

FCNSW Rationale for short-term operations under the CIFOA with additional environmental safeguards while the NRC charts a long-term pathway to return to the CIFOA

Executive Summary

1. Forestry Corporation of NSW (FCNSW) has more than a century of experience in sustainable forestry, land and fire management. As a business that relies on continually producing timber and other products and services from the same land, the sustainability of the public forest estate and the responsible stewardship of that resource is fundamental to our long-term success.
2. Having fought the 2019-2020 bushfires (Bushfires) as one of the 4 designated fire authorities in NSW, FCNSW was quick to realise the devastating impacts not only on the forest estate, but the broader environment and the regional communities in which the majority of its staff are based.
3. While the in terms of the Coastal Integrated Forestry Operations Approval (CIFOA) contains comprehensive environmental protections which have evolved in partnership with the Environmental Protection Agency (EPA) over many years, FCNSW determined that harvesting on those terms was not possible in fire-affected coastal forests in the immediate aftermath of the Bushfires and that additional safeguards would be required to allow the forest to regenerate.
4. Understandably, given the severe environmental impacts, there are increased levels of scrutiny on forestry operations from both the EPA as the regulator, as well as the public more generally.
5. Throughout 2020, FCNSW and the EPA have attempted in good faith to negotiate Site Specific Operating Conditions (SSOC) on a case-by-case basis for each harvesting operation. A small number of operations were conducted under SSOC however negotiations for more areas have proven almost impossible primarily because the EPA's approach is now informed by an expert report which focuses only on environmental considerations, to the exclusion of all others, which is contrary to the principles of ecologically sustainable forestry management (ESFM).
6. This is misconceived in that EFSM requires a balancing of environmental considerations together with the social and economic benefits of a sustainable forestry industry. It also ignores FCNSW's statutory obligations, as a state-owned corporation, to place equal weight on environmental considerations, the need to support the regional communities in which it operates (many of which

were devastated by the Bushfires) and to ensure a supply of timber for, amongst other purposes, rebuilding.

7. Progressively over time more than 80% of public forests have been set aside mostly in national parks and reserves to protect natural and biodiversity values. There is approximately 2 million hectares of State forest in all of NSW. Close to half of this estate is set aside in permanent reserves which cannot be harvested. The total area of coastal forests covered by the CIFOA is approximately 5 million hectares, of which approximately 1.3 million hectares or 27% is State forest. As with the NSW total, close to half of the CIFOA State forest area is reserved leaving only 14% available for harvesting.
8. Notwithstanding this, the EPA's expert report attempts to lay the responsibility for the preservation of biodiversity in NSW entirely at the door of FCNSW despite their being 86% of the public forest estate not available for harvesting and that only around 1% of the State forest area is harvested each year.
9. In order to resolve the differences in approach to ESFM between FCNSW and the EPA, the respective Ministers have engaged the Natural Resources Commission (**NRC**) to undertake a review of what would be required for a return to harvesting under the CIFOA. However, this process will not report to government until several months after it commences in earnest noting terms of reference are yet to be issued. It may then take some time for government to consider the recommendations.
10. During 2020 a limited number of post-fire harvesting operations were approved and conducted under SSOC in Eden, the South Coast and Tumbarumba. These operations provided for a small supply of timber well below the usual contracted volumes.
11. During 2020 alternative work undertaking 'make safe' fire recovery operations and harvesting of private property kept the 12 contractors servicing the South Coast and Eden working. However, these options will be largely exhausted in early 2021.
12. Customers have indicated that access to approved harvest areas by mid-late February 2021 and a clear plan for when supply volumes will return to contracted WSA levels are essential to provide certainty for their employment of contractors and mill staff; avoid permanent mill closures; and provide certainty for continued construction of the new mill facilities at Eden.

13. Estimated direct employment in the forest management, harvest and haulage and mills operations on the south coast, Eden and Tumbarumba is 415. All these jobs are at risk. Downstream employment of secondary processing, transport and sale of products would also be at risk.
14. The hardwood timber industry remains a vital part of employment and economic activity in this area. An external analysis of the industry conducted in 2015 indicated that in Eden, one in ten people were employed in the industry. Tumbarumba has a similar level of reliance, albeit with some softwood employment as well.
15. The good faith discussions with the EPA around SSOC is ongoing however, the current process for SSOC will not meet this timeframe nor is it leading to operable conditions.
16. Faced with the imminent closure of the timber industry in Eden, Tumbarumba and the South Coast of NSW, FCNSW has sought to fulfil its statutory obligations and chart a reasonable course to facilitate environmentally sustainable timber harvesting in the short-term which will enable the industry to continue (albeit at a reduced level) and timber to be supplied without significant direct and indirect job losses and flow on consequences for those communities and individuals, while the NRC charts a longer-term pathway.
17. This involves voluntary augmentation of the existing CIFOA to provide additional environmental safeguards which are based on FCNSW's own fire impact assessment, those SSOC which FCNSW has managed to agree with the EPA to date and adoption or amendment of others which have been proposed and can be operationalised. Further detail of the rationale for this decision is set out below.

History of State Forests in NSW

18. Native forestry in NSW has been conducted by Forestry Corporation, and its predecessors, for over 100 years. The Forestry Commission was originally established in 1916 to ensure the State's forest resources were preserved and managed sustainably for the long-term and not unnecessarily exploited for short-term gain. This premise of long-term sustainability of the forest resource remains at the heart of public native forestry operations in NSW.
19. Since the establishment of the national parks reserve system in 1967, the area of forest set aside for conservation has steadily increased and, as a consequence, the area designated for sustainable timber production has declined over time.
20. The Government undertook a Comprehensive Regional Assessment (CRA) process in the late 1990's that identified the State forests that were of high conservation value and should be protected and those that were of lesser value and appropriate for sustainable timber production.

Those areas identified as having high conservation value were revoked as State forests and transferred into the reserve system as national parks. This reduced the area available for sustainable timber production and halved the volumes of timber committed to industry. This process also saw the establishment of Special Management Zone (SMZ) areas within State forests which also became part of the permanent reserve system along with Flora reserves. Old Growth and Rainforest areas were also identified within the State forest areas and these too were permanently reserved.

21. Concurrently, environmental protections were progressively enhanced through regulations. The IFOAs which were a result of the first RFAs, set out prescriptions protecting threatened species and other environmentally sensitive features in areas of State forests designated for sustainable timber production. While important for ecologically sustainable forest management, in practice, this ruleset further reduced the net harvestable area within the State forest estate.
22. Today in NSW, more than 80 per cent of public forests are permanently set aside in national parks and reserves that were specifically established to protect the most critical habitat. The State forest estate by contrast is designated for sustainable timber production while also being subject to a mosaic of reserves and strict regulations protecting important forest features on this tenure. In the 2 million hectare State forest estate, close to half the estate is set aside in permanent reserves which cannot be harvested. Along the coast of NSW, there are approximately 3.6 million hectares of national parks, 1.3 million hectares of native state forests and 18,000 hectares of hardwood plantations.
23. The IFOAs evolved over time and the CIFOA is the ruleset which governs native forestry on the coast of NSW today in the areas of forest designated for commercial timber production. The CIFOA was adopted in 2019 after being negotiated over a seven year period between Forestry Corporation, the EPA and the Department of Primary Industries with the goal of maintaining existing timber supply and enhancing environmental protections. The CIFOA contains a suite of environmental prescriptions for protecting wildlife habitat, soil and water values and Aboriginal cultural heritage.
24. Separate IFOAs govern operations in the Western Region which were not impacted by the Bushfires. They are not the subject of this analysis because, despite the impact of other fires and climate change more generally, the environmental protections they provide (which are similar to the CIFOA but adapted for the specific forest types in the west) are considered appropriate by both the EPA and FCNSW and harvesting in the State forests in that region have not been the subject of SSOC.

25. Harvesting operations take place in around 1% of the native State forest estate each year and those operations are distributed across that area in accordance with IFOA requirements. Once harvesting is completed, retained trees and soil seed reserves enable harvested areas to regenerate, providing long-term wildlife habitat and timber resources for the future.

Impact of the Bushfires

26. Immediately following the Bushfires, Forestry Corporation determined that it could not comply with all of the conditions of the CIFOA in the short-term while the forests recovered. Forestry Corporation worked with the EPA to seek SSOC to facilitate harvesting in areas affected by fire and in doing so, balance the environmental and social objectives – the forest recovery post-fire and the continuation of the timber industry in communities disrupted by fire impacts. SSOC have allowed for some timber harvesting in the immediate post-fire scenario.

27. Forestry Corporation has an obligation under the Forestry Act 2012 (NSW) (Forestry Act) to meet multiple objectives including protecting the environment and managing in a way which ensures the long-term sustainability and regeneration of the forests; supplying timber to industry and thereby supporting regional jobs and communities.

Socio economic value

28. The NSW timber industry as a whole has a Gross Value of Production (GVP) for the value chain of approximately \$3.2 billion. The hardwood industry accounts for 33% of this with an estimated GVP of \$1.1 billion. In the south of the state (coast and Bombala), GVP is estimated as \$85 million with production from State forests accounting for the majority of this (figures DPI estimates based on ABS and ABARES data).

29. Volumes from State forest operations on the south coast and Eden prior to the bushfires were approximately 270,000 tonnes equating to approximately \$8M in timber royalty (not including the value of harvesting and transporting the timber). The industry on the south coast and Eden accounts for about 25% of production of hardwood timber from NSW State forests.

30. The NSW timber industry as a whole employs approximately 20,700, which is 30% of the total Australian employment in forestry and downstream industries (ABARES).

31. In the south of the state (coast and Bombala), it is estimated that 550 people are employed in the hardwood industry, which is 30% of the total local employment for that region in (DPI economic analysis).

32. Potential job losses in the hardwood industry should be considered against the backdrop of further unavoidable losses expected in the softwoods sector in the coming years while the industry

adjusts to the change in volumes for the coming 10 years as a result of pine plantations destroyed in the 2019-20 bushfires.

33. The hardwood timber industry remains a vital part of employment and economic activity on the south coast. An external analysis of the industry conducted in 2015 indicated that in Eden, one in ten people were employed in the industry. Tumbarumba has a similar level of reliance, albeit with some softwood employment as well.
34. While the northern end of the south coast has a more diverse economic base and a lower reliance on the timber industry for employment, the industry still has a significant socio-economic impact locally and beyond. The Boral mills in Narooma and Nowra produce spotted gum decking products and pallets, supply of which is under contract to a steel manufacturer for steel transportation supplies. Estimated employment in the forest management, harvesting, haulage and mill operations is outlined below.

	South coast	Eden	Tumut (Tumbarumba)	Total
Mills	65	74	97	236
Contractors	34	60	20	114
FCNSW staff	35	27	3	65
				415

35. Downstream, employment is greater still and indirect employment especially in towns like Eden and Tumbarumba is significant. For example cessation of supply from State forests would impact the construction of the sawmill and briquette facility in Eden. This facility would likely move out of NSW impacting significantly on ancillary local employment in the engineering and construction of the facility.

Current state of the timber industry

36. During the period March to October 2020 a limited number of post-fire harvesting operations were approved and conducted under SSOC in Eden, the South Coast and Tumbarumba. For the full 2020 calendar year these operations provided for supply of 33% of supply commitments to ANWE (Eden), 16% to Boral (South Coast) and 81% to Ryan and McNulty (Tumbarumba).
37. During 2020 alternative work undertaking 'make safe' fire recovery operations and harvesting of private property kept the 12 contractors servicing the South Coast and Eden working. However, these options will be largely exhausted in early 2021.
38. As of January 2021, there are no approved State forest harvest areas for any of the six Eden contractors employed by ANWE or the six South Coast contractors employed by FCNSW. ANWE

and FCNSW will each have to manage their own respective contractual obligations including potential stand-downs and business closures should ongoing harvesting and haulage work not be secured.

39. FCNSW and ANWE are parties to a 10-year Wood Supply Agreement (WSA) for sawlogs (commenced 2019) and a 15 year WSA for pulpwood (commenced 2018). ANWE is currently completing site works at Eden ahead of construction of the regrowth sawmill and briquette plant as part of their integrated processing facility which forms part of their sawlog WSA. This development is supported by both the NSW and Federal governments. ANWE has indicated that access to approved harvest areas by mid-late February 2021 and a clear plan for when supply volumes will return to contracted WSA levels are essential to provide work for their contractors, log flow into their mill and to underpin development of their facility.
40. Boral's 20-year WSA with FCNSW and the State of NSW expired on 31 December 2020. FCNSW has offered Boral a 1-year Parcel Sale Agreement (PSA) for 2021. Boral has indicated that approved harvest areas by mid-late February to provide a minimum of 50% of the previous WSA volume is required to operate its two sawmills at Narooma and Nowra for the first half of 2021, with volumes increasing thereafter to avoid closure of one or both mills.
41. Harvesting under post-fire SSOC in Bago State forest in the Tumbarumba management area has been conducted since March 2020. Ryan and McNulty has a 10 year WSA with FCNSW (commenced 2019). The current approved harvest areas are expected to be completed in February/March 2021 after which new harvest areas will be required to maintain contracted supply and keep the mill operating and contractors in work.
42. Following the impact of the bushfires, FCNSW declared Force Majeure on its contracts for timber supply and harvest and haulage. This protects both FCNSW and the State of NSW from damages for not meeting contractual obligations while ever they are prevented from meeting obligations as a direct result of the bushfires. FCNSW and the DRNSW indicated in September 2020 that operations could occur under the CIFOA. Since that time, any restrictions imposed on timber supply from the regulatory environment potentially leaves the State of NSW exposed for damages for having imposed those restrictions.

Potential closures and impact on employment

43. Both ANWE and Boral have indicated to FCNSW a resumption of and certainty of a reasonable level of timber supply is required to maintain employment.

44. Both mills and FCNSW will continue working to identify supply contingencies from the private native forest resource but at this time there are no supply arrangements confirmed beyond early March.
45. Across the board South Coast and Eden customers have less than 5 days stock, which means they have no capacity to manage interruptions to log supply, such as wet weather. It is likely that sawmills will suspend operations intermittently over the next 4-5 weeks as stocks fall to zero.
46. ANWE has a diverse area of supply that covers multiple tenures in both NSW and Victoria. As such, some level of timber supply into the mill is expected to continue beyond March 2021, however without supply from NSW state forests, ANWE will be unable to meet sales commitments in 2021.
47. Boral has been sourcing Spotted Gum from Queensland and trucking it to the south coast mills at substantial additional cost to supply its customers.
48. To date, alternate work has been made available for contractors in fire recovery, plantation salvage operations and private native forestry. The alternate work packages are exhausted and the majority of the contract fleet will be immediately out of work at end of February 2021.
49. The contractors are all small family owned businesses with a combined turnover of approximately \$26.5m per annum.
50. Commencing at the end of February 2021 and staggered through to early April 2021, mill staff and contractors can be expected to be stood down or made redundant. Staffing adjustments to FCNSW's workforce would also be required if the industry in this area were to close.

Legal and Regulatory Framework

51. s10 of the Forestry Act sets out the principal objectives of Forestry Corporation as being:
 - (a) to be a successful business and, to this end—
 - (i) to operate at least as efficiently as any comparable businesses, and
 - (ii) to maximise the net worth of the State's investment in the Corporation,
 - (b) to have regard to the interests of the community in which it operates,
 - (c) where its activities affect the environment, to conduct its operations in compliance with the principles of ecologically sustainable development contained in section 6(2) of the Protection of the Environment Administration Act 1991,
 - (d) to contribute towards regional development and decentralisation,

(e) to be an efficient and environmentally sustainable supplier of timber from Crown-timber land and land owned by it or otherwise under its control or management.

52. S10(2) provides that each of the principal objectives of the Corporation is of equal importance.
53. Forestry Corporation's 2019-20 Wildfires – Environmental impacts and implications for timber harvesting in NSW State forests report (FCNSW Report) states that Forestry Corporation believes it can comply with the conditions of the CIFOA in fire-affected areas but recommends a suite of additional measures to augment the environmental protections in the CIFOA and ensure the public forest estate is adequately protected while it recovers from the impact of the Bushfires.
54. The EPA's view is that it is inappropriate to harvest under the CIFOA and, rather, SSOC must be negotiated on a case-by-case basis for all coastal native forest compartments affected by the Bushfire if harvesting is to go ahead.
55. There is no legal requirement to operate under SSOC issued by the EPA where FCNSW believes it can comply with CIFOA. The CIFOA is designed and intended to provide a high level of environment protection during timber harvesting and ensure the regeneration of the forests in perpetuity, although it does not include specific provisions to account for the extent or level of fire impact experience in the 2019-20 Bushfires.
56. On 7 September 2020, Forestry Corporation and the Department wrote to the EPA indicating that they now considered it appropriate to undertake native harvesting in accordance with the CIFOA, given the time since the Bushfires. This letter annexed the FCNSW Report.
57. On 22 September 2020, the EPA responded to the letter from Forestry Corporation and the Department, indicating that it did not believe that harvesting under the CIFOA was tenable or consistent with the principles of ESFM (as required in s10(1)(c) of the Forestry Act which specially references s6(2) of the *Protection of the Environment Administration Act 1991 (NSW)* (POEA Act). The EPA also indicated that it did not consider harvesting under the CIFOA to be consistent with the precautionary principle which is a fundamental tenet of ecologically sustainable development set out in s6(2) of the POEA Act which provides that, if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:
- (a) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and

- (b) an assessment of the risk-weighted consequences of various options.
58. The EPA annexed to its letter the report of Dr Andrew Smith (Smith Report) which suggests that the EPA should go further than it already had in relation to SSOC thereby further constraining harvesting.
59. From October 2020, FCNSW continued discussions with the EPA on SSOC and has worked with the EPA, using its process to further consider these.
60. In the two September 2020 letters to FCNSW the EPA stated it would consider regulatory action against FCNSW if it attempted to harvest under the CIFOA without SSOC. The EPA has since made it clear to FCNSW during its regular meetings with senior officers that it will seek to injunct FCNSW if it makes any such attempt.
61. Continuing to operate under SSOC carries potential legal risk as the physical conditions for requesting such conditions typically no longer exist as the forests have started to recover and regenerate in response to the fires as native forests do, and therefore there is no 'trigger' to utilise SSOC as FCNSW operations could reasonably comply with the standard conditions of the CIFOA.
62. The Deputy Premier and the Minister for the Environment, wrote to the Minister for Planning and open Spaces in November 2020 seeking the appointment of the NRC to provide advice on a longer-term pathway back to the CIFOA under terms of reference agreed between Forestry Corporation, the EPA and the Department. However, the terms of reference are yet to be agreed and even when they are it is expected to take several months for the NRC to provide advice to the Ministers and some time following for the Ministers to consider the recommendations. In the meantime, the NRC has commenced some preliminary information gathering absent agreed Terms of Reference.
63. While FCNSW is committed to co-operating fully in the NRC Review Process and implementing those of its recommendations which are adopted by Government, as industry impacts will manifest well ahead of this occurring, an interim solution is urgently required to secure a flow of timber sufficient to ensure the industry can continue on the South Coast and in Eden on an environmentally sustainable basis, without significant job losses and consequent community disruption. In this context FCNSW is statutorily required to take what action it can to ensure that these equally important objectives in its enabling legislation are met.

Establishing a reasonable interpretation of ESFM and the precautionary principle.

64. To this end FCNSW has been engaged with the EPA throughout 2020 on the development of operable SSOC. FCNSW and the EPA began a new process to establish additional SSOC in October 2020 following the exchange of letters in September 2020.
65. The process for determining site conditions and potential harvest areas for new SSOC has been slow and challenging for all involved. There is no clear pathway or timeframe for approvals or agreed targets to meet timber supply objectives.
66. FCNSW is concerned that the inability to negotiate an operable solution which strikes a reasonable balance between environmental protections in a post Bushfire context and the desirability of ensuring a minimum flow of timber to sustain already devastated communities, is due to the EPA's reliance on the Smith Report.
67. The Smith Report focuses exclusively on the biodiversity aspect of ESFM and fails to consider at all the social and economic benefits of a sustainable forestry industry, which is a requirement of ESFM. In so doing the Smith Report also fails to take account of the equally weighted community/regional development, timber supply and commercial statutory obligations of FCNSW (see paragraphs 32-33 above).
68. Similarly, the Smith Report focuses entirely on the management of State forests by FCNSW, rather than acknowledge that the principles of ESFM apply to the total forested land estate.
69. As set out in paragraphs 16-23 above the area of State forests comprises 27% of the total forest estate within the CIFOA region, of which close to half is reserved leaving 14% available for harvesting. Timber harvesting operations occur in around 1% of the State forest area each year. The Smith Report therefore overstates the potential impact of harvesting on biodiversity by failing to properly take account of appropriate temporal and spatial scales.

Current state of SSOC discussions and issues with the process

70. FCNSW provided a revised list of high priority harvest areas to the EPA on 10 December 2020. These areas represented the most logical areas to commence new operations under new SSOC.
71. The EPA conducted a 'Risk Assessment' process on these priority areas and notified FCNSW that a subset of the priority areas was suitable to progress to the next stage which involves ecology surveys. After these surveys are complete some of these compartments may potentially be approved for harvest to proceed under final SSOC.

72. The 'Risk Assessment' process has no clear or transparent criteria. FCNSW is provided with the results by the EPA, but not the specific reasoning behind either the approval to survey or the rejection of an area.
73. The implications of the surveys on whether an area progresses to approval for harvesting is also unclear (see paragraphs 58-63 below).
74. The EPA provided FCNSW with results of the 'Risk Assessment' on 22 December 2020. 4 of 8 Eden areas, 2 of 6 South Coast areas and 2 of 2 Tumbarumba areas were approved to progress to the survey stage. Once surveys are undertaken, the EPA has suggested it will then undertake a further 'Risk Assessment' and advise whether harvesting can proceed under the agreed SSOC model, whether additional conditions are required, or if the area is no longer appropriate to consider for harvest under SSOC.
75. The 'Risk Assessment' process does not enable FCNSW to guarantee any level of timber supply to industry in Eden, the South Coast or Tumbarumba in 2021.
76. Only a small number of SSOC operations were conducted on the north coast during 2020 due to the number of compartments approved by the EPA for SSOC; consideration by FCNSW of the likely challenges around compliance with SSOC; and consideration of the commercial viability of operations under these conditions. Consequently, timber supply during 2020 was heavily supplemented by hardwood plantations. However, suitable mature plantations are now limited so access to fire affected forests will be required for industry supply during 2021.

Additional survey requirements

77. The new EPA SSOC proposal makes all standard CIFOA ecological surveys mandatory plus requires significant additional surveys.
78. The additional survey requirements specified by the EPA are frequently more than double or more than those required under the CIFOA and the previous IFOA survey requirements. The total survey program required to progress even the small number of areas currently approved through the EPA risk assessment will not be achievable with FCNSW's current resources (see Attachment 5).
79. Survey results (detection of species in the forest) do not have a documented process or any conclusive outcomes. *"I understand survey results could impact either/both the risk assessment and additional SSOC."* (EPA email clarification 23 December 2020). FCNSW interprets this to mean that survey results may either:

(a) inform further SSOC; and/or

(b) be used to revise the risk assessment and potentially withdraw areas from harvesting.

80. FCNSW's post-fire surveys carried out during 2020 have regularly identified yellow-bellied gliders in coastal forests, greater gliders in tablelands forests and Koalas in North Coast forests, among many other species. With forest recovery well advanced in many areas promoted by strong rainfall since early 2020, it is likely that species detections will continue to be high which is very positive. This is highlighted in FCNSW's Eden and Tallaganda 2020 survey results. It would be expected that these species are also found in surrounding private forests or national parks which are also recovering from the impact of fires.

81. While FCNSW is committed to co-operating with the EPA in relation to any additional requirements which will result in positive environmental outcomes, it is concerned that the requirement for substantial additional surveys to be conducted in extreme fire impact areas will not yield additional biodiversity information that is not already considered and protected by the standard conditions of the CIFOA and the additional voluntary environmental safeguards that FCNSW will implement. The additional surveys also increase the significant risks to FCNSW staff walking in such a dangerous environment.

82. Accordingly, FCNSW proposes a structured survey program that considers both landscape scale forest and species recovery, local habitat values in harvesting areas and within FCNSW resourcing capability. This survey program is outlined in Attachment 6.

Cumulative impacts of SSOC

83. A new suite of draft SSOC (inclusive of landscape planning and operational conditions) has been proposed by the EPA during November and December 2020 and is subject to consultation with FCNSW (see summary in Attachment 3).

84. FCNSW has conducted an initial assessment of the new draft SSOC. They are significantly more restrictive than the previous SSOC and in many cases, inoperable on the ground. The new draft SSOC are likely to lead to a substantial reduction in timber availability on each site and at the local landscape level and exacerbate compliance challenges which were already heightened under the previous SSOC.

Landscape Mapping

- 85. Additional landscape protection requirements have been proposed which require 50% of each Local Landscape Area (LLA) to be excluded from harvesting based on FESM (fire severity model) mapping categories. A further 25% harvesting exclusion must also be set aside for each compartment.
- 86. The proposed mapping protocol for identifying ecological protections for each LLA is rigid and uses only FESM data to determine areas to be excluded. By only using FESM data the mapping outputs have an arbitrary impact on timber availability and operational practicality.
- 87. Other potentially important ecological considerations, such as landscape connectivity, forest type/characteristics and local ecological values are not used in the proposal.
- 88. Analysis of draft proposals has shown that the impact on timber availability at the LLA level is frequently in excess of 50% and often in the order of 75% due to fragmentation and inaccessibility. In some examples the impact approaches 100% of the viable harvest area.
- 89. FCNSW does not object in principle to landscape considerations being used in a precautionary approach to fire affected forest harvesting. However, FCNSW believes that consideration should also be given to inputs other than the FESM mapping and should include a consideration of practical access to viable timber stands.
- 90. FCNSW has attempted to negotiate a mapping protocol that allows more operational flexibility and uses inputs other than FESM. However, the EPA has only agreed minor amendments to the proposed protocol, such as FESM data treatment to reduce the impact of scattered pixels.

Proposed new SSOC

- 91. The proposed new SSOC are complex and present significant compliance challenges.
- 92. In relation to mandatory “retained trees” the proposed conditions introduce new limits and categories of trees that must be correctly identified, marked, and managed through harvesting without any damage or debris impact including:

New proposed requirement	Standard CIFOA requirement
10 Late stage growth trees >60cm dshob /ha	Nil

All trees >90cm dshob	Only "Giant trees" >140/160cm dshob
14 hollow bearing trees*/ha	8 hollow bearing trees /ha
Basal Area retained to minimum 16m ² /ha	10m ² /ha

*Note: There is no agreed hollow bearing tree (HBT) guidance. The EPA previously published a guidance note but it was withdrawn in late 2020, leaving this condition very difficult to implement with confidence.

93. The cumulative impacts would create an impossible operational and compliance environment for FCNSW and its harvesting contractors; would further reduce available volumes from each area; and almost certainly lead to higher log product costs which would have to be borne across the supply chain.
94. The site conditions proposed by the EPA are an extremely precautionary approach to the protection of environmental values and habitat at the site scale. In combination with the local landscape conditions and the survey proposal, the cumulative impact of the new SSOC proposal is highly restrictive and consequently unworkable.
95. As previously stated, the original pre-Smith SSOC (March – Sept 2020) did not provide sufficient timber supply to industry in Eden (33%) and South Coast (16%).
96. The new post-Smith SSOC would be significantly more restrictive and would likely yield returns that would be incapable of sustaining the industry in Eden and the South Coast.

Timing

97. Discussions towards the current round of SSOC incorporating recommendations from the Smith Report have been in progress since October 2020.
98. FCNSW has consistently communicated the urgency of clarifying the process and timeline for approvals for timber harvesting under SSOC in order to keep the industry operating and avoid mill closures and regional job losses. However, a specific and binding timeline has not been agreed.
99. Despite a strong commitment from both FCNSW and the EPA, as at end of January 2021, progress towards new SSOC has not produced a final model inclusive of approved harvest areas and agreed conditions for any of Eden, the South Coast or Tumbarumba.
100. The EPA has advised FCNSW that legal drafting of conditions has commenced but no specific commitment to a timeline for the review or issuing of draft legal conditions has been made.

101. Given that timber supply has been substantially affected during 2020 and the considerable lead time for surveys, mapping, plan preparation and mark-up, it is imperative that FCNSW has planning and supply certainty immediately. It does not appear that this certainty can be delivered by the current SSOC process.

Alternative FCNSW model – CIFOA with additional environmental safeguards for the short-term

102. FCNSW has applied the precautionary principle in accordance with statutory requirements for the effective integration of social, economic and environmental considerations in decision-making processes as part of ecologically sustainable development under s 10(1)(c) of the Forestry Act and according to the principles of ESFM under s 69L of the Forestry Act. FCNSW has now considered the Smith Report and other new information from field surveys conducted since June 2020 in forming an alternative proposal for harvesting in forests burnt in the Bushfires.

103. The FCNSW Report provided systematic analysis of potential ‘precautionary principle’ issues associated with timber harvesting in areas subject to the Bushfires and made recommendations to mitigate identified issues. This FCNSW Report was independently reviewed by members of the NSW DPI Forest Science team and an independent soil scientist.

104. FCNSW has assessed the conditions proposed by the EPA in response to the Smith Report and determined that there are some that can be supported by relevant evidence and can be practically applied or adapted in the context of the FCNSW Report. FCNSW believes that these conditions can both uphold the requirements of the precautionary principle and still meet reasonable timber supply requirements during 2021.

105. Ongoing landscape-scale monitoring surveys undertaken by FCNSW staff are providing strong evidence of recovery in many forest areas, including survival and recovery of critical flora and fauna populations.

106. FCNSW has developed a robust alternative to the current SSOC process that applies as a basis the standard CIFOA, supplemented with additional precautionary conditions to mitigate potential impacts in the short term (CIFOA with additional environmental safeguards see Attachment 2).

107. In order to meet the equally weighted statutory objectives of supplying timber to industry and supporting regional communities in an environmentally sustainable manner, FCNSW needs immediate certainty to plan under a framework that adequately reflects the post Bushfires environment and provides a guaranteed minimum level of timber supply for the industry to

survive in the short term. Without immediate certainty it will not be possible to manage imminent small business closures and the flow-on effects in regional NSW communities already adversely affected by the Bushfires themselves. This would be an unacceptable outcome under the NSW RFAs and Forestry Act objectives.

108. A risk assessment and SWOT analysis for the options of remaining engaged in negotiations with the EPA towards SSOC or using a revised FCNSW model for CIFOA augmented by additional environmental safeguards, has been undertaken and is included in Attachment 1.
109. It is proposed that this model be applied across the Eden, south coast and Tumut sub regions. The existing EPA process of risk assessments and approval of SSOCs would not be required as the voluntary additional environmental safeguards would be applied to all operations in these areas as a precautionary measure.
110. Analysis of the scientific rationale and the expected impact of the voluntary additional environmental safeguards of environmental protection is provided in Attachment 1. Comparison between the EPAs model and FCNSW's model is provided in Attachment 7.

Conclusion

111. The principles of ESFM which are enshrined in FCNSW's enabling legislation require a balancing of the social, environmental and economic aspects of forest management – each of which are given equal weight.
112. In the wake of the Bushfires, the weighting of these factors was naturally skewed towards the environment because of the unprecedented nature of the events. However, as the environment has recovered and longer-term impacts on regional communities and the industry in terms of timber supply have become more apparent, a re-balancing is required to ensure that the impacts on regional communities and individuals as well as the supply of timber for recovery and rebuilding are not unnecessarily exacerbated by impractical or unworkable SSOC which will not yield an environmental benefit commensurate with the difficulty of implementation.
113. FCNSW is committed to working co-operatively with the EPA in the NRC process and implementing those recommendations which are adopted by government by way of a longer-term solution. However, in the immediate term, an interim solution is required if the coastal timber industry is to continue in NSW.
114. The timber industry on the south coast, Eden and Tumbarumba has critical dates approaching at end February 2021 after which significant job losses are expected.

115. FCNSW believes on reasonable scientific grounds that its proposal to harvest under a CIFOA with additional environmental safeguards for the next 12 months while the NRC charts a pathway to return operations under the CIFOA, will allow the industry and those who depend upon it to continue working while providing environmental safeguards which will enable flora and fauna to continue to recover.
116. FCNSW appreciates that the additional environmental safeguards are voluntary. However, adherence to these additional environmental safeguards can be enforced through FCNSW's contracts and licences with harvesting operators and FCNSW intends to gather data on their implementation and compliance and provide that to the EPA as it would with CIFOA requirements in the normal course. FCNSW also invites constructive input from the EPA on any aspect of the above analysis or FCNSW additional environmental safeguards in addition to the CIFOA. An outline of implementation of this proposal is included at Attachment 8.
117. This is an interim step which provides a framework for the timber industry to continue operating in the short term pending the NRC advice and the resultant pathway forward. FCNSW appreciates that this was the original intention of the SSOC process however the lack of emphasis on social and economic values of sustainable forest management outcomes; changing landscape of potential conditions; and lack of certainty on timeframes and deliverables has rendered this process unworkable. The NRC advice is expected later in 2021, and FCNSW will fully participate in the NRC process and implement the recommendations as adopted by the Government.

Recommendations

118. Accordingly, it is recommended that FCNSW:
- (a) Prepare timber harvesting plans during 2021 under the CIFOA with additional environmental safeguards including the voluntary measures outlined in Attachment 2 for Eden and South Coast.
 - (b) Finalise and adopt conditions for Tumut sub region and North Coast burnt areas based on the principles established in attachment 2 to be implemented during 2021.
 - (c) Engage with NSW government agencies on how and when this proposal will be implemented.
 - (d) Continue to engage with NSW government agencies in the NRC review process and implement those NRC recommendations which are adopted by government.

Attachments

Attachment 1: Risk Assessment and SWOT Analysis

Attachment 2: FCNSW Proposal – CIFOA with additional environmental safeguards (South Coast & Eden) – supplementary measures

Attachment 3: EPA SSOC proposal summary (from consultations up to 23 Dec 2020)

Attachment 4: EPA Supplementary Survey Proposal for SSOC

Attachment 5: Summary of the survey requirements for the EPA ‘Risk Assessed’ compartments

Attachment 6: Comparison of additional precautionary survey proposals

Attachment 7: Comparison of proposals for CIFOA supplementary measures (South Coast & Eden)

Attachment 8: Compliance and implementation plan

Attachment 1: Risk Assessment and SWOT Analysis

Option 1: EPA model – new SSOC informed by Smith Report

Risk Assessment

Risk	Rating
Environmental risk	Low
Legal (compliance) risk	Moderate – High
Industry contract risk (Customers)	Extreme
Industry contract risk (Harvest and Haul)	Extreme
Legal risk (ENGO and EPA injunction)	Moderate – High

SWOT Analysis

<p>Strength</p> <ul style="list-style-type: none"> • Has support of EPA • Exceeds requirements under the precautionary principle 	<p>Weakness</p> <ul style="list-style-type: none"> • Survey effort is onerous and uncertain as to the environmental benefit to be achieved • Uncertainty in proceeding even in small number of areas being progressed. • Timing for completion of negotiations likely to cause delays and bring about unmanaged industry impacts • Compliance risk is moderate-high (noting compliance issues with original SSOC) • Legal exposure by using a novel instrument rather than the base CIFOA • Likely increase in cost / reduced financial viability
<p>(e) Opportunities</p> <p>(f) Some timber supply to industry</p> <p>(g)</p>	<p>(h) Threats</p> <p>(i) ENGO campaigns and media</p> <p>(j) EPA withdraw approvals</p> <p>(k) ENGO legal challenge to EPA</p> <p>(l) EPA compliance campaign probable</p>

Option 2: FCNSW model – CIFOA with additional environmental safeguards

Risk assessment:

Risk	Rating
Environmental risk	Low
Legal (compliance) risk	Moderate
Industry contract risk (Customers)	Low – Moderate
Industry contract risk (Harvest and Haul)	Low – Moderate
Legal risk (EPA SWO / injunction)	Moderate – High

SWOT Analysis

<p>Strength</p> <ul style="list-style-type: none"> • Able to minimise industry impacts • Robust legal pathway – existing CIFOA only • Backed by FCNSW systematic scientific assessment • FCNSW retain normal control of operations • Consistent with existing government forestry policy • Can be implemented/stopped on an as needs basis • Does not require additional approvals (EPA or Government) • Reduced compliance exposure to novel conditions • Voluntary environmental prescriptions broadly consistent with environmental outcomes sought from SSOC 	<p>Weakness</p> <ul style="list-style-type: none"> • Does not have support of EPA • Supplementary measures proposed by FCNSW will still provide resourcing and compliance challenges
<p>Opportunities</p> <ul style="list-style-type: none"> • Timber can be generated to meet reasonable supply expectations • Flexibility for amendments as forest regeneration progresses to ensure focus on environmental outcomes • FCNSW landscape surveys can inform ongoing MER program 	<p>Threats</p> <ul style="list-style-type: none"> • EPA legal challenge / injunction • Strong EPA compliance campaign likely • Negative ENGO campaigns and associated media

Attachment 2: FCNSW Proposal – CIFOA with additional environmental safeguards (South Coast & Eden) – supplementary measures

Supplementary Measure	Justification Summary
Application	
Apply conditions in LLAs with: >50% moderate or higher burn intensity Or >25% severe or higher fire intensity.	<ul style="list-style-type: none"> • 12 months after the initial fires many landscapes, particularly those that saw moderate and low fire severity have significantly recovered and do not require additional conditions. • In general areas burnt at lower fire severity have had negligible / positive impact from the fire event. • Until further surveys are completed to determine broad species impacts in high intensity burnt areas the following precautionary conditions are warranted.
Duration	
Duration – SSOC apply for the duration of the current planned operations during 2021 or until an alternative means is found to progress via NRC or other pathway	<ul style="list-style-type: none"> • Wood supply objectives should not be constrained for an extended period by the SSOC process where a reasonable justification to return to normal operations is available
Landscape Exclusions	
LLA Limit <ul style="list-style-type: none"> • Up to 50% of gross area to be excluded based on FESM Mapping Apply revised FCNSW mapping protocol <ul style="list-style-type: none"> • Incorrect values (Roads & infrastructure) removed from FESM data • Apply ‘smoothing’ and ‘small poly removal’ algorithms to FESM data • Identify all areas to be excluded (all FESM 0,1, 2 areas > 0.5 hectare) • Make up to 50% LLA of FESM class 3 where it occurs. • FESM class 4 & 5 not required to be protected 	<ul style="list-style-type: none"> • This condition provides specific protection to unburnt areas of forest and provides up to 50% offset in LLAs where significant areas were subject to moderate or lower burn intensity. As such larger ecological reserves will be mandated to include less burnt parts of the forest landscape where harvesting is planned. • Additional clumps were the original proposed model put forward in FCNSW Post- Fire Environmental Impact Report. The 50% gross LLA benchmark means sometimes more/ sometimes less clumps will be required to achieve this benchmark. • Revision to EPA’s proposed mapping protocols means that logical boundaries for temporary clumps / corridors can be identified to consolidate landscape protections and also allow reasonable access to net harvest area. • This still allows for access to reasonable areas of available timber and does not overly restrict yields.

<p>25% of each compartment to be excluded from harvesting via:</p> <ul style="list-style-type: none"> • Mapped ESA • FESM mapping • WHC • Temp clumps* <p>*these temporary clumps will be focused on mature forest with the highest ecological value.</p> <p>Note: TRC will then be established on this NHA</p>	<ul style="list-style-type: none"> • Additional clumps were the original proposed model put forward in FCNSW Post- Fire Environmental Impact Report. The 25% benchmark means sometimes more/ sometimes less clumps will be required to achieve this requirement. • This still allows for access to reasonable areas of available timber and does not overly restrict yields. • A minimum component of mature forest is appropriate for inclusion in any TRC • This should be naturally achieved through exclusion zones and clump selection, but the 'least burnt' mapping approach may mean less mature forest is initially included in protected areas, hence the need to check this threshold separately.
<p>Additional 10m on all mapped exclusion zones.</p> <p>Boundary marking to be a combination of GPS in harvesters and on-ground</p>	<ul style="list-style-type: none"> • This provision will reduce any edge effect on exclusion zones. • Will increase the size effective ecological functioning of each ESA and the overall network of exclusions. • GPS marking will reduce walking in the forest for the FCNSW mark-up teams in higher risk environments.
<p>Harvesting limit (intensity)</p>	

<p>Selective Harvesting only</p> <p>BA limit 10m2/ha</p>	<ul style="list-style-type: none"> • Selective harvesting only to be employed as defined under CIFOA. • 10m2 will remain the compliance limit, but each operation may specify a variable rate above this mark where silviculture is appropriate (normal FCNSW planning process). • 10m2/ha allows for operational flexibility in those areas that are available to harvesting. • FCNSW note that Basal Area is not in itself ecologically significant for protection of forest values in regrowth forests, as opposed to landscape protection measures and retained tree provisions, which seek to identify and protect specific ecological values. • Resumption of alternate coupe operations in Eden will be considered after a more detailed review is undertaken (or by Jan 2022).
<p>Retained Trees</p>	
<p>Minimum 8 <i>Habitat</i> trees identified / hectare</p> <p>Habitat trees include in order of priority:</p> <ul style="list-style-type: none"> • Hollow Bearing Trees where they exist • Trees > 100cm DBHOB in Eden and South Coast sub-region • recruitment trees where hollow bearing trees don't exist 	<ul style="list-style-type: none"> • CIFOA requires up to 8 Hollow bearing trees to be retained/hectare, where they exist. • The CIFOA condition can be exceeded where these trees genuinely exist in higher densities without significant impact on timber volumes. • Introducing a procedure to always retain 8 trees incorporating all available HBT and suitable "recruitment" trees will ensure that CIFOA minimum compliance is always in place. It will also ensure that HBT are recruited into areas where the HBT have been destroyed by fire. • A lower threshold for 'giant tree' protection will be introduced as part of this package to ensure that larger, veteran trees in southern coastal forest are retained. The measure to be used by FCNSW during mark-up will be DBHOB, rather than stump diameter due to the impracticality and issues with non-representative measures when assessing diameter at stump height. This measure will not be used in Tumut or the north coast where regrowth trees will frequently achieve this diameter.
<p>Riparian Exclusions</p>	
<p>10m additional buffer on all riparian zones.</p> <p>ESA 2 on outer buffer</p> <p>Maps to use GPS centre line marking of drainage lines.</p>	<p>Consolidated protections to increase ecological functioning</p> <p>Operational practicality through lidar and GPS marking, also reduces walking in the forest for FT team.</p>
<p>Surveys</p>	

<p>Survey Proposal is detailed in Attachment 6</p>	<p>The survey proposal has been designed to inform landscape and clump protection provisions for relevant species in each location. The survey effort has been designed to meet reasonable expectations for achieving the planning requirements while being achievable with available survey resources.</p>
<p>Soil and Water protection conditions</p>	
<p>FCNSW to use methodology established by Dr Peter Walsh to determine if additional conditions are required. If yes:</p> <ul style="list-style-type: none"> • slope limit for harvesting to 25° • Snig track drainage spacing increases to previous SSOC requirement 	<p>Methodology established by Dr Walsh Aligns with FCNSW report</p>

Attachment 3: EPA SSOC proposal summary (from consultations up to 23 Dec 2020)

Original EPA proposal	EPA Final negotiated position
Application / Trigger	
Not specified	Not specified
Duration	
5 years	As resolved by NRC process
Harvest extent	
Compartment Limit <ul style="list-style-type: none"> Maximum 75% of the gross Native Forest area can be harvested 	These requirements were agreed to be merged into a mapping protocol. The broad percentage and 'FESM only' approach still remain.
LLA Limit <ul style="list-style-type: none"> The least burnt (which includes "unburned") 50% of the gross native forest area of an LLA (according to FESM mapping) must not be harvested. 	
Late Stage Forest <ul style="list-style-type: none"> Oldest growth stage forest present excluded at minimum 25% of the gross native forest area of each compartment. These can include other ESAs but must be excluded in areas with a minimum contiguous area of 20 ha. 	
Ridge and Headwater Habitat <ul style="list-style-type: none"> Double CIFOA ridge and headwater size and frequency 	<ul style="list-style-type: none"> Additional 20m exclusion on 80m ridge and headwater exclusion zones. 10m additional exclusion on all other EZs (apart from class 1 riparian - below)
Harvesting Method and Limits	
BA 16m ² /ha	FCNSW may apply one of the options below across a compartment: Option 1 – Selective harvesting with increased BA <ul style="list-style-type: none"> BA Limit 16m²/ha Option 2 (EDEN only) – Limited coupe logging with BA retention requirement <ul style="list-style-type: none"> Per alternate coupe harvesting arrangement (condition 48.3) – in any compartment the number of coupes that can be harvested is no more than half the number of coupes +1. BA limit 12m²/ha

Tree retention	
14 hollow-bearing trees.	<ul style="list-style-type: none"> Represents 96% percentile for HBT in CIFOA patches recorded to date. Note the mean HBT rate = 3.3/ha
Retain 10 late growth stage trees/ha \geq 60cm DSHOB. If this cannot be met, retain all trees $>$ 60cm DSHOB and additional largest trees to reach 10/ha patch.	No change
All giant trees and giant dead trees 90cm DSHOB.	
All dead standing trees.	10 dead trees/ha NHA \geq 35cm DSHOB
Riparian Protection	
<ul style="list-style-type: none"> 20m riparian exclusion zone on unmapped and class 1 drainage lines Additional 10m on other drainage lines. All riparian exclusions zones ESA 2. 	<ul style="list-style-type: none"> 20m riparian exclusion zone on unmapped and class 1 drainage lines, Additional 10m on other drainage lines. All riparian exclusions zones ESA 2.
Buffers on existing exclusion zones	
Not included	10m additional exclusion on all EZs apart from: <ul style="list-style-type: none"> class 1 riparian +15m 80m RHHW +20m
Survey	
As part of the Post-fire risk mitigation report FCNSW is to undertake targeted survey for fire sensitive species using the Threatened Species Survey Guidelines targeting sensitive species.	Survey requirements provided separately
Water and Soil	
FCNSW can opt out (either fully or in part) of SSOC soil & water conditions and revert to CIFOA subject to providing justification that considers all aspects outlined in previous SSOC.	No change

Attachment 4: EPA Supplementary Survey Proposal for SSOC

Scope for survey in proposed Southern and Eden SSOC areas December 2020

Note that:

- Broad Area Habitat Search requirement applies separately.
- Post fire surveys are supplementary to any targeted surveys required by Coastal IFOA though post fire survey may count towards a required targeted survey. Where targeted surveys are triggered they must also be undertaken post fire.

Post fire surveys General principles of target areas:

- Survey in harvest areas and areas within 100m (the “net survey area”)
- Routes/sites should representatively sample the forest types/habitats present
- Consider seasonal survey requirements
- Appropriate diurnal timing

Table 1 – the following survey methods must be applied where relevant species have **known habitat**.

Method	Effort/rate	Details/other requirements
Diurnal traverse	For each per 25ha: <ul style="list-style-type: none"> • 2 person hours • 1km at 1km per hr 	Targeting: Threatened flora: <ul style="list-style-type: none"> • Focus on species that may recruit in response to fire. Threatened fauna: <ul style="list-style-type: none"> • Nests, dens and roosts referenced in condition 76 Table 4.
Spotlight traverse	For each per 50ha: <ul style="list-style-type: none"> • 2 person hours (two observers) • 1km at 1km per hr 	Targeting: <ul style="list-style-type: none"> • Gliders - especially greater glider • Owls
Call playback	For each 50ha <ul style="list-style-type: none"> • One site • Two listeners • Two separate nights 	Targeting: <ul style="list-style-type: none"> • Nocturnal birds, mammals and frogs • Especially owl species and Yellow-bellied Glider.
Camera traps	5 cameras per 100ha 14 nights. Prioritise areas of likely habitat	Targeting: <ul style="list-style-type: none"> • Southern Brown Bandicoot
Other TBD	Where species have occurrences in and proximal to harvest areas bespoke survey efforts to identify nest/den habitat and associated habitat for protection are appropriate.	As required

Table 2- where a species in the table below has **known habitat** in the compartment the relevant survey method(s) must be undertaken.

Species	Potential survey type
Recorded<20yrs. Fauna <2km of priority cmpts (5km spotted-tailed quoll) Flora <5km of priority cmpts.	
Yellow-bellied Glider	Spotlight, Call-playback.
Greater Glider	Spotlight
Squirrel Glider	Spotlight, Call-playback.
Southern Brown Bandicoot	Camera
Giant Burrowing Frog	Spotlight, call playback,
Powerful Owl	Spotlight, call playback.
Masked Owl	Spotlight, call playback.
Sooty Owl	Spotlight, call playback.
Spotted-tailed Quoll	Traverse – general
Threatened Flora	Traverse
Koala (in Southern NSW)	Spotlight, call playback, traverse
Little Eagle	Traverse - general
White-bellied Sea Eagle	Traverse - general
Square-tailed Kite	Traverse - general
Regent Honeyeater	Traverse - general
Swift Parrot	Traverse – general. Seasonal.
Gang-gang Cockatoo	Traverse - general
Glossy Black-Cockatoo	Traverse - general
Varied Sittella	Traverse - general
Brown Treecreeper (eastern subspecies)	Traverse - general
Dusky Woodswallow	Traverse - general
Scarlet Robin	Traverse - general
Flame Robin	Traverse - general
Little Lorikeet	Traverse - general
Grey-headed Flying-fox	Traverse - general

Additional notes: EPA Email responses to survey queries: 23/12/2020

What will EPA do with survey results?

Survey results could impact either/both the risk assessment and additional SSOC

What factors lead to areas being rejected by EPA risk assessment?

They primarily relate to planned harvesting in the least burnt categories of the LLA, adjacency to unburnt/partially unburnt corridor extending beyond the LLA, nearby and post-wildfire YBG record/s, Greater Glider records and Swift Parrot records.

Attachment 5: Summary of the survey requirements for the EPA 'Risk Assessed' compartments

SF	Cpts	NHA	Traverse (hours)	Spotlight (hours)	Call Playback (nights)	Remote Cameras (sites)	Total person days (to complete surveys / data management / reporting / logistics)	% Safe Survey	Comments
Yambulla	303A	100	8	4	2 (2 sites)	5	8	100%	No post-fire survey work carried out yet
Nadgee	116A 117A	200	16	4	2 (2 sites)	10	12	100%	2 CPB's already completed. 4 hours spotlight completed. Remote Camera work done is insufficient.
Nadgee	95A	150	12	4	2 (2 sites)	7	10	100%	1 CPB already completed. 2 hours spotlight completed. Remote Camera work done is insufficient.
East Boyd /Timbillica	209A 210A 211A 219A	150	12	4	2 (1 site)	2	10	100%	1 CPB already completed. 2 hours spotlight completed. 5 remote cameras already completed
Mogo	180A	200	16	8	2 (4 sites)	0	12	60%	No post-fire survey work carried out yet. Site conditions are unsafe to survey in some parts.
Dampier	3155A	400	32	16	4 (8 sites)	0	20	0%	No post-fire survey work carried out yet. Site conditions are unsafe to survey.
Bago	54A/55A/63A	250	20	10	2 (5 sites)	0	15	75%	No post-fire survey work carried out yet
Bago	22A	140	12	4	2 (3 sites)	0	10	75%	No post-fire survey work carried out yet
			128	54	18	24	97		

Conclusions:

- On the basis on this desktop analysis FCNSW will not be able to undertake the required survey effort requiring 97 person days within the timeframes required by industry.
- It is unlikely that supplementary resources will be available to make the proposed surveys happen on time.

Assumptions:

- Ecology team must lead surveys to ensure standards are in place.
- Forest Technicians can conduct surveys with guidance
- Planners/other staff that are suitably qualified can conduct surveys with guidance (when available)
- Ecology team must check data and produce reports (1 day per week).
- Logistics, planning, mapping etc require ~1 day per week.
- Unable to purchase new survey equipment in the time allowed.

Options considered for survey resourcing:

- Bring ecologists in from other regions – not possible due to local regional priorities
- DPI ecology – on leave currently + have their own ongoing / priority program
- Private ecology consultants – will need to check availability during January (probably unlikely to be able to start on time)
- Former FCNSW ecology staff (Kelly & Jess) - will need to check availability during January (probably unlikely to be able to start on time)

Attachment 6: Comparison of additional precautionary survey proposals

Method	EPA Proposal				FCNSW proposal	
	Effort/rate	Details/other requirements			Effort / Rate	Details
Diurnal traverse	For each per 25ha: <ul style="list-style-type: none"> 2 person hours 1km at 1km per hr <p>FC Note: rate = 8km / 100ha</p>	Targeting: Threatened flora: <ul style="list-style-type: none"> Focus on species that may recruit in response to fire. Threatened fauna: <ul style="list-style-type: none"> Nests, dens and roosts referenced in condition 76 Table 4. 	Harvest Area surveys	Diurnal traverse	2km / 100ha NHA <ul style="list-style-type: none"> 1 surveyor only 	Can use CIFOA target flora surveys if triggered. Searching for preferred habitat for inclusion in permanent and temporary habitat exclusions. Ideally conduct prior to spotlight/camera work to target survey effort. Design considers FESM, age classes, forest types, etc
Spotlight traverse	For each per 50ha: <ul style="list-style-type: none"> 2 person hours (two observers) 1km at 1km per hr <p>FC Note: rate = 4km / 100ha</p>	Targeting: <ul style="list-style-type: none"> Gliders - especially greater glider Owls 		Spotlight traverse	1km / 100ha NHA	Gliders - especially greater glider
Call playback	For each 50ha <ul style="list-style-type: none"> One site Two listeners Two separate nights 	Targeting: <ul style="list-style-type: none"> Nocturnal birds, mammals and frogs Especially owl species and Yellow-bellied Glider. 		Call playback	1 site / 100ha NHA	modified call playback site targeting YBG
Camera traps	5 cameras per 100ha 14 nights. Prioritise areas of likely habitat	Targeting: <ul style="list-style-type: none"> Southern Brown Bandicoot 		Camera traps	5 Camera site / 100ha NHA <ul style="list-style-type: none"> 14 nights duration 	Eden: targeting SBB and LNP
Other TBD	Where species have occurrences in and proximal to harvest areas bespoke survey efforts to identify nest/den habitat and associated habitat for protection are appropriate.	As required		Landscape Survey	Eden: Landscape / Opportunistic Frog surveys	Design survey (points). When relevant habitat is apparent, targeting Littlejohns and Giant Burrowing frogs if preferred weather conditions occur.
				South Coast tablelands: Targeting Quoll	In June / July Camera survey across potential habitat	

					South coast: Landscape / Opportunistic	Design a landscape scale survey to sample a range of forest types, burn intensity and aspects. Start with areas scheduled for harvest and additional surveys to ensure landscape coverage. <ul style="list-style-type: none">• 20km (north of Clyde River)• 20km (south of Clyde River)
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Attachment 7: Comparison of proposals for CIFOA supplementary measures (South Coast & Eden)

EPA Proposed SSOC	FCNSW Supplementary Measure	Justification for FCNSW position Summary
Application		
<p>Site Specific Operating Conditions (SSOC) apply to any area subject to fire since August 2019.</p> <p>No threshold proposed.</p>	<p>Apply supplementary conditions in LLAs with:</p> <p>>50% moderate or higher burn intensity</p> <p>Or</p> <p>>25% severe or higher fire intensity.</p>	<ul style="list-style-type: none"> • 12 months after the initial fires many landscapes, particularly those that saw moderate and low fire severity have significantly recovered and do not require additional conditions. • In general areas burnt at lower fire severity have had negligible / positive impact from the fire event. • However, until further surveys are completed at a landscape level to establish broad species impacts in high intensity burnt areas the following precautionary conditions are warranted.
<p>Risk Assessment Process applies</p> <ul style="list-style-type: none"> • Each compartment is assessed by EPA to determine if it can be available to progress to surveys • Following surveys each compartment is risk assessed to determine if it is available for harvesting or amended/ additional SSOC 	<p>All areas in South Coast and Eden are potentially available subject to harvesting being distributed across the landscape to meet CIFOA requirements and good forest management principles.</p> <p>Landscape surveys will provide context of critical species fire impact and recovery to determine scale and intensity of harvesting in each management area.</p>	<ul style="list-style-type: none"> • FCNSW require greater certainty than can be provided by applying the EPA risk assessment process. • FCNSW has a limited understanding of the factors affecting the EPA risk assessment and are significantly concerned about the effect this process has on stability of operational schedules and planning timeframes. • FCNSW have undertaken a systematic assessment and field surveys to understand environmental impact and recovery post-fire in each region and are able to make informed, precautionary management decisions on the appropriate scale and intensity of harvesting.
Duration		
<p>SSOCs apply for 5 years (or until the NRC process leads to development of an alternative procedure or outcome).</p>	<p>SSOC apply for the duration of the current planned operations during 2021 or until an alternative approach is established via NRC process.</p> <p>Post 2021 the need for any ongoing conditions would be reviewed by FCNSW in the event an alternative arising from the NRC is not in place.</p>	<ul style="list-style-type: none"> • FCNSW does not believe that there are scientifically sound and peer-reviewed ecological principles to support continuation of the SSOC process for a 5 year period when the NRC process is expected to deliver recommendations during 2021 or without a further review of appropriate conditions to apply post-2021.

Landscape Exclusions		
<p>LLA limit</p> <ul style="list-style-type: none"> • 50% of an LLA must be excluded applying a mapping protocol based on FESM data. 	<p>LLA Limit</p> <ul style="list-style-type: none"> • Up to 50% of gross area to be excluded based on FESM data and other inputs. • High and Extreme burnt areas do not require protection. 	<p>The positions of EPA and FCNSW are similar in principle:</p> <p>FCNSW Proposal</p> <ul style="list-style-type: none"> • This condition provides specific protection to unburnt areas of forest and provides <u>up to</u> 50% offset in LLAs where significant areas were subject to moderate or lower burn intensity. • Additional clumps were the original proposed model put forward in the FCNSW. The 50% gross LLA benchmark means sometimes more/ sometimes less clumps will be required to achieve this benchmark. • FCNSW proposed mapping protocols means that logical boundaries for clumps / corridors can be identified to consolidate landscape protections and also allow reasonable access to net harvest area. <p>The EPA proposal has significantly less flexibility, by using FESM data as the sole input and always requiring a 50% protection requirement. FCNSW assessments of this proposal is that:</p> <ul style="list-style-type: none"> • the mandatory 50% threshold will at times require severe and extreme burned areas with little ecological value to be included • Will most often lead to much higher than 50% exclusion due to the isolation and inaccessibility of patches that results from a pure mapping data approach that does not consider connectivity • Will frequently lead to forest with high timber value being afforded protection without significant ecological reasoning
<p>25% of each compartment to be excluded from harvesting via:</p> <ul style="list-style-type: none"> • Mapped ESA • FESM mapping • 'Oldest growth stage' forest to make up the balance of 25% 	<p>25% of each compartment to be excluded from harvesting via:</p> <ul style="list-style-type: none"> • Mapped ESA • FESM mapping • WHC • Temporary WHC to make up the balance of 25%* <p>*Temporary WHC will follow the established criteria for WHC under the CFIOA.</p>	<p>The positions of the EPA and FCNSW are largely similar.</p> <ul style="list-style-type: none"> • FCNSW model is only differentiated from the EPA model in that it uses the established CIFOA WHC criteria, rather than the 'oldest growth stage forest' as required in the EPA proposal which is undefined in the CIFOA or in development of SSOC. • Additional WHC are the original proposed model put forward in the FCNSW Report. WHC are defined in the CIFOA which allows for unambiguous identification and protection of exclusions rather than an undefined forest type that may be difficult to identify and exclude and may impact on net harvest area and yield with no clear ecological value.

<p>Additional 10m on all mapped exclusion zones.</p> <p>Strict compliance on the new EZ boundary extent.</p>	<p>Additional 10m on all mapped exclusion zones.</p> <p>Boundary marking to be a combination of GPS in harvesters and on-ground marking only where necessary.</p>	<p>The positions of the EPA and FCNSW are largely similar.</p> <ul style="list-style-type: none"> • This provision will reduce any edge effect on exclusion zones and will increase the size and effective ecological functioning of each ESA and the overall network of exclusions that already exist under the CIFOA. • FCNSW proposes that Lidar and GPS marking can be used and therefore reduce walking in the forest in higher risk environments.
<p>Harvesting limit (intensity)</p>		
<p>Selective Harvesting only</p> <p>BA limit 16m²/ha</p> <p>Or</p> <p>In Eden only BA limit 12m²/ha applies where alternate coupe rules are implemented (i.e. 50% of available harvest area in a compartment is excluded from harvesting as alternate coupe rule apply).</p>	<p>Selective Harvesting only</p> <p>BA limit 10m²/ha</p>	<ul style="list-style-type: none"> • Both proposals apply selective harvesting only. The EPA is proposing a higher Basal Area threshold. • FCNSW notes that Basal Area is not in itself ecologically significant for protection of forest values in regrowth forests, as opposed to landscape protection measures and retained tree provisions which seek to identify and protect specific ecological values. • FCNSW has proposed selective harvesting only to be employed as defined under CIFOA for the next 12 months. Under this proposal 10m²/ha will remain the compliance limit, however each operation may specify a variable rate above this mark where local silviculture measures are appropriate (this is a normal FCNSW planning process). • FCNSW proposes that any resumption of alternate coupe operations in Eden will be considered following the NRC review or following a subsequent FCNSW review during 2021.
<p>Retained Trees</p>		
<p>All Hollow Bearing Trees (HBT)</p> <p>Or</p> <p>14 HBT retained per hectare.</p>	<p>Minimum 8 <i>Habitat</i> trees retained per hectare</p> <p>Habitat trees include in order of priority:</p> <ul style="list-style-type: none"> • HBT where they exist • Trees > 100cm DBHOB in Eden and South Coast sub-region • 'Recruitment' trees where hollow bearing trees don't exist 	<p>The FCNSW proposal is to meet or exceed the CIFOA in all patches.</p> <ul style="list-style-type: none"> • The CIFOA requires retention of up to 8 HBT per hectare where they exist. • FCNSW's proposal to always retain 8 habitat trees will ensure that CIFOA compliance is always in place as a minimum. • FCNSW's proposal enables the CIFOA to be exceeded where these trees genuinely exist in higher densities. • A lower threshold for 'giant tree' protection will be introduced to ensure that larger, veteran trees in southern coastal forests are retained. The measure to be used by FCNSW during mark-up will be DBHOB, rather than stump diameter due to the impracticality and issues with non-representative measures when assessing diameter at stump height.

		The EPA proposal for 14 HBT per hectare is very high considering the actual average rate of HBT retention under the CIFOA is 3.5 HBT/ha. Retaining 14 trees is operationally onerous and very difficult from a compliance perspective and will likely impact substantially on timber availability.
Riparian Exclusions		
15m additional buffer on Class 1 drainage lines (smallest dry channels) 10m additional buffer on Clas2,3,4+ drainage lines ESA 2 - Strict compliance on additional buffers.	10m additional buffer on all riparian zones (class1-4+). Plus <ul style="list-style-type: none"> • ESA 2 on additional buffer • Maps/FCMApApp to use GPS centre line marking of drainage lines. 	FCNSW's proposal for 10m additional buffers can be identified and located via a combination of field marking and Lidar and GPS marking which will reduce walking in the forest. FCNSW does not consider there are scientifically sound or peer reviewed ecological principles to support the EPA's additional 15m on Class 1 drainage lines compared with FCNSW's 10m. In addition it creates a significant compliance and safety issue walking in the forest as Class 1's are the most prolific drainage lines across the landscape.
Surveys		

<p>Additional operational surveys Traverse: 8km/100ha Spotlight: 4km/100ha Call Playback: 2 site /100ha Camera ‘traps’: 5/100ha (14 nights)</p> <p>Additional unspecified “bespoke” surveys</p> <p>Note: Surveys do not have known outcomes. Results could be used for</p>	<p>Additional operational surveys Traverse: 2km/100ha Spotlight: 1km/100ha Call Playback: 1 site /100ha Camera ‘traps’: 5/100ha (14 nights)</p> <p>Note: Surveys determine best habitat for inclusion in WHC and potential TRC.</p>	<p>FCNSW’s survey proposal is additional to the CIFOA and to the old IFOA’s and has been designed to inform landscape and clump protection provisions for relevant species in each location. The survey effort has been designed to balance the benefit of additional survey information with survey resources.</p> <p>In contrast the EPA proposal has very onerous survey effort focusing only on the potential harvest area, with no specified outcome. Survey results circle back to either a secondary risk assessment or amendment/additional SSOC. Neither of these options provide reasonable certainty of access to harvest areas.</p> <p>Feedback from regionally based FCNSW ecologists in undertaking these surveys to date support the position that concise targeted surveys have merit in determining local priority areas for inclusion in permanent and temporary harvesting exclusions. However, significant additional effort traversing the net harvest area is of limited value, particularly given that broad area searches (as required under the CIFOA) will still be undertaken to identify and mark habitat features including nests, roosts, dens camps, feed trees, wetlands, rocky outcrops, heath and scrub, as well as retained trees.</p>
<p>None proposed</p>	<p>Additional landscape Surveys</p> <p>Regionally specific landscape surveys recommended to inform priorities for operational conditions and to determine extent of species impacts for regionally identified vulnerable species.</p>	<p>FCNSW has proposed a range of landscape surveys for species that may have been significantly affected by fire in southern NSW, including gliders in the south coast and Potoroos and Bandicoots in Eden. These surveys will inform protections at the compartment scale, but also provide a picture of fire impact and ongoing recovery to inform decisions on the appropriate scale and intensity of harvesting going forward in various local landscapes. Without such landscape surveys the results of compartment level surveys are less meaningful.</p>
<p>Soil and Water protection conditions</p>		
<p>FCNSW to opt in or out depending on site conditions based on FCNSW assessment of ability to comply with the CIFOA.</p>	<p>FCNSW to use ground cover assessment methodology established by Dr Peter Walsh to determine if additional conditions are required. If yes:</p> <ul style="list-style-type: none"> • slope limit for harvesting to 25° • Snig track drainage spacing increases to previous SSOC requirement 	<p>The EPA and FCNSW proposals align.</p> <p>Methodology established by Dr Peter Walsh, FCNSW soil and water specialist.</p> <p>Aligns with FCNSW report recommendation.</p>

Attachment 8 Compliance and implementation plan

Implementation timeframe

The proposal is a short-term solution to be in place for 2021. Once the NRC process reports to Government, FCNSW will amend operations to accommodate the recommendations adopted by the NSW Government. During this 12 month period, the forests will also further recover from the impact of fire.

Regulation and enforcement

The EPA regulates operations under the CIFOA. FCNSW intends to gather data on their implementation and compliance of the additional voluntary environmental safeguards and provide that to the EPA as it would with CIFOA requirements in the normal course.

Adherence to these additional environmental safeguards can be enforced through FCNSW's contracts and licences with harvesting operators.

Enhanced compliance

FCNSW will develop and communicate standard operating procedures outlining additional environmental safeguards to ensure staff and contractors are fully aware of the requirements and their obligations. Training will be conducted and detailed inductions to each harvesting site.

FCNSW will allocate existing resources to ensure staffing levels on the south coast and Eden are adequate to implement the additional environmental safeguards.

FCNSW will also investigate recruitment and training additional Forest Technicians to supplement these resources.

FCNSW has already established a Governance and Assurance Unit within the organisation and will engage and independent external auditor to conduct on-ground audits of operations being conducted with additional environmental safeguards and undertakes to share these results with the EPA.