Review of native vegetation clearing regulations (2016-17)

Individual submission

██████████ , ██████████ . 3056

Following on from my initial submission to the Consultation Paper in April 2016, and the then proposed improvements to the regulations, this submission focuses on the Native vegetation clearing – Assessment guidelines. I assume that the proposed changes to the VPPs will reflect and implement the guidelines, but I have not examined them in detail.

In summary, I support improvements flagged by the Consultation Paper including: greater emphasis on avoiding and minimising clearing, reduced thresholds for the detailed assessment pathway, more comprehensive criteria for determining highly localised and high risk habitats, and consideration of land and water values of native vegetation.   These improvements need strengthening further to ensure they are effective.

However I am greatly concerned with the continued reliance on misleading biodiversity modelling that is not fit for purpose, in particular the NaturePrint modelling and its contrived "strategic" biodiversity score, and to a lesser extent the habitat importance modelling. The outputs of this modelling could often be an artefact of the model structure, instead of representing ecological reality, yet it is being used as a key input to clearing decisions. This is definitely NOT sensible.

Whilst native vegetation and threatened species mapping and modelling is of course an essential conservation tool, I argue strongly below for a return to a transparent definition of Conservation Significance, similar to that which was in the previous Native Vegetation Framework, albeit with some improvements.

I am also concerned that one of the key improvements flagged by the Consultation Paper: No. 10, guidance for when to refuse a clearing application, has not been addressed. Having a more meaningful, transparent definition of conservation significance will assist with this issue.

Clearing assessment pathways

Thresholds

The reduction of the area threshold for both the basic and intermediate pathways to 0.5 ha is welcome – on-site habitat hectare assessment and the detailed pathway is essential for assessing more substantial clearing activities. The same is true for any clearing in highly localised / rare habitats which may have a significant impact on threatened species.

However as recognised by the Assessment Guidelines, clearing of smaller areas can have significant impacts on other biodiversity and /or land and water values, depending on the sensitivity and value of the site. This is especially the case when many small scale clearing activities add up to a large cumulative impact, as can happen for instance with rural residential development.

I'm glad to see the inclusion of endangered EVCs, large old trees, wetlands and sensitive coastal sites, as additional thresholds for the intermediate pathway. Arguably, sites at high risk of land and water degradation, including riparian vegetation and high risk salinity and erosion sites, should also be included in this pathway. However these values are unlikely to be protected unless some qualified on-site assessment/ inspection is required. This could be undertaken by a council officer or a consultant, possibly in lieu of a full habitat hectare report.

Avoiding and minimising clearing

I strongly support the greater emphasis on avoiding and minimising clearing, in the proposed guidelines. A statement about steps taken to avoid and minimise vegetation and biodiversity impacts should also be included with the basic pathway. This does not have to be onerous for the applicant, nor increase application costs. If the applicant believes that impacts are already very minor/ insignificant, the statement could simply reflect that. One key benefit of the native vegetation regulations is that they prompt landholders and developers to think about vegetation impacts. Often there are win-win solutions, where only a minor cost neutral modification to the proposal can greatly reduce vegetation impacts.

As mentioned in my previous submission, development of ecological best practices for different types of landuse and development, can both assist applicants with practical measures for minimising vegetation impacts, and planning authorities in determining if adequate measures have been undertaken.

Misleading biodiversity modelling

NaturePrint and the strategic biodiversity score

The strategic biodiversity score, derived from NaturePrint modelling, is listed as a key decision guideline for planning authorities, and it determines offset requirements when multiplied by the habitat hectare score for the site. I expect that planning authorities will struggle to determine how significant impacts are because the biodiversity score is x or y say.

NaturePrint attempts to combine entirely different biodiversity values into a single score, and by doing this important value judgements /. weightings, assumptions and simplifications are hidden in the mathematics of the modelling – which has not been released. Nature conservation is about value judgements as well as ecological science and data analysis, and as such policy and guidelines need to be publicly available and transparent.

NaturePrint uses the Zonation optimisation algorithm to rank all sites across the State according to how efficiently they retain defined biodiversity attributes. The highest ranked site has the highest strategic biodiversity score. Yet the attributes the model is attempting to optimise include 98 highly contrived "assemblages" of all native species in the State, which lack the testing or peer review of ecological vegetation classes.

Also the outputs of the Zonation algorithm depend greatly on the objective functions and constraints used, so there is a high risk that NaturePrint outputs will be an artefact of its defined mathematical structure, with a poor correlation to real on-ground ecological priorities as determined by expert judgement.

It is essential that the mathematical and technical documentation for NaturePrint is publicly released and subject to peer review.

Habitat distribution models and habitat importance score

In contrast to NaturePrint, I appreciate that habitat distribution models can be a meaningful and much needed representation of how likely a site is to support a particular threatened species. Unfortunately there seem to be major accuracy problems with distribution models for many species at present, leading to wildly inaccurate predictions of their likely extent – this was apparent with models of grassland species used with the Melbourne Strategic Assessment.

Until these accuracy problems are overcome through futher survey and model refinement, I propose it would be preferable to map a species likely habitat, and to prioritise that habitat, based on expert judgement.

In using habitat distribution models for the native vegetation regulations, the Department goes further in defining a habitat importance score, which is the geometric mean of the habitat suitability score and the modelled landscape connectivity, and then defines a specific biodiversity score, by multiplying the habitat importance score with the habitat hectares quality score. This seems like very coarse data crunching to me, which may or may not represent how important habitat is for a particular species. It is also inferred as a key decision guideline for planning authorities.

I propose that the specific biodiversity score is not used, unless independent peer review and expert judgement concludes it is likely to be a reliable representation of the real habitat importance for a particular species. Otherwise I propose the Department constructs maps of likely priority habitat for threatened species based on expert judgement, e.g. core breeding habitat, priority foraging habitat, dispersal habitat, or other meaningful categories. Then proportional impact on a species, and thresholds for specific offsets, can be based on proportional impact on these different priority habitats.

Return to a meaningful, transparent definition of conservation significance

Instead to trying to define a single score for biodiversity value, a matrix approach of rating conservation significance, like that used in the previous Native Vegetation Framework, seems to me to be much more transparent and meaningful.

 The matrix can include a comprehensive but workable list of ecological attributes and quality / condition states for each, and conservation significance is then based on combinations of these attributes and condition states. A discrete number of conservation significance ratings could be defined, e.g. 4 from very high to low.

The ecological vegetation class(es) present at a site, and their conservation significance, would be one key attribute, and the conservation significance would increase if the EVC comprised higher quality vegetation. Threatened species habitat would be another key attribute, and conservation significance would increase if priority habitat for that species was present. Examples of other likely attributes include large old trees, wetlands, vegetation connectivity and conservation significance would increase if multiple attributes are present.

Such a matrix approach shows the value judgements and weightings behind a conservation significance rating, and it is clear to a planning authority what values are being impacted by a clearing proposal. Providing the matrix is based on rigorous expert judgement and peer review from a range of ecologists from both inside and outside the Department, it is much more likely to reflect real on-ground ecological priorities, than an abstract and somewhat arbitrary mathematical model.

As with the Native Vegetation Framework, offsets can be readily calculated based on area to be cleared and habitat hectares score, with increased offset and like for like requirements with increasing conservation significance.

Policy guidance for unacceptable clearing applications

The clearing assessment guidelines as currently written provide little guidance to planning authorities about when to refuse a clearing application, or require it to be substantially modified to minimise impacts. Whether the strategic biodiversity score is x or y will not help with this.

The guidelines should describe the nature of impacts, both qualitatively and if possible by giving indicative clearing extent, where the risks of unacceptable biodiversity impact is high, and priority should be given to further measures to minimising and avoiding clearing. (There would be justification for the planning authority to refuse an application is a permit was required under the zone.) If there is a meaningful definition of conservation significance, as described above, then a graded response to clearing applications can apply as with the previous Native Vegetation Framework. Much lesser impact is tolerable in sites of higher conservation significance.