



Hawkesbury City Council

Attachment 1
to
item 164

Ecological - Biodiversity Priority Rank
for Kurmond
Kurrajong Investigation Area

date of meeting: 10 September 2019
location: council chambers
time: 6:30 p.m.

Hawkesbury Biodiversity Planning Framework

High Biodiversity Value Lands

High biodiversity value lands have been refined from the initial biodiversity prioritisation layer prepared for Hawkesbury Council in 2018. The refinement has been carried out to support guidance for land disposal; conservation investment; an update to the LEP terrestrial biodiversity overlay and inform an update to the OEH biodiversity values mapping across the LGA.

1. Refined Biodiversity Priority Layer

Existing rulesets to define high biodiversity values have been refined to develop a biodiversity priority layer for use in Council's LEP as well as consider alignment and update to the OEH biodiversity values map (BVM). The current extent of the Hawkesbury terrestrial biodiversity overlay and the BVM are shown in Appendix A.

Overall biodiversity values were classed into:

Priority 1 – Lands identified as incorporating the highest biodiversity values to be managed for conservation objectives / investment where possible.

Priority 2 – Lands which include important biodiversity values that provide a supporting function to highest biodiversity lands.

A suite of criteria, defined in Table 1, was applied to available data to prepare the updated biodiversity priority layer. The criteria were aligned with documented values from the Biodiversity Conservation Regulation 2017.

Table 1: Refined biodiversity priority criteria

Dataset	Criteria Priority 1	Criteria Priority 2
Vegetation - Threatened Ecological communities (EECs and CEECs)	Patch size >= 4ha	Patch size < 4ha
Koala habitat (SEPP 44)	Patch size >= 4ha	Patch size < 4ha
Wetlands / Aquatic habitat	100m buffer around mapped wetland/habitat	n/a
Riparian buffers	Vegetated riparian buffers based on ordered streams <ul style="list-style-type: none"> 1st order – 10m 2nd order – 20m 3rd order – 30m 4th order and greater – 40m 	Non-vegetated riparian buffers based on ordered streams <ul style="list-style-type: none"> 1st order – 10m 2nd order – 20m 3rd order – 30m 4th order and greater – 40m

Maps 1 and 2 show the distribution of Priority 1 and 2 values across the areas of the LGA not covered by NPWS Estate (Reserves).

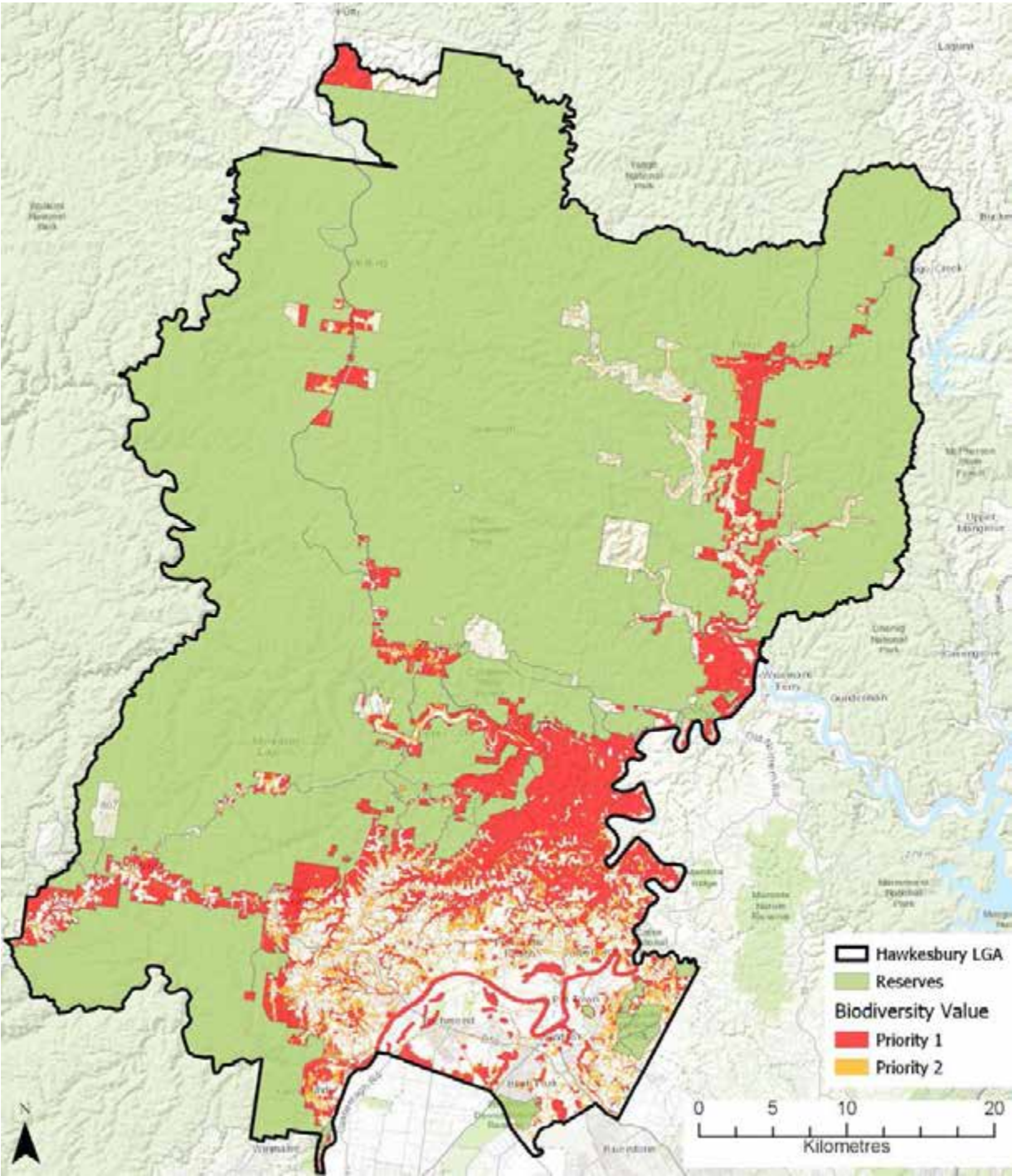


Figure 1: Biodiversity Priority Values

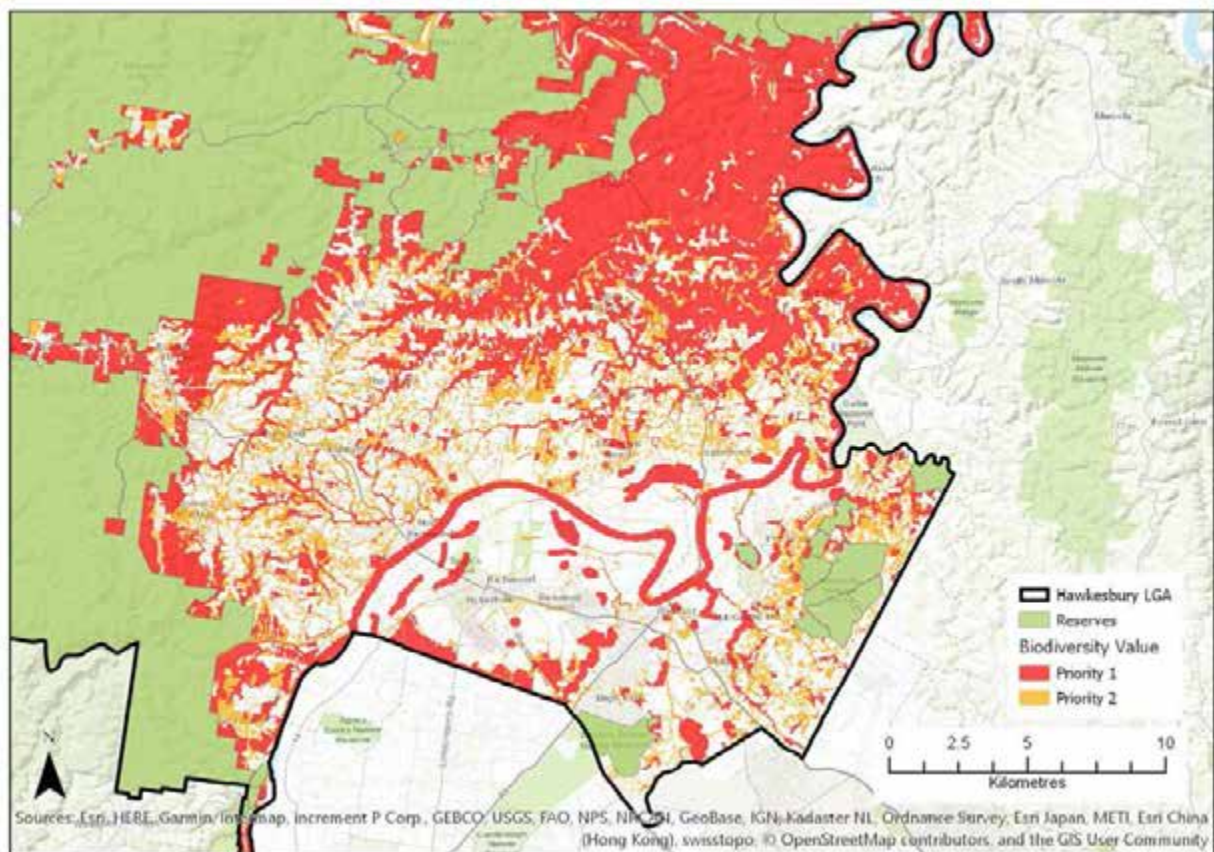


Figure 2: Biodiversity Priority Values – Detail

Table 2 shows the land classification breakdown of the biodiversity priority lands outside of NPWS Reserves. The breakdown considers public (Council or other government land) versus potentially private land. Public land areas were defined from a subset of the current LEP zoning. Private lands were deemed to be the remainder lands.

Table 2: Breakdown of biodiversity priority lands

Land Tenure / Zone	Priority 1 (ha)	Priority 2 (ha)	Total (ha)
E2 Environmental Conservation	451.4		451.4
RE1 Public Recreation	121.8	101.5	223.3
SP2 Infrastructure	298.3	157.1	455.3
W1 Natural Waterways	300.9	12.1	313.0
W2 Recreational Waterways	677.3		677.3
Total Public Lands	1,849.7	270.7	2,120.4
Private Land	30,657.5	10,321.3	40,978.8
Total Biodiversity Value Lands (outside of NPWS Reserve)	32,507.1	10,592.0	43,099.1

1.1 Biodiversity Values Map (BVM)

Currently the Biodiversity Values Map only includes a subset of land with significant biodiversity values based on older vegetation mapping. The BVM covers 10,990 ha across the areas of the Hawkesbury LGA (outside of NPWS Reserves) (Figure 4). The map primarily incorporates areas of Threatened Ecological Communities, some wetland areas and riparian buffers.

Areas identified as both Priority 1 and 2 in the updated biodiversity mapping should be incorporated in a nomination to OEH to update the OEH biodiversity values map (Figures 7 and 8). Additional areas for nomination incorporate updated Threatened Ecological Community (TEC) extent as well as the inclusion of candidate Koala habitat mapping (SEPP44). These definitions follow the criteria for the identification of bioregional or state significant lands as per the criteria provided in Table 1 and defined as values on the Biodiversity Values Map by OEH – found at <https://www.environment.nsw.gov.au/biodiversity/biodiversity-values-map.htm>.

These inclusions would add 32,110 ha of land to the BVM (outside of NPWS Reserves) across the Hawkesbury LGA.

1.2 Spatial Data

The attributes of the shape file of the updated biodiversity priority lands are described in Table 3, below.

Table 3: Biodiversity priority update shapefile attributes

Attribute	Description
FID	GIS identifier
Shape	GIS geometry
Koala	Candidate Koala habitat (SEPP44) – “SEPP44”
Aquatic	Mapped wetland areas including 100m buffer – “Wetlands 100m Buff”
SigVeg	Mapped threatened ecological communities – “TEC”
Riparian	Buffered riparian area – “0 / 10 / 20 / 30 / 40”
Bio_val	Biodiversity priority value – “Priority 1 / Priority 2”
Area_ha	Polygon area – hectares
Patch	Breakdown of greater than or less than 4 ha associated vegetation patch size – “gt 4ha / lt 4ha”
Shape_Leng	polygon perimeter in metres
Shape_Area	polygon area in square metres

Appendix A - Existing Biodiversity Mapping

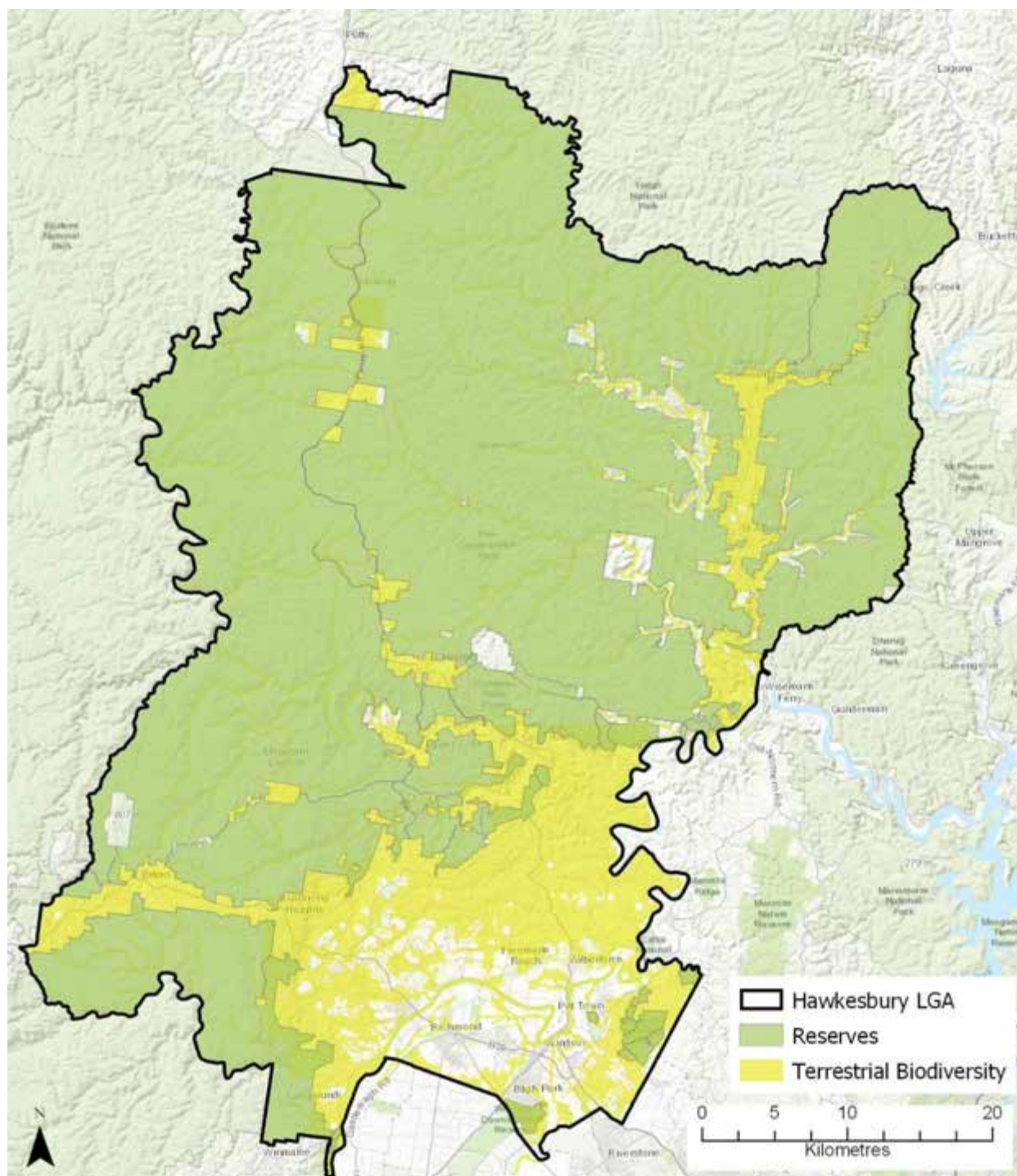
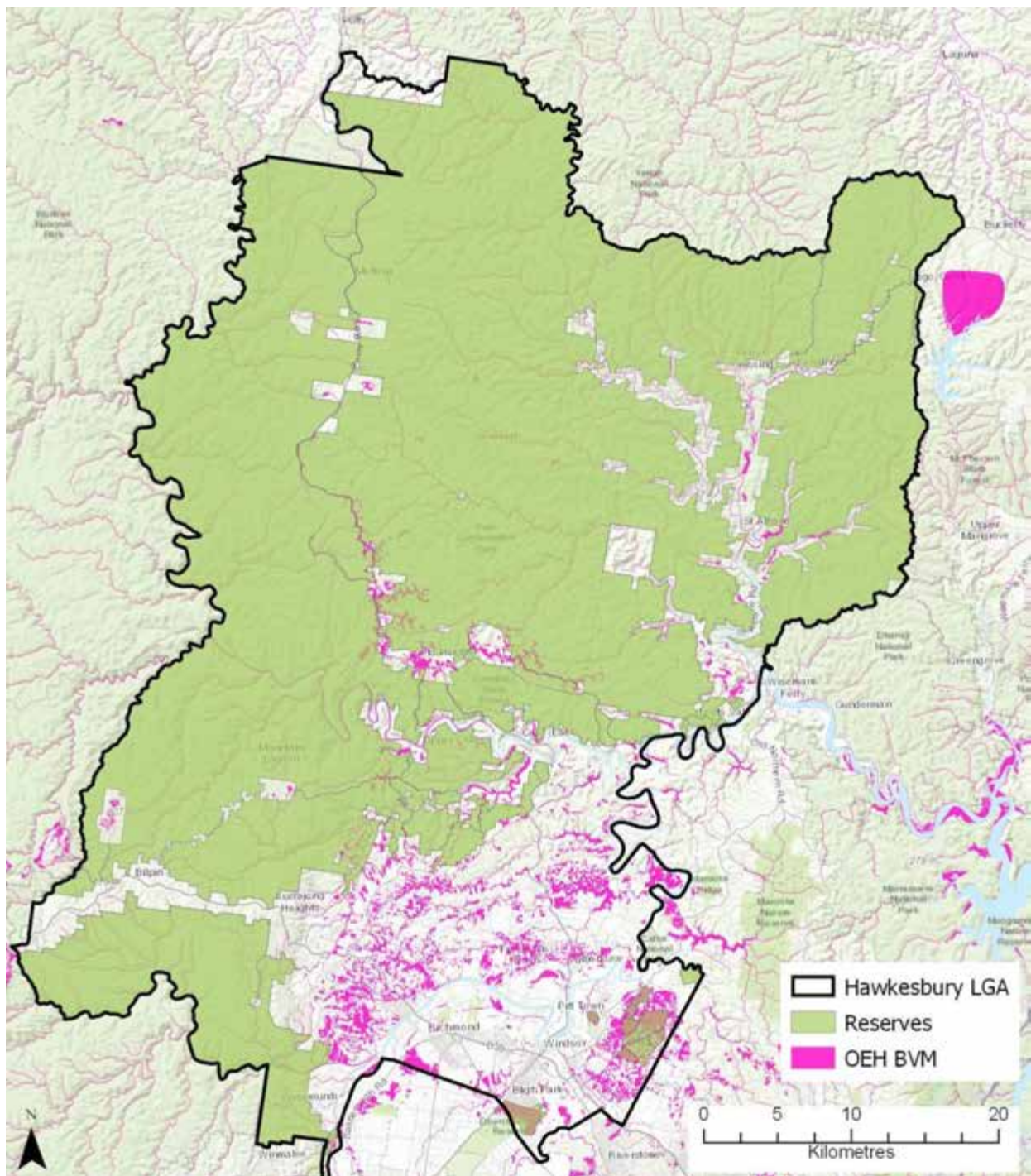


Figure 3: Hawkesbury Terrestrial Biodiversity Overlay



Appendix B - Proposed Biodiversity Mapping

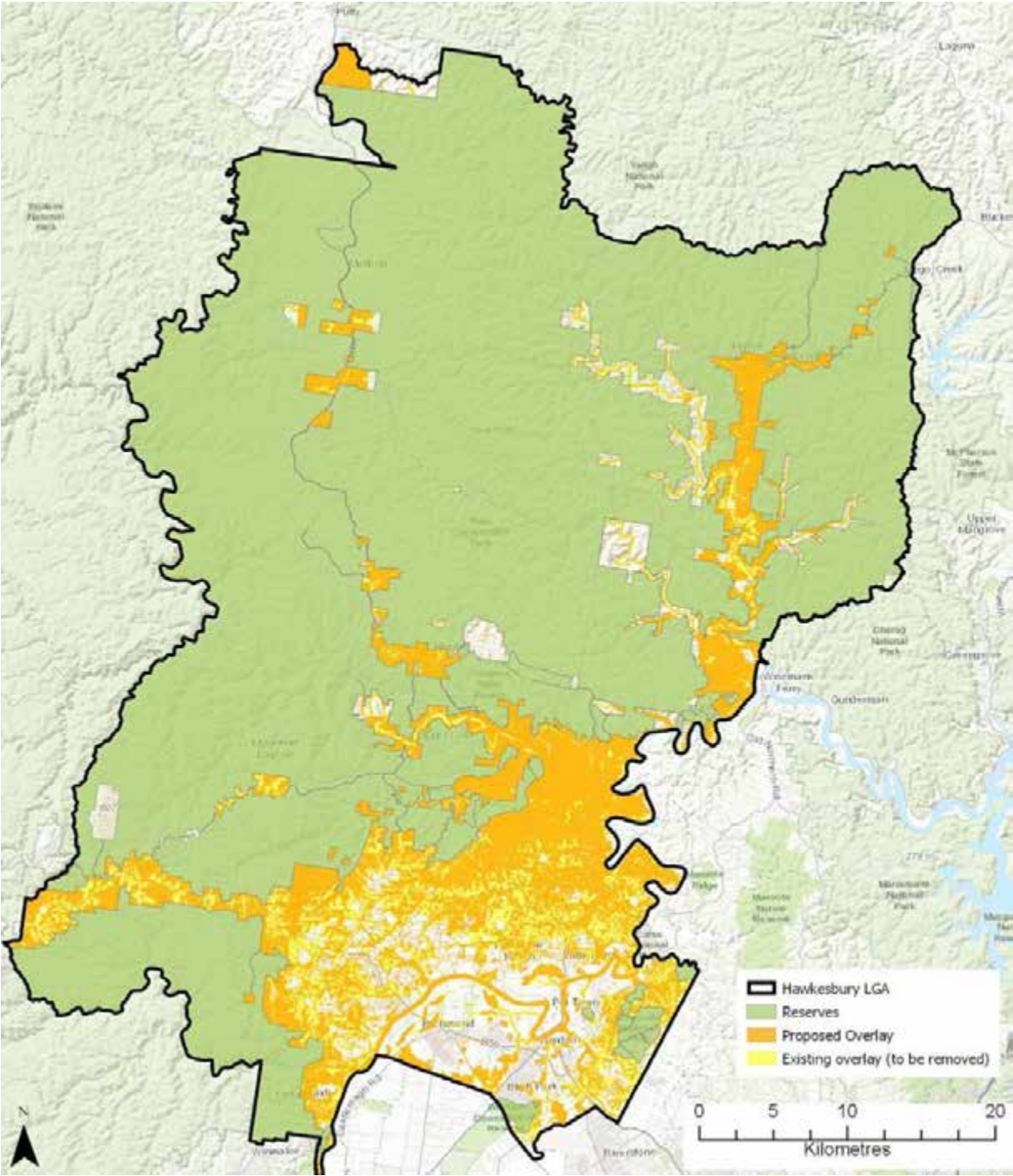


Figure 5: Proposed Hawkesbury Terrestrial Biodiversity Overlay

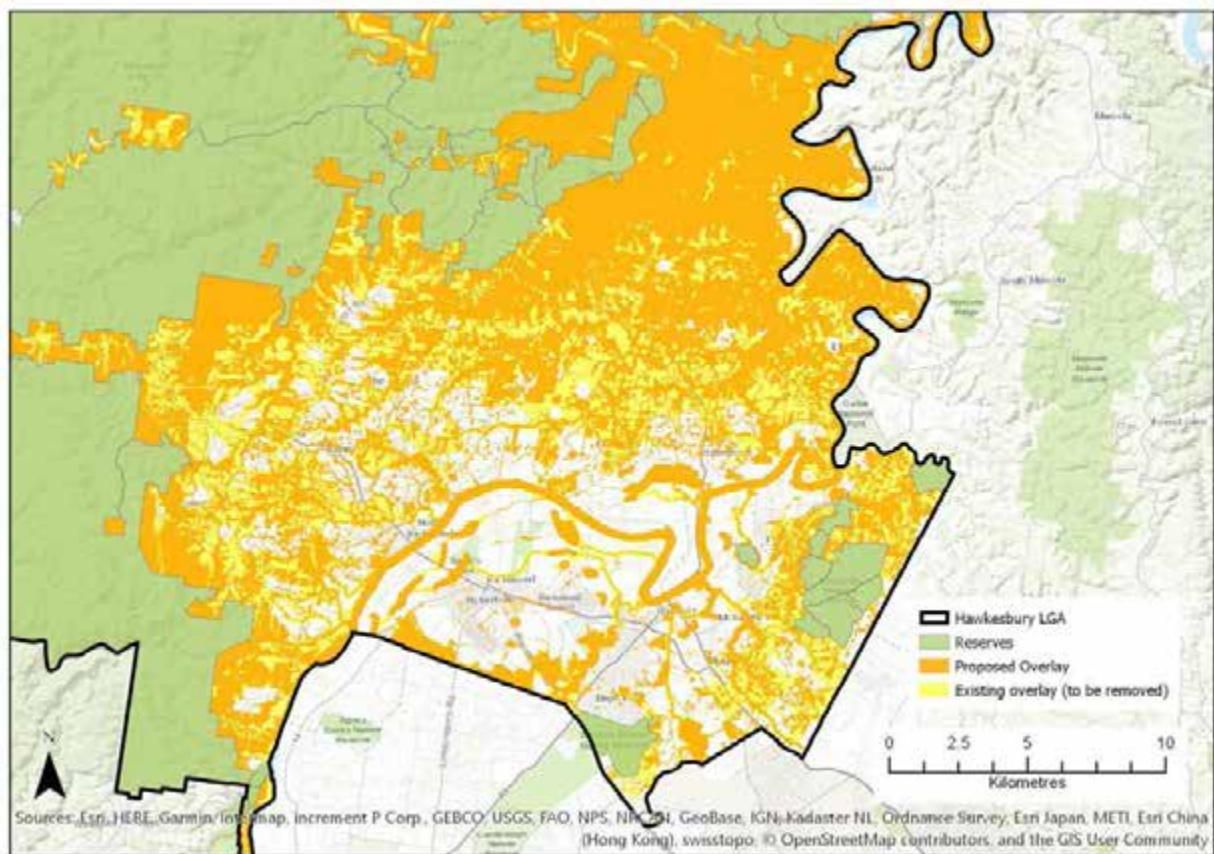


Figure 6: Proposed Hawkesbury Terrestrial Biodiversity Overlay – Detail

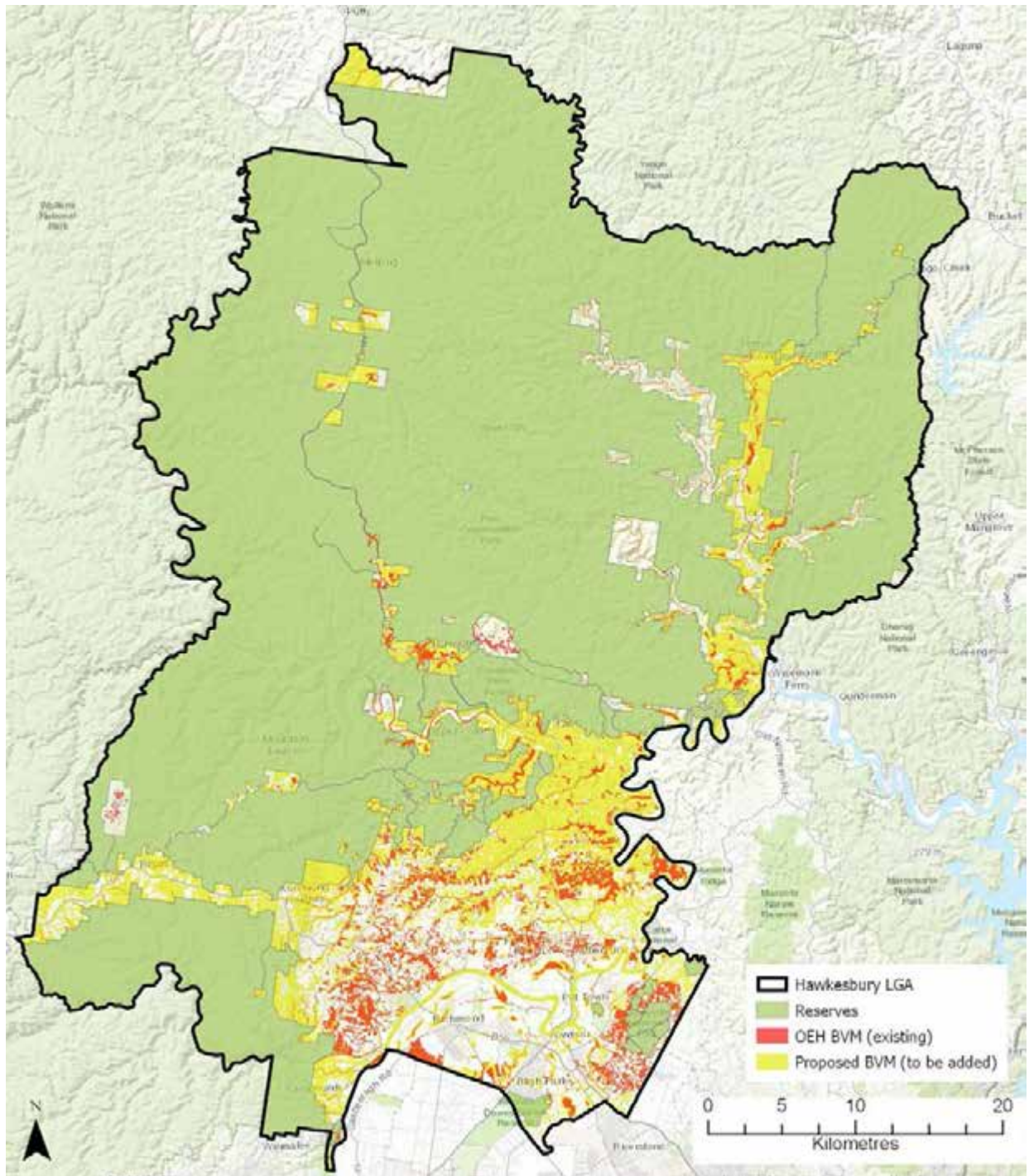


Figure 7: Proposed OEHBiodiversity Values Map (BVM) Update

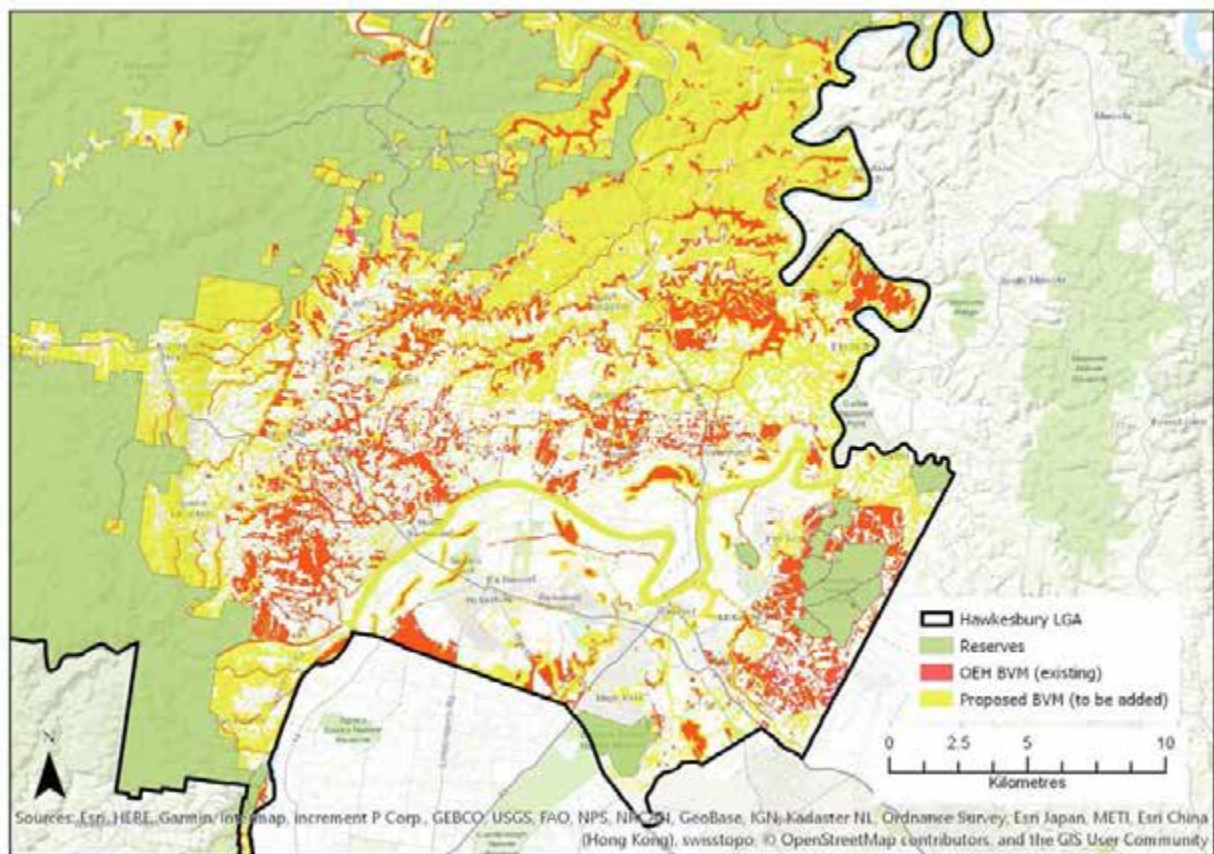


Figure 8: Proposed OEH Biodiversity Values Map (BVM) Update – Detail

