known, at the time of planning the route, to be present in the compartment or other tract of land. <p>(2) The route of the traverse survey must extend beyond the boundary of the compartment or other tract of land into any area within 100 metres of the boundary if that area:</p> <ul style="list-style-type: none"> (a) is known to contain a forest type or a type of environment not present in the compartment or other tract of land itself, and (b) is located within State forest. 	Yes	0
<p>169. Mapping traverse route</p> <p>The route of the traverse survey for the compartment or other tract of land must be mapped at a scale of at least 1:50 000 before the traverse survey is commenced. The map must also indicate the forest types and types of environments known to be present (at the time of preparation of the map) within the compartment or tract and within 100 metres of the compartment or tract (if located within State forest).</p>	Yes	0

Plant and animal surveys before start of logging and road works (part 3.2 of IFOA)

Condition No. and detail	Compliant? Yes/No/ Not determined/Not Applicable	Number of non- compliances
<p>170. Traverse survey – field methodology</p> <p>(1) The person or persons conducting the traverse survey must search for the following along the traverse route:</p> <ul style="list-style-type: none"> (a) wetlands, areas of heath, areas of rocky outcrops or cliffs, dams and tanks, (b) nests and roosts of birds of the species referred to in clause 246, (b2) trees of any species that may be habitat for hollow dependent threatened species, namely: <ul style="list-style-type: none"> (i) trees (living or dead) with evidence of use by a hollow dependent threatened species; or (ii) trees (living or dead) with a dbh of 81centimetres or more. (c) flying-fox camps (as described in clause 249 (2)), (d) dens (whether permanent or maternal) and latrine sites of the spotted-tailed quoll, (e) any individuals of a species of plant referred to in clause 149 or 258, (f) evidence of Box Gum Woodland EEC, Inland Grey Box Woodland EEC or Sandhill Pine EEC, (g) glider sap feed trees within the meaning of clause 203, (h) trees containing raptor nests, (i) evidence of Bush stone curlews, (j) Painted honey eater habitat, as described in clause 246A, (k) White browed treecreeper habitat, as described in clause 246B, (l) nests (other than mud nests) of any species of bird that is protected fauna, (m) evidence of species of concern within the meaning of clause 144; (n) endangered ecological communities (in addition to Box Gum Woodland, Sandhill Pine and Inland Grey Box Woodland EEC). <p>(5) The traverse route must be searched for at least the amount of time calculated at the rate of 1 hour per 100 hectares of the compartment or other tract of land. However, in the case of ancillary road construction, the traverse route (being the road or proposed road) must be searched for at least the amount of time calculated at the rate of 1 hour per 1.2 kilometres of the route.</p>	Yes	0
<p>171. Traverse survey report</p> <p>(1) Forests NSW must ensure that the following information concerning the traverse survey and its results is recorded:</p> <ul style="list-style-type: none"> (a) location of the area in which the traverse survey was conducted, (b) date on which the traverse survey was conducted, (c) name of person or persons conducting the survey, (d) the traverse route (by marking it on a map), (e) length of the traverse route, (f) the time spent in the field conducting the traverse survey (but not including any time spent travelling to and from the location), (g) details of all features or other things referred to in clause 170 (1) that were found in the traverse survey, (h) details of any evidence of a threatened species (or an endangered population) of plant or animal (in addition to those included under paragraph (g)) that was found in the traverse survey. 	Yes	0

Plant and animal surveys before start of logging and road works (part 3.2 of IFOA)

Condition No. and detail	Compliant? Yes/No/ Not determined/Not Applicable	Number of non- compliances								
<p>177. Targeted surveys for plant species – when are they required?</p> <p>(1) Subject to subclause (2), a targeted survey for each species of plant specified in column 1 below is required for the compartment if it is within a State forest specified next to the species' name in column 2.</p> <table><tr><td>Threatened species</td><td>State Forest</td></tr><tr><td>Acacia curranii</td><td>Yelkin, Cargelligo</td></tr><tr><td>Caladenia arenaria</td><td>Kentucky, Yarranjerry, Mejum, Buckingbong, Lonesome Pine</td></tr><tr><td>Acacia ausfeldii</td><td>Tuckland, Cope, Weddin</td></tr></table>	Threatened species	State Forest	Acacia curranii	Yelkin, Cargelligo	Caladenia arenaria	Kentucky, Yarranjerry, Mejum, Buckingbong, Lonesome Pine	Acacia ausfeldii	Tuckland, Cope, Weddin	Not Applicable	0
Threatened species	State Forest									
Acacia curranii	Yelkin, Cargelligo									
Caladenia arenaria	Kentucky, Yarranjerry, Mejum, Buckingbong, Lonesome Pine									
Acacia ausfeldii	Tuckland, Cope, Weddin									
<p>179. Report of data and surveys for compartment</p> <p>(1) Forests NSW must prepare a report for the compartment or other tract of land that includes the following:</p> <p>(a) the report of the results of its search for records of animal and plant species prepared under clause 166,</p> <p>(b) the information relating to, and the results of, the traverse survey for the compartment or other tract of land recorded under clause 171, (c) each report of a targeted plant survey carried out for the compartment or other tract of land, prepared for the purpose of clause 177 (2),</p> <p>(d) all data sheets used in the field for the purpose of a traverse survey and any targeted plant survey,</p> <p>(e) a map of the compartment or other tract of land indicating the location of records of threatened species, flying-fox camps or endangered populations, and the location of evidence of any endangered ecological community, that is found or made during a survey for the compartment or tract under this Part.</p>	Yes	0								
Comment and Evidence										
<p>The EPA found FCNSW was compliant in all of the above conditions.</p> <p>A Preharvest survey report provided by FCNSW included all of the required information, data, field forms and maps to satisfy the above conditions.</p>										

Environmentally significant areas (part 3.6 of IFOA)		
Condition No. and detail	Compliant? Yes/No/Not determined/Not Applicable	Number of non- compliances
<p>261A. Sandhill Pine Woodland EEC</p> <p>(1) Any single area of land of 0.5 hectares or more that consists of Sandhill Pine Woodland EEC according to the Sandhill Pine Woodland EEC Identification Guidelines in Schedule 8 is an environmentally significant area.</p> <p>(2) Forests NSW is to make a written record of the extent and location of any environmentally significant area that it identifies under this clause.</p>	No	1
<p>261B. Records to be kept of EECs</p> <p>Forests NSW must keep written records of a species protection zone or environmentally significant area for an EEC identified under clauses 260 – 261A for the remainder of the term of this approval (Box Gum Woodland EEC, Inland Grey Box Woodland EEC, Sandhill Pine Woodland EEC).</p>	No	1
Comment and Evidence		
<p>EPA found FCNSW was not compliant with the above conditions.</p> <p>In a section 193 notice, the EPA asked FCNSW to provide records of the extent of the Sandhill Pine Woodlands EEC as per condition 261A and 261B. In their response, FCNSW wrote:</p> <p><i>“FCNSW adopted the view that, for planning purposes, all of Bretts State Forest met the definition of SPW EEC, as at least 95% of the harvest area was considered to meet the EEC criteria (ie. The extent of the compartment is EEC). No additional mapping was undertaken and Clause 270B was followed for this operation.”</i></p> <p>The EPA notes that the EEC was not shown on the harvest plan operational map. The harvest plan likewise failed to state the full extent of the Sandhill Pine Woodland EEC in the compartment. The harvest plan for compartment 216 stated, relevantly:</p> <p><i>“The SFO will ensure that all relevant tree retention and silvicultural prescriptions are met during harvesting operations, especially those in relation to management of Sandhill Pine Woodland EEC (clause 270B).</i></p> <p><i>There are no known areas of heath, rocky outcrops, cliffs and/or endangered ecological community (EEC) occurring within the net operational area that need additional harvest exclusions or modified harvesting zones implemented, other than the recognition of the Sandhill Pine Woodland EEC prescriptions.</i></p> <p><i>The SFO should watch out for any of these areas that may occur, and record them in their SFO notes and on their maps.</i></p> <p><i>These areas are not shown on the Operational Map.”</i></p> <p>In another part of the section 193 notice, the EPA sought SFO records as well as any information relating to EECs in Bretts State Forest, compartment 216. The SFO notes that were provided to the EPA make no mention of the Sandhill Pine Woodland EEC or its extent across the whole of the net harvest area. Likewise, the attached map shows numerous exclusion zones for individual threatened flora species (referred to as “SPZ” in the SFO notes), but no mention of an EEC.</p>		

Environmentally significant areas (part 3.6 of IFOA)

Condition No. and detail	Compliant? Yes/No/Not determined/Not Applicable	Number of non- compliances
<p>The words “recognition of the Sandhill Pine Woodland EEC prescriptions” inside the harvest plan are not clear enough to satisfy the requirements of condition 261A. This is particularly so in the absence of a map. Accordingly, FCNSW has failed to provide records of the extent and location of the Sandhill Pine Woodland EEC, contrary to the above conditions.</p> <p>Note: “area of heath” means an area that naturally supports less than ten trees with a dbhob of more than 100 mm per hectare and in which:</p> <ul style="list-style-type: none"> (a) more than 30% of the projected foliage cover (that is, the area of ground covered by projecting the outline of the foliage vertically to the ground) consists of mainly sclerophyllous and semi sclerophyllous shrubs (being woody plants with many stems arising at or near the base), and (b) the sclerophyllous and semi sclerophyllous shrubs (except for broombush) are generally less than 3 metres high at maturity. <p>“environmentally significant area” means an environmentally significant area as described in Part 3.6</p> <p>“species protection zone” means a zone for the protection of a threatened species or protected fauna as described in Part 3.6, being any of the species protection zones described in the following provisions:</p> <ul style="list-style-type: none"> (a) clause 246 (bird nests and roost sites), (a1) clause 246A (Painted honey eater <i>Grantiella picta</i>) (a2) clause 246 B (White browed treecreeper <i>Climacteris affinis</i> - endangered population) (b) clause 249 (Flying-fox camps), (c) clause 252 (Spotted-tailed quoll <i>Dasyurus maculatus</i>), (d) clause 258 (plants), (e) clause 260 (Part 1 Box Gum Woodland EEC), (f) clause 261 (Part 1 Inland Grey Box Woodland EEC), (g) clause 261A (Sandhill Pine Woodland EEC). 		

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			
Level of Environmental Impact		Certain	Likely	Less Likely
	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 – DATA TABLES AND FIGURES

Table 1: waypoints recorded in Bretts State Forest during the audit undertaken on 4 November 2015 (see also the map included below this table).

FID	Identification #	Latitude	Longitude	Easting	Northing
1	780	-34.772474	145.848149	394599	6151584
2	781	-34.772912	145.848831	394662	6151536
3	782	-34.772276	145.850409	394806	6151608
4	783	-34.766746	145.856203	395329	6152228
5	784	-34.766229	145.856062	395315	6152285
6	785	-34.767001	145.856314	395339	6152199
7	786	-34.766646	145.855827	395294	6152238
8	787	-34.771891	145.855952	395312	6151657
9	788	-34.772067	145.855558	395277	6151637
10	789	-34.772188	145.855509	395272	6151623
11	790	-34.771824	145.855563	395277	6151664
12	791	-34.771494	145.855581	395278	6151700
13	792	-34.771486	145.856055	395321	6151702
14	793	-34.772246	145.856129	395329	6151618
15	794	-34.771057	145.863408	395994	6151757
16	795	-34.771111	145.863842	396033	6151751
17	796	-34.770755	145.863553	396007	6151791
18	797	-34.772621	145.86105	395780	6151581
19	798	-34.772204	145.860937	395769	6151627
20	799	-34.772472	145.861432	395815	6151598
21	800	-34.772719	145.861271	395800	6151570
22	801	-34.770108	145.854374	395166	6151853
23	802	-34.769127	145.853259	395062	6151960
24	803	-34.769283	145.853497	395084	6151943

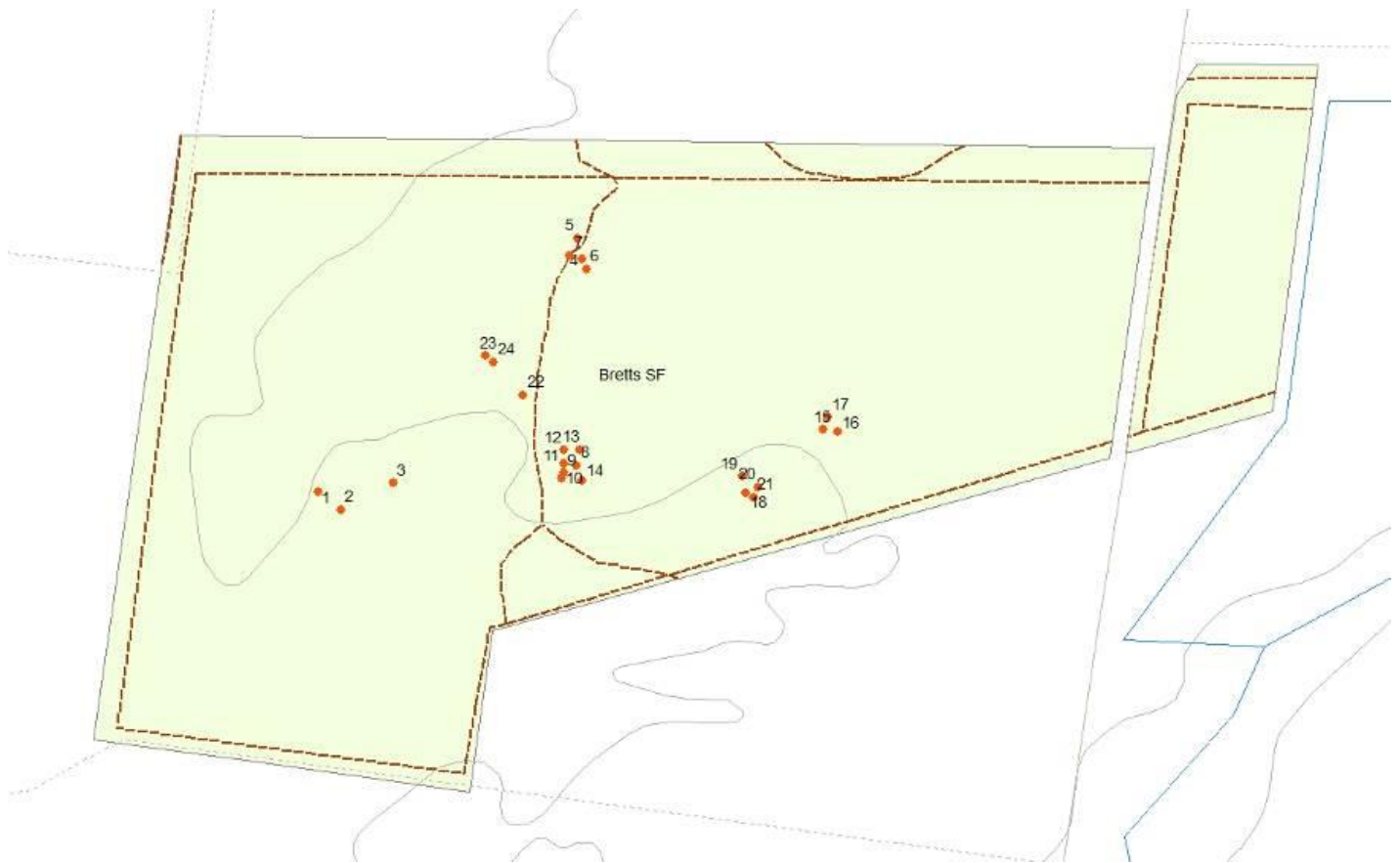


Table 2: plot data showing the number of trees/stumps measured in each of the plots during the audit in Brett's State Forest, compartment 216.

Plot number	Number of trees measured	Number of stumps measured	Total
1	29	38	67
2	22	19	41
3	35	45	80
4	30	33	63
5	28	36	64
6	19	14	33
7	17	7	24
TOTAL	180	192	372

Table 3: plot data showing the numbers of *Callitris glaucophylla* trees >500mm DBHOB and >200mm DBHOB present before and after harvesting, for the purposes of condition 270B of the IFOA.

Plot number	Number of <i>C. glaucophylla</i> trees >500mm DBHOB present before harvesting	Number of <i>C. glaucophylla</i> trees >200mm DBHOB present before harvesting	Number of <i>C. glaucophylla</i> trees >200mm DBHOB remaining after harvesting
1	3	64	36
2	4	41	22
3	0	75	33
4	5	63	30
5	1	64	28
6	7	33	19
7	11	24	17
TOTAL	31	364	185
AVERAGE # / HA	4	52	26

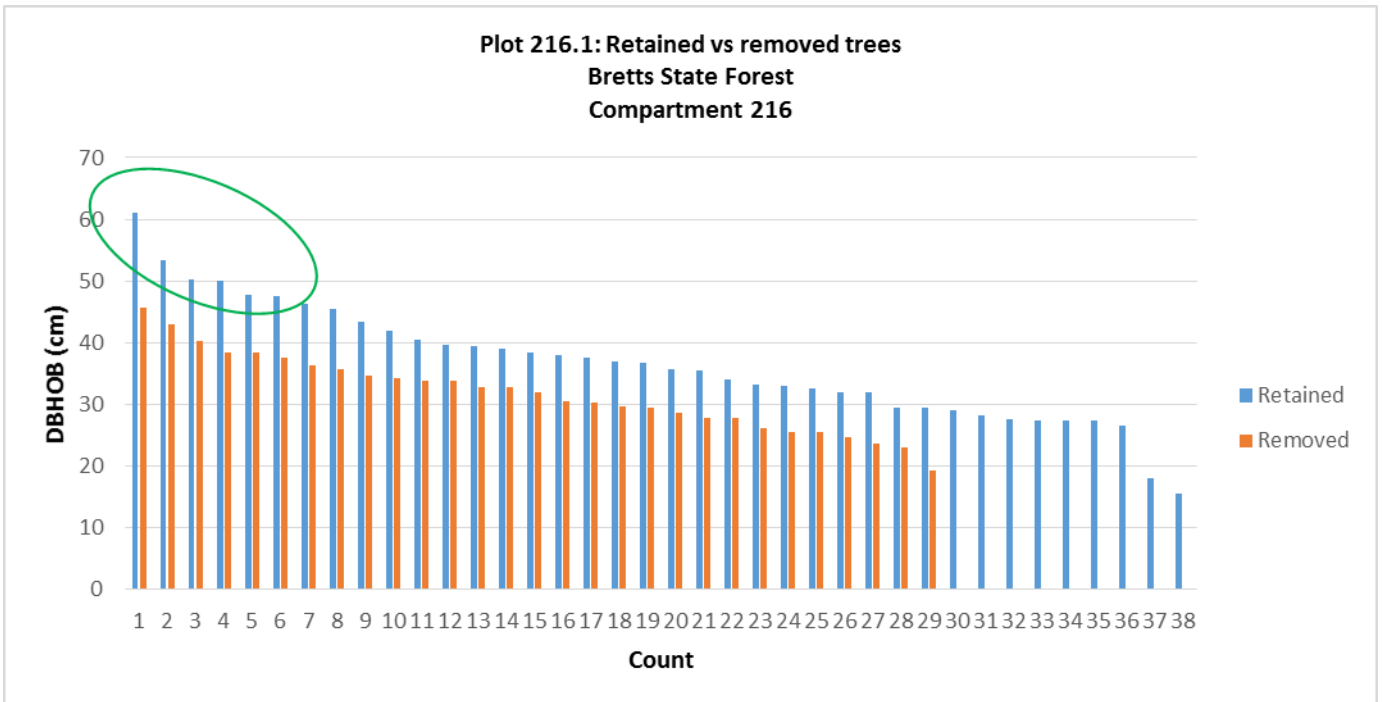


Figure 1: diameters at breast height over bark (DBHOB) of trees measured in plot 1 (blue) versus estimated DBHOB of removed trees (orange).

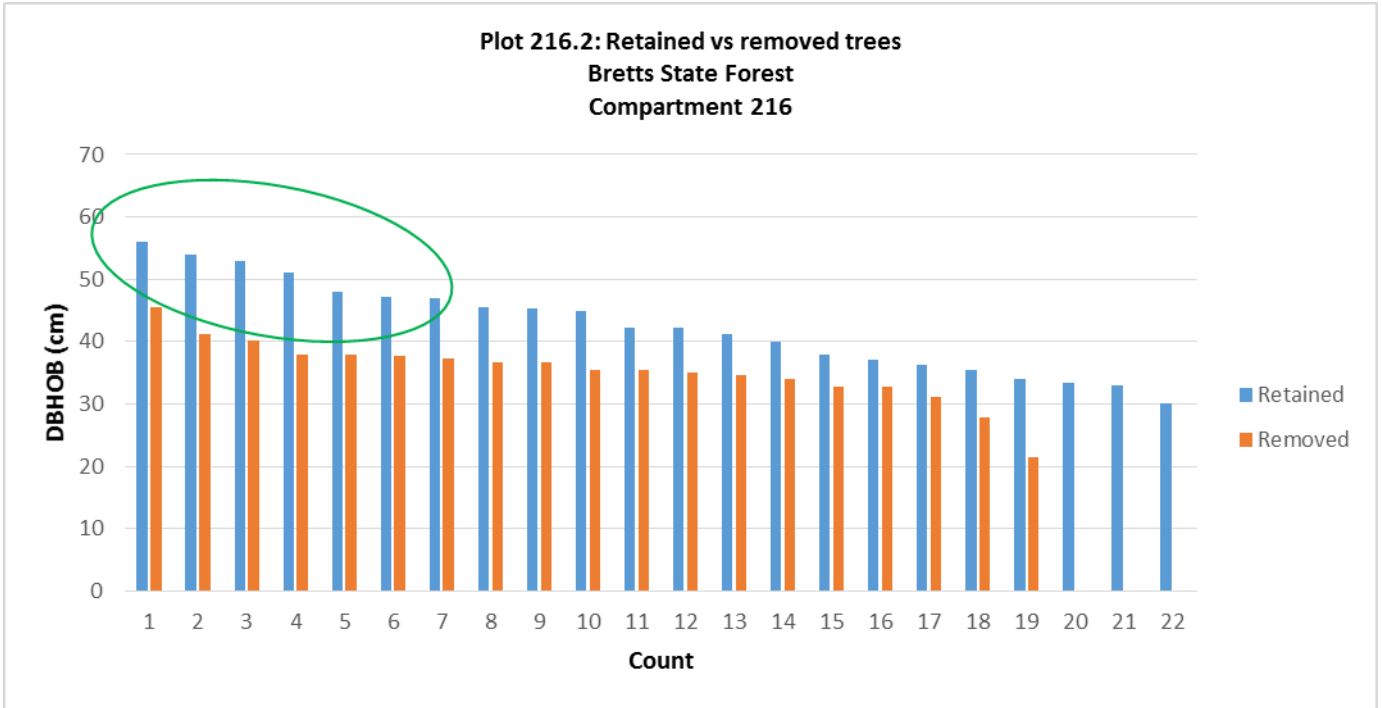


Figure 2: diameters at breast height over bark (DBHOB) of trees measured in plot 2 (blue) versus estimated DBHOB of removed trees (orange).

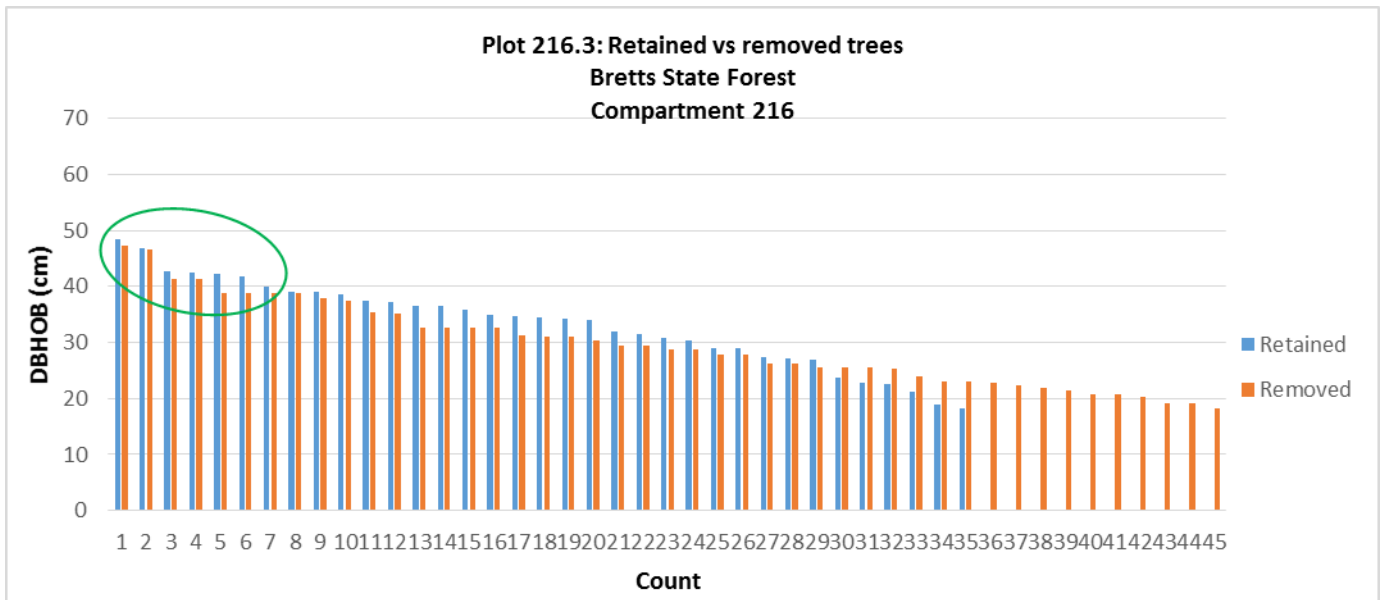


Figure 3: diameters at breast height over bark (DBHOB) of trees measured in plot 3 (blue) versus estimated DBHOB of removed trees (orange).

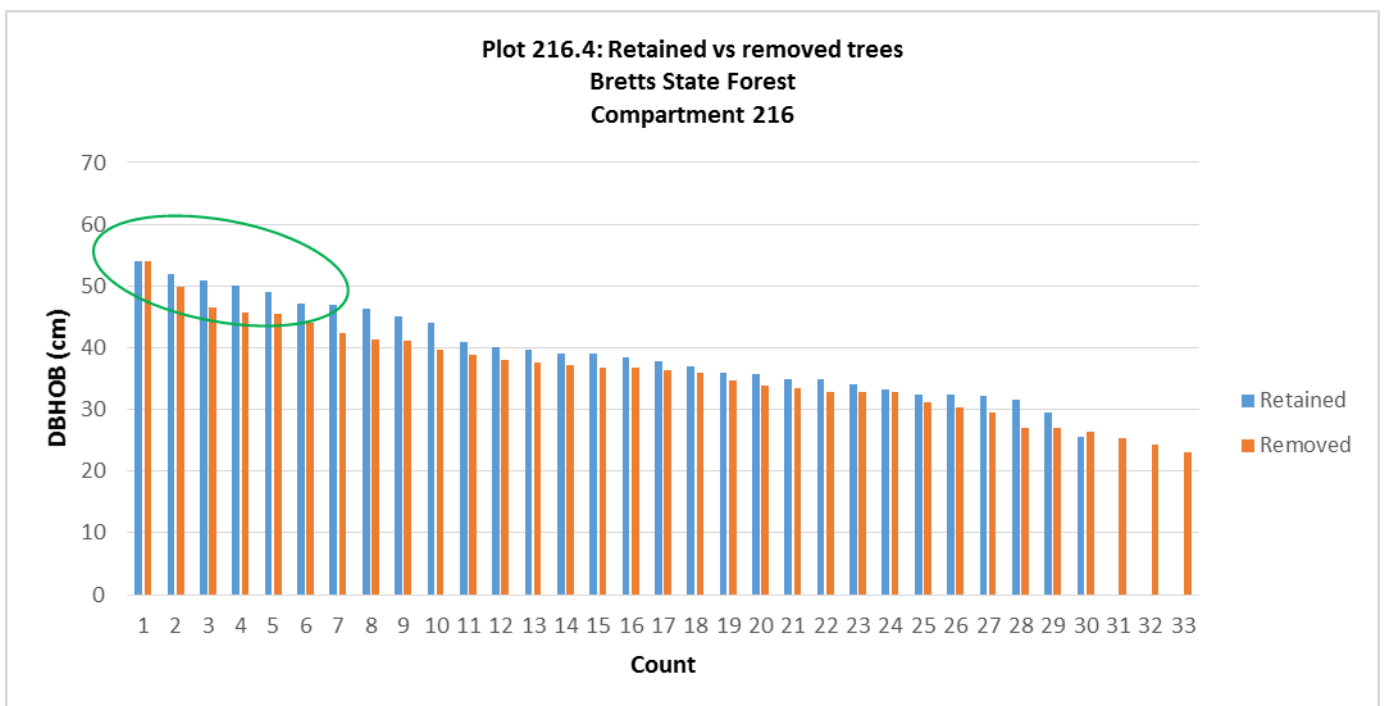


Figure 4: diameters at breast height over bark (DBHOB) of trees measured in plot 4 (blue) versus estimated DBHOB of removed trees (orange).

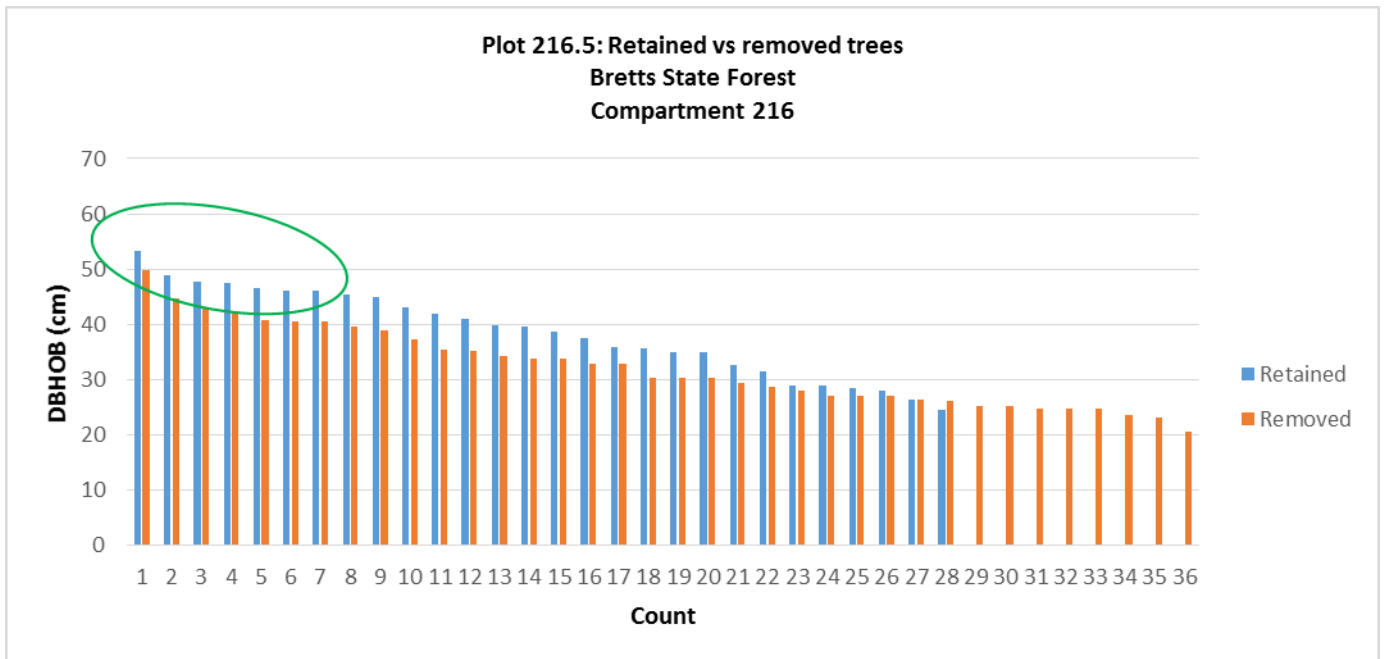


Figure 5: diameters at breast height over bark (DBHOB) of trees measured in plot 5 (blue) versus estimated DBHOB of removed trees (orange).

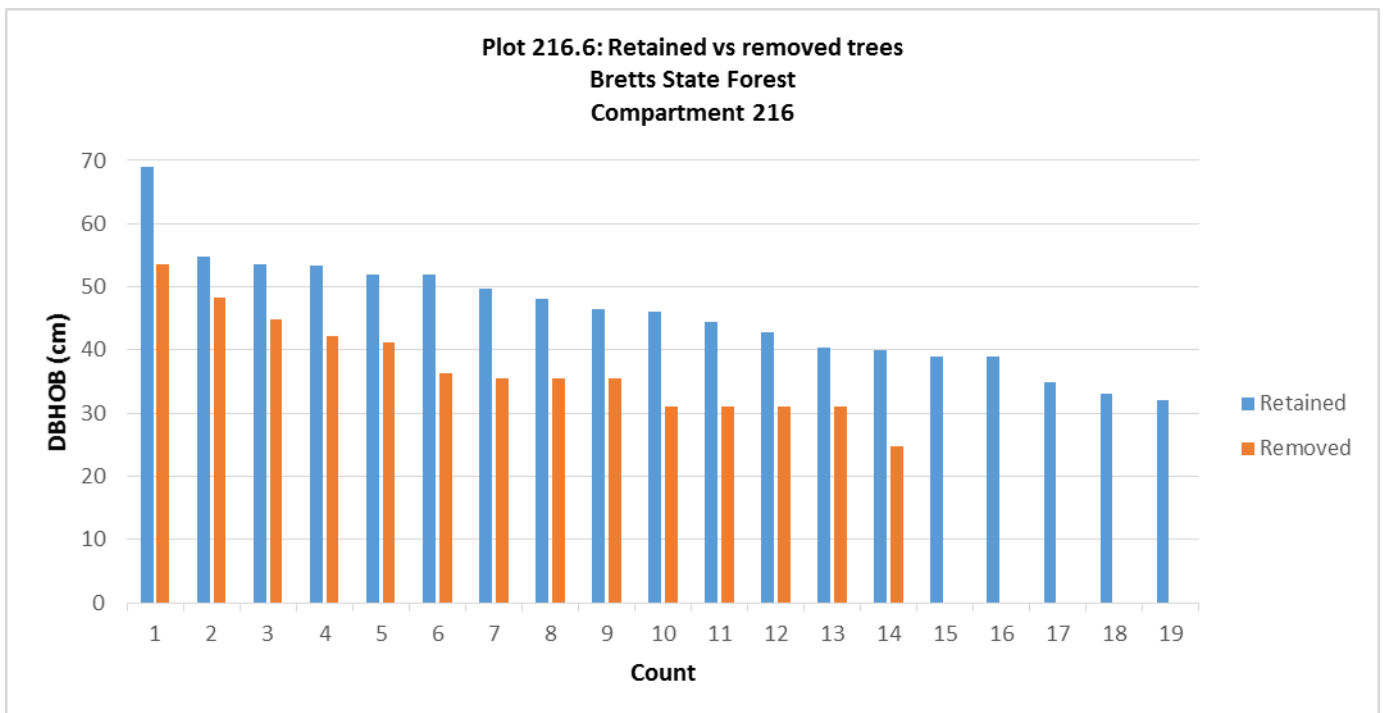


Figure 6: diameters at breast height over bark (DBHOB) of trees measured in plot 6 (blue) versus estimated DBHOB of removed trees (orange).

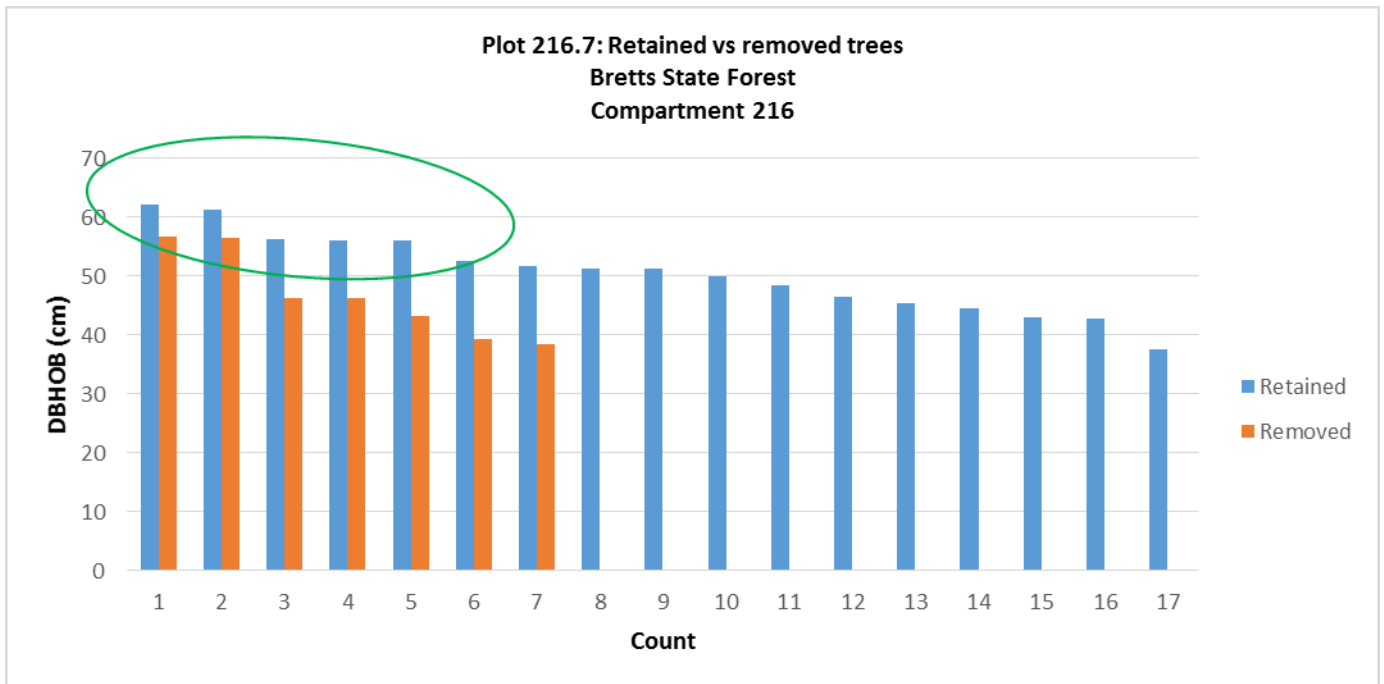


Figure 7: diameters at breast height over bark (DBHOB) of trees measured in plot 7 (blue) versus estimated DBHOB of removed trees (orange).