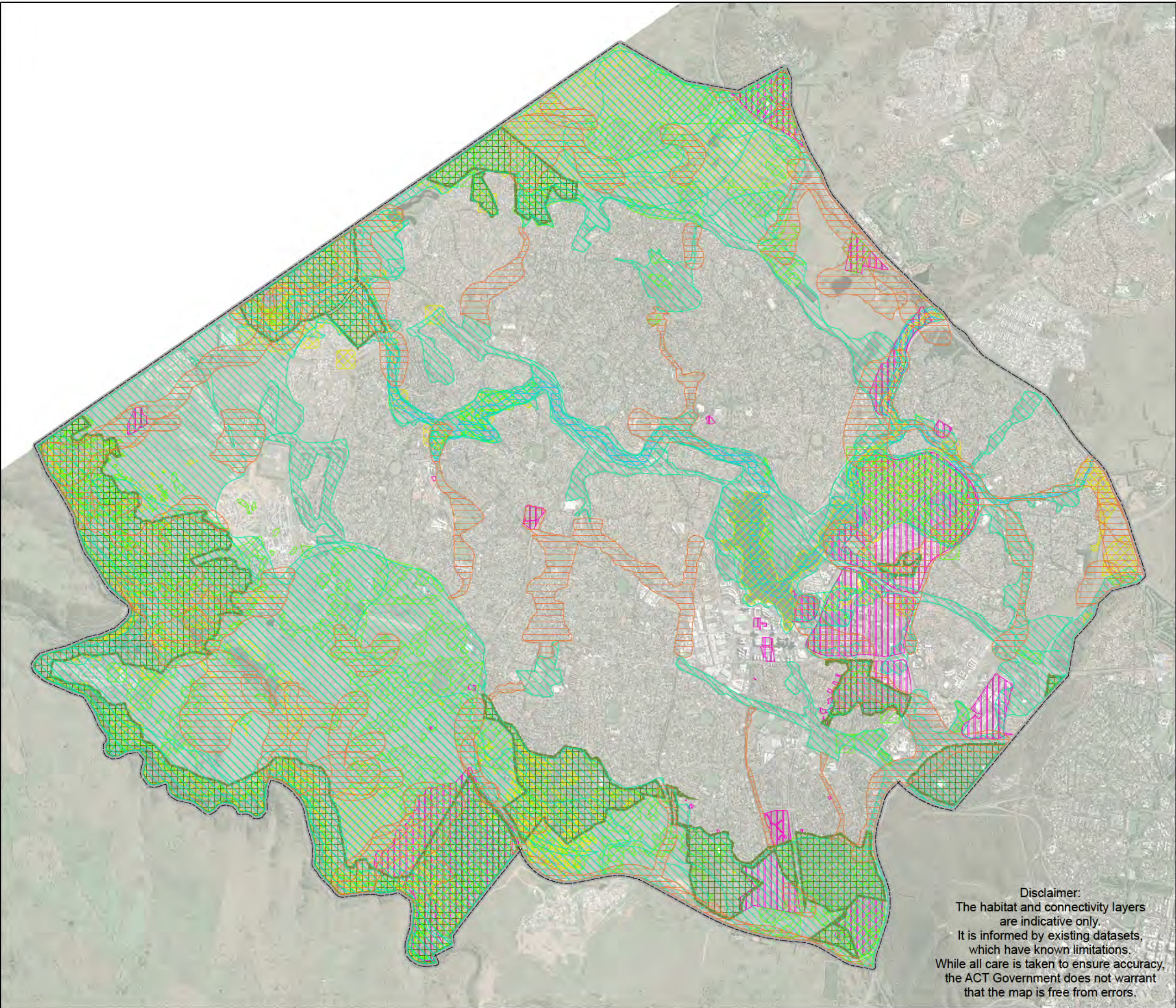
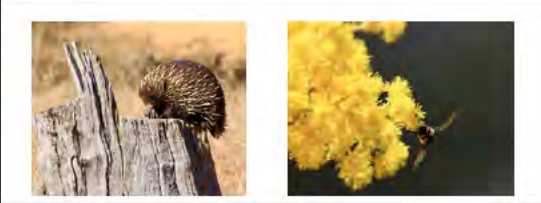




EHW Conservation, Protected & Connectivity: Belconnen District



- Belconnen District
- CATEGORY**
- Conservation Area
- Potential Habitat Area
- Potential Priority Connectivity Areas
- Reserve
- Riparian
- Threatened Fauna
- Threatened Flora
- Heritage

1
Kilometers

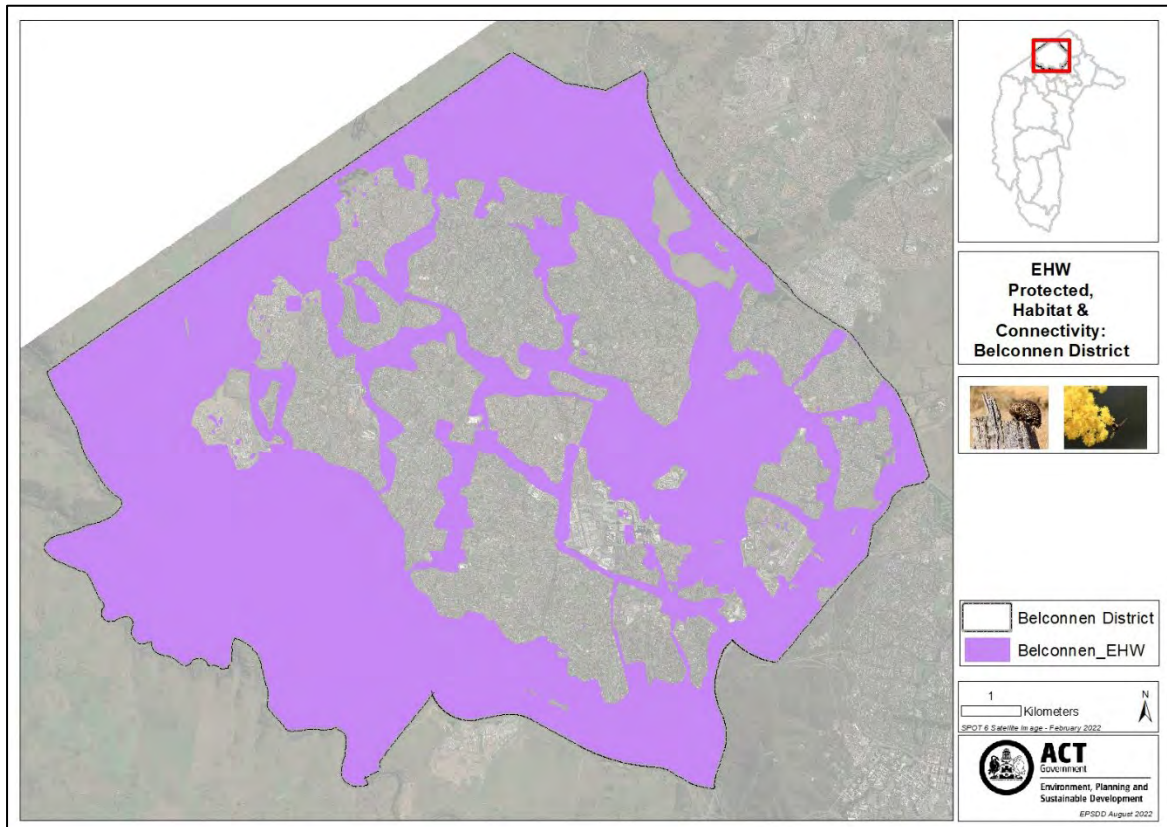
SPOT 6 Satellite Image - March 2022

Disclaimer:
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Environment, Heritage and Water Conservation and Connectivity Layer – Belconnen District

This dataset amalgamates the following spatial datasets:

- Threatened and protected species and ecological communities within the Belconnen district
- Nature reserves within the Belconnen district
- Registered and recorded heritage places within the Belconnen district
- Riparian management corridors within the Belconnen district
- Potential priority habitat connectivity for the Belconnen district
- Potential habitat conservation areas in the Belconnen district



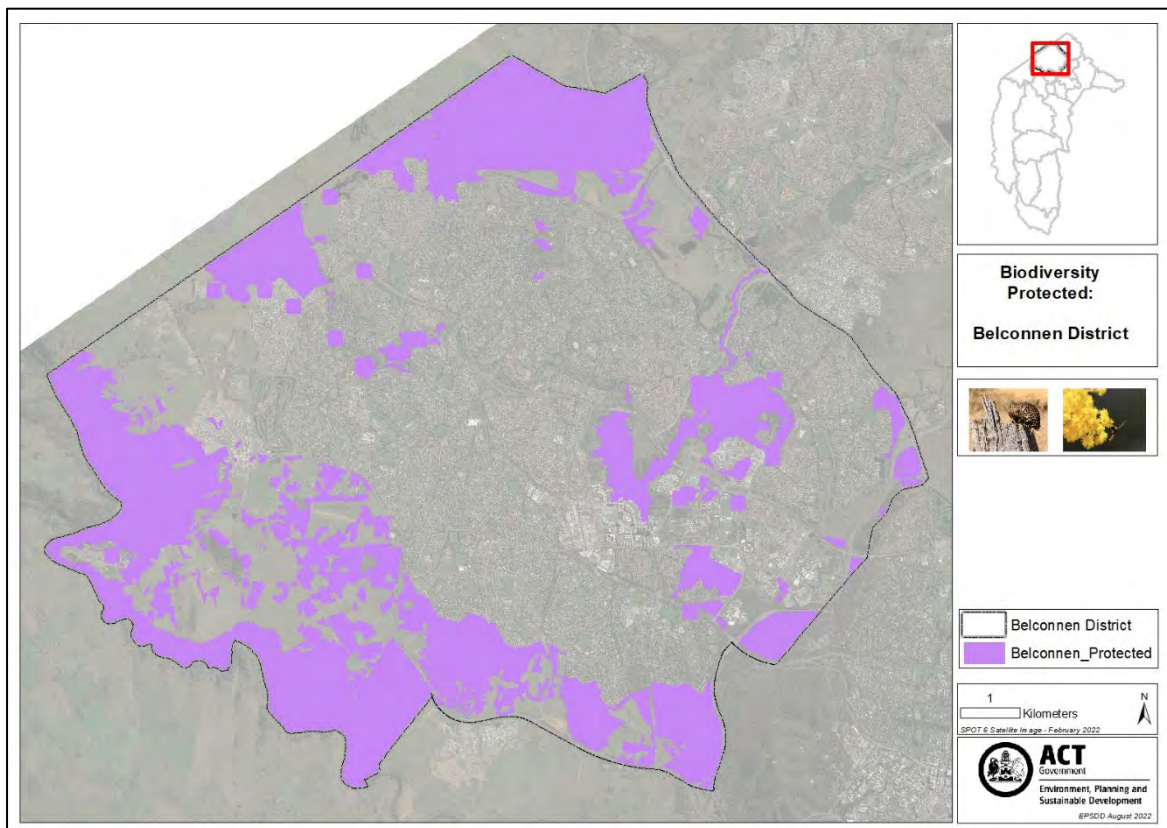
The shapefile “Belconnen_EHW_Protected_Connect.shp” contents can be filtered by “CATEGORY”:

- Nature Reserves
- Protected Flora
- Protected Fauna
- Heritage
- Riparian Corridor
- Conservation Area
- Potential Habitat Area
- Potential Priority Connectivity Area

Threatened & protected ecology

The “Nature Reserve”, “Threatened Flora” and “Threatened Fauna” categories indicate all species, habitat, ecological communities and nature reserves protected under the Nature Conservation Act and/or the EPBC Act, within the Belconnen district. Development within these zones have statutory restrictions, and consultation with the EPSDD Conservator of Flora and Fauna is required.

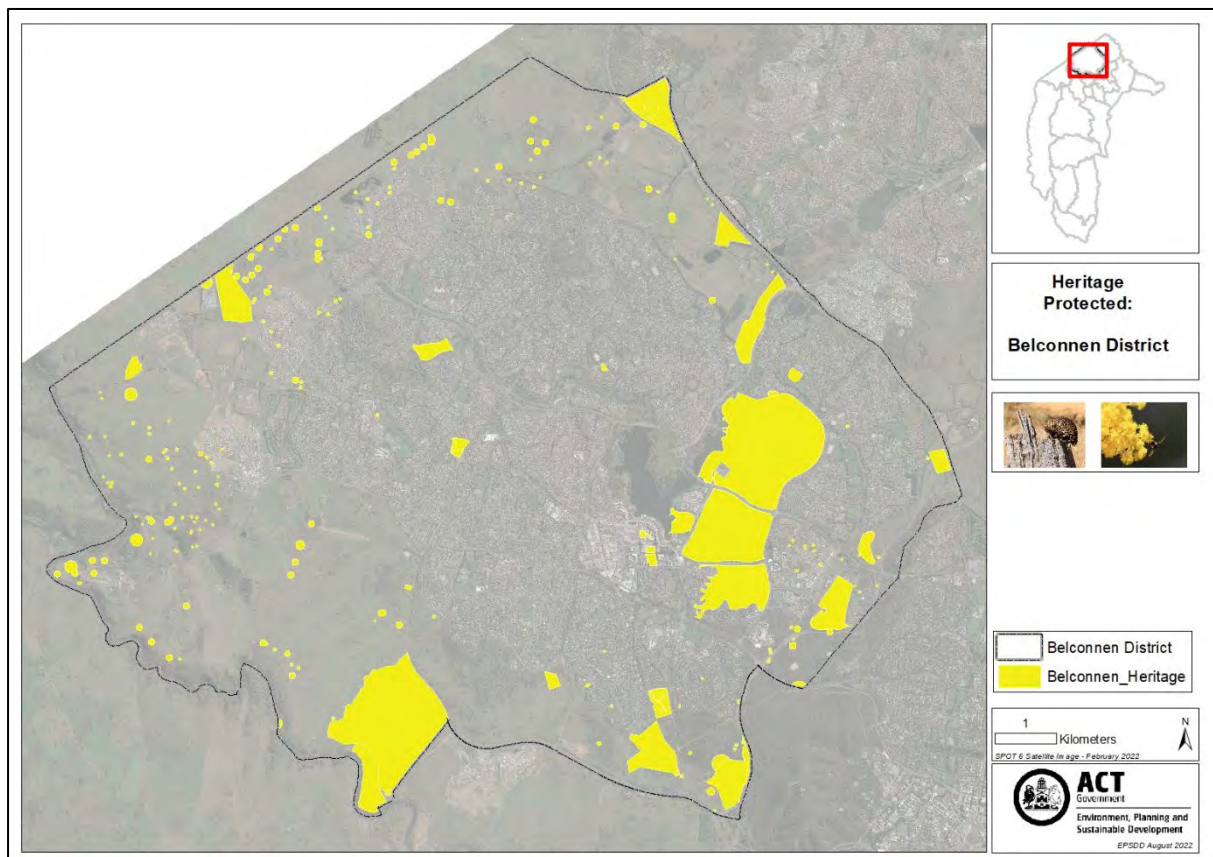
This layer combines verified threatened and protected fauna and flora species habitat and point data obtained from the ACT Wildlife Atlas and Canberra Nature Map, and the ACT Vegetation Map 2018. It does not contain unverified or modelled habitat. An obscuring algorithm was used on threatened wildlife point data, and a spatial buffer of 100m drawn around it to confuse potential sensitive data points and indicate the reach of habitat.



Heritage Protected Areas

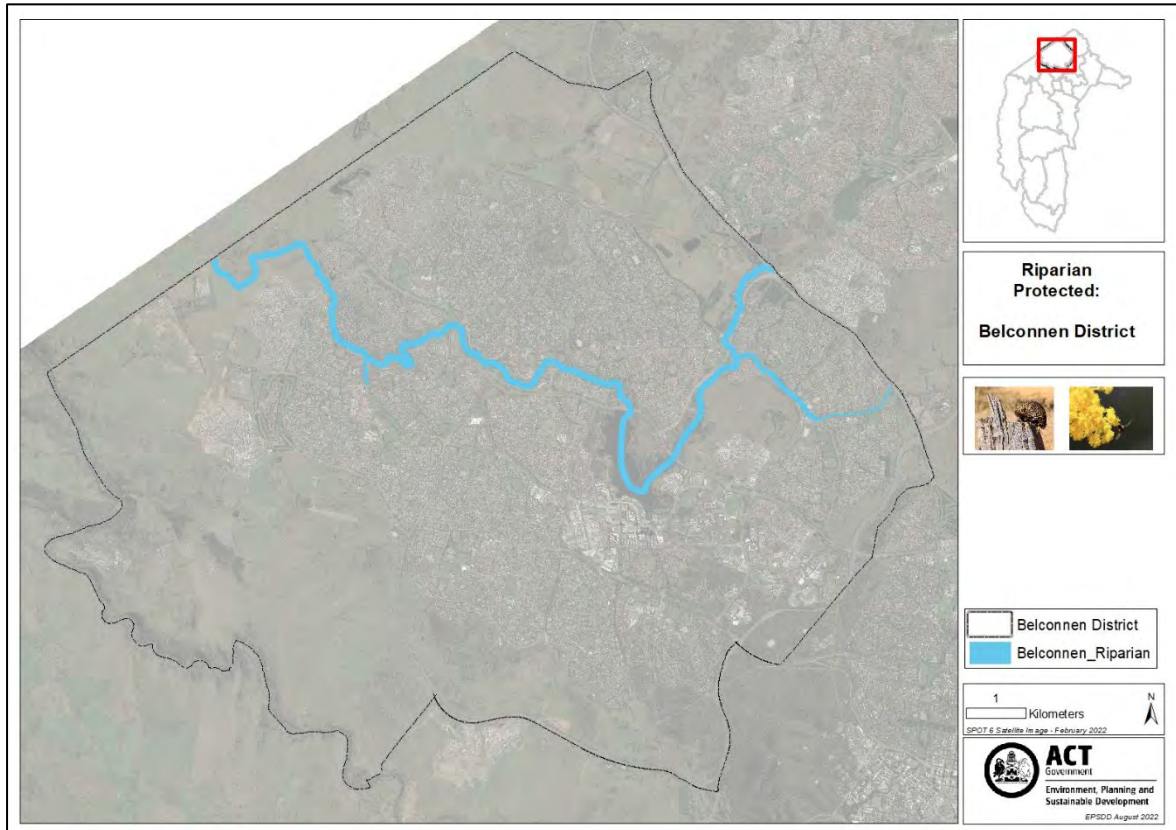
The “Heritage” category identifies registered and recorded heritage places within the Belconnen district, however, it does not differentiate heritage sites by their relative significance and conservation value. In many instances, the presence of heritage sites does not preclude future development, yet it does require careful planning of new development, as well as heritage assessment and management actions. However, there are also places registered on the ACT Heritage Register of high heritage significance, and Aboriginal places of high cultural significance, conservation of which is required under the Heritage Act.

For example, the University of Canberra campus is identified as containing heritage places, which consist of the registered ‘Student Group 2’ and 10 recorded Aboriginal places. Of these, 2 sites are of high significance, being the heritage buildings and an Aboriginal [REDACTED], and their conservation is required under the Heritage Act. Other sites are also of heritage value and opportunities to conserve sites in open space should be considered as part of future development. Where this is not reasonable practicable, and demonstrated to the satisfaction of the ACT Heritage Council, impact mitigation actions would be required prior to future development.



Riparian Management Corridor

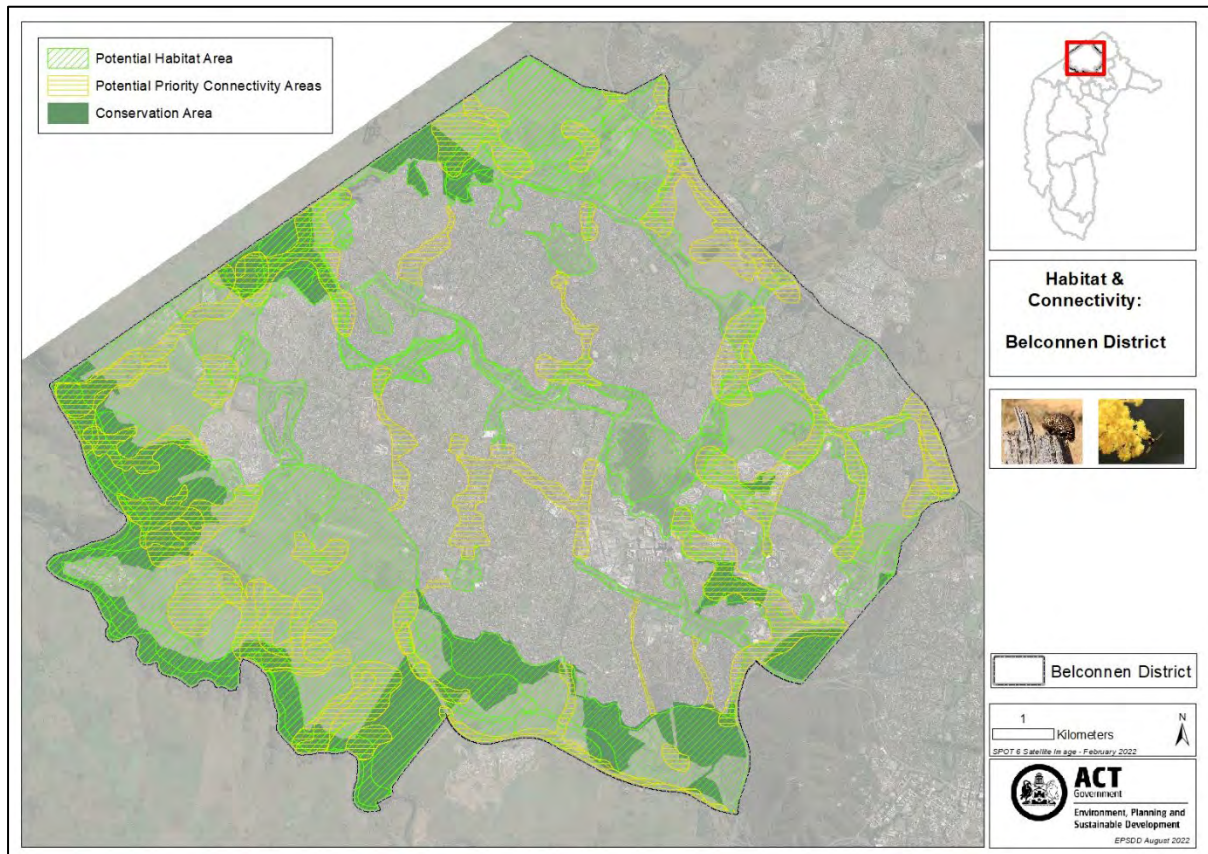
The "Riparian" category identifies riparian corridors in the Belconnen district. The areas of the map identified for Riparian Corridors are based off the wider of either the 1% AEP flood extent (Annual Exceedance Probability of flood) or the values determined based on the NSWG/Strahler method using stream order. Ovals, Paths and Service Zones can be considered compatible developments within riparian zones as long as consultation is undertaken as part of the planning process.



Potential Habitat Conservation and Connectivity Areas

The following categories in the shapefile identify potential habitat conservation areas and priority conservation and restoration sites in the Belconnen:

- Conservation Area
- Potential Habitat Area
- Potential Priority Connectivity Area



This contains generalised outputs from a series of taxa-specific habitat models. These models combine expert-derived estimates of structural habitat requirements, minimum patch sizes, barriers to movement, and the movement capacity of seven wildlife groups with remote-sensing data of those habitat properties (e.g. LiDar vegetation) to map potential habitat and patch connectivity. Potential Habitat Areas provide a generalised spatial layer of potential suitable habitat. It is derived from the combination of habitat modelling for wildlife that are associated with grassland habitat (grassland reptiles), woodland habitat (small- and medium-sized mammals), and/or riparian and aquatic habitat (e.g. frogs, platypus, turtles, and fish). This is potential habitat in the broadest sense as coarse habitat properties (such as the presence of trees) could be modelled with existing data, but equivalent data for fine-scale habitat properties that are important (such as the presence of coarse-woody-debris) do not exist and therefore could not be considered in the current models.

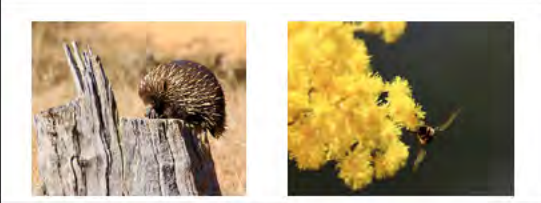
Priority Connectivity Areas are derived from interpreting the taxa-specific habitat maps and identifying where there may be opportunities to connect habitat patches that are currently disconnected. Identified potential habitat areas will be disconnected if there are barriers that impede movement (such as large roads) or when the distance between required habitat patches is too large (such as large areas with insufficient tree cover for woodland species). Priority Connectivity Areas represent identified opportunities for consideration to restore ecological connectivity

throughout the urban environment. They consider the existing conservation reserve network along with the mapped habitat to suggest corridors that could be established, existing areas to enhance, roads that could have wildlife over- or under-passes installed, and other restoration opportunities that would significantly improve connectivity.

Conservation Areas depict current reserves and offsets sites on public land. This layer is provided for context, for example to help visualise connections to reserves outside the urban boundaries. Conservation Areas are protected landscapes, however are not all inclusive. Potential Habitat Areas often extend beyond conservation areas, and provide further context to priority connections.



EHW Potential Habitat & Connectivity: Belconnen District



Belconnen District

CATEGORY

- Potential Habitat Area
- Potential Priority Connectivity Areas
- Conservation Area

1
 Kilometers

SPOT 6 Satellite Image - March 2022


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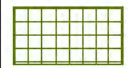
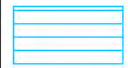




EHW Protected Biodiversity: Belconnen District




 Belconnen District

CATEGORY

-  Reserve
-  Riparian
-  Threatened Fauna
-  Threatened Flora

1 Kilometers



SPOT 6 Satellite Image - March 2022

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DRAFT Habitat priorities for improving connectivity – Belconnen

Date: 20 July 2022

Notes

The habitat connectivity areas were clipped to exclude built-up residential, commercial and industrial land.

Threatened flora habitat and fauna habitat were clipped to exclude residential and commercial leased land.

A 50m buffer was applied to Heritage point data and merged with Heritage polygon data.

constraints were combined and riparian corridors were added.

How to use

The map layer (HabitatConnectivityPriorityAreas.shp) visualises priority conservation and restoration sites in Belconnen to improve habitat connectivity. It is indicative only.



Figure 1. Map showing all priority connectivity conservation and restoration areas.

The layer can be filtered for specific queries using these fields:

- Ecosystem – Grassland, Woodland or Aquatic-Riparian (see next page for visualisation of each ecosystem)
- Objective – Restoration or Conservation

This dataset can be used as a flag for zones requiring further investigation or targeted restoration synonymous with urban planning for wellbeing e.g. active travel, open space, urban cooling, living infrastructure etc. Sites have been identified as a priority for conservation or restoration, or in some cases both. Conservation areas should be used to protect existing values and limit development

impacts. Restoration areas should be used to guide Biodiversity Sensitive Urban Design, particularly in building structural and functional habitat.

Methods:

Conservation and restoration sites were hand drawn and then spatialised in ArcGIS Pro. They have been identified by analysing a number of important ecological datasets including habitat connectivity model (draft) outputs across seven taxa groups, ACT Wildlife Atlas records, Protected Plants database records, Canberra Nature Map sightings, Territory Plan zones and overlays (reserves and urban open space), offsets sites, and ACTmapi significant plants, animals and ecological communities data. Aerial imagery was also used to help guide drawings.

The initial layer was reviewed by ecologists and then updated and finalised.

Limitations:

This layer is a draft and indicative only. It is informed by existing datasets which have known limitations. The limitations as they apply to the use of HabitatConnectivityPriorityAreas.shp are summarised below.

- Site selection was informed by record sightings which are inconclusive. Sighting records exist where people have looked and recorded data. A lack of sightings cannot be presumed to mean a lack of species. Priority sites may not be identified where sighting data is sparse.
- Reserve data was used to identify core habitat in protected reserves and potential linkages. This does not include reserves on private land, or future planned reserves.
- Potential habitat and fragmentation models were used to identify where large patches of core habitat exist and where restoration links could improve connectivity. These models are works in progress and provide preliminary results that require further assessment. Known limitations exist, such as the potential for misclassification of structural habitat elements derived from lidar resulting in incorrect habitat outputs.
- Some habitat requirements which increase or decrease ecological values have not been mapped or considered (e.g. coarse woody debris, predators). Further on ground assessment is required to comprehensively assess ecological values.

Ecosystem visualisations

Grasslands

The map below filters HabitatConnectivityPriorityAreas.shp to show grassland specific sites. Light yellow depicts conservation sites, and medium yellow for restoration sites. Some contextual data is also depicted to show how recorded sightings, protected grassland and potential habitat have been captured by the proposed priority areas. Note native bees have also been considered, but their potential habitat is not displayed here to allow for a clearer, easier to read map.

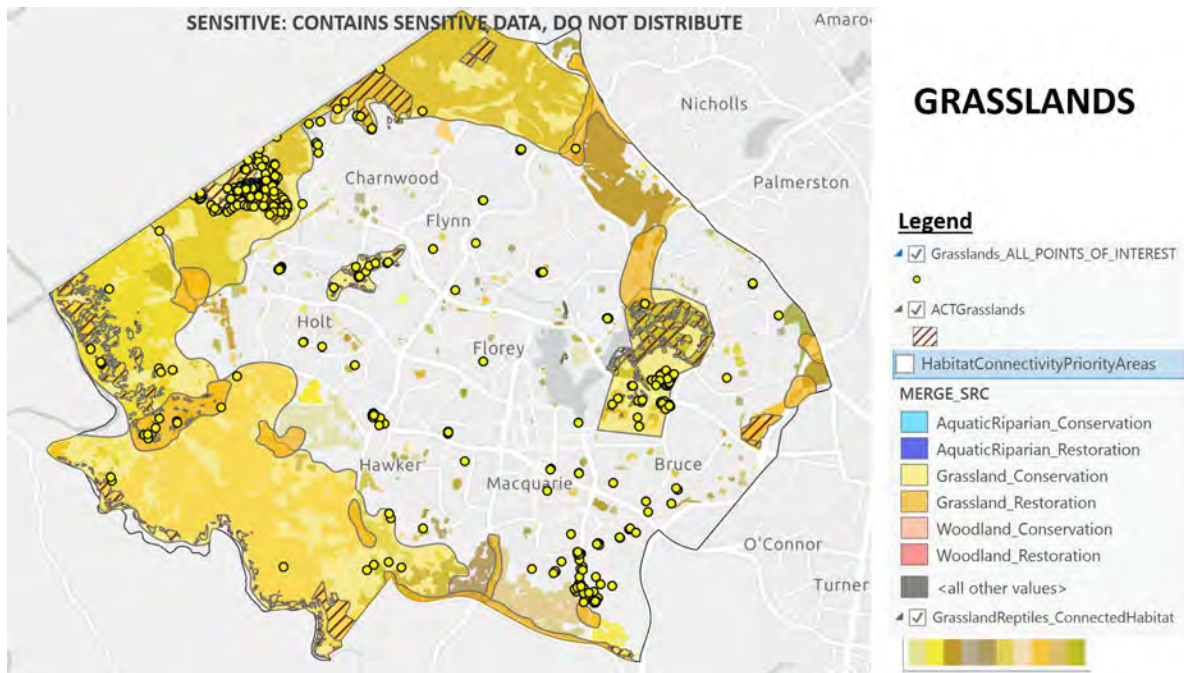


Figure 2. Map showing priority connectivity conservation and restoration areas for grasslands, as well as supporting data.

Aquatic and Riparian

The map in figure 3 shows aquatic and riparian priority sites (filtered from HabitatConnectivityPriorityAreas.shp). Light blue depicts conservation sites, and dark blue depicts restoration areas. Some contextual data is also depicted to show how recorded sightings and potential habitat for fish, aquatic and riparian specialists and amphibians have been captured by the proposed priority areas.

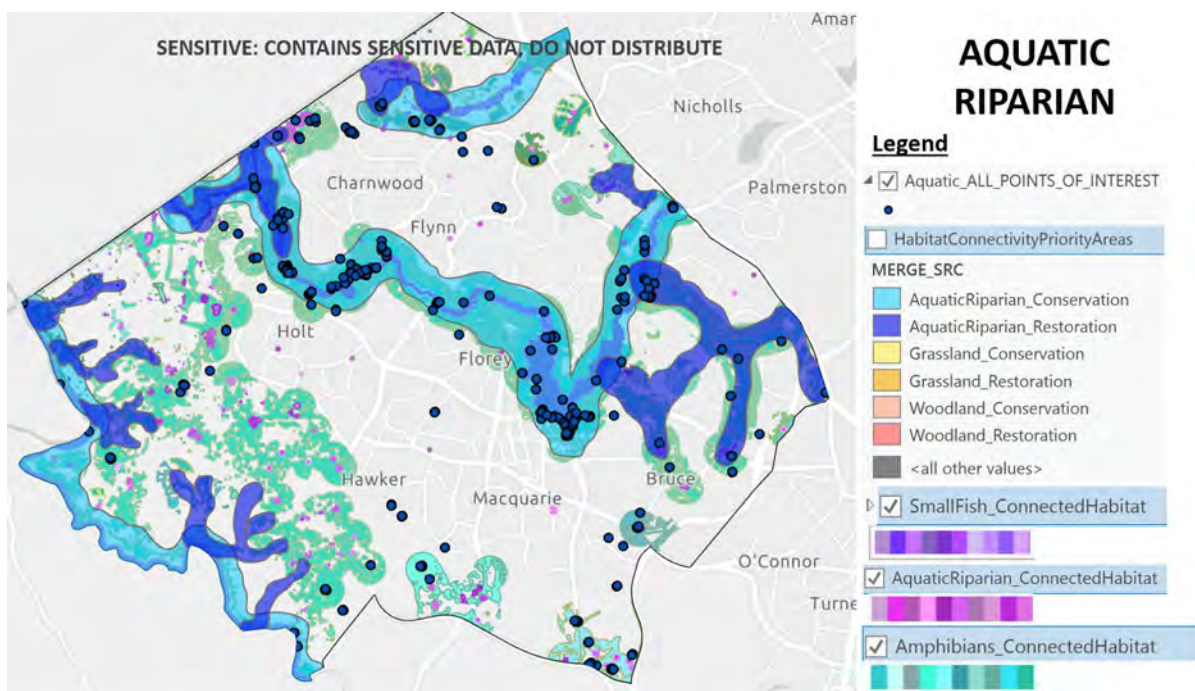


Figure 3. Map showing priority connectivity conservation and restoration areas for aquatic and riparian areas, as well as supporting data.

Woodlands

Figure 4 shows woodland priority sites (filtered from HabitatConnectivityPriorityAreas.shp). The light red depicts conservation areas, and the dark red depicts restoration areas. Some contextual data is also depicted to show how recorded sightings, the modelled distribution of potential threatened woodland, and potential habitat for small mammals has been captured by the proposed priority areas. Note small woodland birds have also been considered, but their potential habitat is not displayed here to allow for a clearer, easier to read map.

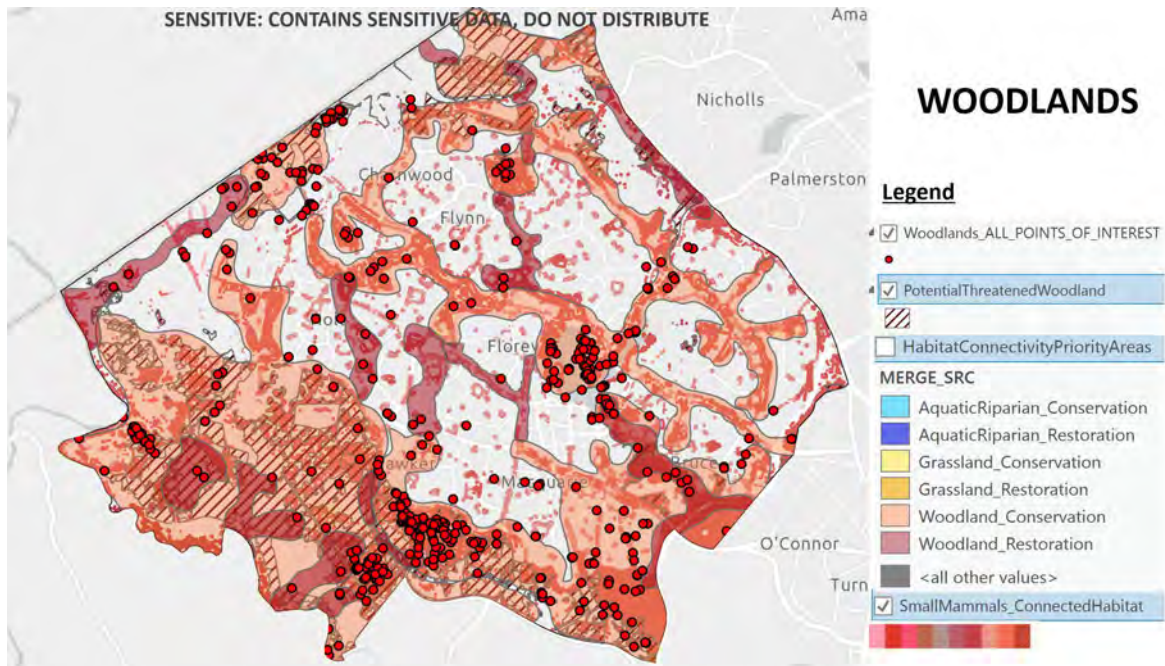
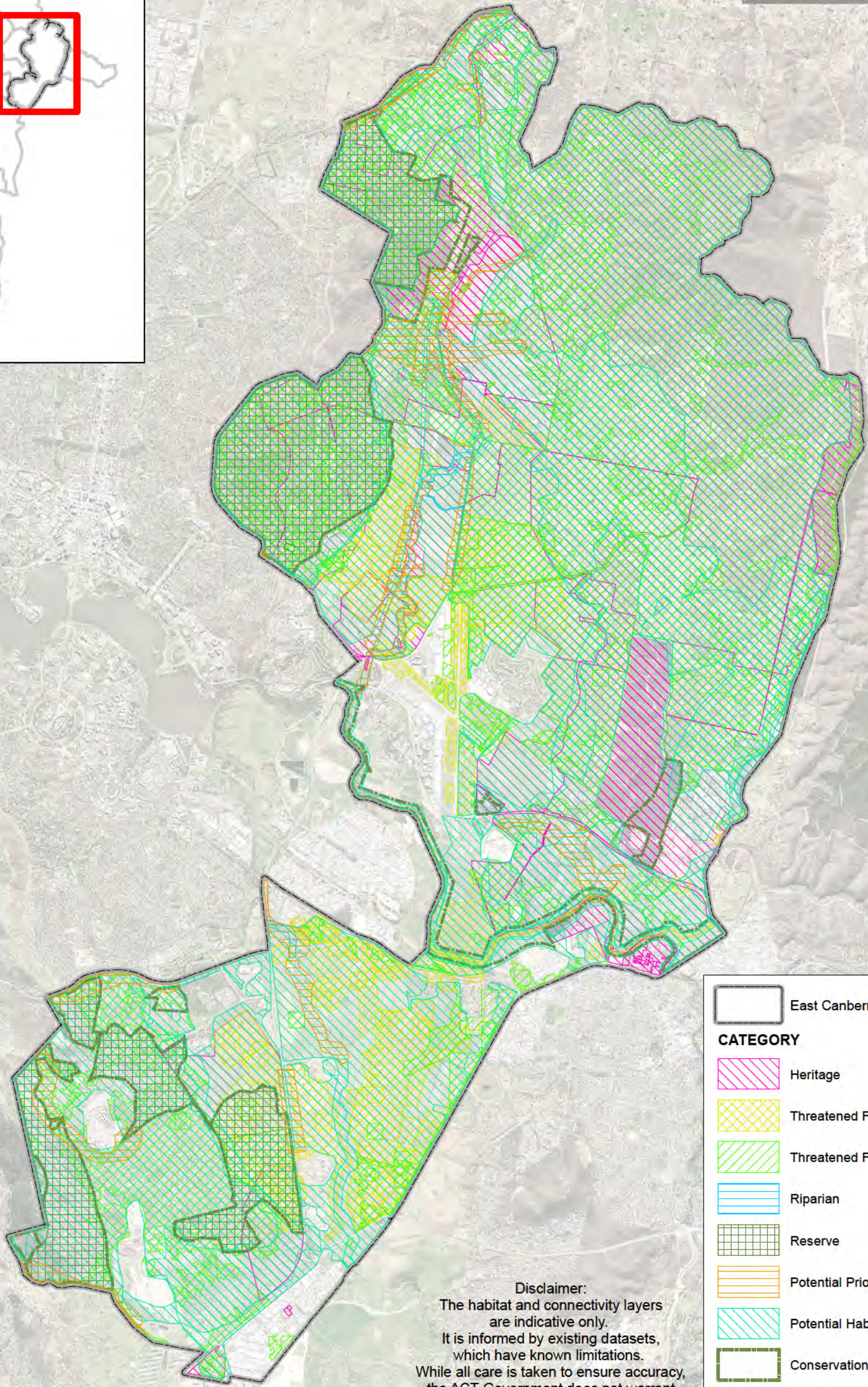


Figure 4. Map showing priority connectivity conservation and restoration areas for woodlands, as well as supporting data.



	East Canberra District
CATEGORY	
	Heritage
	Threatened Fauna
	Threatened Flora
	Riparian
	Reserve
	Potential Priority Connectivity Areas
	Potential Habitat Area
	Conservation Area

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EPSDD August 2022

**EHW Conservation,
 Protected & Connectivity:
 East Canberra District**



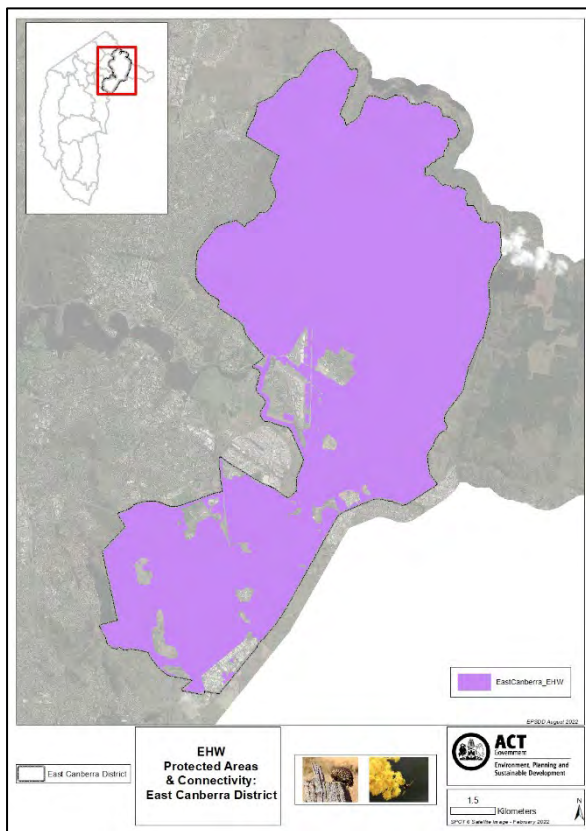
1.5
 Kilometers

2020 Aerial Imagery

Environment, Heritage and Water Conservation and Connectivity Layer – East Canberra District

This dataset amalgamates the following spatial datasets:

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- Nature reserves within the East Canberra district
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- Riparian management corridors within the East Canberra district
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- Potential habitat conservation areas in the East Canberra district



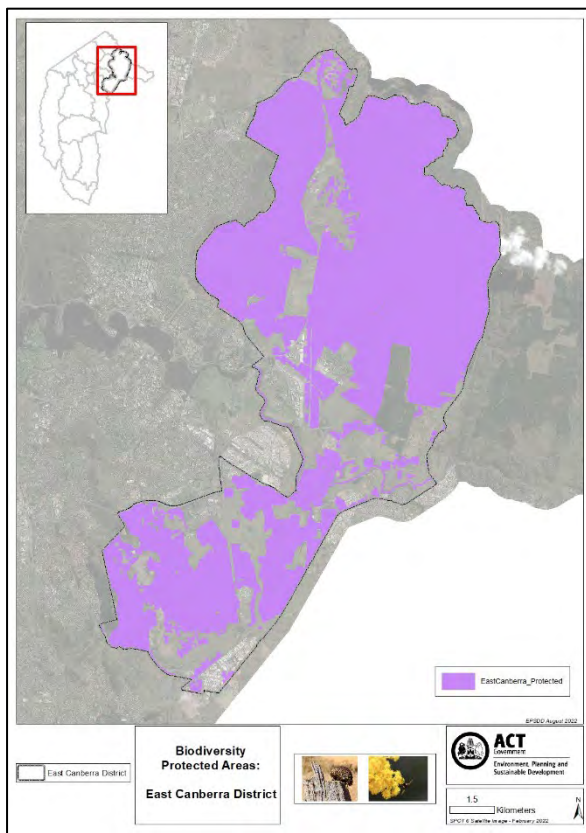
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- Protected Fauna
- Heritage
- Riparian Corridor
- Conservation Area
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Threatened & protected ecology

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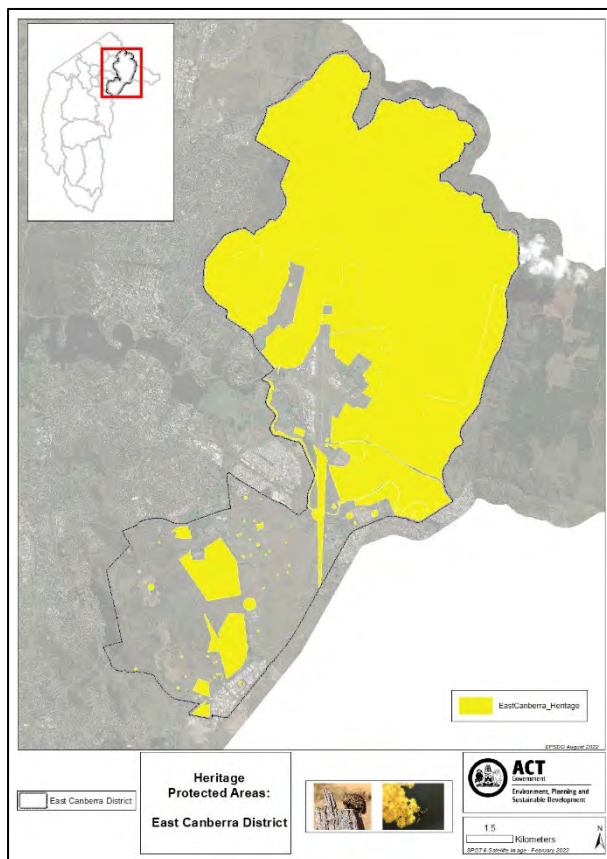
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Heritage Protected Areas

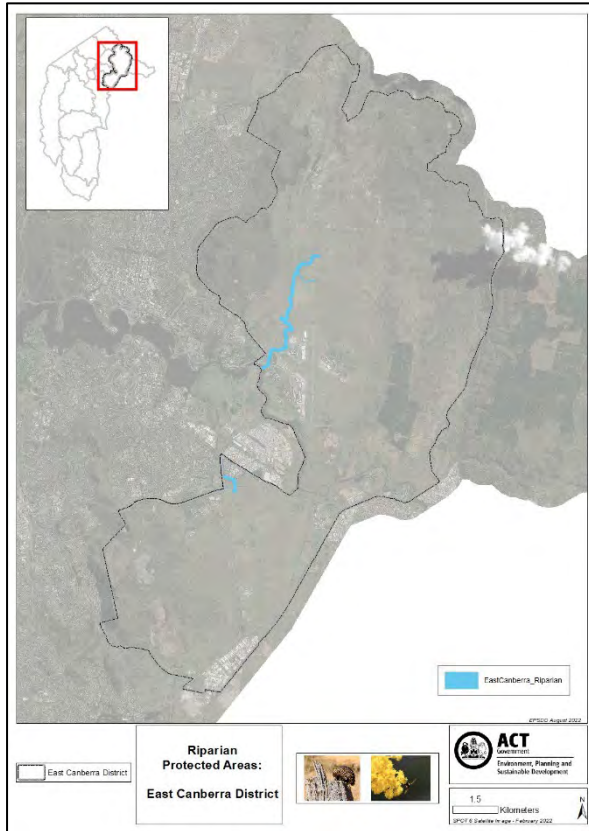
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Riparian Management Corridor

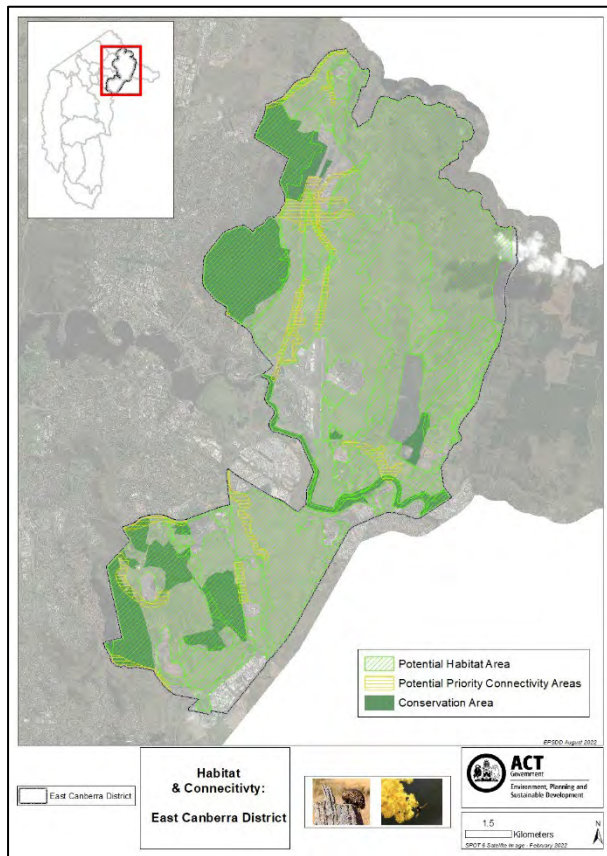
The “Riparian” category identifies riparian corridors in the East Canberra district. The areas of the map identified for Riparian Corridors are based off the wider of either the 1% AEP flood extent (Annual Exceedance Probability of flood) or the values determined based on the NSWG/Strahler method using stream order. Ovals, Paths and Service Zones can be considered compatible developments within riparian zones as long as consultation is undertaken as part of the planning process.



Potential Habitat Conservation and Connectivity Areas

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- Potential Habitat Area
- Potential Priority Connectivity Area



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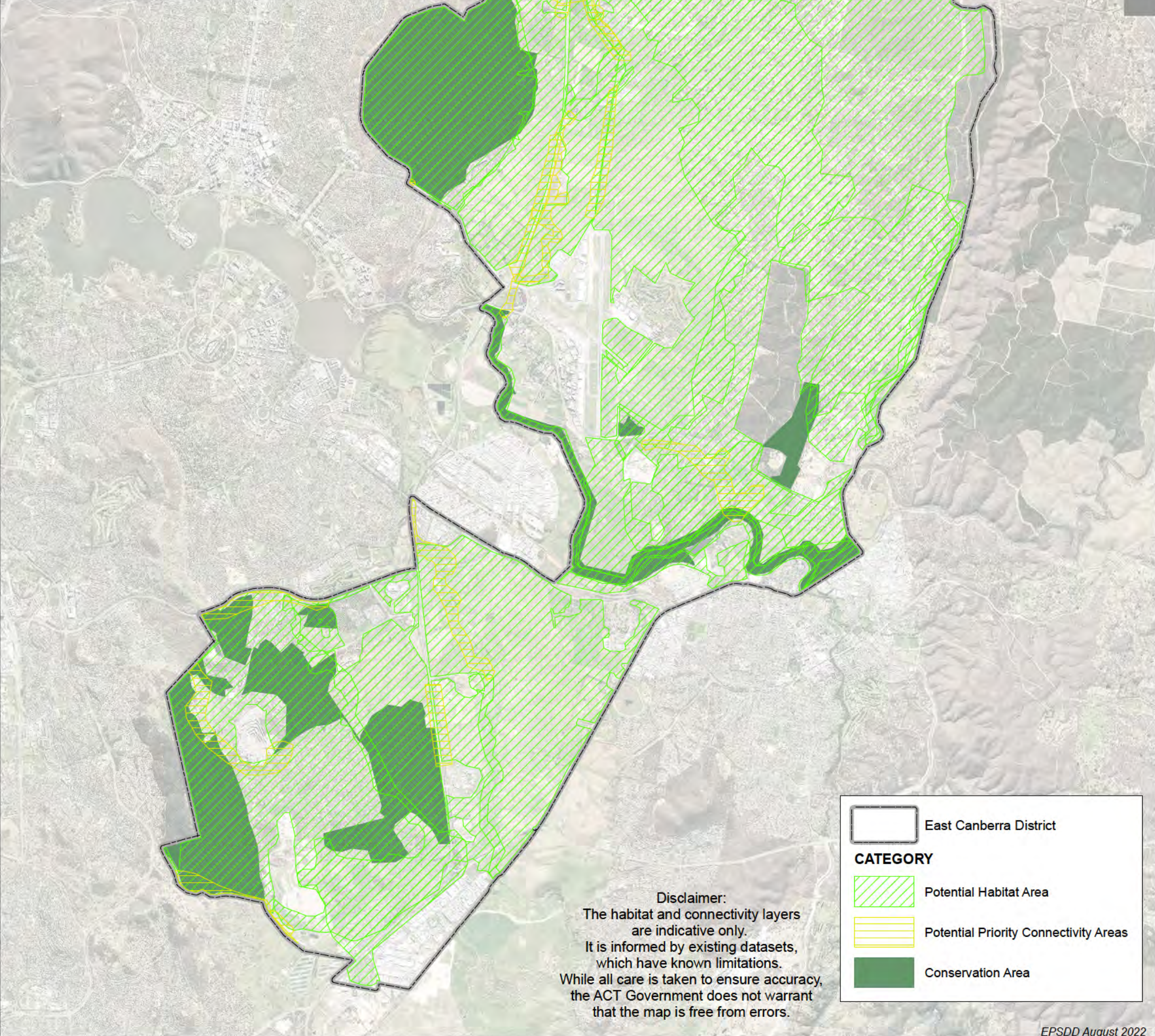
Priority Connectivity Areas are derived from interpreting the taxa-specific habitat maps and identifying where there may be opportunities to connect habitat patches that are currently disconnected. Identified potential habitat areas will be disconnected if there are barriers that impede movement (such as large roads) or when the distance between required habitat patches is too large (such as large areas with insufficient tree cover for woodland species). Priority Connectivity Areas represent identified opportunities for consideration to restore ecological connectivity

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Conservation Areas depict current reserves and offsets sites on public land. This layer is provided for context, for example to help visualise connections to reserves outside the urban boundaries. Conservation Areas are protected landscapes, however are not all inclusive. Potential Habitat Areas often extend beyond conservation areas, and provide further context to priority connections.

For consideration - below are a list of potential “initiatives” that could be highlighted in the East Canberra District. These are not a complete or detailed list of what could be highlighted. Simply included to help guide your own development of these.

- Enhance, restore and connect priority areas of grassland, particularly north of the airport and in the south around existing grassland reserves.
- Enhance, restore and connect priority areas of woodland, particularly the north around the intersection of Nadjung Mada, Goorooyarroo and Mount Majura, as well as areas extending from the Molonglo River Corridor.
- Protect and restore areas of Woolshed Creek, Jerrabomberra Creek and Scrivener Creek as riparian corridors.
- Explore wildlife crossing opportunities for the Majura Parkway to re-establish connectivity between the important woodland and grassland habitat in and around Mount Majura and Mount Ainslie in the west, and the Commonwealth land in the east
- Explore wildlife crossing opportunities for the Monaro Highway to re-establish connectivity between the important grassland habitat of Jerrabomberra East and Jerrabomberra West.



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	East Canberra District
CATEGORY	
	Potential Habitat Area
	Potential Priority Connectivity Areas
	Conservation Area

EPSDD August 2022

**EHW
 Potential Habitat & Connectivity:
 East Canberra District**

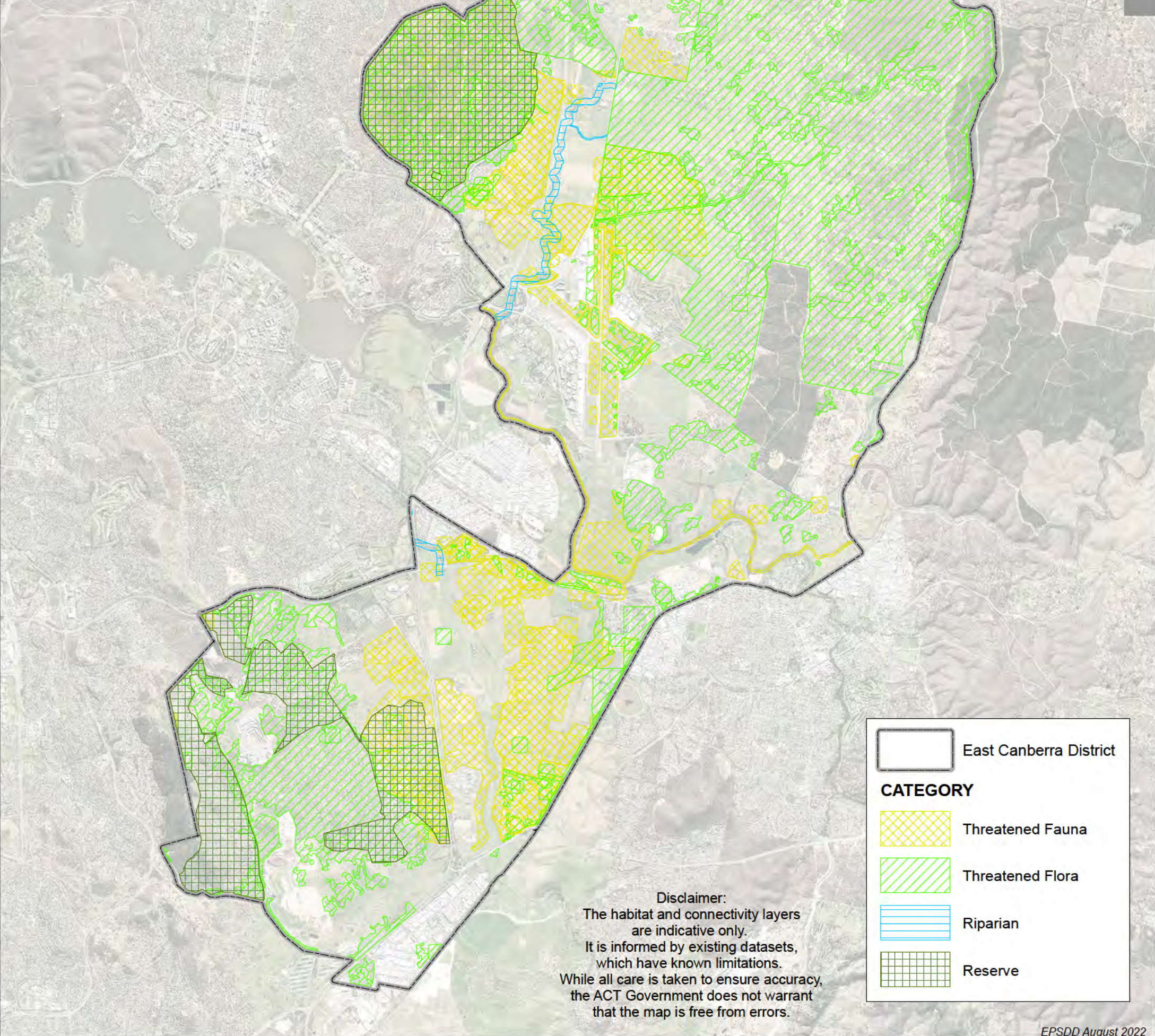


ACT
 Government
 Environment, Planning and Sustainable Development


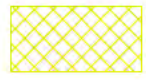

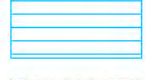

1.5
 Kilometers

2020 Aerial Imagery

N



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	East Canberra District
CATEGORY	
	Threatened Fauna
	Threatened Flora
	Riparian
	Reserve

EPSDD August 2022

EHW Protected Biodiversity: East Canberra District



ACT
Government
Environment, Planning and Sustainable Development

1.5
Kilometers



2020 Aerial Imagery

