



**LIGHT RAIL STAGE 2B**  
Preliminary Ecological Assessment –  
Commonwealth Park to Woden

**FINAL**



This report was prepared using  
Umwelt's ISO 9001 certified  
Quality Management System.

### *Acknowledgement of Country*

*Umwelt would like to acknowledge the traditional custodians of the country on which we work and pay respect to their cultural heritage, beliefs, and continuing relationship with the land. We pay our respect to the Elders – past, present, and future.*

### Disclaimer

This document has been prepared for the sole use of the authorised recipient and this document may not be used, copied or reproduced in whole or part for any purpose other than that for which it was supplied by Umwelt (Australia) Pty Ltd (Umwelt). No other party should rely on this document without the prior written consent of Umwelt.

Umwelt undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document. Umwelt assumes no liability to a third party for any inaccuracies in or omissions to that information. Where this document indicates that information has been provided by third parties, Umwelt has made no independent verification of this information except as expressly stated.

Umwelt (Australia) Pty Ltd

### Document Status

Rev No.	Reviewer		Approved for Issue	
	Name	Date	Name	Date
V1	Clare McInnes	11/8/2023	Clare McInnes	11/08/2023
V2	Clare McInnes	18/8/2023	Clare McInnes	18/8/2023
V3	Clare McInnes	04/09/2023	Clare McInnes	04/09/2023
V4	Beth Noel	21/11/2023	Beth Noel	21/11/2023

# Executive Summary

Umwelt was engaged by AECOM to complete a preliminary ecological assessment of the proposed footprint for the Light Rail Stage 2B Project (the Project). The assessment is required to form part of the Preliminary Environmental Assessment (PEA) for the Project and inform potential impacts on ecological values from project construction and operations.

The Project comprises approximately 10 km of light rail track being laid within the road reserve from Commonwealth Park to Woden, with consideration of an alternate route via National Triangle – Barton (LRS2BProject Area) (**Figure 1.1**), and a proposed upgrade and expansion of the stabling yard in Mitchell (Mitchell Project Area) (**Figure 1.2**).

This preliminary ecological assessment provides results for the locations of ecological values along the proposed alignment, including the presence of ecological communities, threatened species and their habitat as listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), and the Australian Capital Territory (ACT) *Nature Conservation Act 2014* (NC Act). The aim of the preliminary assessment was to identify constraints within the Project area that would require consideration during the design phases.

Previous ecological assessments conducted by ARUP (2021) and Biosis (2019) have been undertaken in the Project Areas. This report presents the results from these ecological assessments, results from an assessment undertaken by Umwelt (2022) and from an updated desktop review of publicly available ecological information.

This assessment also identifies potential constraints of the Project and informs additional field assessments required for 2023, including in areas within the revised project alignment that have not yet been assessed. The ecological assessments will support the EIS for the Project, with the development of a final Biodiversity Impact Assessment Report and Offset Strategy.

The 2023/24 field assessment will provide current information on potential ecological constraints within the revised project alignment that have not yet been assessed. This includes constraints such as native vegetation as defined in the NC Act, and ecological communities and potential and confirmed habitat for threatened species listed under the EPBC Act and/or the NC Act.

Preliminary results have confirmed the following ecological constraints in the Project Areas:

- The LRS2BProject Area is a degraded urban landscape within existing transport corridors and subject to frequent disturbance due to past development. The majority of the LRS2BProject Area was found to support existing infrastructure, exotic vegetation, or landscape plantings (Umwelt, 2022).
  - 13.86 ha of vegetation meeting the definition of native vegetation under the NC Act.
    - 1.06 hectares of non-local native groundcover.
    - 12.29 hectares of native landscape planting.
    - 0.51 hectares of natural temperate grassland.
  - 9.7 hectares of exotic landscape plantings.

- 37.8 hectares of exotic grassland.
- 0.51 hectares of EPBC Act listed *Natural Temperate Grassland of the South Eastern Highlands* critically endangered community and the NC Act listed *Natural Temperate Grassland* critically endangered ecological community occur in the LRS2BProject Area.
- Confirmed foraging habitat for *Callocephalon fimbriatus* (gang-gang cockatoo) is located throughout the LRS2BProject Area, with potential for breeding to occur due to the presence of hollow bearing trees, the observation of potential breeding behaviour, and the presence of known nest trees within 200 m of the light rail alignment.
- *Polytelis swainsonii* (superb parrot) are known to travel from breeding grounds in Molonglo Valley to forage within the Project Area and nearby nature reserves. The main movement corridors for *P. swainsonii* are known to cross the LRS2BProject Area, with high levels of activity detected between Launceston Street and Melrose Drive.
- Potential foraging habitat for transitory *Lathamus discolor* (swift parrot) in the LRS2BProject Area.
- 104 hollow bearing trees (59% native) were located within the LRS2BProject Area, ranging from extra-small to extra-large. Areas within the State Circle and Adelaide Avenue contained the highest concentration of hollow bearing trees. Of these, 48 are classified as mature trees under the ACT Government *Loss of Mature Native Trees Key Threatening Process: Draft Action Plan* (ACT Government 2021).
- 8.35 ha of confirmed and 7.95ha of possible *Synemon plana* (golden sun moth) habitat was recorded in the LRS2BProject Area.
- Four populations of *S. plana* were confirmed to be supported within the LRS2BProject Area.
- 0.51 ha of native grasslands that comprise potential habitat for *Delma impar* (striped legless lizard) was recorded in the LRS2BProject Area.
- 5.56 ha of degraded native grasslands that comprise potential habitat for *Perunga ochracea* (perunga grasshopper) was recorded in the LRS2BProject Area.
- No threatened flora identified as having a moderate or high likelihood of occurrence were recorded in the LRS2BProject Area. Umwelt (2022) considered it unlikely that any threatened species, including the matted flax-lily (*Dianella amoena*), button wrinklewort (*Rutidosia leptorhynchoides*), hoary sunray (*Leucochrysum albicans* subsp. *Tricolor*), or small purple-pea (*Swainsona recta*) are present.
- The Mitchell Project Area has not yet been assessed. Although values including 0.8 ha of low-quality occupied *S. plana* habitat have been confirmed immediately south of the Mitchell Project Area, due to recent disturbance history within the site, it is unlikely to support this or any other threatened species or ecological community.
- Two Weeds of National Significance and nine species declared under the *ACT Pest Plants and Animals Act 2005* (PP&A Act) were recorded in the LRS2BProject Area. This includes highly invasive grassland species such as *Eragrostis curvula* (African lovegrass), *Nassella neesiana* (Chilean needlegrass), and *N. trichotoma* (serrated tussock). One Weed of National Significance and three species declared under the PP&A Act were recorded in the site immediately adjacent to the Mitchell Project Area (ARUP, 2021), however the presence of these species in the Project Area has not been confirmed.

This assessment has determined the proposed action is likely to significantly impact the following matters of environmental significance and referral to the Commonwealth Minister for the Environment for assessment against the provisions of the EPBC Act is considered warranted (**Appendix A**):

- *Natural Temperate Grasslands of the South Eastern Highlands* – critically endangered ecological community under the EPBC Act.
- *Callocephalon fimbriatum* (gang-gang cockatoo) – endangered under the EPBC Act.
- *Synemon plana* (golden sun moth) – vulnerable under the EPBC Act.
- The significant impact assessments are provisional and it may be concluded that additional species will likely be impacted pending results of the 2023/24 field assessment. In particular for *P. swainsonii*, for which updated tracking data will also be made available.

Early planning for measures to avoid and minimise adverse impacts of the Project on ecological values should be prioritised, including but not limited to, consideration of:

- Avoiding impacts, where possible, to EPBC Act and/or NC Act listed threatened ecological communities.
- Avoiding impacts, where possible, on confirmed habitat for *Synemon plana*, prioritising areas of habitat that are dominated by native groundcovers over habitat dominated by exotic vegetation.
- Avoiding impacts, where possible, on potential habitat for *Perunga ochracea* (perunga grasshopper) and *Delma impar* (striped legless lizard).
- Protecting mature trees, especially remnant woodland trees and those with hollows.
- Incorporating connectivity for bird species in landscape planning.
- Mitigating cumulative impacts from the Project on connectivity for bird species.
- Implementing management measures prior to and during construction, and during operation to minimise further spread of weed pest plants under the PP&A Act.

Advice on additional targeted investigations to take place in 2023 and early 2024 in both the LRS2B Project Area and Mitchell Project Areas is provided. This includes:

- Completing a full assessment of all potential ecological constraints within areas not already assessed in both construction and operational footprint along the LRS2B Project Area.
- Confirm the presence of native vegetation (as defined under the NC Act) in the Mitchell Project Area.
- Confirm the presence of hollow bearing and mature native trees in the Mitchell Project Area.
- Undertake additional surveys for breeding habitat for *C. fimbriatus* in both Project Areas.
- Confirm the availability of foraging habitat for *C. fimbriatus* and *P. swainsonii* in the Mitchell Project Area.
- Confirm habitat availability (breeding and foraging) for woodland birds, specifically *Aphelocephala leucopsis* (southern whiteface), *Melanodryas cucullata cucullata* (hooded robin (south-eastern)) and *Climacteris picumnus victoriae* (brown tree creeper (south-eastern)) in the Mitchell Project Area.

- Survey for *D. impar* in identified potential habitat in the LRS2BProject Area.
- Additional surveys may be required for *D. impar* in 2024 if additional potential habitat is identified as part of the 2023/24 field assessment. All other additional surveys should be able to be completed in 2023.

# Table of Contents

<b>Executive Summary</b>	<b>i</b>
<b>1.0 Introduction</b>	<b>1</b>
1.1 Project Areas	2
<b>2.0 Legislative Context</b>	<b>5</b>
2.1 Commonwealth	5
2.1.1 Environment Protection and Biodiversity Conservation Act 1999	5
2.1.2 Australian Capital Territory (Planning and Land Management) Act 1988	5
2.2 Australian Capital Territory	6
2.2.1 Nature Conservation Act 2014	6
2.2.2 Planning Act 2023	6
2.2.3 Territory Plan	7
<b>3.0 Methods</b>	<b>10</b>
3.1 Desktop Review	10
3.2 Likelihood of Occurrence	10
3.3 Field Assessment	11
3.3.1 Vegetation Communities and Condition Assessment	11
3.3.2 Threatened Ecological Communities	13
3.3.3 Native Vegetation	15
3.3.4 Threatened Fauna Habitat Assessment	15
3.3.5 Threatened Flora Habitat Assessment	18
3.3.6 Targeted Threatened Species Surveys	18
3.3.7 Other Species	20
<b>4.0 Results</b>	<b>23</b>
4.1 Desktop Review	23
4.1.1 EPBC Act Protected Matters Search	23
4.1.2 ACT Significant Matters	24
4.2 Likelihood of Occurrence	31
4.2.1 Summary of Previous Ecological Information	34
4.2.2 Habitat Connectivity Values	34
4.3 Vegetation Communities and Condition Assessment	54
4.4 Threatened Ecological Communities	61
4.4.1 EPBC Act listed Natural Temperate Grassland of the South Eastern Highlands Listed Critically Endangered Ecological Community	61



4.4.2	NC Act listed Natural Temperate Grassland Critically Endangered Ecological Community	62
4.5	Native Vegetation	68
4.6	Mature and Hollow Bearing Trees	74
4.7	Threatened Fauna Assessment	80
4.7.1	Threatened Birds	80
4.7.2	Golden Sun Moth	86
4.7.3	Perunga Grasshopper	87
4.8	Targeted Flora Surveys	87
4.9	Pest Plants	93
<b>5.0</b>	<b>Discussion</b>	<b>94</b>
5.1	Native Vegetation	94
5.2	Threatened Ecological Community	94
5.3	Threatened Birds	94
5.4	Golden Sun Moth	95
5.5	Perunga Grasshopper	96
5.6	Striped Legless Lizard	96
5.7	Indirect Impacts	96
5.7.1	Spread of Invasive Species Off-Site (During Construction and Decommissioning).	96
5.7.2	Impacts to Trees Immediately Adjacent the LRS2B Project Area	97
5.8	Assessment Against the Planning Act 2023 and EIS Triggers	98
5.9	Assessment Against Significant Impact Criteria for Proposed Actions On, or Impacting Upon, Commonwealth Land	99
<b>6.0</b>	<b>Conclusion and Recommendations</b>	<b>101</b>
<b>7.0</b>	<b>References</b>	<b>104</b>

## Figures

Figure 1.1	Light Rail Stage 2B Ecological Assessment LRS2BProject Area	3
Figure 1.2	Light Rail Stage 2B Ecological Assessment Mitchell Project Area	4
Figure 2.1	Landuse Zones Surrounding the LRS2BProject Area	8
Figure 2.2	Landuse Zones Surrounding the Mitchell Project Area	9
Figure 4.1	Significant Matters Recorded in the LRS2B Project Area (ACT Government, 2023)	25
Figure 4.2	Significant Matters Recorded in the Mitchell Project Area (ACT Government, 2023)	30
Figure 4.3	Colonisation Potential Woodland Model, Generalist – LRS2B Project Area (ACTmapi, 2023)	36

Figure 4.4	Colonisation Potential Woodland Model, Woodland – LRS2B Project Area (ACTmapi, 2023)	41
Figure 4.5	Colonisation Potential Woodland Model, Forest – LRS2B Project Area (ACTmapi, 2023)	46
Figure 4.6	Colonisation Potential Woodland Model, Generalist – Mitchell Project Area (ACTmapi, 2023)	51
Figure 4.7	Colonisation Potential Woodland Model, Woodland – Mitchell Project Area (ACTmapi, 2023)	52
Figure 4.8	Colonisation Potential Woodland Model, Forest – Mitchell Project Area (ACTmapi, 2023)	53
Figure 4.9	Preliminary Extent of Vegetation Communities within the LRS2B Project Area (from Umwelt, 2022)	56
Figure 4.10	Preliminary Extent of EPBC Act Listed Ecological Communities in the CWP2P Project Area	63
Figure 4.11	Preliminary Extent of Native Vegetation in the LRS2B Project Area (from Umwelt, 2022)	69
Figure 4.12	Preliminary Extent of Mature and Hollow-bearing Trees in the LRS2B Project Area	75
Figure 4.13	Preliminary Habitat for Gang-gang Cockatoo and Threatened Bird Observations	81
Figure 4.14	Preliminary Golden Sun Moth Habitat and Sightings within the CPW2W Project Area	88

## Tables

Table 3.1	Key to Likelihood of Occurrence Assessment	11
Table 3.2	Vegetation Zones for ACT01 Tablelands Dry Tussock Grassland (Capital Ecology, 2018a)	12
Table 3.3	Vegetations Zones for ACT 16 <i>Eucalyptus melliodora</i> - <i>E. blakelyi</i> Tableland Grassy Woodland (Capital Ecology, 2018b)	12
Table 3.4	Definition of Other Vegetation Zone Categories	13
Table 3.5	Natural Temperate Grassland of the South Eastern Highlands Condition Thresholds (DoEE, 2016).	13
Table 3.6	Criteria for the EPBC Act listed White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland Critically Endangered Ecological Community (Commonwealth of Australia, 2006).	14
Table 3.7	Classification criteria for Golden Sun Moth Habitat (SMEC and Rowell, 2018)	15
Table 4.1	Results of EPBC Act Protected Matters Search Tool – LRS2B Project Area	23
Table 4.2	Results of EPBC Act Protected Matters Search Tool – Mitchell Project Area	23
Table 4.3	Likelihood of Occurrence Summary – LRS2B Project Area	32
Table 4.4	Likelihood of Occurrence Summary – Mitchell Project Area	33
Table 4.5	Preliminary Extent of each Plant Community Type and Vegetation Zones in the LRS2B Project Area (Umwelt, 2022)	54
Table 4.6	Assessment against EPBC Act Natural Temperate Grasslands of the South Eastern Highlands Community Classification Criteria (DoEE, 2016).	61
Table 4.7	Number of Mature Native Trees and Trees with Hollows within the LRS2B Project Area	74
Table 4.8	Number of Hollow Sizes Recorded within the LRS2B Project Area	74
Table 4.9	Preliminary Extent of Potential Golden Sun Moth Habitat Condition Categories (Potential Habitat)	86
Table 4.10	Extent of Re-classified Potential Golden Sun Moth Habitat	86

# Appendices

Appendix A	Significant Impact Assessment
Appendix B	Protected Matters Search Tool
Appendix C	Likelihood of Occurrence

# 1.0 Introduction

Umwelt was engaged by AECOM to complete an ecological assessment of the proposed footprint for the Light Rail Stage 2B (the Project). The assessment is required to form part of the Preliminary Environmental Assessment (PEA) for the LRS2B Project and inform potential impacts on ecological values from project construction and operations.

The LRS2B Project comprises approximately 10 km of light rail track being laid within the road reserve from Commonwealth Park to Woden, with consideration of an alternate route via National Triangle – Barton (LRS2B Project Area) (**Figure 1.1**), and a proposed stabling yard in Mitchell (Mitchell Project Area) (**Figure 1.2**).

This assessment provides preliminary results for the locations of ecological values along the proposed alignment, including the presence of ecological communities, threatened species and their habitat as listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), and the Australian Capital Territory (ACT) *Nature Conservation Act 2014* (NC Act). The aim of the assessment was to identify constraints within the Project Area that would require consideration during the design phases.

Previous ecological assessments conducted by ARUP (2021) and Biosis (2019) have been undertaken in the Project Areas. This report presents the results from these ecological assessments, results from an assessment undertaken by Umwelt (2022) and from an updated desktop review of publicly available ecological information.

This assessment also identifies potential constraints of the Project and informs additional field assessments required for 2023, including in areas within the revised project alignment that have not yet been assessed. The ecological assessments will support the EIS for the Project, with the development of a final Biodiversity Impact Assessment Report and Offset Strategy.

The assessment specifically includes the following ecological communities and species that were identified as potentially being impacted by the Project:

- *White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland* – listed as a critically endangered community under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).
- *Yellow Box – Blakely's Red Gum Grassy Woodland* – listed as endangered under the *ACT Nature Conservation Act 2014* (NC Act).
- *Natural Temperate Grassland of the South Eastern Highlands* – listed as a critically endangered community under the EPBC Act.
- *Natural Temperate Grassland* - listed as an endangered ecological community under the NC Act.
- *Lathamus discolor* (swift parrot) – listed as critically endangered under the EPBC Act and critically endangered under the NC Act.
- *Dianella amoena* (matted flax-lily) – listed as endangered under the EPBC Act.

- *Callocephalon fimbriatum* (gang-gang cockatoo) - listed as endangered under the EPBC Act and the NC Act.
- *Polytelis swainsonii* (superb parrot) – listed as vulnerable under the EPBC Act and the NC Act.
- *Synemon plana* (golden sun moth) – listed as vulnerable under the EPBC Act and the NC Act.
- *Delma impar* (striped legless lizard) - listed as vulnerable under the EPBC Act and NC Act.

Advice will also be provided on any requirements for further targeted investigations in both the LRS2BProject Area and Mitchell Project Area (**Section 6.0**).

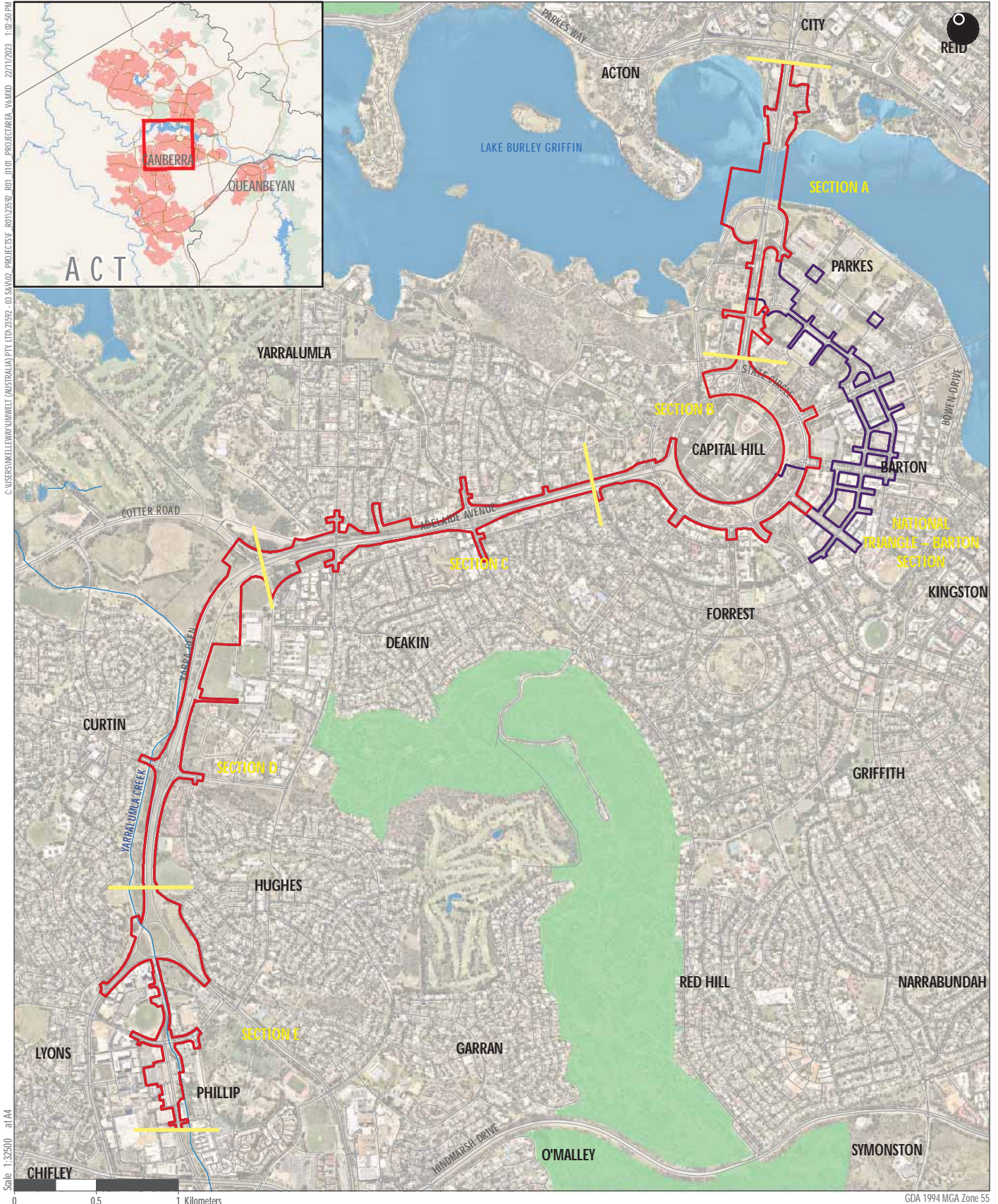
## 1.1 Project Areas

The Project Areas include land where approximately 10 kilometres (km) of light rail track is to be laid within the road reserve between Commonwealth Park and Woden and a proposed area within Mitchell that will support the upgrade and expansion of the existing stabling yard (**Figure 1.1** and **Figure 1.2**).

The Project Areas are approximately 145 hectares (ha) with mixed-use land, traversing through residential, commercial, and recreational land use zones. The LRS2BProject Area also includes Lake Burley Griffin, specifically within the footprint of the Commonwealth Avenue Bridge and Lotus Bay, in the West Lake area.

The LRS2B LRS2BProject Area is further divided into six (6) sections:

- Section A - Parkes Way south along Commonwealth Avenue to the High Commission of Papua New Guinea.
- Section B From the High Commission of Papua New Guinea, southwest along State circle through to Adelaide Avenue, adjacent to the Embassy of the Republic of Korea.
- Section C - From the Embassy of the Republic of Korea, through to Yarra Glen road, adjacent with Mint Oval.
- Section D - From Mint Oval south down Yarra Glen road to the southernmost extent of Clarrie Hermes Park.
- Section E - From the southernmost extent of Clarrie Hermes Park south to the intersection of Wilbow Street and Callum Street, Phillip.
- National Triangle – Barton – From Commonwealth Avenue into King George Terrace, then following Macquarie Street and Bligh Street and onto National Circuit before joining Sydney Avenue and then State Circle.



C:\USERS\WELLENWAY\UMWELT (AUSTRALIA) PTY.LTD\2592 - GB SA\102 - PROJECT\ACTAREA\_V6\AMD - 2211\2023 1:02:50 PM  
 Scale 1:32500 at A4

- Legend**
- Option 2B
  - Option 2B National Triangle - Barton Section
  - ACT Nature Reserves
  - Watercourses
  - Roads

FIGURE 1.1

Light Rail Stage 2b Ecological Assessment Project Area LRS2B Project Area

Image Source: Nearmap (2022) Data source: ACTMapi (2021)



- Legend**
- Project Area
  - ACT Nature Reserves
  - Watercourses
  - Roads

**FIGURE 1.2**  
**Canberra Light Rail Stage 2B**  
**Ecological Assessment**  
**Mitchell Project Area**

## 2.0 Legislative Context

This ecological assessment has been undertaken with consideration of relevant Commonwealth and ACT legislation. The following sections describe the legislative context for this assessment.

### 2.1 Commonwealth

#### 2.1.1 Environment Protection and Biodiversity Conservation Act 1999

The *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides the legal framework for the protection and management of nationally and internationally important flora, fauna, ecological communities, and heritage places; defined as matters of national environmental significance (MNES). In addition to identifying and protecting MNES, the EPBC Act also incorporates measures for the protection of Commonwealth-owned and managed land and assessing the actions of Commonwealth agencies, which are applicable to actions approved by the National Capital Authority (NCA) on land classified as 'Designated Area' in the ACT.

If any proposed actions are likely to result in a significant impact to MNES (as defined under the EPBC Act), the Project must be referred to the Minister for the Environment for assessment and approval. This process requires the proponent to discuss likely impacts to MNES (direct, indirect, cumulative, and facilitated, as appropriate) and the range of avoidance, mitigation, or offset measures incorporated into the Project that address these impacts.

This assessment considers the potential for EPBC Act listed threatened ecological communities, or potential habitat listed for any EPBC Act threatened species, occurs, or is likely to occur in the Project Area and presents a constraint for the Project.

#### 2.1.2 Australian Capital Territory (Planning and Land Management) Act 1988

The *Australian Capital Territory (Planning and Land Management) Act 1988* (PALM Act) provides that land used by or on behalf of the Commonwealth may be declared National Land, to be managed by the Commonwealth. The remaining lands of the Territory are Territory Land, managed by the ACT Government on behalf of the Commonwealth. Section 10 of the PALM Act requires the National Capital Plan to set out the broad planning principles and policies for Canberra and the Territory, and detailed conditions of planning, design, and development for the 'Designated Areas' because of their particular importance to the special character of the national capital.

To maintain a broad oversight of planning in the Territory as a whole, and to ensure its involvement in the planning, design and development of those areas having the special characteristics of the National Capital, the Commonwealth established the NCA to reflect its interests and conduct its intentions. Within Designated Areas the NCA has responsibility for determining detailed planning policy, and for Works Approval (otherwise known as development assessment).

The Project Area includes Designated Land from the Commonwealth Park to Capital Hill and along Adelaide Avenue (**Figure 2.1**). The NCA may consider potential impacts to threatened species and ecological communities listed under the NC Act as part of considerations of potential impacts on the environment.



## 2.2 Australian Capital Territory

### 2.2.1 Nature Conservation Act 2014

The *Nature Conservation Act 2014* (NC Act) is the ACT's primary legislation for the protection of native plants and animals in the ACT, and for the management of the conservation reserve network. The NC Act establishes the ACT Conservator for Flora and Fauna, the ACT Parks and Conservation Service and other various committees. The NC Act also lists threatened native species and ecological communities. The NC Act was referenced in this ecological assessment to inform the identification of threatened ecological communities or species that occur in the Project Area.

### 2.2.2 Planning Act 2023

The ACT *Planning Act 2023* (Planning Act), formerly the *ACT Planning and Development Act 2007* (PD Act), and an associated new planning system is expected to commence on 27 November 2023. As such, the Planning Act was considered in this ecological assessment with regards to potential impacts on threatened species and ecological communities resulting from the project.

The new planning system in the ACT is focused on delivering outcomes for the residents of Canberra, providing some flexibility to encourage better buildings and public spaces for the community.

As with the former PD Act, EPSDD is responsible for approving development in all areas of the ACT other than designated areas. Designated areas include Lake Burley Griffin and its foreshores, the National Triangle (bounded by the Kings, Commonwealth and Constitution Avenues), and the road reserves of the main avenues and approach routes into Canberra (e.g. Northbourne Avenue, Canberra Avenue and Monaro Highway).

Once the new planning system comes into effect, the key considerations that will need to be made during the development application process are outlined in the Planning Act, and include:

- The suitability of the proposed development in the context of the site surrounds.
- The probable impact of the proposed development, including environmental impacts.
- Whether it achieves an appropriate transition between zones (if the site of the proposed development adjoins another zone).
- The interaction of the proposed development with any other adjoining or adjacent development proposals.

For development applications, an Environmental Impact Statement (EIS) is required when the development is listed in Schedule 1 of the Planning (General) Regulation 2023, the Minister declares an EIS is required (if there is a risk of significant adverse environmental impact), or where a proposal is to be assessed and/or approved under an agreement between the Australian and ACT Governments. This project will pursue the EIS planning pathway in line with the Planning Act.

#### 2.2.2.1 Biodiversity Sensitive Urban Design Guide

For some developments, design guides are required to be considered in full, and a design response must be provided when a development application is lodged. Development applications need to meet the requirements in the interim Territory Plan by outlining how they are compliant with the Design Guides. The Biodiversity Sensitive Urban Design Guide (BSUD) looks at how new developments can work in harmony with the natural environment. The trigger for using the BSUD is when one of the following criteria is met:

- The development is a Future Urban Area.
- The development is in Non-Urban zones.
- The development is in an Urban Open Space zone.
- The development has an area greater than one hectare in any zone.

The Study Area is in an Urban Open Space zone, and has an area greater than one hectare, and as such, must demonstrate that the Project is consistent with the assessment outcomes in the BSUD as part of the development application process.

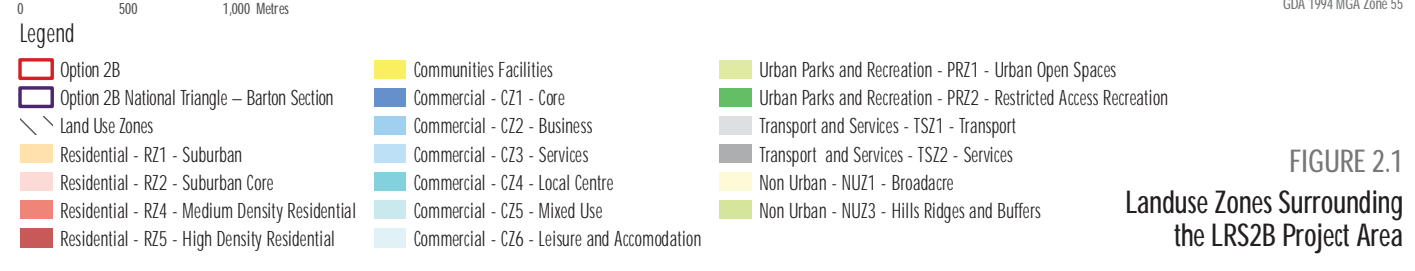
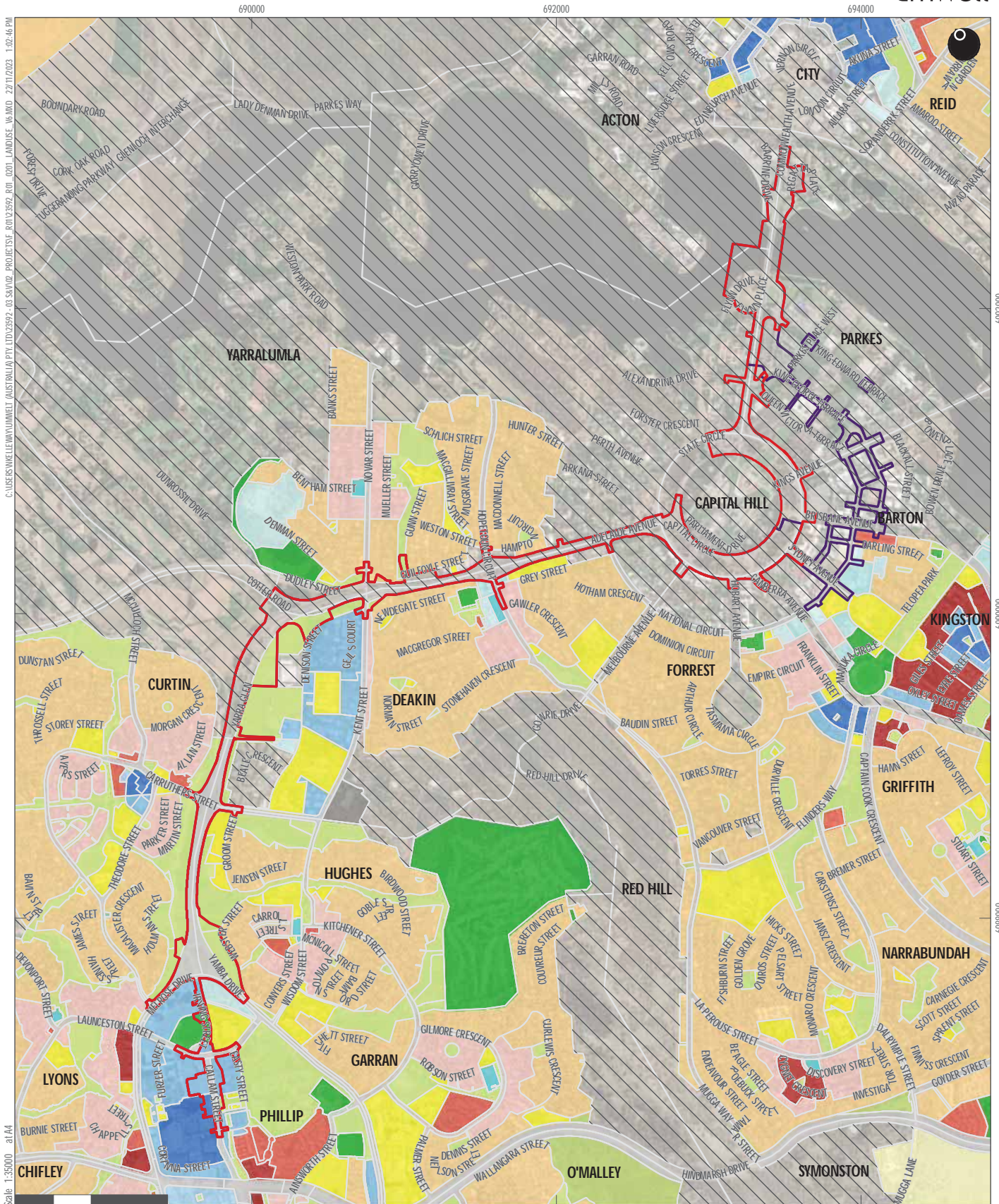
The assessment outcomes specific to the BSUD are:

- Loss of native habitat and biodiversity is avoided or minimised.
- Biodiversity connectivity is maintained across the landscape.
- Threats to biodiversity such as noise, light pollution, invasive species incursions or establishment, chemical pollution or site disturbance are avoided or minimised through good design and planning.

The Project has been designed consistently with the BSUD, minimising the loss of native habitat and maintaining connectivity.

### 2.2.3 Territory Plan

The Territory Plan is a statutory document that guides planning and development in the ACT. Consistent with the National Capital Plan and informed by the ACT Planning Strategy, the Territory Plan identifies land use zones and overlays, their objectives and permissible and prohibited development within each zone. The Project Areas includes approximately nine zones (**Figure 2.1, Figure 2.2**), mostly relating to transport, residential or commercial land uses. Some areas zoned for parks and recreation are also present.





D:\UMWELT (AUSTRALIA) PTY LTD\2592 - 03 SAVI02 - PROJECTS\FE\_R012\2592\_ROT\_0202\_LANDUSEMITCHELL\_V3.MXD 31/08/2023 12:33:15 PM

Scale 1:7500 at A4

6100000

GDA 1994 MGA Zone 55

- Legend**
- Project Areas
  - Commercial - C24 - Local Centre
  - Industrial - IZ1 - General Industrial
  - Industrial - IZ2 - Industrial Mixed Use
  - Urban Parks and Recreation - PRZ1 - Urban Open Spaces
  - Transport and Services - TSZ1 - Transport
  - Non Urban - NUZ1 - Broadacre
  - Non Urban - NUZ3 - Hills Ridges and Buffers

**FIGURE 2.2**  
Landuse Zones Surrounding  
the Mitchell Project Area

## 3.0 Methods

### 3.1 Desktop Review

A desktop review was conducted in July 2023 to identify any known ecological or site-specific values in the Project Areas and inform the pending field component of the assessment. The desktop review included the following:

- A review of the previous ecological investigations, namely:
  - BIOSIS (2019) *Commonwealth Park to Woden Preliminary Environmental Assessment: Biodiversity*.
  - ARUP (2021) *Canberra Light Rail Stage 2B Golden Sun Moth Surveys*.
  - Umwelt (2022) *Canberra Light Rail Stage 2B Ecological Assessment Report*.
- A search of the EPBC Act 'Protected Matters Search Tool' (PMST) (DCCEEW, 2023) to identify matters protected under Commonwealth legislation that may occur within the Project Areas.
- A search of the ACT Government's mapping tool 'ACTmapi' (ACT Government, 2023) to identify matters protected under Territory legislation that may occur within the Project Areas.
- A search of Atlas of Living Australia (2023) and Canberra Nature Map (2023) to identify matters protected under Commonwealth and/or Territory legislation that may occur within the Project Area.
- A review of vegetation mapping – Grasslands, Pre-Settlement, South-eastern Highlands, VIS\_ID4099 (DPIE, 2015).
- A review of the connectivity overlays within the ACT Government's mapping tool 'ACTmapi' (ACT Government, 2023).

The relevant search area includes a 10 km buffer from the Project Area boundaries to capture records of birds and other animals that habituate the local landscape and that may use habitat features in the Project Area.

Additional information on the location of habitat for *Polytelis swainsonii* and *Callocephalon fimbriatus* was also provided by ACT Government Ecologists to inform the assessment.

### 3.2 Likelihood of Occurrence

The results of the desktop review were used to undertake a likelihood of occurrence assessment for Project Area. This tool identifies the likelihood of threatened ecological communities, threatened species, or migratory species occurring within the Project Area that may be targeted during the field survey. This was undertaken in accordance with the criteria in **Table 3.1**.

**Table 3.1 Key to Likelihood of Occurrence Assessment**

Likelihood	Description
<b>Known</b>	The species or community has been recently recorded within the Proposal Area in the past 5 years.
<b>High</b>	It is highly likely that the species inhabits or community is present in the Proposal Area and the species is dependent on suitable habitat that is known or highly likely to occur in the Proposal Area (i.e., for breeding or important life cycle periods such as winter flowering resources), or is known or likely to maintain resident populations in the Proposal Area. Also includes species known or likely to visit the Proposal Area during regular seasonal movements or migration.
<b>Moderate</b>	Potential habitat or community is known or likely to be present in the Proposal Area. Species unlikely to maintain sedentary populations, however, may seasonally use resources within the Proposal Area opportunistically or during migration. The species is unlikely to be dependent on habitat within the Proposal Area (i.e., for breeding or important life cycle periods such as winter flowering resources), or habitat likely to be in a modified or degraded state. Includes cryptic flowering flora species that were not seasonally targeted by surveys and that have not been recorded.
<b>Low</b>	It is unlikely that the species inhabits, or the community is present in the Proposal Area. It may be an occasional visitor, but habitat within the Proposal Area is widely distributed in the local area, meaning that the species is not dependent on available habitat in the Proposal Area (i.e., for breeding or important life cycle periods such as winter flowering resources). Specific habitat is not known to be present in the Proposal Area, or the species are a non-cryptic perennial flora species have previously been targeted by surveys and not recorded.

### 3.3 Field Assessment

The following methods were undertaken by Umwelt in the 2021/22 field season and originally described in Umwelt (2022). No field work was undertaken in the Mitchell Project Area at this time. The Mitchell Project Area and areas within the LRS2BProject Area not yet assessed will be included in the 2023/24 field assessment. The scope of the 2023/24 field assessment will be informed by the results of the Likelihood of Occurrence assessment (**Section 4.2**), and recommendations in Umwelt (2022).

Umwelt (2022) did not include any aquatic habitat or species assessments. Confirmation of the need to undertake an aquatic ecological assessment is also discussed in **Section 4.2**.

#### 3.3.1 Vegetation Communities and Condition Assessment

##### 3.3.1.1 Vegetation Mapping

Vegetation was mapped according to ACT Plant Community Type (PCT) to conform with requirements of the ACT Environmental Offsets Policy (ACT Government, 2015a).

Vegetation was divided into generally homogenous vegetation zones based on the structure, floristic composition, and quality, with PCTs categorised with grassland and woodland zones presented in **Table 3.2** and **Table 3.3** (Capital Ecology, 2018a; Capital Ecology, 2018b). Other vegetation zones included non-local native groundcover, landscape plantings (native), landscape plantings (exotic) and exotic grassland (**Table 3.4**).

**Table 3.2 Vegetation Zones for ACT01 Tablelands Dry Tussock Grassland (Capital Ecology, 2018a)**

Groundstorey Dominance	Native Forb Diversity (Floristic Value Score)	Vegetation Zone ID	Meet criteria for EPBC Act listed community?
Native	High: FVS $\geq$ 6.5	01.1 (ACT01 Zone 1)	Yes - <i>Natural Temperate Grassland of the South Eastern Highlands (High Diversity)</i>
	Mod: FVS $\geq$ 5 but $\leq$ 6.5 and/or >50% foliage cover of <i>Carex bichenoviana</i> , <i>Themeda triandra</i> or <i>Poa labillardieri</i>	01.2 (ACT01 Zone 2)	Yes - <i>Natural Temperate Grassland of the South Eastern Highlands (Moderate Diversity)</i>
	Low: FVS <5	1.3 (ACT01 Zone 3)	Yes - <i>Natural Temperate Grassland of the South Eastern Highlands (low diversity)</i>

**Table 3.3 Vegetations Zones for ACT 16 *Eucalyptus melliodora* - *E. blakelyi* Tableland Grassy Woodland (Capital Ecology, 2018b)**

Groundstorey dominance	Mature characteristic canopy sp. spp.	Regeneration of characteristic canopy sp./spp.	Native Forb Diversity # (Low, Mod-High)	Vegetation Zone ID	Meet criteria for EPBC Act listed community?
Native	Present	Present	Mod-High	16.1	Yes - <i>White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland</i>
			Low	16.2	Yes - <i>White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland</i>
	Absent	Present	Mod-High	16.3	Yes - <i>White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland</i>
			Absent	16.4	Yes - <i>White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland</i>
			Absent	16.5	Candidate <i>White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland</i> (depending on patch continuity)

# Low = < 12 species (disturbance tolerant species only); Mod-high =  $\geq$  12 species (including  $\geq$  1 important disturbance sensitive species).

**Table 3.4 Definition of Other Vegetation Zone Categories**

Plant Community Type ACT	Vegetation Zone Category
Non-Local Native Groundcover	Areas dominated by non-local native understorey species with no forb diversity
Landscape Plantings - Native	Planted local and non-local native trees with mixed native and exotic understorey
Landscape Plantings - Exotic	Planted exotic trees with mixed native and exotic understorey
Exotic Grassland	Exotic Grassland
Waterbody	Water (Lake Burley Griffin and artificial wetlands)
Construction Site	Construction Site
Infrastructure	Infrastructure (Buildings, roads and paths)

### 3.3.2 Threatened Ecological Communities

Following vegetation zone definition and floristic condition assessment, each zone that constituted an NC Act and EPBC Act listed threatened ecological community was assessed against the condition thresholds to determine whether the zones met the critical threshold for inclusion.

#### 3.3.2.1 Natural Temperate Grassland Assessment

The NC Act listed *Natural Temperate Grassland* critically endangered ecological community (NC Act NTG) is defined in the *Nature Conservation (Natural Temperate Grassland) Conservation Advice 2020* (ACT Government, 2020a). Clear diagnostic criteria and condition thresholds are not defined specifically, however, the community is stated to be encompassed in the *Natural Temperate Grassland of the South Eastern Highlands* critically endangered ecological community listed under the EPBC Act.

Vegetation zones that were identified as *ACT01 Tablelands Dry Tussock Grassland* were assessed to determine whether they met the condition criteria for the EPBC Act *Natural Temperate Grassland of the South Eastern Highlands* critically endangered ecological community (Department of the Environment and Energy, 2016) (Table 3.5) and the NC Act *Natural Temperate Grassland* critically endangered ecological community.

**Table 3.5 Natural Temperate Grassland of the South Eastern Highlands Condition Thresholds (DoEE, 2016).**

High-Very High Condition Threshold	Moderate – High Condition Threshold	Native Pasture
Favourable sampling times: At least 12 non-grass native species <b>OR</b> At least 3 indicator species <b>OR</b> A floristic value score (FVS) of at least 6.5	Favourable sampling times: At least 8 non-grass native species <b>OR</b> At least 2 indicator species <b>OR</b> A FVS of at least 5	The patch lacks the minimum native understorey for classification as natural temperate grassland
	Characterised by at least 50% foliage cover of the ground of: <i>Themeda triandra</i> <b>OR</b> <i>Poa labillardierei</i> (generally in flats and drainage lines where this vegetation type naturally occurs). <b>OR</b> <i>Carex bichenoviana</i> (or at least 50 tussocks for every 100 m <sup>2</sup> )	



### 3.3.2.2 Box Gum Woodland Assessment

Vegetation zones that were identified as *ACT16 Eucalyptus melliodora – E. blakelyi Tableland Grassy Woodland* were assessed against the condition thresholds identified in the Commonwealth significant impact guidelines (Department of Environment and Heritage, 2006) to determine whether zones met diagnostic criteria for the *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* critically endangered ecological community (Table 3.6).

Each vegetation zone identified as *ACT16 Eucalyptus melliodora – E. blakelyi Tableland Grassy Woodland* was also assessed against criteria for classification as the NC Act listed *Yellow Box – Blakely's Red Gum Grassy Woodland* critically endangered ecological community (ACT Government, 2020b; ACT Government, 2019), which is encompassed by the EPBC Act listed *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* critically endangered ecological community. Based on the conservation advice, diagnostic criteria and condition thresholds for the NC Act listed *Yellow Box – Blakely's Red Gum Grassy Woodland* critically endangered ecological community are assumed to be consistent with those for the EPBC Act listed critically endangered ecological community, with the exception of the 2 ha minimum patch size threshold for areas meeting criteria on the basis of regeneration or mature trees, rather than forb diversity. For the purposes of assessment under the ACT NC Act, a minimum patch size threshold of 0.1 ha was assumed for all triggers based on a conservative interpretation of the conservation advice (ACT Government, 2020; ACT Government, 2019).

**Table 3.6 Criteria for the EPBC Act listed White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland Critically Endangered Ecological Community (Commonwealth of Australia, 2006).**

Criteria	
Is, or was previously, at least one of the most common overstorey species white box ( <i>Eucalyptus albens</i> ), yellow box ( <i>Eucalyptus melliodora</i> ), or Blakely's red gum ( <i>Eucalyptus blakelyi</i> )? and	
Does the patch have a predominantly native understorey? and either	
If the patch is 0.1 ha or greater in size:	Are there 12 or more native non-grass understorey species present? Is there at least one important species*?
If the patch is 2 ha or greater in size:	Does the patch have an average of 20 or more mature trees per hectare, or is there regeneration of the dominant over storey eucalypts

\*Important species as defined in the Listing Advice

### 3.3.3 Native Vegetation

Areas that met the definition of native vegetation under the NC Act were mapped. Section 233 of the NC Act defines a native vegetation area as:

‘an area where –

- a. either –
  - i. 10% or more of the area is covered with vegetation (whether dead or alive); and
  - ii. no more than 60% of the ground layer vegetation cover is exotic annual (at any time of the year); and
  - iii. more than 50% of the perennial ground layer vegetation cover is native vegetation; or
- b. trees or shrubs indigenous to the area have a canopy cover of 10% or more in any stratum of the area.’

### 3.3.4 Threatened Fauna Habitat Assessment

#### 3.3.4.1 Golden Sun Moth Habitat

Potential *Synemon plana* (golden sun moth) habitat was mapped in accordance with the habitat condition classes outlined in **Table 3.7**, which included an additional ‘low-density Chilean needlegrass’ habitat condition class (habitat with between 10 – 50% of *Nassella neesiana* (Chilean needlegrass) (i.e. where it is not the dominated grass species).

Areas that did not support suitable feed species were not mapped as one of the potential habitat categories.

**Table 3.7 Classification criteria for Golden Sun Moth Habitat (SMEC and Rowell, 2018)**

Habitat Condition	Notes	Minimum Criteria
<b>High quality</b>	Primary natural temperate grassland or native pasture dominated by native larval food plants (i.e. <i>Rytidosperma</i> sp. and/or <i>Austrostipa</i> sp.), with low weed cover and some bare ground.	<ul style="list-style-type: none"> <li>&gt; 10% cover <i>Rytidosperma</i> sp.</li> <li>&gt; 15% cover <i>Rytidosperma</i> sp. and <i>Austrostipa</i> sp. combined</li> <li>&gt; 5 % bare ground</li> <li>&lt; 5% broadleaf</li> <li>Low to moderate biomass</li> <li>Moderate to high native plant diversity</li> </ul>
<b>Moderate quality</b>	Primary or secondary grassland, with a moderate component of <i>Rytidosperma</i> sp. and/or <i>Austrostipa</i> sp., and/or moderate weed cover.	<ul style="list-style-type: none"> <li>&gt; 5% cover <i>Rytidosperma</i> sp.</li> <li>&gt; 10% cover <i>Rytidosperma</i> sp. and/or <i>Austrostipa</i> sp. combined</li> <li>&gt; 3 % bare ground</li> <li>&lt; 10% broadleaf</li> <li>Low to moderate biomass</li> <li>Moderate native plant diversity</li> </ul>

**OR**

Habitat Condition	Notes	Minimum Criteria
	Native-dominated grassland typically with a moderate to high component of <i>Rytidosperma</i> sp. and/or <i>Austrostipa</i> sp., but less than High quality habitat because of one or more of the following conditions:	On a steep slope or hilltop On a south or east-facing slope Soil very shallow and/or stony, rock outcrops present Secondary grassland or contains scattered trees
<b>Low quality</b>	Larval food plants ( <i>Rytidosperma</i> sp., <i>Austrostipa</i> sp. and/or <i>Nassella neesiana</i> (Chilean needlegrass) are a minor component of the ground layer, growing sparsely or in patches among unsuitable vegetation such as:	Exotic species (excluding <i>Nassella neesiana</i> ) Native C4 grasses (such as <i>Themeda triandra</i> ) Other unsuitable native ground cover (e.g. <i>Poa labillardieri</i> , rushes/sedges)  <b>AND</b> > 10% cover <i>Rytidosperma</i> sp. and/or <i>Austrostipa</i> sp. combined < 20% broadleaf > 10% and < 50% cover <i>Nassella neesiana</i> (note low quality <i>Nassella neesiana</i> if no native species present)
<b>Chilean Needle Grass dominated</b>	Grassland dominated by <i>Nassella neesiana</i> .	> 50% cover <i>Nassella neesiana</i>
<b>Low density Chilean Needle Grass</b>	Grassland (without high abundance of other feed species) with moderate occurrence of <i>Nassella neesiana</i> .	>10 – 50% cover <i>Nassella neesiana</i>

### 3.3.4.2 Perunga Grasshopper Habitat

Due to habitat modification and fragmentation, *Perunga ochracea* (Perunga grasshopper) is thought to have a small range, occurring only in the ACT and adjacent areas in NSW. In the ACT, *P. ochracea* has been found in larger patches of native grasslands supporting *Rytidosperma* spp., *Austrostipa* spp. or *T. triandra*, including the natural temperate grassland ecological community (ACT Government, 2017a). Areas of native grassland that support these species in the Project Areas were considered habitat for *P. ochracea*.

### 3.3.4.3 Mature and Hollow-bearing Trees

An assessment was undertaken of mature and hollow-bearing trees (native and exotic species). This assessment involved searching all mature trees for hollows from ground level. When identified, the following data was recorded:

- Tree species.
- Estimate of the diameter at breast height in centimetres.

- Presence/absence of hollows in the following size classes:
  - The abundance of hollows in the following size classes:
    - Extra-small hollows <2.5 cm
    - Small hollows 2.5 – 5 cm
    - Medium hollows 5 – 10 cm
    - Large hollows 10 – 30 cm
    - Extra-large hollows >30 cm.

Notes were taken on the presence of current/past occupation; these included: chewed hollow edges, scratch marks and investigation by fauna and the presence of stick-nests.

Native hollow-bearing trees, and mature remnant *Eucalyptus* were mapped. Mature *Eucalyptus* trees (as defined in the *Loss of Mature Native Trees Key Threatening Process: Draft Action Plan* (ACT Government, 2021)) are considered to be those above 50cm DBH (in lower elevation woodland species).

#### **Superb Parrot Breeding Habitat (LRS2BProject Area and Mitchell Project Areas)**

- Consistent with Stojanovic et. al. (2021), trees assessed to have a > 50 % likelihood that they are suitable for *P. swainsonii* nesting will be mapped. These trees have the following attributes:
  - tree species is *Eucalyptus rossii* or *E. blakelyi*; and
  - trunk diameter at breast height > 70 cm; and
  - >9 tree hollows (with entrance size > 4 cm) are visible from the ground.

This assessment will only occur within areas not surveyed in 2023.

#### **Gang-gang Cockatoo Breeding Habitat (LRS2BProject Area and Mitchell Project Areas)**

- Specific methods to assess *C. fimbriatus* breeding habitat are being developed by the ACT Government. These methods are expected to be available in time for the 2023/24 field assessment.

#### **3.3.4.4 Bird Foraging Habitat**

Foraging habitat was assessed specially for *C. fimbriatus*, *P. swainsonii*, and *Lathamus discolor* (swift parrot).

Within the ACT, *P. swainsonii* foraging habitat is positively associated with trees and shrubs between 3 - 20 m high (ACT Government, 2019), with the species predominantly feeding on native or non-local plants such as *Eucalyptus melliodora* (yellow box), *E. sideroxylon* (mugga ironbark), *E. cinerea* (argyle apple), *Acacia* spp. (wattle species), *Prunus* spp. (ornamental plums) and *Ulmus* sp. Additionally, lerp taken from eucalypts forms an important part of *P. swainsonii* diet. *Polytelis swainsonii* are also known to forage in native and exotic grasslands preferring the seeds *Rytidosperma* spp., *Critesion* spp., *Triticum aestivum* and *Avena sativa*.

*Callocephalon fimbriatus* natural foraging habitat comprises mainly of *Eucalyptus* sp. and *Acacia* sp. in woodland assemblages. The species will feed on exotic species, primarily *Crataegus monogyna*, *Cotoneaster glaucophyllus* (cotoneaster) and *Pyracantha* sp. (hawthorn) and within suburban areas, often feeds on seeds and berries from other ornamental trees, shrubs, and hedges (Higgins, 1999). The EPBC Act conservation advice for *C. fimbriatus* (DAWE, 2022) notes that while exotic vegetation in urban environments forms part of their diet, it is not habitat critical to the survival of the species.

The Project Area provides potential temporary foraging habitat for *Lathamus discolor* during migration with planted native winter-flowering species such as *Eucalyptus melliodora*, *E. sideroxylon* and *E. cinerea*. The species is more likely to utilise woodland habitats in Canberra Nature Park rather than planted trees in an urban context, however it has been included noting that it was a focal species in previous assessments in the Project Area.

Areas of potential high use foraging habitat for these species were determined based on the presence of habitat, observed individuals and in consultation with ACT Government Ecologists.

### 3.3.4.5 Reptile Habitat Assessment

Areas of potential threatened reptile habitat, including patches of tussock grasses, coarse woody debris, rock habitat, rocky outcrops, and termite mounds were mapped. Areas potentially supporting suitable tussocky grassland suitable for *Delma impar* (striped legless lizard) will be mapped.

### 3.3.5 Threatened Flora Habitat Assessment

Remnant native grassland or grassy woodland patches with an understorey in moderate to high condition were considered habitat for threatened flora, specifically *Leucochrysum albicans subsp. tricolor* (hoary sunray), *Rutidosis leptorhynchoides* (button wrinklewort), and *Swainsona recta* (small purple-pea), which were identified as having a moderate to high likelihood of occurring in the Project Areas (Section 4.2), and the *Dianella amoena* (matted flax-lily).

### 3.3.6 Targeted Threatened Species Surveys

#### 3.3.6.1 Golden Sun Moth Surveys

Targeted surveys for *Synemon plana* will be undertaken during the 2023/24 flying season in areas of mapped habitat. Surveys commenced after flying moths are confirmed present at ACT reference sites. Surveys were undertaken following the survey guidelines (DEWHA, 2009):

- Locally expecting flying season to be between early November and late December.
- Warm days above 20°C.
- Warmest part of the day between 10 am and 2 pm.
- Clear or mostly cloudless sky.
- Still or relatively still wind conditions.
- At least two days since rain.

Each survey was undertaken by ecologists slowly walking through suitable habitats and scanning and counting the number flying moths observed. Survey paths and the number of moths observed were recorded. In addition, for each moth observed their location and sex were recorded.

To enable data collected by Biosis (2019) and ARUP (2021) to be included in the analysis of the distribution of *S. plana* habitat, following completion of potential habitat mapping and targeted surveys, results from the habitat mapping and population surveys from all three assessments were pooled to determine whether habitat is likely to be occupied habitat based on the criteria below:

- **Confirmed:** *S. plana* habitat categories have been confirmed and *S. plana* have been recorded within the patch OR *S. plana* habitat has been confirmed and *S. plana* have been observed within 200m of the patch.
- **Possible:** vegetation meets the *S. plana* category assessment, but no *S. plana* have been recorded within 200m of the patch.
- **Unlikely:** potential *S. plana* habitat is absent based on the absence or scarcity of suitable feed species; however, *S. plana* have been recorded in or adjacent to these habitat areas, indicating flying moths have moved to the site from other areas.

### 3.3.6.2 Perunga Grasshopper

The *Perunga ochracea* (Perunga grasshopper) is hard to detect and survey guidelines have not been developed for this species. Targeted surveys are not recommended due to the difficulty in detecting these species. For the purpose of this assessment, it is assumed that this species is present in areas deemed suitable habitat.

### 3.3.6.3 Threatened Flora Surveys

Threatened flora transects will be conducted in areas identified as suitable habitat for *L. albicans*, *R. leptorhynchoides*, and *S. recta* and the *D. amoena*.

The parallel field traverse is the preferred option for conducting field surveys for threatened flora species under the Biodiversity Assessment Method (BAM). For herbs and forbs, the maximum distance when using the parallel field traverse is 10m for open vegetation and 5m for dense vegetation (NSW Government, 2020).

October through to January is the highest detection rate for all the focal species. Survey efforts will be undertaken in these months to improve detection rates.

### 3.3.7 Other Species

The following species were identified as having a moderate to high likelihood of occurrence in one or both of the Project Areas but were not considered to require targeted surveys.

#### 3.3.7.1 White-throated Needletail

*Hirundapus caudacutus* (white-throated needletail) breeds exclusively in Asia with the species migrating to Australia during the non-breeding season. It is widespread in eastern and south-eastern Australia between October and April and is recorded in all coastal regions of Queensland and NSW and into adjacent inland plains across the western slopes of the Great Divide.

*Hirundapus caudacutus* is an aerial specialist and rarely lands. In the ACT, the species occurs in flocks of between five and 50 individuals and does not exhibit discernible terrestrial habitat preferences. It commonly occurs at heights of between one to 300 m, to over 1,000 m above ground level (ACT Government, 2018). The population size within Australia has not been quantified but is thought to be substantially over 10,000 individuals.

Potential threats to the species in Australia are limited, including collision with overhead wire, lighthouses and wind turbines is a threat to individuals, although not an entire population. Due to the limited nature of threats to the species or migratory capacity, there are no threat abatement or recovery actions underway or proposed (TSSC, 2019).

*Hirundapus caudacutus* are likely to be an intermittent visitor to the aerial habitat over the Project Areas, consistent with other parts of the landscape surrounding the ACT. It is not anticipated that the species would interact with habitat or infrastructure in the Project Areas.

Due to the aerial nature of its lifestyle and wide distribution, along with the absence of substantial changes to landscape use or vegetation patterns likely in the Project Areas, impacts from the proposed action on the species are considered unlikely.

While *Hirundapus caudacutus* was identified as having a moderate likelihood of occurrence in the Mitchell Project Area and has been recorded in the LRS2B Project Area, due to the aerial and highly mobile nature of the species, a habitat assessment and targeted surveys for this species would not be informative and are not warranted. Based on available information, a significant impact assessment for this species is outlined in **Appendix A**.

### 3.3.7.2 Grey-headed Flying-fox

A colony of *Pteropus poliocephalus* (grey-headed flying-fox) occurs within Commonwealth Park, adjacent to the northern shoreline of Central Basin and approximately 350m east of Section A within the LRS2B Project Area.

The camp is managed by the NCA in accordance with the *Commonwealth Park Grey Headed Flying-Fox Management Plan* (Ecosure, 2020). The camp was first established in 2003 and has since been seasonally occupied by the species. As of 2020, the maximum number of recorded *P. poliocephalus* within the camp was 8,190, and the maximum observed camp extent was 1.47 ha. Roost trees used within the park primarily consist of pine trees, eucalypts, poplars, and oaks with an intermittent understorey (Ecosure, 2020).

The *Referral guideline for management actions in grey-headed and spectacled flying-fox camps – EPBC Act Policy Statement* (DoE, 2015) provides guidance regarding the management of flying fox camps. One of the criteria considered within this guidance is whether camps are nationally significant or not. A nationally significant flying fox camp is defined as 'camps that have contained  $\geq 10,000$  grey-headed flying-foxes in more than one year in the last 10 years, or have been occupied by more than 2,500 grey-headed flying-foxes permanently or seasonally every year for the last 10 years.'

The camp in Commonwealth Park is not currently considered nationally significant (DCCEEW, 2023b), however it is likely to in the future and could become one at any time. In the last decade, the camp has been occupied by more than 2,500 individuals, and has the potential for a sudden influx of more than 10,000 individuals (Ecosure, 2020).

Actions that may impact on nationally-important flying-fox camps may include the dispersal of animals through disturbance by noise (DoE, 2015), which could include construction noise. Further, activities that are conducted in spring to summer are also identified as higher risk, as they coincides with the species breeding cycle, and occur at a time when the species may be susceptible to heat stress events (Ecosure, 2020).

DoE (2015) and Ecosure (2020) advises that proposed activities should be modified to reduce impacts. This includes:

- Seeking authorisation or advice by *P. poliocephalus* expert (required prior to proposed activity).
- Avoiding disturbance in the critical breeding season and excessive noise or machinery within 100 m of the camp.
- Reduce or modify the frequency, intensity duration of an activity where possible.
- Monitor the effect of new activities or activities with unknown level of risk before, during and after proposed activity.

Due to the proximity of Section A of the LRS2B Project Area to the Commonwealth Park diurnal roosting location, further consideration is required to consider potential construction and operational impacts of the project on the species. In particular, impacts associated with construction and operational noise, along with interactions with overhead powerlines are recommended to be considered. Based on available information, a significant impact assessment for this species is outlined in **Appendix A**. No field assessment is required for this species.



### 3.3.7.3 Murray Cod

No assessment of the aquatic values within the LRS2B Project Area have occurred or are planned.

Prior to the Molonglo River being flooded to create Lake Burley Griffin, the river historically held a range of native fish species, including *Maccullochella peelii* (Murray cod), *Macquaria australasica* (Macquarie perch), *Macquaria ambigua* (golden perch) and trout cod (*Maccullochella macquariensis*). Between the 1930s and 1960s, pollution associated with upstream mine tailings dam collapses resulted in the loss of fish from the Molonglo River (Beitzel, Evans, & Jekabsons, 2018).

Since the 1960s Lake Burley Griffin has been regularly stocked with fish. Stocking was historically undertaken prior to the 1980s using exotic species such as *Oncorhynchus mykiss* (rainbow trout) and *Salmo trutta* (brown trout). Today, only native species are stocked, including *M. peelii*.

A fish survey in 2012 demonstrated that the populations of large bodied native fish in the lake were entirely dependent upon ongoing stocking (Beitzel, Evans, & Jekabsons, 2018). The most recent release was of 14,000 *M. peelii* in 2021/2022 (ACT Government, 2022). The presence of this species is therefore confirmed and no additional surveys are required.

The population of *M. peelii* within Lake Burley Griffin is not recognised as an important population of the species. The closest important population of the species is within the Murrumbidgee River (downstream of the Lake) within the ACT (National Murray Cod Recovery Team, 2010). Based on available information, a significant impact assessment for this species is outlined in **Appendix A**.

## 4.0 Results

### 4.1 Desktop Review

#### 4.1.1 EPBC Act Protected Matters Search

Results of the EPBC Act Protected Matters Search (PMST) are displayed in **Table 4.1** and **Table 4.2**. Commentary is provided on the results relevant to the Project Areas. The complete reports are provided in **Appendix B**.

**Table 4.1 Results of EPBC Act Protected Matters Search Tool – LRS2B Project Area**

MNES	Protected Matters Search Results	Comment
Listed Threatened Ecological Communities	2	<p>Parts of the Project Area are within the former extent of <i>Natural Temperate Grasslands of the South Eastern Highlands</i> critically endangered ecological communities. Regional mapping identifies small, isolated patches of natural temperate grassland are recorded within the Project Area on Dudley Street. Additional patches were located on Bowen Drive, Barton and at Stirling Park, Yarralumla.</p> <p>Parts of the Project Area are located within the former extent of the <i>White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grasslands</i> critically endangered ecological community. Regional mapping identifies areas of vegetation meeting criteria for inclusion in this community approximately 0.7 km from the Project Area in Red Hill and the Oakey Hill and Mount Taylor complex.</p>
Listed Threatened Species	61 22 birds, 3 fish, 4 frogs, 3 reptiles, 3 insect, 6 mammals, 20 plants	A likelihood of occurrence has been completed for listed threatened species ( <b>Appendix BC</b> ).
Listed Migratory Species	14	A likelihood of occurrence has been completed for listed migratory species ( <b>Appendix BC</b> ).

**Table 4.2 Results of EPBC Act Protected Matters Search Tool – Mitchell Project Area**

MNES	Protected Matters Search Results	Comment
Listed Threatened Ecological Communities	2	<p>Parts of the Project Area are within the former extent of <i>Natural Temperate Grasslands of the South Eastern Highlands</i> critically endangered ecological communities. Regional mapping identifies small, isolated patches of natural temperate grassland are recorded within the Project Area in the adjacent Crace Grasslands.</p> <p>The Project Area is located in an area that was part of the former extent of the <i>White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grasslands</i> critically endangered ecological community.</p>

MNES	Protected Matters Search Results	Comment
Listed Threatened Species	52 18 birds, 3 fish, 4 frogs, 3 insects, 5 mammals, 3 reptiles, 16 plants	A likelihood of occurrence has been completed for listed threatened species ( <b>Appendix B</b> ).
Listed Migratory Species	14	A likelihood of occurrence has been completed for listed migratory species ( <b>Appendix BC</b> ).

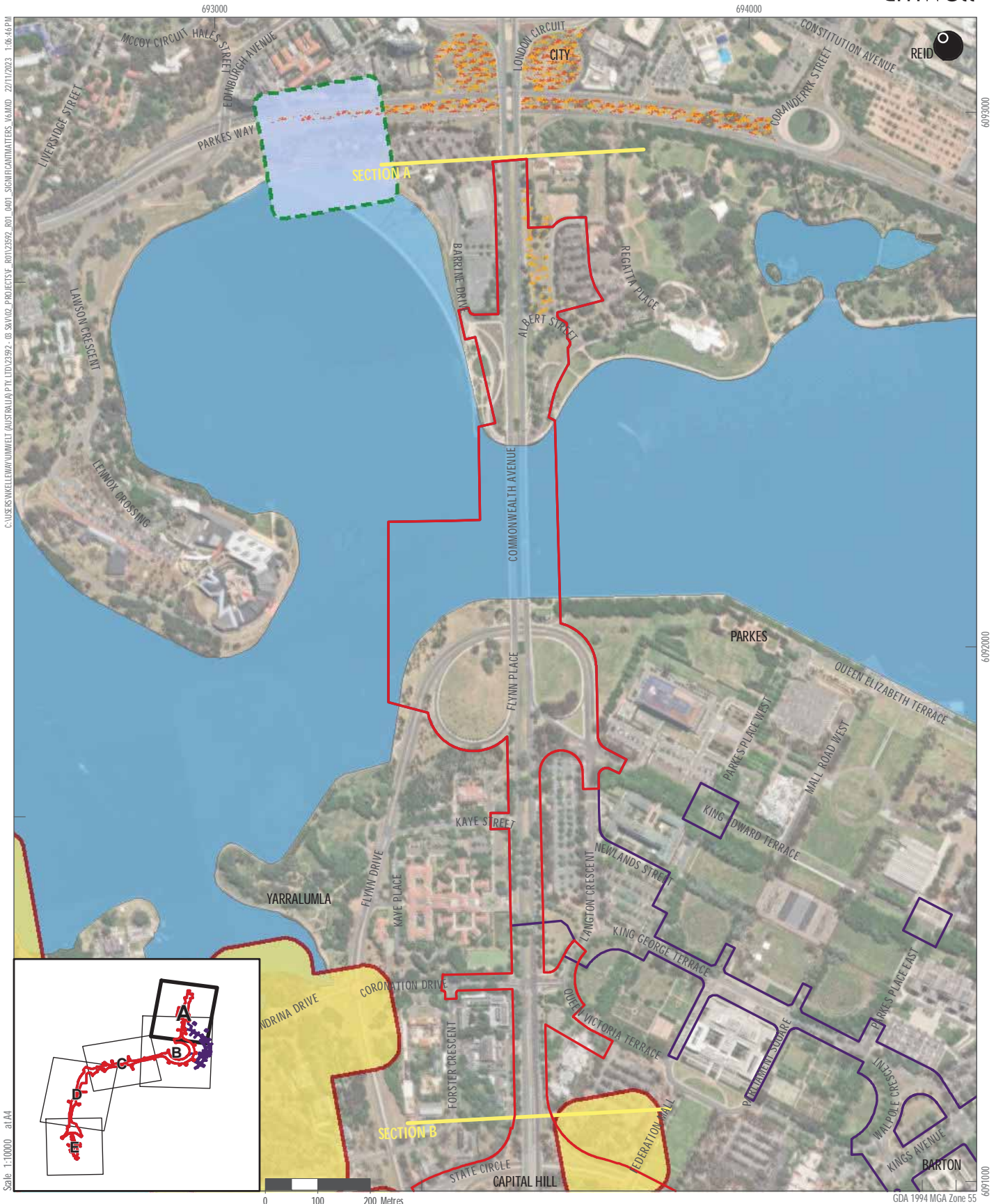
## 4.1.2 ACT Significant Matters

### 4.1.2.1 Commonwealth Park - Woden Project Area

ACTmapi identified *S. plana* records along Adelaide Avenue and Yarra Glen Drive (north of Carruthers Street). Two threatened ecological communities, four threatened fauna species, two threatened flora species and two records for unspecified rare plants were also recorded in the vicinity of the Project Area. No registered or provisionally registered trees were recorded, with the nearest registered tree located approximately 140 m to the west of Irving Street, Phillip. The results of the ACTmapi search are presented in **Figure 4.1**.

### 4.1.2.2 Mitchell Project Area

Adjacent to the Mitchell Project Area is the Crace Grasslands Nature Reserve, which supports native grassland and natural temperate grassland. Five threatened fauna species and one threatened flora species were recorded in the adjacent grassland community. ACTmapi identified no registered trees in or near the Project Area. The results of the ACTmapi search are presented in **Figure 4.2**.



C:\Users\Kwelle\Documents\umwelt (australia) Pty Ltd\2392 - 03\_SAV02\_PROJECTSFE\_ROMY2392 - 01\_0401\_SIGNIFICANTMATTERS\_V6.MXD 22/11/2023 1:06:46 PM

Scale 1:10000 at A4

693000

6092000

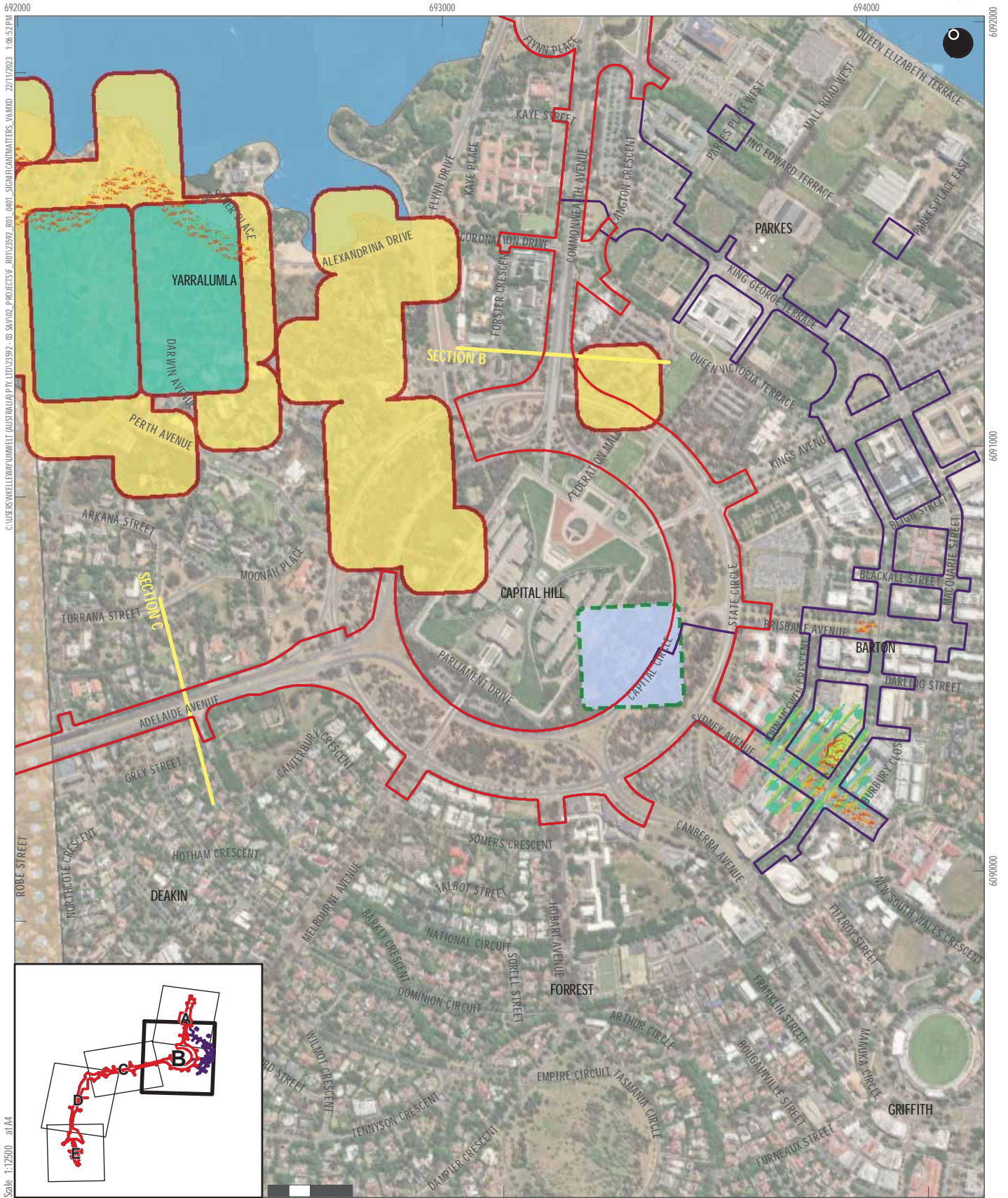
691000

GDA 1994 MGA Zone 55

- Legend**
- Option 2B
  - Option 2B National Triangle – Barton Section
  - Threatened Fauna**
  - Golden Sun Moth (*Synemon plana*)
  - Murray Cod (*Maccullochella peelii peelii*)
  - Macquarie Perch (*Macquaria australasica*)
  - Murray River Crayfish (*Euastacus armatus*)
  - Silver Perch (*Bidyanus bidyanus*)
  - Trout Cod (*Maccullochella macquariensis*)
  - White-spined Blackfish (*Gadopsis bispinosus*)
  - Murray Cod (*Maccullochella peelii peelii*)
  - Other Significant Entities**
  - Rare and Other Important Plants
  - Threatened Flora**
  - Rutidosia leptorhynchoides* (Button Wrinklewort)
  - Leucochrysum albicans* subsp. *tricolor* (Hoary Sunray)

FIGURE 4.1.A

Significant Matters Recorded in the LRS2B Project Area (ACT Government, 2023)

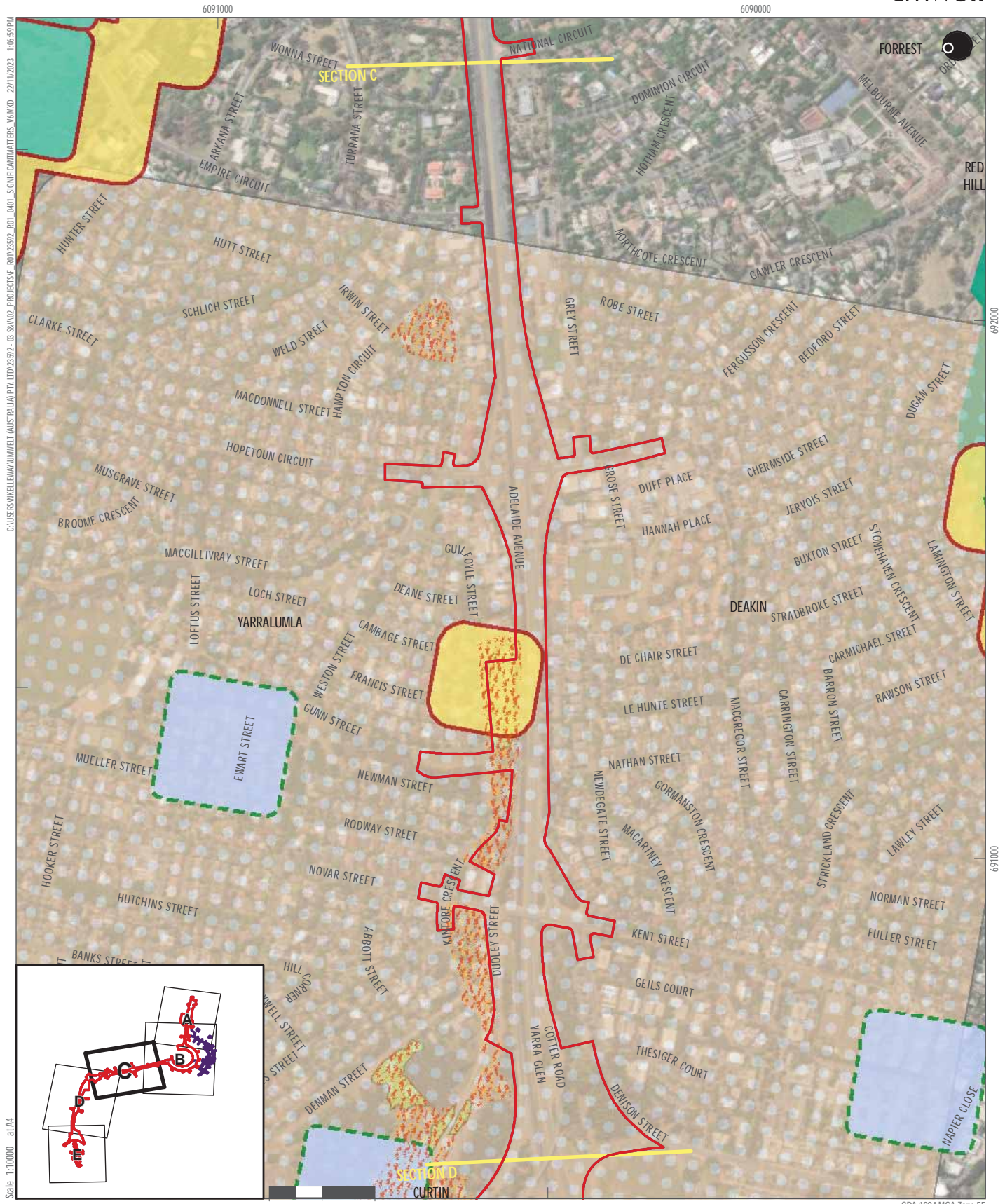


- |  |  |
|--|--|
| Option 2B  | Other Significant Entities   |
| Option 2B National Triangle – Barton Section             | Rare and Other Important Plants                                    |
| <b>Threatened Fauna</b>                                  | <i>Rutidosia leptorhynchoides</i> (Button Winklewort)              |
| Golden Sun Moth ( <i>Synemon plana</i> )                 | <i>Leucochrysum albicans</i> subsp. <i>tricolor</i> (Hoary Sunray) |
| Canberra Raspy Cricket ( <i>Cooraboorama canberrae</i> ) | <b>Grasslands</b>  |
| Murray Cod ( <i>Maccullochella peelii peelii</i> )       | Natural temperate grassland NTG                                    |
| Macquarie Perch ( <i>Macquaria australasica</i> )        | Threatened Woodlands   |
| Murray River Crayfish ( <i>Euastacus armatus</i> )       |  |
| Silver Perch ( <i>Bidyanus bidyanus</i> )                |  |

- Image source: *Maccullochella macquariensis*  
 Two-spined Blackfish (*Gadopsis bispinosus*)  
 Spotted-tailed Quoll (*Dasyurus maculatus*)  
 Murray Cod (*Maccullochella peelii peelii*)

FIGURE 4.1.B

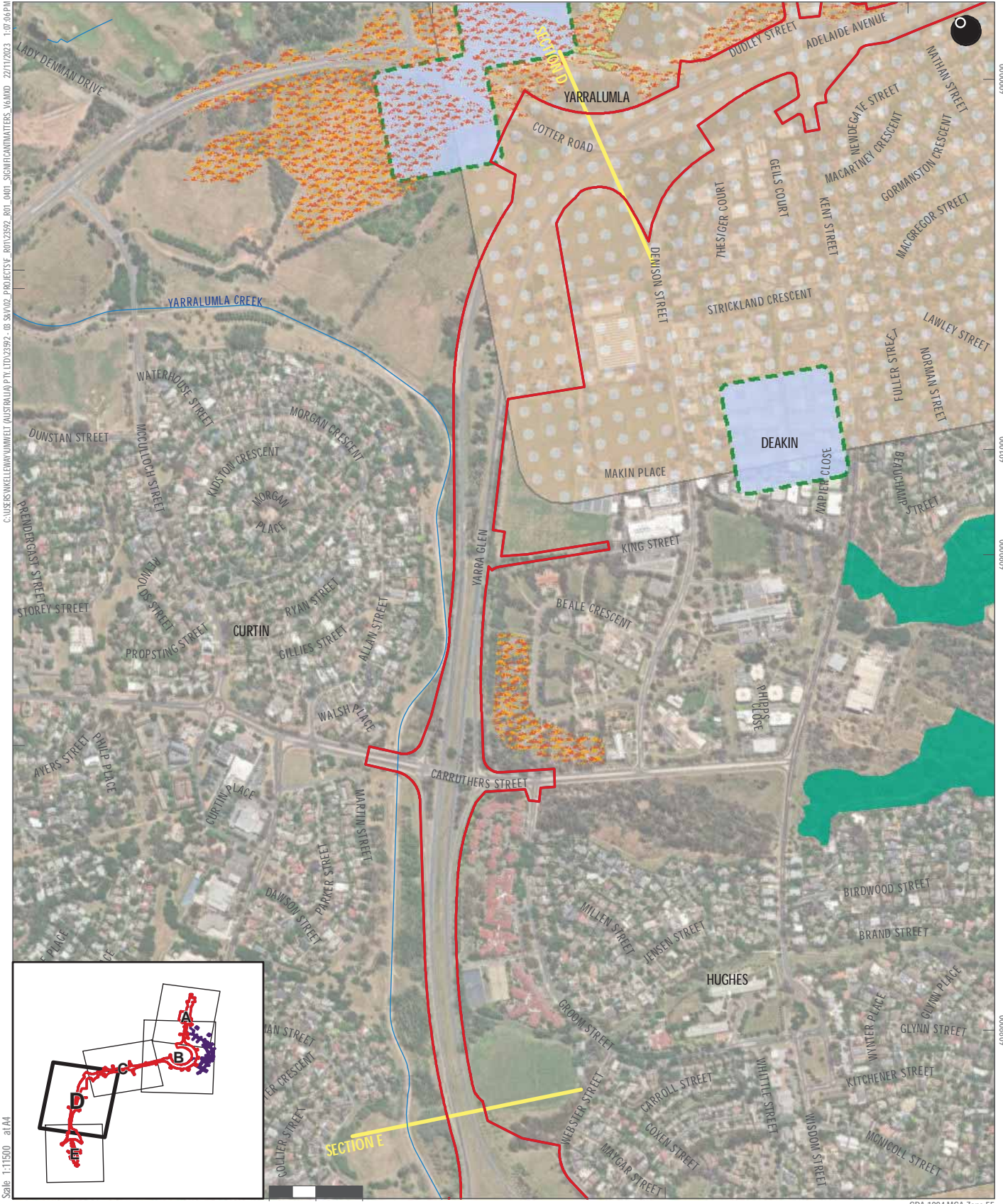
Significant Matters Recorded in the LRS2B Project Area (ACT Government, 2023)



- Legend**
- Option 2B
  - Option 2B National Triangle – Barton Section
- Threatened Fauna**
- Golden Sun Moth (*Synemon plana*)
  - Murray Cod (*Maccullochella peelii peelii*)
  - Macquarie Perch (*Macquaria australasica*)
  - Murray River Crayfish (*Euastacus armatus*)
  - Silver Perch (*Bidyanus bidyanus*)
  - Trout Cod (*Maccullochella macquariensis*)
  - Spotted-tailed Quoll (*Dasyurus maculatus*)
- Other Significant Entities**
- Rare and Other Important Plants
- Threatened Flora**
- Rutidosia leptorrynchoides* (Button Wrinklewort)
  - Leucochrysum albicans* subsp. *tricolor* (Hoary Sunray)
- Grasslands**
- Natural temperate grassland NTG
  - Threatened Woodlands
- Image source: Spotted-tailed Quoll (*Dasyurus maculatus*)

FIGURE 4.1.C

Significant Matters Recorded in the LRS2B Project Area (ACT Government, 2023)

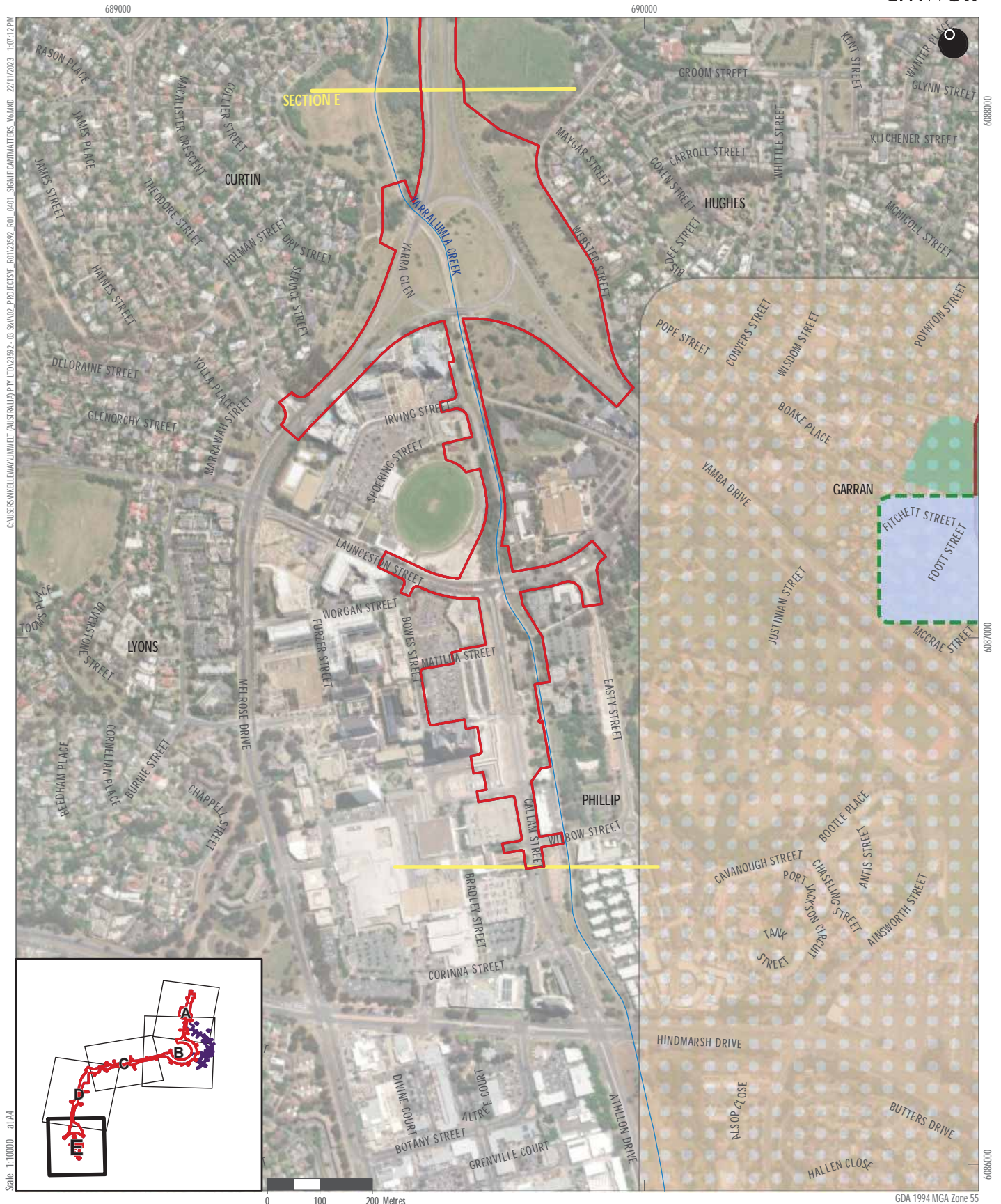


- Legend**
- Option 2B
  - Option 2B National Triangle – Barton Section
  - Threatened Fauna**
  - Golden Sun Moth (*Synemon plana*)
  - Murray Cod (*Maccullochella peelii peilii*)
  - Macquarie Perch (*Macquaria australasica*)
  - Murray River Crayfish (*Euastacus armatus*)
  - Silver Perch (*Bidyanus bidyanus*)
  - Trout Cod (*Maccullochella macquariensis*)
  - Spotted-tailed Quoll (*Dasyurus maculatus*)
  - Image Shrew-spined Blackfish (*Gadopsis bispinosus*)

- Other Significant Entities**
- Rare and Other Important Plants
  - Grasslands
  - Natural temperate grassland NTG
  - Threatened Woodlands

FIGURE 4.1.D

Significant Matters Recorded in the LRS2B Project Area (ACT Government, 2023)



- Legend**
- Option 2B
  - Option 2B National Triangle – Barton Section
  - Murray Cod (*Maccullochella peelii peilii*)
  - Macquarie Perch (*Macquaria australasica*)
  - Murray River Crayfish (*Euastacus armatus*)
  - Silver Perch (*Bidyanus bidyanus*)
  - Trout Cod (*Maccullochella macquariensis*)
  - Two-spined Blackfish (*Gadopsis bispinosus*)
  - Spotted-tailed Quoll (*Dasyurus maculatus*)

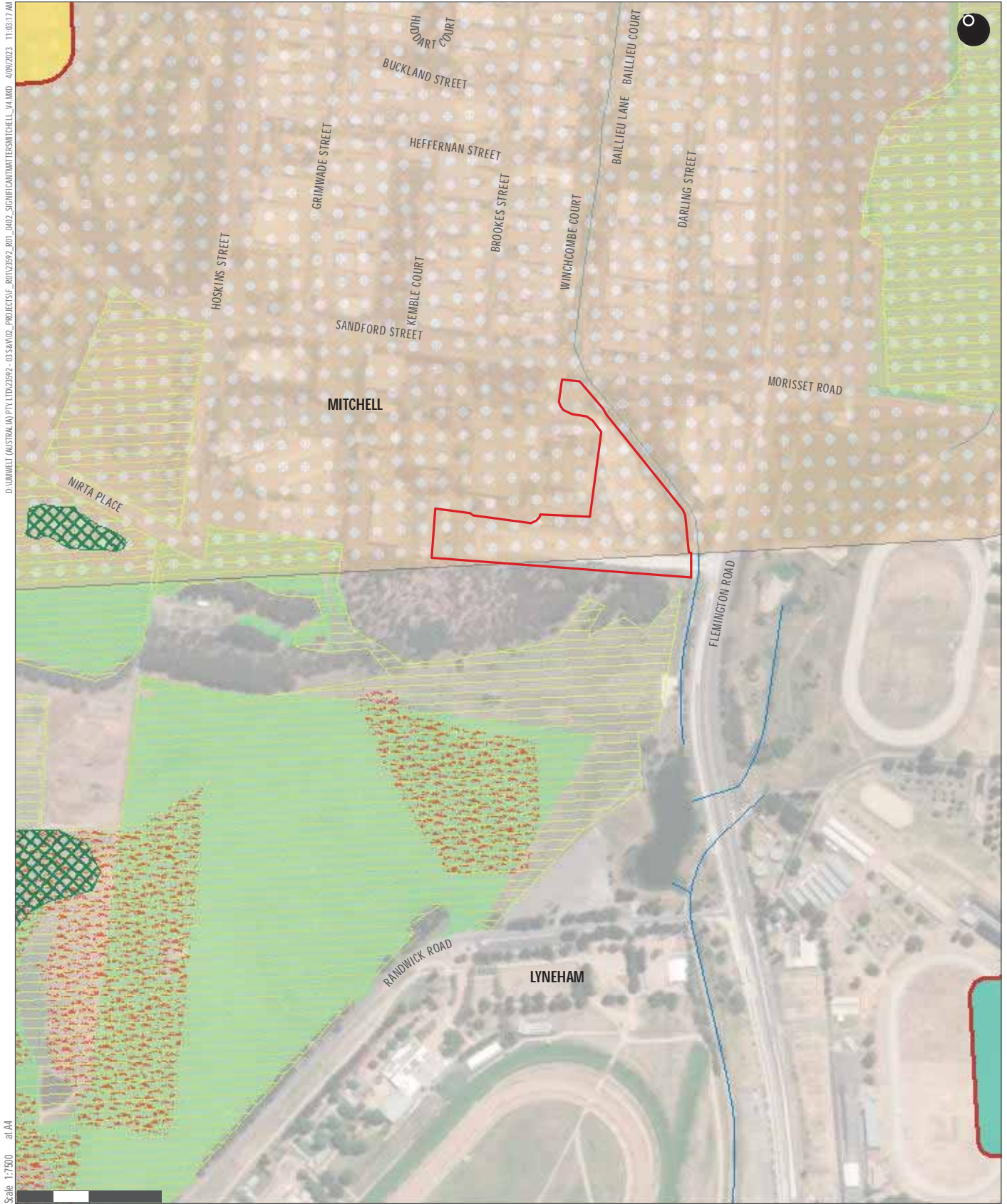
- Other Significant Entities**
- Rare and Other Important Plants
- Threatened Flora**
- Leucochrysum albicans* subsp. *tricolor* (Hoary Sunray)
  - Threatened Woodlands

FIGURE 4.1.E

Significant Matters Recorded in the LRS2B Project Area (ACT Government, 2023)



D:\UMWELT (AUSTRALIA) PTY LTD\2592 - 03 SKM\02\_PROJECTS\F\_001\2592\_ROT\_0402\_SIGNIFICANTMATTERSMITCHELL\_V4.MXD 4/09/2023 11:03:17 AM



Scale 1:7500 at A4

0 100 200 Metres

GDA 1994 MGA Zone 55

**Legend**

- Project Areas
- Threatened Fauna**
- Golden Sun Moth (*Synemon plana*)
- Striped Legless Lizard (*Delma impar*)
- Threatened Flora**
- Rutidosia leptorhynchoides* (Button Wrinklewort)
- Leucochrysum albicans* subsp. *tricolor* (Hoary Sunray)
- Spotted-tailed Quoll (*Dasyurus maculatus*)
- Grasslands**
- Native grassland NG
- Natural temperate grassland NTG
- Other Significant Entities**
- Threatened Woodlands

FIGURE 4.2

Significant Matters Recorded in the Mitchell Project Area (ACT Government, 2023)

## 4.2 Likelihood of Occurrence

Threatened species with a moderate or high likelihood of occurring in the Project Area are summarised in **Table 4.3**.

A total of 13 species listed under the EPBC Act and/or the NC Act were assessed as having a moderate or high likelihood of occurrence in the LRS2B Project Area. This includes five bird species, one fish species, one reptile species, two invertebrate species, one mammal species and three flora species.

A total of six species listed under the EPBC Act and/or the NC Act were assessed as having a moderate or high likelihood of occurrence in the Mitchell Project Area. This includes four bird species and two mammal species.

**Table 4.3 Likelihood of Occurrence Summary – LRS2B Project Area**

Scientific Name	Common Name	EPBC Act	NC Act	Database	Likelihood of occurrence
<b>Birds</b>					
<i>Callocephalon fimbriatum</i>	gang-gang cockatoo	endangered	endangered	AoLA, CNM	Known
<i>Hirundapus caudacutus</i>	white-throated needletail	vulnerable	vulnerable	PMST; AoLA, CNM	High
<i>Lathamus discolor</i>	swift parrot	critically endangered	critically endangered	PMST; AoLA; CNM	High
<i>Polytelis swainsonii</i>	superb parrot	vulnerable	vulnerable	PMST; AoLA; CNM	Known
<b>Fish</b>					
<i>Maccullochella peeli</i>	Murray Cod	vulnerable	-	PMST; CNM; AoLA	Known
<b>Reptiles</b>					
<i>Delma impar</i>	striped legless lizard	vulnerable	vulnerable	PMST; AoLA; ACTmapi	Moderate
<b>Insects</b>					
<i>Synemon plana</i>	golden sun moth	vulnerable	endangered	PMST; AoLA; CNM; ACTmapi	Known
<i>Perunga ochracea</i>	Perunga grasshopper	-	vulnerable		Moderate
<b>Mammals</b>					
<i>Pteropus poliocephalus</i>	grey-headed flying-fox	vulnerable	vulnerable	PMST; CNM	Moderate
<b>Plants</b>					
<i>Leucochrysum albicans</i> subsp. <i>tricolor</i>	hoary sunray	endangered	-	PMST; ACTmapi	Moderate
<i>Rutidosis leptorhynchoides</i>	button wrinklewort	endangered	endangered	PMST; AoLA; CNM; ACTmapi	Moderate
<i>Swainsona recta</i>	small purple pea	endangered	endangered	PMST; AoLA; ACTmapi	Moderate

Table 4.4 Likelihood of Occurrence Summary – Mitchell Project Area

Scientific Name	Common Name	EPBC Act	NC Act	Database	Likelihood of occurrence
<b>Birds</b>					
<i>Aphelocephala leucopsis</i>	southern whiteface	vulnerable	not listed	PMST; AoLA	Moderate
<i>Melanodryas cucullata cucullata</i>	hooded robin (south-eastern)	endangered	vulnerable	PMST; AoLA; CNM	Moderate
<i>Callocephalon fimbriatum</i>	gang-gang cockatoo	endangered	endangered	AoLA, CNM	Moderate
<i>Climacteris picumnus victoricae</i>	brown treecreeper (south-eastern)	vulnerable	vulnerable	PMST; AoLA; CNM	Moderate
<b>Mammals</b>					
<i>Pteropus poliocephalus</i>	grey-headed flying-fox	vulnerable	vulnerable	PMST; AoLA; CNM	Moderate

## 4.2.1 Summary of Previous Ecological Information

Ecological values listed under the EPBC Act and/or the NC Act have been identified during previous ecological surveys that were undertaken between Commonwealth Park and Woden, specifically Biosis, (2019), ARUP (2021) and Umwelt (2022), with the latter consolidating the results of the previous reports into a single report that included data collected in the 2021/2022 field season (also presented in this report). ARUP (2021) also included surveys in an area immediately adjacent to the Mitchell Project Area.

No ecological assessments have been undertaken within the Mitchell Project Area, however, a row of native trees is known to have been planted on site (M. Andrew. pers. comm, 2023). The species are not known and will be confirmed as part of the 2023/24 field assessment.

ARUP (2021) surveyed an area in the Crace Nature Reserve, outside of, but immediately adjacent to the southern boundary of the Mitchell Project Area. This area was confirmed to support a patch (3.25 ha) of native plantation. The patch has an open to mid-dense canopy consisting of planted *Eucalyptus bicostata* (southern blue gum), *E. mannifera* (brittle gum) and *E. bridgesiana* (apple box), with a sparse exotic shrub layer dominated *Crataegus monogyna* (hawthorn) and *Rosa rubiginosa* (sweet briar), and a ground layer dominated by exotic *Phalaris aquatica* with some *N. neesiana* and native perennials including *Austrostipa scabra* (slender speargrass), *Rytidosperma carphoides* (short wallaby grass), *Bothriochloa macro* (Red-leg grass) and *Chloris truncata* (windmill grass).

ARUP (2021) also recorded a small (approximately 1 ha) patch of modified grassland, which supports native grasses and/ or forbs including *A. scabra*, *R. carphoides*, *B. macra*, *Themeda triandra* (kangaroo grass), *C. truncata*, *Wahlenbergia communis* (tufted bluebell). This patch reportedly supports 0.8 ha of low-quality *S. plana* habitat, with four male *S. plana* being recorded during species surveys.

ARUP (2021) recorded three species declared under the PP&A Act, namely *Crataegus monogyna* (hawthorn) and *Rosa rubiginosa* (sweet briar) and the highly invasive *N. neesiana*, which also a Weed of National Significance. The presence of these species in the Mitchell Project Area has not been confirmed.

## 4.2.2 Habitat Connectivity Values

The ACTmapi 'Significant Species, Vegetation Communities and Registered Trees' layer (ACT Government, 2022; Barret and Love, 2012) includes layers demonstrating connectivity for generalist, woodland, and forest bird species throughout Canberra, based on the presence and density of the trees.

### 4.2.2.1 LRS2B Project Area

The habitat connectivity value for generalist (**Figure 4.3**) species is mostly low within the LRS2B Project Area, due to the presence of open grasslands and planted exotic trees. In addition, generalist species have greater versatility in the vegetation types utilised. The native and exotic tree plantings present in the LRS2B Project Area are used by birds dispersing through the surrounding landscape, with the Yarralumla Creek corridor known to be used by a particularly broad range of species. Within the National Triangle – Barton Section, low levels of habitat connectivity are interspersed along the light rail alignment.

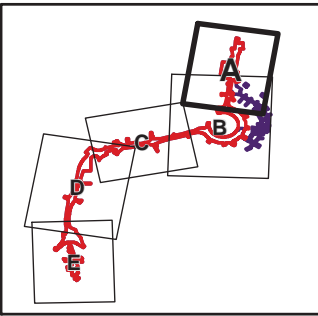
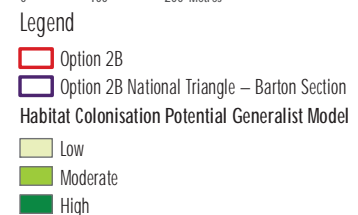
While most of the LRS2B Project Area supports areas with low habitat connectivity value for woodland (Figure 4.4) bird species, patches with medium connectivity value are present, i.e. between Melrose Drive and State Circle. These areas are likely to provide a least-cost pathway for birds flying between the Molonglo Valley and Red Hill Nature Reserve. In addition, these areas are increasingly utilised by *P. swainsonii* to travel from breeding grounds in the Molonglo Valley to forage within the Project Area and nearby nature reserves (L. Rayner pers. comm, 2022). This information is not incorporated in the connectivity modelling by ACT Government. There is potential for individual trees within these areas of medium connectivity value to substantially contribute to the integrity of these connectivity corridors for the purposes of *P. swainsonii* movement. Low-value corridors are also identified between the Mount Taylor and Isaacs Ridge Nature Reserves.

The habitat connectivity value is moderate for forest species (Figure 4.5) between Mount Taylor and Issacs Ridge Nature Reserves, along the Yarralumla Creek and across the National Triangle – Barton Section, following the major roads. The Project Area also has areas of high connectivity value for forest bird species within the corridor between the Molonglo Valley and Red Hill Nature Reserve located between Melrose Drive and State Circle. ACTmapi also indicates the National Triangle – Barton Section contains relatively important functional canopy connection for the localised area.

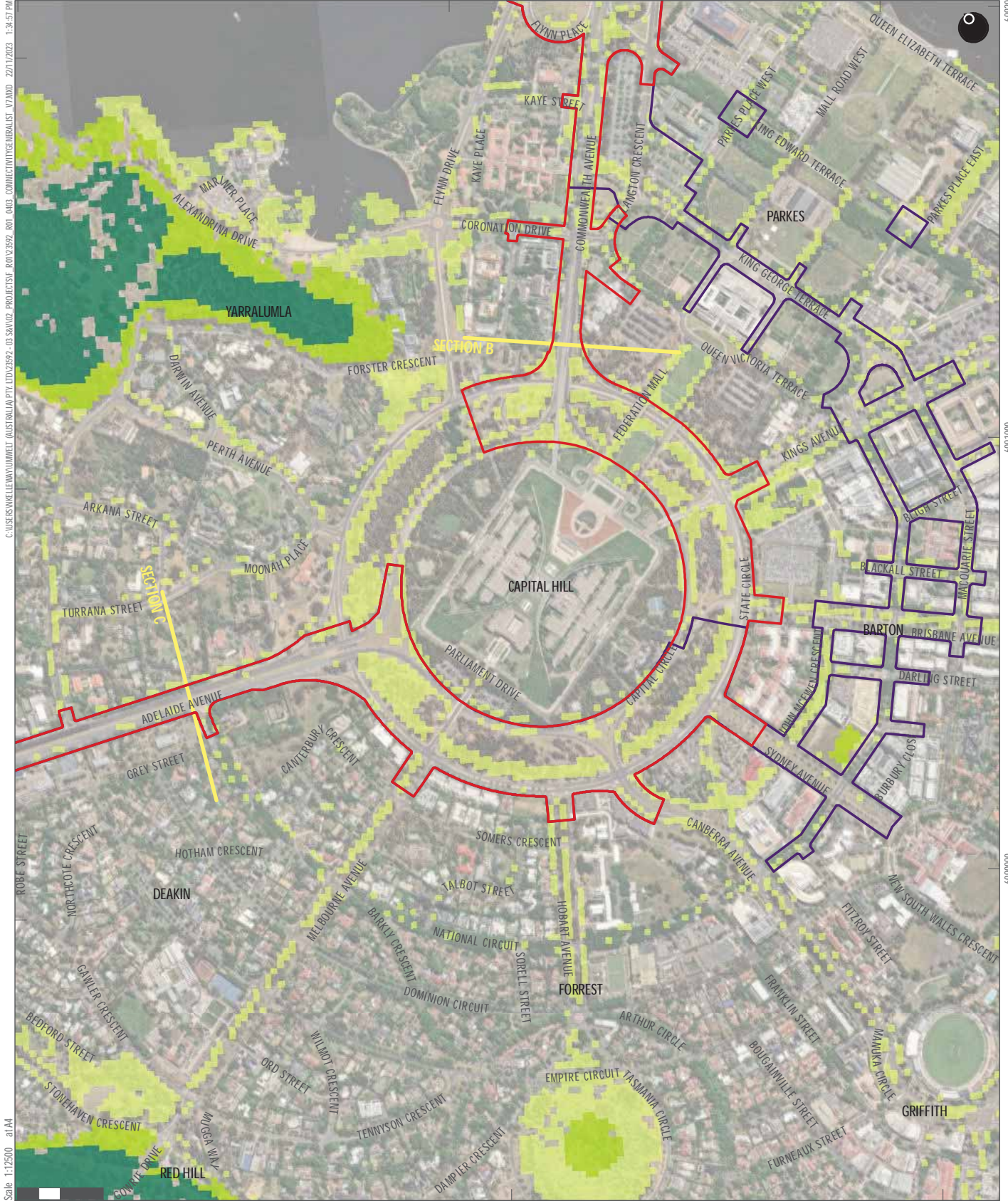
#### 4.2.2.2 Mitchell Project Area

A habitat colonization potential value search for the Mitchell Project Area indicates that the site has no to low habitat value for generalist (Figure 4.6), woodland (Figure 4.7) and forest bird species (Figure 4.8), with all low values of potential habitat on the border with the adjacent southern woodlands.

ACTmapi indicates that the Mitchell Project Area sits adjacent to a significant regional and local link between habitat areas in the region, with a significant east-west habitat corridor linking Majura Nature Reserve with vegetation areas in western Canberra on the southern Project Area boundary. This link would provide a least-cost path for fauna dispersal particularly bird species reliant on 'stepping-stone' woodland communities. Planted trees across the Project Area sit near this regional link and are likely to contribute to canopy linkage. Planted trees on the southern border of the Project Area in particular, may function as part of the overall habitat linkage woodland patch.



**FIGURE 4.3.A**  
**Habitat Connectivity Values**  
**Generalist Bird Species,**  
**LRS2B Project Area**  
**(ACTmapi, 2023)**

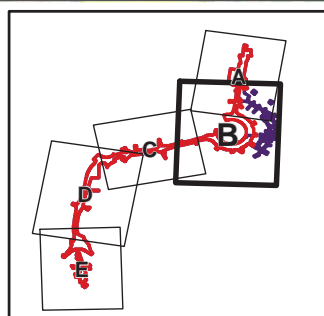


Scale 1:12500 at A4

GDA 1994 MGA Zone 55

**Legend**

- Option 2B
- Option 2B National Triangle – Barton Section
- Habitat Colonisation Potential Generalist Model**
- Low
- Moderate
- High



**FIGURE 4.3.B**

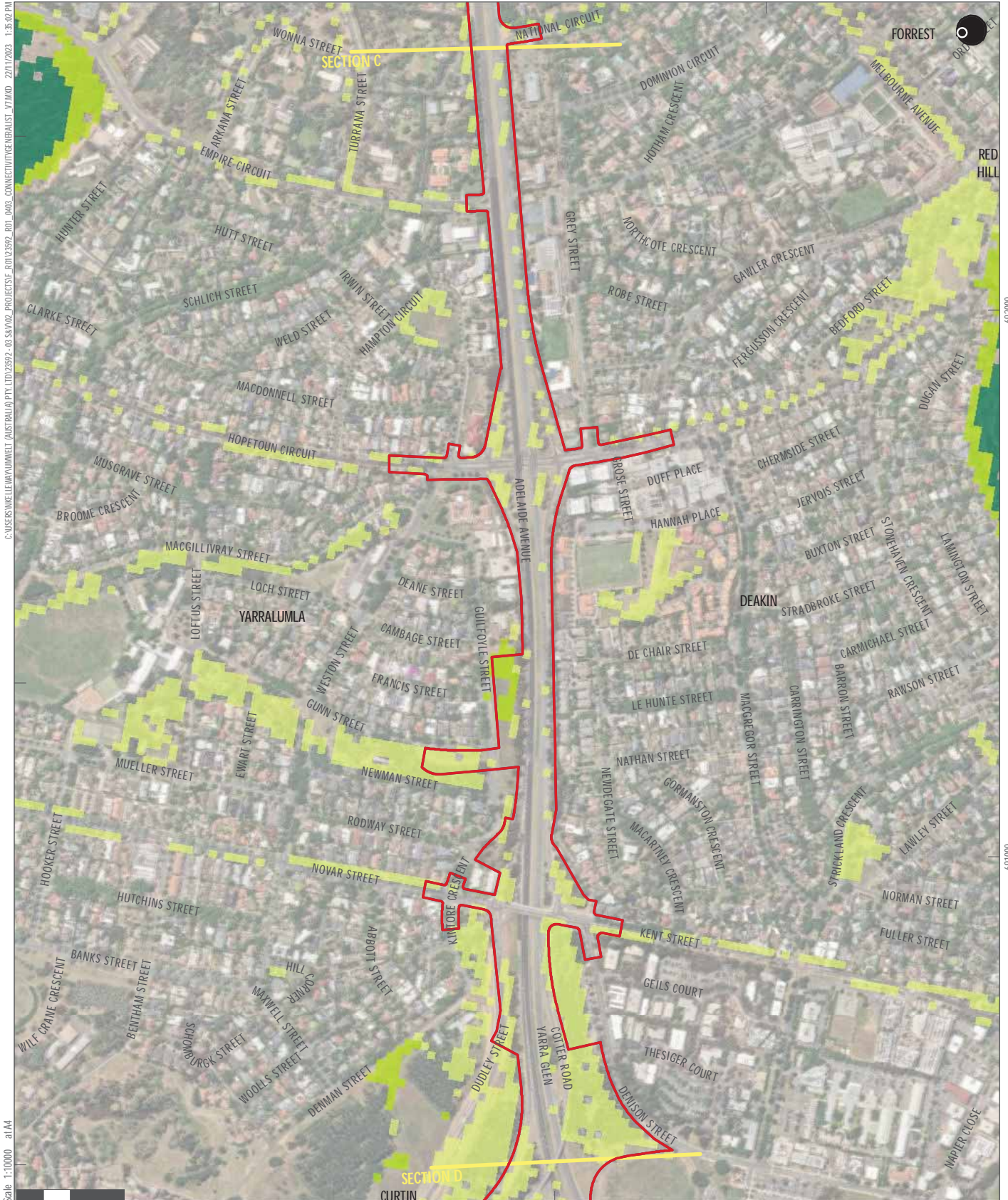
**Habitat Connectivity Values  
Generalist Bird Species,  
LRS2B Project Area  
(ACTmapi, 2023)**



6091000

6090000

C:\USERS\KELLEY\WU\UMWELT (AUSTRALIA) PTY. LTD\2592 - 03 SKA\02\_PROJECTS\FRONT2592\_ROT\_0003\_CONNECTIVITY\GENERALIST\_V7\000\_22112023\_1:35:02 PM

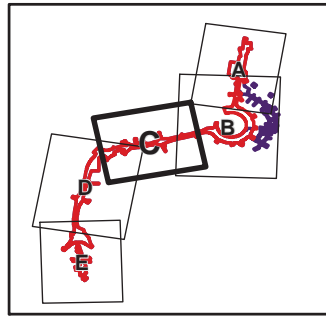


Scale 1:10000 at A4

0 100 200 Metres

GDA 1994 MGA Zone 55

- Legend**
- Option 2B
  - Option 2B National Triangle – Barton Section
  - Habitat Colonisation Potential Generalist Model**
  - Low
  - Moderate
  - High



**FIGURE 4.3.C**  
**Habitat Connectivity Values**  
**Generalist Bird Species,**  
**LRS2B Project Area**  
**(ACTmap, 2023)**

690000

691000

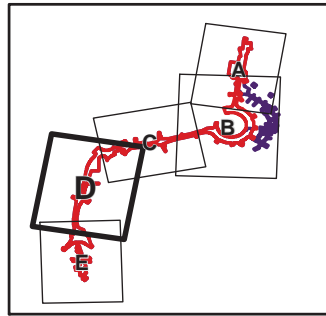
C:\USERS\KELLEW\Umwelt (AUSTRALIA) PTY. LTD\2592 - 03 SKA\02\_PROJECTS\F\_R012592\_R01\_0002\_CONNECTIVITY\GENERALIST\_V7\WD0 - 22112023 1:36:07 PM



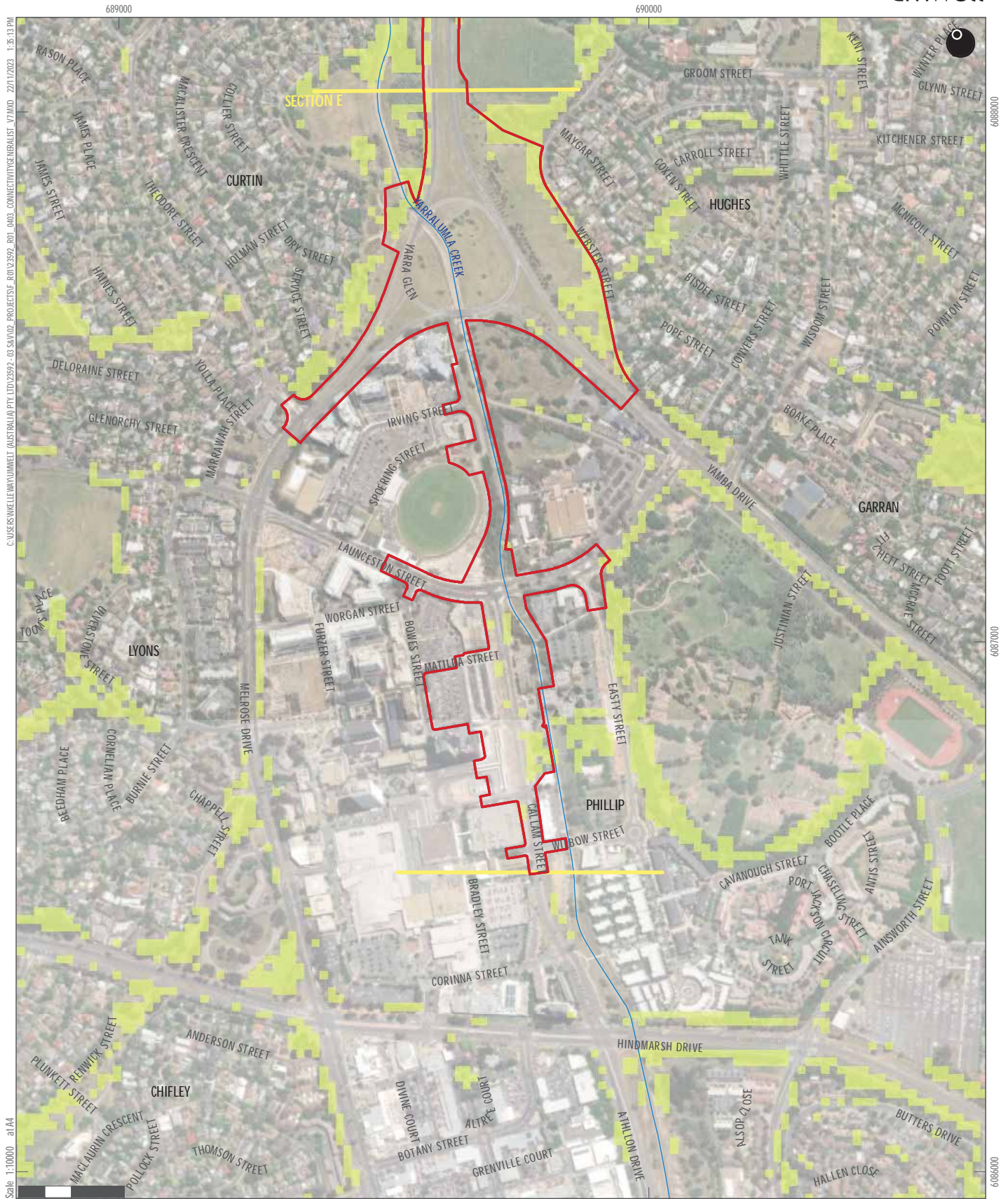
Scale 1:11500 at A4

GDA 1994 MGA Zone 55

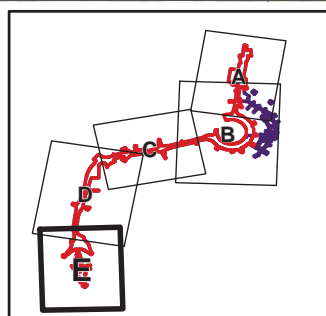
- Legend**
- Option 2B
  - Option 2B National Triangle – Barton Section
  - Habitat Colonisation Potential Generalist Model**
  - Low
  - Moderate
  - High



**FIGURE 4.3.D**  
Habitat Connectivity Values  
Generalist Bird Species,  
LRS2B Project Area  
(ACTmapi, 2023)



- Scale 1:10000 at A4
- 0 100 200 Metres
- Legend**
- Option 2B
  - Option 2B National Triangle – Barton Section
  - Habitat Colonisation Potential Generalist Model**
  - Low
  - Moderate
  - High



**FIGURE 4.3.E**  
 Habitat Connectivity Values  
 Generalist Bird Species,  
 LRS2B Project Area  
 (ACTmapi, 2023)

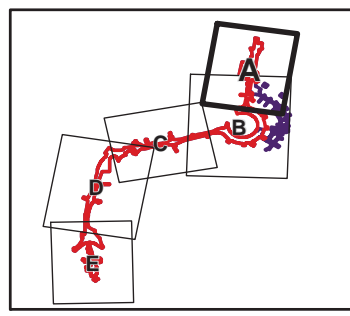
C:\USERS\KELLEW\umwelt (AUSTRALIA) PTY.LTD\2392 - 03 SRV\02\_PROJECTS\F\_8012592\_ROT\_0004\_CONNECTIVITYWOODLAND\_V7.MXD 22/11/2023 1:36:34 PM



Scale 1:10000 at A4  
0 100 200 Metres

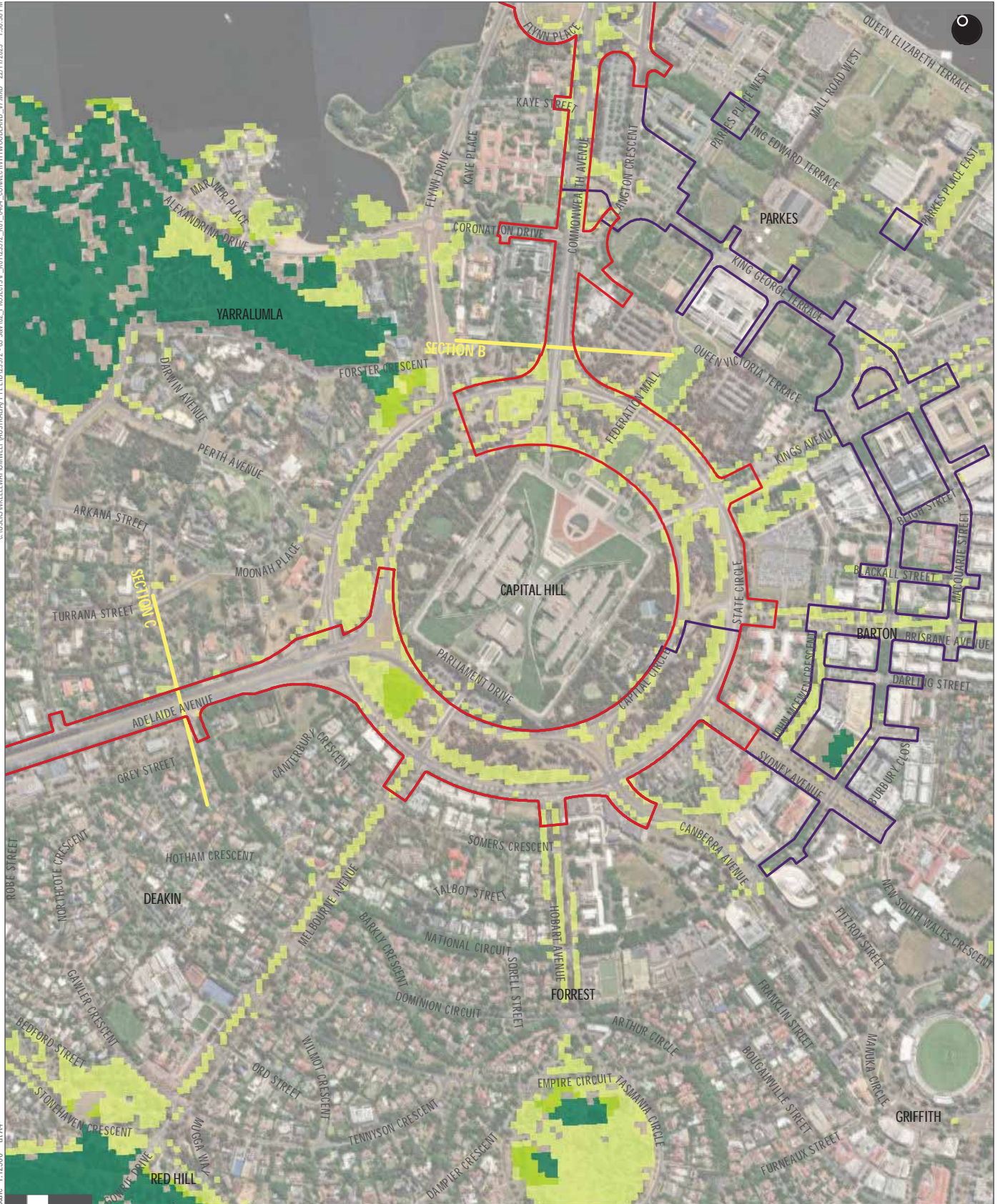
GDA 1994 MGA Zone 55

- Legend**
- Option 2B
  - Option 2B National Triangle – Barton Section
- Habitat Colonisation Potential Woodland Model**
- Low
  - Moderate
  - High

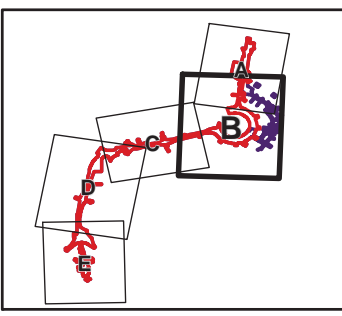


**FIGURE 4.4.A**  
Habitat Connectivity Values  
Woodland Bird Species,  
LRS2B Project Area  
(ACTmapi, 2023)

C:\USERS\KELLEN\UMMWELT (AUSTRALIA) PTY.LTD\2392 - 03 SRV\02\_PROJECTS\F\_R01\2592\_ROT\_0404\_CONNECTIVITYWOODLAND\_V7.MXD 22/11/2023 1:36:38 PM  
 Scale 1:12500 at A4



- Legend**
- Option 2B
  - Option 2B National Triangle – Barton Section
  - Habitat Colonisation Potential Woodland Model**
  - Low
  - Moderate
  - High



**FIGURE 4.4.B**  
 Habitat Connectivity Values  
 Woodland Bird Species,  
 LRS2B Project Area  
 (ACTmapi, 2023)

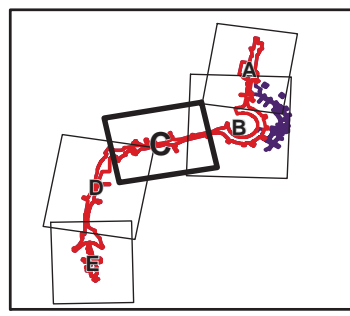
C:\USERS\KELLEY\UMWELT (AUSTRALIA) PTY.LTD\2392 - 03 SKM\02\_PROJECTS\F - 8012392\_ROT\_0004\_CONNECTIVITYWOODLAND\_V7.DWG 22/11/2023 1:36:43 PM



Scale 1:10000 at A4

GDA 1994 MGA Zone 55

- Legend**
- Option 2B
  - Option 2B National Triangle – Barton Section
- Habitat Colonisation Potential Woodland Model**
- Low
  - Moderate
  - High



**FIGURE 4.4.C**  
**Habitat Connectivity Values**  
**Woodland Bird Species,**  
**LRS2B Project Area**  
**(ACTmapi, 2023)**

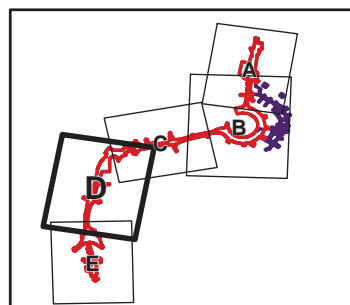
C:\USERS\KELLEY\UMWELT (AUSTRALIA) PTY LTD\23292 - 03 SKM\02\_PROJECTS\F\_80112592\_ROT\_0404\_CONNECTIVITY\WOODLAND\_V7.MXD 22/11/2023 1:36:49 PM  
 Scale 1:11500 at A4



GDA 1994 MGA Zone 55

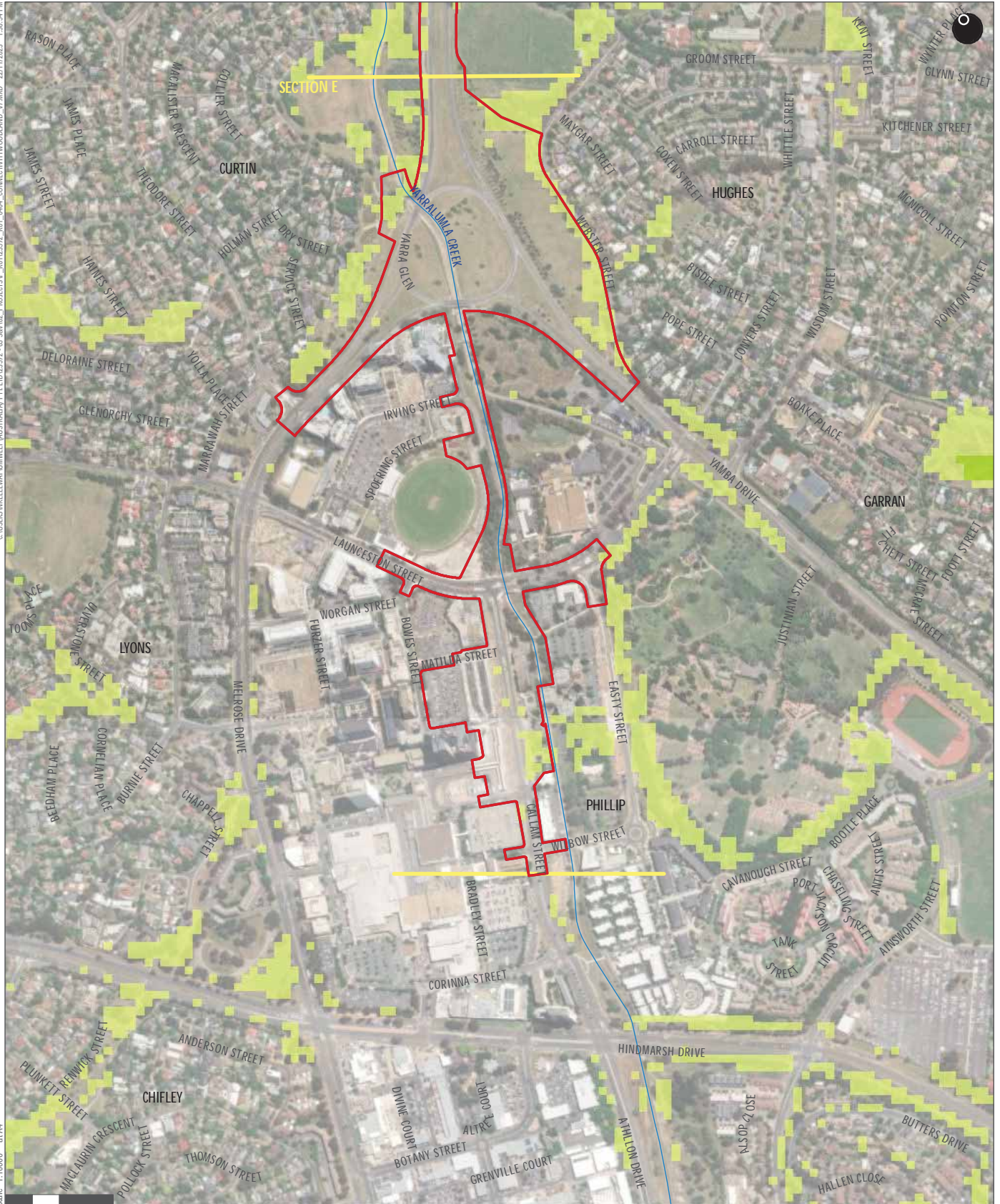
**Legend**

- Option 2B
- Option 2B National Triangle – Barton Section
- Habitat Colonisation Potential Woodland Model**
- Low
- Moderate
- High



**FIGURE 4.4.D**  
 Habitat Connectivity Values  
 Woodland Bird Species,  
 LRS2B Project Area  
 (ACTmapi, 2023)

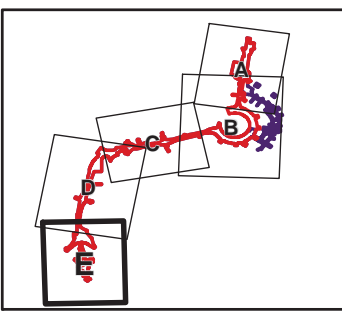
C:\USERS\KELLEW\UMWELT (AUSTRALIA) PTY.LTD\2392 - 03 SRV\02\_PROJECTS\F - R01\2392\_ROT\_0404\_CONNECTIVITY\WOODLAND\_V7.MXD 22/11/2023 1:36:54 PM  
 Scale 1:10000 at A4



0 100 200 Metres

GDA 1994 MGA Zone 55

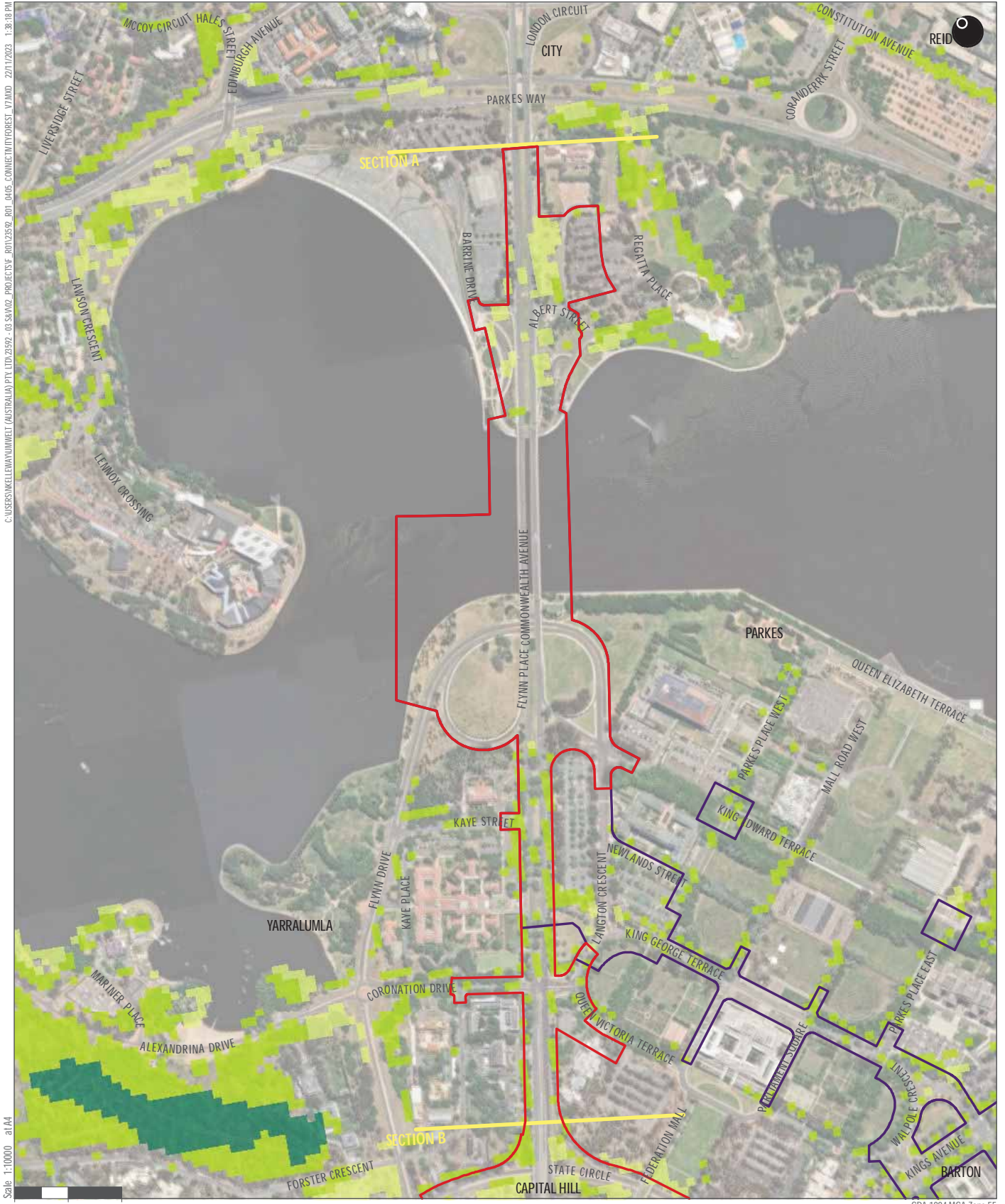
- Legend**
- Option 2B
  - Option 2B National Triangle – Barton Section
  - Habitat Colonisation Potential Woodland Model**
  - Low
  - Moderate
  - High



**FIGURE 4.4.E**  
 Habitat Connectivity Values  
 Woodland Bird Species,  
 LRS2B Project Area  
 (ACTmapi, 2023)



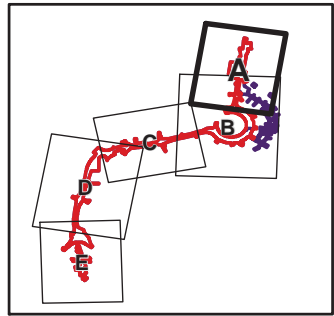
C:\USERS\KELLEWAY\UMWELT (AUSTRALIA) PTY LTD\2592 - 03 S&M\02\_PROJECTS\Forest\_Bird\_Species\_Model\ACTMapi\_2023\_1:38:18 PM



Scale 1:10000 at A4  
 0 100 200 Metres

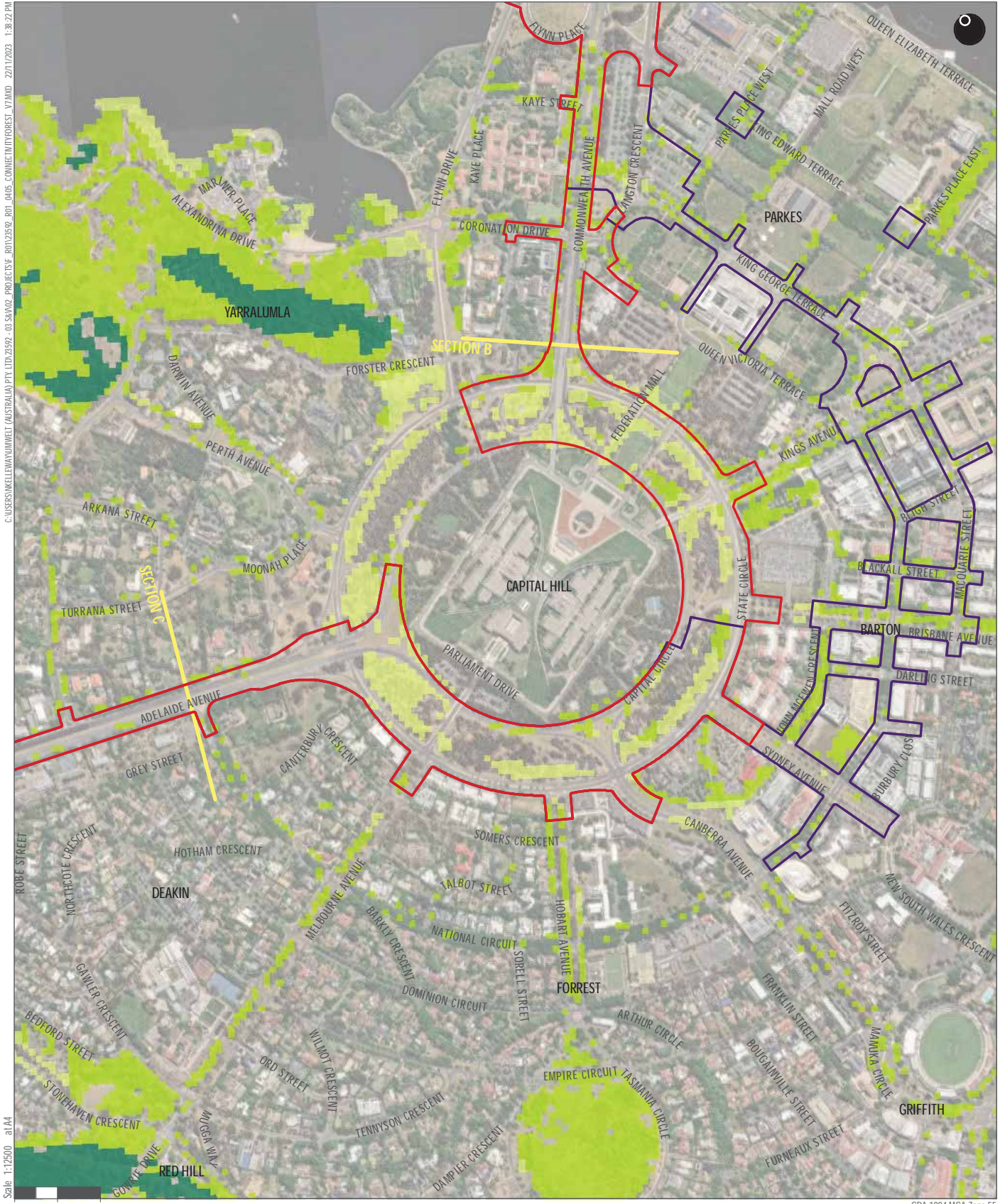
GDA 1994 MGA Zone 55

- Legend**
- Option 2B
  - Option 2B National Triangle – Barton Section
- Habitat Colonisation Potential Forest Model**
- Low
  - Moderate
  - High



**FIGURE 4.5.A**  
 Habitat Connectivity Values  
 Forest Bird Species, LRS2B  
 Project Area (ACTMapi, 2023)

C:\USERS\KELLEW\UMWELT (AUSTRALIA) PTY LTD\2592 - 03 S&V02\_PROJECTS\FOR\_BIRD\_SPECIES\_RLS2B\ACTM\2021\2023\_1:38:22 PM



- Legend**
- Option 2B
  - Option 2B National Triangle – Barton Section
- Habitat Colonisation Potential Forest Model**
- Low
  - Moderate
  - High

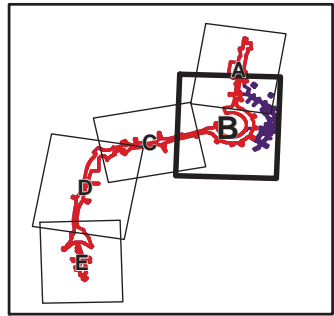
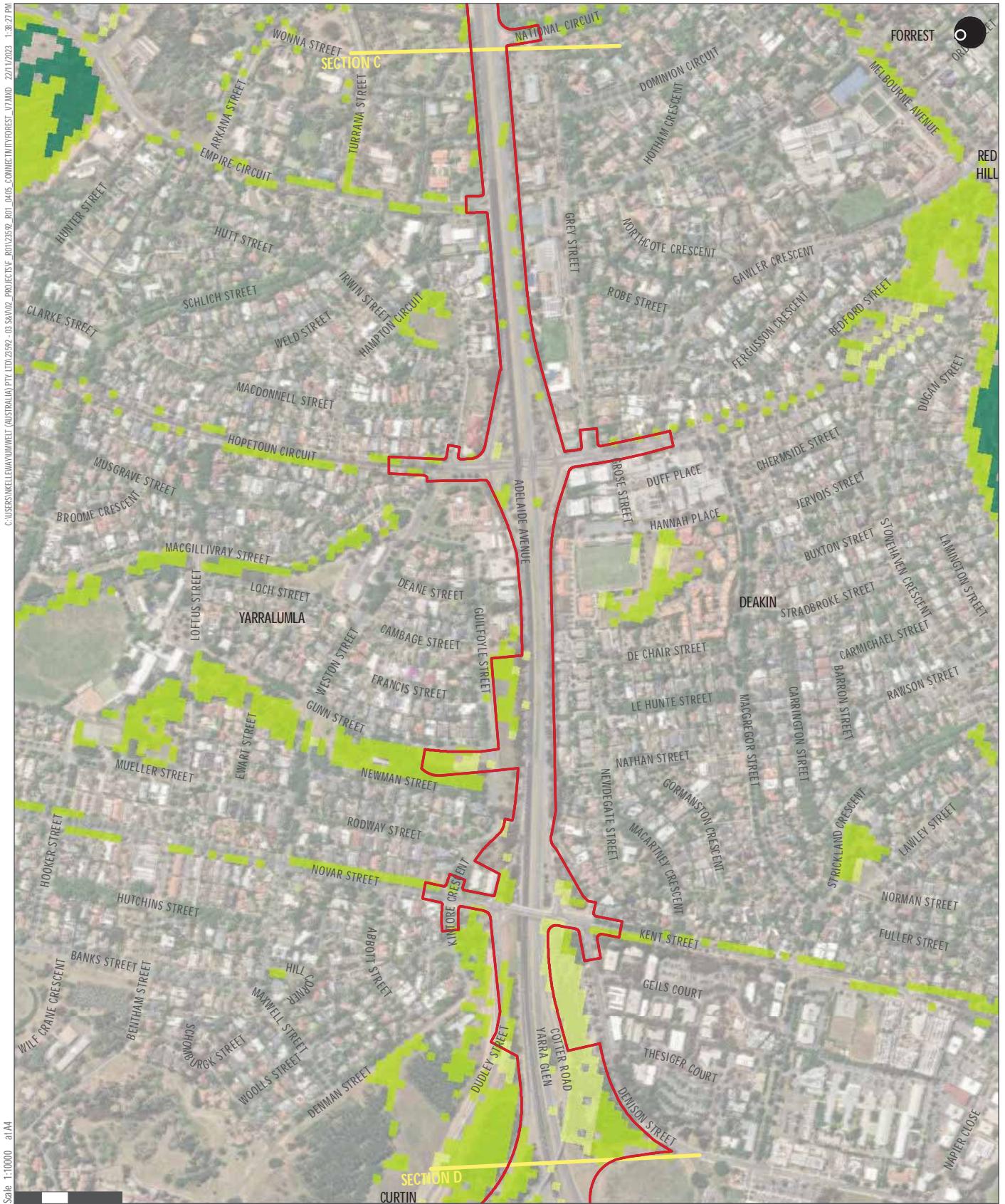


FIGURE 4.5.B

Habitat Connectivity Values  
Forest Bird Species, LRS2B  
Project Area (ACTmapi, 2023)



C:\USERS\KELLYW\UMWELT (AUSTRALIA) PTY LTD\2892 - 03 S&MV02\_PROJECTS\FORREST\_R01\289590\_R01\_0405\_CONNECTIVITY\FORREST\_V7\0405\_22112023\_1:38:27 PM

Scale 1:10000 at A4

0 100 200 Metres

GDA 1994 MGA Zone 55

**Legend**

- Option 2B
- Option 2B National Triangle – Barton Section
- Habitat Colonisation Potential Forest Model**
- Low
- Moderate
- High

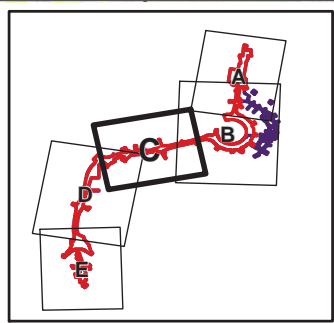


FIGURE 4.5.C

Habitat Connectivity Values  
Forest Bird Species, LRS2B  
Project Area (ACTmap, 2023)

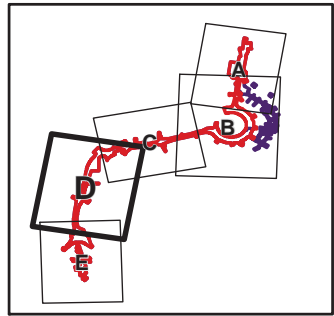
C:\USERS\KELLEY\W\UMWELT (AUSTRALIA) PTY LTD\2092 - 03 S&M\02\_PROJECTS\Forest\_R01\_0405\_CONNECTIVITY\FORREST\_V7\WD02\_2211\2023\_1:38:32 PM  
 Scale 1:11500 at A4



0 100 200 Metres

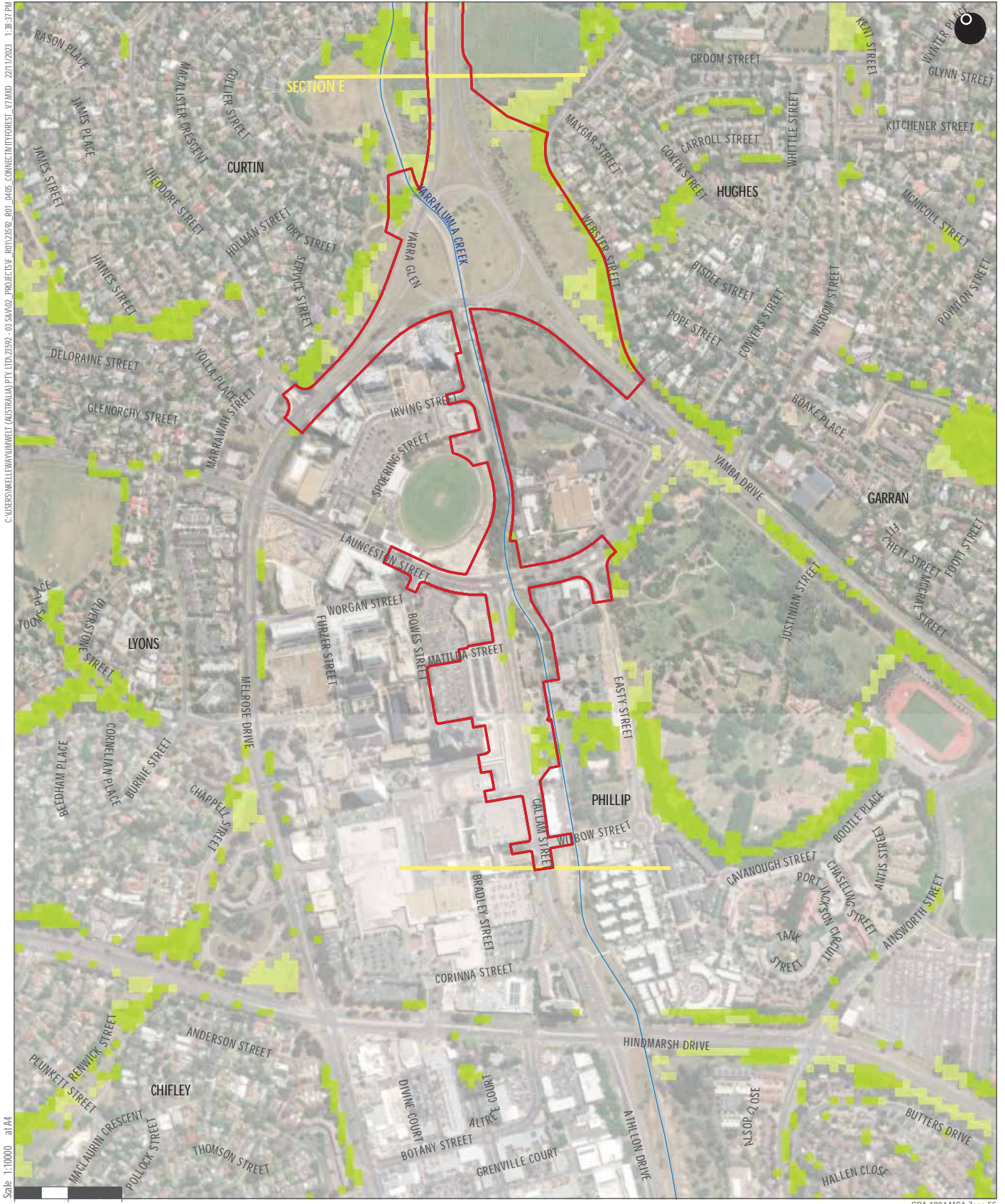
GDA 1994 MGA Zone 55

- Legend**
- Option 2B
  - Option 2B National Triangle – Barton Section
  - Habitat Colonisation Potential Forest Model**
  - Low
  - Moderate
  - High



**FIGURE 4.5.D**  
 Habitat Connectivity Values  
 Forest Bird Species, LRS2B  
 Project Area (ACTmapI, 2023)

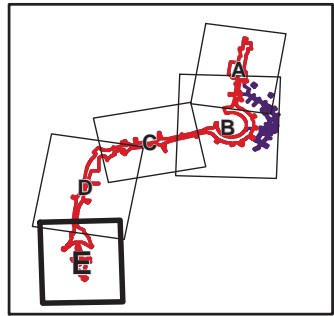
C:\USERS\KELLEYW\UMWELT (AUSTRALIA) PTY LTD\2092 - 03 SAVOZ\_PROJECTS\F\_R012592 - 03 SAVOZ\_CONNECTIVITY\F0REST\_V71.MXD 22/11/2023 1:38:27 PM



Scale 1:10000 at A4

GDA 1994 MGA Zone 55

- Legend**
- Option 2B
  - Option 2B National Triangle – Barton Section
  - Habitat Colonisation Potential Forest Model**
  - Low
  - Moderate
  - High



**FIGURE 4.5.E**  
**Habitat Connectivity Values**  
**Forest Bird Species, LRS2B**  
**Project Area (ACTmapI, 2023)**



D:\UMWELT (AUSTRALIA) PTY.LTD\23592 - 03.58.002\_PROJECTS\PROJECTS\RO1\23592\_ROT\_0406\_COVCONNECTIVITYGENERALISTMITCHELL\_V3.MXD 31/08/2023 9:39:46 PM

Scale 1:10000 at A4

6101000  
6100000  
6099000

- Legend**
- Project Area
  - Habitat Colonisation Potential Generalist Model**
  - Low
  - Moderate
  - High

FIGURE 4.6

Colonisation Potential  
Woodland Model, Generalist  
Mitchell Project Area  
(ACTmap, 2023)

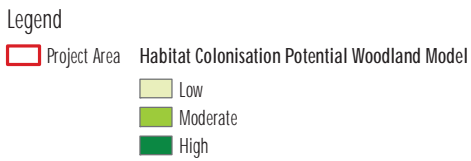


FIGURE 4.7

Colonisation Potential Woodland Model, Woodland Mitchell Project Area (ACTmapi, 2023)



**Legend**

- Project Area
- Habitat Colonisation Potential Forest Model**
- Low
- Moderate
- High

FIGURE 4.8

Colonisation Potential  
Woodland Model, Forest  
Mitchell Project Area  
(ACTmapi, 2023)



## 4.3 Vegetation Communities and Condition Assessment

Six vegetation communities were confirmed in the CWP2P Project Area (Table 4.5; Figure 4.9).

- ACT01.1 *Tablelands Dry Tussock Grassland – Natural Temperate Grassland (High Diversity)* (as defined by Capital Ecology, 2018a).
- ACT01.2 *Tablelands Dry Tussock Grassland – Natural Temperate Grassland (Moderate Diversity)* (as defined by Capital Ecology, 2018a).
- Non-Local Native Groundcover.
- Landscape Plantings – Native.
- Landscape Plantings – Exotic.
- Exotic Grassland.

**Table 4.5 Preliminary Extent of each Plant Community Type and Vegetation Zones in the LRS2B Project Area (Umwelt, 2022)**

Vegetation Community	Extent (ha)
ACT01.1 <i>Tablelands Dry Tussock Grassland – Natural Temperate Grassland (High Diversity)</i>	0.40
ACT01.2 <i>Tablelands Dry Tussock Grassland – Natural Temperate Grassland (Moderate Diversity)</i>	0.11
Exotic Grassland	37.83
Non-Local Native Ground-cover	1.06
Landscape Plantings - Exotic	9.74
Landscape Plantings - Native	12.29
<b>Blue and Formed Infrastructure</b>	
Water (Lake Burley Griffin and artificial wetlands)	0.94
Construction Site	0.91
Infra-structure (Buildings, roads, drains, and paths)	45.00

### 4.3.1.1 ACT01.1 Tablelands Dry Tussock Grassland - Natural Temperate Grassland – High Diversity

Based on the regional mapping, it is likely that vegetation in these areas would have originally been native grassland prior to European settlement. One patch of Zone ACT01.1 *Tablelands Dry Tussock Grassland - Natural Temperate Grassland (High Diversity)* (0.4 ha) was recorded. The patch is located on the periphery of the Project Area and is surrounded by Landscape Plantings – Native. It is modified due to previous disturbances and current management practices (Figure 4.9).

This patch would conform to the *Themeda* grassland category of ACT01 *Tablelands Dry Tussock Grassland* due to *T. triandra* being the dominant native perennial grass within the patch. Under NSW PCTs, it would conform to the PCT 320: *Kangaroo Grass- Red-leg Grass Forb rich template tussock grassland of the northern Monaro, ACT and upper Lachlan River region of the NSW South Western Slopes Bioregion and South Eastern Highlands Bioregion*. This patch had a low to moderate forb diversity.

The plot consisted of a floristic value score of 15.80. This patch was assessed against the natural temperate grasslands listing criteria under the NC Act and EPBC Act (refer to **Section 4.4** for details).

#### 4.3.1.2 ACT01.2 Tablelands Dry Tussock Grassland - Natural Temperate Grassland – Moderate Diversity

One patch of Zone ACT01.2 *Tablelands Dry Tussock Grassland - Natural Temperate Grassland (Moderate Diversity)* (0.11 ha) was recorded. The patch is located on the periphery of the Project Area and is surrounded by Landscape Plantings – Native (**Figure 4.9**). The patch has been previously disturbed and is disturbed by current management measures (i.e. mowing). This patch was assessed against the natural temperate grasslands listing criteria under the NC Act and EPBC Act (refer to **Section 4.4** for details).

#### 4.3.1.3 Non-local Native Groundcover

Two patches supporting non-local native grasses, both within the road median were recorded. The patches consist of a combination of non-local native grass (*Cynodon dactylon*) along with scattered annual native grasses (primarily *Chloris truncata*) and exotic perennial grasses such as *Eragrostis curvula* and *Nassella neesiana* with annual grasses such as *Bromus* spp. occurred throughout the patches. No native forbs were observed. Due to the dominance of non-local native species, and the absence of diagnostic species, this area was not allocated to an ACT PCT (**Figure 4.9**).

#### 4.3.1.4 Landscape Plantings – Native

A total of 12.29 ha of Landscape Plantings – Native was recorded throughout the Project Area and included locally native and non-locally native trees. The plantings are often located adjacent to the main roads or have been used as a screen between the road and residential areas. Common dominant landscape plantings included the locally native species such as *Casuarina cunninghamiana*, *E. polyanthemus*, *E. mannifera*, and *E. melliodora*. Non-local plantings included *E. globulus* and other *Eucalyptus* spp. Native shrubs that have been planted include *Acacia baileyana* and *A. decurrens*.

The groundcover is often a mixture of native and exotic perennial grasses, including the highly invasive *N. neesiana*. Only disturbance tolerant native and exotic forbs were recorded (**Figure 4.9**).

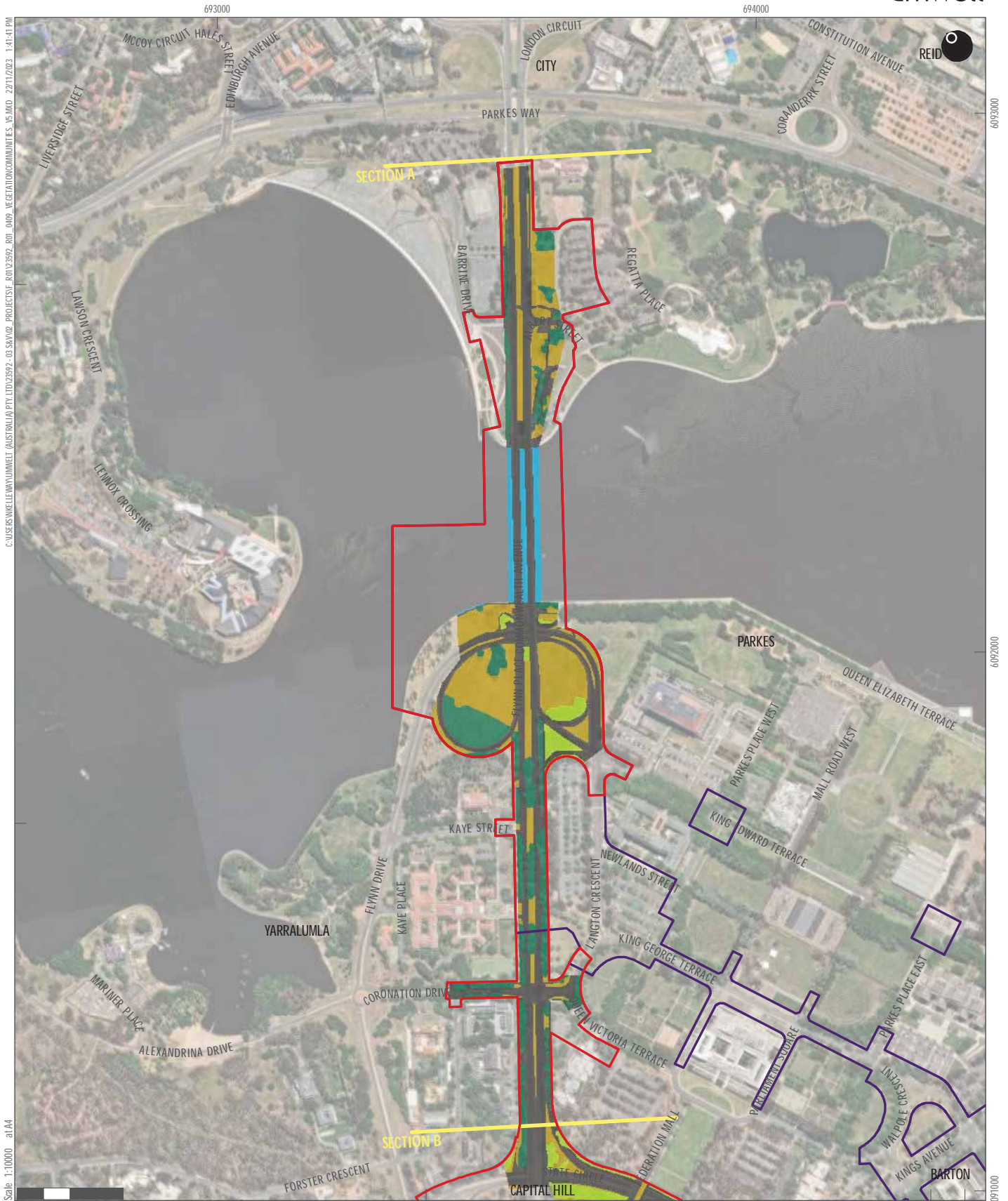
#### 4.3.1.5 Landscape Plantings – Exotic

A total of 9.74 ha of Landscape Plantings – Exotic was recorded throughout the Project Area. The plantings often occur adjacent to the road or are used as amenity features in front of residential buildings. Dominant tree species include *Populus alba* (white poplar) and *Ulmus procera* (English elm), with a groundcover dominated by exotic perennial grasses including *N. neesiana* and exotic forbs (**Figure 4.9**).

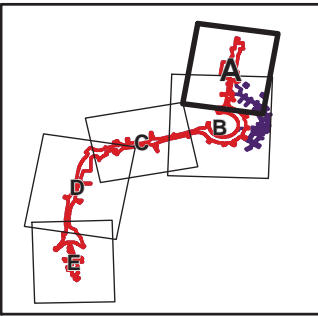
#### 4.3.1.6 Exotic Grassland

The dominant vegetation community within the LRS2B Project Area (37.83 ha) is Exotic Grassland. These areas consist primarily of exotic perennial grass species such as *N. neesiana*, *E. curvula* and *Eleusine tristachyna* (goose grass).

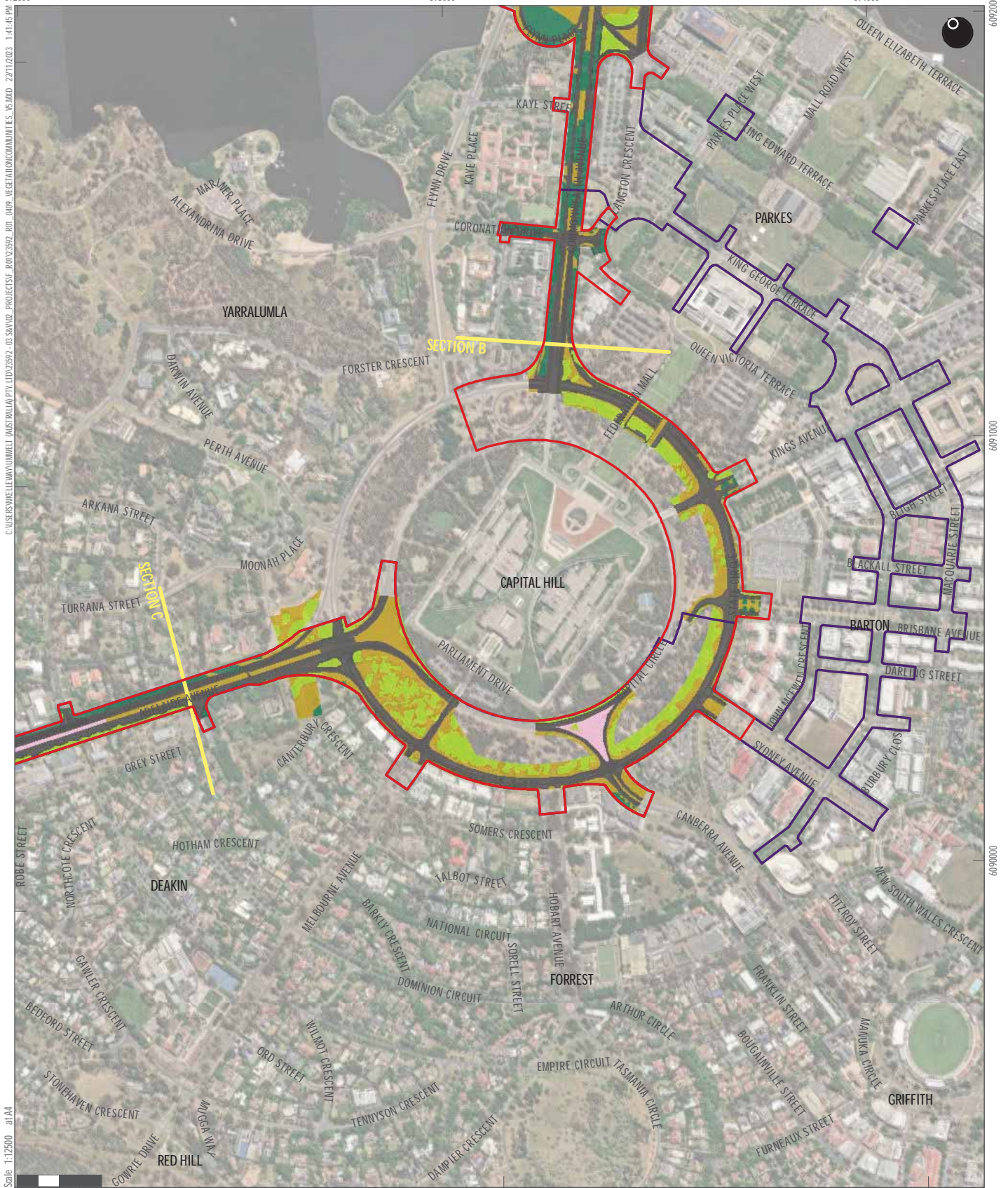
Throughout the exotic grassland, small patches (<0.05 ha) consisted of disturbance tolerance native grasses such as *Bothriochloa macra* (red-leg grass) *Chloris truncata* (windmill grass) with no or very low forb diversity. Young exotic trees such as *Populus alba* and *Ulmus procera* that have been planted adjacent to the exotic grassland often occur within the grasslands (**Figure 4.9**).



- Legend**
- Plant Community Types and Zones**
- Landscape Plantings - Exotic
  - Landscape Plantings - Native
  - Exotic Grassland
  - Infrastructure (Buildings, roads, and paths)
  - Water (Lake Burley Griffin and artificial wetlands)



**FIGURE 4.9.A**  
Interim Extent of Vegetation Communities within the LRS2B Project Area (from Umwelt, 2022)



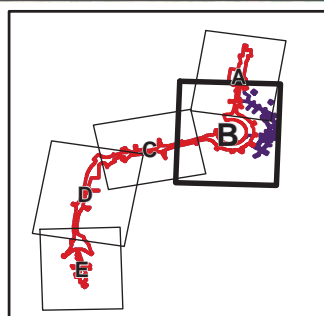
Scale 1:12500 at A4

GDA 1994 MGA Zone 55

**Legend**

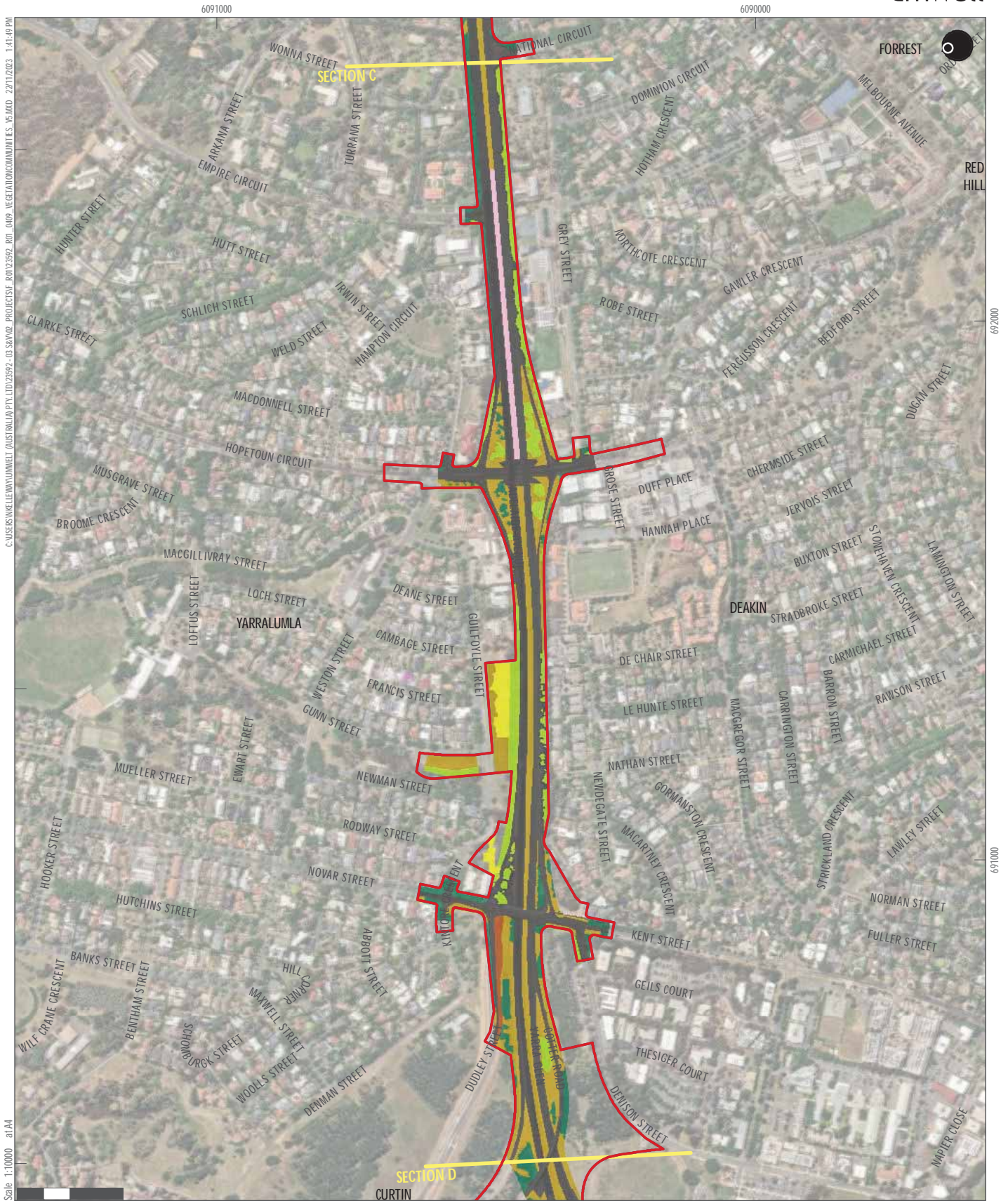
**Plant Community Types and Zones**

- Landscape Plantings - Exotic
- Landscape Plantings - Native
- Exotic Grassland
- Non-Local Native Groundcover
- Infrastructure (Buildings, roads, and paths)

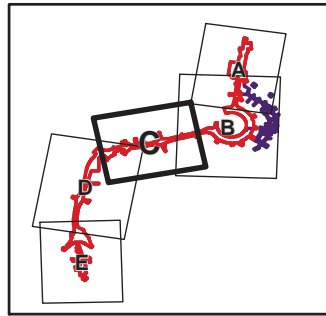


**FIGURE 4.9.B**

**Interim Extent of Vegetation Communities within the LRS2B Project Area (from Umwelt, 2022)**



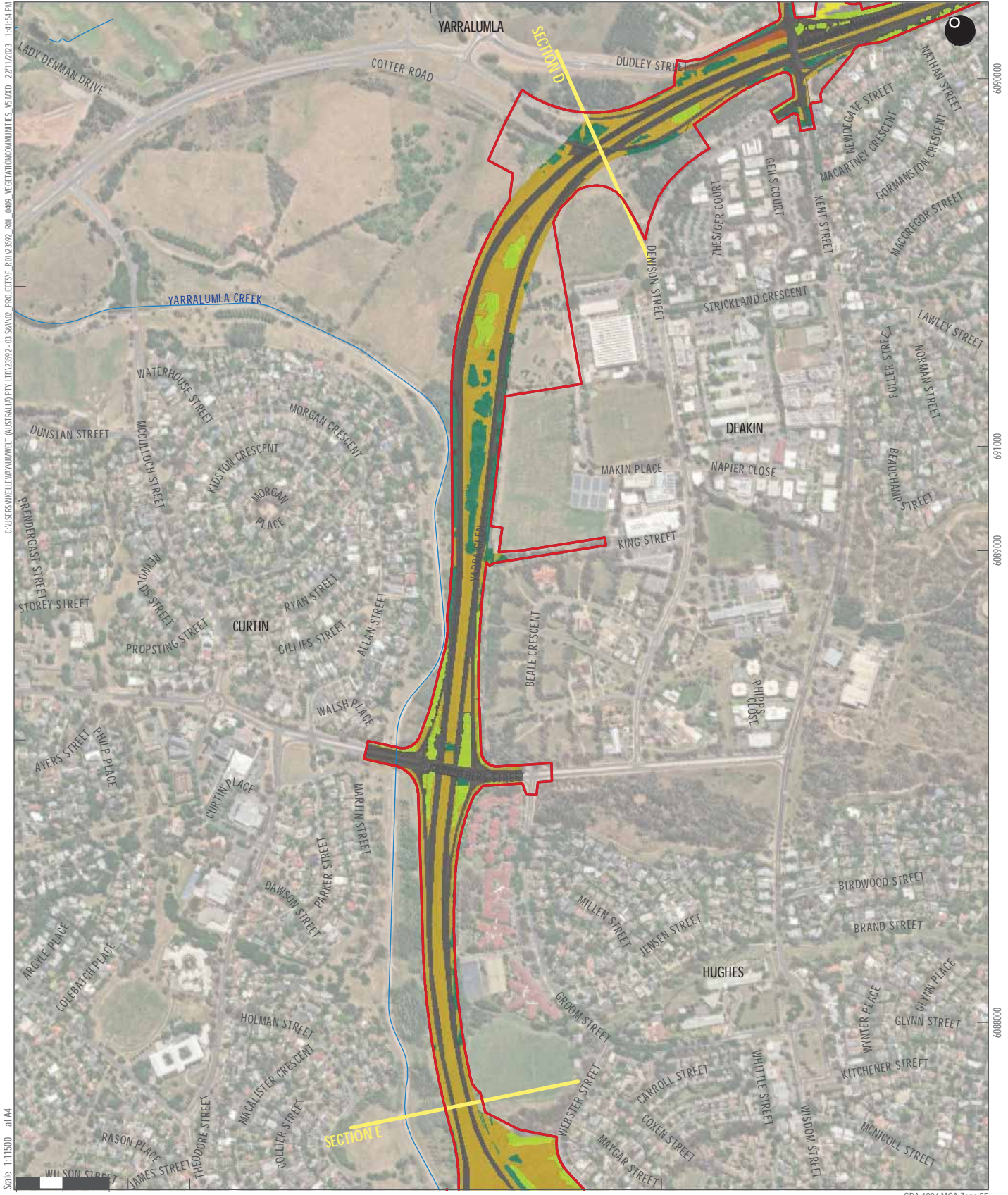
- Legend**
- Plant Community Types and Zones**
- Landscape Plantings - Exotic
  - Native Grassland
  - Landscape Plantings - Native
  - Exotic Grassland
  - Non-Local Native Groundcover
  - Construction Site
  - Infrastructure (Buildings, roads, and paths)



**FIGURE 4.9.C**  
Interim Extent of Vegetation Communities within the LRS2B Project Area (from Umwelt, 2022)

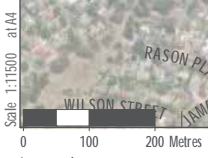
690000

691000



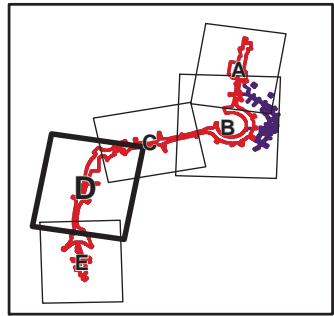
C:\USERS\KELLEW\UMWELT (AUSTRALIA) PTY. LTD\2592 - 03 SKA\02\_PROJECTS\F - ROT\2592 - 03 SKA\02\_VEGETATION\COMMUNITIES\_V5.DWG 2/21/2023 1:41:54 PM

690000  
691000  
692000  
693000

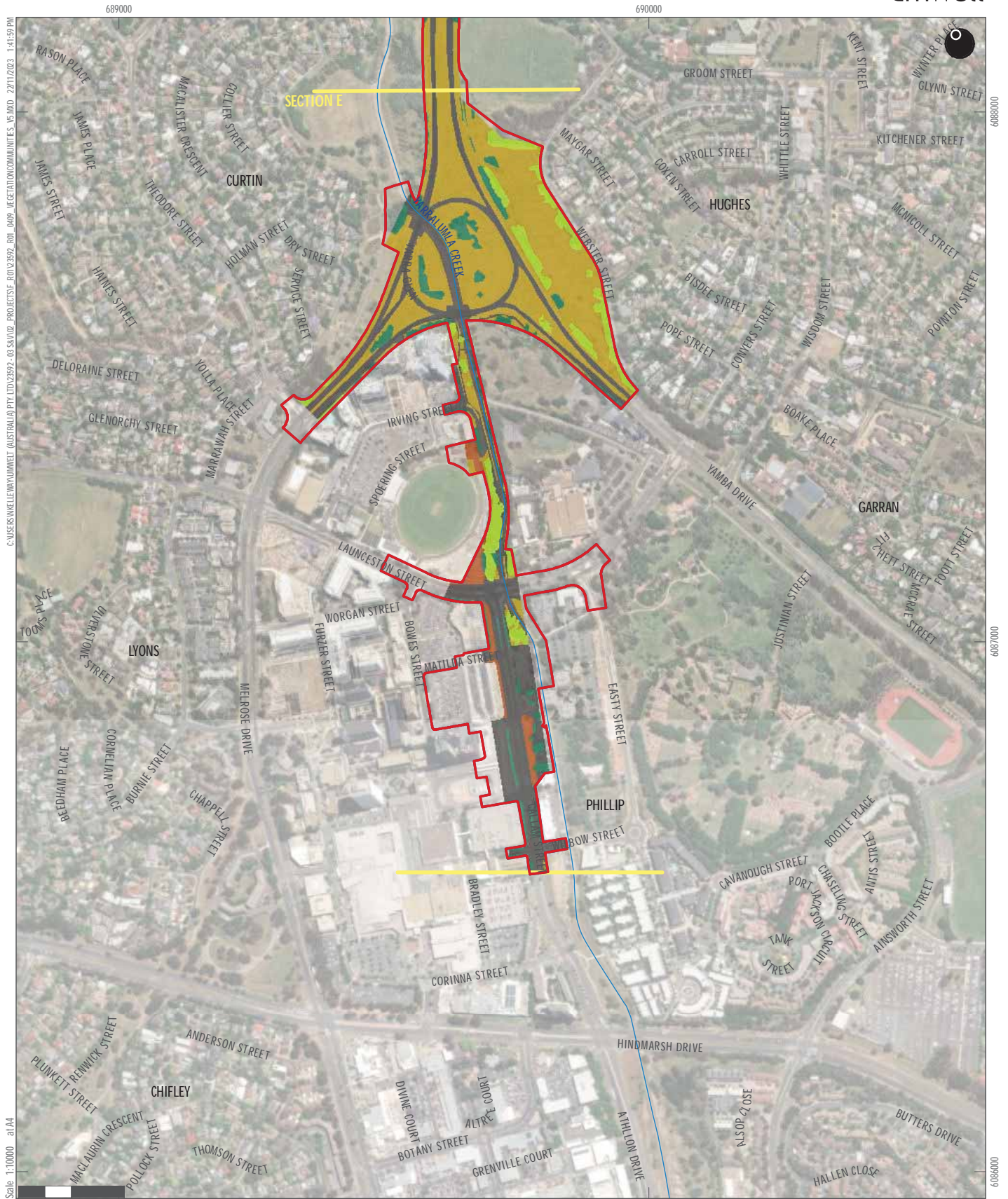


GDA 1994 MGA Zone 55

- Legend**
- Plant Community Types and Zones**
- Landscape Plantings - Exotic
  - Native Grassland
  - Landscape Plantings - Native
  - Exotic Grassland
  - Construction Site
  - Infrastructure (Buildings, roads, and paths)



**FIGURE 4.9.D**  
Interim Extent of Vegetation Communities within the LRS2B Project Area (from Umwelt, 2022)



- Legend
- Plant Community Types and Zones
- Landscape Plantings - Exotic
  - Landscape Plantings - Native
  - Exotic Grassland
  - Construction Site
  - Infrastructure (Buildings, roads, and paths)

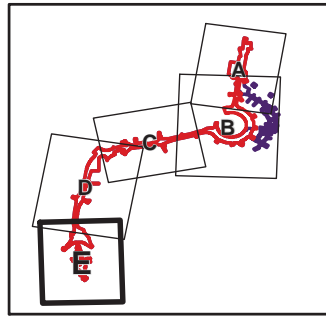


FIGURE 4.9.E  
Interim Extent of Vegetation  
Communities within the  
LRS2B Project Area (from  
Umwelt, 2022)

## 4.4 Threatened Ecological Communities

### 4.4.1 EPBC Act listed Natural Temperate Grassland of the South Eastern Highlands Listed Critically Endangered Ecological Community

Mapping of the historic boundaries of grassland extent in the LRS2B Project Area suggests that areas north of State Circle, west of Kent Street and north of Launceston Street would have formerly supported native grasslands prior to European settlement (SEED, 2015). Due to past land management practices, these native grassland areas have been heavily modified and fragmented. The original grasslands within the Project Areas would likely have met the diagnostic criteria for the EPBC Act listed *Natural Temperate Grasslands of the South Eastern Highlands* critically endangered ecological community.

Two patches of remnant native grasslands (i.e., one patch categorized as ACT01.1 *Tablelands Dry Tussock Grassland - Natural Temperate Grassland (High Diversity)* and one patch categorized as ACT01.2 *Tablelands Dry Tussock Grassland - Natural Temperate Grassland (Moderate Diversity)*) were recorded in the LRS2B Project Area (Table 4.6).

A preliminary total 0.51 ha of the critically endangered ecological community is present in Section C the LRS2B Project Area (Figure 4.10).

**Table 4.6 Assessment against EPBC Act Natural Temperate Grasslands of the South Eastern Highlands Community Classification Criteria (DoEE, 2016).**

Condition threshold	ACT01.1 Patch 1	ACT01.2 Patch 2
<b>Method A</b>		
Is the patch at least 0.1 ha in size?	Yes (0.4 ha)	Yes (0.11 ha)
Is the patch characterised by at least 50% foliage cover of the ground of: If no, then proceed to assessment under the 'Minimum Condition Threshold – Method B'.		
Kangaroo Grass;	Yes	No
River tussock; or	No	No
Carex bichenoviana?	No	No
<b>Method B</b>		
Is the patch at least 0.1 ha in size?	Yes	Yes
Is the cover of native plants greater than the cover of perennial exotic plants?	Yes	Yes
In sampling plots of 0.04 ha in size (i.e. 20m X 20m) surveyed during non-favourable sampling times:		
at least 4 native non-grass species recorded; or	n/a	n/a
at least 1 indicator species; or	n/a	n/a
a floristic value score of at least 3.	n/a	n/a
In sampling plots of 0.04 ha in size (i.e. 20m X 20m) surveyed during favourable sampling times:		
at least 8 native non-grass species recorded; or	Yes (10 recorded)	No (likely to be the same as ACT 01.2 Patch 4)

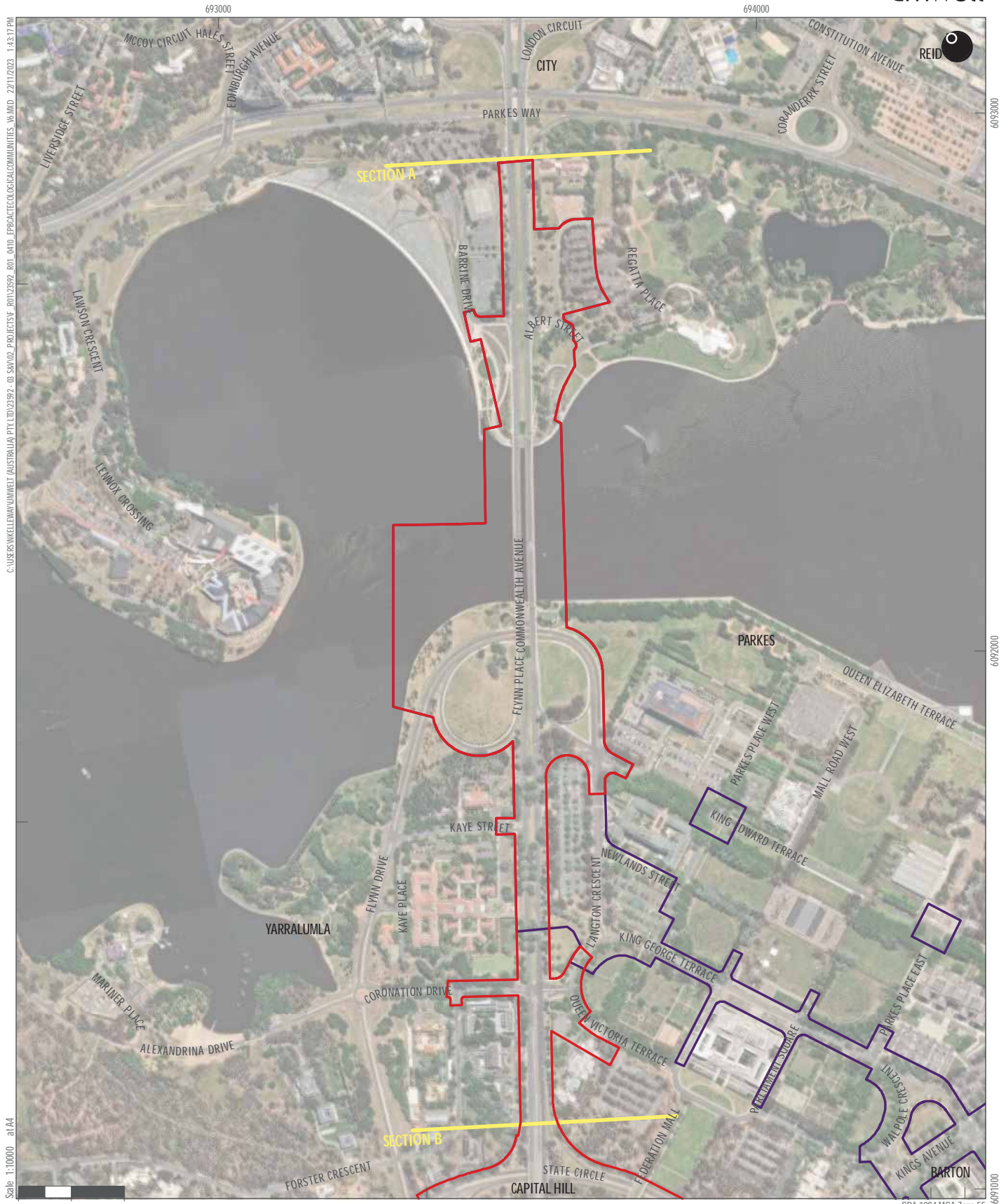


Condition threshold	ACT01.1 Patch 1	ACT01.2 Patch 2
at least 2 indicator species; or	Yes (5 recorded)	Yes (likely to be the same as ACT 01.2 Patch 4)
a floristic value score of at least 5.	Yes (FVS 15.80)	Yes (likely to be the same as ACT 01.2 Patch 4)
EPBC Act Natural Temperate Grassland of the South Eastern Highlands	Yes	Yes

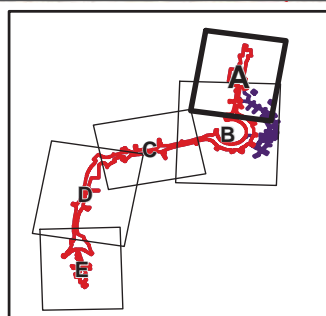
#### 4.4.2 NC Act listed Natural Temperate Grassland Critically Endangered Ecological Community

In the absence of additional condition thresholds for the NC Act both patches of ACT01 *Tablelands Dry Tussock Grassland - Natural Temperate Grassland* are considered to conform to the NC Act listed *Natural Temperate Grassland* (i.e., consistent with the areas conforming to the EPBC Act listed *Natural Temperate Grassland of the South Eastern Highlands* critically endangered ecological community).

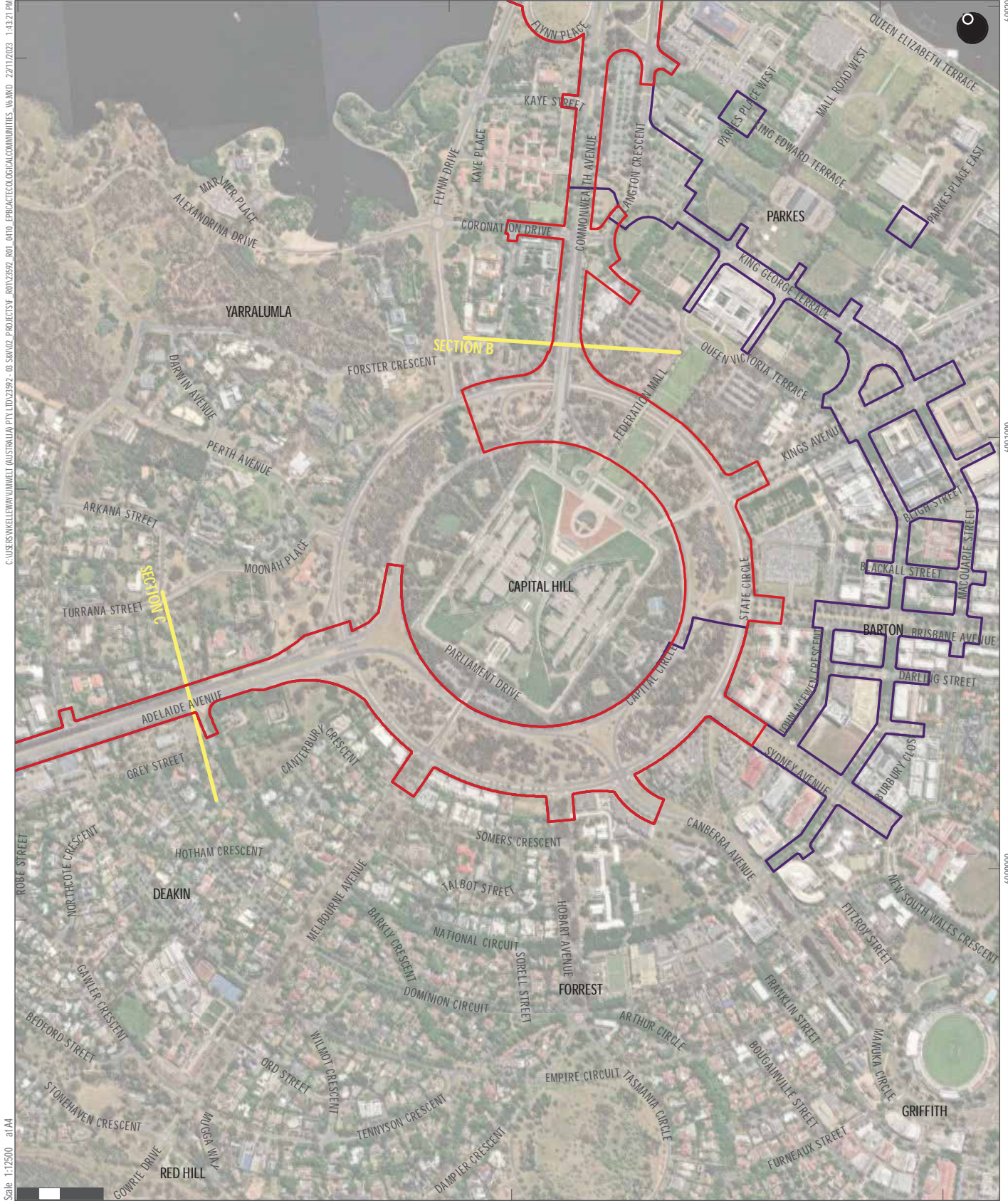
A preliminary total 0.51 ha of the critically endangered ecological community is present in Section C in the LRS2B Project Area (Figure 4.10).



Legend



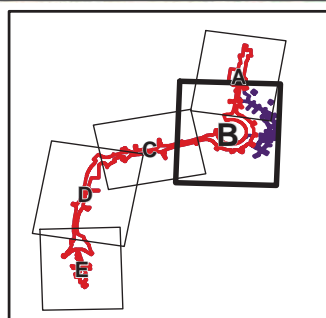
**FIGURE 4.10.A**  
 Interim Extent of EPBC Act  
 Listed Ecological  
 Communities in the LRS2B  
 Project Area



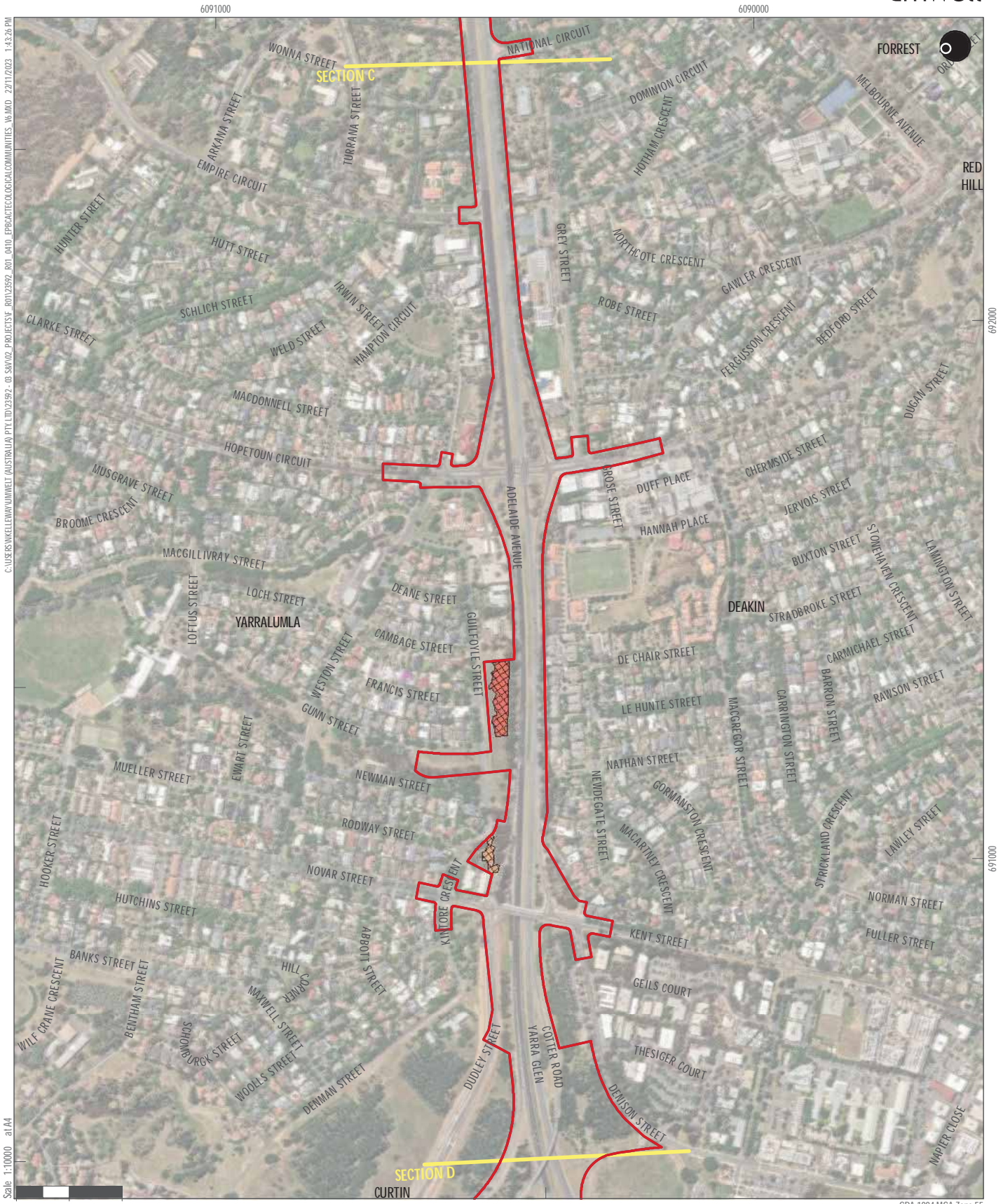
Scale 1:12500 at A4

GDA 1994 MGA Zone 55

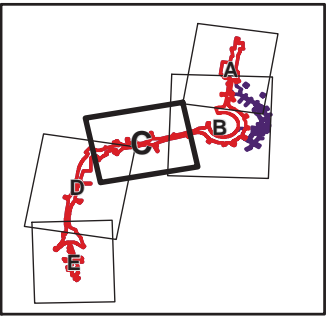
Legend



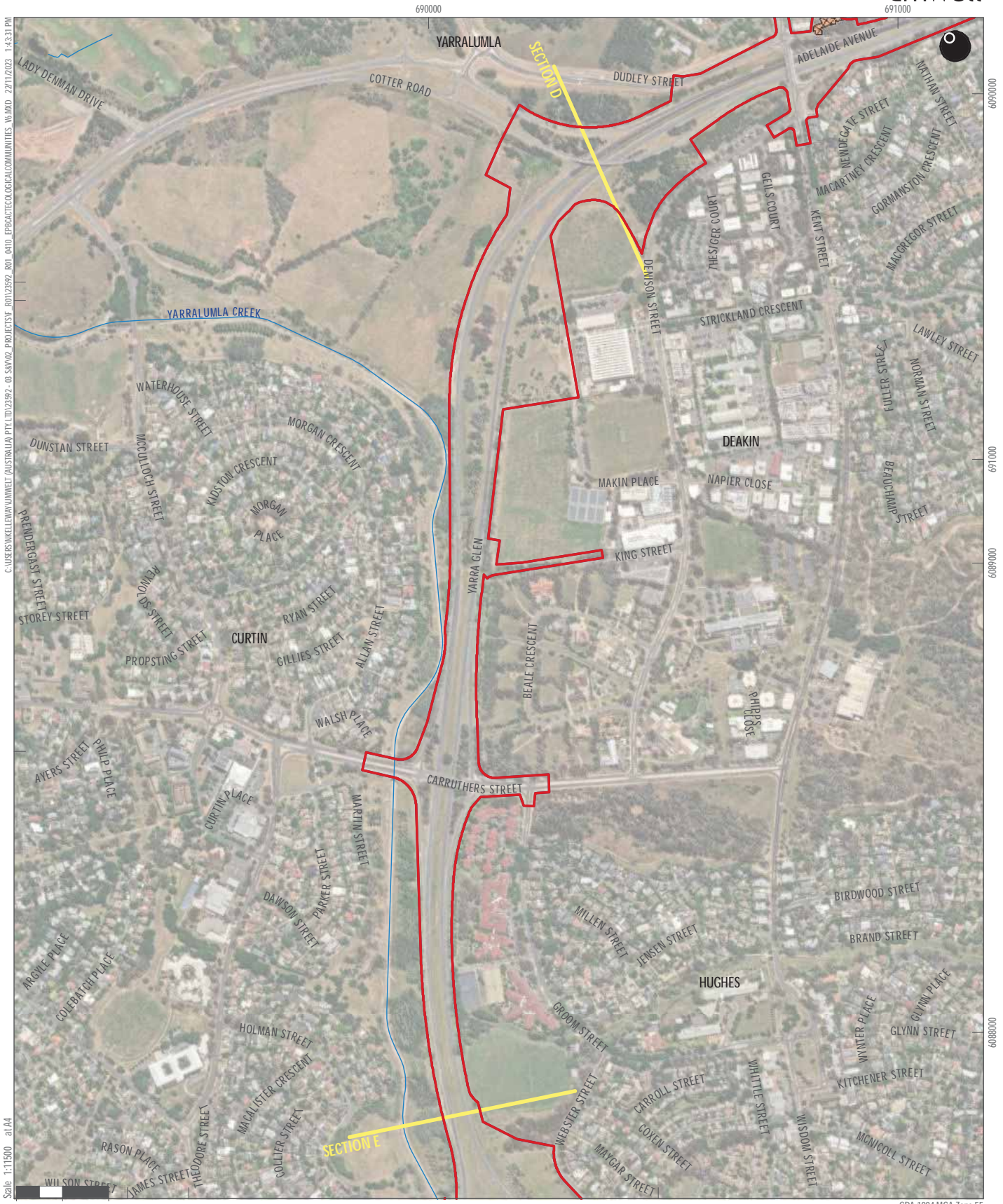
**FIGURE 4.10.B**  
Interim Extent of EPBC Act Listed Ecological Communities in the LRS2B Project Area



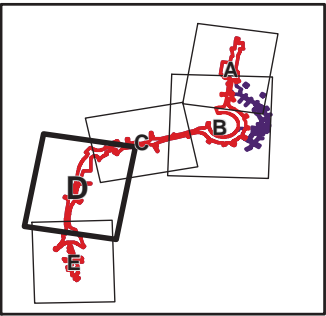
- Scale 1:10000 at A4
- Legend
- Threatened Ecological Communities (EPBC Act)**
- Natural Temperate Grassland of the South Eastern Highlands (Critically Endangered)
  - ACT01 Tablelands Dry Tussock Grassland**
    - ACT01.1 Tablelands Dry Tussock Grassland — Natural Temperate Grassland (High Diversity)
    - ACT01.2 Tablelands Dry Tussock Grassland — Natural Temperate Grassland (Moderate Diversity)



**FIGURE 4.10.C**  
Interim Extent of EPBC Act Listed Ecological Communities in the LRS2B Project Area



- Legend**
- Threatened Ecological Communities (EPBC Act)
  - Natural Temperate Grassland of the South Eastern Highlands (Critically Endangered)
  - ACT01 Tablelands Dry Tussock Grassland
  - ACT01.2 Tablelands Dry Tussock Grassland — Natural Temperate Grassland (Moderate Diversity)



**FIGURE 4.10.D**  
Interim Extent of EPBC Act Listed Ecological Communities in the LRS2B Project Area

## 4.5 Native Vegetation

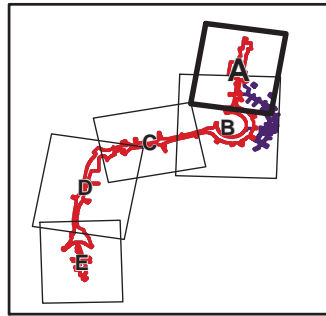
The following vegetation communities meet the definition of a native vegetation area within the LRS2B Project Area:

- ACT01.1- *Tablelands Dry Tussock Grassland – Natural Temperate Grassland (High Diversity)*.
- ACT01.2 – *Tablelands Dry Tussock Grassland – Natural Temperate Grassland (Moderate Diversity)*.
- Non-Local Native Groundcover.
- Landscape Plantings – Native.

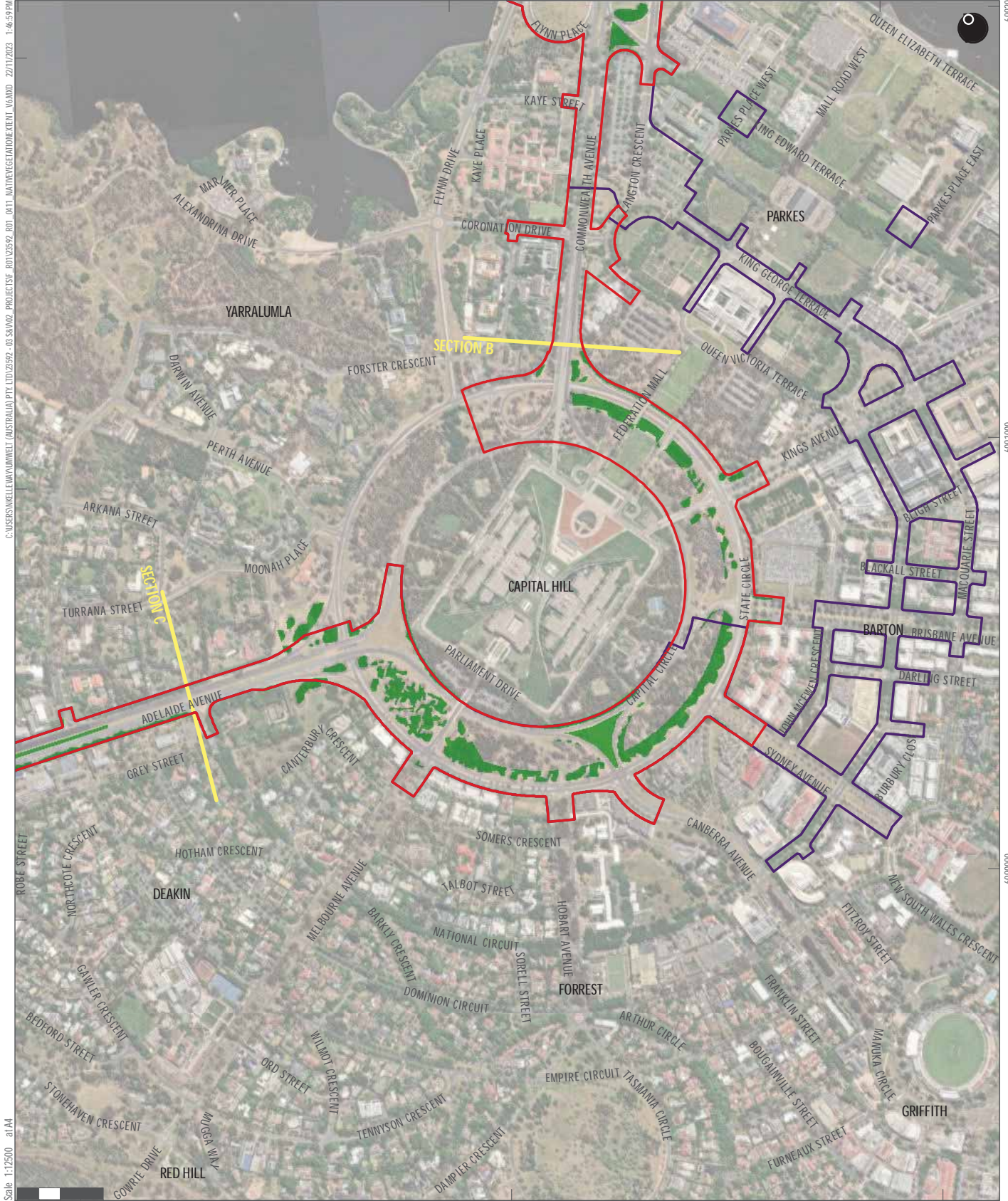
A preliminary total of 13.86 ha of native vegetation is present in the LRS2B Project Area (**Figure 4.11**).



Legend  
■ Native Vegetation



**FIGURE 4.11.A**  
 Interim Extent of Native  
 Vegetation in the LRS2B  
 Project Area (from Umwelt,  
 2022)

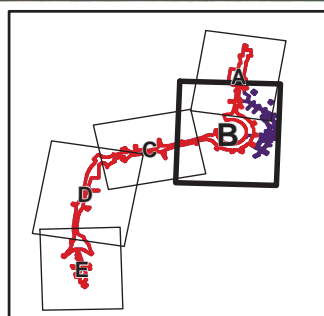


Scale 1:12500 at A4

GDA 1994 MGA Zone 55

**Legend**

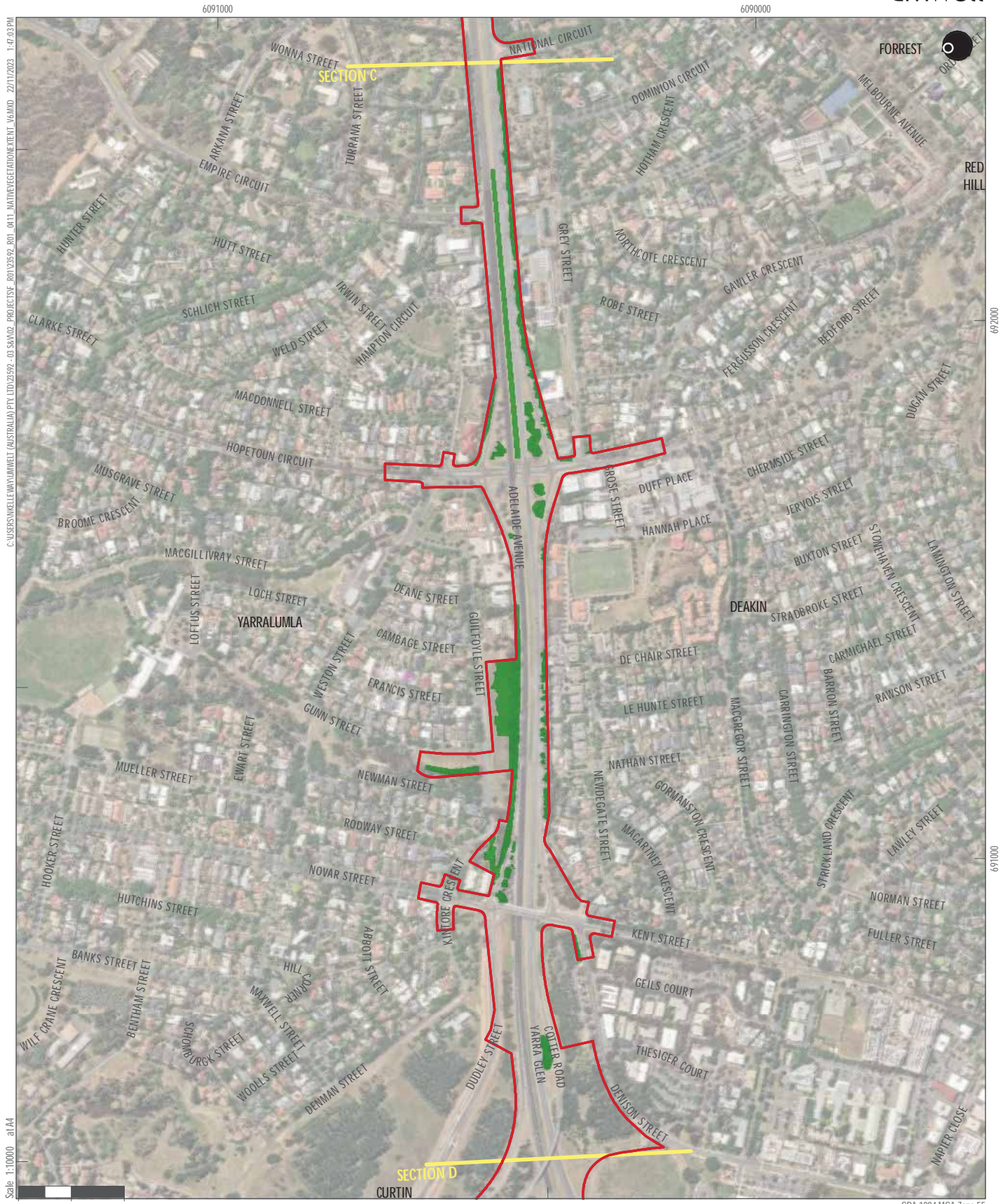
■ Native Vegetation



**FIGURE 4.11.B**

Interim Extent of Native Vegetation in the LRS2B Project Area (from Umwelt, 2022)





Scale 1:10000 at A4

Legend  
 Native Vegetation

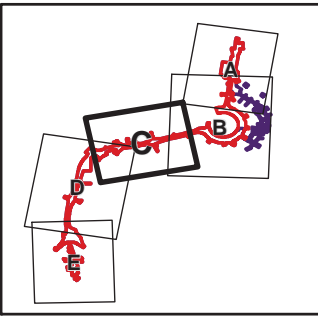
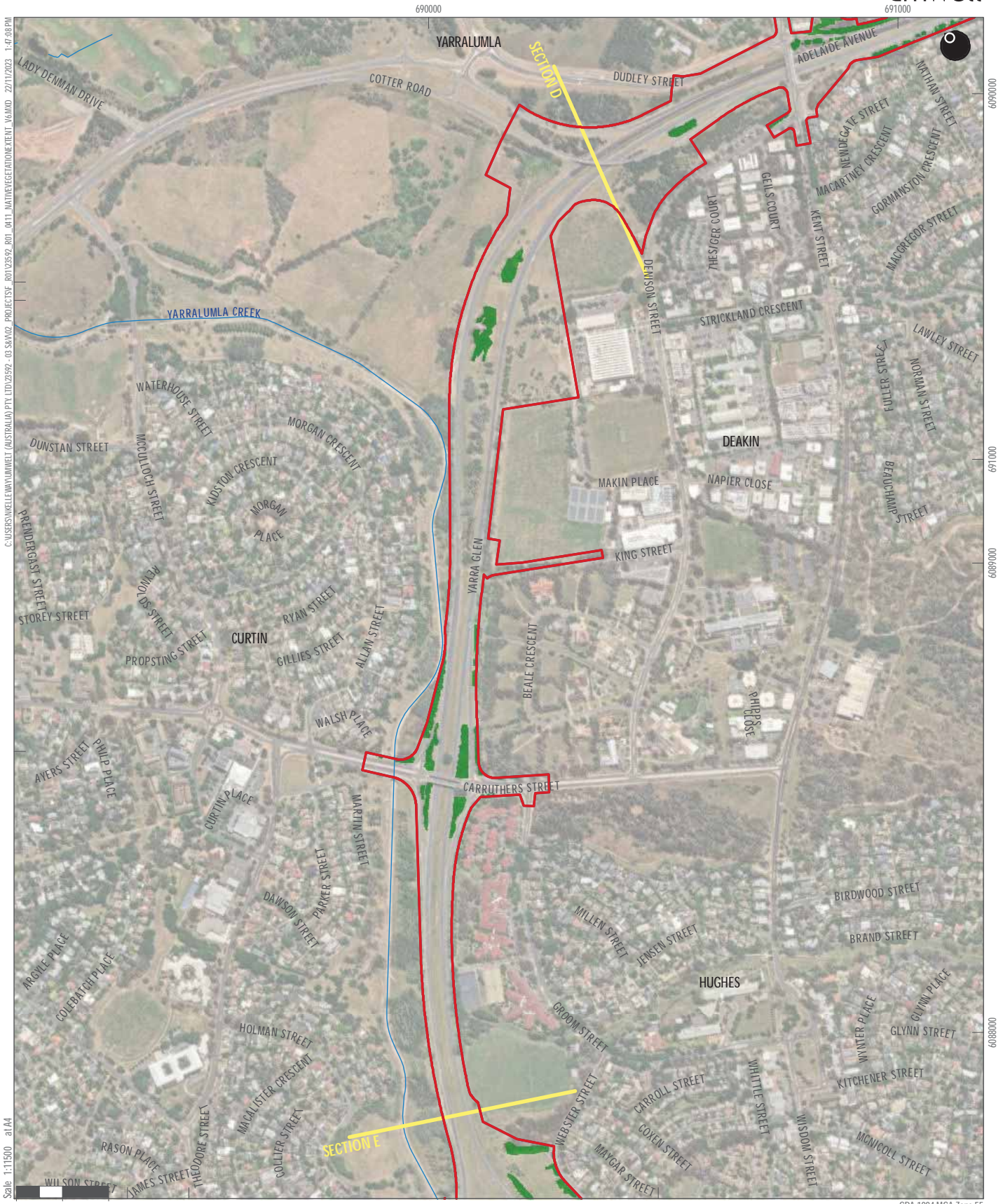


FIGURE 4.11.C  
 Interim Extent of Native  
 Vegetation in the LRS2B  
 Project Area (from Umwelt,  
 2022)



Scale 1:11500 at A4  
 0 100 200 Metres

Legend  
 ■ Native Vegetation

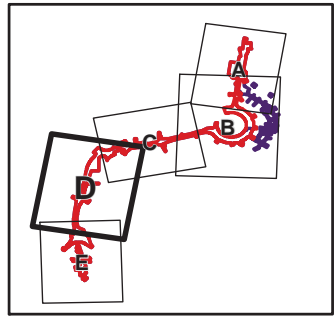
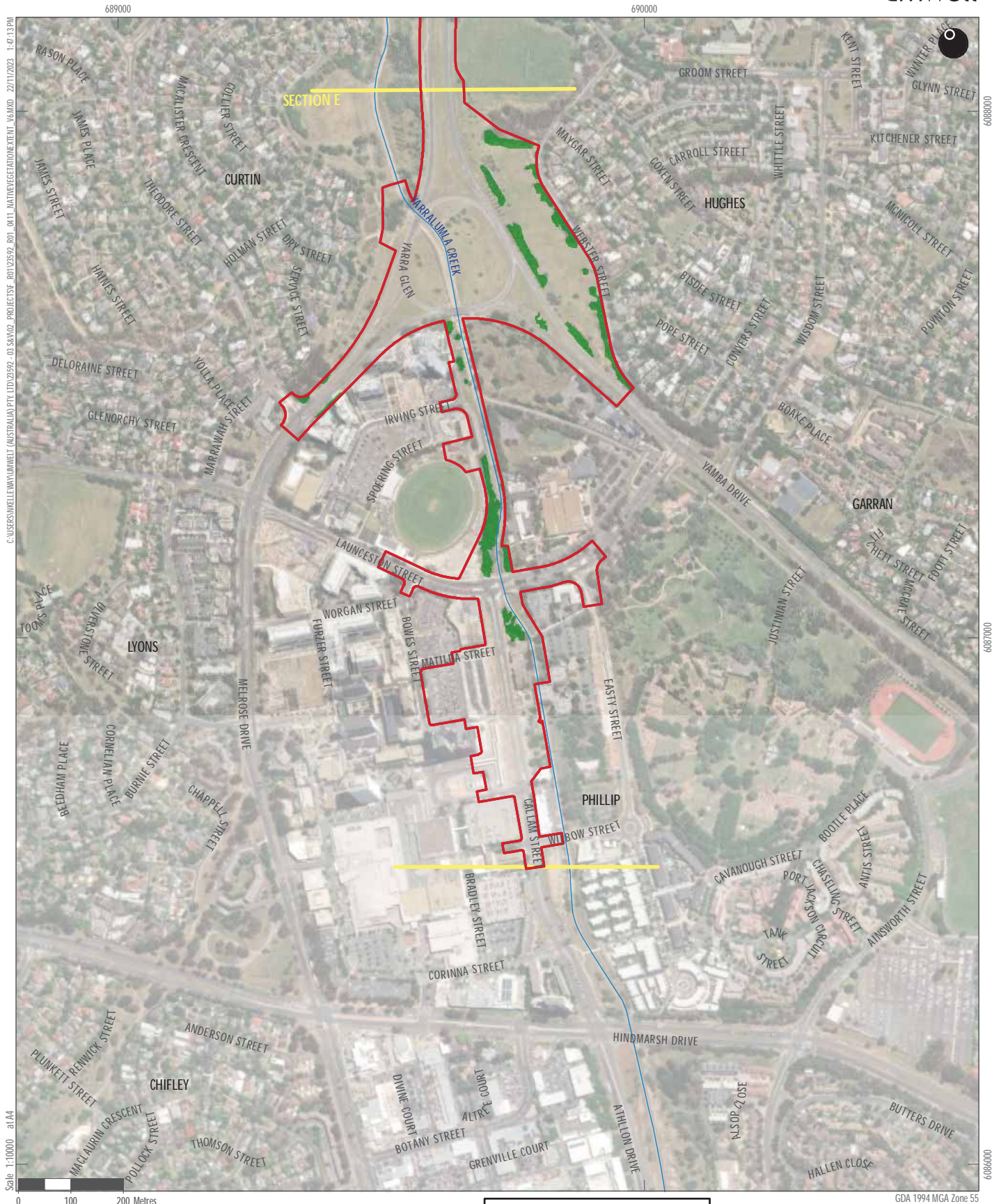


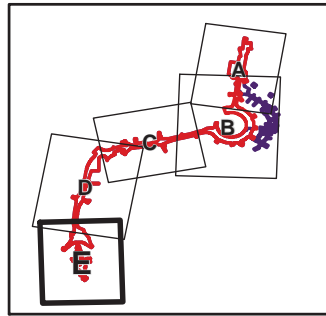
FIGURE 4.11.D  
 Interim Extent of Native  
 Vegetation in the LRS2B  
 Project Area (from Umwelt,  
 2022)



C:\USERS\KELLEWAY\UMWELT (AUSTRALIA) PTY. LTD.\2592 - 03 SKA\02\_PROJECTS\F\_01\2592\_001\_011\_MATVEGETATION\EXT\_16\AMD\_22112023\_1:47:13 PM

Scale 1:10000 at A4

**Legend**  
 Native Vegetation



**FIGURE 4.11.E**  
 Interim Extent of Native Vegetation in the LRS2B Project Area (from Umwelt, 2022)

## 4.6 Mature and Hollow Bearing Trees

One hundred and four (104) hollow-bearing trees (Table 4.7) were identified within the LRS2B Project Area ranging from extra-small to extra-large in size (Table 4.8).

A total of 52 (50%) of the hollow-bearing trees identified were native. Of these native hollow-bearing trees, 48 meet the definition of mature by possessing a diameter at breast height of greater than 50 cm (ACT Government, 2021). Native hollow-bearing species included remnant *E. blakelyi* as well as planted local species such as *E. mannifera*, *E. cinerea*, *E. polyanthemos*, and *Casuarina* sp. Non-local native trees that consist of hollows include species such as *E. sideroxylon* and *E. globulus*. Exotic hollow-bearing trees included *Pinus* sp., *Quercus* sp. and *Ulmus* sp. Thirteen dead trees (stags) were also observed to have hollows.

Section C within the State Circle and Adelaide Avenue had the highest number of hollow-bearing trees. Both Section B1 and C largely comprise of native trees. Section A and D had the most exotic trees with hollows. The number and size of hollows recorded were based on what could be observed from the ground (Figure 4.12).

**Table 4.7 Number of Mature Native Trees and Trees with Hollows within the LRS2B Project Area**

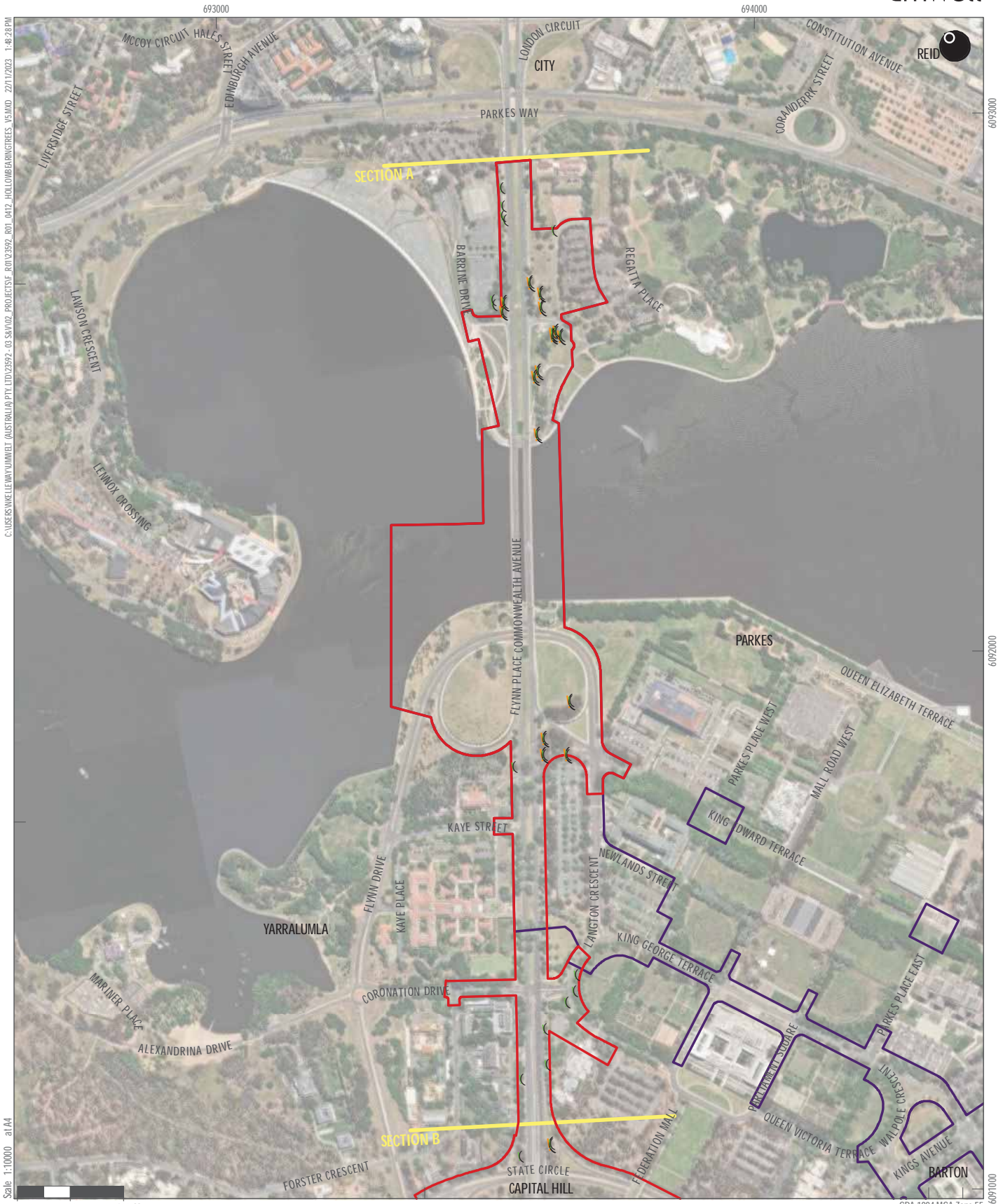
Tree Type	No. of Hollows
No. Native trees with Hollows	52
No. Exotic Trees with Hollows	41
No. Stags with Hollows (native and exotic)	11
Total	104
No. of Native Mature trees <sup>1</sup>	48

Hollows that were actively being used with birds entering and leaving the hollows and displaying breeding behaviours (i.e. chewing around the hollow entrance) were recorded during the surveys.

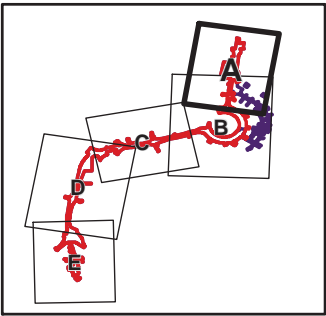
**Table 4.8 Number of Hollow Sizes Recorded within the LRS2B Project Area**

Hollow Size	No. of Hollows
Hollow (Extra small)	102
Hollow (Medium)	59
Hollow (Large)	43
Hollow (Extra Large)	2
Total	227

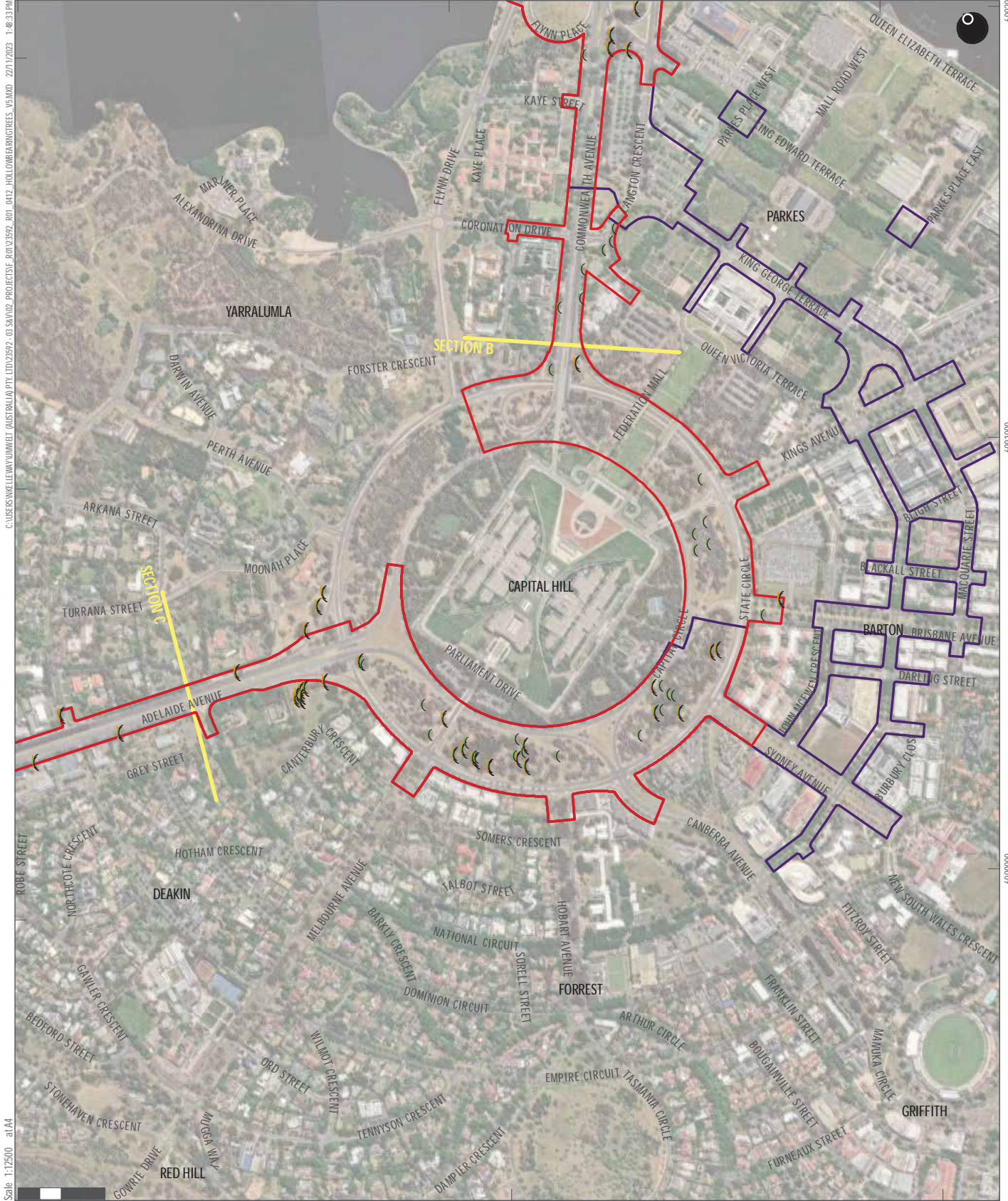
<sup>1</sup> 'Mature tree' is defined as a *Eucalyptus* sp. tree with DBH greater than 50cm (ACT Government, 2021).



- Legend
- Option 2B
  - Option 2B National Triangle – Barton Section
  - ↘ Mature Tree
  - ↘ Hollow-Bearing Tree



**FIGURE 4.12.A**  
 Interim Distribution of Mature and Hollow-bearing Trees in the LRS2B Project Area  
 (from Umwelt, 2022)

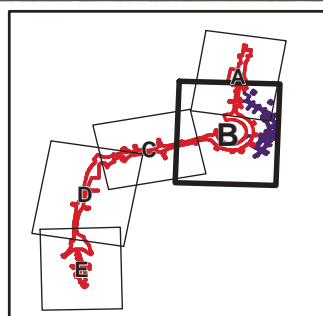


Scale 1:12500 at A4

GDA 1994 MGA Zone 55

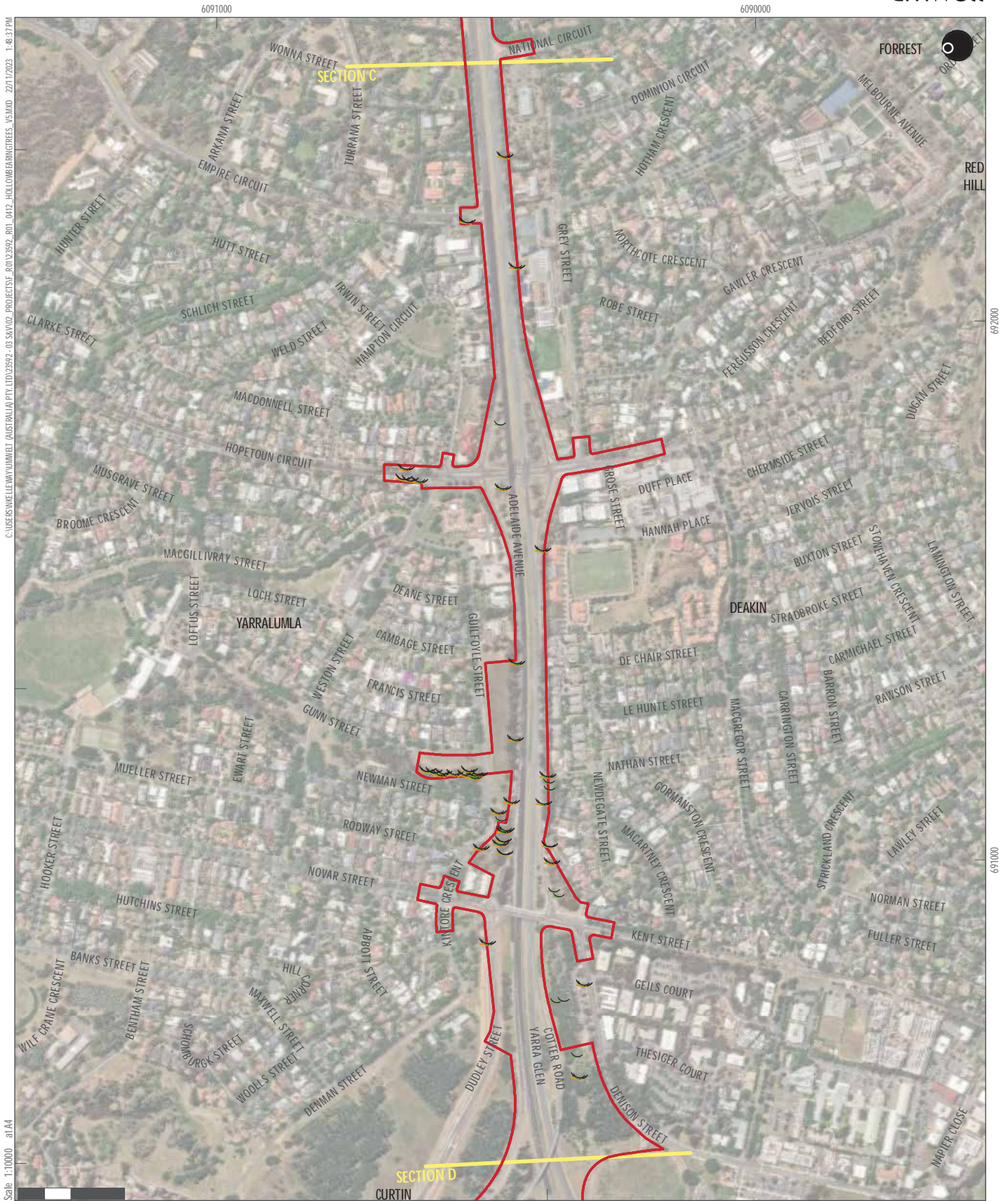
**Legend**

- Option 2B
- Option 2B National Triangle – Barton Section
- ) Mature Tree
- ( Hollow-Bearing Tree



**FIGURE 4.12.B**

**Interim Distribution of Mature and Hollow-bearing Trees in the LRS2B Project Area (from Umwelt, 2022)**



C:\Users\wellew\My Documents\umwelt (australia) Pty Ltd\2592 - 03 SKM\02 - PROJECTS\F - ROT\2592 - ROT\_0412 - HOLLOWBEARINGTREES\_V5\MXD - 22/11/2023 1:48:27 PM  
 Scale 1:10000 at A4

- Legend**
- Option 2B
  - Option 2B National Triangle – Barton Section
  - ⤿ Mature Tree
  - ⤿ Hollow-Bearing Tree

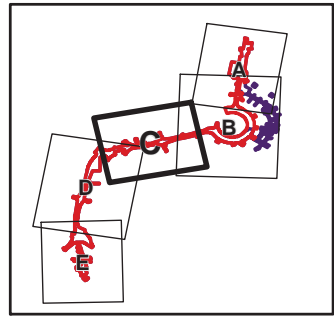
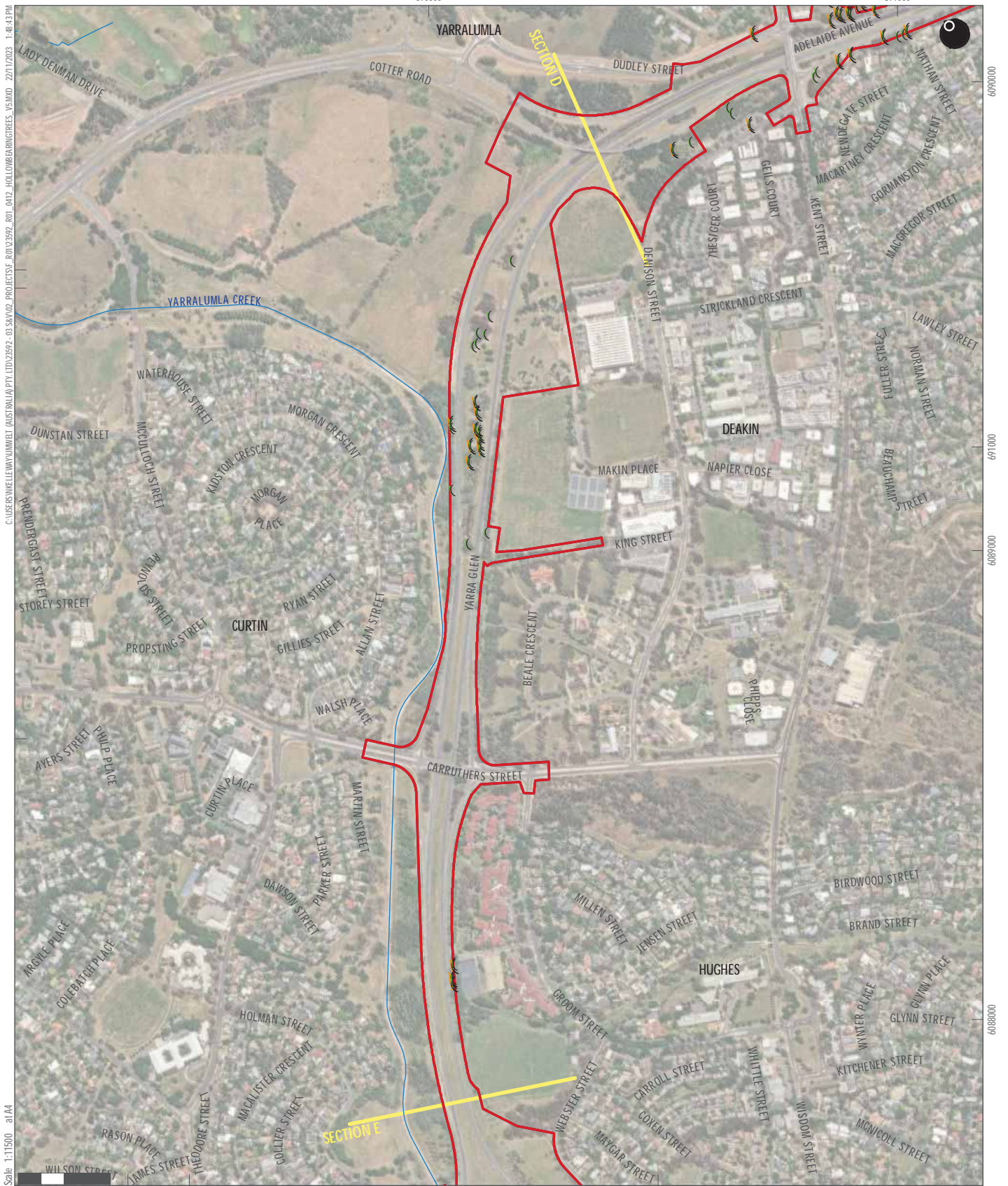


FIGURE 4.12.C

Interim Distribution of Mature and Hollow-bearing Trees in the LRS2B Project Area (from Umwelt, 2022)



- Legend
- Option 2B
  - Option 2B National Triangle – Barton Section
  - Mature Tree
  - Hollow-Bearing Tree

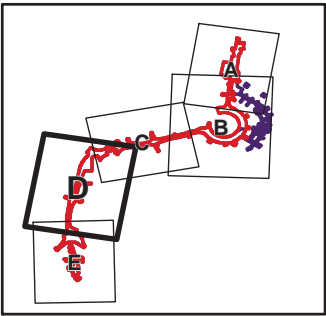
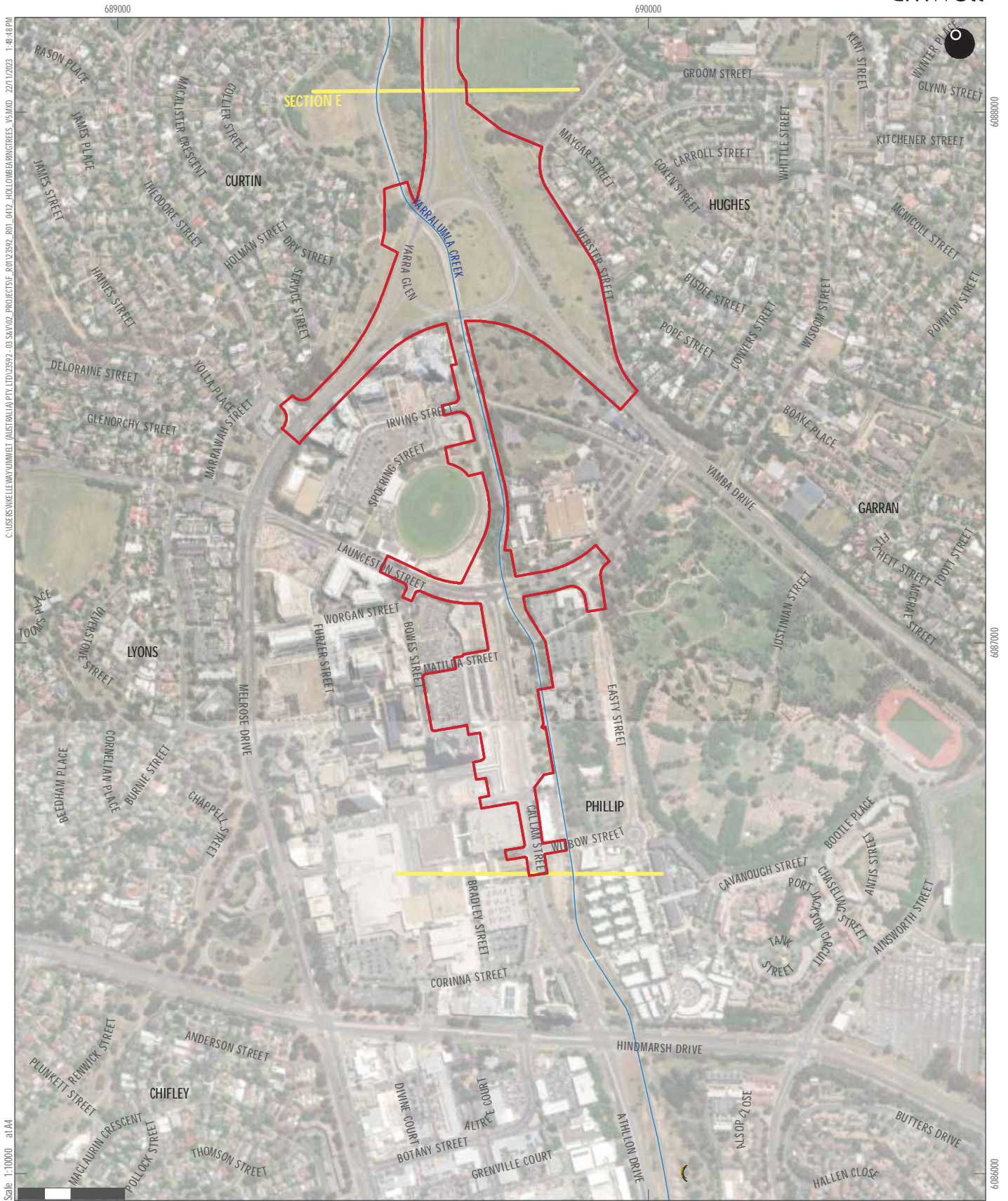


FIGURE 4.12.D  
Interim Distribution of Mature and Hollow-bearing Trees in the LRS2B Project Area (from Umwelt, 2022)

Image Source: Data source:





- Scale 1:10000 at A4
- Legend
- Option 2B
  - Option 2B National Triangle – Barton Section
  - C Mature Tree
  - C Hollow-Bearing Tree

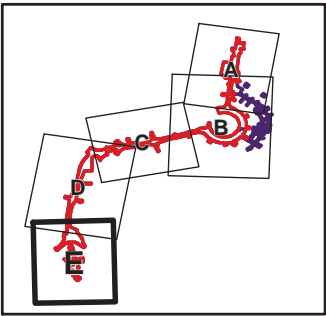


FIGURE 4.12.E

Interim Distribution of Mature and Hollow-bearing Trees in the LRS2B Project Area (from Umwelt, 2022)

## 4.7 Threatened Fauna Assessment

### 4.7.1 Threatened Birds

The LRS2B Project Area supports remnant, planted (native and exotic) and regenerating native trees that provide woodland birds with foraging and breeding habitat as well as movement corridors.

#### 4.7.1.1 Superb Parrot

Six *Polytelis swainsonii* were observed in the LRS2B Project Area. Other observations have been recorded in the southern sections of the LRS2B Project Area (Figure 4.13).

The LRS2B Project Area provides foraging habitat including *E. melliodora*, *E. sideroxylon*, *E. cinerea*, *Acacia* spp. and *Ulmus* sp. As the species is also known to feed on native and exotic grass seed, it is likely that the *P. swainsonii* may also use grasslands in the LRS2B Project Area. Potentially important foraging habitat has been mapped between Launceston Street and Melrose Drive in Woden (L. Rayner pers. comm. 2022).

ACT Government monitoring confirms that there is no breeding habitat in the CWP2P or Mitchell Project Areas. The location of breeding areas for *P. swainsonii* in the ACT is well understood as the species is subject to active research in the ACT (L. Rayner pers. comm., 2022). The closest breeding habitat is in the Molonglo Valley.

#### 4.7.1.2 Gang-gang Cockatoo

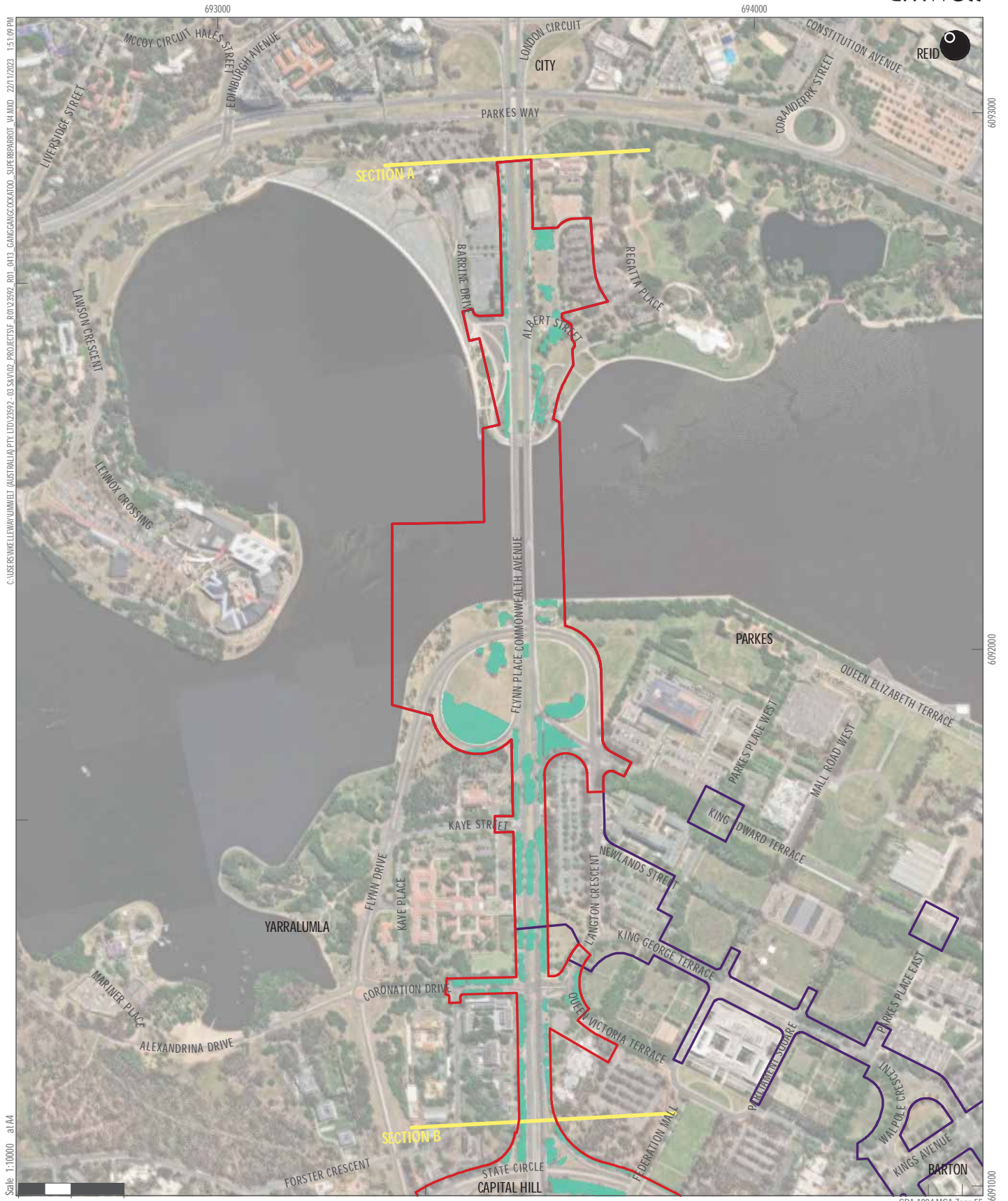
Eight sightings of *C. fimbriatus* were made in the LRS2B Project Area. A pair (one male and one female) were observed chewing at the entrance of a hollow and displaying potential breeding like behaviours.

There are confirmed records of *C. fimbriatus* breeding within 200 m of the Light Rail corridor in Hughes (S. Taylor pers. comm., 2023), with breeding habitat known to occur in the broader area (including within the suburbs of Hughes, Deakin, Garran, and Red Hill and the Red Hill Nature Reserve).

Potential foraging habitat, comprising planted native vegetation and exotic vegetation, is widespread in the LRS2B Project Area (S. Taylor pers. comm., 2023), including in built-up areas. Of particular importance for *C. fimbriatus* foraging is blue gum (*E. globulus*) trees. Other foraging species recorded including *Eucalyptus* spp., *Acacia* spp., *Cotoneaster* sp. and *Pyracantha* sp. (Figure 4.13).

#### 4.7.1.3 Swift Parrot

The LRS2B Project Area provides potential temporary foraging habitat for *Lathamus discolor* during migration with planted native winter-flowering species such as *E. melliodora*, *E. sideroxylon* and *E. cinerea*. The Project Area is however, unlikely to have any important role in maintaining suitable foraging resources or connectivity for the species.



C:\USERS\WELLEVAY\UMWELT (AUSTRALIA) PTY.LTD\23592 - G3 SRV\02\_PROJECTS\013592 - R01\_0413\_GANGGANGCOCKATOO\_SUPERBPARROT\_VA.WXD 22/11/2023 1:51:09 PM

Scale 1:10000 at A4



- Legend**
- Option 2B
  - Option 2B National Triangle - Barton Section
  - Gang-gang Cockatoo (*Callocephalon fimbriatum*) Foraging Habitat (critical habitat)

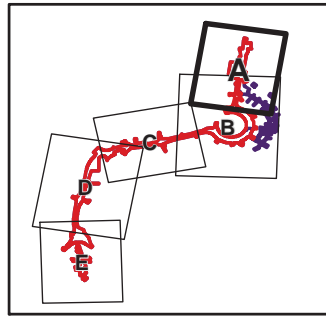
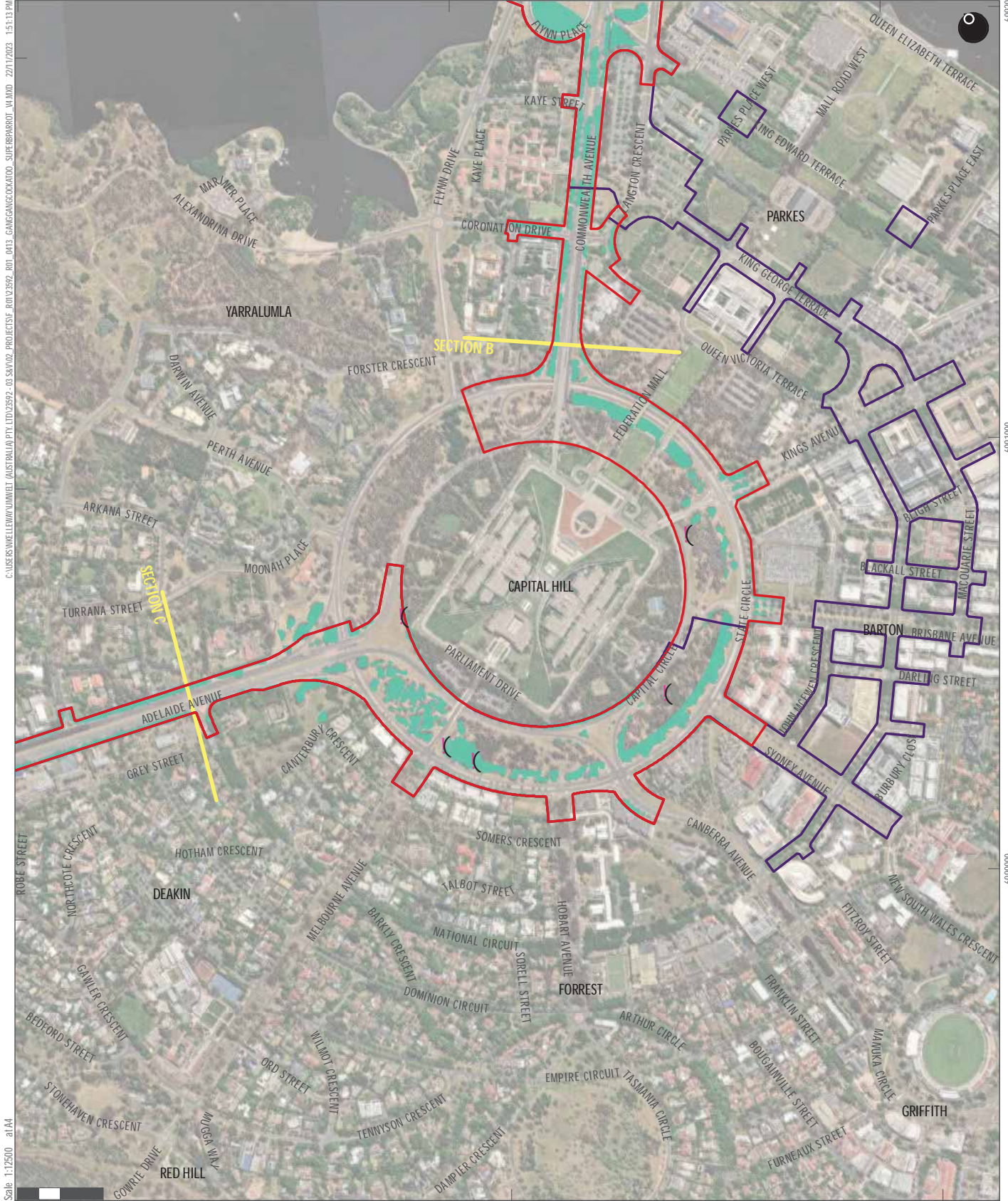


FIGURE 4.13.A

Gang Gang Cockatoo and Superb Parrot within the LRS2B Project Area (Umwelt, 2022)



Scale 1:12500 at A4

GDA 1994 MGA Zone 55

Legend

- Option 2B
- Option 2B National Triangle – Barton Section
- Gang-gang Cockatoo (*Callocephalon fimbriatum*) Foraging Habitat (critical habitat)
- X Gang-gang Cockatoo (*Callocephalon fimbriatum*) Record

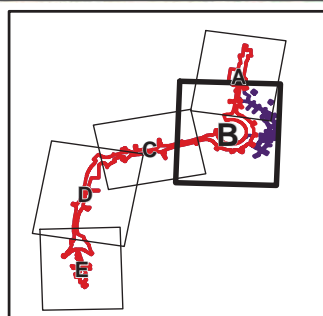
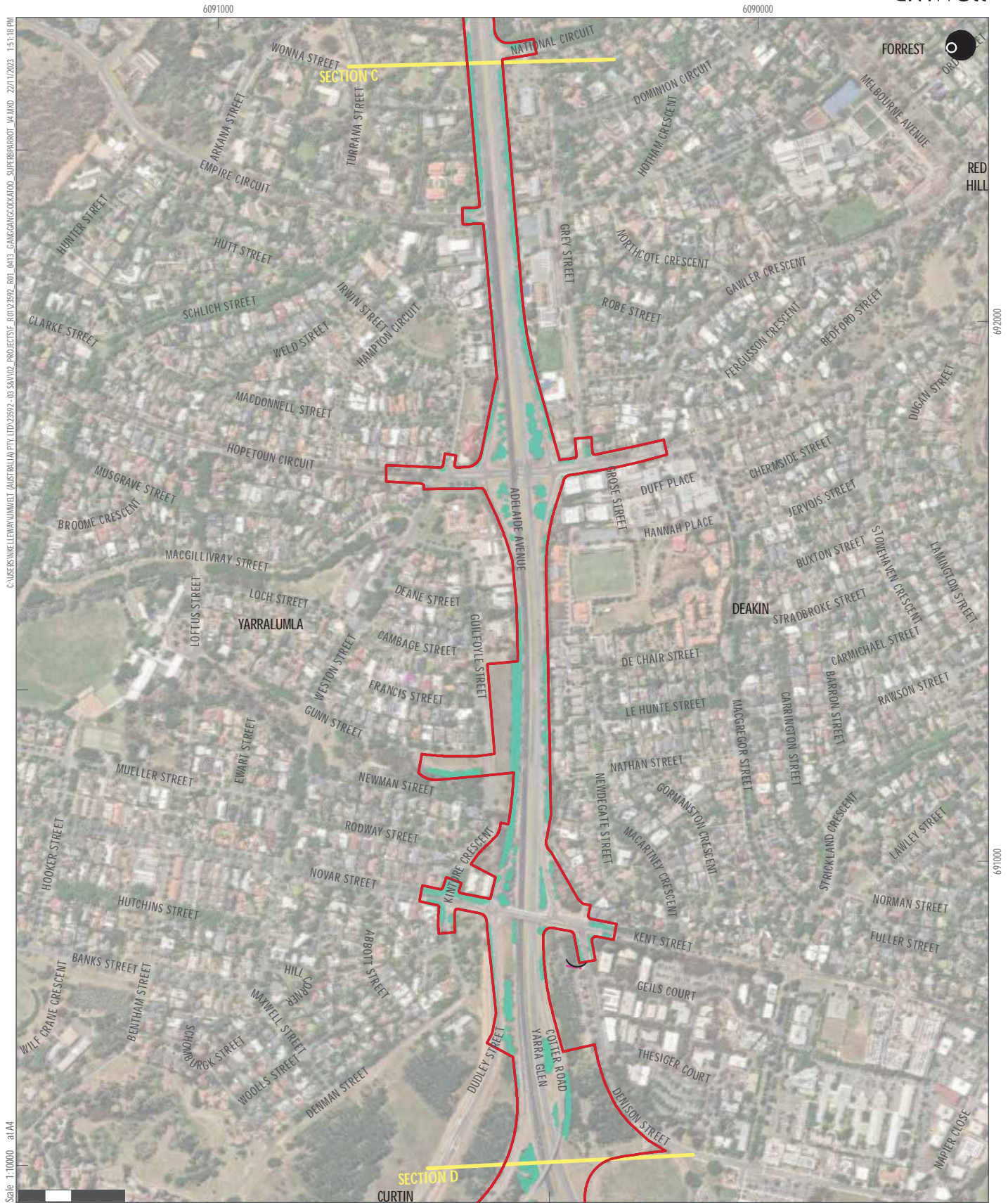


FIGURE 4.13.B

Gang Gang Cockatoo and Superb Parrot within the LRS2B Project Area (Umwelt, 2022)



- Legend**
- Option 2B
  - Option 2B National Triangle – Barton Section
  - Gang-gang Cockatoo (*Callocephalon fimbriatum*) Foraging Habitat (critical habitat)
  - ✕ Gang-gang Cockatoo (*Callocephalon fimbriatum*) Record

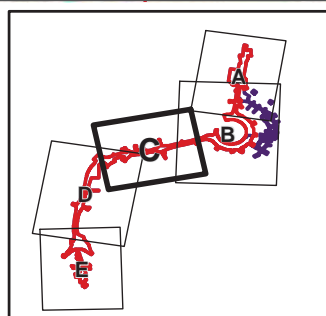
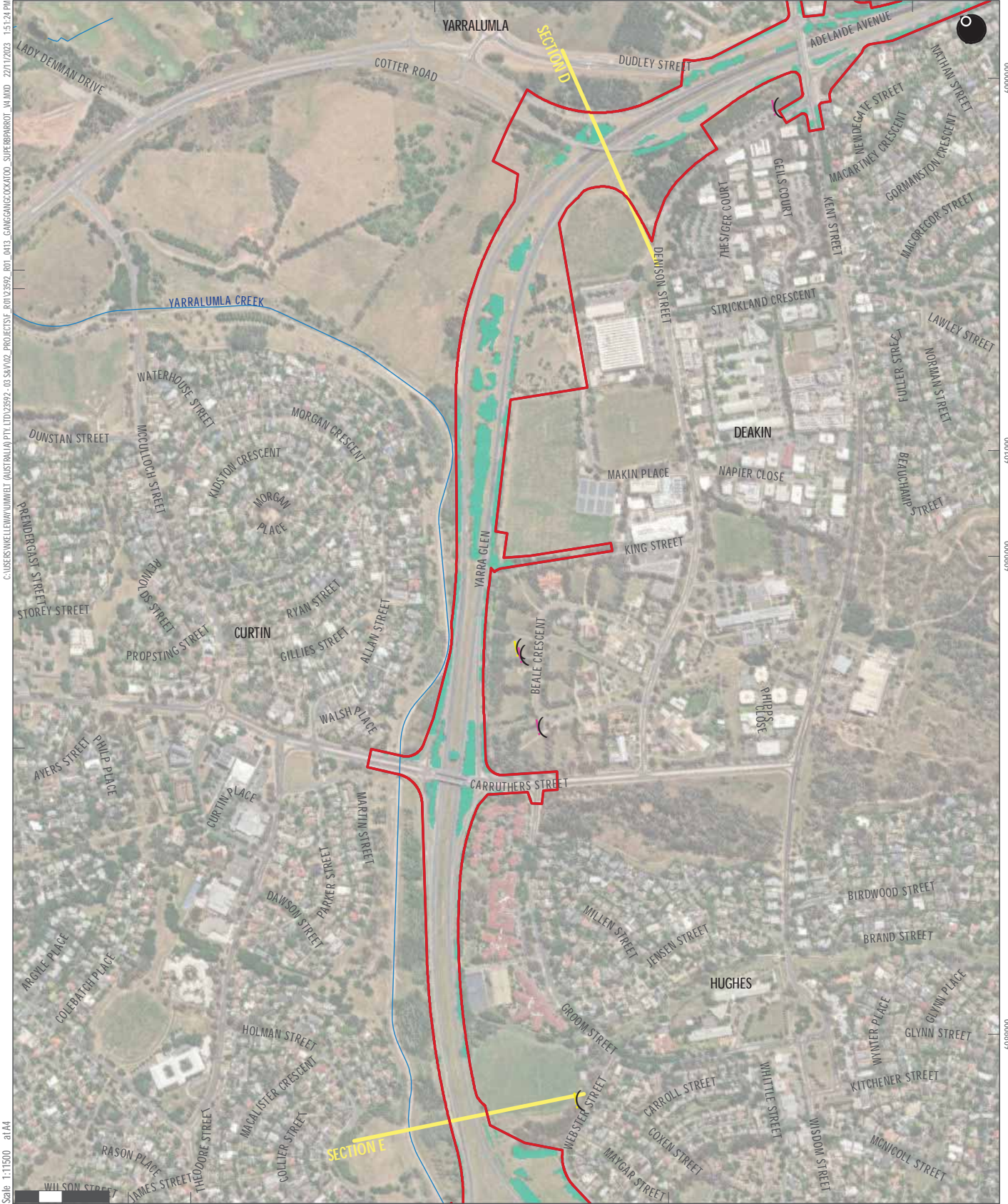


FIGURE 4.13.C

Gang Gang Cockatoo and Superb Parrot within the LRS2B Project Area (Umwelt, 2022)

690000

691000



C:\USERS\WELLEN\UMWELT (AUSTRALIA) PTY LTD\25992 - 03 SRV\02\_PROJECTS\01\_R01\25992 - 03 SRV\02\_PROJECTS\01\_R01\_0413 GANGGANGCOCKATOO\_SUPERBPARROT\_VA.MXD 22/11/2023 1:51:24 PM

6096000  
6096000  
6096000  
6096000  
6096000

Scale 1:11500 at A4

GDA 1994 MGA Zone 55

**Legend**

- Option 2B
- Option 2B National Triangle – Barton Section
- Gang-gang Cockatoo (*Callocephalon fimbriatum*) Foraging Habitat (critical habitat)
- Gang-gang Cockatoo (*Callocephalon fimbriatum*) Record
- Superb Parrot (*Polytelis swainsonii*) Record

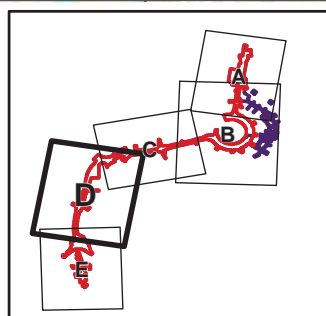
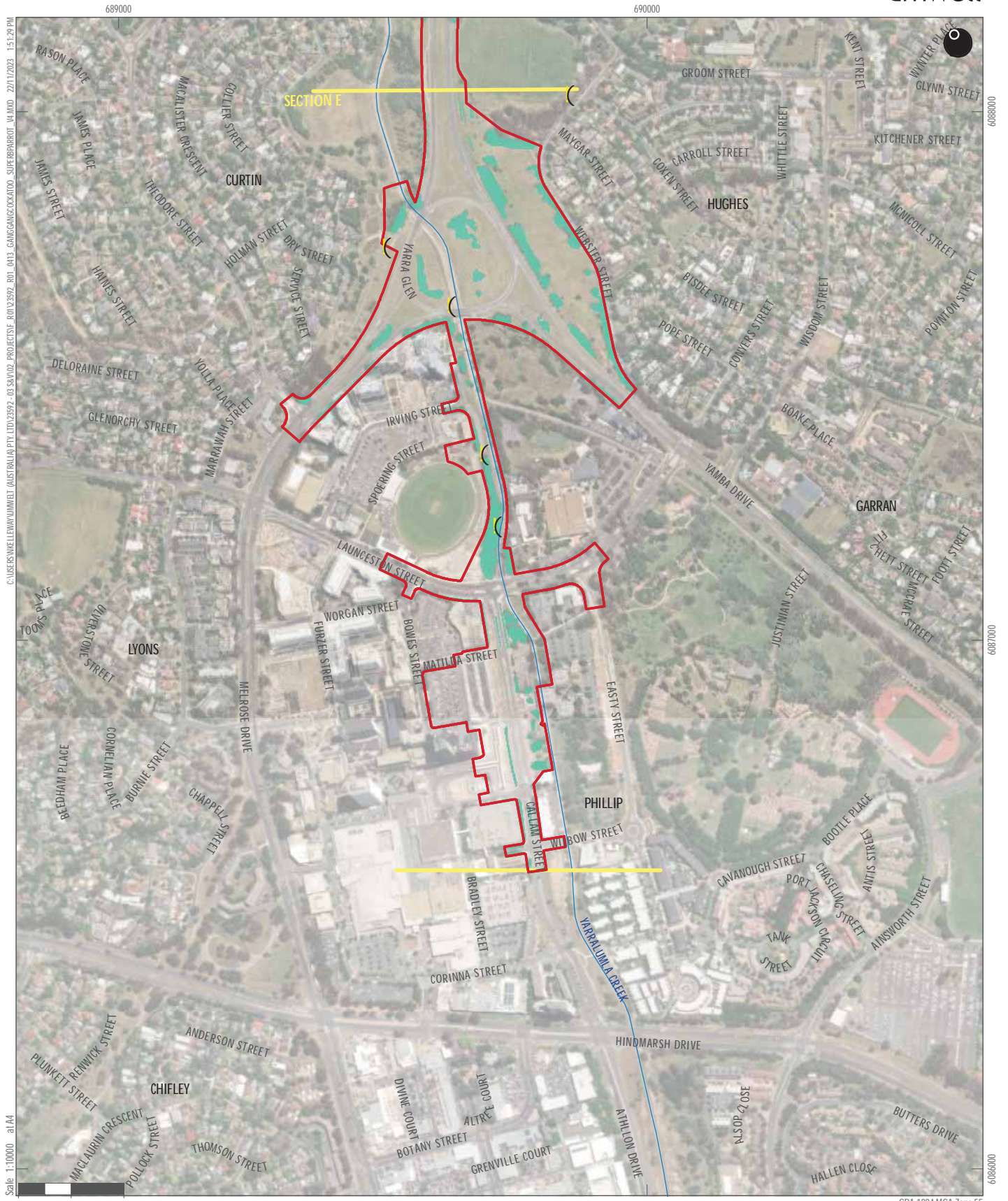


FIGURE 4.13.D

Gang Gang Cockatoo and Superb Parrot within the LRS2B Project Area (Umwelt, 2022)



- Legend**
- Option 2B
  - Option 2B National Triangle – Barton Section
  - Gang-gang Cockatoo (*Callocephalon fimbriatum*) Foraging Habitat (critical habitat)
  - Superb Parrot (*Polytelis swainsonii*) Record

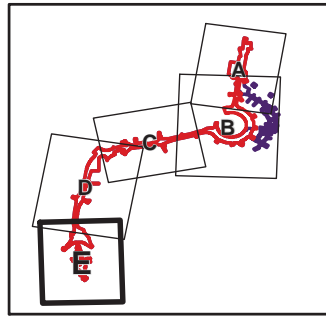


FIGURE 4.13.E  
Gang Gang Cockatoo and Superb Parrot within the LRS2B Project Area (Umwelt, 2022)

## 4.7.2 Golden Sun Moth

### 4.7.2.1 Golden Sun Moth Habitat Condition

The total area of 16.51 ha of potential *Synemon plana* habitat was recorded in all sections within the LRS2B Project Area (Figure 4.14). The most common habitat condition was *Nassella neesiana* (Chilean needlegrass) dominated followed by low-density *N. neesiana* habitat. Only one patch of high quality (0.012 ha) habitat was identified (Table 4.9).

Table 4.9 Preliminary Extent of Potential Golden Sun Moth Habitat Condition Categories (Potential Habitat)

Section	Extent(ha)
High quality	0.012
Medium quality	0.00
Low quality	0.69
<i>Nassella neesiana</i> (Chilean needlegrass) dominated	9.09
Low-density <i>N. neesiana</i>	6.72
<b>Total</b>	<b>16.51</b>

Using the definition in Section 3.3.6.1, the likelihood that potential *S. plana* habitat can be classified as confirmed habitat was undertaken. The possible habitat mostly occurs within Section E (6.99 ha). No Possible habitat was identified in Sections B and C. Unlikely habitat (5.68 ha) was identified throughout the sections except for Section A and Section E.

Table 4.10 Extent of Re-classified Potential Golden Sun Moth Habitat

Section	Confirmed Habitat (ha)	Possible Habitat (ha)	Unlikely Habitat (ha)
A	0.54	0.33	0.00
B	4.5	0.00	0.98
C	1.90	0.00	1.23
D	1.40	0.72	3.48
E	0.00	6.99	0.00
<b>Total</b>	<b>8.35</b>	<b>7.95</b>	<b>5.68</b>

### 4.7.2.2 Targeted Survey

*Synemon plana* were recorded around State Circle, and along Adelaide Avenue near the Cotter Road junction (Figure 4.14); with 35 moths observed in the LRS2B Project Area. *S. plana* populations are considered isolated if they occur greater than 200 metres apart; and considering habitat fragmentation and barriers to dispersal such as obstacles over 1m in height (DEWHAA, 2009). Given this, the Project Area contains three separate populations:

- Population 1 – around state circle.
- Population 2 – along the northern edge of Adelaide Avenue near the Cotter Road Junction.
- Population 3 – along the southern edge of Adelaide Avenue near the Cotter Road Junction.

A fourth population occurs near Commonwealth Park (ARUP, 2021).



### 4.7.3 Perunga Grasshopper

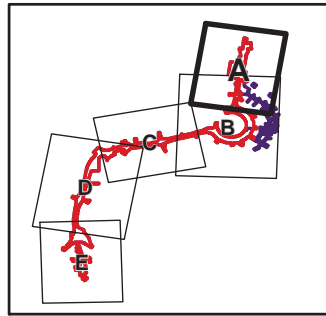
Areas mapped as ACT01.1 *Tablelands Dry Tussock Grassland – Natural Temperate Grassland (High Diversity)* and ACT01.2 *Tablelands Dry Tussock Grassland – Natural Temperate Grassland (Moderate Diversity)* in the LRS2B Project Area are considered habitat for the *Perunga ochracea*.

## 4.8 Targeted Flora Surveys

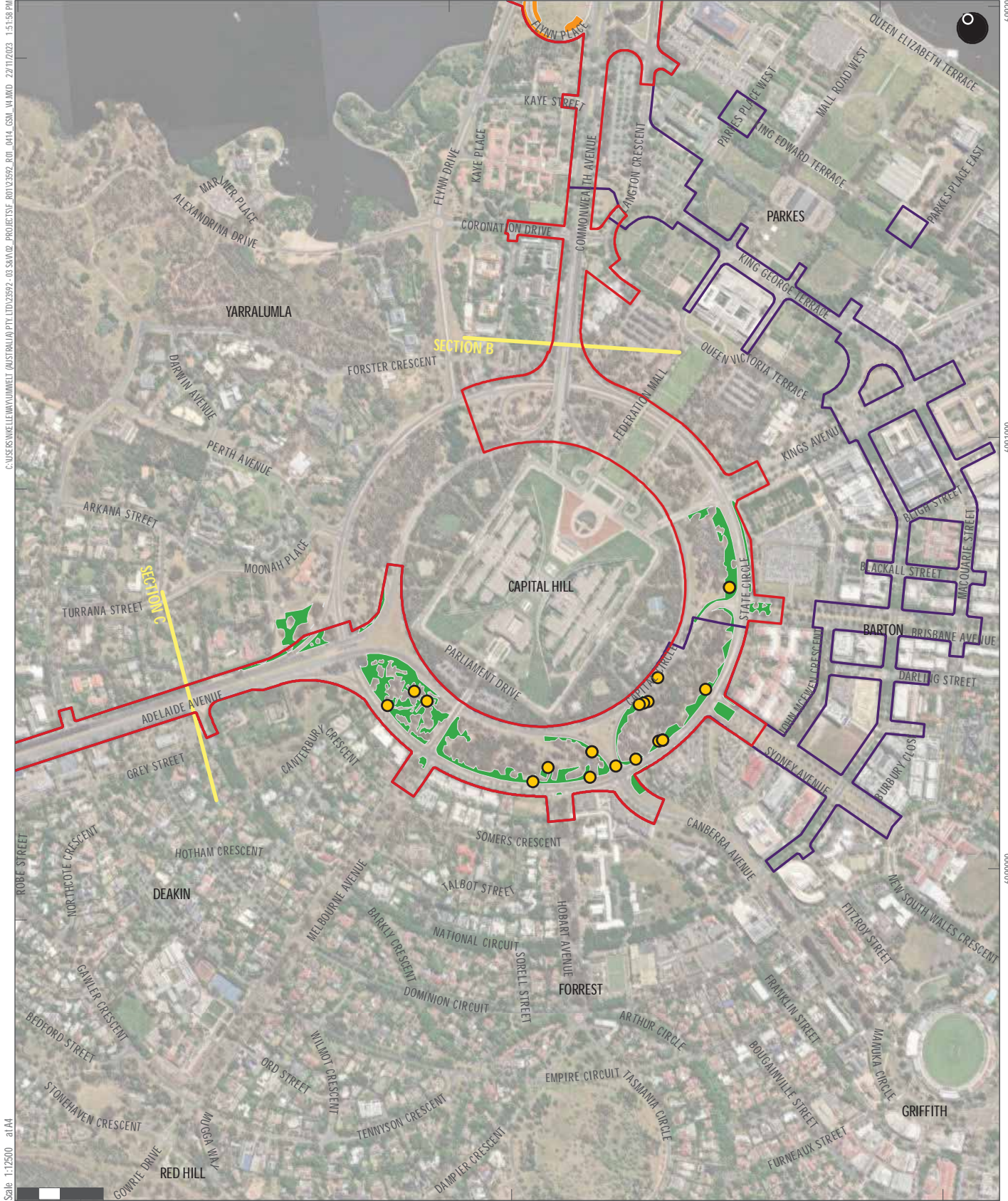
No individuals of any threatened flora species were detected within the LRS2B Project Area.



- Scale 1:10000 at A4
- 0 100 200 Metres
- Legend**
- Option 2B
  - Option 2B National Triangle – Barton Section
  - Golden Sun Moth (*Synemon plana*) Habitat
  - Chilean Needle Grass Dominated - Confirmed Habitat
  - Chilean Needle Grass Dominated - Potential Habitat



**FIGURE 4.14.A**  
**Golden Sun Moth within the**  
**LRS2B Project Area (Umwelt,**  
**2022)**



Scale 1:12500 at A4

GDA 1994 MGA Zone 55

Legend

- Option 2B
- Option 2B National Triangle – Barton Section
- Golden Sun Moth (*Synemon plana*) Observations
- Golden Sun Moth (*Synemon plana*) Habitat
- Chilean Needle Grass Dominated - Confirmed Habitat
- Chilean Needle Grass Dominated - Potential Habitat

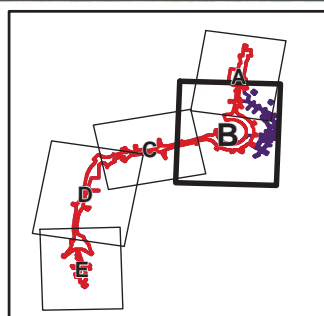
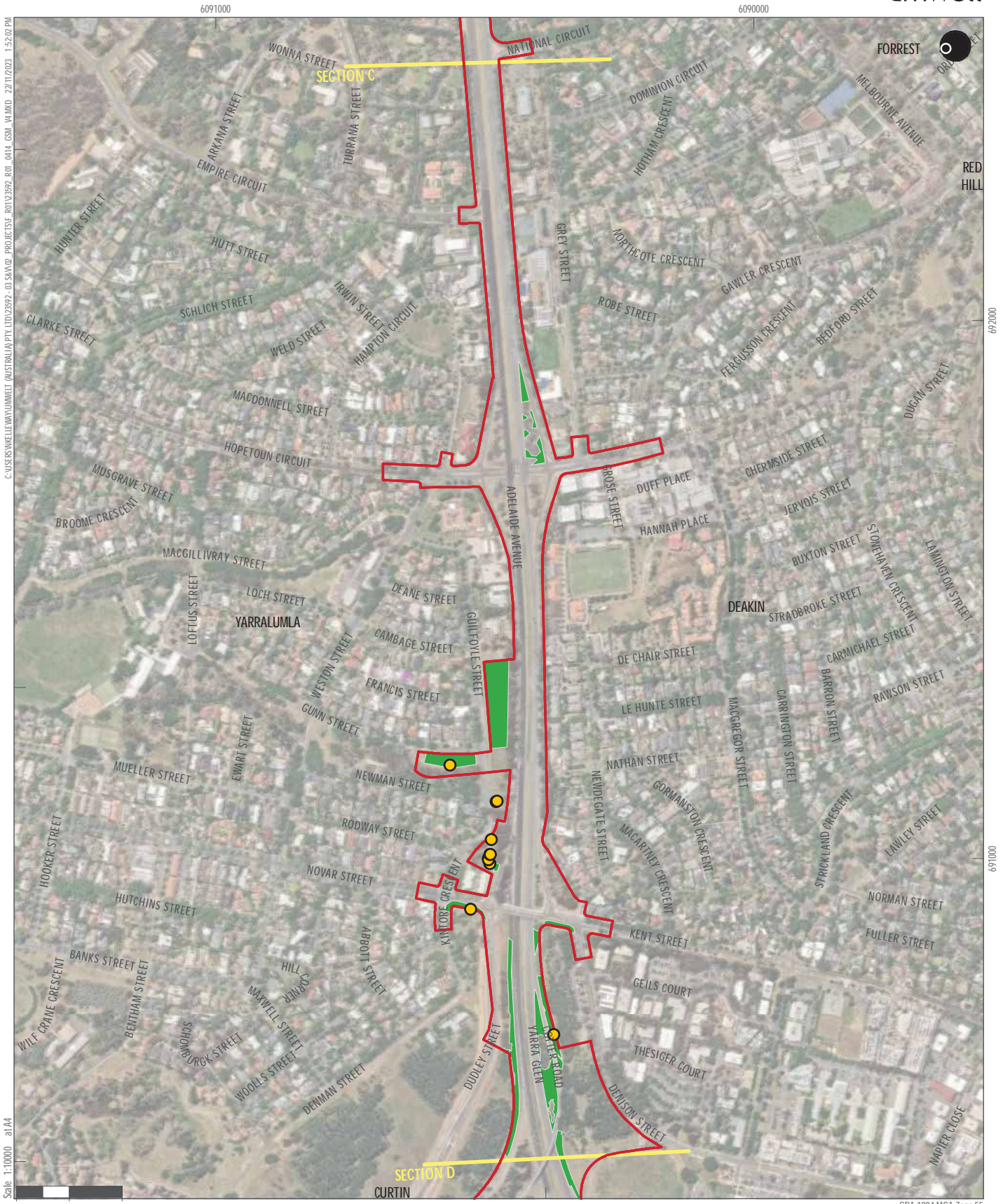


FIGURE 4.14.B

Golden Sun Moth within the LRS2B Project Area (Umwelt, 2022)



- Scale 1:10000 at A4
- Legend
- Option 2B
  - Option 2B National Triangle – Barton Section
  - Golden Sun Moth (*Synemon plana*) Observations
  - Golden Sun Moth (*Synemon plana*) Habitat
  - Chilean Needle Grass Dominated - Confirmed Habitat

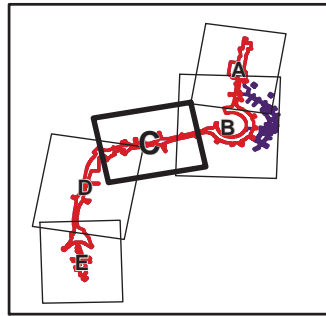
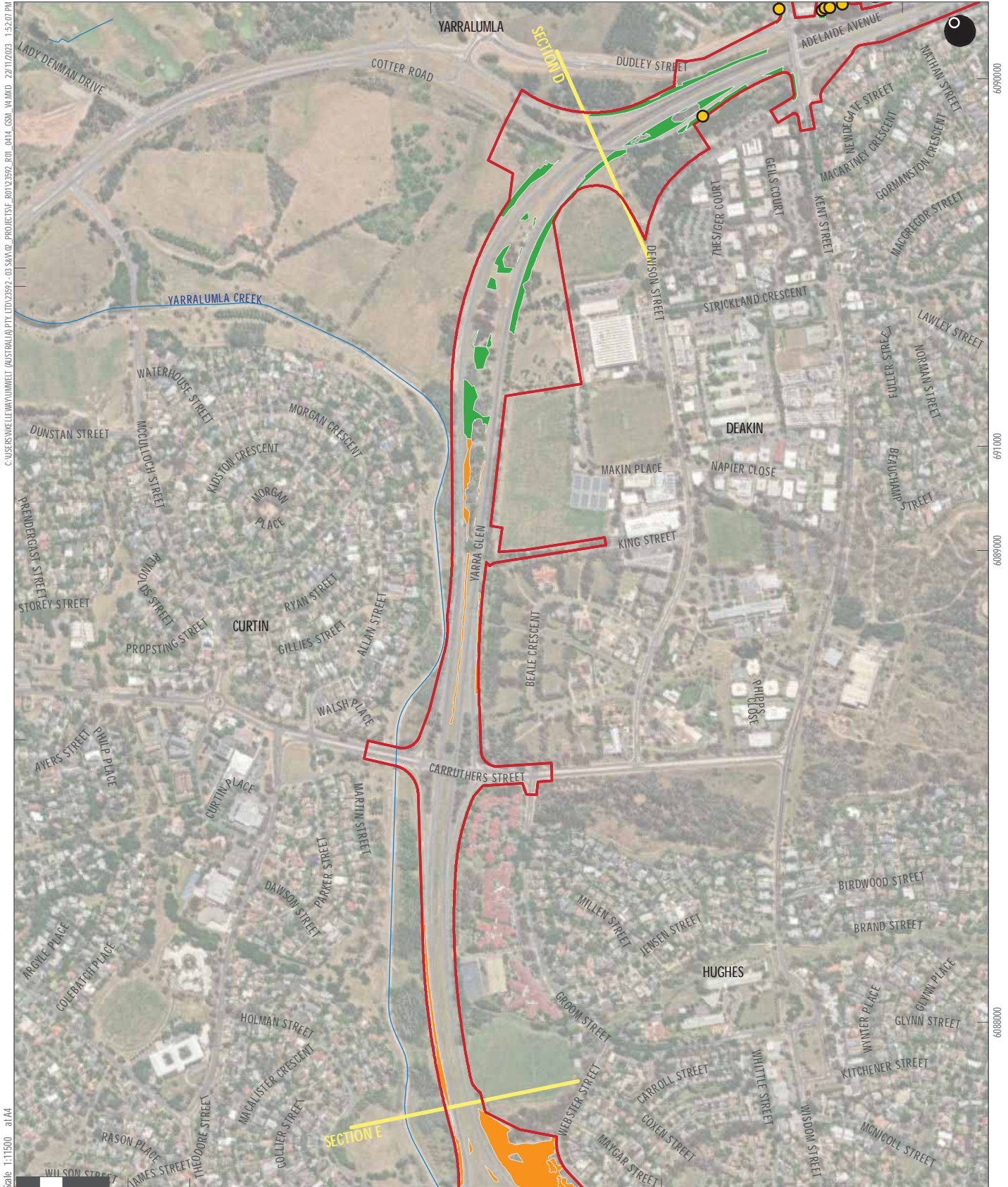


FIGURE 4.14.C  
Golden Sun Moth within the LRS2B Project Area (Umwelt, 2022)

690000

691000



C:\USERS\KELLEW\Umwelt (AUSTRALIA) PTY. LTD\2592 - 03 SKV\02\_PROJECTS\F\_00123592\_ROI\_0414\_GSM\_VA\WD\_22112023\_15207.PM

Scale 1:11500 at A4

690000  
691000  
690000  
691000  
690800

GDA 1994 MGA Zone 55

- Legend**
- Option 2B
  - Option 2B National Triangle – Barton Section
  - Golden Sun Moth (*Synemon plana*) Observations
  - Golden Sun Moth (*Synemon plana*) Habitat
  - Chilean Needle Grass Dominated - Confirmed Habitat
  - Chilean Needle Grass Dominated - Potential Habitat

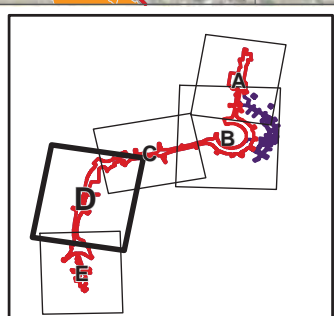
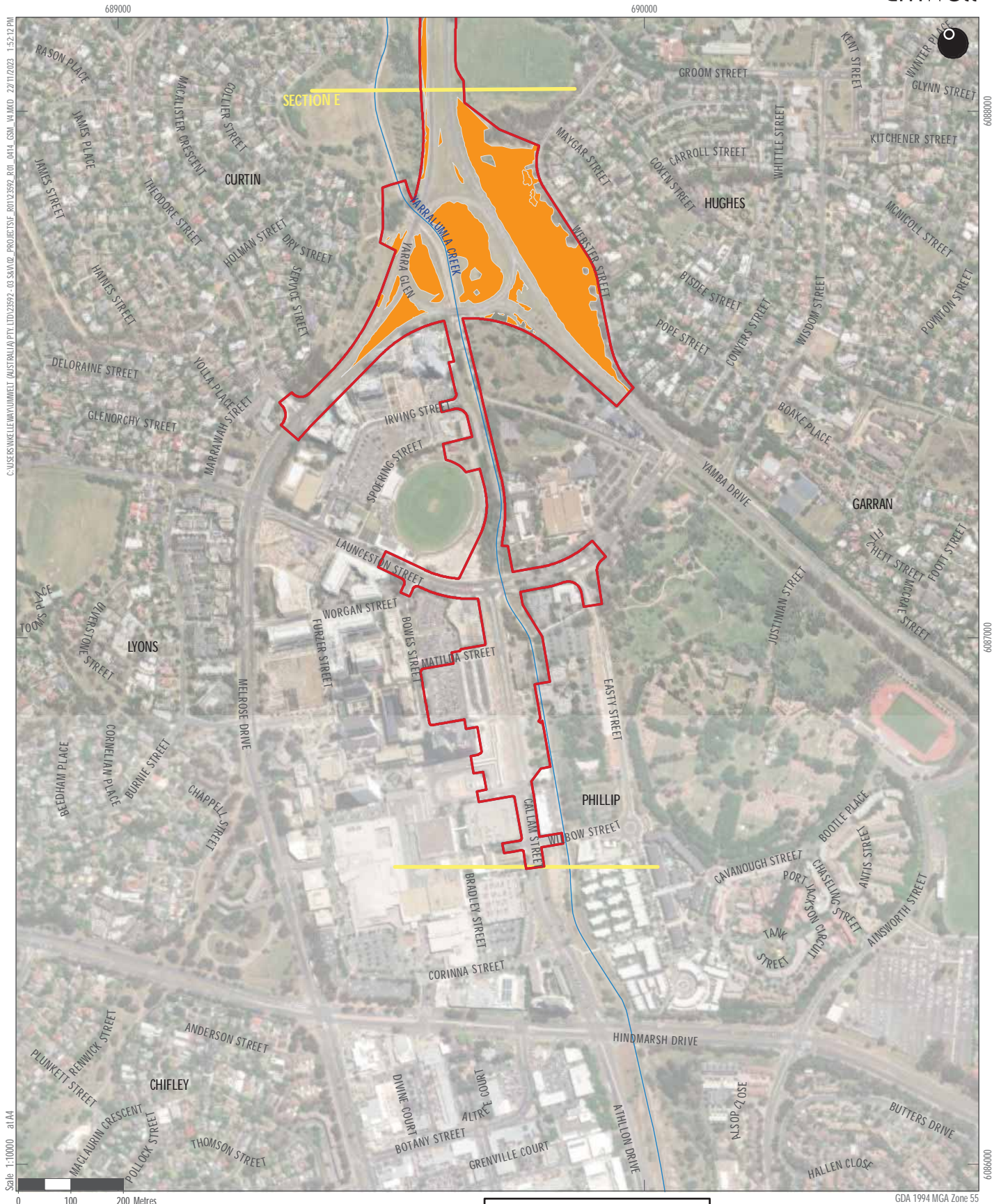
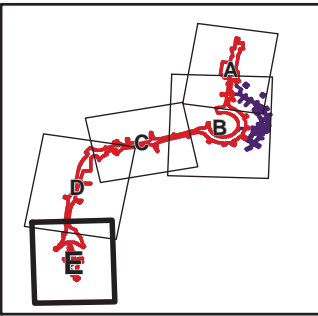


FIGURE 4.14.D

Golden Sun Moth within the LRS2B Project Area (Umwelt, 2022)



- Legend**
- Option 2B
  - Option 2B National Triangle – Barton Section
  - Golden Sun Moth (*Synemon plana*) Habitat
  - Chilean Needle Grass Dominated - Potential Habitat



**FIGURE 4.14.E**  
Golden Sun Moth within the LRS2B Project Area (Umwelt, 2022)

## 4.9 Pest Plants

Nine pest plants declared under the PP&A Act were recorded (**Table 4.11**), including *N. neesiana* and *N. trichotoma*, two Weeds of National Significance (WoNS), which were both common throughout the LRS2B Project Area.

**Table 4.11 Pest Plants, Class, and Location within the LRS2B Project Area**

Pest Plant	WoNS	Class	Loction
<i>Nasella neesiana</i> Chilean needlegrass	Yes	Class 3 – Must be Contained Class 4 - Prohibited	Section A – Common Section B – Common Section C – Common Section D – Common Section E – Common
<i>Nassella trichotoma</i> serrated tussock	Yes	Class 3 – Must be Contained Class 4 - Prohibited	Section D - Scattered
<i>Eragrostis curvula</i> African lovegrass	No	Class 3 – Must be Contained	Section B – Scattered to moderate density patches near main roads Section C - Scattered to moderate dense patches near main roads Section D - Scattered to large dense patches Section E – Common
<i>Hypericum perforatum</i> St John’s wort	No	Class 3 – Must be Contained	Section B – Scattered and isolated Section D - Scattered and isolated
<i>Pinus Radiata</i> Monterey pine	No	Class 3 – Must be Contained	Section C – Planted adjacent to main roads Section D – Planted adjacent to main roads
<i>Populus alba</i> white poplar	No	Class 4 - Prohibited	Section D – Planted along median strip and roadside Section E – Planted along the roadside
<i>Cotoneaster</i> sp.	No	Class 4 - Prohibited	Section C – Scattered and isolated
<i>Hedera helix</i> English ivy	No	Class 4 - Prohibited	Section D - Scattered
<i>Pyracantha angustifolia</i> firethorn	No	Class 2 – Must be suppressed Class 4 - Prohibited	Section E - Scattered

# 5.0 Discussion

## 5.1 Native Vegetation

Six vegetation communities mapped in the LRS2B Project Area are likely to be impacted by the Project (Table 4.5). Area of native vegetation were assigned to ACT01 *Tablelands Dry Tussock Grassland* where remnant vegetation persisted; or as Non-Local Native Groundcover and Landscape Plantings – Native where no remnant vegetation was present and where there was no alignment with a naturally occurring vegetation community.

The proposed works may constitute the threatening process 'loss of mature native trees (including hollow-bearing trees)', which is relevant to species or ecological communities listed under the NC Act (ACT Government, 2021). A total of 48 native mature and hollow-bearing trees (as defined in ACT Government, 2021) and an additional 4 native hollow-bearing of small dbh are located in the LRS2B Project Area.

It is unlikely the Mitchell Project Area supports native vegetation; however an assessment is required to confirm.

## 5.2 Threatened Ecological Community

Currently, a total of 0.51 ha of the native vegetation likely to be impacted meets the minimum criteria for listing as EPBC Act *Natural Temperate Grassland of the South Eastern Highlands* critically endangered community and the NC Act *Natural Temperate Grassland* critically endangered ecological community. This patch is located in an area identified for impact due to construction activities. On-going operational activities are not planned in this area and options to avoid impacting this area should be considered.

Due to the recent disturbance history it is considered highly unlikely that the Mitchell Project Area supports any threatened ecological communities.

## 5.3 Threatened Birds

Native and exotic plantings of shrubs and trees provide fragmented patches of habitat that may be used for foraging and dispersal in the LRS2B Project Area. However, as the Project Area is in highly fragmented landscape, only highly mobile bird species that are tolerant of urban environments are likely to utilise the habitat. Such species include *C. fimbriatus* (gang-gang cockatoo) and *P. swainsonii* (superb parrot).

*Callocephalon fimbriatus* is known to utilise native and exotic trees in built up areas and there are widely dispersed records in the surrounding landscape. While it is unlikely that development in the LRS2B Project Area would substantially change landscape connectivity for the species, there is potential for individual trees or clumps of trees to contribute to the integrity of the connectivity corridors used by *C. fimbriatus* to move across the landscape.

An assessment of the presence of habitat available for the *C. fimbriatus* within the Mitchell Project Area is required.



*Polytelis swainsonii* is particularly vulnerable to the effects of habitat fragmentation. Connectivity between breeding and foraging sites is particularly important as they appear reluctant to cross large areas of open ground. In the ACT, *P. swainsonii* travels from breeding grounds in Molonglo Valley to forage within the Project Area and nearby nature reserves (L. Rayner pers. comm, 2022), with movement restricted to preferred corridors. There is potential for individual trees within the LRS2B Project Area to substantially contribute to the integrity of the connectivity corridors used by *P. swainsonii* to move across the landscape. Habitat identified in the Project Area between Launceston Street and Melrose Drive in Woden may play an important role in connectivity of habitat around Red Hill to the Molonglo Valley.

There is potential for the project to impact *P. swainsonii*, primarily through the removal of native and exotic vegetation that plays a key role in habitat connectivity. ACT Government ecologists have substantial data and modelling relating to the utilisation of the landscape by *P. swainsonii*. Further consultation with ACT Government Ecologists is recommended during the Project design phases to assist in planning measures to avoid and minimise impacts of the development. This consultation will also ensure that impact assessment and any subsequent commitments are guided by accurate and current information.

An assessment of the presence of habitat available for *P. swainsonii* within the Mitchell Project Area is required.

*Lathamus discolor* is a highly mobile species. They may occasionally utilise remnant and planted eucalypts in the Project Areas and the surrounding urban landscape for foraging during migration, however, visitation within the Project Areas is likely to be transitory and opportunistic in nature.

Patches of native trees form part of the built urban habitat that may occasionally be used for foraging during transit by the species, however, larger areas of remnant vegetation (i.e. the local nature reserves) provide greater habitat and connectivity value in the ACT. The potential habitat is unlikely to be important for *L. discolor* foraging. Opportunities to minimise impact on foraging habitat for this species in the LRS2B Project Area should still be identified.

An assessment of the presence of habitat available for the *L. discolor* within the Mitchell Project Area is required.

*Aphelocephala leucopsis* (southern whiteface), *Melanodryas cucullata cuculatta* (hooded robin), and *Climacteris picumnus* (brown treecreeper) were identified as having a moderate likelihood of occurrence in the Mitchell Project Area. Areas of open woodland and open forest mapped as part of the vegetation assessment are considered habitat for woodland birds. An assessment of the presence of habitat features for *A. leucopsis*, *M. c. cuculatta*, and *C. picumnus* is required to confirm the availability of habitat for these species in this Project Area. This includes habitat features such as shrubs, fallen logs and other coarse woody debris.

## 5.4 Golden Sun Moth

Detection of *S. plana* in the LRS2B Project Area was substantially lower during the 2021 survey season than either the survey seasons completed in 2019 or 2020, despite more or equivalent survey effort. All surveys commenced following confirmation of activity within reference sites and were undertaken following the same methodology (DEWHA, 2009). A total of 35 male moths were recorded in this assessment over eight separate days (no female moths were recorded). In comparison, Biosis (2019) and ARUP (2021) recorded 334 and 427 individual moths, respectively. Biosis (2019) reported only one day of sub-optimal weather conditions (17°C) and while ARUP (2021) reported that weather conditions were not ideal, that *S. plana* activity was confirmed at reference sites before and sometimes after the survey period.

The low numbers observed in the 2021 survey period can be explained by the cool and wet conditions.

The total area of confirmed and possible *S. plana* habitat within the CPW2W Project Area was 8.35 ha and 7.95 ha, respectively, with most habitat being dominated by *N. neesiana*.

Targeted surveys are recommended to be undertaken in areas classified as possible or unlikely habitat (as defined in **Section 3.3.6.1**) and in new areas mapped as habitat in the planned 2023/24 field assessment.

Due to the recent disturbance history, it is highly unlikely that the Mitchell Project Area supports *S. plana* habitat, however due to the proximity of a confirmed population in the adjacent Crace Nature Reserve, an assessment of the presence of habitat within this Project Area is required.

## 5.5 Perunga Grasshopper

Potential *P. ochracea* habitat has been identified in the area classified as EPBC Act *Natural Temperate Grassland of the South Eastern Highlands* critically endangered community and the NC Act *Natural Temperate Grassland* critically endangered ecological community in the LRS2B Project Area. Avoiding impacts to this area should be investigated as part of the Project planning.

Due to the recent disturbance history, it is unlikely that the Mitchell Project Area supports *P. ochracea* habitat. This will be confirmed during the 2023/24 field assessment.

## 5.6 Striped Legless Lizard

Potential *D. impar* habitat was identified in the area classified as EPBC Act *Natural Temperate Grassland of the South Eastern Highlands* critically endangered community and the NC Act *Natural Temperate Grassland* critically endangered ecological community in the LRS2B Project Area. Surveys to confirm the presence of this species will be undertaken in the 2023/24 field assessment.

Due to the recent disturbance history, it is unlikely that the Mitchell Project Area supports *D. impar* habitat. This will be confirmed during the 2023/24 field assessment.

## 5.7 Indirect Impacts

Native vegetation and habitat surrounding the Project Area may be indirectly impacted by the proposed works if mitigation measures are not implemented. Potential indirect impacts include the following:

### 5.7.1 Spread of Invasive Species Off-Site (During Construction and Decommissioning).

Invasive plants may be inadvertently brought into or spread beyond the Project Areas on equipment and machinery. A total of nine weed species listed under the PP&A Act including two WoNS are currently present in the Project Areas.

The risk of further spread of these weed species from the Project Areas into adjacent areas and the risk of introduction and spread of different weed species would be mitigated through implementation of weed management mitigation measures.

Implementation of such measures would substantially reduce the potential for adverse impacts on natural temperate grassland and associated species habitat adjacent to the Project Areas.

Project works are unlikely to result in the introduction of invasive fauna species.

### **5.7.2 Impacts to Trees Immediately Adjacent the LRS2B Project Area**

Up to seven *E. blakelyi* (including three 'mature' trees one of which is hollow-bearing) in ACT16.1 and ACT16.2 are located immediately adjacent to the access road. These trees may not persist following construction of the access road due to indirect impacts such as compaction of adjacent ground and alteration of local hydrology. Demarcation of approved clearance boundaries would considerably reduce the risk of inadvertent direct impacts on these trees and the implementation of management measures set out in the Construction Environmental Management Plan such as sediment and erosion control measures would mitigate the risk of indirect impacts on these trees.

## 5.8 Assessment Against the Planning Act 2023 and EIS Triggers

Pursuant to the Planning Act (2023), the Project likely to result in ecological impacts listed under Part 4.1. Schedule 1 Part 1.2 of the Planning (General) Regulation 2023.

The ecological impacts that trigger the requirement to prepare an EIS for the Project are detailed below. An assessment of the Project against each of these triggers is also provided.

*Item 1 –*

If the proposal is likely to have a significant adverse environmental impact on one or more of the following, as per Schedule 1, Part 1.2 Column 1 Item 16, unless the conservator of flora and fauna produces an environmental significance opinion that the proposal is not likely to have a significant adverse environmental impact:

- a. a critically endangered species
- b. an endangered species
- c. a vulnerable species
- d. a conservation dependent species
- e. a regionally threatened species
- f. a regionally conservation dependent species
- g. a provisionally listed threatened species
- h. a listed migratory species
- i. a threatened ecological community
- j. a protected native species
- k. a Ramsar wetland
- l. any other protected matter’.

A significant adverse environmental impact as defined under the Planning Act Chapter 6, Part 6.3, Division 6.3.2 occurs when:

- (a) the environmental function, system, value, or entity that might be adversely impacted by a proposed development is significant; or
- (b) the cumulative or incremental effect of a proposed development might contribute to a substantial adverse impact on an environmental function, system, value, or entity.

In deciding whether an adverse environmental impact is significant, the following matters must be taken into account:

- (a) the kind, size, frequency, intensity, scope and length of time of the impact.
- (b) the sensitivity, resilience and rarity of the environmental function, system, value or entity likely to be affected.’

Based on the results of the preliminary assessments in the Project Areas, it can be concluded that the Project is likely to result in a significant adverse environmental impact upon three threatened fauna species and one threatened ecological community being:

- *Callocephalon fimbriatum* (gang-gang cockatoo) – endangered under the NC Act.
- *Perunga ochperunga* (perunga grasshopper) – endangered under the NC Act (based on assumption of presence in the Natural Temperate Grassland ecological community).
- *Synemon plana* (golden sun moth) - vulnerable under the NC Act.
- Natural Temperate Grassland ecological community - critically endangered under the NC Act.

'Item 2 -

If the proposal will result in the clearing of more than 0.5 hectares of native vegetation on land that is not designated as a future urban area under the territory plan, unless the conservator of flora and fauna produces an environmental significance opinion that the clearing is not likely to have a significant adverse environmental impact.'

Based on the results of the preliminary assessments in the Project Areas, 0.5 hectares of native vegetation may be cleared in the LRS2B Project Area (**Figure 4.11**) (planted native species, Section B, Section C, Section D and Section E).

It is noted that the updated ACT *Planning and Development Act* (2022) passed the ACT Legislative Assembly in June 2023, and will supersede the ACT *Planning and Development Act* (2007). The updated ACT Planning and Development Act (2022) includes several changes to significant development regulations, including changes to EIS processes. The new P&D Act is expected to come into effect late 2023.

## 5.9 Assessment Against Significant Impact Criteria for Proposed Actions On, or Impacting Upon, Commonwealth Land

The Project includes proposed actions on, or impacting upon, Commonwealth land and therefore assessment against the EPBC Act significant impact guidelines (DoE, 2013) is required.

A significant impact assessment was undertaken for all species assessed as having a moderate to high likelihood of occurring in the Project Areas (**Section 3.2; Section 4.2**).

This assessment has determined the proposed action is likely to significantly impact the following matters of environmental significance and referral to the Commonwealth Minister for the Environment for assessment against the provisions of the EPBC Act is considered warranted (**Appendix A**):

- *Natural Temperate Grasslands of the South Eastern Highlands* – critically endangered ecological community under the EPBC Act.
- *Callocephalon fimbriatum* (gang-gang cockatoo) – endangered under the EPBC Act.
- *Synemon plana* (golden sun moth) – vulnerable under the EPBC Act.

Significant impact assessments were also undertaken for the following species:

- *Polytelis swainsonii* (superb parrot) – vulnerable under the EPBC Act.
- *Lathamus discolor* (swift parrot) – critically endangered under the EPBC Act.
- *Hirundapus caudacutus* (white-throated needle-tail) – vulnerable under the EPBC Act.
- *Pteropus poliocephalus* (grey-headed flying-fox) – vulnerable under the EPBC Act.
- *Maccullochella peelii* (Murray cod) - vulnerable under the EPBC Act.

For *P. swainsonii*, the assessment is considered provisional noting that further information on the utilisation of the Project Areas (i.e. tracking data) is pending. Further assessment of foraging habitat within the Project Areas is also planned as part of the 2023/24 field assessment.

For *L. discolor*, further investigation into the availability of food resources will be undertaken as part of the 2023/24 field assessment, however noting the transitory nature of this species and the availability of food resources outside the Project Areas, the assessment concluded that no significant impact is likely.

For the remaining species assessed, sufficient information (from publicly available literature) was available to inform the assessment, which concluded that no significant impact is likely.

Mitigation measures are strongly recommended to reduce impacts on these species as much as is possible.

Insufficient information is currently available to assess any potential significant impact on the following species:

*Dianella amoena* (matted flax-lily) - endangered under the EPBC Act.

*Leucochrysum albicans* subsp. *tricolor* (hoary sunray) – endangered under the EPBC Act.

*Rutidosia leptorhynchoides* (button wrinklewort) – endangered under the EPBC Act.

*Swainsona recta* (small purple pea) - endangered under the EPBC Act.

*Delma impar* (striped legless lizard) – vulnerable under the EPBC Act.

An assessment of the availability of habitat and/or confirmation of the presence of populations of these species will be undertaken as part of the 2023/24 field assessment. A significant impact assessment for these species can occur at this time.

## 6.0 Conclusion and Recommendations

The LRS2B Project Area is located in a degraded urban landscape, primarily within existing transport corridors, that has been subject to large variety of disturbance due to past development as well as ongoing operation of roads and management of open space. The majority of the LRS2B Project Area supports existing infrastructure, exotic vegetation, or landscape plantings. The Mitchell Project Area is also located in a fragmented landscape.

The following preliminary constraints were identified in the Project Areas (noting that additional surveys are planned in both the LRS2B and Mitchell Project Areas in 2023/24):

- 13.86 ha of vegetation meeting the definition of native vegetation under the NC Act.
- 0.51 ha of EPBC Act listed *Natural Temperate Grassland of the South Eastern Highlands* critically endangered community and the NC Act listed *Natural Temperate Grassland* critically endangered ecological community.
- For the LRS2B Project Area habitat for *Synemon plana*, including 8.35 ha of confirmed habitat and 7.94 ha of possible habitat.
- Four populations of *S. plana* were confirmed to be supported within the LRS2B Project Area.
- Confirmed foraging habitat for *Polytelis swainsonii* in the LRS2B Project Area, in addition to areas that may be important to maintain east-west connectivity for the species between breeding habitat in the Molonglo Valley and foraging habitat around Red Hill and in adjacent suburbs. Based on observed activity and consultation with ACT Government ecologists, potentially important habitat for the *P. swainsonii* may occur between Launceston Street and Melrose Drive in Woden.
- Confirmed foraging habitat for *Callocephalon fimbriatus* is located throughout the LRS2B and Mitchell Project Area, and there is potential for breeding to occur due to the presence of hollow bearing trees due to the observation of potential breeding behaviour and the presence of known nest trees within 200 m of the LRS2B Project Area. Foraging habitat that is likely to meet the definition of 'habitat critical for the survival of the species' on the basis of information provided in the EPBC Act listing advice for *C. fimbriatus* is present in both Project Areas.
- Potential foraging habitat for transitory *Lathamus discolor* in the LRS2B Project Area.
- 0.51 ha of degraded native grasslands that comprise potential habitat for *Delma impar* is located in the LRS2B Project Area.
- 0.51 ha of degraded native grasslands that comprise potential habitat for *Perunga ochracea*.
- Hollows in native and exotic trees that potentially provide habitat for threatened and non-threatened fauna. 104 hollow-bearing trees (including native and exotic species and dead stags), with hollows ranging from extra small (<2.5 cm) to extra-large (>30 cm) were recorded.
- Over fifty remnant woodland trees, comprising *Eucalyptus blakelyi* and *E. melliodora* are present. This includes 48 that meet the definition of mature trees and are likely to be several hundred years old. These consequently have both intrinsic value as remnant entities of the former woodland ecosystem as well as important habitat values for native fauna.

This assessment has determined the proposed action is likely to significantly impact the following matters of environmental significance and referral to the Commonwealth Minister for the Environment for assessment against the provisions of the EPBC Act is considered warranted (**Appendix A**):

- *Natural Temperate Grasslands of the South Eastern Highlands* – critically endangered ecological community under the EPBC Act
- *Callocephalon fimbriatum* (gang-gang cockatoo) – endangered under the EPBC Act
- *Synemon plana* (golden sun moth) – vulnerable under the EPBC Act.
- The significant impact assessments are provisional and it may be concluded that additional species will likely be impacted pending results of the 2023/24 field assessment. In particular for *P. swainsonii*, for which updated tracking data will also be made available.

Early planning for measures to avoid and minimise adverse impacts of the proposal on ecological values should be prioritised, including but not limited to, consideration of:

- Protecting mature trees, especially remnant woodland trees and those with hollows.
- Incorporating connectivity for bird species in landscape planning through consideration of protection and enhancement of existing patches with regenerating native trees and shrubs. In particular seeking to enhance connectivity between Red Hill Nature Reserve and the Molonglo Valley along Yarralumla Creek in Section D of the LRS2B Project Area could alleviate impacts of clearing of vegetation to contributing to connectivity in this area.
- Potential cumulative impacts of the Project on connectivity for bird species between Red Hill Nature Reserve and Molonglo Valley, with particular reference to NCA and EPSDD developments in the North Curtin region.
- Avoiding impacts, where possible, during detailed design and construction planning on areas that meet criteria for inclusion in EPBC Act and / or NC Act listed threatened ecological communities, noting that these areas typically also represent the highest value habitat or potential habitat for grassland fauna such as *S. plana*, *D. impar*, and *P. ochracea*.
- Avoiding impacts on confirmed habitat for *S. plana*, prioritising areas of habitat that are dominated by native groundcovers over habitat dominated by exotic vegetation.
- Implementing weed management measures prior to construction, during construction and during operation is important to prevent further spread of pest plants under the PP&A Act that have been recorded in the Project Area. This is especially relevant for the highly invasive grassland species such as *Eragrostis curvula*, *Nassella neesiana*, and *N. trichotoma*, which are reducing the condition and extent of the EPBC Act and NC Act listed natural temperate grassland and box gum woodland critically endangered ecological communities.

Further targeted investigations in both the LRS2B and Mitchell Project Areas are required to enable a complete assessment of the ecological constraints for the Project. This includes:

- Completing a full assessment of all potential ecological constraints within areas not already assessed in both construction and operational footprint along the LRS2B Project Area.
- Confirm the presence of native vegetation (as defined under the NC Act) in the Mitchell Project Area.



- Confirm the presence of hollow bearing and mature native trees in the Mitchell Project Area.
- Undertake additional surveys for breeding habitat for *C. fimbriatus* in both Project Areas.
- Confirm the availability of foraging habitat for *C. fimbriatus* and *P. swainsonii* in the Mitchell Project Area.
- Confirm habitat availability (breeding and foraging) for woodland birds, specifically *Aphelocephala leucopsis*, *Melanodryas cucullata cuculatta* and *Climacteris picumnus victoriae* in the Mitchell Project Area.
- Complete an assessment of habitat for threatened grassland fauna in the Mitchell Project Area.
- Survey for *Delma impar* in identified potential habitat in the LRS2B Project Area.
- Additional surveys may be required for *D. impar* in spring 2024 if additional potential habitat is identified as part of the 2023/24 field assessment. All other additional surveys should be able to be completed in 2023.

## 7.0 References

ACT Government. (1999). *Swift Parrot (Lathamus discolor): A vulnerable species. Action Plan No. 16*. Environment ACT, Canberra.

ACT Government. (2015a). *Environmental offsets policy*. Available at: <https://www.environment.act.gov.au/nature-conservation/environmental-offsets-policy> (Accessed 3rd March 2022)

ACT Government. (2015b). *ACT Environmental Offsets Calculator Assessment Methodology*. Canberra: ACT Government.

ACT Government. (2017a). *Perunga Grasshopper (Perunga ochperunga) Action Plan*. Canberra: ACT Government.

ACT Government. (2017b). *Nature Conservation (Murray Cod) Native Species Conservation Plan*. Canberra: ACT Government.

ACT Government. (2019). *ACT Native Woodland Conservation Strategy and Action Plan*. Canberra: ACT Government, Environment, Planning and Sustainable Development.

ACT Government. (2020a). *Nature Conservation (Natural Temperate Grassland) Conservation Advice 2020*. Canberra: ACT Government Environment, Planning and Sustainable Development

ACT Government. (2020b). *Nature Conservation (Yellow Box – Blakely's Red Gum Grassy Woodland) Conservation Advice 2020*. Canberra: ACT Government Environment, Planning and Sustainable Development.

ACT Government. (2021). *Loss of Mature Native Trees Key Threatening Process: Draft Action Plan*. Canberra: ACT Government, Environment, Planning and Sustainable Development.

ACT Government. (2022). *Australia Capital Territory Fisheries Management Plan: Fish Stocking 2022-2027*. Canberra: ACT Government.

ACT Government. (2023). *ACTmapi. Significant Species, Vegetation Communities and Registered Trees*. Available at: <https://app2.actmapi.act.gov.au/actmapi/index.html?viewer=ssvcr> (Accessed 1 August 2023)

ACT Scientific Committee. (2020). *Nature Conservation (Perunga Grasshopper) Conservation Advice 2020*. Canberra: ACT Government Environment, Planning and Sustainable Development.

ARUP. (2021). *Canberra Light Rail Stage 2B Golden Sun Moth Surveys*. Canberra: Major Projects Canberra.

Atlas of Living Australia (AoLA). (2023). *Atlas of Living Australia Spatial Portal*. Available at: <http://www.spatial.ala.org.au>. (Accessed 1<sup>st</sup> August 2023).

Baker-Gabb, D. 2011. *National Recovery Plan for the Superb Parrot* *Polytelis swainsonii*. Department of Sustainability and Environment, Melbourne.

Beitzel, M., Evans, L., & Jakobsons, M. (2018). *Lake Burley Griffin Fisheries Survey 2017*. Report prepared for the National Capital Authority.

Biosis. (2019). *Commonwealth Park to Woden Preliminary Environmental Assessment: Biodiversity*. Canberra: Biosis.

Capital Ecology. (2018a). *2017 Grassland Quality and Extent Mapping– ACT Government*. Canberra: Environmental Offsets, ACT Parks, and Conservation Service.

Capital Ecology. (2018b). *2017 Woodland Quality and Extent Mapping – ACT Government*. Canberra: Environmental Offsets, ACT Parks, and Conservation Service.

Canberra Nature Map. (2023). *Canberra Nature Map Distribution Map*. Available at: <http://canberra.naturemapr.org/sightings/map> (Accessed 9th August 2023)

Commonwealth of Australia. (2006). *Advice to the Minister for the Environment and Heritage from the Threatened Species Scientific Committee (TSSC) on Amendments to the List of Ecological Communities under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*. Available at: Box Gum listing advice and conservation advice ([awe.gov.au](http://awe.gov.au)) Box Gum listing advice and conservation advice ([awe.gov.au](http://awe.gov.au))

Department of Agriculture, Water, and the Environment (DAWE). (2021). *National Recovery Plan for the Grey-headed Flying-fox Pteropus poliocephalus*. Canberra: Department of Agriculture, Water, and the Environment.

Department of Climate Change, Energy, Environment and Water (DCCEEW). (2023). *Protected Matters Search Tool*. Available at: Protected Matters Search Tool - DAWE Protected Matters Search Tool – DCCEEW (Accessed: 9th August 2023).

DCCEEW. (2023b). *National Flying-fox Monitoring Viewer*. Retrieved from Department of Climate Change, Energy, the Environment and Water, Australian Government: <https://www.environment.gov.au/webgis-framework/apps/ffc-wide/ffc-wide.jsf>

Department of Agriculture, Water, and the Environment (DAWE). (2022). *Conservation Advice for Callocephalon fimbriatum (Gang-gang Cockatoo)*. Canberra: Australian Government.

Department of the Environment (DoE). (2013). *Matters of National Environmental Significance, Significant Impact Guidelines 1.1*. Department of Environment.

DoE. (2015). *Referral guideline for management actions in grey-headed and spectacled flying-fox camps: EPBC Act Policy Statement*. Department of Environment.

DoE. (2015b). *Draft Referral Guideline for 14 Birds Listed as Migratory Species Under the EPBC Act*. Department of the Environment.

Department of the Environment and Energy. (2016). *Natural Temperate Grassland of the South Eastern Highlands: a nationally protected ecological community*. Canberra: Australian Government.

Department of the Environment and Heritage. (2006). *Species list for the EPBC Act policy statement - White box - Yellow box - Blakely's red gum grassy woodlands and derived native grasslands - last updated 22 May 2006*. Canberra: Department of the Environment and Heritage.

Department of Environment and Resource Management. (2011). *National recovery plan for the Large-eared Pied Bat Chalinolobus dwyeri*. The State of Queensland: Department of Environment and Resource Management.

Department of the Environment, Water, Heritage, and the Arts (DEWHAA). (2009). *Significant impact guidelines for the critically Golden Sun Moth* (*Synemon plana*). Canberra: Australian Government.

Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC). (2011). *Survey Guidelines for Australia's threatened reptiles*. Guidelines for detecting reptiles listed as threatened under the *Environment Protection and Biodiversity Conservation Act 1999*. Canberra: Australian Government.

Ecosure (2020). *Commonwealth Park Grey Headed Flying-Fox Camp Management Plan*. Prepared for the National Capital Authority. Canberra: Ecosure.

Higgins P.J. (Ed). (1999). *Handbook of Australian, New Zealand & Antarctic birds: Volume 4 parrots to dollarbird*. Melbourne: Oxford University Press.

National Murray Cod Recovery Team. (2010). *National Recovery Plan for the Murray Cod* *Maccullochella peelii peelii*. Department of Sustainability and Environment, Melbourne.

SMEC and Rowell, A. (2018). *Yass Valley Lot 2 Offset Golden Sun Moth Population Monitoring and Habitat Assessment 2017*. Prepared for ACT Government Environment and Planning.

Stojanovic, D. *et al.* (2021) Suitable nesting sites for specialized cavity dependent wildlife are rare in Woodlands, *Forest Ecology and Management*, 483(3), p. 118718. doi:10.1016/j.foreco.2020.118718.

Threatened Species Scientific Committee (TSSC). (2019). *Conservation Advice* *Hirundapus caudacutus* *White-throated Needletail*. Canberra: Department of the Environment and Energy. Available at: <http://www.environment.gov.au/biodiversity/threatened/species/pubs/682-conservation-advice-04072019.pdf>.

Umwelt. (2022). *Canberra Light Rail Stage 2B Ecological Assessment Report*. Report for AECOM. Canberra: Umwelt.



APPENDIX A  
Significant Impact Assessment

## Significant Impact Assessment: Natural Temperate Grassland of the South Eastern Highlands – critically endangered

Note this this in a preliminary assessment, pending further assessment of the extent of this ecological community in the LRS2B Project Area as part of the 2023/24 field assessment.

Is there a real chance or possibility that the action will:	Response
Reduce the extent of an ecological community?	Yes. The proposed action is likely to impact 0.51 ha of this critically endangered ecological community
Fragment or increase fragmentation of an ecological community, for example by clearing vegetation for roads or transmission lines?	No. The proposed action would impact the full extent of the patch of the critically endangered ecological community.
Adversely affect habitat critical to the survival of an ecological community?	Yes. The patch of natural temperate grassland supports a population of <i>Synemon plana</i> (golden sun moth) is potential habitat for <i>Delma impar</i> (striped legless lizard) and <i>P. ochracea</i> (perunga grasshopper) (NC Act listed).
Modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns?	The proposed action would impact the full extent of the patch of the critically endangered ecological community.
Cause a substantial change in the species composition of an occurrence of an ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting?	Yes. The proposed action would impact the full extent of the patch of the critically endangered ecological community.
Cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to: <ul style="list-style-type: none"> <li>• assisting invasive species, that are harmful to the listed ecological community, to become established, or</li> <li>• causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community, which kill or inhibit the growth of species in the ecological community?</li> </ul>	The proposed action would impact the full extent of the patch of the critically endangered ecological community.
Interfere with the recovery of an ecological community?	Yes. As a critically endangered community with less than 1% of pre-1750 extent remaining, the proposed action will interfere with the recovery of the natural temperate grassland ecological community. All patches of this ecological community are considered high conservation value.
Conclusion	The proposed action is likely to have a significant adversely impact the natural temperate grassland ecological community.

## Significant Impact Assessment: Swift Parrot (*Lathamus discolor*) - critically endangered

Is there a real chance or possibility that the action will:	Response
Lead to a long-term decrease in the size of a population?	No. <i>Lathamus discolor</i> may occasionally utilise remnant and planted eucalypts in the Project Area and the surrounding urban landscape for foraging during migration. However, vegetation in the Project Area is unlikely to have any important role in maintaining suitable foraging resources or connectivity for the species.
Reduce the area of occupancy of the species?	No. While the proposed action will potentially impact foraging habitat, it is considered transitory habitat between more suitable habitat areas. As a highly mobile species, the potential action would not prevent the species from utilising the surrounding landscape and habitat features to the extent that its area of occupancy is reduced. No breeding habitat occurs in mainland Australia.
Fragment an existing population into two or more populations?	No. The proposed action will not fragment any existing populations.
Adversely affect habitat critical to the survival of a species	No. While the proposed action will potentially impact foraging habitat, it is considered transitory habitat between more suitable habitat areas. As a highly mobile species, the potential action would not prevent the species from utilising the surrounding landscape and habitat features to the extent that its area of occupancy is reduced. No breeding habitat occurs in mainland Australia.
Disrupt the breeding cycle of a population?	No. <i>Lathamus discolor</i> breeding is restricted to Tasmania
Modify, destroy, remove, isolate, or decrease the availability or quality of habitat to the extent that the species is likely to decline?	No. While the proposed action will potentially impact foraging habitat, it is considered transitory habitat between more suitable habitat areas. As a highly mobile species, the potential action would not prevent the species from utilising the surrounding landscape and habitat features to the extent that its area of occupancy is reduced. No breeding habitat occurs in mainland Australia.
Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat?	No. No invasive species that may be harmful to <i>L. discolor</i> are likely to become established as a result of the proposed action.
Introduce disease that may cause the species to decline?	No. The proposed action is unlikely to introduce Psittacine Beak and Feather Disease or any other diseases that gang-gang cockatoo are susceptible to.
Interfere with the recovery of the species?	No. While the proposed action will potentially impact foraging habitat, it is considered transitory habitat between more suitable habitat areas. As a highly mobile species, the potential action would not prevent the species from utilising the surrounding landscape and habitat features to the extent that its area of occupancy is reduced. No breeding habitat occurs in mainland Australia.
Conclusion	The proposed action is unlikely to result in a significant impact to <i>L. discolor</i> .

## Significant Impact Assessment: Gang-gang Cockatoo (*Callocephalon fimbriatum*)- endangered

Note this this in a preliminary assessment, pending further assessment of foraging and breeding habitat in the Project Areas as part of the 2023/24 field assessment.

Is there a real chance or possibility that the action will:	Response
Lead to a long-term decrease in the size of a population?	<p>Yes. As <i>Callocephalon fimbriatum</i> gang-gang cockatoo is newly listed in the EPBC Act, important populations of this species are yet to be defined. As such, for the purpose of this assessment, gang-gang cockatoo that may occur in the Project Area are considered to be part of an important population.</p> <p>The proposed action includes the removal of vegetation that is identified as important foraging habitat for this species. Habitat critical to the survival of the <i>C. fimbriatum</i> includes all foraging habitat during both the breeding and non-breeding season, with the exception of exotic feeding grounds such as ornamental trees, shrubs, and hedges within urban and suburban areas (DAWE, 2022).</p>
Reduce the area of occupancy of the species?	<p>No. While the proposed action will potentially impact foraging habitat that is considered critical for the survival of the species, it is considered transitory habitat between more suitable habitat areas.</p> <p>As a highly mobile species, the potential action would not prevent the species from utilising the surrounding landscape and habitat features to the extent that its area of occupancy is reduced.</p> <p>The presence of breeding habitat has not been confirmed within the Project Areas.</p>
Fragment an existing population into two or more populations?	<p>No. The proposed action will not fragment any existing populations.</p>
Adversely affect habitat critical to the survival of a species	<p>Yes. The proposed action includes the potential removal of foraging habitat that is critical to the survival of the <i>C. fimbriatum</i>. The Project Area includes hollow bearing trees that will be assessed as suitable breeding habitat as part of the 2023/24 field assessment.</p>
Disrupt the breeding cycle of a population?	<p>Uncertain. The Project Area includes hollow bearing trees that will be assessed as suitable breeding habitat as part of the 2023/24 field assessment. Breeding trees are known to occur within 200m of the LRS2B Project Area (S. Taylor pers. comm., 2023). Updated methods (as developed by the ACT Government and the Australian National University) will be used to assess the suitability of hollows for breeding.</p>
Modify, destroy, remove, isolate, or decrease the availability or quality of habitat to the extent that the species is likely to decline?	<p>Yes. The proposed action includes the potential removal of foraging habitat that is critical to the survival of the <i>C. fimbriatum</i>.</p>
Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat?	<p>No. No invasive species that may be harmful to <i>C. fimbriatum</i> are likely to become established, as a result of the proposed action.</p>
Introduce disease that may cause the species to decline?	<p>No. The proposed action is unlikely to introduce Psittacine Beak and Feather Disease or any other diseases that gang-gang cockatoo are susceptible to.</p>



Is there a real chance or possibility that the action will:	Response
Interfere with the recovery of the species?	Yes. The proposed action includes the potential removal of foraging habitat that is critical to the survival of the <i>C. fimbriatum</i> .
Conclusion	Based on the potential impact to critical foraging habitat, the proposed action is likely to have a significant adverse impact on the <i>C. fimbriatum</i> . Investigation into the presence of breeding habitat in the Project Area will occur as part of the 2023/24 field assessment

### Significant Impact Assessment: Golden Sun Moth (*Synemon plana*) – vulnerable

Note this this in a preliminary assessment, pending further assessment of the extent of *S. plana* habitat and populations within the Project Areas as part of the 2023/24 field assessment.

Is there a real chance or possibility that the action will:	Response
Lead to a long-term decrease in the size of an important population of the species?	<ul style="list-style-type: none"> <li>○ Yes. Four populations of <i>Synemon plana</i> occupying a combined preliminary area of 8.35 ha of confirmed and 7.95 ha of possible habitat was recorded in the LRS2B Project Area.</li> <li>○ Additional habitat and populations are likely to be recorded as part of the 2023/24 field assessment.</li> <li>○ While each individual population is not considered important, this assessment has been made based on the cumulative impact on this species from the proposed action. The populations also occupy a large area, stretching across the length of the Project Area, with the proposed action potentially impacting a high proportion known records in the local landscape.</li> </ul>
Reduce the area of occupancy of an important population of the species?	Yes. The proposed action will impact on four populations and potentially occupied <i>S. plana</i> habitat and will therefore reduce the area of occupancy of the species.
Fragment an existing population into two or more populations	Yes. The proposed action will potentially further fragment populations of <i>S. plana</i> . This is in the context that Project Area is already within a highly fragmented urbanised landscape
Adversely affect habitat critical to the survival of the species?	Yes. The proposed action will impact small patches of habitat that are predominately of low quality ( <i>N. nessiana</i> dominated) and in a highly fragmented urban environment. The combined extent of both confirmed and possible habitat may however, be large (pending results of the 2023/24 field assessment) with the proposed action potentially impacting a high proportion known records in the local landscape.
Disrupt the breeding cycle of an important population?	<p>Yes. The proposed action may affect an unknown number of breeding individuals through direct mortality and disturbance during construction work. This is likely to result in a disruption to the breeding cycle within the four local populations identified within the Project Area.</p> <p>Planning for the proposed action need to include provisions to ensure that habitat not directly impacted but adjacent to the Project Area will continue to be management for the species (ie. maintain mowing regimes).</p>

Is there a real chance or possibility that the action will:	Response
Modify, destroy, remove, or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline?	Yes. The proposed action will result in the destruction and removal of habitat for the species. While measures to mitigate impacts within the construction footprint (outside the operational footprint) may be possible (i.e. revegetation), it is unlikely that these areas will provide the quality and structure required to support <i>S. plana</i> . Re-colonisation of these sites by <i>S.plana</i> post disturbance is also highly unlikely. Translocation attempts are not proven to be successful and should not be considered as part of options for species recovery.
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat?	Yes. Populations of <i>S. plana</i> within and adjacent to the LRS2B Project Area occur in exotic grassland dominated by the invasive <i>Nassella neesiana</i> (Chilean needlegrass). African lovegrass was observed recorded in the Project Area. This species has potential to impact the quality of <i>S. plana</i> habitat. Pest plant management protocols are recommended to control the spread of pest plants, as a result of the proposed action.
Introduce disease that may cause the species to decline	No. There are no known disease issues affecting this species.
Interfere substantially with the recovery of the species?	Yes. The proposed action will potentially impact over 30ha of habitat supporting four populations of <i>S. plana</i> .
Conclusion	Based on the cumulative impact on multiple populations within the Project Area, the proposed action is likely to have a significant adverse impact on <i>S. plana</i> .

### Significant Impact Assessment: Superb Parrot (*Polytelis swainsonii*) – vulnerable

Note this this in a preliminary assessment, pending to the provision of updated tracking data on the species within the ACT urban landscape from the Australian National University and the ACT Government.

Is there a real chance or possibility that the action will:	Response
Lead to a long-term decrease in the size of an important population of a species?	No. For the purpose of this assessment <i>Polytelis swainsonii</i> that may occur in the Project Area are considered to be part of an important population. It is noted that this species is considered to comprise one single population. Habitat in the Project Area is unlikely to provide foraging habitat that is critical for the survival of the species (Baker-Gabb, 2011). No breeding habitat is present in or near the Project Area.
Reduce the area of occupancy of an important population?	No. The proposed action would not reduce the area of occupancy for the species. While the proposed action will potentially impact foraging habitat it is considered transitory habitat between more suitable habitat that is critical for the survival of the species.
Fragment an existing important population into two or more populations?	No. The proposed action will not fragment any existing populations.
Adversely affect habitat critical to the survival of a species?	No. The proposed action is unlikely to impact foraging habitat that is critical for the survival of the species. No breeding habitat occurs in the Project Area.
Disrupt the breeding cycle of an important population?	No. The location of breeding habitat for <i>P. swainsonii</i> is well understood. No breeding habitat it located near the Project Area.

Is there a real chance or possibility that the action will:	Response
Modify, destroy, remove, or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline?	No. The removal of native and exotic vegetation within the Project Area is unlikely to cause <i>P. swainsonii</i> to decline. The proposed action is unlikely to impact habitat that is critical for the survival of the species.
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	No. No invasive species that may be harmful to <i>P. swainsonii</i> are likely to become established as a result of the proposed action.
Introduce disease that may cause the species to decline?	No. The proposed action is unlikely to introduce Psittacine Beak and Feather Disease or any other diseases that <i>P. swainsonii</i> are susceptible to.
Interfere substantially with the recovery of the species?	No. The proposed action is unlikely to impact habitat that is critical for the survival of the species.
Conclusion	Preliminary results indicate that the proposed action is unlikely to have a significant adverse impact on <i>P. swainsonii</i> , however additional assessment is required noting the pending provision of the latest tracking data of this species in the ACT urban environment.

### Significant Impact Assessment: White-throated Needle-tail (*Hirundapus caudacutus*) – vulnerable

Is there a real chance or possibility that the action will:	Response
Lead to a long-term decrease in the size of an important population of a species?	No. The proposed action would not lead to a long-term decrease in the size of any important populations. A significant impact to the population at a national scale would require the loss of 10 individuals (DoE, 2015b), which is highly unlikely, given the number of bird strikes recorded historically in Canberra.
Reduce the area of occupancy of an important population?	No. The proposed action would not reduce the area of occupancy of any important populations.
Fragment an existing important population into two or more populations?	No. The proposed action would not fragment any existing important populations.
Adversely affect habitat critical to the survival of a species?	No. No habitat critical to the survival of the species would be removed.
Disrupt the breeding cycle of an important population?	No. The proposed action would not disrupt the breeding cycle of an important population.
Modify, destroy, remove, or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline?	No. The proposed action would not destroy any habitat to the extent that the species is likely to decline.
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	No. The proposed action is unlikely to result in the introduction of any invasive species.
Introduce disease that may cause the species to decline?	No. The proposed action is unlikely to introduce a disease that could result in the decline of the species.
Interfere substantially with the recovery of the species?	No. The proposed action would not interfere with the recovery of the species.

Is there a real chance or possibility that the action will:	Response
Conclusion	The proposed action is unlikely to result in a significant impact to <i>Hirundapus caudacutus</i> .

### Significant Impact Assessment: Grey-headed Flying-fox (*Pteropus poliocephalus*) – vulnerable

Is there a real chance or possibility that the action will:	Response
Lead to a long-term decrease in the size of an important population of a species?	<p>No. The proposed action would not lead to a long-term decrease in the size of any important populations.</p> <p>The colony <i>Pteropus poliocephalus</i> at Commonwealth Park is not currently considered to be nationally important, however, significant impacts may still be possible for such camps. This may include (DoE, 2015):</p> <ul style="list-style-type: none"> <li>• Actions which result in mortality levels that constitute significant population stress.</li> <li>• Actions which do not consider strategic planning or adopt mitigation measures.</li> </ul> <p>Actions to mitigate noise as a result of construction and operation of the light rail should be considered as part of project planning.</p>
Reduce the area of occupancy of an important population?	No. The proposed action would not reduce the area of occupancy of any important populations. It is also considered unlikely that the <i>P. poliocephalus</i> camp would be displaced as a result of the proposed action, based on the existing land use and noise profile of the camp.
Fragment an existing important population into two or more populations?	No. The proposed action would not fragment any existing important populations.
Adversely affect habitat critical to the survival of a species?	No. No habitat critical to the survival of the species would be affected.
Disrupt the breeding cycle of an important population?	No. The proposed action would not disrupt the breeding cycle of an important population. There is a low potential that breeding may be disrupted at a local scale, however monitoring measures in the camp management plan (Ensure, 2020) would ensure that any impacts are recognised and able to be responded to. Measures should also be put in place to assist mitigate potential noise impacts.
Modify, destroy, remove, or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline?	No. The proposed action would not destroy any habitat to the extent that the species is likely to decline.
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	No. The proposed action is unlikely to result in the introduction of any invasive species.
Introduce disease that may cause the species to decline?	No. The proposed action is unlikely to introduce a disease that could result in the decline of the species.
Interfere substantially with the recovery of the species?	No. The proposed action would not interfere with the recovery of the species.
Conclusion	The proposed action is unlikely to result in a significant impact to <i>P. poliocephalus</i> .

## Significant Impact Assessment: Murray cod (*Maccullochella peelii*) – vulnerable

Is there a real chance or possibility that the action will:	Response
Lead to a long-term decrease in the size of an important population of a species?	No. The proposed action would not lead to a long-term decrease in the size of any important populations. It is unlikely that the proposed action will result in any fish kills. The species is also stocked within Lake Burley Griffin.
Reduce the area of occupancy of an important population?	No. The proposed action would not reduce the area of occupancy of any important populations. It is considered unlikely that any aquatic habitat would be impacted by the proposed action.
Fragment an existing important population into two or more populations?	No. The proposed action would not fragment any existing important populations. No in-water infrastructure with the ability to fragment fish habitat would be installed.
Adversely affect habitat critical to the survival of a species?	No. No habitat critical to the survival of the species would be affected.
Disrupt the breeding cycle of an important population?	No. The proposed action would not disrupt the breeding cycle of an important population.
Modify, destroy, remove, or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline?	No. The proposed action would not destroy any habitat to the extent that the species is likely to decline.
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	No. The proposed action is unlikely to result in the introduction of any invasive species.
Introduce disease that may cause the species to decline?	No. The proposed action is unlikely to introduce a disease that could result in the decline of the species.
Interfere substantially with the recovery of the species?	No. The proposed action would not interfere with the recovery of the species.
Conclusion	The proposed action is unlikely to result in a significant impact to Murray cod.



## APPENDIX B

Protected Matters Search Tool



# EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 09-Aug-2023

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

# Summary

## Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

<a href="#">World Heritage Properties:</a>	None
<a href="#">National Heritage Places:</a>	4
<a href="#">Wetlands of International Importance (Ramsar)</a>	4
<a href="#">Great Barrier Reef Marine Park:</a>	None
<a href="#">Commonwealth Marine Area:</a>	None
<a href="#">Listed Threatened Ecological Communities:</a>	2
<a href="#">Listed Threatened Species:</a>	51
<a href="#">Listed Migratory Species:</a>	14

## Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <https://www.dcceew.gov.au/parks-heritage/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

<a href="#">Commonwealth Lands:</a>	85
<a href="#">Commonwealth Heritage Places:</a>	78
<a href="#">Listed Marine Species:</a>	22
<a href="#">Whales and Other Cetaceans:</a>	None
<a href="#">Critical Habitats:</a>	1
<a href="#">Commonwealth Reserves Terrestrial:</a>	1
<a href="#">Australian Marine Parks:</a>	None
<a href="#">Habitat Critical to the Survival of Marine Turtles:</a>	None

## Extra Information

This part of the report provides information that may also be relevant to the area you have

<a href="#">State and Territory Reserves:</a>	25
<a href="#">Regional Forest Agreements:</a>	1
<a href="#">Nationally Important Wetlands:</a>	2
<a href="#">EPBC Act Referrals:</a>	205
<a href="#">Key Ecological Features (Marine):</a>	None
<a href="#">Biologically Important Areas:</a>	None
<a href="#">Bioregional Assessments:</a>	None
<a href="#">Geological and Bioregional Assessments:</a>	None



# Details

## Matters of National Environmental Significance

National Heritage Places			[ Resource Information ]
Name	State	Legal Status	Buffer Status
Historic			
<a href="#">Australian Academy of Science Building</a>	ACT	Listed place	In buffer area only
<a href="#">Australian War Memorial and the Memorial Parade</a>	ACT	Listed place	In buffer area only
<a href="#">High Court - National Gallery Precinct</a>	ACT	Listed place	In buffer area only
<a href="#">Old Parliament House and Curtilage</a>	ACT	Listed place	In buffer area only

Wetlands of International Importance (Ramsar Wetlands)		[ Resource Information ]
Ramsar Site Name	Proximity	Buffer Status
<a href="#">Banrock station wetland complex</a>	800 - 900km upstream from Ramsar site	In feature area
<a href="#">Hattah-kulkyne lakes</a>	500 - 600km upstream from Ramsar site	In feature area
<a href="#">Riverland</a>	700 - 800km upstream from Ramsar site	In feature area
<a href="#">The coorong, and lakes alexandrina and albert wetland</a>	800 - 900km upstream from Ramsar site	In feature area

## Listed Threatened Ecological Communities

[ Resource Information ]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Natural Temperate Grassland of the South Eastern Highlands</a>	Critically Endangered	Community likely to occur within area	In feature area
<a href="#">White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland</a>	Critically Endangered	Community likely to occur within area	In feature area

## Listed Threatened Species

[ Resource Information ]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.

Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
<b>BIRD</b>			
<a href="#">Anthochaera phrygia</a> Regent Honeyeater [82338]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Aphelocephala leucopsis</a> Southern Whiteface [529]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Botaurus poiciloptilus</a> Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Callocephalon fimbriatum</a> Gang-gang Cockatoo [768]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Calyptorhynchus lathami lathami</a> South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Climacteris picumnus victoriae</a> Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Falco hypoleucos</a> Grey Falcon [929]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Grantiella picta</a> Painted Honeyeater [470]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Lathamus discolor</a> Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Limosa lapponica baueri</a> Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Melanodryas cucullata cucullata</a> South-eastern Hooded Robin, Hooded Robin (south-eastern) [67093]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Neophema chrysostoma</a> Blue-winged Parrot [726]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Polytelis swainsonii</a> Superb Parrot [738]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Rostratula australis</a> Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Stagonopleura guttata</a> Diamond Firetail [59398]	Vulnerable	Species or species habitat known to occur within area	In feature area
<b>FISH</b>			
<a href="#">Maccullochella macquariensis</a> Trout Cod [26171]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Maccullochella peelii</a> Murray Cod [66633]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
<a href="#">Macquaria australasica</a> Macquarie Perch [66632]	Endangered	Species or species habitat may occur within area	In feature area
<b>FROG</b>			
<a href="#">Litoria aurea</a> Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Litoria booroolongensis</a> Booroolong Frog [1844]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Litoria castanea</a> Yellow-spotted Tree Frog, Yellow-spotted Bell Frog [1848]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Litoria raniformis</a> Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828]	Vulnerable	Species or species habitat may occur within area	In feature area
<b>INSECT</b>			
<a href="#">Keyacris scurra</a> Key's Matchstick Grasshopper [89739]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Synemon plana</a> Golden Sun Moth [25234]	Vulnerable	Species or species habitat known to occur within area	In feature area
<b>MAMMAL</b>			
<a href="#">Chalinolobus dwyeri</a> Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Dasyurus maculatus maculatus (SE mainland population)</a> Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Petauroides volans</a> Greater Glider (southern and central) [254]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)</a> Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Pteropus poliocephalus</a> Grey-headed Flying-fox [186]	Vulnerable	Roosting known to occur within area	In feature area
<b>PLANT</b>			
<a href="#">Ammobium craspedioides</a> Yass Daisy [20758]	Vulnerable	Species or species habitat known to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Amphibromus fluitans</a> River Swamp Wallaby-grass, Floating Swamp Wallaby-grass [19215]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Caladenia actensis</a> Canberra Spider Orchid [76138]	Critically Endangered	Species or species habitat known to occur within area	In buffer area only
<a href="#">Dodonaea procumbens</a> Trailing Hop-bush [12149]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Eucalyptus aggregata</a> Black Gum [20890]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Lepidium aschersonii</a> Spiny Peppercross [10976]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Lepidium ginninderrense</a> Ginninderra Peppercross [78474]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Lepidium hyssopifolium</a> Basalt Pepper-cress, Peppercross, Rubble Pepper-cress, Pepperweed [16542]	Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Leucochrysum albicans subsp. tricolor</a> Hoary Sunray, Grassland Paper-daisy [89104]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Neoastelia spectabilis</a> [6404]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
<a href="#">Pomaderris pallida</a> Pale Pomaderris [13684]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Prasophyllum petilum</a> Tarengo Leek Orchid [55144]	Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Rutidosia leptorhynchoides</a> Button Wrinklewort [67251]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Senecio macrocarpus</a> Large-fruit Fireweed, Large-fruit Groundsel [16333]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Swainsona recta</a> Small Purple-pea, Mountain Swainson-pea, Small Purple Pea [7580]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Thesium australe</a> Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat known to occur within area	In feature area

## REPTILE

<a href="#">Aprasia parapulchella</a> Pink-tailed Worm-lizard, Pink-tailed Legless Lizard [1665]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Delma impar</a> Striped Legless Lizard, Striped Snake-lizard [1649]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Tympanocryptis lineata</a> Canberra Grassland Earless Dragon, Lined Earless Dragon [25558]	Critically Endangered	Species or species habitat known to occur within area	In buffer area only

## Listed Migratory Species

[ [Resource Information](#) ]

Scientific Name	Threatened Category	Presence Text	Buffer Status
<b>Migratory Marine Birds</b>			
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
<b>Migratory Terrestrial Species</b>			
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Motacilla flava</a> Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat known to occur within area	In feature area
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		Species or species habitat known to occur within area	In feature area
<b>Migratory Wetlands Species</b>			
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area	In feature area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat known to occur within area	In feature area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area	In feature area
<a href="#">Limosa lapponica</a> Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In buffer area only
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Pandion haliaetus</a> Osprey [952]		Species or species habitat known to occur within area	In buffer area only

## Other Matters Protected by the EPBC Act

### Commonwealth Lands

[\[ Resource Information \]](#)

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State	Buffer Status
<b>Communications, Information Technology and the Arts - Telstra Corporation Limited</b>		
Commonwealth Land - Australian Telecommunications Commission [16050]	NSW	In buffer area only

### Defence

Defence - 139 CANBERRA AVE - FYSHWICK [80002]	ACT	In buffer area only
Defence - 139 CANBERRA AVE - FYSHWICK [80003]	ACT	In buffer area only
Defence - 139 CANBERRA AVE - FYSHWICK [80004]	ACT	In buffer area only
Defence - ADFA MARINE FACILITY - YARRALUMLA [80102]	ACT	In buffer area only
Defence - AIDAB Building [80035]	ACT	In buffer area only
Defence - AUSTRALIAN DEFENCE FORCE ACADEMY [80104]	ACT	In buffer area only
Defence - BELCONNEN RADIO STATION ; BELCONNEN COMMUNICATIONS STATION [80039]	ACT	In buffer area only
Defence - CAMPBELL PARK [80040]	ACT	In buffer area only
Defence - DEFENCE RECRUITING UNIT - GIO BUILDING [80036]	ACT	In buffer area only
Defence - HEWLETT PACKARD BUILDING - FERNHILL PARK [80044]	ACT	In buffer area only
Defence - HEWLETT PACKARD BUILDING - FERNHILL PARK [80043]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80023]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80022]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80025]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80024]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80027]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80026]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80017]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80018]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80011]	ACT	In buffer area only



Commonwealth Land Name	State	Buffer Status
Defence - MAJURA FIELD FIRING RANGE [80010]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80016]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80029]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80028]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80021]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80008]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80009]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80020]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80014]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80031]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80030]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80012]	ACT	In buffer area only
Defence - MAJURA NAVIGATIONAL AID SITE [80032]	ACT	In buffer area only
Defence - NCC BUILDING - CANBERRA CITY [80038]	ACT	In buffer area only
Defence - NORTHBOURNE HOUSE [80037]	ACT	In buffer area only
Defence - NORTHCOTT DRIVE PLAYING FIELDS (Addison Rd) [80048]	ACT	In buffer area only
Defence - PHYSICS FIELD TESTING STATION - CANBERRA [80103]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80073]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80062]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80075]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80080]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80083]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80081]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80082]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80069]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80049]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80060]	ACT	In buffer area only

Commonwealth Land Name	State	Buffer Status
Defence - RAAF BASE FAIRBAIRN [80070]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80079]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80076]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80059]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80068]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80074]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80077]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80053]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80051]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80052]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80058]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80055]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80050]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80067]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80061]	ACT	In buffer area only
Defence - ROYAL MILITARY COLLEGE - DUNTROON [80085]	ACT	In buffer area only
Defence - ROYAL MILITARY COLLEGE - DUNTROON [80084]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80089]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80088]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80099]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80093]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80092]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80098]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80097]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80096]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80091]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80090]	ACT	In buffer area only

Commonwealth Land Name	State	Buffer Status
Defence - RUSSELL HILL COMPLEX [80095]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80087]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80086]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80094]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80100]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80101]	ACT	In buffer area only
Defence - WERRIWA DEPOT [80109]	ACT	In buffer area only
Defence - WERRIWA DEPOT [80108]	ACT	In buffer area only

#### Education, Science and Training - CSIRO

Commonwealth Land - Commonwealth Scientific & Industrial Research Organisation [12329]	NSW	In buffer area only
Commonwealth Land - Commonwealth Scientific & Industrial Research Organisation [15614]	NSW	In buffer area only

#### Commonwealth Heritage Places

[ [Resource Information](#) ]

Name	State	Status	Buffer Status
<b>Historic</b>			
<a href="#">Acton Conservation Area</a>	ACT	Listed place	In buffer area only
<a href="#">Acton Peninsula Building 1</a>	ACT	Listed place	In buffer area only
<a href="#">Acton Peninsula Building 15</a>	ACT	Listed place	In buffer area only
<a href="#">Acton Peninsula Building 2</a>	ACT	Listed place	In buffer area only
<a href="#">Acton Peninsula Limestone Outcrops</a>	ACT	Listed place	In buffer area only
<a href="#">Anzac Memorial Chapel of St Paul</a>	ACT	Listed place	In buffer area only
<a href="#">Apostolic Nunciature</a>	ACT	Listed place	In buffer area only
<a href="#">Apple Shed Asset C58</a>	ACT	Listed place	In buffer area only
<a href="#">Australian American Memorial and Sir Thomas Blamey Square</a>	ACT	Listed place	In buffer area only
<a href="#">Australian Forestry School (former)</a>	ACT	Listed place	In buffer area only
<a href="#">Australian National Botanic Gardens (part)</a>	ACT	Listed place	In buffer area only
<a href="#">Australian War Memorial</a>	ACT	Listed place	In buffer area only
<a href="#">Blundells Farmhouse, Slab Outbuilding and Surrounds</a>	ACT	Listed place	In buffer area only

Name	State	Status	Buffer Status
<a href="#">Cameron Offices (Wings 3, 4 and 5, and Bridge)</a>	ACT	Listed place	In buffer area only
<a href="#">Canberra School of Art</a>	ACT	Listed place	In buffer area only
<a href="#">Canberra School of Music</a>	ACT	Listed place	In buffer area only
<a href="#">Captains Quarters Assets B1 to B4</a>	ACT	Listed place	In buffer area only
<a href="#">Carillon</a>	ACT	Listed place	In buffer area only
<a href="#">Casey House and Garden</a>	ACT	Listed place	In buffer area only
<a href="#">Changi Chapel</a>	ACT	Listed place	In buffer area only
<a href="#">Commandants House Asset B9</a>	ACT	Listed place	In buffer area only
<a href="#">Commencement Column Monument</a>	ACT	Listed place	In buffer area only
<a href="#">Communications Centre</a>	ACT	Listed place	In buffer area only
<a href="#">CSIRO Main Entomology Building</a>	ACT	Listed place	In buffer area only
<a href="#">Drill Hall Gallery</a>	ACT	Listed place	In buffer area only
<a href="#">Duntroon House and Garden</a>	ACT	Listed place	In buffer area only
<a href="#">East Block Government Offices</a>	ACT	Listed place	In buffer area only
<a href="#">Edmund Barton Offices</a>	ACT	Listed place	In buffer area only
<a href="#">General Bridges Grave</a>	ACT	Listed place	In buffer area only
<a href="#">Gungahlin Complex</a>	ACT	Listed place	In buffer area only
<a href="#">Gungahlin Homestead and Landscape</a>	ACT	Listed place	In buffer area only
<a href="#">High Court - National Gallery Precinct</a>	ACT	Listed place	In buffer area only
<a href="#">High Court of Australia</a>	ACT	Listed place	In buffer area only
<a href="#">Institute of Anatomy (former)</a>	ACT	Listed place	In buffer area only
<a href="#">John Gorton Building</a>	ACT	Listed place	In buffer area only
<a href="#">King George V Memorial</a>	ACT	Listed place	In buffer area only
<a href="#">Lake Burley Griffin and Adjacent Lands</a>	ACT	Listed place	In buffer area only
<a href="#">Lennox House Complex</a>	ACT	Listed place	In buffer area only
<a href="#">National Gallery of Australia</a>	ACT	Listed place	In buffer area only
<a href="#">National Library of Australia and Surrounds</a>	ACT	Listed place	In buffer area only

Name	State	Status	Buffer Status
<a href="#">National Rose Gardens</a>	ACT	Listed place	In buffer area only
<a href="#">Old Parliament House and Curtilage</a>	ACT	Listed place	In buffer area only
<a href="#">Old Parliament House Gardens</a>	ACT	Listed place	In buffer area only
<a href="#">Parade Ground and Associated Buildings Group</a>	ACT	Listed place	In buffer area only
<a href="#">Parliament House Vista</a>	ACT	Listed place	In buffer area only
<a href="#">Parliament House Vista Extension - Portal Buildings</a>	ACT	Listed place	In buffer area only
<a href="#">Patent Office (former)</a>	ACT	Listed place	In buffer area only
<a href="#">Phytotron</a>	ACT	Listed place	In buffer area only
<a href="#">Redwood Plantation</a>	ACT	Listed place	In buffer area only
<a href="#">Reserve Bank of Australia</a>	ACT	Listed place	In buffer area only
<a href="#">Residence Asset B5</a>	ACT	Listed place	In buffer area only
<a href="#">Residence Asset B7</a>	ACT	Listed place	In buffer area only
<a href="#">Residence Asset C12</a>	ACT	Listed place	In buffer area only
<a href="#">Residence Asset C13</a>	ACT	Listed place	In buffer area only
<a href="#">Residence Asset C14</a>	ACT	Listed place	In buffer area only
<a href="#">Residence Asset C15</a>	ACT	Listed place	In buffer area only
<a href="#">Residence Asset C7</a>	ACT	Listed place	In buffer area only
<a href="#">Residence Asset C8</a>	ACT	Listed place	In buffer area only
<a href="#">R G Menzies Building ANU</a>	ACT	Listed place	In buffer area only
<a href="#">RMC Duntroon Conservation Area</a>	ACT	Listed place	In buffer area only
<a href="#">Royal Australian Naval Transmitting Station</a>	ACT	Listed place	In buffer area only
<a href="#">Russell Cafeteria</a>	ACT	Within listed place	In buffer area only
<a href="#">Russell Precinct Heritage Area</a>	ACT	Listed place	In buffer area only
<a href="#">Sculpture Garden National Gallery of Australia</a>	ACT	Listed place	In buffer area only
<a href="#">The CSIRO Forestry Precinct</a>	ACT	Listed place	In buffer area only
<a href="#">The Lodge</a>	ACT	Listed place	In buffer area only

Name	State	Status	Buffer Status
<a href="#">The Royal Australian Mint</a>	ACT	Listed place	In buffer area only
<a href="#">The Surveyors Hut</a>	ACT	Listed place	In buffer area only
<a href="#">Toad Hall ANU</a>	ACT	Listed place	In buffer area only
<a href="#">University House and Garden</a>	ACT	Listed place	In buffer area only
<a href="#">West Block and the Dugout</a>	ACT	Listed place	In buffer area only
<a href="#">West Portal Cafeteria</a>	ACT	Listed place	In buffer area only
<a href="#">Westridge House &amp; Grounds</a>	ACT	Listed place	In buffer area only
<a href="#">Yarralumla and Surrounds</a>	ACT	Listed place	In buffer area only
<a href="#">York Park North Tree Plantation</a>	ACT	Listed place	In buffer area only
<b>Natural</b>			
<a href="#">Majura Valley Natural Temperate Grassland</a>	ACT	Listed place	In buffer area only
<a href="#">State Circle Cutting</a>	ACT	Listed place	In buffer area only
<a href="#">Synemon Plana Moth Habitat</a>	ACT	Listed place	In buffer area only

**Listed Marine Species** [\[ Resource Information \]](#)

Scientific Name	Threatened Category	Presence Text	Buffer Status
<b>Bird</b>			
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
<a href="#">Bubulcus ibis as Ardea ibis</a> Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Chalcites osculans as Chrysococcyx osculans</a> Black-eared Cuckoo [83425]		Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Haliaeetus leucogaster</a> White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Lathamus discolor</a> Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Limosa lapponica</a> Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In buffer area only
<a href="#">Merops ornatus</a> Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Motacilla flava</a> Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Neophema chrysostoma</a> Blue-winged Parrot [726]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Pandion haliaetus</a> Osprey [952]		Species or species habitat known to occur within area	In buffer area only
<a href="#">Pterodroma cervicalis</a> White-necked Petrel [59642]		Species or species habitat may occur within area	In buffer area only
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Rostratula australis as Rostratula benghalensis (sensu lato)</a> Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area overfly marine area	In feature area

### Critical Habitats [\[ Resource Information \]](#)

Name	Type of Presence	Buffer Status
<a href="#">Lepidium ginninderrense (Ginninderra Peppergrass) - Northwest corner Belconnen Naval Transmission Station, ACT</a>	Listed Critical Habitat	In buffer area only

### Commonwealth Reserves Terrestrial [\[ Resource Information \]](#)

Name	State	Type	Buffer Status
Australian National	ACT	Botanic Gardens (Commonwealth)	In buffer area only



Name	State	Type	Buffer Status
------	-------	------	---------------

## Extra Information

### State and Territory Reserves [\[ Resource Information \]](#)

Protected Area Name	Reserve Type	State	Buffer Status
Aranda Bushland	Nature Reserve	ACT	In buffer area only
Black Mountain	Nature Reserve	ACT	In buffer area only
Bruce Ridge	Nature Reserve	ACT	In buffer area only
Budjan Galindji	Nature Reserve	ACT	In buffer area only
Crace	Nature Reserve	ACT	In feature area
Dunlop Grassland	Nature Reserve	ACT	In buffer area only
Goorooyarroo	Nature Reserve	NSW	In buffer area only
Goorooyarroo	Nature Reserve	ACT	In buffer area only
Gossan Hill	Nature Reserve	ACT	In buffer area only
Gungaderra Grassland	Nature Reserve	ACT	In buffer area only
Jerrabomberra Wetlands	Nature Reserve	ACT	In buffer area only
Justice Robert Hope Park	Nature Reserve	ACT	In buffer area only
Kinleyside	Nature Reserve	ACT	In buffer area only
Molonglo River	Nature Reserve	ACT	In buffer area only
Mt Ainslie	Nature Reserve	ACT	In buffer area only
Mt Majura	Nature Reserve	ACT	In buffer area only
Mt Painter	Nature Reserve	ACT	In buffer area only
Mt Pleasant	Nature Reserve	ACT	In buffer area only
Mulanggari Grassland	Nature Reserve	ACT	In buffer area only
Mulligans Flat	Nature Reserve	ACT	In buffer area only

Protected Area Name	Reserve Type	State	Buffer Status
Nadjung Mada	Nature Reserve	ACT	In buffer area only
O'Connor Ridge	Nature Reserve	ACT	In buffer area only
Percival Hill	Nature Reserve	ACT	In buffer area only
Red Hill	Nature Reserve	ACT	In buffer area only
The Pinnacle	Nature Reserve	ACT	In buffer area only

## Regional Forest Agreements [\[ Resource Information \]](#)

Note that all areas with completed RFAs have been included. Please see the associated resource information for specific caveats and use limitations associated with RFA boundary information.

RFA Name	State	Buffer Status
<a href="#">Southern RFA</a>	New South Wales	In buffer area only

## Nationally Important Wetlands [\[ Resource Information \]](#)

Wetland Name	State	Buffer Status
<a href="#">Horse Park Wetland</a>	ACT	In buffer area only
<a href="#">Jerrabomberra Wetlands</a>	ACT	In buffer area only

## EPBC Act Referrals [\[ Resource Information \]](#)

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<a href="#">Australian War Memorial - Main Building Gallery Preparation Works</a>	2022/09413		Completed	In buffer area only
<a href="#">Belconnen Section 44 Block 11- Residential Towers</a>	2023/09468		Completed	In buffer area only
<a href="#">C.S Christian Laboratory Demolition</a>	2022/09323		Completed	In buffer area only
<a href="#">Campbell Park Car Park Consolidation Project</a>	2022/09354		Assessment	In buffer area only
<a href="#">Commonwealth Avenue Utility Relocation</a>	2023/09567		Referral Decision	In buffer area only
<a href="#">F.C Pye Laboratory Demolition</a>	2022/09322		Completed	In buffer area only
<a href="#">Federal Golf Club Retirement Village and Water Infrastructure</a>	2022/09201		Completed	In buffer area only
<a href="#">Forestry Place Redevelopment of CSIRO Yarralumla, Block 7 Section 4 Yarralumla, ACT</a>	2021/8937		Post-Approval	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<a href="#">install a 250 seat cinema in the NFSA north gallery</a>	2005/2371		Completed	In buffer area only
<a href="#">John Gorton Campus Carpark</a>	2022/09400		Post-Approval	In buffer area only
<a href="#">Lawson North Residential Development</a>	2022/09298		Assessment	In buffer area only
<a href="#">National Library of Australia Forecourt Lombardy Poplar Replacement</a>	2022/09406		Completed	In buffer area only
<a href="#">New RSPCA Facility</a>	2022/09285		Assessment	In buffer area only
<a href="#">Release 33 Prod Test Project 2</a>	2023/09587		Post-Approval	In buffer area only
<a href="#">The Canberra Brickworks Precinct, Blocks 1, 7, and 20 Section 102, Yarralumla, ACT</a>	2017/8074		Approval	In buffer area only
<b>Controlled action</b>				
<a href="#">ANZAC Park East and ANZAC Park West sale - Parkes, ACT</a>	2016/7766	Controlled Action	Post-Approval	In buffer area only
<a href="#">Archival recording &amp; demolition of two Commonwealth Heritage Listed buildings</a>	2011/5895	Controlled Action	Post-Approval	In buffer area only
<a href="#">Australian War Memorial Redevelopment</a>	2019/8574	Controlled Action	Post-Approval	In buffer area only
<a href="#">Blocks 3 and 15, Section 22, Barton, ACT Divestment</a>	2017/8028	Controlled Action	Post-Approval	In buffer area only
<a href="#">Bonner 4 East Extension, Gungahlin</a>	2011/6126	Controlled Action	Completed	In buffer area only
<a href="#">Campbell Station 5 Development</a>	2012/6292	Controlled Action	Post-Approval	In buffer area only
<a href="#">Canberra Brickworks Precinct access road and Dudley Street upgrade, ACT</a>	2017/8072	Controlled Action	Post-Approval	In buffer area only
<a href="#">City Hill Section 63 Redevelopment Project, ACT</a>	2019/8449	Controlled Action	Post-Approval	In buffer area only
<a href="#">City to Commonwealth Park Light Rail 2A</a>	2019/8582	Controlled Action	Post-Approval	In buffer area only
<a href="#">Clarrie Hermes Drive Extension</a>	2009/5156	Controlled Action	Post-Approval	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Controlled action</b>				
<a href="#">Commonwealth Park to Woden Light Rail Project, ACT</a>	2019/8491	Controlled Action	Assessment Approach	In buffer area only
<a href="#">Crawford School building incorporating teaching facilities, academic/staff offi</a>	2007/3665	Controlled Action	Post-Approval	In buffer area only
<a href="#">Demolition of old administrative buildings</a>	2012/6231	Controlled Action	Completed	In buffer area only
<a href="#">Development of a new facility for the ANU College of Arts and Social Sciences, ANU Action Campus, AC</a>	2016/7700	Controlled Action	Post-Approval	In buffer area only
<a href="#">Development of Block 18 Section 86 Yarralumla, ACT</a>	2016/7812	Controlled Action	Post-Approval	In buffer area only
<a href="#">Development of cabin, camping and possible hotel accomodation</a>	2010/5750	Controlled Action	Post-Approval	In buffer area only
<a href="#">Development of future urban areas Jacka (North), Taylor and Kinlyside</a>	2012/6350	Controlled Action	Completed	In buffer area only
<a href="#">Development of part Block 20 Section 86 Yarralumla, ACT</a>	2016/7813	Controlled Action	Post-Approval	In buffer area only
<a href="#">Development of the Future Urban Areas of Kenny and Throsby</a>	2012/6279	Controlled Action	Completed	In buffer area only
<a href="#">dismantle &amp; remove masts and aerials at Belconnen Naval Transmission Station</a>	2005/2218	Controlled Action	Post-Approval	In feature area
<a href="#">Divestment of York Park North</a>	2004/1426	Controlled Action	Completed	In buffer area only
<a href="#">Extension of Taxiway Bravo</a>	2008/4170	Controlled Action	Post-Approval	In buffer area only
<a href="#">Federal Golf Club Retirement Village Project, ACT</a>	2018/8277	Controlled Action	Assessment Approach	In buffer area only
<a href="#">Hotel and Carpark Development</a>	2012/6606	Controlled Action	Post-Approval	In buffer area only
<a href="#">Infrastructure Upgrade and Construction at Canberra Airport</a>	2009/4748	Controlled Action	Post-Approval	In buffer area only
<a href="#">Lawson South residential development</a>	2010/5549	Controlled Action	Post-Approval	In buffer area only
<a href="#">Malcolmvale West Detention Basin</a>	2011/6218	Controlled Action	Further Information Request	In buffer area only
<a href="#">Moncrieff Residential Development</a>	2011/6113	Controlled Action	Completed	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Controlled action</b>				
<a href="#">Morisset Road Extension and Sullivans Creek Retardation Basin</a>	2020/8822	Controlled Action	Further Information Request	In feature area
<a href="#">New Public High School in East Gungahlin</a>	2019/8599	Controlled Action	Completed	In buffer area only
<a href="#">Proposed demolition and landscape works</a>	2012/6627	Controlled Action	Post-Approval	In buffer area only
<a href="#">Refurbishment of the SE Wing of Old Parliament House</a>	2008/4325	Controlled Action	Post-Approval	In buffer area only
<a href="#">Removal of Trees on National Land</a>	2009/5204	Controlled Action	Post-Approval	In buffer area only
<a href="#">Residential and commercial development, Blocks 4 and 5 Section 38, Campbell, ACT</a>	2014/7372	Controlled Action	Post-Approval	In buffer area only
<a href="#">Residential Development, Block 9 Section 64, Watson, and extension of Negus Crescent, ACT</a>	2012/6418	Controlled Action	Post-Approval	In buffer area only
<a href="#">Residential Estate Stage 2C</a>	2010/5648	Controlled Action	Post-Approval	In buffer area only
<a href="#">Soil remediation works</a>	2008/4367	Controlled Action	Post-Approval	In buffer area only
<a href="#">Throsby Denominational School Site</a>	2012/6251	Controlled Action	Completed	In buffer area only
<a href="#">Throsby Multisport Complex</a>	2010/5456	Controlled Action	Completed	In buffer area only
<a href="#">Transfer of Defence Land at Majura</a>	2007/3756	Controlled Action	Post-Approval	In buffer area only
<a href="#">University of Canberra Public Hospital</a>	2013/6987	Controlled Action	Post-Approval	In buffer area only
<a href="#">William Hovell Drive Duplication</a>	2020/8703	Controlled Action	Assessment Approach	In buffer area only
<b>Not controlled action</b>				
<a href="#">2.1km upgrade and extension of Morisset road</a>	2010/5565	Not Controlled Action	Completed	In feature area
<a href="#">Amaroo 4 Residential Estate</a>	2001/343	Not Controlled Action	Completed	In buffer area only
<a href="#">Amaroo Community Precinct Development</a>	2000/63	Not Controlled Action	Completed	In buffer area only
<a href="#">ANBG Production Nursery</a>	2002/590	Not Controlled Action	Completed	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Not controlled action</b>				
<a href="#">Angel of the North Installation</a>	2010/5591	Not Controlled Action	Completed	In buffer area only
<a href="#">Anzac Park West Building - perimeter security works</a>	2004/1511	Not Controlled Action	Completed	In buffer area only
<a href="#">Belconnen Trunk Sewer Project, ACT</a>	2018/8256	Not Controlled Action	Completed	In buffer area only
<a href="#">Benjamin Offices Redevelopment</a>	2001/317	Not Controlled Action	Completed	In feature area
<a href="#">Birch Building Refurbishment</a>	2019/8544	Not Controlled Action	Completed	In buffer area only
<a href="#">Block 622 Redevelopment AFP Driver Training Area</a>	2002/810	Not Controlled Action	Completed	In buffer area only
<a href="#">Block 7, Section 74</a>	2001/210	Not Controlled Action	Completed	In feature area
<a href="#">Block 8 Section 5 Bruce Belconnen</a>	2003/1009	Not Controlled Action	Completed	In buffer area only
<a href="#">Bomber Command Memorial</a>	2004/1353	Not Controlled Action	Completed	In buffer area only
<a href="#">Bonner Residential Development Stages 1, 2 and 3</a>	2008/4036	Not Controlled Action	Completed	In buffer area only
<a href="#">Bowen Place Crossing</a>	2011/6203	Not Controlled Action	Completed	In buffer area only
<a href="#">Bruce East Residential Estate</a>	2000/55	Not Controlled Action	Completed	In buffer area only
<a href="#">Canberra Primary Mains Extension Gas Pipeline Project</a>	2000/15	Not Controlled Action	Completed	In buffer area only
<a href="#">Capital Metro Stage 1 Light Rail Service, ACT</a>	2014/7379	Not Controlled Action	Completed	In feature area
<a href="#">Collection, Sorting &amp; Recycling Centre</a>	2000/116	Not Controlled Action	Completed	In buffer area only
<a href="#">construct addition to Admin Annex</a>	2004/1891	Not Controlled Action	Completed	In feature area
<a href="#">Construction of a link road on Marjura Parkway, Pialligo, ACT</a>	2015/7483	Not Controlled Action	Completed	In buffer area only
<a href="#">Construction of an Advanced Instrumentation and Technology Centre at the Mt Stro</a>	2004/1748	Not Controlled Action	Completed	In buffer area only
<a href="#">Construction of a New Cooling Tower Enclosure</a>	2008/4457	Not Controlled Action	Completed	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Not controlled action</b>				
<a href="#">Construction of a New Office Building</a>	2009/4814	Not Controlled Action	Completed	In buffer area only
<a href="#">Construction of a short haul road</a>	2013/6802	Not Controlled Action	Completed	In buffer area only
<a href="#">construction of new admin bldg</a>	2004/1731	Not Controlled Action	Completed	In feature area
<a href="#">Construction of New Australian Government Offices and On-Site Parking</a>	2008/4158	Not Controlled Action	Completed	In buffer area only
<a href="#">Construction of office building and associated activities</a>	2005/2383	Not Controlled Action	Completed	In buffer area only
<a href="#">Construction of the IKEA Canberra Northern Access Road, ACT</a>	2016/7742	Not Controlled Action	Completed	In buffer area only
<a href="#">Construction of Two Office Buildings on Block 1 Section 3, Barton</a>	2010/5367	Not Controlled Action	Completed	In buffer area only
<a href="#">CSIRO Black Mountain Masterplan Phase 1&amp;2 new &amp; improved facilities</a>	2014/7142	Not Controlled Action	Completed	In buffer area only
<a href="#">CSIRO Yarralumla-Demolition of Minor Structure, ACT</a>	2021/8935	Not Controlled Action	Completed	In buffer area only
<a href="#">Development of a Diplomatic Mission</a>	2007/3520	Not Controlled Action	Completed	In buffer area only
<a href="#">Development of area for Diplomatic Mission Lease</a>	2007/3644	Not Controlled Action	Completed	In buffer area only
<a href="#">Development of Block 8 S48 for commercial purposes</a>	2006/2570	Not Controlled Action	Completed	In buffer area only
<a href="#">Development of John Gorton Building Basement</a>	2001/453	Not Controlled Action	Completed	In buffer area only
<a href="#">Development of Youth Detention Centre</a>	2006/2963	Not Controlled Action	Completed	In buffer area only
<a href="#">Dunlop 4 West Residential Development</a>	2003/1055	Not Controlled Action	Completed	In feature area
<a href="#">Duplication of Barton Highway and Gungahlin Drive</a>	2001/341	Not Controlled Action	Completed	In feature area
<a href="#">Eastern Precinct Development and National Service Memorial</a>	2008/4629	Not Controlled Action	Completed	In buffer area only
<a href="#">East O'Malley Residential Estate</a>	2003/1163	Not Controlled Action	Completed	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Not controlled action</b>				
<a href="#">Edmund Barton Building Upgrade and Refurbishment Works</a>	2007/3712	Not Controlled Action	Completed	In buffer area only
<a href="#">Extension to cooling towers at the rear of Old Parliament House</a>	2004/1625	Not Controlled Action	Completed	In feature area
<a href="#">Fairbairn Avenue Upgrade, Anzac Parade to Northcott Drive</a>	2003/1257	Not Controlled Action	Completed	In buffer area only
<a href="#">Fencing of the moat bridges at the Shine Dome, Acton, ACT</a>	2014/7322	Not Controlled Action	Completed	In buffer area only
<a href="#">fixing banner holders (top and bottom) to the fascia</a>	2007/3299	Not Controlled Action	Completed	In buffer area only
<a href="#">Flemington Road Gunghalin</a>	2000/46	Not Controlled Action	Completed	In buffer area only
<a href="#">Forde residential development</a>	2006/2599	Not Controlled Action	Completed	In buffer area only
<a href="#">Franklin Residential Estate</a>	2005/2474	Not Controlled Action	Completed	In feature area
<a href="#">Gallery Development, Stage 2</a>	2006/2829	Not Controlled Action	Completed	In buffer area only
<a href="#">Gundaroo Drive extension</a>	2000/57	Not Controlled Action	Completed	In buffer area only
<a href="#">Gungaharra Creek Floodway Project</a>	2005/1975	Not Controlled Action	Completed	In feature area
<a href="#">Gungaharra Trunk Sewer Stage 1</a>	2003/1259	Not Controlled Action	Completed	In feature area
<a href="#">Gungahlin Drive Extension</a>	2003/1156	Not Controlled Action	Completed	In feature area
<a href="#">Harrison 3 Residential Estate</a>	2005/2343	Not Controlled Action	Completed	In feature area
<a href="#">Horse Park Drive Project</a>	2001/323	Not Controlled Action	Completed	In feature area
<a href="#">Horse Park Estate/ Block 4 Section 1/470 dwellings</a>	2001/534	Not Controlled Action	Completed	In buffer area only
<a href="#">Humanities and Science Campus</a>	2007/3525	Not Controlled Action	Completed	In buffer area only
<a href="#">Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia</a>	2015/7522	Not Controlled Action	Completed	In feature area
<a href="#">INDIGO Central Submarine Telecommunications Cable</a>	2017/8127	Not Controlled Action	Completed	In feature area



Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Not controlled action</b>				
<a href="#">Installation of Fibre Optic Cable at Lawson Crescent - NBN Rollout</a>	2017/8016	Not Controlled Action	Completed	In buffer area only
<a href="#">Installation of interceptors on stormwater outlets</a>	2003/998	Not Controlled Action	Completed	In buffer area only
<a href="#">Installation of passive distributed antenna system in the Robert Garran Offices</a>	2005/2363	Not Controlled Action	Completed	In buffer area only
<a href="#">Installation of traffic lights at the intersection of Anzac Parade</a>	2010/5704	Not Controlled Action	Completed	In buffer area only
<a href="#">John Gorton Building Safety Fence &amp; Overhead Protection, Parks, ACT</a>	2013/7017	Not Controlled Action	Completed	In buffer area only
<a href="#">Kingston Foreshore Development - Harbour Civil Works</a>	2007/3492	Not Controlled Action	Completed	In buffer area only
<a href="#">Kingston Foreshore Development - Reclamation and Filling Lake Burley Griffin</a>	2004/1383	Not Controlled Action	Completed	In feature area
<a href="#">Land Divestment, Block 13, Section 9, Barton, ACT (bounded by Blackall Street, B</a>	2005/2453	Not Controlled Action	Completed	In buffer area only
<a href="#">Lyneham Sports Resort Complex</a>	2001/142	Not Controlled Action	Completed	In buffer area only
<a href="#">minor alterations to NE corner OPH</a>	2004/1824	Not Controlled Action	Completed	In feature area
<a href="#">Mixed Use Redevelopment of 1 Dairy Road, Fyshwick, ACT</a>	2021/9062	Not Controlled Action	Completed	In buffer area only
<a href="#">Molonglo 3 Water Supply Pipeline, ACT</a>	2017/8061	Not Controlled Action	Completed	In buffer area only
<a href="#">Mulligans Flat Road - Northern Section</a>	2011/5918	Not Controlled Action	Completed	In buffer area only
<a href="#">Mulligans Flat Woodland Sanctuary- Gorooyaroo extension of predator-proof fence, ACT</a>	2017/8093	Not Controlled Action	Completed	In buffer area only
<a href="#">National Gallery of Australia upgrade</a>	2007/3335	Not Controlled Action	Completed	In buffer area only
<a href="#">National Gallery Upgrade</a>	2001/295	Not Controlled Action	Completed	In feature area
<a href="#">Navigational aid facility upgrade</a>	2005/2459	Not Controlled Action	Completed	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Not controlled action</b>				
<a href="#">Neighbourhood Landscape Works/Tree Planting</a>	2000/117	Not Controlled Action	Completed	In buffer area only
<a href="#">NewActon Nishi Building</a>	2010/5336	Not Controlled Action	Completed	In buffer area only
<a href="#">North and South Poplars Residential Development</a>	2003/1136	Not Controlled Action	Completed	In buffer area only
<a href="#">Observatory Restoration Works</a>	2004/1691	Not Controlled Action	Completed	In buffer area only
<a href="#">Old Parliament House Lift Upgrade Project, Parkes, ACT</a>	2019/8506	Not Controlled Action	Completed	In buffer area only
<a href="#">Old Parliament House South-East Wing Refurbishment</a>	2008/3949	Not Controlled Action	Completed	In buffer area only
<a href="#">Permanent Access Ramp, Old Parliament House</a>	2004/1485	Not Controlled Action	Completed	In buffer area only
<a href="#">Podium Refurbishment, National Library of Australia</a>	2006/3038	Not Controlled Action	Completed	In buffer area only
<a href="#">Protection, Horticultural and Upgrading Works of York Park North Oak Plantation</a>	2008/4637	Not Controlled Action	Completed	In buffer area only
<a href="#">Redevelopment of Anzac Park East and West</a>	2004/1470	Not Controlled Action	Completed	In buffer area only
<a href="#">Refurbishment of The Royal Australian Mint</a>	2005/2122	Not Controlled Action	Completed	In buffer area only
<a href="#">Refurbishment Works at The Lodge, Deakin</a>	2012/6504	Not Controlled Action	Completed	In buffer area only
<a href="#">refurbishment works to upper floor SW Wing, OPH, ACT</a>	2007/3538	Not Controlled Action	Completed	In buffer area only
<a href="#">Residential Accommodation &amp; Infrastructure</a>	2003/953	Not Controlled Action	Completed	In buffer area only
<a href="#">Residential subdivision and construction works</a>	2003/1197	Not Controlled Action	Completed	In feature area
<a href="#">Residential Tower Development</a>	2019/8461	Not Controlled Action	Completed	In buffer area only
<a href="#">Revocation of National Land status of Block 588 at Barton Hwy and Gundaroo Drive</a>	2004/1527	Not Controlled Action	Completed	In feature area
<a href="#">Sale of Block 1 Section 75 Bruce Division, Belconnen, ACT</a>	2003/1006	Not Controlled Action	Completed	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Not controlled action</b>				
<a href="#">Sale of Commonwealth Land, Block 3 Section 75, Bruce</a>	2003/1007	Not Controlled Action	Completed	In buffer area only
<a href="#">Sale of land located at Blocks 11 and 13, Section 45, Division of Belconnen</a>	2003/1049	Not Controlled Action	Completed	In buffer area only
<a href="#">Sale of Macquarie Hotel, 18 National Circuit</a>	2002/836	Not Controlled Action	Completed	In buffer area only
<a href="#">Sale of Marcus Clarke St Carpark, Block 11 Section 61</a>	2002/847	Not Controlled Action	Completed	In buffer area only
<a href="#">Sale of part of Blk13/Sct19 ACT Water Police HQ</a>	2003/1057	Not Controlled Action	Completed	In feature area
<a href="#">Shine Dome Roof Repair</a>	2020/8747	Not Controlled Action	Completed	In buffer area only
<a href="#">Stage 4 of a residential development</a>	2010/5742	Not Controlled Action	Completed	In buffer area only
<a href="#">Subdivision and land sale of Block 11 Section 63, London Circuit, Canberra City</a>	2002/848	Not Controlled Action	Completed	In buffer area only
<a href="#">Temporary Office Accommodation at Government House</a>	2005/2344	Not Controlled Action	Completed	In buffer area only
<a href="#">Transfer of Building R9 in Russell ACT to Dept of Defence for demolition</a>	2021/8898	Not Controlled Action	Completed	In buffer area only
<a href="#">upgrade mechanical services Reps &amp; Senate Press Offices</a>	2005/1933	Not Controlled Action	Completed	In feature area
<a href="#">Wells Station Drive Extension Stages 1A &amp; 1B</a>	2007/3420	Not Controlled Action	Completed	In buffer area only
<a href="#">West Block Office Refurbishment, Queen Victoria Terrace</a>	2021/9139	Not Controlled Action	Completed	In buffer area only
<b>Not controlled action (particular manner)</b>				
<a href="#">2 stage development of suburb of Crace</a>	2008/4175	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Aerial baiting for wild dog control</a>	2006/2713	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
<a href="#">AFP Majura Driver Training Facility, ACT</a>	2013/6807	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Not controlled action (particular manner)</b>				
<a href="#">ANU- Crawford school extension</a>	2010/5764	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Bonner Stage 4, Site Servicing and Land Release</a>	2009/4816	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Canberra Centenary Trail Project</a>	2012/6645	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Capital Metro - Russell Extension Project, ACT</a>	2015/7576	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Carpark Access Road, Block 12, Section 22, Barton</a>	2010/5548	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Commonwealth Place Forecourt, Stage 2 Works</a>	2005/2007	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Construct Bioscience Lab and assoc works</a>	2005/2143	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
<a href="#">Construction and operation of new National Portrait Gallery</a>	2005/2327	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Construction of a four lane dual carriageway road from Monaro Hwy to Federal Hwy, Majura ACT</a>	2009/5057	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Construction of a New Office Building</a>	2009/4871	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">construction of shoulder and taxiway fillet</a>	2001/307	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
<a href="#">Construct signalised bridge and underpass &amp; remove trees</a>	2008/4547	Not Controlled Action (Particular	Post-Approval	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<u>Not controlled action (particular manner)</u>				
		Manner)		
<a href="#">Creation of a new facility, ANU Acton Campus, ACT</a>	2016/7643	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Defence Headquarters, Bungendore to HMAS Harman and Russell Defence Offices fibr</a>	2007/3507	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Demolition and redevelopment of Bruce Hall, Acton, ACT</a>	2016/7820	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Duntroon Residential Development</a>	2001/374	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">East Lake Electrical Infrastructure Relocation and Upgrade</a>	2009/5253	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Ground floor works, Edmund Barton Building, Canberra</a>	2009/5038	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">INDIGO Marine Cable Route Survey (INDIGO)</a>	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
<a href="#">Jamieson House Redevelopment Reid</a>	2011/5803	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Majura Road Upgrade</a>	2002/825	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Non-Potable Water &amp; Internal Reticulation Upgrade at the Australian National Bo</a>	2010/5364	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Refurbishment of former Patent Office &amp; demolition of Robert Garran link office</a>	2009/4777	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Not controlled action (particular manner)</b>				
<a href="#">Refurbishment of National Film and Sound Archive Theatrette, ACT</a>	2012/6591	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Replacement of poplars at the National Library of Australia Forecourt, ACT</a>	2021/8950	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Site Servicing &amp; Land Release</a>	2010/5439	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Temporary display of bridge sections from HMAS Brisbane</a>	2005/2379	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<b>Referral decision</b>				
<a href="#">City to Commonwealth Park Light Rail Project, ACT</a>	2019/8490	Referral Decision	Completed	In buffer area only
<a href="#">Construction of Majura Park Precinct Including Access Road, Warehouses, and Asso</a>	2004/1425	Referral Decision	Completed	In feature area
<a href="#">Construction of two 15m height memorials</a>	2012/6269	Referral Decision	Completed	In buffer area only
<a href="#">Demolition of the Robert Garran Office Annex Building</a>	2009/5189	Referral Decision	Completed	In buffer area only
<a href="#">Handrail installation, Treasury Building, Parkes Place West</a>	2006/2832	Referral Decision	Completed	In buffer area only
<a href="#">Mirrabei Drive Extension</a>	2010/5412	Referral Decision	Completed	In buffer area only
<a href="#">Redevelopment of Accommodation</a>	2009/4947	Referral Decision	Completed	In buffer area only
<a href="#">Re-development of forecourt to create the Humanities and Science Campus Square.</a>	2006/2759	Referral Decision	Completed	In buffer area only
<a href="#">Refurbishment works to the SE wing of Old Parliament House</a>	2007/3778	Referral Decision	Completed	In buffer area only
<a href="#">West Block Hotel Adaptation, Queen Victoria Terrace</a>	2021/9083	Referral Decision	Completed	In buffer area only

# Caveat

## 1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

## 2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

## 3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

## 4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

# Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- [-Natural history museums of Australia](#)
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- [-Other groups and individuals](#)

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.



Please feel free to provide feedback via the [Contact us](#) page.

[© Commonwealth of Australia](#)

Department of Climate Change, Energy, the Environment and Water

GPO Box 3090

Canberra ACT 2601 Australia

+61 2 6274 1111



# EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 09-Aug-2023

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

# Summary

## Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

<a href="#">World Heritage Properties:</a>	None
<a href="#">National Heritage Places:</a>	4
<a href="#">Wetlands of International Importance (Ramsar)</a>	4
<a href="#">Great Barrier Reef Marine Park:</a>	None
<a href="#">Commonwealth Marine Area:</a>	None
<a href="#">Listed Threatened Ecological Communities:</a>	2
<a href="#">Listed Threatened Species:</a>	53
<a href="#">Listed Migratory Species:</a>	14

## Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <https://www.dcceew.gov.au/parks-heritage/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

<a href="#">Commonwealth Lands:</a>	182
<a href="#">Commonwealth Heritage Places:</a>	79
<a href="#">Listed Marine Species:</a>	22
<a href="#">Whales and Other Cetaceans:</a>	None
<a href="#">Critical Habitats:</a>	1
<a href="#">Commonwealth Reserves Terrestrial:</a>	1
<a href="#">Australian Marine Parks:</a>	None
<a href="#">Habitat Critical to the Survival of Marine Turtles:</a>	None

## Extra Information

This part of the report provides information that may also be relevant to the area you have

<a href="#">State and Territory Reserves:</a>	32
<a href="#">Regional Forest Agreements:</a>	1
<a href="#">Nationally Important Wetlands:</a>	1
<a href="#">EPBC Act Referrals:</a>	214
<a href="#">Key Ecological Features (Marine):</a>	None
<a href="#">Biologically Important Areas:</a>	None
<a href="#">Bioregional Assessments:</a>	None
<a href="#">Geological and Bioregional Assessments:</a>	None

# Details

## Matters of National Environmental Significance

### National Heritage Places [\[ Resource Information \]](#)

Name	State	Legal Status	Buffer Status
<b>Historic</b>			
<a href="#">Australian Academy of Science Building</a>	ACT	Listed place	In buffer area only
<a href="#">Australian War Memorial and the Memorial Parade</a>	ACT	Listed place	In buffer area only
<a href="#">High Court - National Gallery Precinct</a>	ACT	Listed place	In feature area
<a href="#">Old Parliament House and Curtilage</a>	ACT	Listed place	In feature area

### Wetlands of International Importance (Ramsar Wetlands) [\[ Resource Information \]](#)

Ramsar Site Name	Proximity	Buffer Status
<a href="#">Banrock station wetland complex</a>	800 - 900km upstream from Ramsar site	In feature area
<a href="#">Hattah-kulkyne lakes</a>	500 - 600km upstream from Ramsar site	In feature area
<a href="#">Riverland</a>	700 - 800km upstream from Ramsar site	In feature area
<a href="#">The coorong, and lakes alexandrina and albert wetland</a>	800 - 900km upstream from Ramsar site	In feature area

### Listed Threatened Ecological Communities [\[ Resource Information \]](#)

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Natural Temperate Grassland of the South Eastern Highlands</a>	Critically Endangered	Community likely to occur within area	In feature area
<a href="#">White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland</a>	Critically Endangered	Community likely to occur within area	In feature area

### Listed Threatened Species [\[ Resource Information \]](#)

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.

Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
<b>BIRD</b>			
<a href="#">Anthochaera phrygia</a> Regent Honeyeater [82338]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Aphelocephala leucopsis</a> Southern Whiteface [529]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Botaurus poiciloptilus</a> Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Callocephalon fimbriatum</a> Gang-gang Cockatoo [768]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Calyptorhynchus lathami lathami</a> South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Climacteris picumnus victoriae</a> Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Falco hypoleucos</a> Grey Falcon [929]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Grantiella picta</a> Painted Honeyeater [470]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Lathamus discolor</a> Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Limosa lapponica baueri</a> Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Melanodryas cucullata cucullata</a> South-eastern Hooded Robin, Hooded Robin (south-eastern) [67093]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Neophema chrysostoma</a> Blue-winged Parrot [726]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Polytelis swainsonii</a> Superb Parrot [738]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Pycnoptilus floccosus</a> Pilotbird [525]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Rostratula australis</a> Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Stagonopleura guttata</a> Diamond Firetail [59398]	Vulnerable	Species or species habitat known to occur within area	In feature area
<b>FISH</b>			
<a href="#">Maccullochella macquariensis</a> Trout Cod [26171]	Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Maccullochella peelii</a> Murray Cod [66633]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Macquaria australasica</a> Macquarie Perch [66632]	Endangered	Species or species habitat may occur within area	In feature area

**FROG**

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Litoria aurea</a> Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Litoria booroolongensis</a> Booroolong Frog [1844]	Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Litoria castanea</a> Yellow-spotted Tree Frog, Yellow-spotted Bell Frog [1848]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Litoria raniformis</a> Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828]	Vulnerable	Species or species habitat may occur within area	In feature area
<b>INSECT</b>			
<a href="#">Keyacris scurra</a> Key's Matchstick Grasshopper [89739]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Synemon plana</a> Golden Sun Moth [25234]	Vulnerable	Species or species habitat known to occur within area	In feature area
<b>MAMMAL</b>			
<a href="#">Chalinolobus dwyeri</a> Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Dasyurus maculatus maculatus (SE mainland population)</a> Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Petaurus australis australis</a> Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)</a> Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Pteropus poliocephalus</a> Grey-headed Flying-fox [186]	Vulnerable	Roosting known to occur within area	In feature area

**PLANT**

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Ammobium craspedioides</a> Yass Daisy [20758]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
<a href="#">Amphibromus fluitans</a> River Swamp Wallaby-grass, Floating Swamp Wallaby-grass [19215]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Caladenia actensis</a> Canberra Spider Orchid [76138]	Critically Endangered	Species or species habitat known to occur within area	In buffer area only
<a href="#">Calotis glandulosa</a> Mauve Burr-daisy [7842]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Dodonaea procumbens</a> Trailing Hop-bush [12149]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Eucalyptus aggregata</a> Black Gum [20890]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Lepidium aschersonii</a> Spiny Peppercross [10976]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Lepidium ginninderrense</a> Ginninderra Peppercross [78474]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Lepidium hyssopifolium</a> Basalt Pepper-cress, Peppercross, Rubble Pepper-cress, Pepperweed [16542]	Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Leucochrysum albicans subsp. tricolor</a> Hoary Sunray, Grassland Paper-daisy [89104]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Neoastelia spectabilis</a> [6404]	Vulnerable	Species or species habitat known to occur within area	In buffer area only



Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Pomaderris pallida</a> Pale Pomaderris [13684]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Prasophyllum petilum</a> Tarengo Leek Orchid [55144]	Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Rutidosis leptorhynchoides</a> Button Wrinklewort [67251]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Senecio macrocarpus</a> Large-fruit Fireweed, Large-fruit Groundsel [16333]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Swainsona recta</a> Small Purple-pea, Mountain Swainson-pea, Small Purple Pea [7580]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Thesium australe</a> Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat likely to occur within area	In feature area

## REPTILE

<a href="#">Aprasia parapulchella</a> Pink-tailed Worm-lizard, Pink-tailed Legless Lizard [1665]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Delma impar</a> Striped Legless Lizard, Striped Snake-lizard [1649]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Tymanocryptis lineata</a> Canberra Grassland Earless Dragon, Lined Earless Dragon [25558]	Critically Endangered	Species or species habitat known to occur within area	In buffer area only

## Listed Migratory Species

[ [Resource Information](#) ]

Scientific Name	Threatened Category	Presence Text	Buffer Status
<b>Migratory Marine Birds</b>			
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area

## Migratory Terrestrial Species

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat known to occur within area	In feature area
<a href="#">Motacilla flava</a> Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat known to occur within area	In feature area
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		Species or species habitat known to occur within area	In feature area
<b>Migratory Wetlands Species</b>			
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area	In feature area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat known to occur within area	In feature area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area	In feature area
<a href="#">Limosa lapponica</a> Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Pandion haliaetus</a> Osprey [952]		Species or species habitat known to occur within area	In feature area

## Other Matters Protected by the EPBC Act

### Commonwealth Lands [\[ Resource Information \]](#)

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State	Buffer Status
<b>Communications, Information Technology and the Arts - Australian Postal Corporation</b>		
Commonwealth Land - Australian Postal Corporation [12324]	NSW	In buffer area only
<b>Defence</b>		
Defence - 10 WHYALLA ST - FYSHWICK [80001]	ACT	In buffer area only
Defence - 139 CANBERRA AVE - FYSHWICK [80002]	ACT	In buffer area only
Defence - 139 CANBERRA AVE - FYSHWICK [80004]	ACT	In buffer area only
Defence - 139 CANBERRA AVE - FYSHWICK [80003]	ACT	In buffer area only
Defence - 169 GLADSTONE ST - FYSHWICK [80005]	ACT	In buffer area only
Defence - ADC / JSSC - WESTON [80034]	ACT	In buffer area only
Defence - ADFA MARINE FACILITY - YARRALUMLA [80102]	ACT	In buffer area only
Defence - AIDAB Building [80035]	ACT	In buffer area only
Defence - AUSTRALIAN DEFENCE FORCE ACADEMY [80104]	ACT	In buffer area only
Defence - BELCONNEN RADIO STATION ; BELCONNEN COMMUNICATIONS STATION [80039]	ACT	In buffer area only
Defence - CAMPBELL PARK [80040]	ACT	In buffer area only
Defence - DEAKIN OFFICES [80042]	ACT	In buffer area only
Defence - DEFENCE RECRUITING UNIT - GIO BUILDING [80036]	ACT	In buffer area only
Defence - HEWLETT PACKARD BUILDING - FERNHILL PARK [80043]	ACT	In buffer area only
Defence - HEWLETT PACKARD BUILDING - FERNHILL PARK [80044]	ACT	In buffer area only

Commonwealth Land Name	State	Buffer Status
Defence - HMAS HARMAN - SYMONSTOWN [80107]	ACT	In buffer area only
Defence - HMAS HARMAN - SYMONSTOWN [80106]	ACT	In buffer area only
Defence - HMAS HARMAN - SYMONSTOWN [80105]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80008]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80010]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80019]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80009]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80027]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80025]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80024]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80023]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80022]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80020]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80021]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80028]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80029]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80013]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80017]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80011]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80012]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80014]	ACT	In buffer area only
Defence - MAJURA FIELD FIRING RANGE [80026]	ACT	In buffer area only
Defence - MAJURA NAVIGATIONAL AID SITE [80032]	ACT	In buffer area only
Defence - MAJURA NAVIGATION BEACON [80033]	ACT	In buffer area only
Defence - MAWSON OFFICE ACCOMM [80045]	ACT	In buffer area only
Defence - MT JERRABOMBERRA OBSTRUCTION WARNING [80046]	NSW	In buffer area only
Defence - MT JERRABOMBERRA OBSTRUCTION WARNING [80047]	NSW	In buffer area only

Commonwealth Land Name	State	Buffer Status
Defence - NAVAL COMBAT DATA SYSTEM CENTRE - FYSHWICK [80007]	ACT	In buffer area only
Defence - NAVAL COMBAT DATA SYSTEM CENTRE - FYSHWICK [80006]	ACT	In buffer area only
Defence - NCC BUILDING - CANBERRA CITY [80038]	ACT	In buffer area only
Defence - NORTHBOURNE HOUSE [80037]	ACT	In buffer area only
Defence - NORTHCOTT DRIVE PLAYING FIELDS (Addison Rd) [80048]	ACT	In buffer area only
Defence - PHYSICS FIELD TESTING STATION - CANBERRA [80103]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80049]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80069]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80051]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80054]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80055]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80052]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80053]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80059]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80058]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80057]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80056]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80050]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80080]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80081]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80082]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80083]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80078]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80062]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80064]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80067]	ACT	In buffer area only

Commonwealth Land Name	State	Buffer Status
Defence - RAAF BASE FAIRBAIRN [80065]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80060]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80063]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80066]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80061]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80079]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80074]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80075]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80076]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80077]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80070]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80071]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80072]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80073]	ACT	In buffer area only
Defence - RAAF BASE FAIRBAIRN [80068]	ACT	In buffer area only
Defence - ROYAL MILITARY COLLEGE - DUNTROON [80084]	ACT	In buffer area only
Defence - ROYAL MILITARY COLLEGE - DUNTROON [80085]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80089]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80088]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80086]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80087]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80101]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80100]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80096]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80097]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80091]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80090]	ACT	In buffer area only

Commonwealth Land Name	State	Buffer Status
Defence - RUSSELL HILL COMPLEX [80098]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80094]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80095]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80099]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80093]	ACT	In buffer area only
Defence - RUSSELL HILL COMPLEX [80092]	ACT	In buffer area only
Defence - WERRIWA DEPOT [80109]	ACT	In buffer area only
Defence - WERRIWA DEPOT [80108]	ACT	In buffer area only
<b>Defence - Defence Housing Authority</b>		
Commonwealth Land - Defence Housing Authority [16360]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [15594]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12318]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16078]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12310]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [15728]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12316]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [15727]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12312]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16112]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12311]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16114]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12307]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16110]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12306]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16298]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12305]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12315]	NSW	In buffer area only

Commonwealth Land Name	State	Buffer Status
Commonwealth Land - Defence Housing Authority [16295]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12303]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16111]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16297]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16294]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12308]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12301]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12302]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12309]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12300]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12297]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12294]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12295]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16358]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [15904]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16195]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16198]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12296]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [15726]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [15593]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16193]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16076]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16077]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16074]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [15908]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [15907]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [15906]	NSW	In buffer area only



Commonwealth Land Name	State	Buffer Status
Commonwealth Land - Defence Housing Authority [15905]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [15595]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16293]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16292]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16296]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [15617]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [15697]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16079]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16359]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [15412]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [15699]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16108]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16107]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [15540]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16109]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16024]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16106]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16023]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16075]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16113]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16299]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12327]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12326]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12328]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16561]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [12325]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [15926]	NSW	In buffer area only

Commonwealth Land Name	State	Buffer Status
Commonwealth Land - Defence Housing Authority [15925]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16493]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [15927]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [15924]	NSW	In buffer area only

#### Transport and Regional Services - Airservices Australia

Commonwealth Land - Airservices Australia [12293]	NSW	In buffer area only
---	-----	---------------------

#### Unknown

Commonwealth Land - [16524]	NSW	In buffer area only
-----------------------------	-----	---------------------

#### Commonwealth Heritage Places

[ [Resource Information](#) ]

Name	State	Status	Buffer Status
------	-------	--------	---------------

#### Historic

<a href="#">Acton Conservation Area</a>	ACT	Listed place	In buffer area only
<a href="#">Acton Peninsula Building 1</a>	ACT	Listed place	In buffer area only
<a href="#">Acton Peninsula Building 15</a>	ACT	Listed place	In buffer area only
<a href="#">Acton Peninsula Building 2</a>	ACT	Listed place	In buffer area only
<a href="#">Acton Peninsula Limestone Outcrops</a>	ACT	Listed place	In buffer area only
<a href="#">Anzac Memorial Chapel of St Paul</a>	ACT	Listed place	In buffer area only
<a href="#">Apostolic Nunciature</a>	ACT	Listed place	In buffer area only
<a href="#">Apple Shed Asset C58</a>	ACT	Listed place	In buffer area only
<a href="#">Australian American Memorial and Sir Thomas Blamey Square</a>	ACT	Listed place	In buffer area only
<a href="#">Australian Forestry School (former)</a>	ACT	Listed place	In buffer area only
<a href="#">Australian National Botanic Gardens (part)</a>	ACT	Listed place	In buffer area only
<a href="#">Australian War Memorial</a>	ACT	Listed place	In buffer area only
<a href="#">Blundells Farmhouse, Slab Outbuilding and Surrounds</a>	ACT	Listed place	In buffer area only
<a href="#">Cameron Offices (Wings 3, 4 and 5, and Bridge)</a>	ACT	Listed place	In buffer area only
<a href="#">Canberra School of Art</a>	ACT	Listed place	In buffer area only
<a href="#">Canberra School of Music</a>	ACT	Listed place	In buffer area only
<a href="#">Captains Quarters Assets B1 to B4</a>	ACT	Listed place	In buffer area only

Name	State	Status	Buffer Status
<a href="#">Carillon</a>	ACT	Listed place	In buffer area only
<a href="#">Casey House and Garden</a>	ACT	Listed place	In feature area
<a href="#">Changi Chapel</a>	ACT	Listed place	In buffer area only
<a href="#">Commandants House Asset B9</a>	ACT	Listed place	In buffer area only
<a href="#">Commencement Column Monument</a>	ACT	Listed place	In feature area
<a href="#">Communications Centre</a>	ACT	Listed place	In feature area
<a href="#">CSIRO Main Entomology Building</a>	ACT	Listed place	In buffer area only
<a href="#">Drill Hall Gallery</a>	ACT	Listed place	In buffer area only
<a href="#">Duntroon House and Garden</a>	ACT	Listed place	In buffer area only
<a href="#">East Block Government Offices</a>	ACT	Listed place	In feature area
<a href="#">Edmund Barton Offices</a>	ACT	Listed place	In feature area
<a href="#">General Bridges Grave</a>	ACT	Listed place	In buffer area only
<a href="#">Gungahlin Complex</a>	ACT	Listed place	In buffer area only
<a href="#">Gungahlin Homestead and Landscape</a>	ACT	Listed place	In buffer area only
<a href="#">High Court - National Gallery Precinct</a>	ACT	Listed place	In feature area
<a href="#">High Court of Australia</a>	ACT	Listed place	In buffer area only
<a href="#">Institute of Anatomy (former)</a>	ACT	Listed place	In buffer area only
<a href="#">John Gorton Building</a>	ACT	Listed place	In feature area
<a href="#">King George V Memorial</a>	ACT	Listed place	In feature area
<a href="#">Lake Burley Griffin and Adjacent Lands</a>	ACT	Listed place	In feature area
<a href="#">Lennox House Complex</a>	ACT	Listed place	In buffer area only
<a href="#">National Gallery of Australia</a>	ACT	Listed place	In feature area
<a href="#">National Library of Australia and Surrounds</a>	ACT	Listed place	In feature area
<a href="#">National Rose Gardens</a>	ACT	Listed place	In feature area
<a href="#">Old Parliament House and Curtilage</a>	ACT	Listed place	In feature area
<a href="#">Old Parliament House Gardens</a>	ACT	Listed place	In feature area
<a href="#">Parade Ground and Associated Buildings Group</a>	ACT	Listed place	In buffer area only

Name	State	Status	Buffer Status
<a href="#">Parliament House Vista</a>	ACT	Listed place	In feature area
<a href="#">Parliament House Vista Extension - Portal Buildings</a>	ACT	Listed place	In buffer area only
<a href="#">Patent Office (former)</a>	ACT	Listed place	In feature area
<a href="#">Phytotron</a>	ACT	Listed place	In buffer area only
<a href="#">Redwood Plantation</a>	ACT	Listed place	In buffer area only
<a href="#">Reserve Bank of Australia</a>	ACT	Listed place	In buffer area only
<a href="#">Residence Asset B5</a>	ACT	Listed place	In buffer area only
<a href="#">Residence Asset B7</a>	ACT	Listed place	In buffer area only
<a href="#">Residence Asset C12</a>	ACT	Listed place	In buffer area only
<a href="#">Residence Asset C13</a>	ACT	Listed place	In buffer area only
<a href="#">Residence Asset C14</a>	ACT	Listed place	In buffer area only
<a href="#">Residence Asset C15</a>	ACT	Listed place	In buffer area only
<a href="#">Residence Asset C7</a>	ACT	Listed place	In buffer area only
<a href="#">Residence Asset C8</a>	ACT	Listed place	In buffer area only
<a href="#">R G Menzies Building ANU</a>	ACT	Listed place	In buffer area only
<a href="#">RMC Duntroon Conservation Area</a>	ACT	Listed place	In buffer area only
<a href="#">Royal Australian Naval Transmitting Station</a>	ACT	Listed place	In buffer area only
<a href="#">Russell Cafeteria</a>	ACT	Within listed place	In buffer area only
<a href="#">Russell Precinct Heritage Area</a>	ACT	Listed place	In buffer area only
<a href="#">Sculpture Garden National Gallery of Australia</a>	ACT	Listed place	In feature area
<a href="#">The CSIRO Forestry Precinct</a>	ACT	Listed place	In buffer area only
<a href="#">The Lodge</a>	ACT	Listed place	In buffer area only
<a href="#">The Royal Australian Mint</a>	ACT	Listed place	In buffer area only
<a href="#">The Surveyors Hut</a>	ACT	Listed place	In feature area
<a href="#">Three Wartime Bomb Dump Buildings</a>	ACT	Listed place	In buffer area only
<a href="#">Toad Hall ANU</a>	ACT	Listed place	In buffer area only

Name	State	Status	Buffer Status
<a href="#">University House and Garden</a>	ACT	Listed place	In buffer area only
<a href="#">West Block and the Dugout</a>	ACT	Listed place	In feature area
<a href="#">West Portal Cafeteria</a>	ACT	Listed place	In buffer area only
<a href="#">Westridge House &amp; Grounds</a>	ACT	Listed place	In buffer area only
<a href="#">Yarralumla and Surrounds</a>	ACT	Listed place	In buffer area only
<a href="#">York Park North Tree Plantation</a>	ACT	Listed place	In feature area

#### Natural

<a href="#">Majura Valley Natural Temperate Grassland</a>	ACT	Listed place	In buffer area only
<a href="#">State Circle Cutting</a>	ACT	Listed place	In feature area
<a href="#">Synemon Plana Moth Habitat</a>	ACT	Listed place	In buffer area only

#### Listed Marine Species

[ [Resource Information](#) ]

Scientific Name	Threatened Category	Presence Text	Buffer Status
<b>Bird</b>			
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
<a href="#">Bubulcus ibis as Ardea ibis</a> Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area	In feature area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Chalcites osculans</a> as <a href="#">Chrysococcyx osculans</a> Black-eared Cuckoo [83425]		Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Haliaeetus leucogaster</a> White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Lathamus discolor</a> Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Limosa lapponica</a> Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In buffer area only
<a href="#">Merops ornatus</a> Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Motacilla flava</a> Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Neophema chrysostoma</a> Blue-winged Parrot [726]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Pandion haliaetus</a> Osprey [952]		Species or species habitat known to occur within area	In feature area
<a href="#">Pterodroma cervicalis</a> White-necked Petrel [59642]		Species or species habitat may occur within area	In buffer area only
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Rostratula australis as Rostratula benghalensis (sensu lato)</a> Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area overfly marine area	In feature area

### Critical Habitats [\[ Resource Information \]](#)

Name	Type of Presence	Buffer Status
<a href="#">Lepidium ginninderrense (Ginninderra Peppergrass) - Northwest corner Belconnen Naval Transmission Station, ACT</a>	Listed Critical Habitat	In buffer area only

### Commonwealth Reserves Terrestrial [\[ Resource Information \]](#)

Name	State	Type	Buffer Status
Australian National	ACT	Botanic Gardens (Commonwealth)	In buffer area only

### Extra Information

#### State and Territory Reserves [\[ Resource Information \]](#)

Protected Area Name	Reserve Type	State	Buffer Status
Aranda Bushland	Nature Reserve	ACT	In buffer area only
Black Mountain	Nature Reserve	ACT	In buffer area only

Protected Area Name	Reserve Type	State	Buffer Status
Bruce Ridge	Nature Reserve	ACT	In buffer area only
Budjan Galindji	Nature Reserve	ACT	In buffer area only
Callum Brae	Nature Reserve	ACT	In buffer area only
Cooleman Ridge	Nature Reserve	ACT	In buffer area only
Crace	Nature Reserve	ACT	In buffer area only
Farrer Ridge	Nature Reserve	ACT	In buffer area only
Goorooyarroo	Nature Reserve	ACT	In buffer area only
Gossan Hill	Nature Reserve	ACT	In buffer area only
Gungaderra Grassland	Nature Reserve	ACT	In buffer area only
Isaacs Ridge	Nature Reserve	ACT	In buffer area only
Jerrabomberra Wetlands	Nature Reserve	ACT	In buffer area only
Justice Robert Hope Park	Nature Reserve	ACT	In buffer area only
Molonglo Gorge	Nature Reserve	ACT	In buffer area only
Molonglo River	Nature Reserve	ACT	In buffer area only
Mt Ainslie	Nature Reserve	ACT	In buffer area only
Mt Majura	Nature Reserve	ACT	In buffer area only
Mt Mugga Mugga	Nature Reserve	ACT	In buffer area only
Mt Painter	Nature Reserve	ACT	In buffer area only
Mt Pleasant	Nature Reserve	ACT	In buffer area only
Mt Taylor	Nature Reserve	ACT	In buffer area only
Mulanggari Grassland	Nature Reserve	ACT	In buffer area only
Nadjung Mada	Nature Reserve	ACT	In buffer area only
O'Connor Ridge	Nature Reserve	ACT	In buffer area only
Oakey Hill	Nature Reserve	ACT	In buffer area only
Percival Hill	Nature Reserve	ACT	In buffer area only
Queanbeyan	Nature Reserve	NSW	In buffer area only
Red Hill	Nature Reserve	ACT	In buffer area only



Protected Area Name	Reserve Type	State	Buffer Status
The Pinnacle	Nature Reserve	ACT	In buffer area only
Wanniassa Hills	Nature Reserve	ACT	In buffer area only
West Jerrabomberra	Nature Reserve	ACT	In buffer area only

## Regional Forest Agreements

[\[ Resource Information \]](#)

Note that all areas with completed RFAs have been included. Please see the associated resource information for specific caveats and use limitations associated with RFA boundary information.

RFA Name	State	Buffer Status
<a href="#">Southern RFA</a>	New South Wales	In buffer area only

## Nationally Important Wetlands

[\[ Resource Information \]](#)

Wetland Name	State	Buffer Status
<a href="#">Jerrabomberra Wetlands</a>	ACT	In buffer area only

## EPBC Act Referrals

[\[ Resource Information \]](#)

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<a href="#">Australian War Memorial - Main Building Gallery Preparation Works</a>	2022/09413		Completed	In buffer area only
<a href="#">Belconnen Section 44 Block 11- Residential Towers</a>	2023/09468		Completed	In buffer area only
<a href="#">C.S Christian Laboratory Demolition</a>	2022/09323		Completed	In buffer area only
<a href="#">Campbell Park Car Park Consolidation Project</a>	2022/09354		Assessment	In buffer area only
<a href="#">Commonwealth Avenue Utility Relocation</a>	2023/09567		Referral Decision	In feature area
<a href="#">F.C Pye Laboratory Demolition</a>	2022/09322		Completed	In buffer area only
<a href="#">Federal Golf Club Retirement Village and Water Infrastructure</a>	2022/09201		Completed	In buffer area only
<a href="#">Forestry Place Redevelopment of CSIRO Yarralumla, Block 7 Section 4 Yarralumla, ACT</a>	2021/8937		Post-Approval	In buffer area only
<a href="#">install a 250 seat cinema in the NFSA north gallery</a>	2005/2371		Completed	In buffer area only
<a href="#">John Gorton Campus Carpark</a>	2022/09400		Post-Approval	In feature area
<a href="#">Lawson North Residential Development</a>	2022/09298		Assessment	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<a href="#">National Library of Australia Forecourt Lombardy Poplar Replacement</a>	2022/09406		Completed	In buffer area only
<a href="#">New RSPCA Facility</a>	2022/09285		Assessment	In buffer area only
<a href="#">Release 33 Prod Test Project 2</a>	2023/09587		Post-Approval	In buffer area only
<a href="#">The Canberra Brickworks Precinct, Blocks 1, 7, and 20 Section 102, Yarralumla, ACT</a>	2017/8074		Approval	In buffer area only
<b>Controlled action</b>				
<a href="#">ANZAC Park East and ANZAC Park West sale - Parkes, ACT</a>	2016/7766	Controlled Action	Post-Approval	In buffer area only
<a href="#">Archival recording &amp; demolition of two Commonwealth Heritage Listed buildings</a>	2011/5895	Controlled Action	Post-Approval	In buffer area only
<a href="#">Australian War Memorial Redevelopment</a>	2019/8574	Controlled Action	Post-Approval	In buffer area only
<a href="#">Blocks 3 and 15, Section 22, Barton, ACT Divestment</a>	2017/8028	Controlled Action	Post-Approval	In buffer area only
<a href="#">Campbell Station 5 Development</a>	2012/6292	Controlled Action	Post-Approval	In buffer area only
<a href="#">Canberra Brickworks Precinct access road and Dudley Street upgrade, ACT</a>	2017/8072	Controlled Action	Post-Approval	In buffer area only
<a href="#">City Hill Section 63 Redevelopment Project, ACT</a>	2019/8449	Controlled Action	Post-Approval	In buffer area only
<a href="#">City to Commonwealth Park Light Rail 2A</a>	2019/8582	Controlled Action	Post-Approval	In feature area
<a href="#">Commonwealth Park to Woden Light Rail Project, ACT</a>	2019/8491	Controlled Action	Assessment Approach	In feature area
<a href="#">Crawford School building incorporating teaching facilities, academic/staff offi</a>	2007/3665	Controlled Action	Post-Approval	In buffer area only
<a href="#">Demolition of old administrative buildings</a>	2012/6231	Controlled Action	Completed	In buffer area only
<a href="#">Development of a new facility for the ANU College of Arts and Social Sciences, ANU Action Campus, AC</a>	2016/7700	Controlled Action	Post-Approval	In buffer area only
<a href="#">Development of Block 18 Section 86 Yarralumla, ACT</a>	2016/7812	Controlled Action	Post-Approval	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Controlled action</b>				
<a href="#">Development of cabin, camping and possible hotel accomodation</a>	2010/5750	Controlled Action	Post-Approval	In buffer area only
<a href="#">Development of part Block 20 Section 86 Yarralumla, ACT</a>	2016/7813	Controlled Action	Post-Approval	In buffer area only
<a href="#">Development of the Future Urban Areas of Kenny and Throsby</a>	2012/6279	Controlled Action	Completed	In buffer area only
<a href="#">Development of the Narrabundah Long Stay Caravan Park Land Swap Site</a>	2007/3554	Controlled Action	Post-Approval	In buffer area only
<a href="#">dismantle &amp; remove masts and aerials at Belconnen Naval Transmission Station</a>	2005/2218	Controlled Action	Post-Approval	In buffer area only
<a href="#">Divestment of York Park North</a>	2004/1426	Controlled Action	Completed	In feature area
<a href="#">Expansion of the Mugga Lane Resource Management Centre</a>	2011/5808	Controlled Action	Post-Approval	In buffer area only
<a href="#">Extension of Taxiway Bravo</a>	2008/4170	Controlled Action	Post-Approval	In buffer area only
<a href="#">Federal Golf Club Retirement Village Project, ACT</a>	2018/8277	Controlled Action	Assessment Approach	In buffer area only
<a href="#">Hotel and Carpark Development</a>	2012/6606	Controlled Action	Post-Approval	In buffer area only
<a href="#">Infrastructure Upgrade and Construction at Canberra Airport</a>	2009/4748	Controlled Action	Post-Approval	In buffer area only
<a href="#">Lawson South residential development</a>	2010/5549	Controlled Action	Post-Approval	In buffer area only
<a href="#">Malcolmvale West Detention Basin</a>	2011/6218	Controlled Action	Further Information Request	In buffer area only
<a href="#">Monaro Highway - Lanyon Drive Upgrade Package 1C</a>	2020/8768	Controlled Action	Post-Approval	In buffer area only
<a href="#">Morisset Road Extension and Sullivans Creek Retardation Basin</a>	2020/8822	Controlled Action	Further Information Request	In buffer area only
<a href="#">Mugga Quarry overburden expansion project, ACT</a>	2018/8151	Controlled Action	Post-Approval	In buffer area only
<a href="#">New Public High School in East Gungahlin</a>	2019/8599	Controlled Action	Completed	In buffer area only
<a href="#">Proposed demolition and landscape works</a>	2012/6627	Controlled Action	Post-Approval	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Controlled action</b>				
<a href="#">Refurbishment of the SE Wing of Old Parliament House</a>	2008/4325	Controlled Action	Post-Approval	In feature area
<a href="#">Removal of Trees on National Land</a>	2009/5204	Controlled Action	Post-Approval	In feature area
<a href="#">Residential and commercial development, Blocks 4 and 5 Section 38, Campbell, ACT</a>	2014/7372	Controlled Action	Post-Approval	In buffer area only
<a href="#">Residential Development, Block 9 Section 64, Watson, and extension of Negus Crescent, ACT</a>	2012/6418	Controlled Action	Post-Approval	In buffer area only
<a href="#">Soil remediation works</a>	2008/4367	Controlled Action	Post-Approval	In buffer area only
<a href="#">The Poplars, Jerrabomberra, NSW</a>	2020/8801	Controlled Action	Post-Approval	In buffer area only
<a href="#">Transfer of Defence Land at Majura</a>	2007/3756	Controlled Action	Post-Approval	In buffer area only
<a href="#">University of Canberra Public Hospital</a>	2013/6987	Controlled Action	Post-Approval	In buffer area only
<a href="#">William Hovell Drive Duplication</a>	2020/8703	Controlled Action	Assessment Approach	In buffer area only
<b>Not controlled action</b>				
<a href="#">2.1km upgrade and extension of Morisset road</a>	2010/5565	Not Controlled Action	Completed	In buffer area only
<a href="#">ANBG Production Nursery</a>	2002/590	Not Controlled Action	Completed	In buffer area only
<a href="#">Angel of the North Installation</a>	2010/5591	Not Controlled Action	Completed	In buffer area only
<a href="#">Anzac Park West Building - perimeter security works</a>	2004/1511	Not Controlled Action	Completed	In buffer area only
<a href="#">Benjamin Offices Redevelopment</a>	2001/317	Not Controlled Action	Completed	In feature area
<a href="#">Birch Building Refurbishment</a>	2019/8544	Not Controlled Action	Completed	In buffer area only
<a href="#">Block 622 Redevelopment AFP Driver Training Area</a>	2002/810	Not Controlled Action	Completed	In buffer area only
<a href="#">Block 7, Section 74</a>	2001/210	Not Controlled Action	Completed	In buffer area only
<a href="#">Block 8 Section 5 Bruce Belconnen</a>	2003/1009	Not Controlled Action	Completed	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Not controlled action</b>				
<a href="#">Bomber Command Memorial</a>	2004/1353	Not Controlled Action	Completed	In buffer area only
<a href="#">Bowen Place Crossing</a>	2011/6203	Not Controlled Action	Completed	In feature area
<a href="#">Bruce East Residential Estate</a>	2000/55	Not Controlled Action	Completed	In buffer area only
<a href="#">Canberra Primary Mains Extension Gas Pipeline Project</a>	2000/15	Not Controlled Action	Completed	In buffer area only
<a href="#">Capital Metro Stage 1 Light Rail Service, ACT</a>	2014/7379	Not Controlled Action	Completed	In buffer area only
<a href="#">Collection, Sorting &amp; Recycling Centre</a>	2000/116	Not Controlled Action	Completed	In buffer area only
<a href="#">construct addition to Admin Annex</a>	2004/1891	Not Controlled Action	Completed	In feature area
<a href="#">Construction of a link road on Marjura Parkway, Pialligo, ACT</a>	2015/7483	Not Controlled Action	Completed	In buffer area only
<a href="#">Construction of an Advanced Instrumentation and Technology Centre at the Mt Stro</a>	2004/1748	Not Controlled Action	Completed	In buffer area only
<a href="#">Construction of a New Cooling Tower Enclosure</a>	2008/4457	Not Controlled Action	Completed	In feature area
<a href="#">Construction of a New Office Building</a>	2009/4814	Not Controlled Action	Completed	In buffer area only
<a href="#">Construction of a short haul road</a>	2013/6802	Not Controlled Action	Completed	In buffer area only
<a href="#">construction of new admin bldg</a>	2004/1731	Not Controlled Action	Completed	In feature area
<a href="#">Construction of New Australian Government Offices and On-Site Parking</a>	2008/4158	Not Controlled Action	Completed	In feature area
<a href="#">Construction of office building and associated activities</a>	2005/2383	Not Controlled Action	Completed	In feature area
<a href="#">Construction of public housing units within Block 29, Section 36, Mawson, ACT.</a>	2017/8013	Not Controlled Action	Completed	In buffer area only
<a href="#">Construction of the IKEA Canberra Northern Access Road, ACT</a>	2016/7742	Not Controlled Action	Completed	In buffer area only
<a href="#">Construction of Two Office Buildings on Block 1 Section 3, Barton</a>	2010/5367	Not Controlled Action	Completed	In feature area

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Not controlled action</b>				
<a href="#">CSIRO Black Mountain Masterplan Phase 1&amp;2 new &amp; improved facilities</a>	2014/7142	Not Controlled Action	Completed	In buffer area only
<a href="#">CSIRO Yarralumla-Demolition of Minor Structure, ACT</a>	2021/8935	Not Controlled Action	Completed	In buffer area only
<a href="#">Development of a diplomatic mission</a>	2007/3638	Not Controlled Action	Completed	In buffer area only
<a href="#">Development of a Diplomatic Mission</a>	2007/3520	Not Controlled Action	Completed	In buffer area only
<a href="#">Development of area for Diplomatic Mission Lease</a>	2007/3644	Not Controlled Action	Completed	In feature area
<a href="#">Development of Block 8 S48 for commercial purposes</a>	2006/2570	Not Controlled Action	Completed	In buffer area only
<a href="#">Development of John Gorton Building Basement</a>	2001/453	Not Controlled Action	Completed	In feature area
<a href="#">Development of residential estate, 47 Mowatt Street</a>	2005/2368	Not Controlled Action	Completed	In buffer area only
<a href="#">Development of Youth Detention Centre</a>	2006/2963	Not Controlled Action	Completed	In buffer area only
<a href="#">Dunlop 4 West Residential Development</a>	2003/1055	Not Controlled Action	Completed	In feature area
<a href="#">Duplication of Barton Highway and Gungahlin Drive</a>	2001/341	Not Controlled Action	Completed	In buffer area only
<a href="#">Eastern Precinct Development and National Service Memorial</a>	2008/4629	Not Controlled Action	Completed	In buffer area only
<a href="#">East O'Malley Residential Estate</a>	2003/1163	Not Controlled Action	Completed	In feature area
<a href="#">Edmund Barton Building Upgrade and Refurbishment Works</a>	2007/3712	Not Controlled Action	Completed	In feature area
<a href="#">establishment of a prison on part Block 6 Section 24 and part Block 12 Section 1</a>	2004/1723	Not Controlled Action	Completed	In buffer area only
<a href="#">Extension to cooling towers at the rear of Old Parliament House</a>	2004/1625	Not Controlled Action	Completed	In feature area
<a href="#">Fairbairn Avenue Upgrade, Anzac Parade to Northcott Drive</a>	2003/1257	Not Controlled Action	Completed	In feature area
<a href="#">Fencing of the moat bridges at the Shine Dome, Acton, ACT</a>	2014/7322	Not Controlled Action	Completed	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Not controlled action</b>				
<a href="#">fixing banner holders (top and bottom) to the fascia</a>	2007/3299	Not Controlled Action	Completed	In feature area
<a href="#">Flemington Road Gunghalin</a>	2000/46	Not Controlled Action	Completed	In buffer area only
<a href="#">Franklin Residential Estate</a>	2005/2474	Not Controlled Action	Completed	In buffer area only
<a href="#">Gallery Development, Stage 2</a>	2006/2829	Not Controlled Action	Completed	In buffer area only
<a href="#">Gungaderra Creek Floodway Project</a>	2005/1975	Not Controlled Action	Completed	In buffer area only
<a href="#">Gungaderra Trunk Sewer Stage 1</a>	2003/1259	Not Controlled Action	Completed	In feature area
<a href="#">Gungahlin Drive Extension</a>	2003/1156	Not Controlled Action	Completed	In feature area
<a href="#">Harrison 3 Residential Estate</a>	2005/2343	Not Controlled Action	Completed	In buffer area only
<a href="#">Horse Park Drive Project</a>	2001/323	Not Controlled Action	Completed	In buffer area only
<a href="#">Humanities and Science Campus</a>	2007/3525	Not Controlled Action	Completed	In feature area
<a href="#">Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia</a>	2015/7522	Not Controlled Action	Completed	In feature area
<a href="#">INDIGO Central Submarine Telecommunications Cable</a>	2017/8127	Not Controlled Action	Completed	In feature area
<a href="#">Installation of Fibre Optic Cable at Lawson Crescent - NBN Rollout</a>	2017/8016	Not Controlled Action	Completed	In buffer area only
<a href="#">Installation of interceptors on stormwater outlets</a>	2003/998	Not Controlled Action	Completed	In buffer area only
<a href="#">Installation of passive distributed antenna system in the Robert Garran Offices</a>	2005/2363	Not Controlled Action	Completed	In feature area
<a href="#">Installation of traffic lights at the intersection of Anzac Parade</a>	2010/5704	Not Controlled Action	Completed	In buffer area only
<a href="#">Jerrabomberra Heights Residential Estate</a>	2000/70	Not Controlled Action	Completed	In buffer area only
<a href="#">John Gorton Building Safety Fence &amp; Overhead Protection, Parks, ACT</a>	2013/7017	Not Controlled Action	Completed	In feature area

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Not controlled action</b>				
<a href="#">Kingston Foreshore Development - Harbour Civil Works</a>	2007/3492	Not Controlled Action	Completed	In buffer area only
<a href="#">Kingston Foreshore Development - Reclamation and Filling Lake Burley Griffin</a>	2004/1383	Not Controlled Action	Completed	In feature area
<a href="#">Land Divestment, Block 13, Section 9, Barton, ACT (bounded by Blackall Street, B</a>	2005/2453	Not Controlled Action	Completed	In feature area
<a href="#">Lyneham Sports Resort Complex</a>	2001/142	Not Controlled Action	Completed	In buffer area only
<a href="#">minor alterations to NE corner OPH</a>	2004/1824	Not Controlled Action	Completed	In feature area
<a href="#">Mixed Use Redevelopment of 1 Dairy Road, Fyshwick, ACT</a>	2021/9062	Not Controlled Action	Completed	In buffer area only
<a href="#">Molonglo 3 Water Supply Pipeline, ACT</a>	2017/8061	Not Controlled Action	Completed	In buffer area only
<a href="#">Monaro Highway - Lanyon Drive Upgrade Package 1B, Hume, ACT</a>	2020/8767	Not Controlled Action	Completed	In buffer area only
<a href="#">Mugga Lane Solar Development</a>	2012/6670	Not Controlled Action	Completed	In buffer area only
<a href="#">Mulligans Flat Woodland Sanctuary- Gorooyaroo extension of predator-proof fence, ACT</a>	2017/8093	Not Controlled Action	Completed	In buffer area only
<a href="#">National Gallery of Australia upgrade</a>	2007/3335	Not Controlled Action	Completed	In feature area
<a href="#">National Gallery Upgrade</a>	2001/295	Not Controlled Action	Completed	In feature area
<a href="#">Navigational aid facility upgrade</a>	2005/2459	Not Controlled Action	Completed	In buffer area only
<a href="#">Neighbourhood Landscape Works/Tree Planting</a>	2000/117	Not Controlled Action	Completed	In buffer area only
<a href="#">NewActon Nishi Building</a>	2010/5336	Not Controlled Action	Completed	In buffer area only
<a href="#">North and South Poplars Residential Development</a>	2003/1136	Not Controlled Action	Completed	In feature area
<a href="#">North Watson Residential Estate</a>	2003/1231	Not Controlled Action	Completed	In buffer area only
<a href="#">Observatory Restoration Works</a>	2004/1691	Not Controlled Action	Completed	In buffer area only



Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Not controlled action</b>				
<a href="#">Old Parliament House Lift Upgrade Project, Parkes, ACT</a>	2019/8506	Not Controlled Action	Completed	In feature area
<a href="#">Old Parliament House South-East Wing Refurbishment</a>	2008/3949	Not Controlled Action	Completed	In feature area
<a href="#">Permanent Access Ramp, Old Parliament House</a>	2004/1485	Not Controlled Action	Completed	In feature area
<a href="#">Podium Refurbishment, National Library of Australia</a>	2006/3038	Not Controlled Action	Completed	In feature area
<a href="#">Protection, Horticultural and Upgrading Works of York Park North Oak Plantation</a>	2008/4637	Not Controlled Action	Completed	In feature area
<a href="#">Redevelopment of Anzac Park East and West</a>	2004/1470	Not Controlled Action	Completed	In feature area
<a href="#">Refurbishment of The Royal Australian Mint</a>	2005/2122	Not Controlled Action	Completed	In buffer area only
<a href="#">Refurbishment Works at The Lodge, Deakin</a>	2012/6504	Not Controlled Action	Completed	In buffer area only
<a href="#">refurbishment works to upper floor SW Wing, OPH, ACT</a>	2007/3538	Not Controlled Action	Completed	In feature area
<a href="#">Residential Accommodation &amp; Infrastructure</a>	2003/953	Not Controlled Action	Completed	In buffer area only
<a href="#">Residential Housing Estate</a>	2001/218	Not Controlled Action	Completed	In buffer area only
<a href="#">Residential subdivision and construction works</a>	2003/1197	Not Controlled Action	Completed	In buffer area only
<a href="#">Residential Tower Development</a>	2019/8461	Not Controlled Action	Completed	In buffer area only
<a href="#">Revocation of National Land status of Block 588 at Barton Hwy and Gundaroo Drive</a>	2004/1527	Not Controlled Action	Completed	In buffer area only
<a href="#">Sale of Block 1 Section 75 Bruce Division, Belconnen, ACT</a>	2003/1006	Not Controlled Action	Completed	In buffer area only
<a href="#">Sale of Blocks 7 &amp; 8 Section 66</a>	2002/835	Not Controlled Action	Completed	In buffer area only
<a href="#">Sale of Commonwealth Land, Block 3 Section 75, Bruce</a>	2003/1007	Not Controlled Action	Completed	In buffer area only
<a href="#">Sale of land located at Blocks 11 and 13, Section 45, Division of Belconnen</a>	2003/1049	Not Controlled Action	Completed	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Not controlled action</b>				
<a href="#">Sale of Macquarie Hotel, 18 National Circuit</a>	2002/836	Not Controlled Action	Completed	In buffer area only
<a href="#">Sale of Marcus Clarke St Carpark, Block 11 Section 61</a>	2002/847	Not Controlled Action	Completed	In buffer area only
<a href="#">Sale of part of Blkl3/Sct19 ACT Water Police HQ</a>	2003/1057	Not Controlled Action	Completed	In feature area
<a href="#">Shine Dome Roof Repair</a>	2020/8747	Not Controlled Action	Completed	In buffer area only
<a href="#">Site Preparation of Inner Asset Protection Zone in three Canberra Nature Parks</a>	2007/3531	Not Controlled Action	Completed	In buffer area only
<a href="#">South Canberra Memorial Park</a>	2019/8595	Not Controlled Action	Completed	In buffer area only
<a href="#">Subdivision and land sale of Block 11 Section 63, London Circuit, Canberra City</a>	2002/848	Not Controlled Action	Completed	In buffer area only
<a href="#">Telecommunication Work, Block 2 Section 364, Fadden, ACT</a>	2012/6411	Not Controlled Action	Completed	In buffer area only
<a href="#">Temporary Office Accommodation at Government House</a>	2005/2344	Not Controlled Action	Completed	In buffer area only
<a href="#">Transfer of Building R9 in Russell ACT to Dept of Defence for demolition</a>	2021/8898	Not Controlled Action	Completed	In buffer area only
<a href="#">upgrade mechanical services Reps &amp; Senate Press Offices</a>	2005/1933	Not Controlled Action	Completed	In feature area
<a href="#">Urban development in parts of the suburb of Wright and arterial road btw Street</a>	2009/5041	Not Controlled Action	Completed	In buffer area only
<a href="#">Wells Station Drive Extension Stages 1A &amp; 1B</a>	2007/3420	Not Controlled Action	Completed	In buffer area only
<a href="#">West Block Office Refurbishment, Queen Victoria Terrace</a>	2021/9139	Not Controlled Action	Completed	In feature area
<b>Not controlled action (particular manner)</b>				
<a href="#">2 stage development of suburb of Crace</a>	2008/4175	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">ActewAGL - upgrade to 132kv transmission line Theodore to Gilmore, ACT</a>	2012/6443	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Not controlled action (particular manner)</b>				
<a href="#">Aerial baiting for wild dog control</a>	2006/2713	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
<a href="#">AFP Majura Driver Training Facility, ACT</a>	2013/6807	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">ANU- Crawford school extension</a>	2010/5764	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Canberra Centenary Trail Project</a>	2012/6645	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
<a href="#">Capital Metro - Russell Extension Project, ACT</a>	2015/7576	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Carpark Access Road, Block 12, Section 22, Barton</a>	2010/5548	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Commonwealth Place Forecourt, Stage 2 Works</a>	2005/2007	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
<a href="#">Construct Bioscience Lab and assoc works</a>	2005/2143	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
<a href="#">Construction and operation of new National Portrait Gallery</a>	2005/2327	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
<a href="#">Construction of a four lane dual carriageway road from Monaro Hwy to Federal Hwy, Majura ACT</a>	2009/5057	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Construction of a New Office Building</a>	2009/4871	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">construction of shoulder and taxiway fillet</a>	2001/307	Not Controlled Action (Particular	Post-Approval	In feature area

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Not controlled action (particular manner)</b>				
		Manner)		
<a href="#">Construct signalised bridge and underpass &amp; remove trees</a>	2008/4547	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Creation of a new facility, ANU Acton Campus, ACT</a>	2016/7643	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Defence Headquarters, Bungendore to HMAS Harman and Russell Defence Offices fibr</a>	2007/3507	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Demolition and redevelopment of Bruce Hall, Acton, ACT</a>	2016/7820	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Duntroon Residential Development</a>	2001/374	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">East Lake Electrical Infrastructure Relocation and Upgrade</a>	2009/5253	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Fyshwick East Industrial Estate, Block 2223, District of Jerrabomberra</a>	2009/4850	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Ground floor works, Edmund Barton Building, Canberra</a>	2009/5038	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
<a href="#">Hume West Industrial Estate Development</a>	2009/4766	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">INDIGO Marine Cable Route Survey (INDIGO)</a>	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
<a href="#">Jamieson House Redevelopment Reid</a>	2011/5803	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Not controlled action (particular manner)</b>				
<a href="#">Majura Road Upgrade</a>	2002/825	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Non-Potable Water &amp; Internal Reticulation Upgrade at the Australian National Bo</a>	2010/5364	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">North Weston Residential Development</a>	2011/6163	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">North Weston Residential Development, Canberra</a>	2009/4752	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Refurbishment of former Patent Office &amp; demolition of Robert Garran link office</a>	2009/4777	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
<a href="#">Refurbishment of National Film and Sound Archive Theatre, ACT</a>	2012/6591	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Replacement of poplars at the National Library of Australia Forecourt, ACT</a>	2021/8950	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
<a href="#">Temporary display of bridge sections from HMAS Brisbane</a>	2005/2379	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Urban development in parts of residential suburb of Coombs, Cotter Road</a>	2009/5050	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<b>Referral decision</b>				
<a href="#">City to Commonwealth Park Light Rail Project, ACT</a>	2019/8490	Referral Decision	Completed	In feature area
<a href="#">Construction of Majura Park Precinct Including Access Road, Warehouses, and Asso</a>	2004/1425	Referral Decision	Completed	In feature area
<a href="#">Construction of two 15m height memorials</a>	2012/6269	Referral Decision	Completed	In buffer area only
<a href="#">Demolition of the Robert Garran Office Annex Building</a>	2009/5189	Referral Decision	Completed	In feature area

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<b>Referral decision</b>				
<a href="#"><u>Development of Symonston Stage 2</u></a>	2012/6320	Referral Decision	Completed	In buffer area only
<a href="#"><u>Handrail installation, Treasury Building, Parkes Place West</u></a>	2006/2832	Referral Decision	Completed	In feature area
<a href="#"><u>Redevelopment of Accommodation</u></a>	2009/4947	Referral Decision	Completed	In buffer area only
<a href="#"><u>Re-development of forecourt to create the Humanities and Science Campus Square.</u></a>	2006/2759	Referral Decision	Completed	In feature area
<a href="#"><u>Refurbishment works to the SE wing of Old Parliament House</u></a>	2007/3778	Referral Decision	Completed	In feature area
<a href="#"><u>South Jerrabomberra urban development project</u></a>	2010/5708	Referral Decision	Completed	In buffer area only
<a href="#"><u>Symonston Residential Estate Stage 2, Symonston, ACT</u></a>	2014/7327	Referral Decision	Completed	In buffer area only
<a href="#"><u>West Block Hotel Adaptation, Queen Victoria Terrace</u></a>	2021/9083	Referral Decision	Completed	In feature area

# Caveat

## 1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

## 2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

## 3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

## 4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

# Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- [-Natural history museums of Australia](#)
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- [-Other groups and individuals](#)

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.



Please feel free to provide feedback via the [Contact us](#) page.

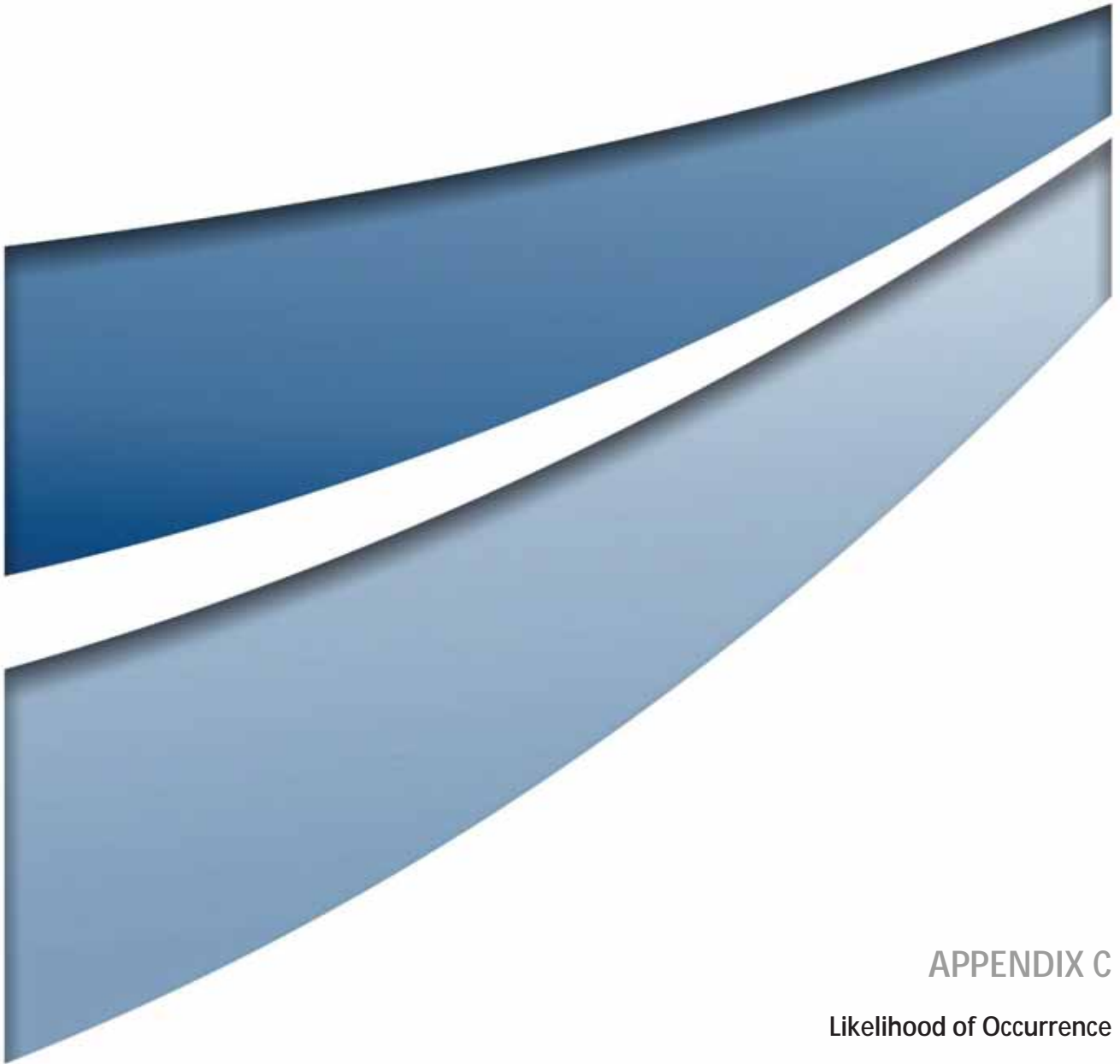
[© Commonwealth of Australia](#)

Department of Climate Change, Energy, the Environment and Water

GPO Box 3090

Canberra ACT 2601 Australia

+61 2 6274 1111



## APPENDIX C

Likelihood of Occurrence

### Commonwealth Park to Woden Project Area Likelihood of Occurrence

Scientific Name	Common Name	EPBC Act	NC Act	Database	Likelihood of occurrence
<b>Birds</b>					
<i>Anthochaera phrygia</i>	regent honeyeater	critically endangered	critically endangered	PMST; AoLA; CNM	<b>Low</b> – Foraging species are present within the Project Area and suitable eucalypt woodlands exist adjacent to the Project Area. The species may rarely use the Project Area for foraging and connectivity; however, the Project Area is not important habitat.
<i>Aphelocephala leucopsis</i>	southern whiteface	vulnerable	–	PMST	<b>Low</b> – This species requires woodland habitat, and may rarely use the Project Area for foraging and connectivity. The Project Area is unlikely to be important habitat.
<i>Botaurus poiciloptilus</i>	Australasian Bittern	endangered	endangered	PMST; AoLA	<b>Low</b> – Very little habitat for this species is present within the Project Area with only a small man-made overflow dam adjacent to Athllon Drive identified as. This dam is not considered important habitat.
<i>Calidris ferruginea</i>	curlew sandpiper	critically endangered, migratory (Bonn, CAMBA, JAMBA, ROKAMBA)	–	PMST; CNM	<b>Low</b> – Very little habitat for this species is present within the Project Area, with only a small man-made overflow dam adjacent to Athllon Drive identified as potential habitat. This dam is not considered important habitat.
<i>Collocephalon fimbriatus</i>	gang-gang cockatoo	endangered	–	PMST; ALoA, CNM, ACTMapi	<b>Known</b> – This species is known to forage within the Project Area and confirmed breeding locations are located within ~200 m of the Project Area.
<i>Calyptorhynchus lathami</i>	glossy black-cockatoo	–	vulnerable	AoLA	<b>Low</b> – Foraging habitat for this species is not found within the Project Area.
<i>Climacteris picumnus victoriae</i>	brown treecreeper	–	vulnerable	AoLA	<b>Low</b> – The species is unlikely to be utilise the Project Area for habitat. If this species is present within the locality, it is likely that this species would utilise the areas of continuous woodland as habitat.
<i>Daphoenositta chrysoptera</i>	varied sittella	–	vulnerable	AoLA	<b>Low</b> – No habitat for this species is present within the Project Area.

Scientific Name	Common Name	EPBC Act	NC Act	Database	Likelihood of occurrence
<i>Falco hypoleucos</i>	grey falcon	vulnerable	-	PMST; CNM; AoLA	<b>Low</b> – No habitat for this species is present within the Project Area.
<i>Grantiella picta</i>	painted honeyeater	vulnerable	vulnerable	PMST; AoLA	<b>Low</b> – This species is mainly found west of the Great Dividing Range and is highly dependent upon the presence of mistletoe species. There is little mistletoe present within the Project Area. There is significant woodland habitat within the locality of the Project Area should an individual enter the region.
<i>Hieraaetus morphnoides</i>	little eagle	-	vulnerable	AoLA	<b>Low</b> – there is no suitable habitat in the Project Area however this species may forage above and/or adjacent to the Project Area.
<i>Hirundapus caudacutus</i>	white-throated needletail	vulnerable	vulnerable	PMST; ALoA; CNM	<b>High</b> – This species occurs across eastern Australia, foraging and drinking on the wing. This species may use the airspace of the Project Area. Some suitable roosting habitat is present within the Project Area however, the species is more likely to utilise roosting habitat in the large woodland area in nearby reserves. This species has been recorded most recently in Deakin approximately 100m adjacent to the Project Area in 2016 (CNM, 2023).
<i>Lathamus discolor</i>	swift parrot	critically endangered	critically endangered	PMST; AoLA; CNM	<b>High</b> – Winter flowering eucalypt species are present within the Project Area which may provide foraging habitat. This species was most recently sighted in the suburbs of Hackett, Watson, Hughes, Curtin in 2022, 2032 (CNM, 2023).
<i>Limosa lapponica baueri</i>	nunivak bar-tailed godwit	vulnerable	-	PMST; AoLA	<b>Low</b> – This species utilises estuarine mudflats, beaches and mangroves. These habitat features are not present within the Project Area.

Scientific Name	Common Name	EPBC Act	NC Act	Database	Likelihood of occurrence
<i>Melanodryas cucullata cucullata</i>	hooded robin (south-eastern)	endangered	vulnerable	CNM; AoLA	<b>Low</b> – This species inhabits dry eucalypt forests, acacia woodlands and shrublands with complex ground layers. This species is unlikely to occur within the Project area as complex understories are very limited within the Project Area and there are no records of this species within the Project Area.
<i>Neophema chrysostris</i>	blue-winged parrot	vulnerable		PMST	<b>Low</b> – This species requires woodland habitat, and may rarely use the Project Area for foraging and connectivity. The Project Area is unlikely to be important habitat.
<i>Numenius madagascariensis</i>	eastern curlew	critically endangered, migratory (Bonn, CAMBA, JAMBA, ROKAMBA)	-	PMST; AoLA	<b>Low</b> – Very little habitat for this species is present within the Project Area with only a small man-made overflow dam adjacent to Athllon Drive identified as potential habitat. This dam is not considered important habitat.
<i>Polytelis swainsonii</i>	superb parrot	vulnerable	vulnerable	PMST; AoLA; CNM	<b>Known</b> – There are multiple known records of this species within the Project Area. This species may utilise the Project Area as foraging and breeding habitat.
<i>Pycnoptilus floccosus</i>	pilotbird	vulnerable	vulnerable	PMST; AoLA	<b>Low</b> – This species requires mountain habitat, and may rarely use the Project Area for foraging and connectivity. The Project Area is unlikely to be important habitat.
<i>Petroica boodang</i>	scarlet robin	-	vulnerable	AoLA	<b>Low</b> – The species is unlikely to utilise the Project Area for habitat. If this species is present within the locality, within this locality it is likely that this species would utilise the areas of continuous woodland as habitat.
<i>Rostratula australis</i>	Australian painted snipe	critically endangered	endangered	PMST; AoLA; CNM	<b>Low</b> – Very little habitat for this species is present within the Project Area with only a small man-made overflow dam adjacent to Athllon Drive identified as potential habitat. This dam is not considered important habitat.

Scientific Name	Common Name	EPBC Act	NC Act	Database	Likelihood of occurrence
<i>Stagonopleura guttata</i>	diamond firetail	vulnerable		PMST; AoLA	<b>Low</b> – This species occurs in woodlands and open forest habitat. It may rarely use the Project Area for foraging and connectivity. The Project Area is unlikely to be important habitat.
<b>Fish</b>					
<i>Macquaria australasica</i>	Macquarie perch	endangered	endangered	PMST; ACTmapi	<b>Low</b> – Currently restricted to the Murrumbidgee river, Lower Paddys river, and Cotter river. Translocated into the Molonglo river above Kowen Forest.
<i>Maccullochella macquariensis</i>	trout cod	endangered	endangered	PMST; ACTmapi	<b>Low</b> – Currently restricted to the Murrumbidgee and Cotter river corridors.
<i>Maccullochella peelii</i>	Murray cod	vulnerable	–	PMST; AoLA; ACTmapi	<b>Known</b> – Species historically occurred in the Molonglo River and is now stocked annually into Lake Burley Griffin.
<b>Amphibians</b>					
<i>Litoria aurea</i>	green and golden bell frog	critically endangered	vulnerable	PMST; AoLA	<b>Low</b> – A small dam is the only potential habitat within the Project Area, however as this does not connect with other suitable habitats the Project Area is not considered suitable for the species.
<i>Litoria booroolongensis</i>	Booroolong frog	endangered	–	PMST	<b>Low</b> – No suitable habitat is present within the Project Area.
<i>Litoria castanea</i>	yellow-spotted tree frog	critically endangered	critically endangered	PMST; AoLA	<b>Low</b> – No suitable habitat is present within the Project Area.
<i>Litoria raniformis</i>	growling grass frog	vulnerable	vulnerable	PMST; AoLA	<b>Low</b> – A small dam is the only potential habitat within the Project Area, however as this does not connect with other suitable habitat the Project Area is not considered suitable for the species.
<b>Reptiles</b>					
<i>Aprasia parapulchella</i>	pink-tailed worm-lizard	vulnerable	vulnerable	PMST; ACTmapi; AoLA	<b>Low</b> – Habitat for this species is not present within the Project Area.

Scientific Name	Common Name	EPBC Act	NC Act	Database	Likelihood of occurrence
<i>Delma impar</i>	striped legless lizard	vulnerable	vulnerable	PMST; AoLA; ACTmapi	<b>Moderate</b> – Some areas of the Project Area support potential habitat.
<i>Tympanocryptis lineata</i>	Canberra grassland earless dragon	critically endangered	critically endangered	PMST; ACTmapi; AoLA	<b>Low</b> – Suitable habitat, Natural temperate grasslands, is present within the Project Area, however the distribution of this species within the ACT is well studied and understood. The nearest known population is greater than 5km from the Project Area. It is highly unlikely that this species would exist within the Project Area.
<b>Insects</b>					
<i>Keyacris scurra</i>	Key's matchstick grasshopper	endangered	endangered	PMST; ACTmapi; AoLA	<b>Low</b> – This species is known to require native grasslands and secondary native grasslands. It has only recorded in a small number of sites in the ACT.
<i>Synemona plana</i>	golden sun moth	vulnerable	endangered	PMST; AoLA; CNM; ACTmapi	<b>Known</b> – This species has been recorded numerous times within the Project Area across consecutive years, in both Natural temperate grasslands and grasslands containing <i>Nasella neesiana</i> (Chilean needlegrass).
<i>Perunga ochracea</i>	perunga grasshopper	–	endangered	CMN, ACTmapi	<b>Moderate</b> – This species inhabits areas of natural temperate grassland and Box-Gum Grassy Woodland. This species preferentially inhabits tussock grasslands; however, it has been recorded in heavily grazed areas where tussock levels are low. This species is known to inhabit the Red Hill Nature Reserve (approximately 970m from natural temperate grassland within the Project Area) (ACT Scientific Committee, 2020).
<b>Mammals</b>					
<i>Chalinolobus dwyeri</i>	large-eared pied bat	critically endangered	–	PMST	<b>Low</b> – The Project Area is outside the predicted range of this species and habitat requirements are absent from the Project Area. Suitable rock escarpments and caves on which this species are dependent for roosting and breeding are not present within 2 km of the site.

Scientific Name	Common Name	EPBC Act	NC Act	Database	Likelihood of occurrence
<i>Dasyurus maculatus</i>	spotted-tail quoll	endangered	vulnerable	PMST; CNM; ACTmapi; AoLA	<b>Low</b> – It is unlikely that this species would occur within the Project Area due to the hazards provided by the main roads within the Project Area. Additionally there is more appropriate woodland habitats outside of the Project Area in nearby reserves.
<i>Petrogale penicillata</i>	brush-tailed rock-wallaby	critically endangered	endangered	PMST	<b>Low</b> – There is no habitat for this species within the Project Area.
<i>Petauroides volans</i>	greater glider	critically endangered	vulnerable	PMST	<b>Low</b> – No suitable habitat is present within the Project Area.
<i>Phascolarctos cinereus</i>	koala	endangered	vulnerable	PMST; CNM; AoLA	<b>Low</b> – The species is unlikely to <del>be</del> utilise the Project Area for habitat. If this species is present within the locality, within this locality it is likely that this species would utilise the areas of continuous woodland as habitat.
<i>Pteropus poliocephalus</i>	grey-headed flying-fox	vulnerable	vulnerable	PMST; CNM	<b>Moderate</b> – No roosting camps are present within the Project Area. This may utilise the airspace of the Project area for movement.
<b>Plants</b>					
<i>Ammobium craspedioides</i>	Yass daisy	critically endangered	–	PMST	<b>Low</b> – This species is unlikely to occur within the Project Area due to the impacts of edge effect landscape maintenance within the Project Area.
<i>Amphibromus fluitans</i>	river swamp wallaby-grass	vulnerable	–	PMST	<b>Low</b> – There is a dam, which may provide habitat within the Project Area. This species would only occur within the Project Area as a planted native.
<i>Bossiaea grayi</i>	Murrumbidgee bossiaea	–	endangered	ACTmapi	<b>Low</b> – This species occurs exclusively within incised river valleys and on steep, rocky slopes featuring skeletal soils. This habitat is not present within the Project Area, as such, this species is unlikely to occur within the Project Area.



Scientific Name	Common Name	EPBC Act	NC Act	Database	Likelihood of occurrence
<i>Caladenia actensis</i>	Canberra spider orchid	critically endangered	critically endangered	PMST; AoLA	<b>Low</b> – This species is known from only four areas within the ACT, no habitat for this species is present within the Project Area.
<i>Dianella amoena</i>	matted flax-lily	endangered	–	ACTmapi; AoLA	<b>Low</b> – This species is only known in Victoria. Targeted surveys were completed as this was identified as a focal species in the scope.
<i>Dodonaea procumbens</i>	trailing hopbush	vulnerable	–	PMST; CNM; AoLA	<b>Low</b> – There are no records of this species in close proximity to the Project Area, however, species that grow in association with this species are found within the Natural temperate grassland areas within the Project Area.
<i>Eucalyptus aggregata</i>	black gum	vulnerable	vulnerable	PMST; AoLA	<b>Low</b> – As of 2014, only 16 mature trees were known in the wild in the ACT, with the species absent from the Project Area. An additional twenty trees have been planted within the suburbs of Garran and Yarralumla however these are unlikely to be within the Project Area.
<i>Lepidium ginninderrense</i>	Ginninderra pepperpress	vulnerable	endangered	PMST; ACTmapi; AoLA	<b>Low</b> – There may be some habitat for this species within the Natural temperate grassland within the Project Area, however, these areas are regularly mown regularly.
<i>Lepidium aschersonii</i>	spiny pepperpress	vulnerable	–	PMST	<b>Low</b> – there is no potential habitat for this species within the Project Area.
<i>Lepidium hyssopifolium</i>	pepperpress	endangered	–	PMST; CNM; AoLA	<b>Low</b> – No habitat for this species is present within the Project Area.
<i>Leucochrysum albicans</i> subsp. <i>tricolor</i>	hoary sunray	endangered	–	PMST; ACTmapi	<b>Moderate</b> – This species may occur within Natural temperate grasslands within the Project Area.
<i>Muehlenbeckia tuggeranong</i>	Tuggeranong lignum	critically endangered	endangered	PMST; ACTmapi; AoLA	<b>Low</b> – No habitat for this species is present within the Project Area.

Scientific Name	Common Name	EPBC Act	NC Act	Database	Likelihood of occurrence
<i>Neostelia spectabilis</i>	-	vulnerable	-	PMST; AoLA	<b>Low</b> – No habitat for this species is present within the Project Area.
<i>Pomaderris cotoneaster</i>	cotoneaster pomaderris	endangered	-	PMST	<b>Low</b> – No habitat for this species is present within the Project Area.
<i>Pomaderris pallida</i>	pale pomaderris	vulnerable	vulnerable	PMST; ACTmapi	<b>Low</b> – There is no habitat for this species within the Project Area.
<i>Prasophyllum petilum</i>	Tarengo leek orchid	endangered	endangered	PMST	<b>Low</b> – This species is known to occur at one site within the ACT, this site is approximately 20 kilometres from the Project Area.
<i>Rutidosia leptorhynchoidea</i>	button wrinklewort	endangered	endangered	PMST; AoLA; CNM; ACTmapi	<b>Moderate</b> – This species may occur within Natural Temperate Grassland within the Project Area.
<i>Senecio macrocarpus</i>	large-fruit fireweed	vulnerable	-	PMST	<b>Low</b> – No habitat for this species is present within the Project Area.
<i>Swainsona recta</i>	small purple-pea	endangered	endangered	PMST; AoLA; ACTmapi	<b>Moderate</b> – This species may occur in natural grasslands and grassy woodlands but is highly sensitive to disturbance. This species is unlikely to occur throughout the majority of the Project Area as any potential habitat within the Project Area is highly degraded subjected heavily to edge effect and continual mowing. However, there is potential for the species to occur in remnant patches of native grassland and grassy woodland.
<i>Thesium australe</i>	Austral toadflax	vulnerable	vulnerable	PMST; ACTmapi	<b>Low</b> – This species may occur in natural grasslands and grassy woodlands particularly where Themeda triandra is present. These species are highly sensitive to disturbance and known in ACT primarily from intact native vegetation in the Murrumbidgee River Corridor and Namadgi National Park consequently is unlikely to occur in remnant native vegetation in the Project Area.

### Mitchell Project Area Likelihood of Occurrence

Scientific Name	Common Name	EPBC Act	NC Act	Database	Likelihood of occurrence
<b>Birds</b>					
<i>Anthochaera phrygia</i>	regent honeyeater	critically endangered	critically endangered	PMST; AoLA	<b>Low</b> – This species is most associated with eucalypt woodland and dry sclerophyll forest. It may use the Project Area for foraging or connectivity, although it is unlikely.
<i>Aphelocephala leucopsis</i>	southern whiteface	vulnerable	not listed	PMST; AoLA	<b>Moderate</b> – This species requires woodland habitat and may use the Project Area for foraging and connectivity.
<i>Botaurus poiciloptilus</i>	Australasian bittern	endangered	endangered	PMST; AoLA	<b>Low</b> – This bird prefers wetland habitat, none of which is near the Project Area.
<i>Calidris ferruginea</i>	curlew sandpiper	critically endangered	not listed	PMST; AoLA	<b>Low</b> – This bird prefers wetland habitat, none of which is near the Project Area.
<i>Callocephalon fimbriatum</i>	gang-gang cockatoo	endangered	endangered	PMST; AoLA; CNM; ACTmapi	<b>Moderate</b> – This species is known to have habitat across the ACT, utilising the woodland and dry sclerophyll forests. It may utilize the Project Area for foraging and connectivity.
<i>Calyptorhynchus lathami lathami</i>	south-eastern glossy black-cockatoo	vulnerable	vulnerable	PMST	<b>Low</b> – Foraging habitat for this species is not found within the Project Area.
<i>Climacteris picumnus victoriarie</i>	brown treecreeper (south-eastern)	vulnerable	vulnerable	PMST; AoLA; CNM	<b>Moderate</b> – This species prefers woodland habitat. It may occasionally use the Project Area for foraging or connectivity.
<i>Falco hypoleucos</i>	grey falcon	vulnerable	not listed	PMST; CNM	<b>Low</b> – This species is unlikely to use the Project Area.
<i>Grantiella picta</i>	painted honeyeater	vulnerable	not listed	PMST; AoLA; CNM	<b>Low</b> – This species is mainly found west of the Great Dividing Range and is highly dependent upon the presence of mistletoe species. There is little mistletoe present within the Project Area. There is significant woodland habitat within the locality of the Project Area should an individual enter the region.
<i>Hirundapus caudacutus</i>	white-throated needle-tail	vulnerable	not listed	PMST; AoLA; CNM; ACTmapi	<b>Low</b> – This species occurs across eastern Australia, foraging and drinking on the wing. This species may use

Scientific Name	Common Name	EPBC Act	NC Act	Database	Likelihood of occurrence
<i>Lathamus discolor</i>	swift parrot	critically endangered	critically endangered	PMST; AoLA; ACTMapi	the airspace of the Project Area. The species is more likely to utilise roosting habitat in the large woodland area in nearby reserves.
<i>Limosa lapponica baueri</i>	Nunivak bar-tailed godwit	vulnerable	not listed	PMST	<b>Low</b> – Species prefers winter flowering Eucalyptus sp. and is unlikely to utilize the Project Area.
<i>Melanodryas cucullata cucullata</i>	hooded robin (south-eastern)	endangered	vulnerable	PMST; AoLA; CNIM	<b>Low</b> – This species is a coastal and shore migratory bird. It has no habitat in the Project Area. <b>Moderate</b> – This species inhabits dry eucalypt forests, acacia woodlands and shrublands with complex ground layers. This species is unlikely to occur within the Project area.
<i>Neophema chrysofoma</i>	blue-winged parrot	vulnerable	not listed	PMST; AoLA	<b>Low</b> – This species requires woodland habitat, and may rarely use the Project Area for foraging and connectivity. The Project Area is unlikely to be important habitat.
<i>Numenius madagascariensis</i>	eastern curlew	critically endangered	not listed	PMST	<b>Low</b> – This species is a coastal and shore migratory bird. It has no habitat in the Project Area.
<i>Polytelis swainsonii</i>	superb parrot	vulnerable	vulnerable	PMST; AoLA; ACTMapi	<b>Low</b> – There are multiple known records of this species within the ACT. This species is unlikely to utilise the Project Area as foraging and breeding habitat.
<i>Rostratula australis</i>	Australian painted snipe	endangered	endangered	PMST; AoLA	<b>Low</b> – This species is a wading wetland bird. It has no habitat in the Project Area.
<i>Stagonopleura guttata</i>	diamond firetail	vulnerable	not listed	PMST; AoLA	<b>Low</b> – This species occurs in woodlands and open forest habitat with high grass cover. It is unlikely to use the Project Area for foraging and connectivity.
<b>Fish</b>					
<i>Maccullochella macquariensis</i>	trout cod	endangered	not listed	PMST	<b>Low</b> – There is no habitat for this species within the Project Area.
<i>Maccullochella peelii</i>	Murray cod	vulnerable	not listed	PMST; AoLA; ACTMapi	<b>Low</b> – There is no habitat for this species within the Project Area.

Scientific Name	Common Name	EPBC Act	NC Act	Database	Likelihood of occurrence
<i>Macquaria australasica</i>	Macquarie perch	endangered	vulnerable	PMST	Low – There is no habitat for this species within the Project Area.
<b>Amphibians</b>					
<i>Litoria aurea</i>	green and golden bell frog	vulnerable	vulnerable	PMST; AoLA	Low – There is no habitat for this species within the Project Area.
<i>Litoria booroolongensis</i>	Booroolong frog	endangered	not listed	PMST	Low – There is no habitat for this species within the Project Area.
<i>Litoria castanea</i>	yellow-spotted tree frog, yellow-spotted bell frog	critically endangered	critically endangered	PMST; AoLA	Low – There is no habitat for this species within the Project Area.
<i>Litoria raniformis</i>	green and golden frog	vulnerable	vulnerable	PMST; AoLA	Low – There is no habitat for this species within the Project Area.
<b>Insects</b>					
<i>Keyacris scurra</i>	Key's matchstick grasshopper	endangered	endangered	PMST; AoLA; CNIM; ACTmapi	Low – This species has been recorded less than one kilometer away in Crace grasslands, however no grassland habitat exists for it within the Project Area.
<i>Synemon plana</i>	golden sun moth	vulnerable	vulnerable	PMST; AoLA; CNIM; ACTmapi	Low – This species is found in tree-less grassland habitat and is unlikely to be present in the Project Area. This species has been recorded in grassland habitat directly adjacent to the Project Area.
<i>Perunga ochracea</i>	Perunga grasshopper	-	endangered	ACTmapi, CNIM	Low – This species is predominantly found in grassland habitat but can be found in open woodland. This species has been recorded less than one kilometer away in Crace grasslands.
<b>Mammals</b>					
<i>Chalinolobus dwyeri</i>	large-eared pied bat	vulnerable	not listed	PMST	Low – The Project Area is outside the predicted range of this species and habitat requirements are absent from the Project Area. Suitable rock escarpments and caves on which this species are dependent for roosting and breeding are not present

Scientific Name	Common Name	EPBC Act	NC Act	Database	Likelihood of occurrence
<i>Dasyurus maculatus maculatus</i> (SE mainland population)	spotted-tail quoll	endangered	endangered	PMST; AoLA; CNIM; ACTMapi	<b>Low</b> – It is unlikely that this species would occur within the Project Area due to the hazards provided by the main roads within the Project Area. Additionally there is more appropriate woodland habitats outside of the Project Area in nearby reserves.
<i>Petauroides volans</i>	greater glider (southern and central)	endangered	endangered	PMST	<b>Low</b> – There is no habitat for this species within the Project Area.
<i>Phascolarctos cinereus</i> (combined populations of Qld, NSW and the ACT)	koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)	endangered	endangered	PMST; AoLA	<b>Low</b> – The species is unlikely to utilise the Project Area for habitat.
<i>Pteropus poliocephalus</i>	grey-headed flying-fox	vulnerable	vulnerable	PMST; AoLA; CNIM	<b>Moderate</b> – No roosting camps are present within the Project Area. This may utilise the airspace of the Project area for movement.
<b>Reptiles</b>					
<i>Aprasia parapulchella</i>	pink-tailed worm-lizard	vulnerable	vulnerable	PMST; ACTMapi	<b>Low</b> – Habitat for this species is not present within the Project Area
<i>Delma impar</i>	striped legless lizard	vulnerable	vulnerable	PMST; AoLA; ACTMapi	<b>Low</b> – This species is a grassland species and its range in the ACT is well known
<i>Tympanocryptis lineata</i>	Canberra grassland earless dragon	critically endangered	critically endangered	PMST; AoLA; ACTMapi	<b>Low</b> – There is no habitat for this species within the Project Area.
<b>Plants</b>					
<i>Ammobium craspedioides</i>	Yass daisy	vulnerable	not listed	PMST	<b>Low</b> – This species has a small range in the ACT and is unlikely to occur in the Project Area.
<i>Amphibromus fluitans</i>	river swamp wallaby-grass	vulnerable	not listed	PMST	<b>Low</b> – there is no habitat for this species within the Project Area.

Scientific Name	Common Name	EPBC Act	NC Act	Database	Likelihood of occurrence
<i>Caladenia actensis</i>	Canberra spider orchid	critically endangered	not listed	PMST; AoLA; ACTMapi	<b>Low</b> – There is no habitat for this species within the Project Area.
<i>Dodonaea procumbens</i>	trailing hop-bush	vulnerable	not listed	PMST; AoLA	<b>Low</b> – This species has not been recorded in the Project Area.
<i>Eucalyptus aggregata</i>	black gum	vulnerable	not listed	PMST; AoLA	<b>Low</b> – As of 2014 only 16 mature trees have been sighted in the ACT, none of which are in the Project Area.
<i>Lepidium aschersonii</i>	spiny peppercress	vulnerable	not listed	PMST	<b>Low</b> – there is no habitat for this species within the Project Area.
<i>Lepidium ginninderrense</i>	Ginninderra Peppercress	vulnerable	endangered	PMST; AoLA	<b>Low</b> – there is no habitat for this species within the Project Area.
<i>Lepidium hyssopifolium</i>	peppercress	endangered	not listed	PMST; AoLA	<b>Low</b> – there is no habitat for this species within the Project Area.
<i>Leucochrysum albicans</i> subsp. <i>tricolor</i>	hoary sunray	endangered	not listed	PMST; AoLA; ACTMapi	<b>Low</b> – This species can occur in a wide variety of woodland, forest and modified woodland habitats, and is unlikely to occur in the Project Area.
<i>Neoastelia spectabilis</i>	null	vulnerable	not listed	PMST; AoLA	<b>Low</b> – there is no habitat for this species within the Project Area.
<i>Pomaderris pallida</i>	pale pomaderris	vulnerable	vulnerable	PMST; AoLA	<b>Low</b> – There is no habitat for this species within the Project Area.
<i>Prasophyllum petilum</i>	Tarengo Leek orchid	endangered	endangered	PMST; AoLA	<b>Low</b> – This species is known to occur at one site within the ACT, this site is approximately 9 kilometres from the Project Area.
<i>Rutidosia leptorhynchoides</i>	button wrinklewort	endangered	endangered	PMST; AoLA; CNM; ACTmapi	<b>Low</b> – This species can occur in woodland communities across the ACT, and is unlikely to occur in the Project Area.
<i>Senecio macrocarpus</i>	large-fruit fireweed	vulnerable	not listed	PMST	<b>Low</b> – Locally this species has only been found at one location approximately 20 kilometres from the Project Area.
<i>Swainsona recta</i>	small purple-pea	endangered	endangered	PMST; AoLA; ACTMapi	<b>Low</b> – This species occurs in woodland habitat with a grassy understorey, and is unlikely to be present within the Project Area.

Scientific Name	Common Name	EPBC Act	NC Act	Database	Likelihood of occurrence
<i>Thesium australe</i>	Austral toadflax, toadflax	vulnerable	not listed	PMST; AoLA	<b>Low</b> – This species is present across the ACT in grassland and grassy woodland habitat. It is mostly recorded in large areas of native vegetation. Highly sensitive to disturbance.



