Hornsby Vegetation Mapping - Planning Proposal (21.04.01 vs2)

The following are the key issues from this planning proposal that we recommend require specific policy positions/directions and rationale. This can then inform and support the Department's assessment and approach to this proposal, particularly given this planning proposal has the potential to have a significant impact on the application of the Codes SEPP and other SEPPs within the Hornsby LGA and also potential to set a precedent on these matters that other Councils may seek to pursue.

1 – Expansion of local communities to be mapped

Council had resolved that the planning proposal was to update the mapping including the identification of all vegetation communities (adding 9 local or common communities -marked in red in the table below) plus a 10m buffer.

	Smith and Smith 2008		ELA 2017	
Vegetation Significance	**Area (ha)**	**Number of Vegetation communities**	**Area (ha)****	**Number of Vegetation communities**
Commonwealth (CEEC and EEC)	337	3	607	4
NSW (CEEC and EEC)	236	10	279	10
Regionally Significant (Sydney Region)	822	11	943	12
Sub-total Area	**1,395**	**24**	**1,829**	**26**
Locally Significant (Hornsby Shire)	1,267	4	1,384	3
Common Species	12, 858	6	13,139	6
*Urban Native Exotic/remnant vegetation**	*N/A*	*N/A*	*648**	*1**
Total Area	**15,520*****	**34**	**16,352**	**35**

Figure 1: Previous mapping extent (Smith and Smith 2008) and proposed mapping extent (ELA 2017). The proposal now includes red marked vegetation – being Locally significant and common species. Source: Council Report 12.08.2020 page 5.

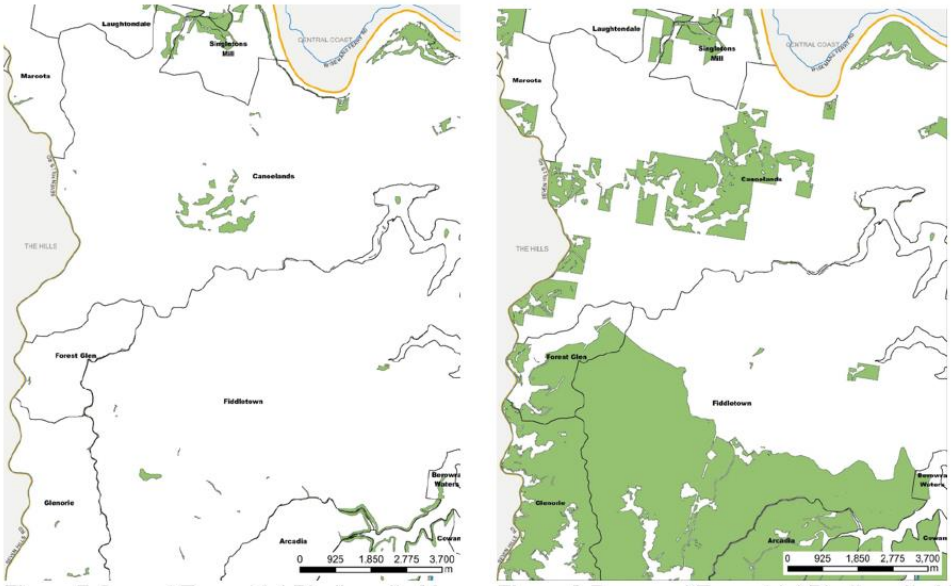

Figure 2: Example of mapping – from Planning Proposal

Issue

The proposal seeks to include 'local' or 'common' species in the LEP mapping, without any analysis of the significance of these 9 local vegetation communities and justification for inclusion. This has potential to have a major impact on the Hornsby LGA regarding the Codes SEPP and the complying development pathway and to set a precedent for LEPs in other Councils.

Council Feedback

Council staff have indicated it was not the intention of Council to provide any further justification other than to suggest all vegetation should be mapped and is of significance. Council also reiterated that the Department had previously advised that there is no standard approach/criteria to mapping vegetation in the LEP and it is up to Council to interpret.

DPIE Position

What is DPIE's policy position and rationale on the inclusion of 'locally significant' and 'common' tree species in LEP mapping and specifically land mapped as 'Environmentally Sensitive Land' or alternatively as land mapped as 'Terrestrial Biodiversity'?

Policy comments

- Whilst there may not be a formal written policy on this, environmentally sensitive land has really only included significant species that require additional assessment before developments are approved, not all vegetation. It has never been the Department's policy intent to use identification of all vegetation as a means to prevent complying development.
- Locally significant trees can already be captured in the council's significant tree register.
- A Planning Circular/Practice Note could be developed by the Regional Team to clearly establish the Department's position on how these maps can be used by councils in future.
- Policy would not support locally significant and common tree species being grouped with other elements that would have a higher conservation value i.e. terrestrial biodiversity.

2 – Changes to clause 6.4 and title of LEP vegetation map

Issue

The proposal seeks to amend the vegetation mapped as 'Terrestrial Biodiversity' within the Hornsby LEP and retitle as 'Environmentally Sensitive Land' and to amend Clause 6.4 to change 'Terrestrial Biodiversity' to 'Environmentally Sensitive Land'. This increases clarity around the impact of the mapped areas on limiting the application of the Codes SEPP and complying development.

DPIE Position

What is DPIE's policy position and rationale on amending clause 6.4 as proposed and changing the title of the mapping to Environmentally Sensitive Land', particularly given this will set a precedent unless there are already other examples of this approach in other LEPs.

Policy Comment

- Rather than replacing a commonly used term, the LEP could specify that, for the purposes of that instrument, a particular mapped area is considered ESL (see cl7.5 of the Port Macquarie-Hastings LEP, which does this for Koala Habitat and environmentally sensitive area).
- Sutherland and Canada Bay councils have mapped ESL in separate maps and clauses, rather than replacing the model Biodiversity clause.
- Understanding the component of the current definition of ESL that Hornsby plans to use in this classification would be important – there are specific terms and types of land that can be captured under this definition. Hornsby can not add an ESL term to the SI Dictionary.

- NB The Department is currently reviewing Schedule 1 of the Seniors SEPP, which contains the definition of *environmentally sensitive land*. Any future changes to this may affect the way ESL can be captured.

3 – Planning and economic impact

Council adopted Option 2 (refer table below) as the approach for this planning proposal leading to a significant increase in the vegetation mapped (in association with the changes to clause 6.4) without any analysis of the planning and economic implications.

Existing Properties affected by Terrestrial Biodiversity Mapping	**Proposed**
1750	**12,150**

Map	**Significant Communities (plus 'Bushland Protection' from *HSLEP 1994*)**	**Buffer**	**No. of properties affected (approx.)**	**Base Vegetation Map**
Current LEP Map	*National, State and Regional*	*Nil*	*1,750*	*Smith and Smith 2008*
Option 1 (using existing rationale and maintain the same thresholds)	National, State and Regional	Nil	4,100	ELA 2017
Option 2 (update and expand the threshold to map all communities)	National State, Regional, local and common species	10m	12,150	ELA 2017
Option 3 (update to map all communities but distinguish to lessen implications for local and common species)	National State, Regional local and common species	10m	12,150 (8,050 DCP implications) (4,100 Complying Development, LEP and DCP implications)	ELA 2017

Figure 3: Options presented to Council (Council went with Option 2) Council Report 12.08.2020 - Page 10

Issue

The proposal lacks any detailed economic analysis (beyond the above identification of properties affected), so it is unclear in terms of the following:

- Identification of land zoned residential – that would allow DPIE to fully understand the impact on complying development; and
- Proposal doesn't identify land zoned rural that is capable of developing through Complying development

- No economic impact analysis has been completed to address the increase of development applications for Council to assess, including the impacts on the following:
  - Housing Code
  - Rural Housing Code
  - ARH SEPP
  - LRHDC (not significantly relevant)

Council feedback
Council have indicated they prepared the planning proposal based on what Council resolved to prepare. They have indicated that analysis of the planning impact was not considered relevant as the protection of existing vegetation is the priority.

DPIE Position
We propose that an analysis of the planning and economic implications should be outlined by Council in the proposal, particularly given the amount of additional vegetation proposed to be mapped.

Policy Comments

- In the 2018-19 financial year, 466 CDCs were issued for the Hornsby Council area.
- CDCs were issued for residential, commercial and subdivision developments (and "other" which could be industrial, education or infrastructure projects). A change in where complying development is used could affect all of these streams of development.
- There could be a considerable financial impost on a large number of homeowners and businesses if they are unable to access the complying development approval pathway for any future works, due to increases in approval time, uncertain or additional design or development requirements, and the increased design time required for a construction certificate to be granted, among other things.
- There would also be a significant increase in the number of applications needing to be assessed by council, which would impact time and human resources, and may require additional staff.
- Both these impacts should be considered as part of the financial analysis.

4 – Lack of validated vegetation

Approximately 21% of the map has been validated by current and previous authors. 214 areas were validated by Eco Logical Australia. Whilst 28 sites could not be surveyed without accessing private land.

Issue
What are acceptable validation standards?

Council Feedback:
Council staff have indicated that DPIE has not provided clarity around what it expects to be an acceptable amount of vegetation to be validated.

This approach is consistent with industry practice for broad scale vegetation mapping and has been used to inform the Biodiversity Assessment Method (as part of the NSW Biodiversity Offsetting Scheme) and the 2016 Native Vegetation Map of the Sydney Metropolitan Area undertaken by OEH.

However, if the Department has a particular mapping threshold which they would like Council to achieve to include vegetation mapping within the HLEP 2013, please advise us of this so it can be incorporated into Council's budget for Biodiversity and vegetation mapping in the future.

DPIE Position
What is or should be DPIE's policy position or standard for validation.
Validation of a map is about having a degree of confidence that the representation (the map) reflects the evidence on the ground. The degree of confidence required is highly dependent on the intentions and perspective of the map producer and that of the map user. There can be a wide divergence between the two perspectives.

Policy Comments (via Environment, Energy and Science Division)

The mapping resolution (scale) is an important consideration for both producer and user. The scale of older hard copy maps was generally controlled by the producer. These days most mapping is digital and the scale of resolution is largely in the hands of the user. Best -practice now is that the producer should provide a statement about the scale of map preparation and recommended scale of use.

Validation for mapping generally relates to how ***accurate*** map attribution (how vegetation is described) for any given point. This is different from spatial ***precision*** which relates to the geographical location (aka line work). Best practice is mainly concerned with mapped **Accuracy.**

Validation best practice is reflected when the following methods are used:

- Collection of a set of independent site survey data. This means that the map producers have no specific knowledge about this data and was not used in map production in any way. Generally this is collected post-mapping but can comprise data , reserved and unused from any other time.
- The survey site data is representative of the types of (vegetation) having been mapped. This means that the most if not all thematic types are sampled to some degree and the survey is ***stratified***. Stratification is done by computers these days generally based on mapped types, surficial geology, aspect and access parameters
- The survey site data is proportional to the represented extent of each type. This means the survey effort is proportioned across vegetation types.
- The survey sites themselves are randomly located in the stratified locations. This is important in reducing sampling bias.

Practice

The reality is that an independent set of survey data for validation is very rare, as it generally represents a significant additional investment on top of the primary mapping effort. However, validation data is most economically collected as part of the initial mapping survey effort and kept to one side strictly for this purpose. Generally at least 10% of all the available survey data reflects best practice, although this may rarely be possible.

Despite the best design intentions, access to survey sites always a limiting factor and a range of compromises are necessary to take into account; time available, costs, physical access and surveyor expertise.

Advice

I assume that the LEP environmentally sensitive lands map is a map of vegetation types as opposed to a binary (native/non-native) map and the intention of the mapping is to indicate a level of accuracy and precision at a property-scale. While this could be equally expressed as a regional scale (prepared at ~1:25000 scale) or a fine scale (prepared at ~1:5000 scale), we will assume that the level of confidence required is relatively high as property level decisions are required by Council and landholder.

Contemporary best practice for validation outcomes is:

- Binary mapping (native/non-native vegetation) 95%+
- Fine scale mapping 80%+
- Regional scale mapping 70%+
- Vegetation models 60%-65%+

If 21% of the mapping has been validated and the validation methods and results reflect best-practice as outlined above then the effort would be sufficient. If **significantly** deficient in any or all of the above a further assessment of the effort to date would be necessary to identify the most cost effective means to address that and invest in further validation effort.