

The New Koala Prescription. North East Forest Alliance, June 2017.



The Forestry Corporation and the Environment Protection Authority (EPA) have decided to remove the need to look for Koalas before logging and to remove the requirement to identify and protect Koala High Use Areas.

Instead they have produced a model that broadly identifies and ranks Koala habitat, which they intend to use to set tree retention requirements according to modelled habitat quality. Their problem is that at the same time they have preferentially selected the highest quality habitat for the most intensive logging and conversion to quasi-plantations.

North-coast Koala populations have [declined by 50%](#) over the past 15-20 years. Logging of their habitat has to stop. Proper identification of Koala habitat needs to be undertaken independently of the Forestry Corporation using a range of search methods to identify occupied core Koala habitat for exclusion from logging.

Current Requirements.

The Threatened Species Licence requires that in logging areas which contain preferred forest types for Koalas, Koala Mark-up Searches must be conducted at least 300 metres in advance of logging operations. Foresters are required to **thoroughly** search around the base of trees for Koala scats (faecal pellets). If they identify a Koala High Use tree (with 20+ scats, or scats from a mother and baby) they are required to undertake a systematic scat survey. If they find at least three consecutive trees with Koala scats within 100 metres it is identified as a Koala High Use Area and must have a 20m logging exclusion zone implemented around it.

In a logging area where a Koala High Use Area is identified, or where scats are found under two consecutive trees, it is classed as "intermediate use area" and 10 primary browse species are required to be protected per 2 hectares.

The principal problem with this prescription is that the thresholds for identifying Koala High Use Areas are too high and the Forestry Corporation refuse to undertake the scat searches with the thoroughness required to identify them, as proved by NEFA in [Royal Camp State Forest](#). The outcome is that only around 14 ha a year (equivalent to one or two home ranges) are protected as Koala High Use Areas.

Intermediate use areas are frequently identified, though as there is no requirement that retained trees be the mature trees required by Koalas, small useless trees are often claimed as feed trees.

The Principal Determinants of Koala Habitat

The principal determinants of Koala habitat at the local scale are preferred tree species, tree size and forest maturity. There are a variety of other factors, though these all need to be taken into account to accurately identify Koala habitat.

The NSW Recovery Plan for the Koala (DECCW 2008) identifies that the loss and degradation of habitat is the most significant threat facing NSW koala populations. Koalas have been found to have a preference for mature trees of specific species in the size range 30-80cm (DECCW 2008). In the Comprehensive Regional Assessment, undertaken jointly between the Commonwealth and NSW Governments in north-east NSW, a significant threat to Koalas was identified (Environment Australia 1999) as "*Logging that fails to retain stems in the 30-80 DBH size class*".

As part of a project to map Koala habitat, the EPA's (2016) [Koala Habitat Mapping pilot report](#) assessed the relationship between Koalas and key variables in 4 State Forests in north-east NSW known to have significant Koala populations. They found usage of preferred species increased linearly with tree size, noting "*the data demonstrates a strong positive relationship between size class and activity, with highest activity in the largest size class*", and that "*Seventy-four per cent (74%) of all activity resides in the high class of structural maturity*".

The EPA (2016) tested numerous variables, concluding that for Koalas:

Limited areas of higher koala activity corresponded with; a higher abundance and diversity of local koala feed trees, trees and forest structure of a more mature size class (>30 centimetres and mature forest structure), and areas of least disturbance.

Developing a Koala Model

The Forestry Corporation and EPA have been doggedly pursuing Koala habitat modelling in order to remove the need for pre-logging Koala surveys.

The EPA's (2016) [Koala Habitat Mapping pilot](#) undertook a range of habitat and modelling exercises, which led the expert reviewers to conclude that existing vegetation mapping did not adequately reflect the distribution of preferred feed trees and that Koalas were absent from areas of potentially suitable habitat because of other factors, such as logging, that could not be accounted for in the models. The experts considered modelling was potentially useful to identify where Koala habitat was likely to occur, though is "*incapable of accurately*

identifying the locations of core Koala habitat, or concentrations of the Koala, at the scale (e.g. logging coupe) required to manage them without recourse to further on-ground surveys" (Kavanagh 2015). The EPA (2016) concluded:

The project results indicate that Koala habitat maps produced via the tested methods, can only be reliably used to differentiate between suitable habitat and unsuitable habitat. The variability within vegetation types means it is difficult to accurately map koala habitat classes at a management scale of 1:5000 metres ... The project findings also indicate that koalas occupy habitat to varying degrees for reasons other than floristic composition".

The EPA were determined to remove the need for pre-logging surveys, so undaunted by the expert review and the conclusions of its own project, the EPA then engaged Department of Industry (DoI) – Forest Science Unit to develop [A predictive habitat model for Koalas](#) (that still doesn't account for vegetation variability, forest structure or logging disturbance) as the basis for Koala management and regulation on State Forests (and likely private forestry).

NEFA accepts that the model is useful for the identification of potential Koala habitat on a regional scale, however it is not valid for regulating logging at the scale of logging operations. For example Clouds Creek and Maria River State Forests have large areas of modelled habitat of the highest quality, though the EPA (2016) found that "Given the ... results for Clouds Creek and to a lesser extent, Maria River SF, in combination with the degree of habitat disturbance (logging and fire) identified in the field, it would be reasonable to conclude that the high activity areas were sink habitats, as less than 30% total habitat utilisation was recorded, in addition to <5% of resident habitat area recorded". By contrast in medium to low quality habitat the EPA (2016) found "that 80% of Carwong and 58% of Royal Camp State Forest is utilised, ... On this basis it can be concluded that habitat in Royal Camp and Carwong is source habitat, where reproduction exceeds mortality on average over time". The EPA go on to state:

In relative terms, Carwong appeared to be the least disturbed by logging and fire. Having both wildfire and multiple recent logging events absent for approximately 20 years, appears to correlate with overall highest occupancy compared with other pilot areas that have experienced multiple, more recent silviculture treatments. This result aligns with Smith's (2004) findings that koala prefer areas of least disturbance.

It is apparent that Koalas have been decimated in extensive areas identified as what used to be their best habitat.

The Forestry Corporation and EPA's Proposal

Despite the conclusion that modelling is inappropriate for regulation at the scale of individual logging operations the EPA are intent on using models to regulate logging. The Forestry Corporation's proposal is to get rid of the requirement to exclude Koala High Use Areas from logging and instead use their model to identify "primary" and "secondary" habitat.

Where there is a "contemporary" record of a Koala in a compartment, then within mapped "primary habitat" all koala feed trees must be retained, and within mapped secondary habitat 6 Koala feed trees per ha must be retained.

Where a Koala is located during a harvesting operation, a temporary 20 metres harvesting exclusion zone must be placed around that tree whilst the koala remains in it. This is a return

to the prescription that existed prior to the Endangered Fauna (Interim Protection Act 1991: *"About the only thing done in a logging operation when a koala is located is to not fall the tree, at that time. It may be felled later (next day) if the koala has moved"* (Ernie Chiswell, Coffs Harbour District Forester, 29.11.1989)

It is perplexing as to how this will work in practice as the Forestry Corporation and EPA are intending to significantly increase logging intensity, specifically targeting the highest quality Koala habitat identified by their modelling for the most intensive logging and conversion to what the EPA term "quasi-plantations".

The high quality modelled habitat represents 8% of the north east NSW modelled habitat, yet contains half of the Koala records. 27% of the modelled high quality habitat occurs on public land available for logging. Of the high quality habitat, 90% occurs on the 58% of State Forest proposed for intensified logging. The alternate coupes of the proposed 140,000ha North Coast Intensive Zone represent 15% of the State Forest area yet encompass 38% of the highest quality Koala habitat on State Forests.

Despite north-coast Koala populations crashing by 50% over the past 15-20 years, in part due to the loss of mature feed trees through logging, the Forestry Corporation and EPA are removing the need to identify and protect Koala High Use Areas while targeting the best habitat for the most aggressive logging and conversion into quasi-plantations.

