

# Memorandum

**Ref:** B20#32487  
**To:** Guy Watson  
**From:** Shane Priddle  
**CC:** Neil McCarthy  
**Date:** 9 November 2020

**Subject: Bussell Highway (H043) Duplication Hutton Road to Sabina River Project: Supplementary fauna habitat assessment results**

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## Purpose

To identify the fauna habitat value of several minor clearing areas (approximately 1.24 ha) along the Bussell Highway (H043) Duplication Project, that were not captured by existing fauna survey reports.

## Background

Bussell Highway is the main link between Perth, Bunbury and the Busselton – Margaret River area, supporting the tourism, forestry and agricultural industries in the region. It is also an important commuter link for residents who live in the Busselton or Margaret River area and work in the Bunbury or Perth Metropolitan areas.

Main Roads Western Australia (Main Roads) is planning to construct a second carriageway along the 17.85 km section between Capel and the Sabina River, to provide dual carriageway access along the entire 46 km portion of the highway between Bunbury and Busselton (the Bussell Highway Duplication). Of the 17.85 km of proposed works, a 5.55 km section (Stage 1) has previously been approved under EPBC 2015/7626, and the remaining 12.3 km section (Stage 2) is subject to further environmental approvals.

The project includes the construction of a 12.3 km two-lane carriageway (southbound) to duplicate the existing carriageway effectively between Hutton Road and the Sabina River bridge and other road infrastructure including, but not limited to, bridges, culverts, lighting, noise barriers, fencing, landscaping, road safety barriers and signs. The upgrade of this section of Bussell Highway to a four-lane highway will include lane widths of 3.5 m across the two lanes. The left shoulder width is to be 2.5 m and will be fully sealed. The right shoulder width (median strip) is to be 1.5 m fully sealed. The total median width from edge to edge is to be a minimum of 27 m with a target width of 31 m.

The overall project footprint covers an area of 128 ha. Although the majority of the area is degraded or completely cleared, a total of 22.18 ha of vegetation is proposed to be cleared. Approximately 1.24 ha of the proposed clearing footprint was not included in previous fauna surveys.

Previous fauna surveys include the following

- Bussell Highway – Hutton Road to Sabina section. Level 1 Fauna and Targeted Western Ringtail Possum Survey (360 Environmental, 2017)
- Targeted Fauna Survey. Bussell Highway – Hutton to Sabina Section (Harewood, 2018)
- Bussell Highway (Hutton to Sabina) Western Ringtail Possum Assessment (Biota, 2020)

## Methods

A circa 1.24 ha study area was provided by Main Roads WA Project Management Team. It was derived by a GIS gap analysis to identify areas of the proposed clearing footprint (polygons) that were outside of the areas assessed by previous fauna surveys. Approximately 100 discreet polygons were identified along the project length that had not been previously surveyed.

Each polygon location was visited and assessed. Brief notes were made on:

- Structural vegetation types at each site,
- Western Ringtail Possum (WRP) habitat value. N/A areas were extended from existing mapping and represented negligible clearing (i.e. habitat part of a larger patch).
- Black cockatoos
  - Foraging habitat scores was based on the presence of known feed species (Commonwealth of Australia, 2017).
  - Breeding - Suitable DBH Trees were recorded over the site. These targeted trees with a DBH >50cm and considered old enough to start developing large hollows and provide ongoing hollow recruitment (SEWPAC 2012).  
Hollows were recorded with the number, height and size of hollows noted in size classes.  
Evidence of use such as chews, wear and other factors were noted along with the suitability of the hollow for black cockatoo breeding, e.g. orientation, access, chamber size or use by other animals.
- Photos were taken at some locations where vegetation clearing was likely to result in the loss of whole trees / shrubs. These will be maintained within the Main Roads records system for future reference (not included in this report).

Existing project fauna habitat mapping layers were updated in line with the existing criteria developed by 360 Environmental (2017). Specifically, these included WRP habitat (polygons), black cockatoo foraging habitat (polygons) and suitable DBH tree and hollow tree locations (points) shapefiles. Refer to Table 1 and Figure 1 for the study area and results.

Where very small extensions of existing patches were identified, the values from the existing patch were adopted.

## Limitations

In accordance with *Technical Guidance* (EPA 2020) survey limitations are identified below.

**Table 1 Limitations of survey adequacy and accuracy**

Aspect	Constraint	Comment
Competency / experience of the survey team, including experience in the bioregion surveyed	No	Suitably qualified individuals carried out the work: Shane Priddle (Contractor Environment, Main Roads WA, Ba Marine Science; Certified Environmental Practitioner No.310) with nearly 20 years' experience conducting fauna surveys throughout NSW and WA.
Scope, e.g. where faunal groups were excluded from the survey	No	The scope of the Memo was to update the existing fauna habitat GIS layers to include minor clearing updates based on the current footprint. These including basic habitat, WRP and black cockatoo habitat assessments.

Adequacy of the survey intensity and proportion of survey achieved	No	The additional areas were mostly very small in extent and extended from existing assessed patches. Suitable effort was adopted to quantify the habitat areas required. A precautionary approach has also been adopted.
The proportion of the task achieved and further work	No	The surveys were completed adequately, to a sufficient level with respect to the scope.
Timing/weather/season	No	The surveys were completed in spring 2020. The survey timing and weather conditions were suitable.
Disturbances that may have affected results of survey	No	There were no disturbances that affected the survey.
Intensity (in retrospect, was the intensity adequate)	No	Based on the results the survey is considered adequate to meet the project scope.
Completeness (e.g. was relevant area fully surveyed);	No	All areas were surveyed.
Resources (e.g. degree of expertise available in animal identification to taxon level);	No	The surveys were completed adequately.
Access problems;	No	The site was on the Bussell Highway verge and accessible.
Identification of hollows	Negligible	Ground-based counts of hollows are subjective, it is not possible to be certain that the feature is a hollow as seen from the ground. Limitations include the likelihood that some hollows may be missed, may not be observable or may be obscured, particularly hollows in branches and vertical. It is unlikely due to the nature of the vegetation surveyed (mostly shrubs, small trees or regrowth) that any hollows were missed.

## Results

The circa 100 polygons were typically very small and narrow in extent. Only 28 polygons were greater than 100m<sup>2</sup> in size. At most locations, the polygon represented only a minor extension of existing mapped habitat, or an additional area of tree canopy.

The results of the survey are detailed in Table 1 and summarised below.

- Additional 1.02 ha of moderate to high value WRP habitat. This figure includes foraging habitat likely to be used by WRP.
- Additional 0.89 ha of potential black cockatoo foraging habitat.
- Additional seven suitable DBH trees (Flooded Gums >50cm DBH), with none containing hollows.
- No black cockatoo roost sites.

Numerous areas were considered to be too small to assess as individual patches or contained canopy only (0.12 ha). These areas are unlikely to be cleared and therefore not included in the WRP or black cockatoo foraging areas. Likewise, several very small areas (mapping artefacts < 2 m<sup>2</sup>) were not included in the survey.

## References

Commonwealth of Australia (2017) *Revised draft referral guideline for three threatened black cockatoo species: Carnaby's Cockatoo, Baudin's Cockatoo and the Forest Red-tailed Black Cockatoo.*

Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) (2012) *Commonwealth EPBC Act referral guidelines for three threatened black cockatoo species: Carnaby's cockatoo (endangered), Calyptorhynchus latirostris, Baudin's cockatoo (vulnerable), Calyptorhynchus baudinii, and Forest red-tailed black cockatoo (vulnerable) Calyptorhynchus banksii naso.*

**TABLE 1 Bussell Highway (H043) Duplication Hutton Road to Sabina River Project supplementary fauna habitat assessment results**

<b>Id</b>	<b>Vegetation</b>	<b>Cockatoo</b>	<b>WRP</b>	<b>Area m<sup>2</sup></b>
0	Kunzea, Acacia, Eucalyptus sp.		Foraging	56
1	Kunzea, Acacia, Eucalyptus sp.		Foraging	117
6	Tuart, Rudis, Melaleuca, Kunzea	Foraging	Foraging	162
7	Tuart, Rudis, Melaleuca, Kunzea	Foraging	Foraging	578
8	Marri, Melaleuca, Kunzea	Foraging	Foraging	85
9	Marri, Melaleuca, Kunzea	Foraging	Foraging	23
10	Marri, Melaleuca, Kunzea	Foraging	Foraging	63
12	Tuart, Eucalyptus sp.	Foraging	Foraging	252
13	Rudis or Tuart	Foraging	Foraging	196
15	Jarrah, Peppermint, Allocasuarina, Tuart, Eucalyptus X	Foraging	Foraging	97
16	Tuart, Rudis, Peppermint	Foraging	Foraging	31
18	Marri, Tuart, Jarrah, Rudis, Peppermint	Foraging	Foraging	9
19	Marri, Tuart, Jarrah, Rudis, Peppermint	Foraging	Foraging	83
20	Tuart, Rudis	Foraging	Foraging	27
21	Tuart, Rudis	Foraging	Foraging	94
22	Acacia, Melaleuca		Foraging	2
23	Acacia, Melaleuca		Foraging	12
24	Eucalyptus X	Foraging	Foraging	18
25	Eucalyptus X	Foraging	Foraging	4
26	Tuart, Marri, Melaleuca, Peppermint	Foraging	Foraging	528
28	Acacia, Kunzea		Foraging	9
29	Tuart	Foraging		12
29	Acacia, Kunzea		Foraging	3
30	Eucalyptus sp, Acacia, Tuart, Kunzea	Foraging	Foraging	5
31	Eucalyptus sp, Acacia, Tuart, Kunzea	Foraging	Foraging	38
32	Peppermint, Melaleuca, Tuart, Marri	Foraging	Foraging	80
33	Peppermint, Melaleuca, Tuart, Marri	Foraging	Foraging	33
34	Peppermint, Melaleuca, Tuart, Marri	Foraging	Foraging	6
35	Peppermint, Melaleuca, Tuart, Marri	Foraging	Foraging	9
36	Kunzea, Rudis, Melaleuca	Foraging	Foraging	11
37	Peppermint, Marri, Rudis, Kunzea	Foraging	Foraging	14
38	Peppermint, Marri, Rudis, Kunzea	Foraging	Foraging	32
39	Peppermint, Marri, Rudis, Kunzea	Foraging	Foraging	70
40	Peppermint, Marri, Rudis, Kunzea	Foraging	Foraging	27
41	Kunzea, Acacia, Eucalyptus sp.		Foraging	5
42	Kunzea, Acacia, Eucalyptus sp.		Foraging	13
43	Marri, Melaleuca, Kunzea, Peppermint, Tuart	Foraging	Foraging	191
44	Kunzea		Foraging	4
47	Peppermint, Rudis, Kunzea	Foraging	Foraging	20
48	Peppermint, Rudis, Kunzea	Foraging	Foraging	35
49	Peppermint, Rudis, Kunzea	Foraging	Foraging	30

**Bussell Highway (H043) Duplication Hutton Road to Sabina River Project: Supplementary fauna habitat assessment**

<b>Id</b>	<b>Vegetation</b>	<b>Cockatoo</b>	<b>WRP</b>	<b>Area m<sup>2</sup></b>
50	Canopy only			6
51	Canopy only			17
52	Canopy only			19
53	Canopy only			1
54	Pine	Foraging		81
55	Peppermint, Marri, Rudis, Kunzea	Foraging	Foraging	3
56	Peppermint, Marri, Rudis, Kunzea	Foraging	Foraging	13
57	Peppermint, Marri, Rudis, Kunzea	Foraging	Foraging	18
58	Peppermint, Marri, Rudis, Kunzea	Foraging	Foraging	453
59	Acacia, Melaleuca		Foraging	20
60	Planted Euc, Shrubland		Foraging	84
61	Planted Euc, Shrubland			19
62	Planted Euc, Shrubland			45
63	Kunzea		Foraging	29
64	Peppermint, Marri, Rudis, Kunzea	Foraging	Foraging	2
65	Peppermint, Marri, Rudis, Kunzea	Foraging	Foraging	6
66	Kunzea		Foraging	48
69	Peppermint, Marri, Rudis, Kunzea	Foraging	Foraging	82
70	Peppermint, Marri, Rudis, Kunzea	Foraging	Foraging	40
72	Eucalptus X	Foraging		113
73	Canopy	Foraging		40
75	Rudis, Melaleuca	Foraging	Foraging	439
76	Melaleuca	Foraging	Foraging	116
77	Single shrub			19
78	Peppermint, Melaleuca, Tuart, Marri	Foraging	Foraging	122
79	Sheoak		Foraging	51
80	Tuart planted		Foraging	90
81	Canopy only			287
83	Canopy only			178
86	Marri, Melaleuca, Kunzea, Peppermint, Tuart	Foraging	Foraging	8
88	Acacia, Peppermint, Melaleuca		Foraging	5
90	Acacia, Peppermint, Melaleuca		Foraging	15
91	Marri	Foraging	Foraging	99
92	Marri, Rudis	Foraging	Foraging	18
93	Marri, Melaleuca, Kunzea	Foraging	Foraging	818
94	Marri, Melaleuca, Kunzea	Foraging	Foraging	207
95	Marri, Melaleuca, Kunzea	Foraging	Foraging	25
97	Marri, Melaleuca, Kunzea	Foraging	Foraging	27
98	Acacia, Sedges, Tuart	Foraging	Foraging	4
99	Acacia, Sedges, Tuart	Foraging	Foraging	7
100	Acacia, Sedges, Tuart	Foraging	Foraging	4
101	Acacia, Sedges, Tuart	Foraging	Foraging	646
102	Acacia, Peppermint, Melaleuca		Foraging	101

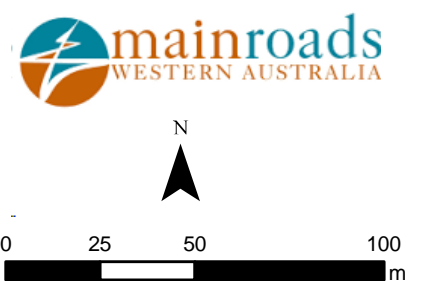
**Bussell Highway (H043) Duplication Hutton Road to Sabina River Project: Supplementary fauna habitat assessment**

<b>Id</b>	<b>Vegetation</b>	<b>Cockatoo</b>	<b>WRP</b>	<b>Area m<sup>2</sup></b>
103	Tuart, Marri, Melaleuca, Peppermint	Foraging	Foraging	106
106	Marri, Melaleuca, Kunzea	Foraging	Foraging	374
107	Marri, Melaleuca, Kunzea	Foraging	Foraging	48
109	Canopy	Foraging	Foraging	103
110	Marri, Melaleuca, Kunzea	Foraging	Foraging	40
112	Marri, Melaleuca, Kunzea	Foraging	Foraging	3
114	Acacia, Melaleuca		Foraging	680
115	Marri, Peppermint, Acacia, Tuart	Foraging	Foraging	30
117	Marri, Acacia	Foraging	Foraging	261
118	Tuart, Marri, Peppermint, Acacia, Kunzea	Foraging	Foraging	33
119	Marri, Melaleuca, Kunzea	Foraging	Foraging	2
120	Marri	Foraging	Foraging	30



**Bussell Highway Hutton to Sabina**  
Map 1

- |  |                                     |   |
|--|-------------------------------------|---|
| ● Habitat Tree - One or more large hollows possibly suitable for black cockatoos | ● Habitat Tree - No hollows seen    | ■ Potential Black cockatoo foraging habitat         |
| ● Habitat Tree - One or more possible small/medium hollows                       | ■ Survey area (Main Roads 2020)     | ■ Potential Black cockatoo foraging and WRP habitat |
|  | ■ Black cockatoo, WRP habitat value |   |
|  | ■ Unlikely habitat or canopy only   |   |
|  | ■ Potential WRP habitat             |   |

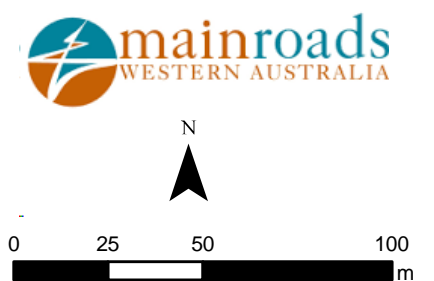






**Bussell Highway Hutton to Sabina**  
Map 2

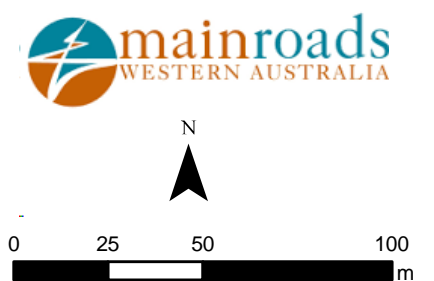
- |  |                                     |   |
|--|-------------------------------------|---|
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| ● Habitat Tree - One or more possible small/medium hollows                       | ■ Survey area (Main Roads 2020)     | ■ Potential Black cockatoo foraging and WRP habitat |
|  | ■ Black cockatoo, WRP habitat value |   |
|  | ■ Unlikely habitat or canopy only   |   |
|  | ■ Potential WRP habitat             |   |





**Bussell Highway Hutton to Sabina**  
Map 3

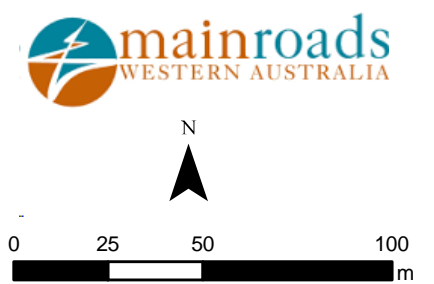
- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li><span style="color: yellow;">●</span> Habitat Tree - One or more possible small/medium hollows</li> <li><span style="color: green;">●</span> Habitat Tree - No hollows seen</li> <li><span style="border: 1px solid purple; display: inline-block; width: 10px; height: 10px;"></span> Survey area (Main Roads 2020)</li> </ul> | <ul style="list-style-type: none"> <li><span style="color: blue;">■</span> Black cockatoo, WRP habitat value</li> <li><span style="border: 1px solid lightgreen; display: inline-block; width: 10px; height: 10px;"></span> Unlikely habitat or canopy only</li> <li><span style="color: green;">■</span> Potential Black cockatoo foraging and WRP habitat</li> <li><span style="border: 1px solid lightgreen; display: inline-block; width: 10px; height: 10px;"></span> Potential Black cockatoo foraging habitat</li> </ul> |
|--|---|





**Busseil Highway Hutton to Sabina**  
Map 4

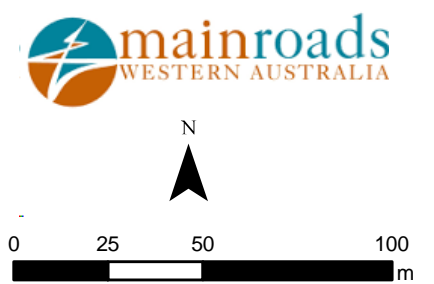
- Habitat Tree - No hollows seen
- Survey area (Main Roads 2020)
- Black cockatoo, WRP habitat value
- Unlikely habitat or canopy only

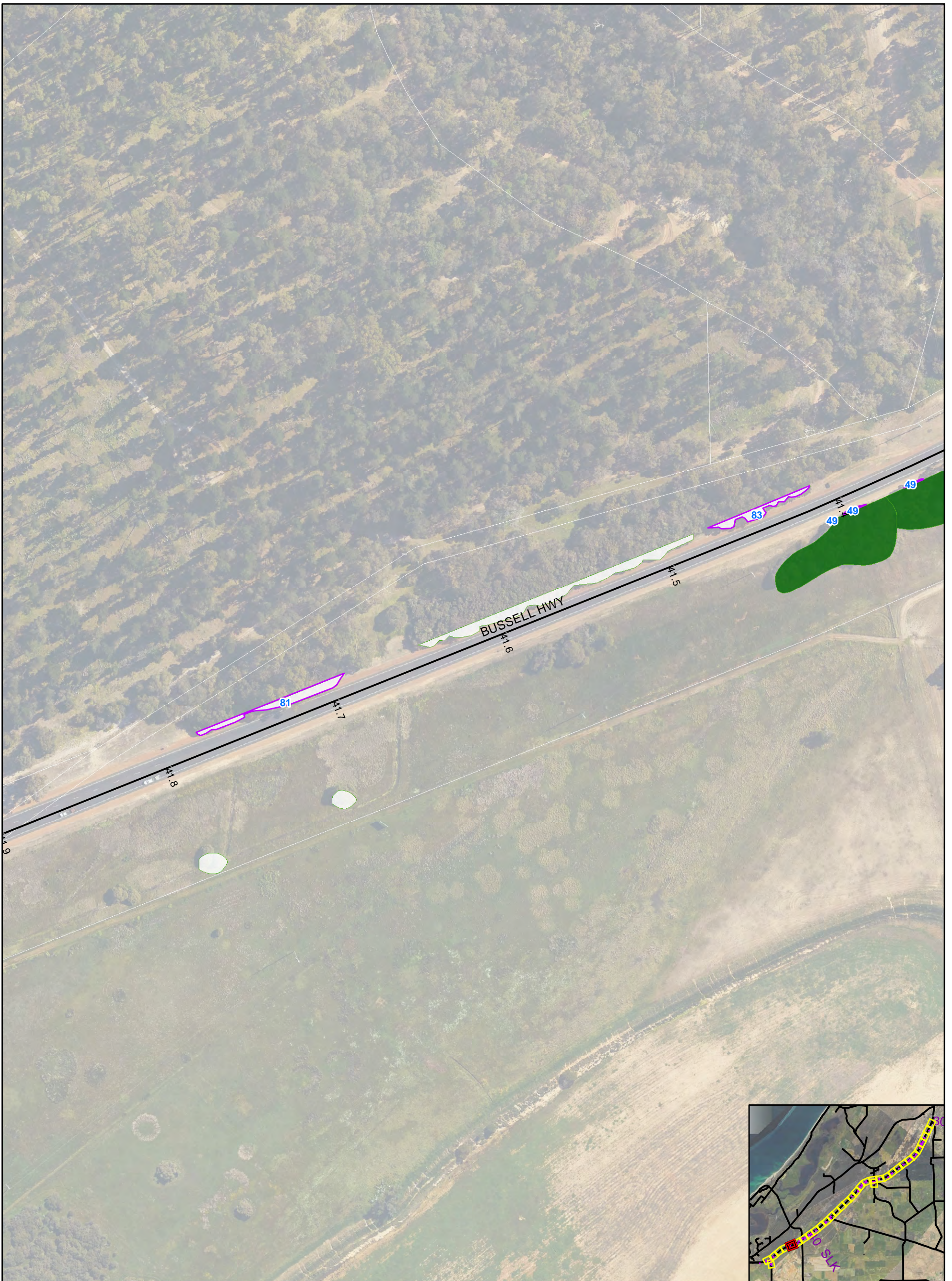




**Busseil Highway Hutton to Sabina**  
Map 5

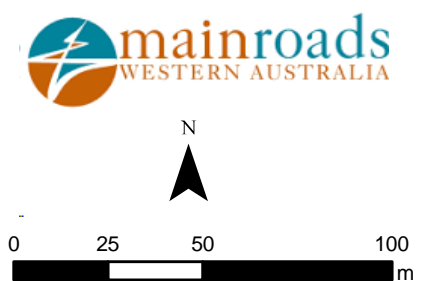
- Habitat Tree - No hollows seen
- Potential WRP habitat
- ▭ Survey area (Main Roads 2020)
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- Unlikely habitat or canopy only

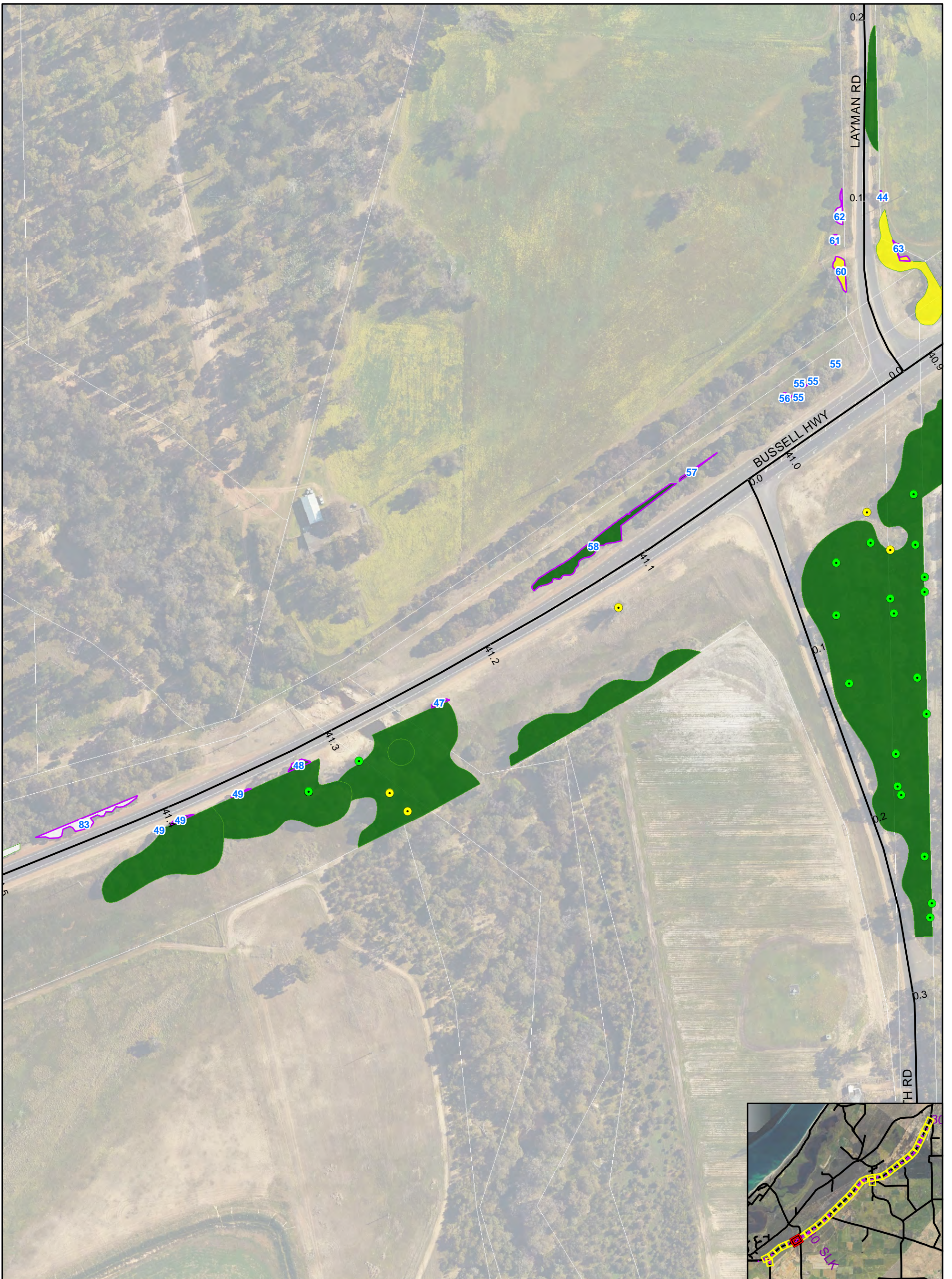




**Bussell Highway Hutton to Sabina**  
Map 6



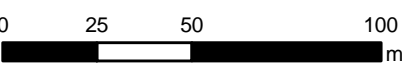
- Survey area (Main Roads 2020)
- Black cockatoo, WRP habitat value
- Unlikely habitat or canopy only
- Potential Black cockatoo foraging and WRP habitat

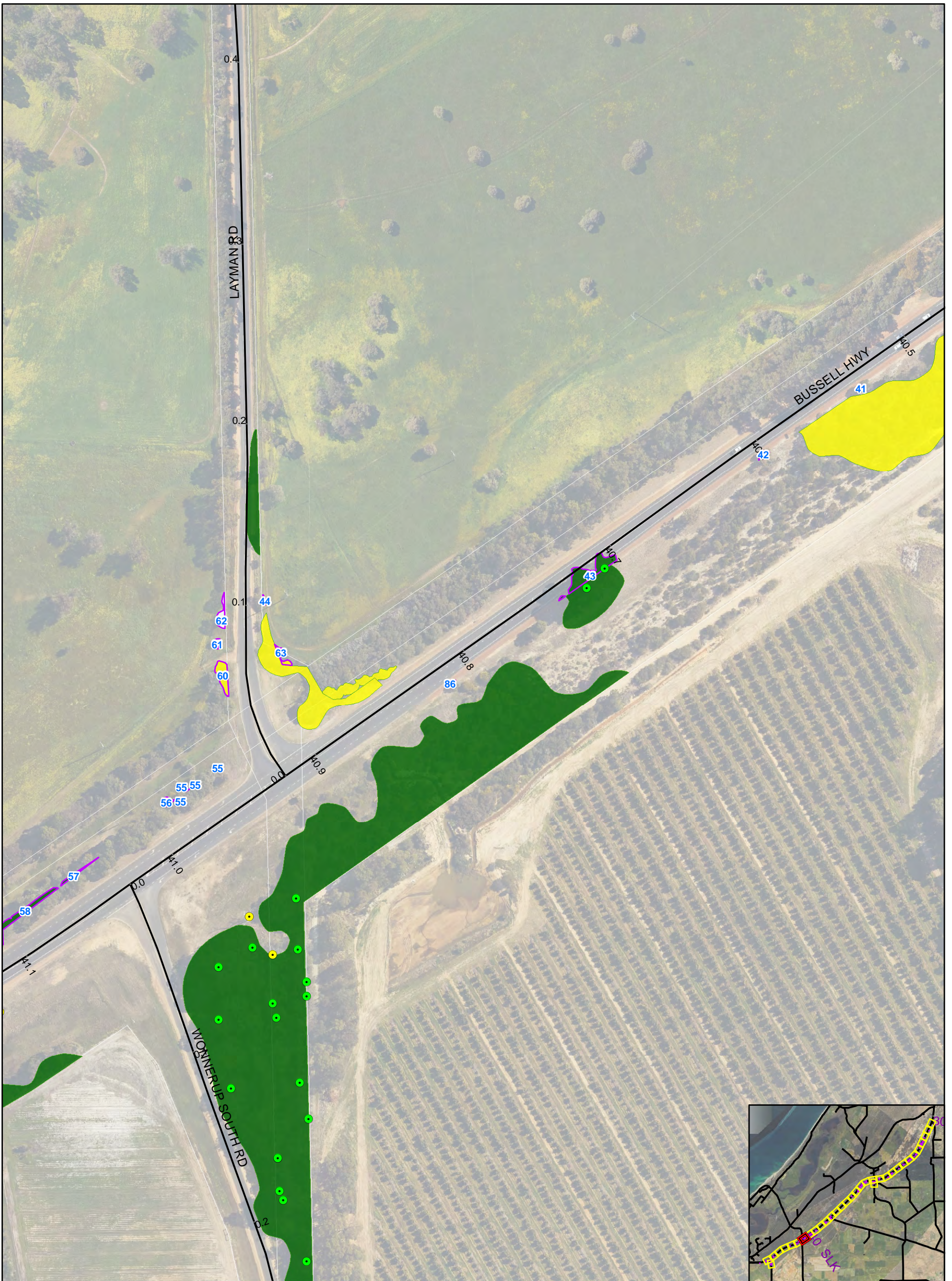




**Busseil Highway Hutton to Sabina**  
Map 7

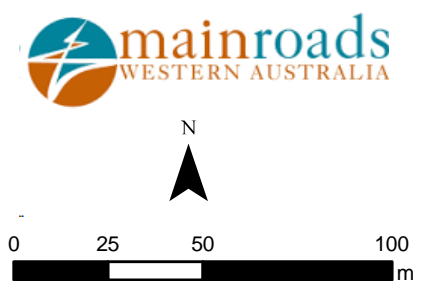
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- Survey area (Main Roads 2020)
- Potential Black cockatoo foraging and WRP habitat
- Potential WRP habitat
- Unlikely habitat or canopy only
- Black cockatoo, WRP habitat value

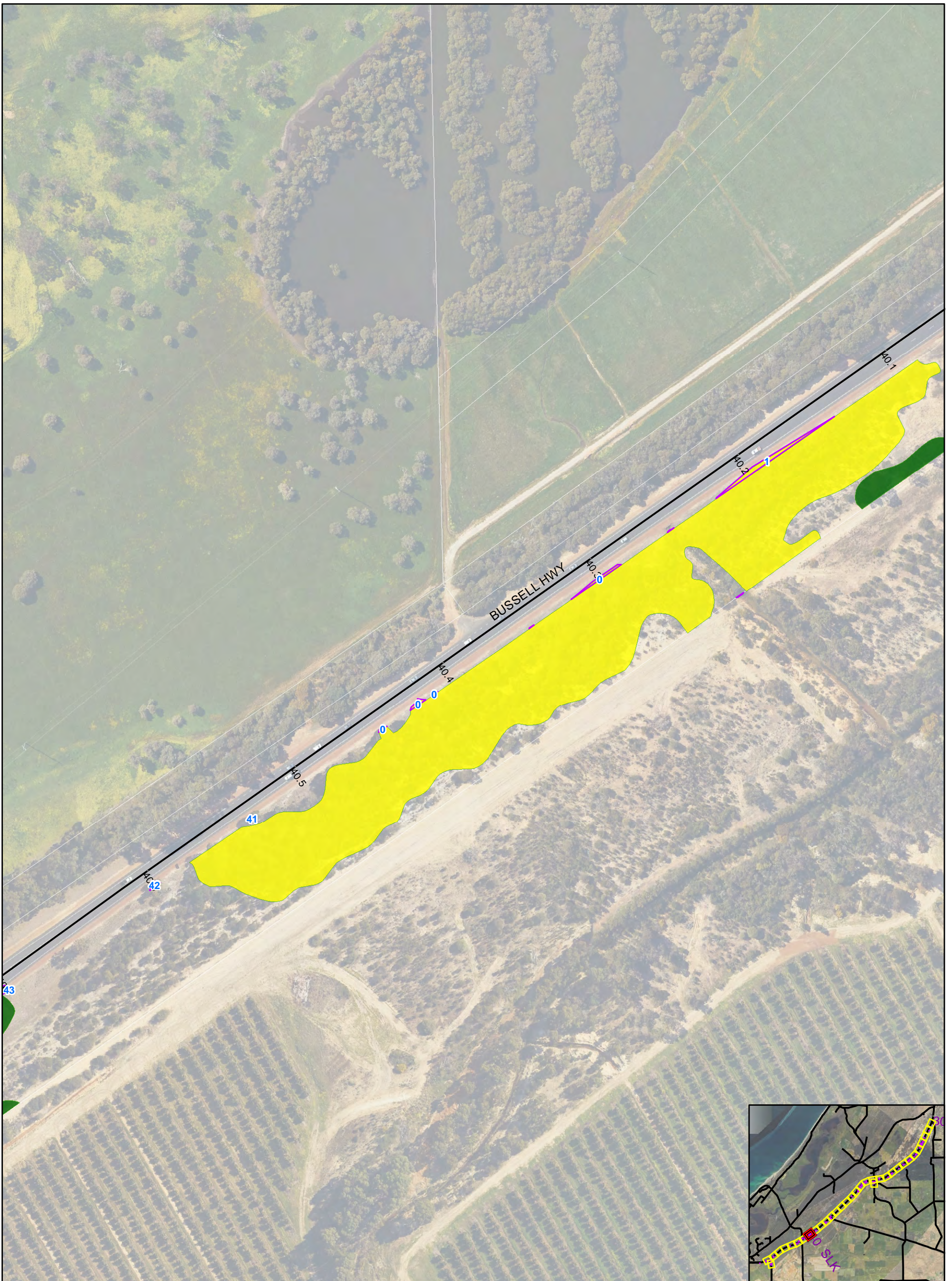
  
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**Bussell Highway Hutton to Sabina**  
Map 8

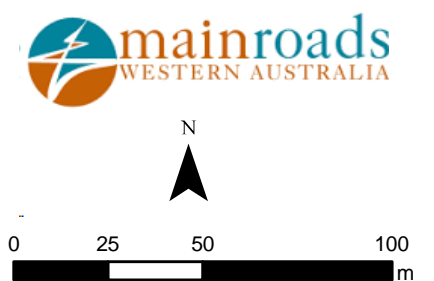
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- Unlikely habitat or canopy only
- Potential WRP habitat
- Potential Black cockatoo foraging and WRP habitat
- Black cockatoo, WRP habitat value





**Bussell Highway Hutton to Sabina**  
Map 9

- Survey area (Main Roads 2020)
- Black cockatoo, WRP habitat value
- Potential WRP habitat
- Potential Black cockatoo foraging and WRP habitat

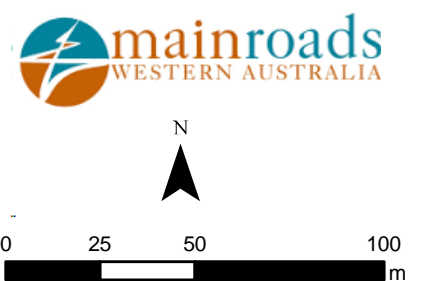






**Bussell Highway Hutton to Sabina**  
Map 10

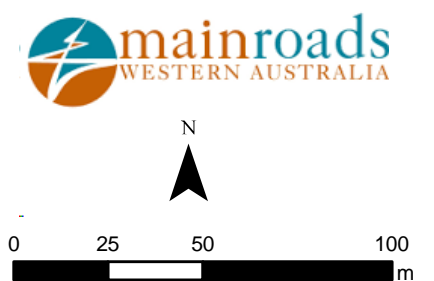
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- Black cockatoo, WRP habitat value
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- Potential Black cockatoo foraging and WRP habitat

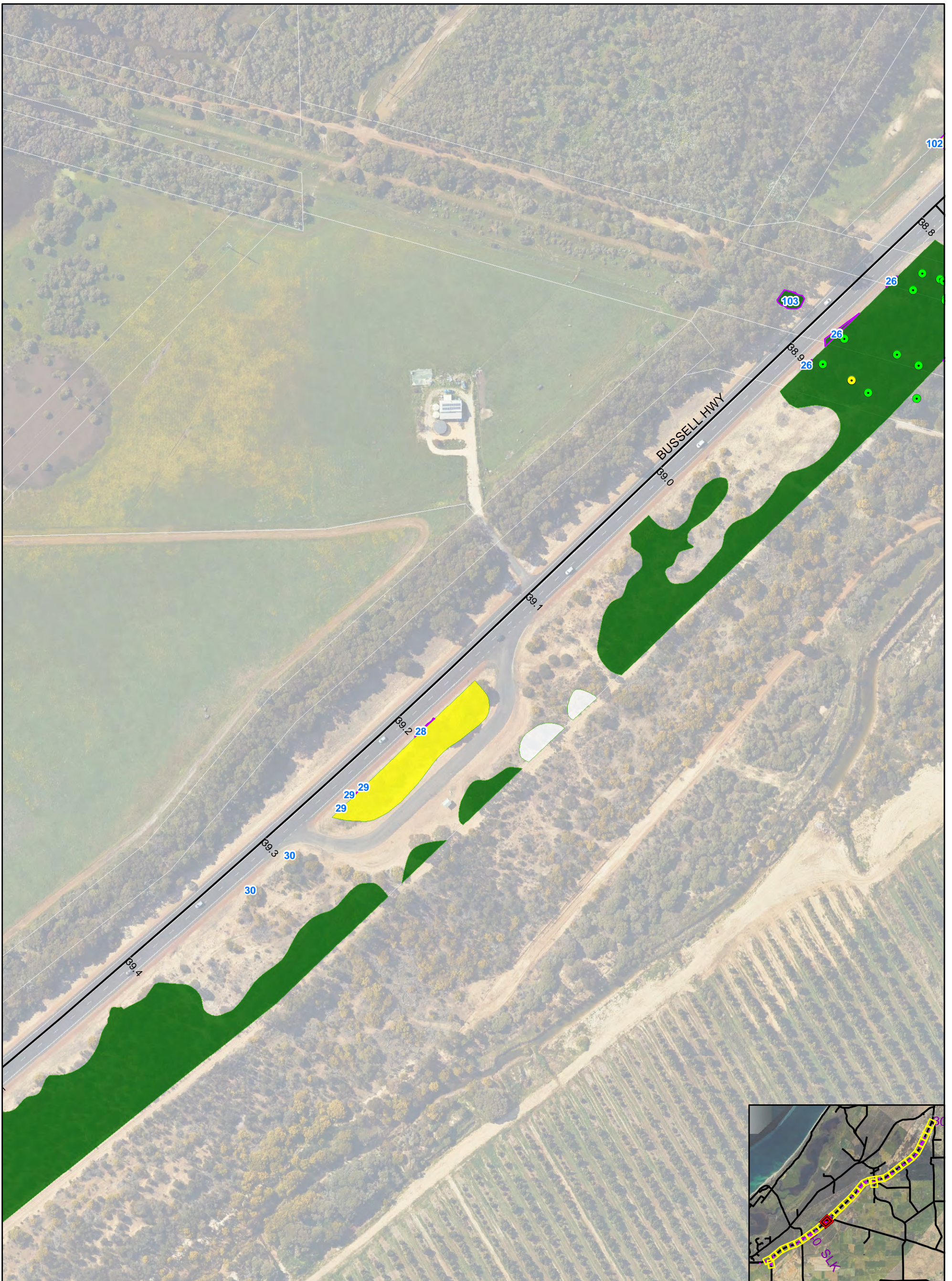




**Bussell Highway Hutton to Sabina**  
Map 11

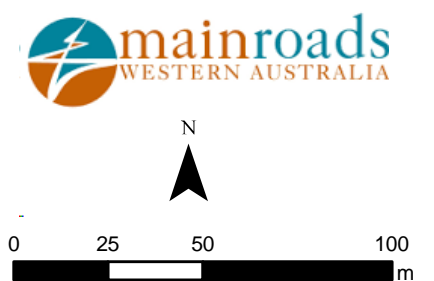
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- Black cockatoo, WRP habitat value
- Potential WRP habitat
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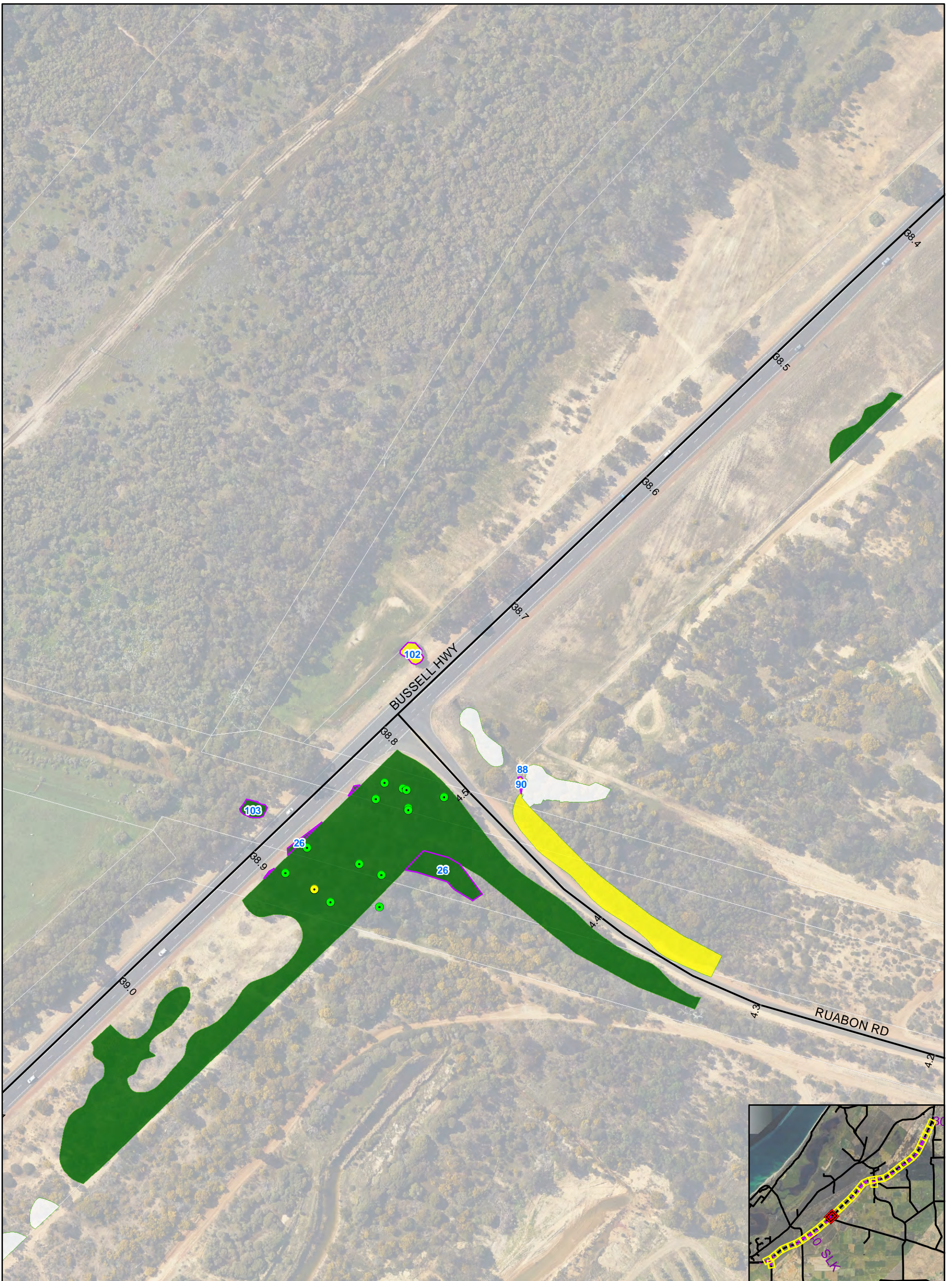




**Bussell Highway Hutton to Sabina**  
Map 12

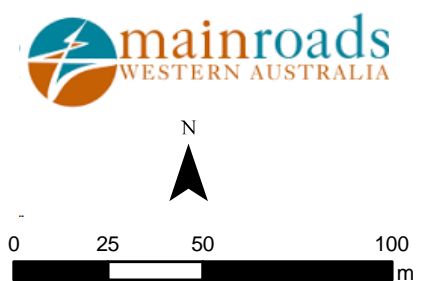
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**Bussell Highway Hutton to Sabina**  
Map 13

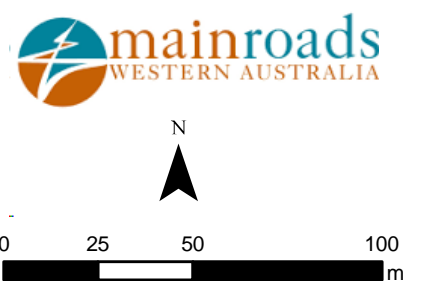
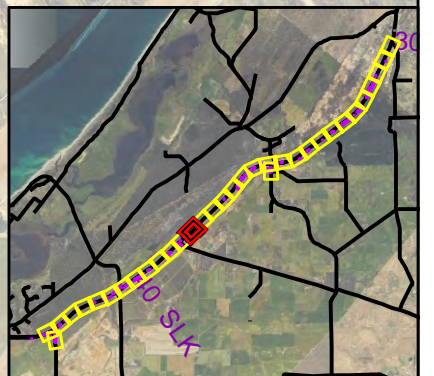
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- Potential WRP habitat
- Potential Black cockatoo foraging and WRP habitat





**Bussell Highway Hutton to Sabina**  
Map 14

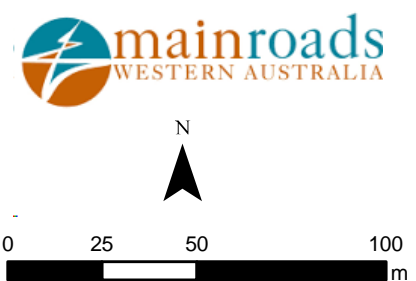
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**Bussell Highway Hutton to Sabina**  
Map 15

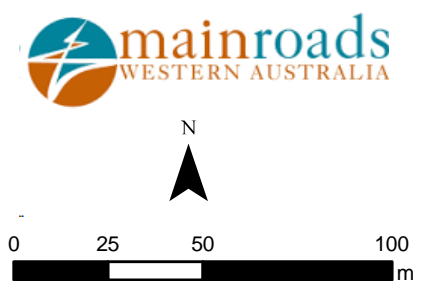
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**Bussell Highway Hutton to Sabina**  
Map 16

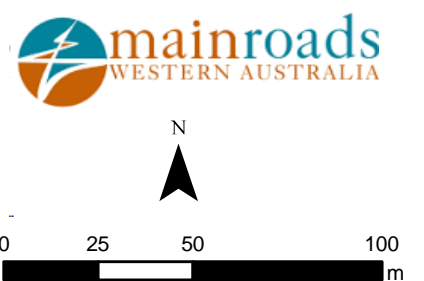
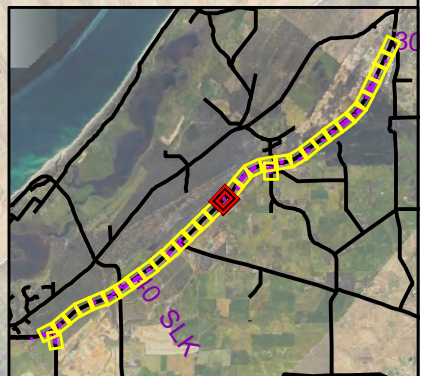
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Black cockatoo, WRP habitat value
- Potential Black cockatoo foraging and WRP habitat



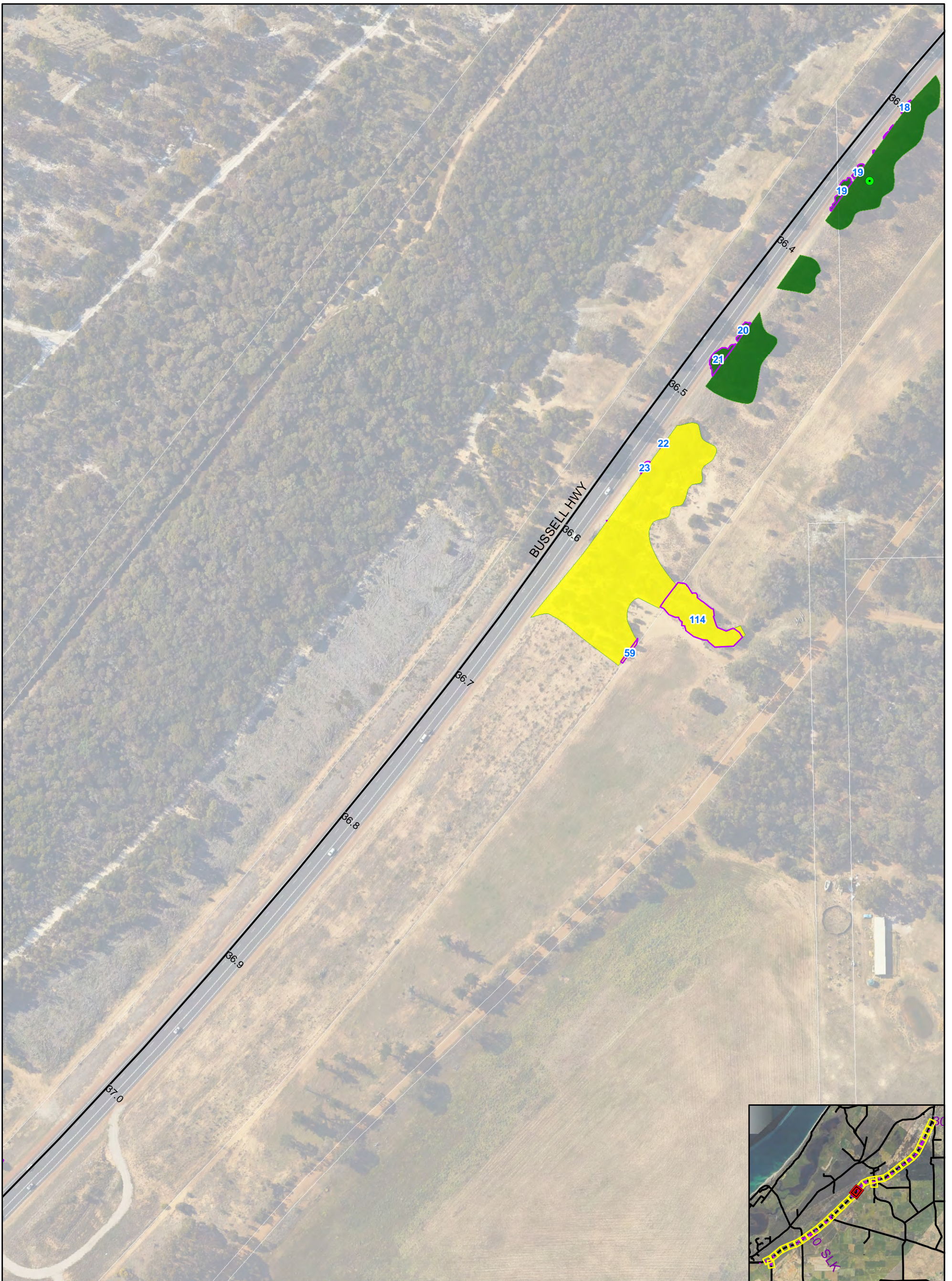


**Bussell Highway Hutton to Sabina**  
Map 17

- Habitat Tree - No hollows seen
- Potential Black cockatoo foraging and WRP habitat
- Survey area (Main Roads 2020)
- Black cockatoo, WRP habitat value
- Unlikely habitat or canopy only

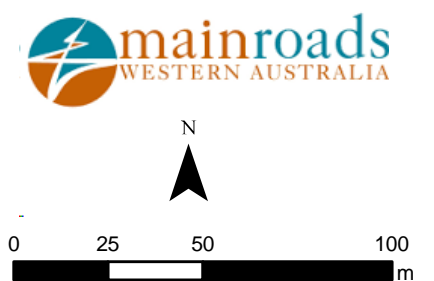


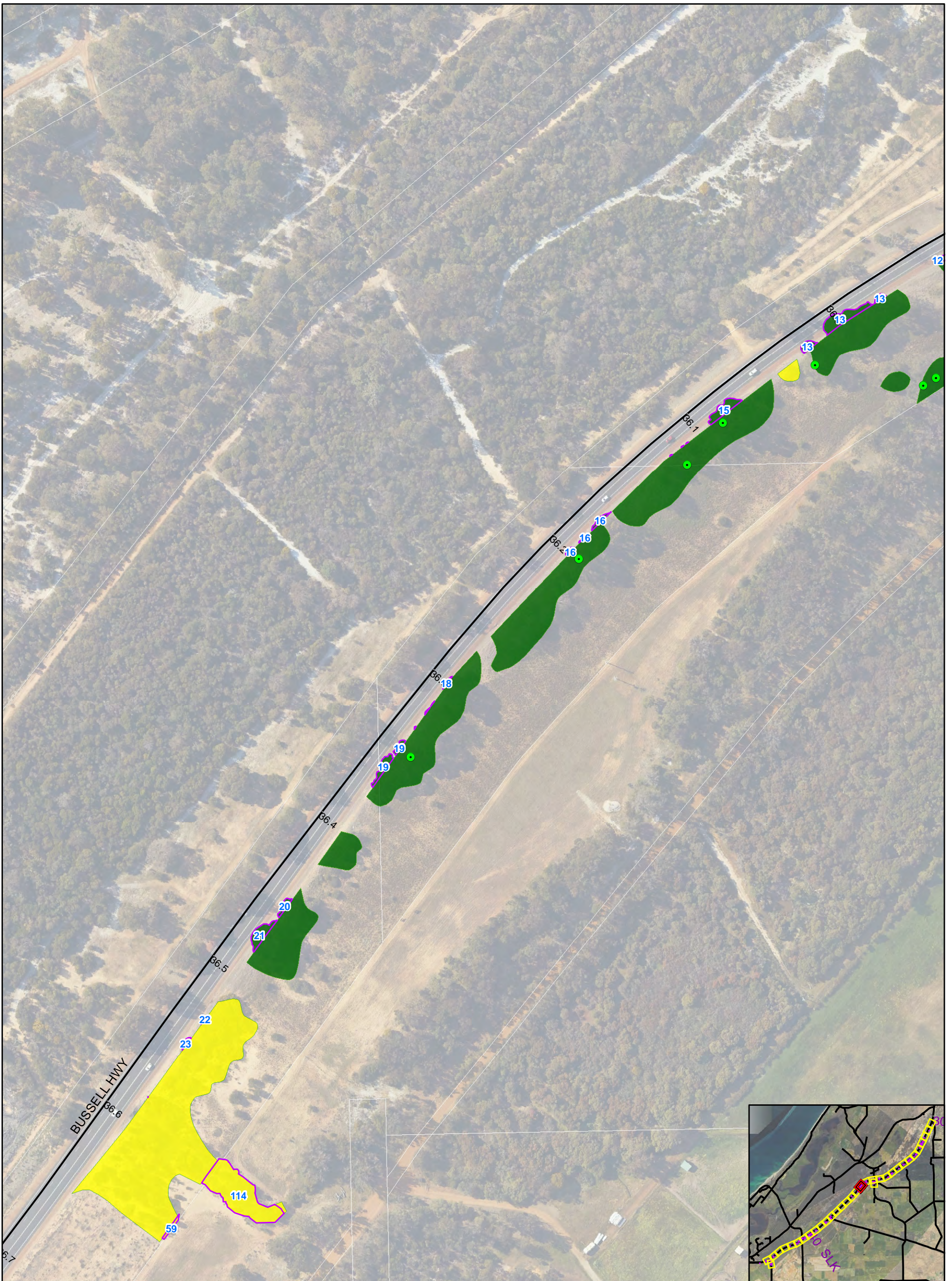




**Busseil Highway Hutton to Sabina**  
Map 18

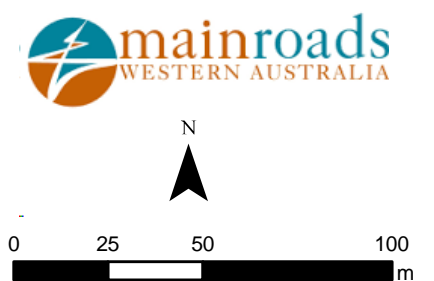
- Habitat Tree - No hollows seen
  - Survey area (Main Roads 2020)
  - Potential Black cockatoo foraging and WRP habitat
  - Potential WRP habitat
  - Unlikely habitat or canopy only
- Black cockatoo, WRP habitat value

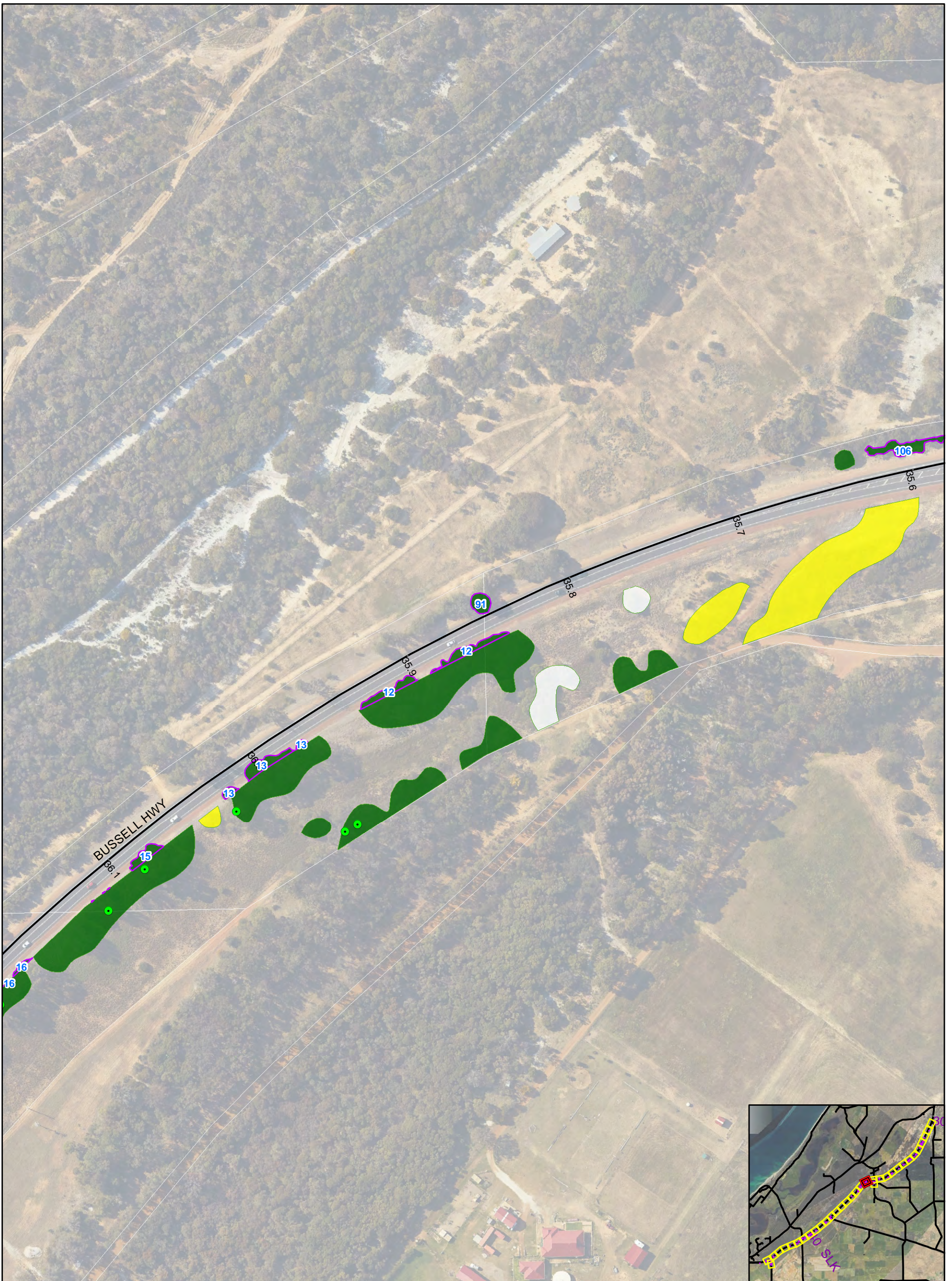




**Bussell Highway Hutton to Sabina**  
Map 19

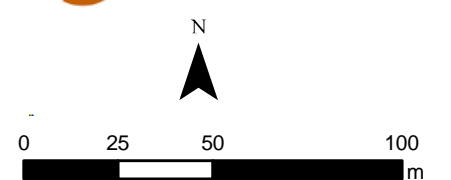
- Habitat Tree - No hollows seen
  - Survey area (Main Roads 2020)
  - Potential Black cockatoo foraging and WRP habitat
  - Potential WRP habitat
- Black cockatoo, WRP habitat value

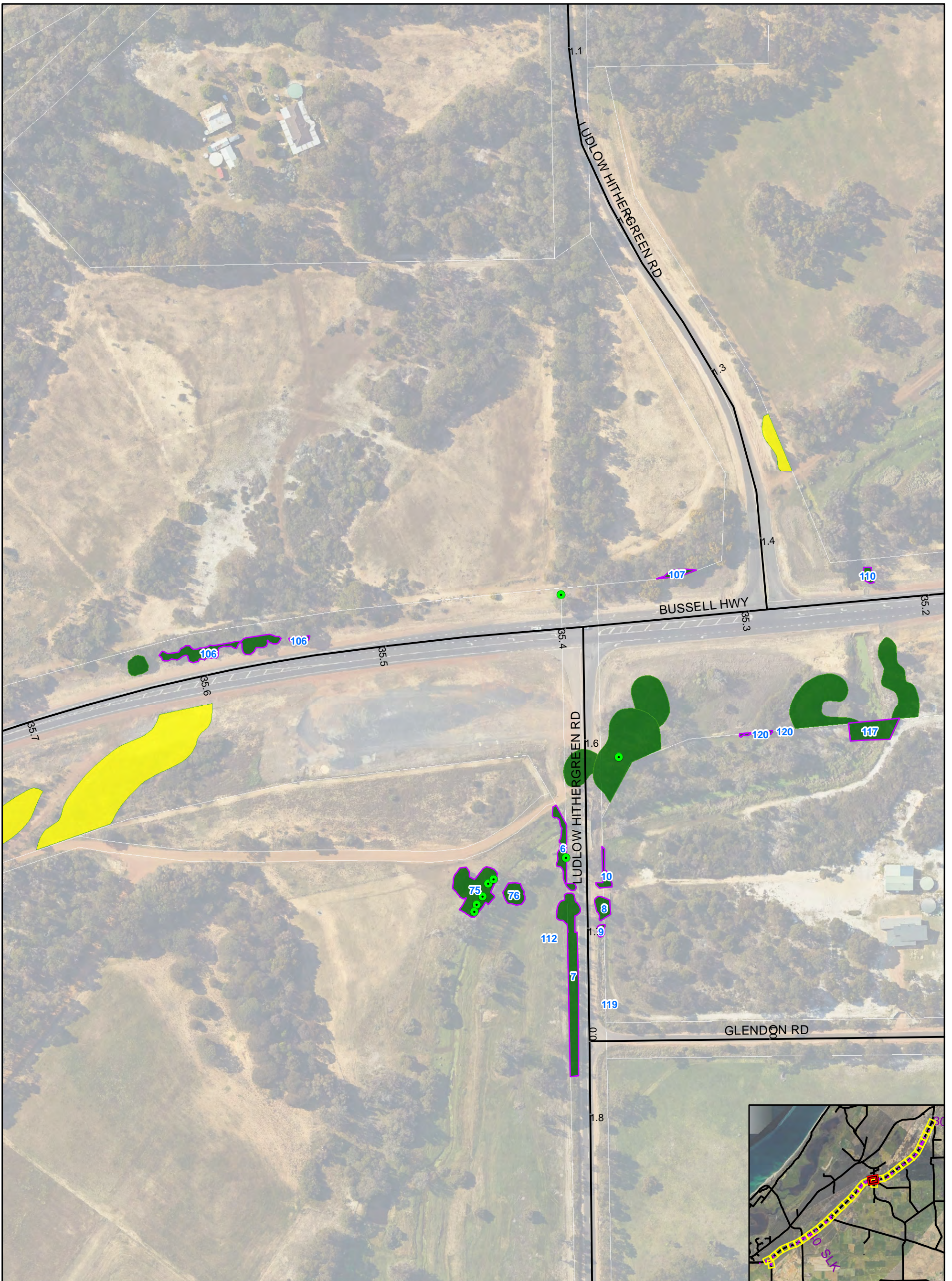




**Busseil Highway Hutton to Sabina**  
Map 20

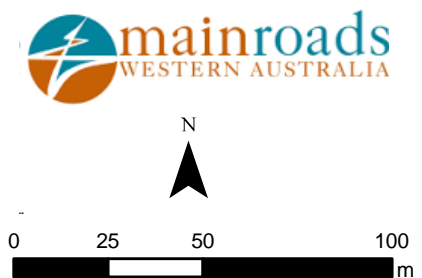
- Habitat Tree - No hollows seen
  - Survey area (Main Roads 2020)
  - Potential Black cockatoo foraging and WRP habitat
  - Unlikely habitat or canopy only
  - Potential WRP habitat
- Black cockatoo, WRP habitat value

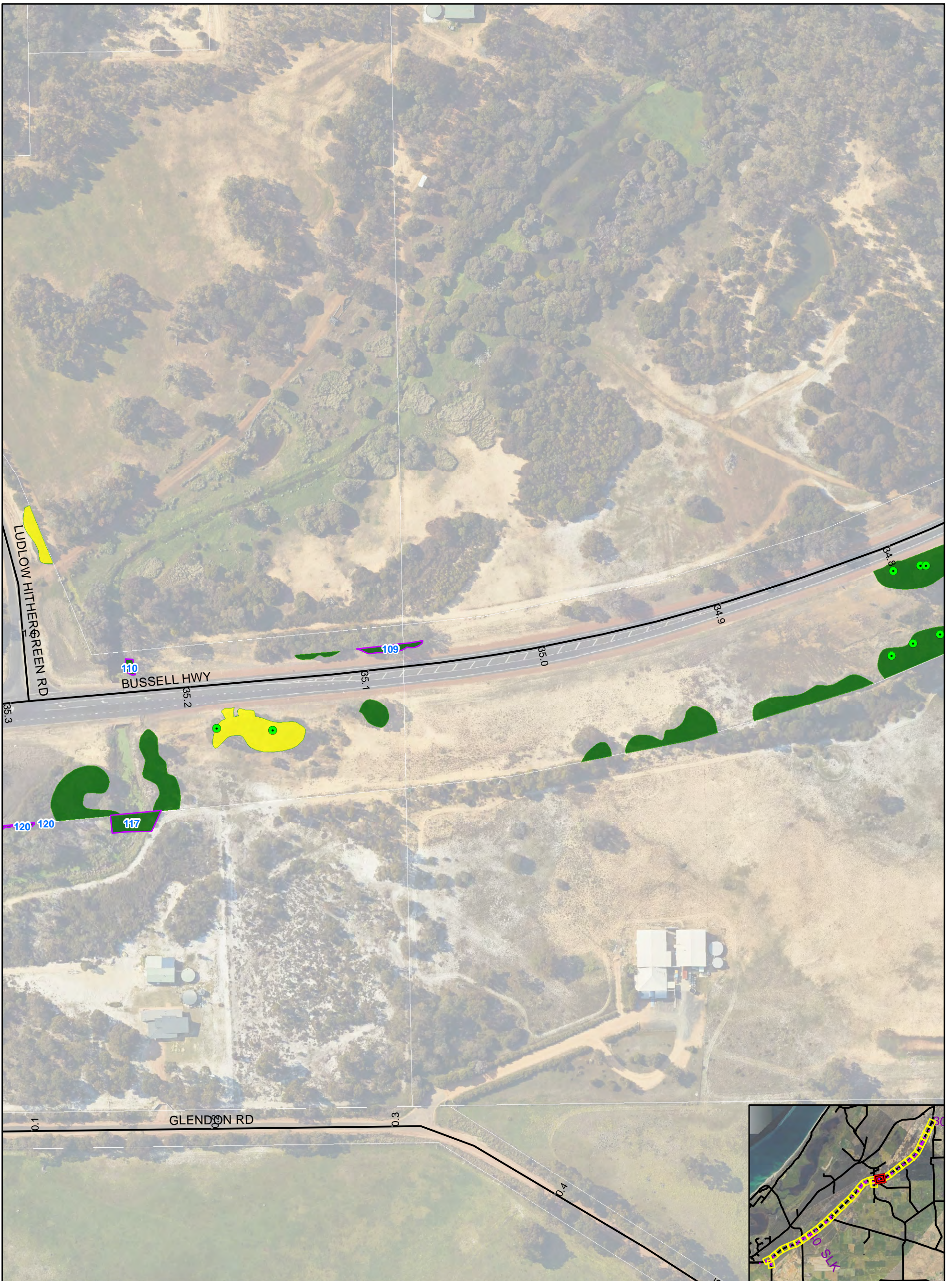




**Bussell Highway Hutton to Sabina**  
Map 21

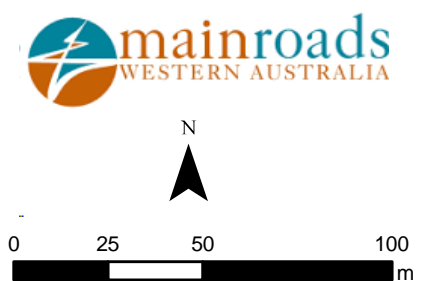
- Habitat Tree - No hollows seen
  - Survey area (Main Roads 2020)
  - Potential WRP habitat
  - Potential Black cockatoo foraging and WRP habitat
- Black cockatoo, WRP habitat value

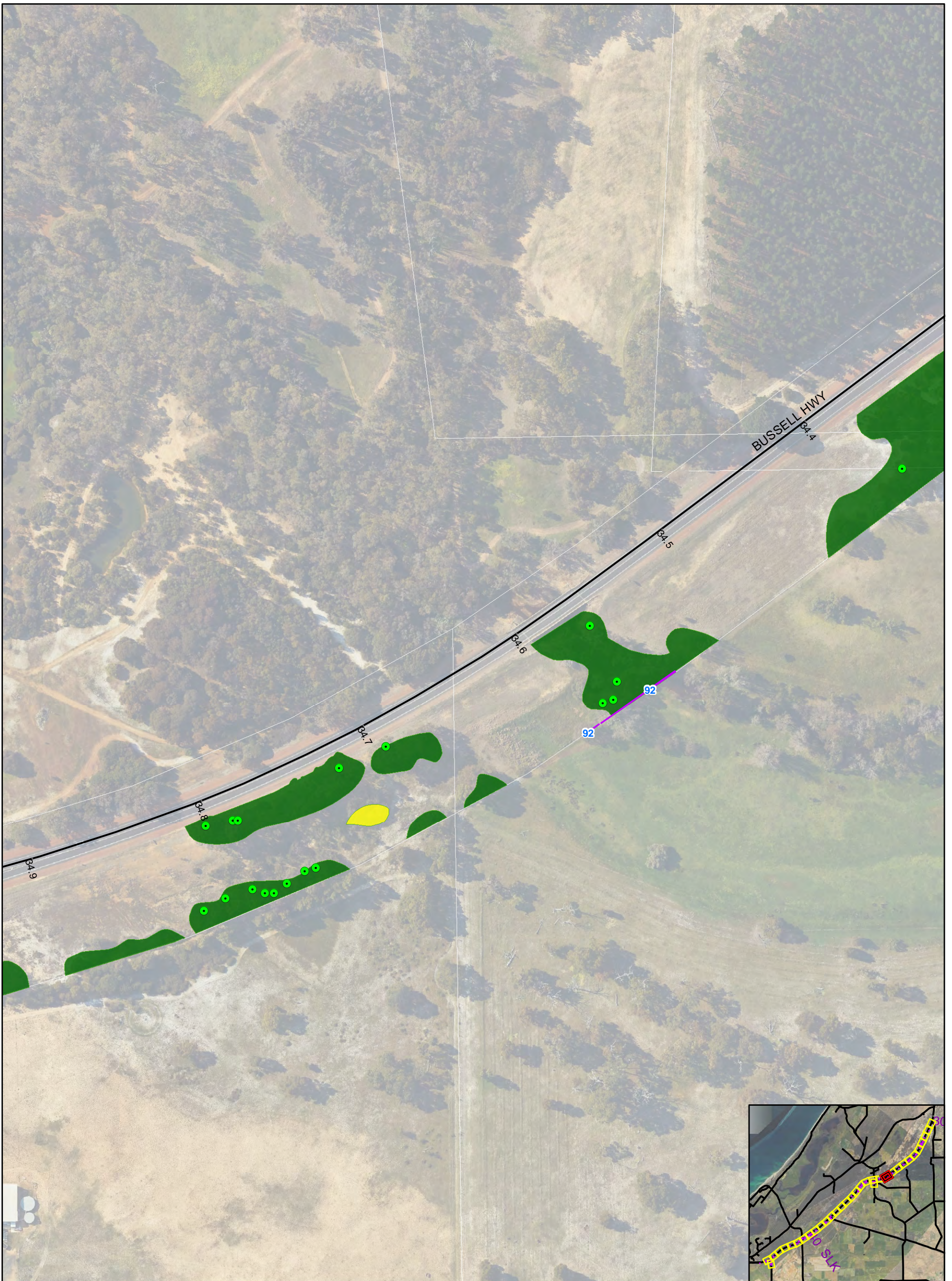




**Busell Highway Hutton to Sabina**  
Map 22

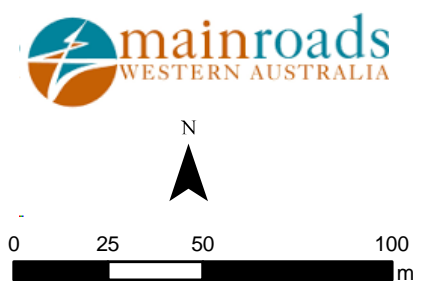
- Habitat Tree - No hollows seen
- Potential Black cockatoo foraging and WRP habitat
- Survey area (Main Roads 2020)
- Black cockatoo, WRP habitat value
- Potential WRP habitat





**Bussell Highway Hutton to Sabina**  
Map 23

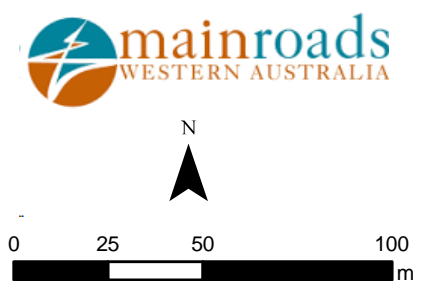
- Habitat Tree - No hollows seen
- Potential Black cockatoo foraging and WRP habitat
- ▭ Survey area (Main Roads 2020)
- Black cockatoo, WRP habitat value
- ▭ Potential WRP habitat





**Busell Highway Hutton to Sabina**  
Map 24

- Habitat Tree - No hollows seen
- Survey area (Main Roads 2020)
- Black cockatoo, WRP habitat value
- Potential Black cockatoo foraging and WRP habitat

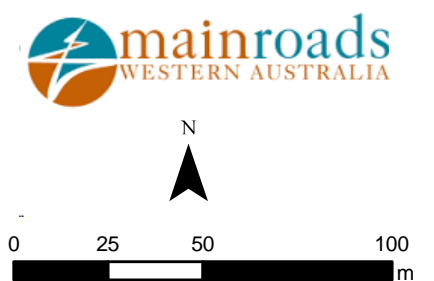




**Bussell Highway Hutton to Sabina**

Map 25

- Survey area (Main Roads 2020)
- Potential Black cockatoo foraging and WRP habitat
- Potential Black cockatoo foraging habitat

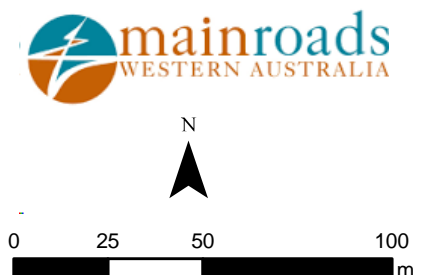






**Bussell Highway Hutton to Sabina**  
Map 26


- Habitat Tree - One or more possible small/medium hollows
- Habitat Tree - No hollows seen
- Survey area (Main Roads 2020)
- Potential Black cockatoo foraging habitat
- Potential Black cockatoo foraging and WRP habitat
- Black cockatoo, WRP habitat value






**Bussell Highway Hutton to Sabina**  
Map 27

- Habitat Tree - One or more possible small/medium hollows
- Habitat Tree - No hollows seen
- Survey area (Main Roads 2020)
- Black cockatoo, WRP habitat value
- Potential Black cockatoo foraging and WRP habitat



N

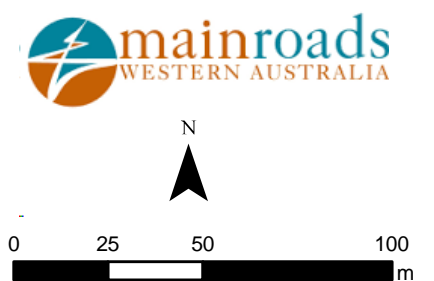


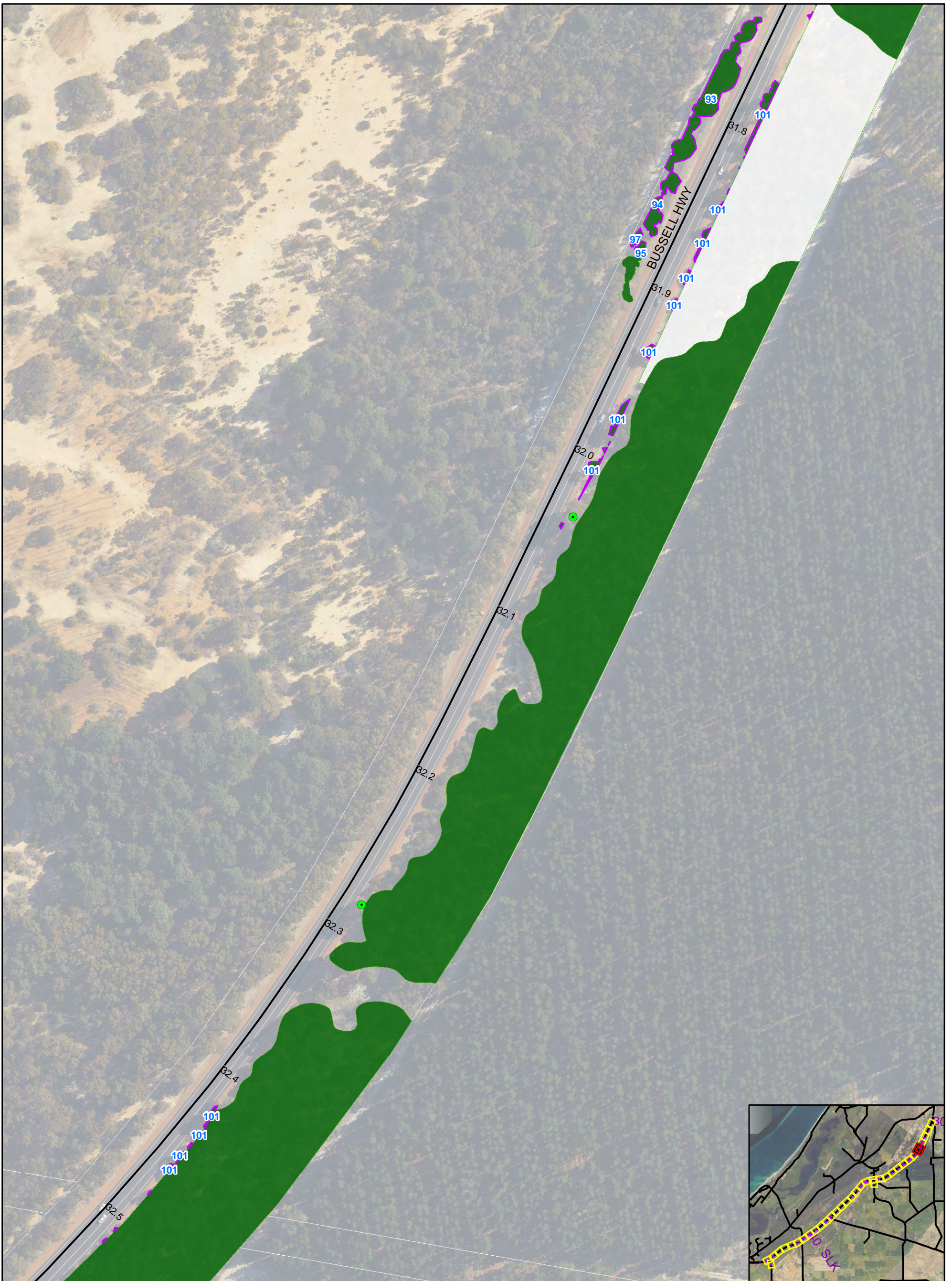
0    25    50    100  
m



**Bussell Highway Hutton to Sabina**  
Map 28

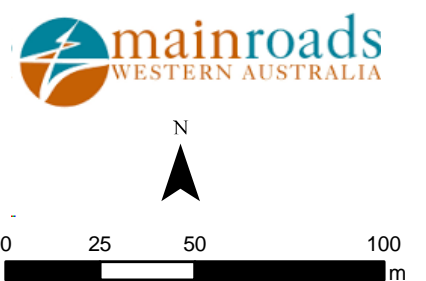
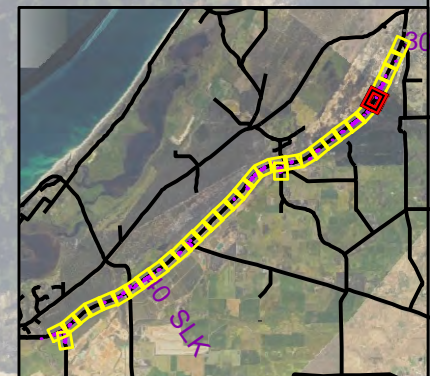
- Habitat Tree - No hollows seen
- Survey area (Main Roads 2020)
- Black cockatoo, WRP habitat value
- Potential Black cockatoo foraging and WRP habitat





**Bussell Highway Hutton to Sabina**  
Map 29

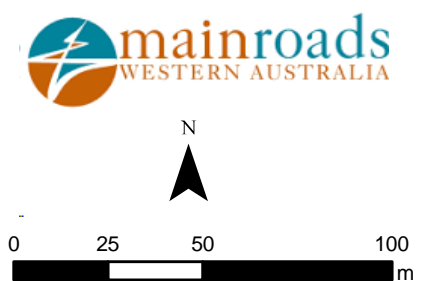
- Habitat Tree - No hollows seen
- Survey area (Main Roads 2020)
- Potential Black cockatoo foraging and WRP habitat
- Black cockatoo, WRP habitat value
- Unlikely habitat or canopy only

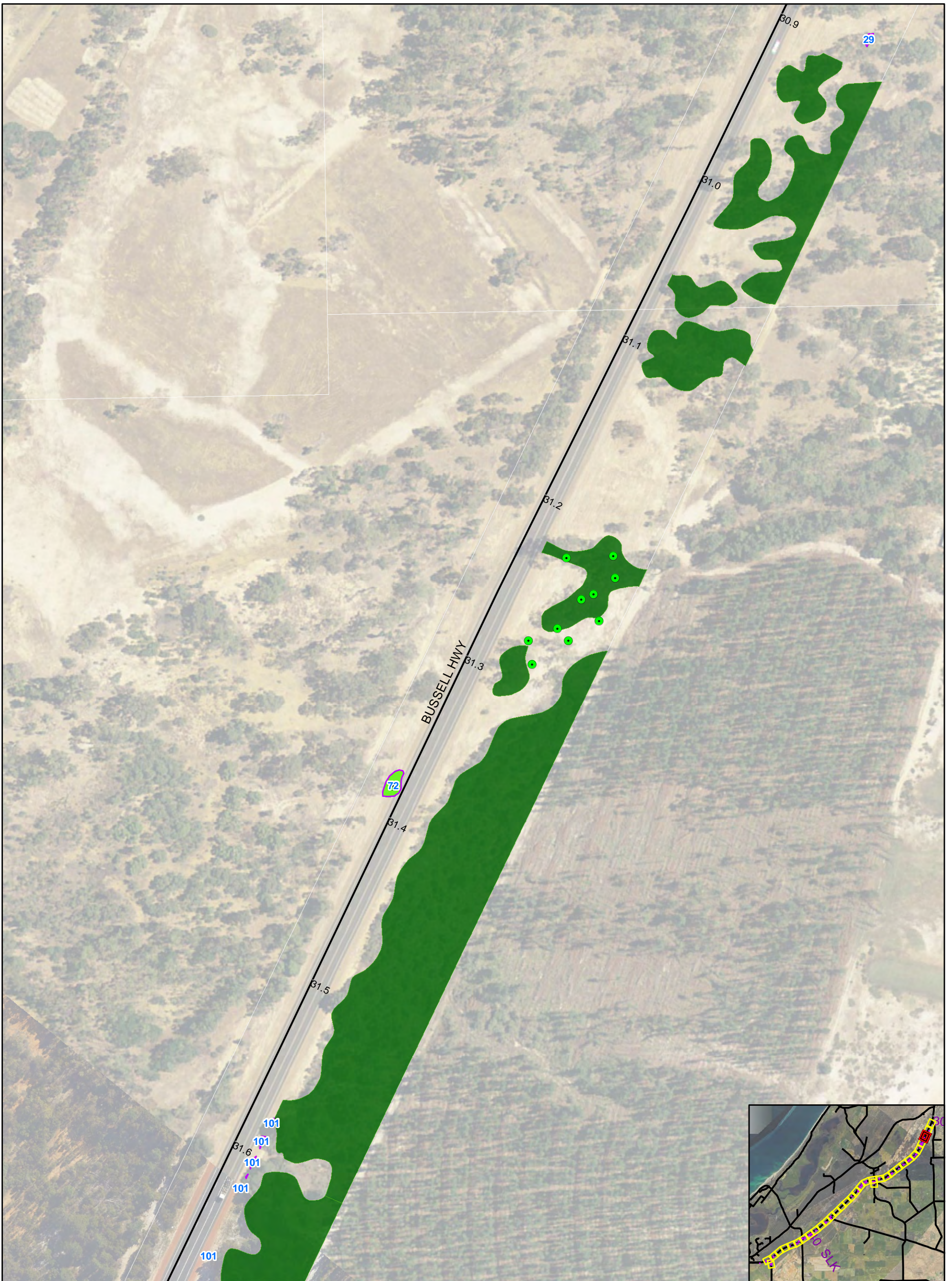




**Bussell Highway Hutton to Sabina**  
Map 30

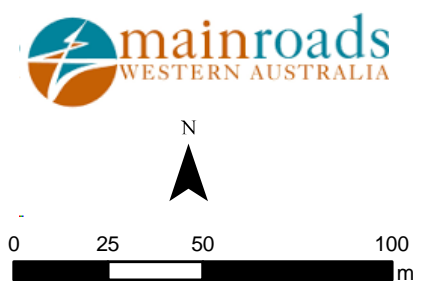
- Habitat Tree - No hollows seen
- Survey area (Main Roads 2020)
- Potential Black cockatoo foraging habitat
- Potential Black cockatoo foraging and WRP habitat
- Unlikely habitat or canopy only





**Bussell Highway Hutton to Sabina**  
Map 31


- Habitat Tree - No hollows seen
- Survey area (Main Roads 2020)
- Potential Black cockatoo foraging and WRP habitat
- 101 Black cockatoo, WRP habitat value
- Potential Black cockatoo foraging habitat




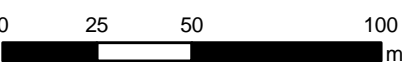


**Busseil Highway Hutton to Sabina**  
Map 32

- Habitat Tree - No hollows seen
- Potential Black cockatoo foraging and WRP habitat
- Survey area (Main Roads 2020)
- Black cockatoo, WRP habitat value
- Potential Black cockatoo foraging habitat

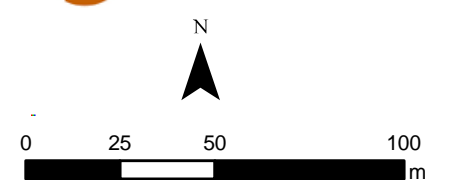


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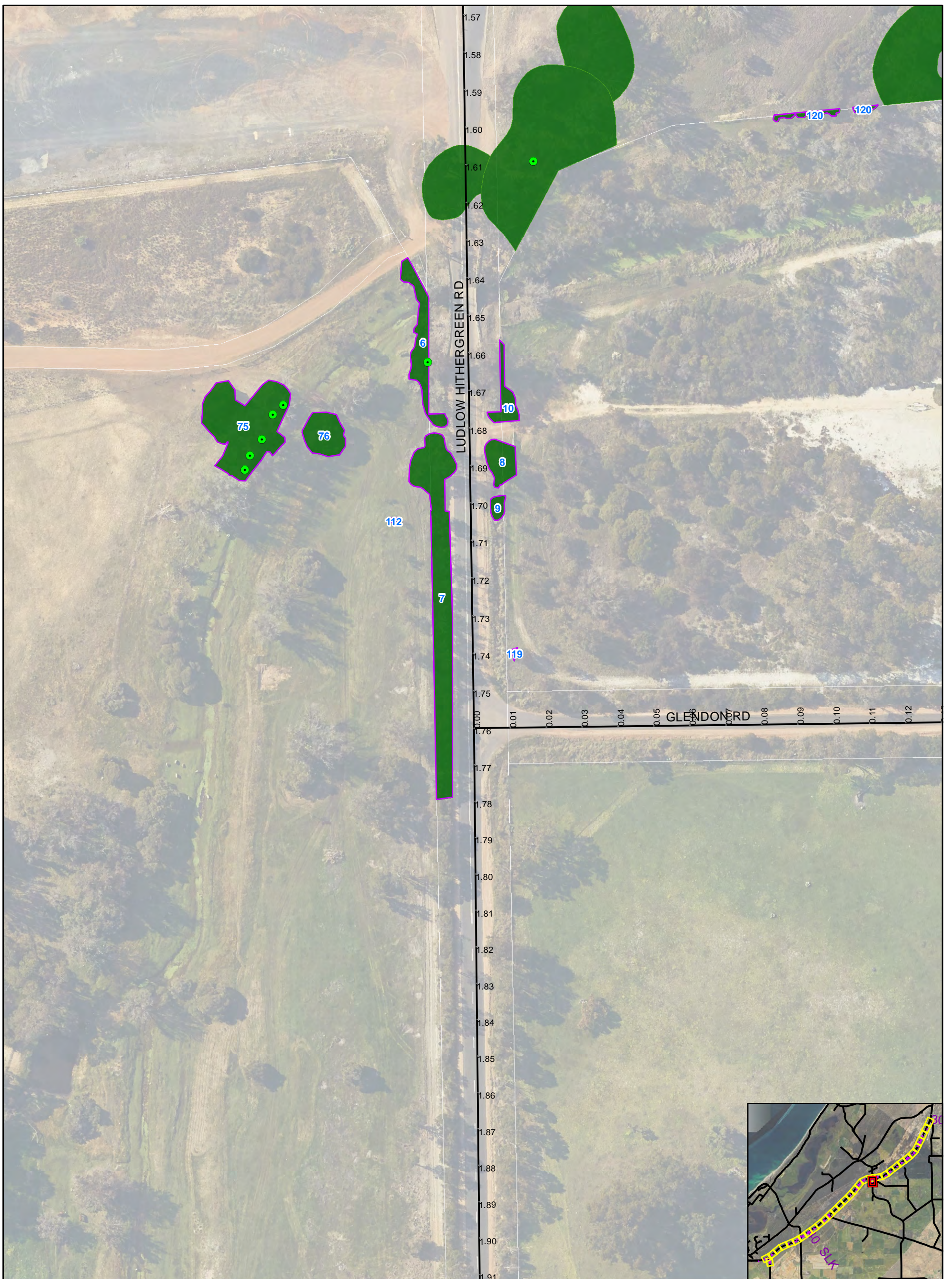





Bussell Highway Hutton to Sabina  
Map 33







**Bussell Highway Hutton to Sabina**  
Map 34

- Habitat Tree - No hollows seen
- Survey area (Main Roads 2020)
- Black cockatoo, WRP habitat value
- Potential Black cockatoo foraging and WRP habitat