



WAPC

Western
Australian
Planning
Commission

September 2025

Metropolitan Region Scheme Amendment 1344/57 (Minor Amendment)



Maida Vale Urban Precinct

Submissions 1 - 65
Volume 1 of 2

City of Kalamunda

**Metropolitan Region Scheme
Amendment 1344/57
(Minor Amendment)**

Maida Vale Urban Precinct

Submissions 1 - 65

City of Kalamunda

Volume 1 of 2



WAPC

Western
Australian
Planning
Commission

September 2025

The Western Australian Planning Commission acknowledges Aboriginal people as the traditional custodians of Western Australia. We pay our respects to the Ancestors and Elders, both past and present, and the ongoing connection between people, land, waters, and community. We acknowledge those who continue to share knowledge, their traditions and culture to support our journey for reconciliation. In particular, we recognise land and cultural heritage as places that hold great significance for Aboriginal people.

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MRS Amendment 1344/57 (Minor) Submissions 1 - 65
File 833-2-24-63 Pt 2 (Vol 1 of 2)

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This document is available in alternative formats on application to the Department of Planning, Lands and Heritage Communications Branch.

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Department of
**Primary Industries and
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SUBMISSION

1

Your reference: 833-2-24-63 Pt 1
(RLS/0756)
Our reference: LUP 1703
Enquiries: Greg Doncon

Ms Sam Fagan
Secretary
Western Australian Planning Commission
140 William Street Perth WA 6000

Email: referrals@dplh.wa.gov.au

Date: 11 October 2023

Dear Sam

**Proposed Metropolitan Region Scheme Amendment 1344/57
Maida Vale Urban Precinct**

Thank you for inviting the Department of Primary Industries and Regional Development (DPIRD) to comment on the above proposal.

DPIRD does not object to the proposed amendment to rezone approximately 177.53 ha of land in Maida Vale from the 'Rural' zone to the 'Urban Deferred' zone in the Metropolitan Region Scheme, as the land is not used for agriculture. The land is currently used for rural residential purposes.

For more information, please contact Greg Doncon on 90813117 or
greg.doncon@dpird.wa.gov.au

Yours sincerely

Mr Timothy Overheu
**Acting Director Agriculture Resource Management Assessment
Sustainability and Biosecurity**

Section 57 Amendment (Minor)
Form 57

Submission

Metropolitan Region Scheme Amendment 1344/57

Maida Vale Urban Precinct

To: Secretary
Western Australian Planning Commission
Locked Bag 2506
PERTH WA 6001

OFFICE USE ONLY

SUBMISSION NUMBER

2

RLS/110

Title (Mr, Mrs, Miss, Ms) First Name

Surname **Name and contact details removed at the request of the submitter** (PLEASE PRINT CLEARLY)

Address .. Postcode ..

Contact phone number Email address

Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission? ☒ Yes ☐ No

Submission (Please attach additional pages if required. It is preferred that any additional information be loose rather than bound)

I am writing to express my concerns for the proposed regional rezoning for Maida Vale, specifically

for my property, After reviewing the MRS 1344/57
Environmental Assessment, it is not 100% clear whether our lot is being partially rezoned as
public open space. We do not want our lot to be zoned as public open space as there is no
legitimate reason for it. There are no confirmed black cockatoo nesting trees located on our
lot and there are no threatened or priority flora species located on our lot. We can see from the
Environmental Assessment that the adjacent lot (lot 30) contains numerous threatened and
priority flora species, however, this should not affect the proposed zoning of our lot as our lot is
relatively clear and does not contain any threatened or priority flora species.

Another concern we have is Note 1 on page 157 of the Environmental Assessment. This note
states that "Additional areas of local open space will be investigated and provided at detailed
structure planning stage". Within our cul-de-sac there are already two proposed areas of
local open space. If additional areas of local open space are to be proposed, they should be
located in the area between Bruce road and Ravenswood road or the area bordered by
Kent, Brewer, Harold and Hawtin road, as these areas do not have much proposed local
open space and contain more black cockatoo potential breeding trees than our area does.

On a more personal note, we purchased this lot in late 2022 with the intention of it being

turn over to complete your submission

(Submission continued. Please attach additional pages if required)

our forever home where we can raise a family. We were aware of the proposed Maida Vale South urbanisation project when purchasing the lot, but never had any intention of selling to a developer. We both grew up on large properties and have always wanted the same for our kids. We do not want this rezoning to be approved and would much prefer for our property to remain zoned as rural. However, if the rezoning is approved, we want to be zoned as residential rather than public open space. We worked hard to afford this property and didn't pay over a million dollars for our property to be reclaimed as public open space. We hope that you consider our submission and understand that this is our dream home and we will do anything to keep it.

You should be aware that:

- The WAPC is subject to the *Freedom of Information Act 1992* and as such, submissions made to the WAPC may be subject to applications for access under the act.
- In the course of the WAPC assessing submissions, or making its report on these submissions, copies of your submission or the substance of that submission, may be disclosed to third parties.

To be signed by person(s) making the submission

Signature Date 06/10/2023

**Note: Submissions MUST be received by the advertised closing date 28 NOVEMBER 2023.
Late submissions will NOT be considered.**

Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-26 14:20:15

About you

1 What is your first name?

First name: **Name and contact details removed at the request of the submitter**

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

The Environmental Assessment Plan (EAP) compiled by 360 Environmental does not comply with the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), and therefore cannot be considered valid for the purposes of the proposed MRS Minor amendment 1344/57. Furthermore, the presence of a nationally threatened species within the proposed amendment area is a matter of national environmental significance and must be referred to the Federal Government.

WHAT IS THE EPBC ACT:

According to the Department of Climate Change, Energy, Environment and Water (Link 1):

"The Environment Protection and Biodiversity Conservation Act 1999 (the EPBC Act) is the Australian Government's central piece of environmental legislation.

The EPBC Act provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places—defined in the EPBC Act as matters of national environmental significance.

The nine matters of national environmental significance to which the EPBC Act applies are:

- world heritage properties
- national heritage places
- wetlands of international importance (often called 'Ramsar' wetlands after the international treaty under which such wetlands are listed)
- nationally threatened species and ecological communities
- migratory species
- Commonwealth marine areas
- the Great Barrier Reef Marine Park
- nuclear actions (including uranium mining)
- a water resource, in relation to coal seam gas development and large coal mining development."

WHO DOES THE EPBC ACT APPLY TO:

According to the Department of Climate Change, Energy, Environment and Water (Link 1):

"The EPBC Act affects any group or individual (including companies) whose actions may have a significant impact on a matter of national environmental significance. This includes:

- landowners
- developers
- industry
- farmers
- councils
- state and territory agencies
- Commonwealth agencies."

WHEN DOES A PROJECT NEED TO BE ASSESSED BY THE FEDERAL GOVERNMENT:

According to the Department of Climate Change, Energy, Environment and Water (Link 1):

"When a person (a 'proponent') wants an action (often called a 'proposal' or 'project') assessed for environmental impacts under the EPBC Act, he or she must refer the project to the Department of Sustainability, Environment, Water, Population and Communities. This 'referral' is then released to the public, as well as relevant state, territory and Commonwealth ministers, for comment on whether the project is likely to have a significant impact on matters of national environmental significance.

The minister or the minister's delegate will then decide whether the likely environmental impacts of the project are such that it should be assessed under the EPBC Act. Any relevant public comments are taken into consideration in making that decision."

WHY DOES THE EPBC ACT APPLY:

According to page 4 of the "EPBC Act referral guidelines for three threatened black cockatoo species: Carnaby's Cockatoo, Baudin's Cockatoo, Forest red-tailed black cockatoo" (Attachment 1), the Carnaby's cockatoo, Baudin's cockatoo and the Forest red-tailed black cockatoo are listed as threatened under the EPBC Act. The document also states that "Listed threatened species and ecological communities are matters of national environmental significance under the EPBC Act."

According to Table 28 on page 63 (page 168 of the PDF) of the Environmental Assessment Plan (EAP) conducted by 360 Environmental, both the Carnaby's Cockatoo and the Forest Red-tailed Black Cockatoo were recorded within the proposed amendment area.

The presence of a nationally threatened species within the proposed amendment area is a matter of national environmental significance to which the EPBC Act applies. This means that the Environmental Assessment Plan prepared by 360 Environmental must comply with all aspects of the Environment Protection and Biodiversity Conservation Act 1999.

REASONS WHY THE EAP DOES NOT COMPLY WITH THE EPBC:

Data is too old:

Table 10 on page 29 (page 53 of the PDF) of the EAP shows that the Level 2 Flora and Vegetation and Fauna Report was conducted in September of 2015. This data is now 8 years old and according to the Department of Climate Change, Energy, Environment and Water (Link 2):

"We generally can't accept survey data that's more than 5 years old because:

- populations of species can change due to fires, drought, flooding and land management changes
- some species' ranges can shift due to climate change.

If your data is older than 4 years when you start planning your project, you might need to do another survey."

Appendix F of the EAP contains a supplementary survey that was undertaken in September of 2022. This supplementary survey takes credit for data from the Level 2 Flora and Vegetation and Fauna Report which was 7 years old at the time making it not acceptable by EPBC guidelines. Another full Level 2 Flora and Vegetation and Fauna Survey should be completed to make the data current.

Observations did not occur at dawn/dusk:

Page 65 (page 170 of the PDF) of the EAP states "...dawn/dusk surveys were not conducted (360 Environmental, 2023)". According to the Department of Climate Change, Energy, Environment and Water Carnaby's Black Cockatoo SPRAT Profile Survey Guidelines (Link 3): "Observations should occur at dawn and dusk, when the female is likely to move off the nest to feed." The Survey Guidelines also go on to say: "Numbers tend to be largest at the roost site between dusk and dawn (Johnstone & Kirkby 2008), and surveys for roosts should occur at these times (30 minutes before and after sunrise and sunset), as birds are leaving or returning to roost sites, over several days."

Surveys not conducted in the non-breeding season:

Table 10 on page 29 (page 53 of the PDF) of the EAP shows that a total of 3 surveys were conducted in September 2015, September 2021 and September 2022. Although this falls within the breeding season, according to the Department of Climate Change, Energy, Environment and Water Carnaby's Black Cockatoo SPRAT Profile Survey Guidelines (Link 3): "To get an accurate picture of the importance of a roost site, surveys should be conducted in both the breeding and non-breeding season." The Survey Guidelines also go on to say: "Observations should occur over several days and in more than one month during the breeding season."

Page 1745 of the EAP says that the supplementary survey "was conducted over eight days between June and September 2022" but does not mention specific dates. As there is no mention of the specific dates that this survey was conducted, this makes it difficult to say whether this survey was conducted in both the breeding and non-breeding season, raising questions about the validity of the data.

Furthermore, this supplementary survey takes credit for data from the Level 2 Flora and Vegetation and Fauna Report which according to page 184 of the EAP took place "On survey dates 16 and 21 September and 7 October 2015" which are both within the breeding season, making the data invalid.

CONCLUSION:

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) applies to the Environmental Assessment Plan (EAP) prepared by 360 Environmental due to the presence of nationally threatened species (Carnaby's cockatoo, Baudin's cockatoo and the Forest red-tailed black cockatoo) within the proposed amendment area.

The EAP references information which is older than 5 years and references surveys which were not conducted as per the Black Cockatoo Survey Guidelines under the EPBC Act. The EPBC Act stipulates that data older than 5 years will not be accepted and recommends that another survey be conducted if the data is more than 4 years old. A "supplementary" survey which takes credit for the old data is not sufficient. Furthermore, the EPBC Act

Survey Guidelines for Black Cockatoos state that observations should occur at dusk and dawn, in both the breeding and non-breeding season and in more than one month during the breeding season. 360 Environmental have failed to fulfill these requirements and as such the submitted EAP cannot be considered a valid environmental assessment plan for the purposes of the proposed MRS Minor amendment 1344/57.

RECOMMENDATIONS:

Since the EAP does not comply with various requirements of the EPBC Act, at the very least the WAPC should recommend that 360 Environmental conduct another Level 2 Flora and Vegetation and Fauna Survey as per the EPBC Act Survey Guidelines for Black Cockatoos and present data that is less than 5 years old. Specifically, another Level 2 Flora and Vegetation and Fauna Survey needs to be conducted within 4 years of the EAP submission date, in both the breeding and non-breeding season, in more than one month during the breeding season and with observations occurring at dusk and dawn. As 360 Environmental was commissioned by Monument (the developer) to prepare the EAP, the WAPC should consider approaching an independent environmental consultancy to prepare a separate EAP to avoid bias.

Finally, as the presence of a nationally threatened species within the proposed amendment area is a matter of national environmental significance, I urge the WAPC to refer this matter to the Federal Government and the Department of Sustainability, Environment, Water, Population and Communities. This will allow the matter to be released to the public, as well as relevant state, territory and Commonwealth ministers, for comment on whether the project is likely to have a significant impact on matters of national environmental significance.

REFERENCES:

Reference Link 1:

<https://www.dcceew.gov.au/environment/epbc/publications/factsheet-epbc-act-frequently-asked-questions#:~:text=Who%20does%20the%20EPBC%20Act,landow>

Reference Link 2: <https://www.dcceew.gov.au/environment/epbc/advice/surveys-and-data>

Reference Link 3: http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?showprofile=Y&taxon_id=59523

File 1:

EPBC Act referral guidelines for three threatened black cockatoo species.pdf was uploaded

File 2:

Submission - EAP Does Not Comply With EPBC.docx was uploaded

File 3:

No file uploaded



Australian Government

**Department of Sustainability, Environment,
Water, Population and Communities**



EPBC Act referral guidelines for three threatened black cockatoo species:

Carnaby's cockatoo (endangered) *Calyptorhynchus latirostris*

Baudin's cockatoo (vulnerable) *Calyptorhynchus baudinii*

Forest red-tailed black cockatoo (vulnerable) *Calyptorhynchus banksii naso*



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Disclaimer

The contents of this document have been compiled using a range of source materials and is valid as at April 2012. The Australian Government is not liable for any loss or damage that may be occasioned directly or indirectly through the use of reliance on the contents of the document.

Front page photograph: male Carnaby's cockatoo (Leonie McMahon).



Important notice

Please note that these guidelines are general in nature and do not remove your obligation to consider whether you need to make a referral to the federal environment minister under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). While these guidelines provide information to help you decide whether to refer your action, the possible impacts of your proposal will depend on the particular circumstances of the action. These circumstances may include issues such as the proximity of the action to habitat, indirect impacts and impact-mitigation measures.

These guidelines were made on the basis of the best information available at the time of writing. However, the impacts of proposals will be assessed by the department on the basis of the best information available at that point in time, which may differ from the information on which these guidelines are based.

These guidelines do not provide guidance on requirements under state and local government laws. Information on Western Australian and local government council laws can be obtained from the Western Australian Department of Environment and Conservation (www.dec.wa.gov.au/) and the local councils in or near the proposed project area.



How to use these guidelines

These guidelines are intended to assist you in determining whether your action needs to be referred to the Australian Government Department of Sustainability, Environment, Water, Population and Communities (the department). These guidelines should be read in conjunction with EPBC Act Policy Statement 1.1 Significant Impact Guidelines – Matters of National Environmental Significance (www.environment.gov.au/epbc/publications/neg-guidelines.html).

These guidelines apply to Carnaby's cockatoo (*Calyptorhynchus latirostris*), Baudin's cockatoo (*Calyptorhynchus baudinii*) and the forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*), collectively referred to here as black cockatoos, anywhere they may occur in Western Australia. These species are listed as threatened under the EPBC Act as follows:

- Carnaby's cockatoo: endangered.
- Baudin's cockatoo: vulnerable.
- Forest red-tailed black cockatoo: vulnerable.

Listed threatened species and ecological communities are matters of national environmental significance under the EPBC Act.

If you plan to undertake an action that has, will have or is likely to have a significant impact on any of these species of black cockatoos, you must refer the proposal to the minister before starting. The minister will then decide within 20 business days whether assessment is required under the EPBC Act. The potential significance of each action is judged on a case-by-case basis. Substantial penalties apply for undertaking an action, to which the EPBC Act applies, without approval (civil penalties up to \$5.5 million or criminal penalties of up to seven years imprisonment). More information on referral, assessment and compliance is available at www.environment.gov.au/epbc/.

The criteria used to judge significant impact for vulnerable and endangered species are listed in the **Significant impact guidelines 1.1**. The criteria in the significant impact guidelines refer to 'populations' and 'important populations'. These terms have not been defined for black cockatoos, due to the mobile and widely-distributed nature of these species, and the variation in flock compositions (for example, between breeding and non-breeding seasons). For black cockatoos, it is more appropriate to consider significance in terms of impacts on habitat rather than a resident population. Section 6 provides guidance for when one or more of these criteria may trigger the need to refer your action.





A national recovery plan, www.environment.gov.au/biodiversity/threatened/publications/recovery/wa-forest-black-cockatoos.html is in place for Baudin's and forest red-tailed black cockatoos. A national recovery plan for Carnaby's cockatoo is in development at the time of writing. The federal environment minister must not make a decision that is inconsistent with a national recovery plan.

The decision tree in Figure 1 and the rest of these guidelines are designed to assist you in determining whether your proposed action needs to be referred. You may also refer your proposed action if you are uncertain about the need to refer, or contact the department by emailing epbc.referrals@environment.gov.au.

Possible exceptions to the need to refer

Certain actions are exempt from the requirement of assessment and approval under the EPBC Act. These include lawful continuations of land use that started before 16 July 2000, or actions that were legally authorised before 16 July 2000. There are a number of criteria that must be satisfied to rely on any such exemptions. More information on exemptions under the EPBC Act is available at www.environment.gov.au/epbc/publications/exemptions.html.

Under certain circumstances a Regional Forest Agreement (RFA) forestry operation that is undertaken in accordance with an RFA may also be exempt from having to be referred under the EPBC Act. For more information on RFAs see www.daff.gov.au/rfa.



WHERE TO GET MORE INFORMATION

The **SPRAT** profiles for these species provides the biological and ecological context for survey guidelines, significant impact guidance and mitigation measures. They can be accessed at www.environment.gov.au/cgi-bin/sprat/public/sprat.pl.

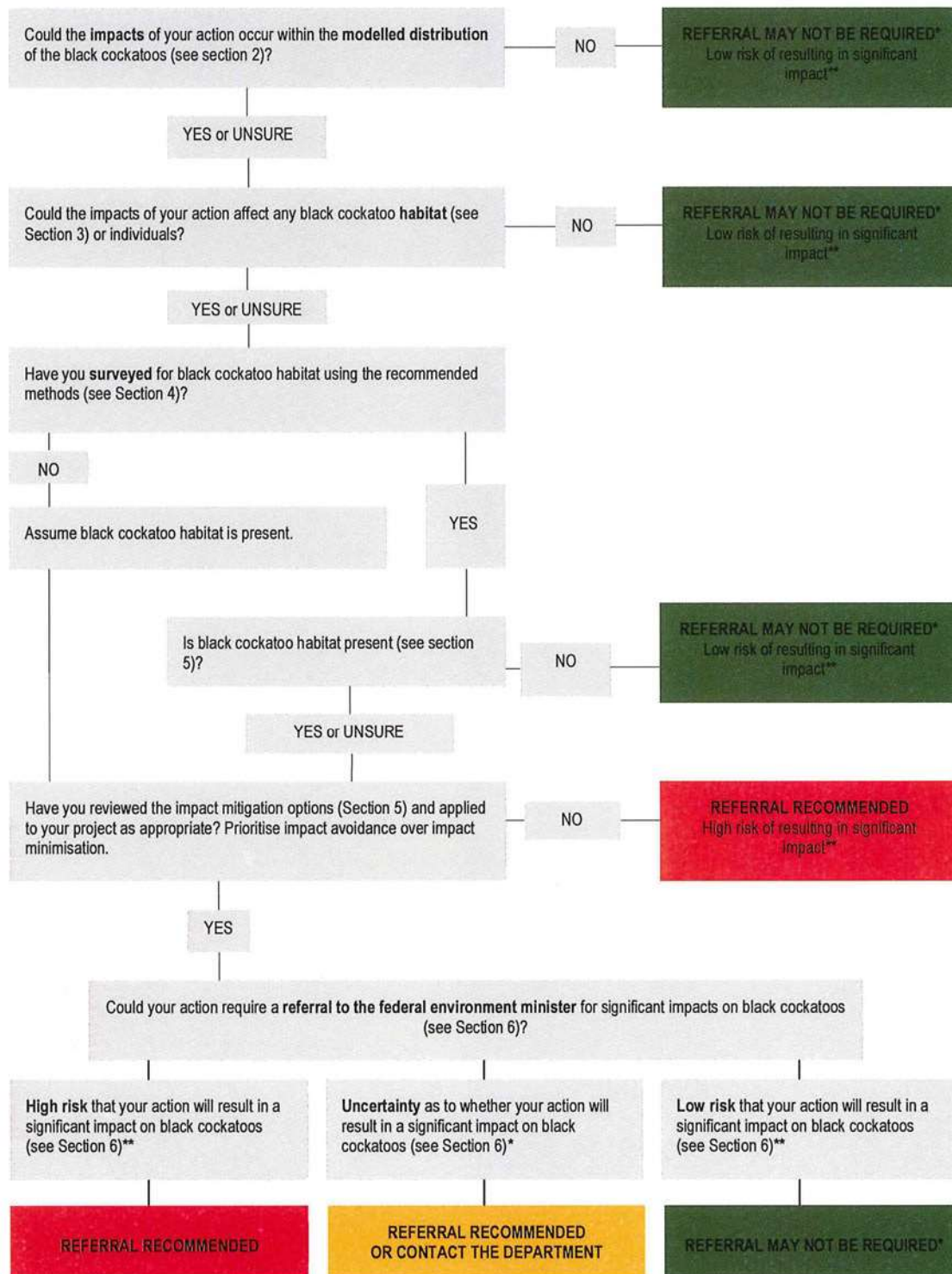
Other EPBC Act policy statements are available to help you understand the EPBC Act and your obligations. They are available from the department's website at www.environment.gov.au/epbc/guidelines-policies.html or by contacting the community information unit by email: ciu@environment.gov.au or by phone: 1800 803 772. The department can provide assistance in ensuring your action complies with the EPBC Act, especially when contacted early in the planning process.

The **Protected Matters Search Tool**, www.environment.gov.au/epbc/pmst/index.html can provide a good starting point for determining the likelihood of having matters of national environmental significance in your area. State and territory government agencies may also hold relevant information including habitat and species distribution information.

Further information on these species can be obtained from the Western Australian Department of Environment and Conservation and relevant non-government agencies.



Figure 1: Decision making



* Although it may appear that there is a low risk of a significant impact, and that a referral may not be required, you may still choose to refer your proposed action. If you are uncertain about the need to refer then you can contact the department to discuss your action by emailing epbc.referrals@environment.gov.au.

** Risk is the chance of something happening that will have a [significant] impact on objectives [for example, protecting matters of national environmental significance] (adapted from Australian / New Zealand Risk Management Standard ISO 31000:2009).



1. WHAT IS KNOWN ABOUT BLACK COCKATOOS?

Black cockatoos are long-lived, slow-breeding birds that display strong pair bonds and probably mate for life. These characteristics exacerbate the effects of population decline and habitat loss, and make population recovery very slow.

Baudin's cockatoo breeds from August/September to February/March, while Carnaby's cockatoo breeds from July/August to January/February. The forest red-tailed black cockatoo is thought to breed in October/November, but in years with good autumn rainfall they may breed in March/April. All three black cockatoos addressed in these guidelines breed in hollows in very long-lived trees. Hollows large enough for nesting black cockatoos are usually only found in trees that are more than 200 years old.

Currently, the overall population trend for all three black cockatoo species is declining. Large-scale clearing has seen a significant proportion of original black cockatoo habitat removed. Habitat loss and alteration continue to contribute to the major decline in population density and occupancy of habitat across the range.

Relevant background information on the biology and ecology of the black cockatoos is provided in the department's **Species Profile and Threats (SPRAT)** database.





2. COULD THE IMPACTS OF YOUR ACTION¹ OCCUR WITHIN THE MODELLED DISTRIBUTION OF BLACK COCKATOOS?

Baudin's cockatoo breeds in the eucalypt forests of the south western humid and subhumid zones. From March, flocks migrate north to the central and northern parts of the Darling Scarp for the non-breeding season. Some flocks also move on to the southern Swan Coastal Plain and south coast during the non-breeding season (Map 1). They move back to breeding areas from August.

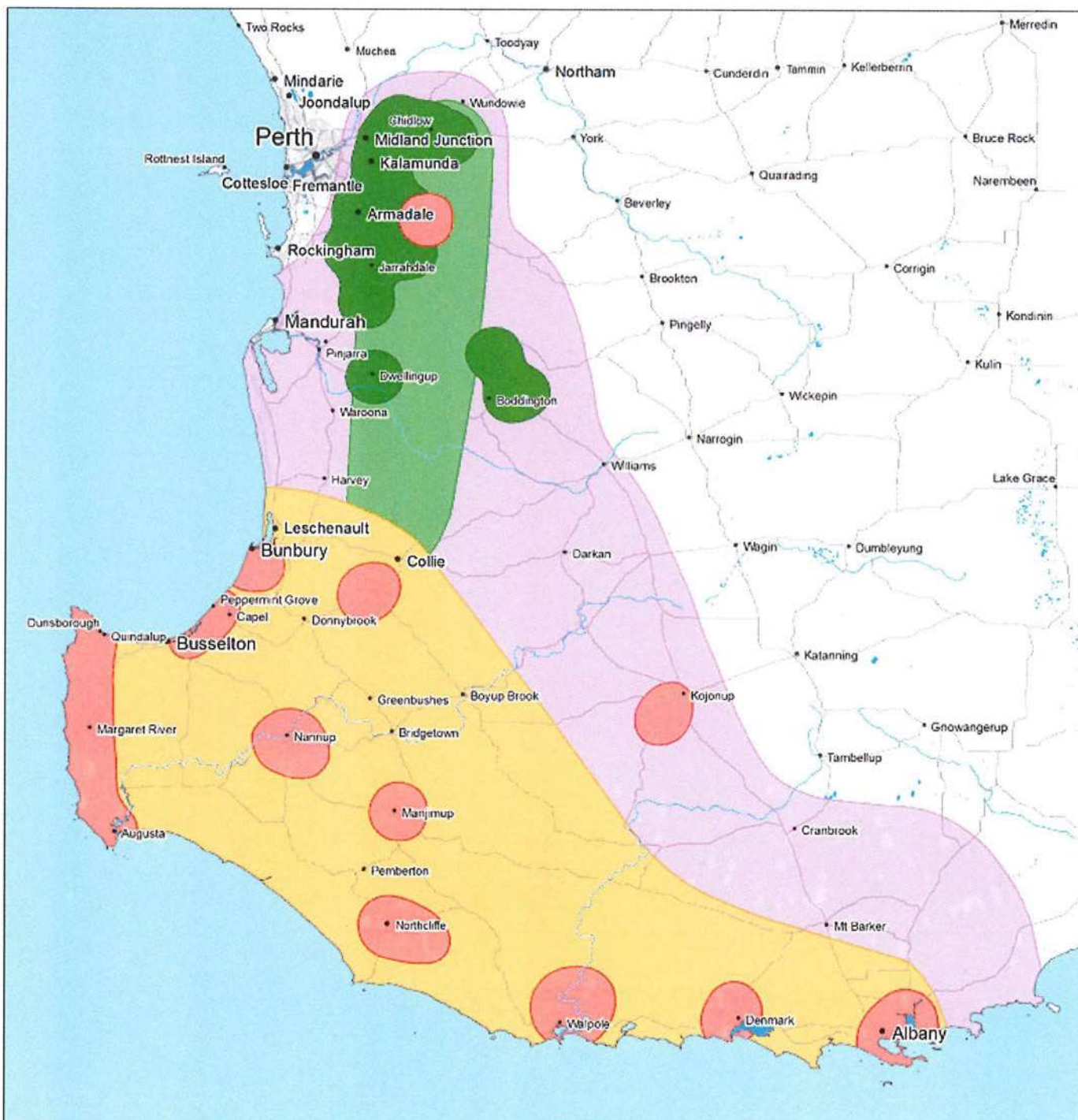
Carnaby's cockatoo breeds in the semi-arid and sub-humid interior ("wheatbelt") and some locations along the south and west coasts (Map 2). From late January/early February most interior-breeding birds leave their breeding areas, moving west, south and east towards the coast. The movement back to breeding sites in the interior occurs in July/August, and September/October to breeding areas on the Swan Coastal Plain.

The forest red-tailed black cockatoo is endemic to the south-west humid and subhumid zones of Western Australia (Map 3). Their distribution extends north to Perth and east to Wundowie, Mount Helena, Christmas Tree Well, North Bannister, Mount Saddleback, Rocky Gully and the upper King River. They are also found on parts of the Swan Coastal Plain.

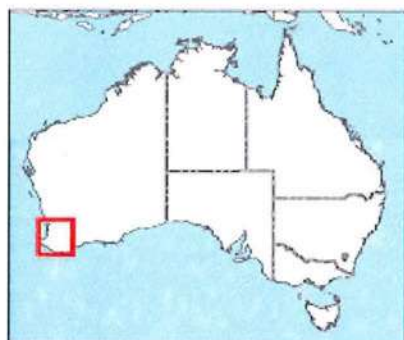
The maps presented in this document are based on the best available information at the time of publication and remain a static product. For the most up-to-date report of whether black cockatoos may occur in your project area, always use the **Protected Matters Search Tool**.

¹ When considering whether your action will have a significant impact on black cockatoos, you should consider all adverse impacts from the action, including direct, indirect and offsite impacts such as downstream, upstream and facilitated impacts (impacts that result from further actions, which are made possible or facilitated by the action).

Map 1: Modelled distribution of Baudin's black cockatoo (*Calyptrorhynchus baudinii*)



INDICATIVE MAP ONLY: For the latest departmental information, please refer to the Protected Matters Search Tool at www.environment.gov.au/epbc/index.html



0 20 40 60 80 100 km



Australian Government

**Department of Sustainability, Environment,
Water, Population and Communities**

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Contextual data sources:
DEWHA (2006), Collaborative Australian Protected Areas Database
Geoscience Australia (2005), Geodata Topo 250K Topographic Data

Legend

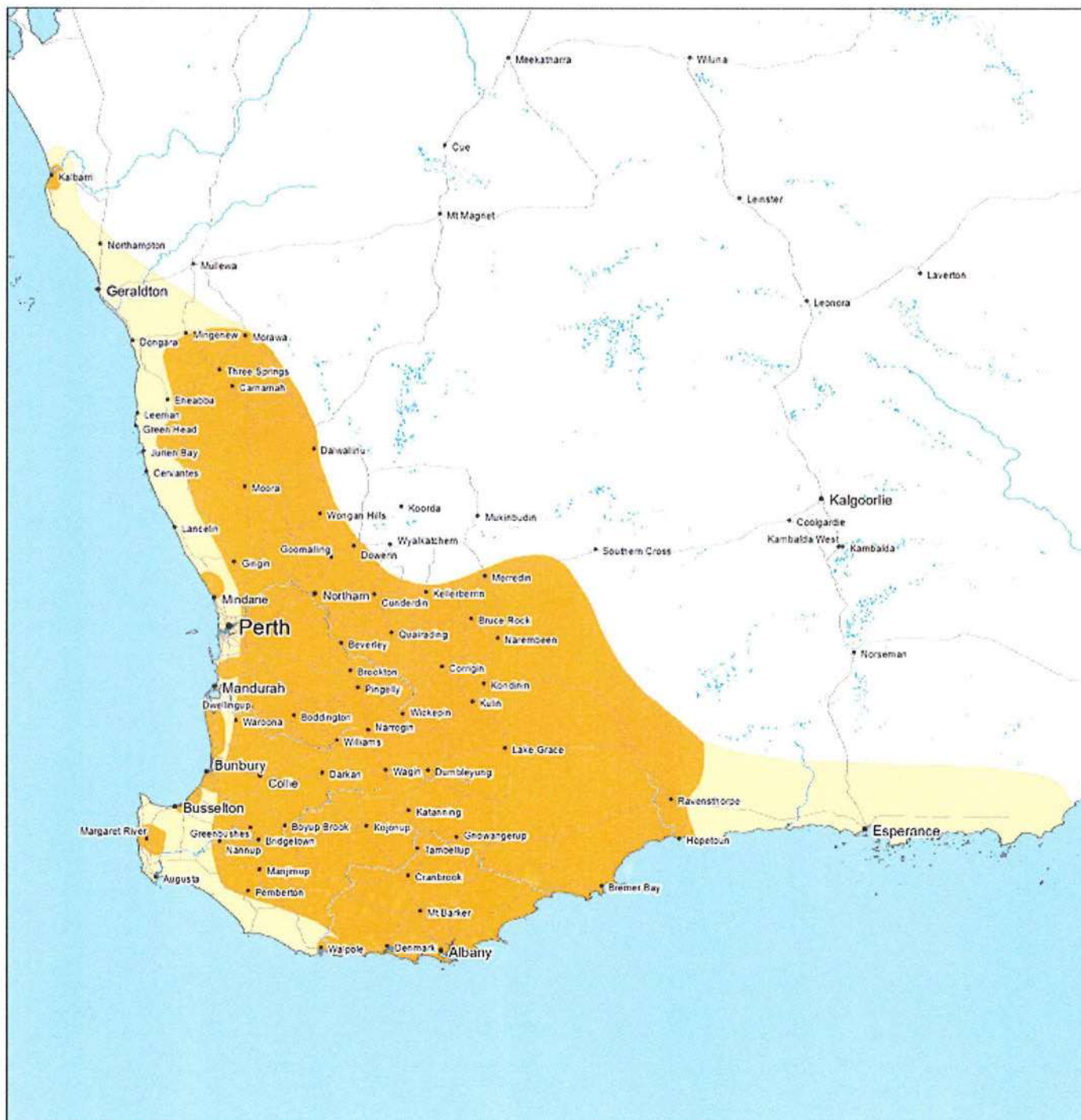
- Known Breeding Areas
- Predicted Breeding Range
- Known Foraging Areas
- Main Wintering Area
- Species Likely to Occur
- Cities & Towns
- Roads
- Major Rivers
- Lakes

Please Note: Known breeding areas represent locations known to be used by birds for breeding as at December 2009. As habitat has been lost in traditional breeding areas, birds have begun breeding at new locations. Distribution created and verified using point locations in SPRAT database (DSEWPac, 2011) and from expert feedback (R. Johnstone, 2011).

CAVEAT: The information presented in this map has been provided by a range of groups and agencies. While every effort has been made to ensure accuracy and completeness, no guarantee is given, nor responsibility taken by the Commonwealth for errors or omissions, and the Commonwealth does not accept responsibility in respect of any information or advice given in relation to, or as a consequence of, anything containing herein.

INDICATIVE MAP ONLY: This map has been compiled from datasets with a range of geographic scales and quality. Species or ecological community distributions are indicative only and not to be used for local assessment. Local knowledge and information should be sought to confirm the presence of the species, or species habitat, at the location of interest.

**Map 2: Modelled distribution of Carnaby's black cockatoo
(*Calyptorhynchus latirostris*)**



INDICATIVE MAP ONLY: For the latest departmental information, please refer to the Protected Matters Search Tool at www.environment.gov.au/epbc/index.html



0 50 100 150 200 250 km



Australian Government

**Department of Sustainability, Environment,
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Contextual data sources:
DEWHA (2006), Collaborative Australian Protected Areas Database
Geoscience Australia (2006), Geodata Topo 250K Topographic Data

Legend

- Breeding Range
- Non-breeding Range
- Cities & Towns
- Lakes
- Roads
- Major Rivers

Please Note: The breeding range represents the areas known to be used by birds for breeding as at December 2009. As habitat has been lost in traditional breeding areas, birds have begun breeding at new locations. Distribution created and verified using point locations in SPRAT database (DSEWPoC, 2011) and from expert feedback (R. Johnstone, 2011).

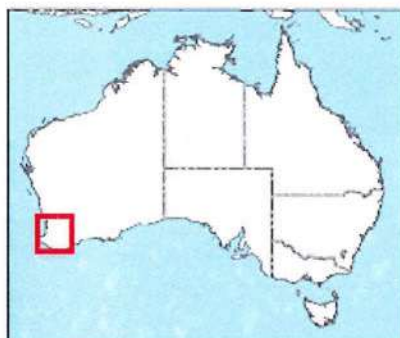
CAVEAT: The information presented in this map has been provided by a range of groups and agencies. While every effort has been made to ensure accuracy and completeness, no guarantee is given, nor responsibility taken by the Commonwealth for errors or omissions, and the Commonwealth does not accept responsibility in respect of any information or advice given in relation to, or as a consequence of, anything containing here in.

INDICATIVE MAP ONLY: This map has been compiled from datasets with a range of geographic scales and quality. Species or ecological community distributions are indicative only and not to be used for local assessment. Local knowledge and information should be sought to confirm the presence of the species, or species habitat, at the location of interest.

Map 3: Modelled distribution of forest red-tailed black cockatoo
(Calyptorhynchus banksii naso)



INDICATIVE MAP ONLY: For the latest departmental information, please refer to the Protected Matters Search Tool at www.environment.gov.au/epbc/index.html



Produced by: Environmental Resources Information Network (ERIN)
 COPYRIGHT Commonwealth of Australia, 2011

Contextual data sources:
 DEWHA (2006), Collaborative Australian Protected Areas Database
 Geoscience Australia (2006), Geodata Topo 250K Topographic Data

Legend

- Species May Occur
- Cities & Towns
- Roads
- Major Rivers
- Lakes

Please Note: Distribution created and verified using point locations in SPRAT database (DSEWPac, 2011) and from expert feedback (R. Johnstone, 2011).

CAVEAT: The information presented in this map has been provided by a range of groups and agencies. While every effort has been made to ensure accuracy and completeness, no guarantee is given, nor responsibility taken by the Commonwealth for errors or omissions, and the Commonwealth does not accept responsibility in respect of any information or advice given in relation to, or as a consequence of, anything contained herein.
INDICATIVE MAP ONLY: This map has been compiled from datasets with a range of geographic scales and quality. Species or ecological community distributions are indicative only and not to be used for local assessment. Local knowledge and information should be sought to confirm the presence of the species, or species habitat, at the location of interest.



3. COULD THE IMPACTS OF YOUR ACTION AFFECT HABITAT FOR BLACK COCKATOOS?

The seasonal movements of black cockatoos means they require large areas of habitat for breeding, night roosting and foraging, as well as connectivity between these habitats to assist their movement through the landscape.

Breeding habitat

Black cockatoos breed in large hollow-bearing trees, generally within woodlands or forests. The size of the tree (measured as the diameter at breast height) can be a useful indication of the hollow-bearing potential of the tree. In a woodland stand with trees of suitable diameter at breast height, all trees of all ages and size are potentially important for maintaining breeding in the long term through maintaining the integrity of the habitat and allowing for recruitment of trees to provide future nest hollows. Maintaining the long-term supply of trees of a size to provide suitable nest hollows is particularly important in woodland stands that are known to support cockatoo breeding.

'Breeding habitat' is defined in these referral guidelines as trees of species known to support breeding (see Table 1) within the range of the species which either have a suitable nest hollow OR are of a suitable diameter at breast height (DBH) to develop a nest hollow. For most tree species, suitable DBH is 500 mm. For salmon gum and wandoo, suitable DBH is 300 mm.

Foraging habitat

While breeding, black cockatoos will generally forage within a 6–12 km radius of their nesting site. Following breeding, birds assemble into flocks and move through the landscape searching for food, usually foraging within 6 km of a night roost. Because of this mobility, potential for reduced seed set and flowering due to drought, and the irregular or infrequent flowering and fruiting patterns of many of their food sources, large areas of foraging habitat are required to support black cockatoo populations.



Night roosting habitat

All three black cockatoos use communal night roosting sites. Flocks may use several different night roosts across the year, with major night roosts typically used for a period of weeks or until the local foraging resources are exhausted. Flocks of black cockatoos show some fidelity to roost sites, with 'traditional' night roost sites being used in most years to access high-quality feeding sites. Due to changing patterns of food and water availability across the landscape, not all night roosts will be used every year. Different roost sites are used under different weather conditions, so a flock requires a range of options within each area frequented.

Carnaby's and Baudin's cockatoos mainly use night roost sites in the non-breeding areas. However, both breeding and non-breeding forest red-tailed black cockatoos use night roosting sites. Groups of birds will roost in a suitable tree or group of tall trees, usually close to an important water source, and within an area of quality foraging habitat. The cockatoos fly to feeding areas each day before returning to the night roost. However, use of a particular night roost site may vary from daily to weekly. Night roosts are generally located in the tallest trees in an area.

Details on the habitat types used by each species for breeding, foraging and night roosting are listed in Table 1.





Table 1: habitats used by black cockatoos.

Habitat	Baudin's	Carnaby's	Forest red-tailed
Breeding²	Generally in woodland or forest ³ , but may also breed in former woodland or forest now present as isolated trees. Nest in hollows in live or dead trees of karri <i>Eucalyptus diversicolor</i> , marri <i>Corymbia calophylla</i> , wandoo <i>E. wandoo</i> and tuart <i>E. gomphocephala</i> .	Generally in woodland or forest ³ , but also breeds in former woodland or forest now present as isolated trees. Nest in hollows in live or dead trees of salmon gum <i>E. salmonophloia</i> , wandoo, tuart, jarrah <i>E. marginata</i> , flooded gum <i>E. rudis</i> , york gum <i>E. loxophleba</i> subsp. <i>loxophleba</i> , powderbark <i>E. accedens</i> , karri and marri.	Generally in woodland or forest ³ , but may also breed in former woodland or forest now present as isolated trees. Nest in hollows in live or dead trees of marri, karri, wandoo, bullich <i>E. megacarpa</i> , blackbutt <i>E. patens</i> , tuart and jarrah.
Night roosting⁴	Generally in or near riparian environments or other permanent water sources. Jarrah, marri, flooded gum, blackbutt <i>E. patens</i> , tuart, and introduced eucalypts including blue gum <i>E. globulus</i> , and lemon scented gum <i>Corymbia citriodora</i> .	Generally in or near riparian environments or natural and artificial permanent water sources. Flat-topped yate <i>E. occidentalis</i> , salmon gum, wandoo, marri, karri, blackbutt, tuart, introduced eucalypts (for example blue gum) and introduced pines.	Tall jarrah, marri, blackbutt, tuart and introduced eucalypt trees within or on the edges of forests.

2. See glossary (p25).

3. For definitions see for example the CSIRO *Australian soil and land survey field handbook*.

4. Black cockatoos may roost overnight in any native or introduced tree in the Perth metropolitan area which has suitable features (including height and proximity to water and foraging habitat).



Habitat	Baudin's	Carnaby's	Forest red-tailed
Foraging	Eucalypt woodlands and forest, and proteaceous woodland and heath. During the breeding season feed primarily on native vegetation, particularly marri. Outside the breeding season, may feed in fruit orchards (mostly apple and pear, but also persimmon) and tips of <i>Pinus</i> spp.	Native shrubland, kwongan heathland and woodland dominated by proteaceous plant species such as <i>Banksia</i> spp. (including <i>Dryandra</i> spp.), <i>Hakea</i> spp. and <i>Grevillea</i> spp. Forages in pine plantations (<i>Pinus</i> spp.), eucalypt woodland and forest that contains foraging species. Also individual trees and small stands of these species.	Jarrah and marri woodlands and forest, and edges of karri forests including wandoo and blackbutt, within the range of the subspecies.
Foraging: common food items	Mostly marri (seeds, flowers, nectar and grubs) and proteaceous trees and shrubs. Also other native seeds and introduced fruits; insects and insect larvae; pith of kangaroo paw <i>Anigozanthos flavidus</i> ; juice of ripe persimmons; tips of <i>Pinus</i> spp. and seeds of apples and pears.	Seeds, flowers and nectar of native proteaceous plant species (for example, <i>Banksia</i> spp., <i>Hakea</i> spp., <i>Dryandra</i> spp. and <i>Grevillea</i> spp), eucalypts and Callistemon. Also seeds of introduced species including <i>Pinus</i> spp., <i>Erodium</i> spp., wild radish, canola, almonds and pecan nuts; insects and insect larvae; occasionally flesh and juice of apples and persimmons.	Mostly seeds of marri and jarrah, also <i>Eucalyptus caesia</i> , <i>illyarrie E. erythrocorys</i> and some introduced eucalypts such as river red gum <i>E. camaldulensis</i> and flooded gum <i>E. grandis</i> , <i>Allocasuarina</i> cones, fruits of snottygobble <i>Persoonia longifolia</i> and mountain marri <i>Corymbia haematoxylon</i> . On the Swan Coastal Plain, often feed on introduced cape lilac <i>Melia azedarach</i> .





4. HAVE YOU SURVEYED FOR BLACK COCKATOO HABITAT USING THE RECOMMENDED METHODS?

A guide to conducting surveys for Carnaby's, Baudin's and forest red-tailed black cockatoo habitat is outlined below. Surveys should:

- be done by a suitably qualified person with experience in vegetation or cockatoo surveys, depending on the type of survey being undertaken
- maximise the chance of detecting the species' habitat and/or signs of use
- determine the context of the site within the broader landscape—for example, the amount and quality of habitat nearby and in the local region (for example, within 10 km)
- account for uncertainty and error (false presence and absences)
- include collation of existing data on known locations of breeding and feeding birds and night roost locations.

Habitat assessment

Habitat assessment is the primary technique used to inform decisions on significant impact for black cockatoos. Assess the extent, type and quality of the vegetation present, including the presence and extent of plants known to be used by the black cockatoos (see Table 1). In potential breeding habitat, measurements of the diameter at breast height of trees in the patch of woodland/forest must be made to determine whether the habitat meets the definition of 'breeding habitat'. Surveys for black cockatoo foraging habitat should be done in any remaining vegetation containing proteaceous heath/woodland, eucalypt woodlands or forest (particularly marri and jarrah forest) and in areas dominated by *Pinus* spp. Any area within the range of the black cockatoos that contains known food or nesting plant species is considered to be potential habitat for the species.



Additional information on black cockatoo use of an area can be determined by searching for signs of use by black cockatoos, if this information is desired. Signs of use include suitable nest hollows, feeding signs or feeding debris, and sighting records. The presence of cockatoo droppings and feathers, or 'chewed' banksia or pine cones or marri nuts, can indicate feeding by black cockatoos (including, if possible, the identification of bite patterns to indicate which black cockatoo species fed there). This can be assessed at any time of year, as cones can remain on the ground for up to two years. Signs of use should be identified by a person with at least three years' experience surveying for black cockatoos.

Targeted surveys for birds

Targeted presence/absence surveys for birds are considered **optional** for the purposes of environmental impact assessment, and, if done, lack of detection should not be taken to mean that black cockatoos do not use the site. Short-term surveys for bird presence are unlikely to give a true representation of habitat use by black cockatoos, due to the mobile nature of these birds and their reliance on different areas of habitat at different times of the year and between years. A guide to conducting targeted surveys can be found in the relevant **SPRAT** profiles for the three species.





5. IS YOUR IMPACT MITIGATION BEST PRACTICE SO THAT IT MAY REDUCE THE SIGNIFICANCE OF YOUR IMPACTS?

When designing your proposed action, avoiding impacts on black cockatoos should be your principal aim. Effective avoidance will result in no net loss of habitat for the species. For example, locate developments on previously cleared land that does not contain black cockatoo habitat. If you believe your options to retain habitat and preserve populations are not possible, then you should mitigate any impacts.

Table 2 outlines the main threats to black cockatoos, the associated impacts and mitigation measures to reduce the level of impacts. It is not intended to be exhaustive or prescriptive.

Impact mitigation should be monitored to ensure that it is effective and to allow for adaptive management responses.



Table 2: Primary threats, impacts and mitigation

Threat and impact	Avoidance and mitigation
<p>Habitat loss and degradation⁵</p> <ul style="list-style-type: none"> • Loss and isolation of mature, hollow-bearing trees necessary for breeding. • Lack of or loss of younger age class trees required to replace old trees that die or are destroyed, leading to a shortage of hollows in the future. • Loss, degradation and fragmentation of foraging habitat. This is particularly important in breeding areas: removal of vegetation around breeding sites, and the removal of native vegetation corridors that connect breeding and foraging sites, reduces the amount of food available to breeding birds and can affect chick survival rates. Breaks of more than 4 km have been shown to prevent breeding birds reaching resources. • Removal of native vegetation corridors, restricting the birds' ability to migrate across the landscape. • Loss, degradation and isolation of night roost sites and surrounding feeding or watering habitat. • Loss and degradation of habitat by secondary impacts such as introduction of dieback caused by <i>Phytophthora cinnamomi</i> (and other plant diseases), weed invasion which can affect seed set, and hydrological changes (such as flooding, drainage or salinity). 	<ul style="list-style-type: none"> • Mitigation and management actions should prioritise impact avoidance over impact reduction measures. • Design the action to avoid or minimise clearing of cockatoo habitat. • Manage forested and eucalypt woodland areas to protect present and future hollow-bearing trees in areas where birds breed. • Retain habitat along riparian and other corridors to preserve roosting habitat, movement corridors and watering points. • Improve and manage habitat on or next to the site of the impact. • Preserve foraging habitat near to breeding resources to allow for the successful fledging of chicks. • Re-create movement corridors between patches of remnant habitat, particularly where these link breeding or roosting sites to patches of foraging habitat. • Maintain a mosaic of vegetation age classes and species to increase the ecological value and longerterm viability of the vegetation. • Plant a mix of foraging habitat species, using local plant species. Plant in blocks or corridors of several hectares to produce enough food to sustain a local population for some weeks. Plantings should be local species of suitable quantity and quality to ensure that they contribute to the local functioning of the landscape and become self-sustaining to support black cockatoos over the long term. Note that it will take many years before new plantings are mature enough to support flocks. • Avoid or control plant diseases. • Notify landowners of the importance of artificial watering points, such as stock watering points, close to night roost sites.





Threat and impact	Avoidance and mitigation
<p>Interactions with humans</p> <ul style="list-style-type: none"> • Death or injury when hit by cars or trucks, particularly road constructions that concentrate birds at roadsides to feed on roadside vegetation and spilt grain, or drink from rainwater retained as puddles on roadsides. • Death or injury from crop protection measures which may trap or injure birds, or prohibit them from accessing nearby native vegetation. • Disturbance to birds from noise, light, vibrations and fumes. • Shooting of birds (for example where they are coming into conflict with humans over fruit or nut crops). • Poaching of birds and eggs. 	<ul style="list-style-type: none"> • Manage habitat for conservation (for example, preventing access from people, livestock, pets, machinery etc.). • Appropriate road and construction design and management to limit concentration of birds on roadsides. For example, avoid planting tree species that will attract cockatoos along road verges. • Signage to alert motorists to watch for birds along roadsides. • Practice good crop transport and farm hygiene. Cover loads (eg canola) when transporting and take care to avoid and clean up crop spills on roadsides. • In apple, pear or other tree crops that may suffer damage by black cockatoos, remove all the fruit when harvesting to avoid attracting cockatoos with surplus fruit left on trees or on the ground. • Employ effective, safe crop protection such as netting that excludes birds during production periods for fruit and nut crops. Contact the Western Australian departments of Environment and Conservation, or Agriculture and Food. • Shooting and poaching are illegal under Western Australian wildlife laws. Substantial penalties may apply to any person found guilty of interfering with native wildlife.
<p>Invasive species</p> <ul style="list-style-type: none"> • Competition for nest hollows with European honeybees and invading bird species • Injury and death from European honeybees. 	<ul style="list-style-type: none"> • Where necessary, control hollow-competing fauna (for example, feral bees, corellas, galahs, wood and mountain ducks) under licence.

5. Degradation may occur through a variety of sources, including changes to the hydrology or fire regimes, and chemical application (causing death or dieback) to known roosting or nesting trees.



6. COULD YOUR ACTION REQUIRE A REFERRAL TO THE FEDERAL ENVIRONMENT MINISTER FOR SIGNIFICANT IMPACTS ON BLACK COCKATOOS?

As the person proposing the action it is your responsibility to decide whether or not to refer your action. If you believe your action is at high risk of having a significant impact on black cockatoos, you should refer the action to the federal environment minister. If you are uncertain whether your action will have a significant impact on black cockatoos you may also refer your action or contact the department.

Table 3 provides guidance on what may be at high to low risk of requiring a referral to the department, and where uncertainty may exist. **Table 3 provides guidance on your need to refer regardless of any mitigation measures adopted.** If your action meets or exceeds the referral triggers in Table 3 you should consider the referral recommendation even if you have included mitigation in your proposed action. This guidance is not intended to be comprehensive. Other types of actions or impacts may constitute varying degrees of risk.

In determining the potential significance of your action, the department will consider the particular circumstances of your case. This may include factors such as the suitability of the habitat, its connectivity, and the amount of habitat remaining in the region.





Table 3: Referral guidelines

High risk of significant impacts: referral recommended

- Clearing of any known nesting tree (see glossary).
- Clearing or degradation of any part of a vegetation community known to contain breeding habitat (see Section 3).
- Clearing of more than 1 ha of quality⁶ foraging habitat⁷ (see Table 1).
- Clearing or degradation (including pruning the top canopy) of a known night roosting site (see glossary).
- Creating a gap of greater than 4 km between patches of black cockatoo habitat (breeding, foraging or roosting).

Uncertainty: referral recommended or contact the department

- Degradation (such as through altered hydrology or fire regimes) of more than 1 ha of foraging habitat⁷. Significance will depend on the level and extent of degradation and the quality of the habitat.
- Clearing or disturbance in areas surrounding black cockatoo breeding, foraging or night roosting habitat that has the potential to degrade habitat through introduction of invasive species, edge effects, hydrological changes, increased human visitation or fire.
- Actions that do not directly affect the listed species but that have the potential for indirect impacts such as increasing competitors for nest hollows.
- Actions with the potential to introduce known plant diseases such as *Phytophthora* spp. to an area where the pathogen was not previously known.

Low risk of significant impacts: referral may not be required

- Actions that do not affect black cockatoo habitat or individuals.
- Actions whose impacts occur outside the modelled distribution of the three black cockatoos.

6. Quality should be assessed as it pertains specifically to black cockatoo use of the habitat. For example, the condition of the understorey is a standard component of most ecological habitat quality surveys but is of limited relevance to considerations for some black cockatoos, particularly in relation to breeding habitat which may consist of mature woodland canopy with little or no understorey.
7. Maintaining the availability of foraging habitat is especially important in the breeding range, as sufficient foraging habitat within a 6–12 km radius of breeding sites is necessary to successfully raise chicks. Maintaining foraging habitat is also particularly important in the Perth metropolitan area, due to the role of these feeding areas in the survival of young birds and the maintenance of the population between breeding seasons, coupled with the lack of habitat remaining in this region and its connectivity values.



7. GLOSSARY

Affected area: The area likely to be affected by the action. This includes the project site and any additional areas likely to be affected, either directly or indirectly. That is, anywhere on or off site where the effects, good and bad, of the proposed action would be felt. Habitat and/or populations may, and often will, extend beyond the development site boundaries. Therefore, the affected area should extend as far as necessary to take all potential impacts, including off site impacts, into account. This is the area that the person proposing an action must survey.

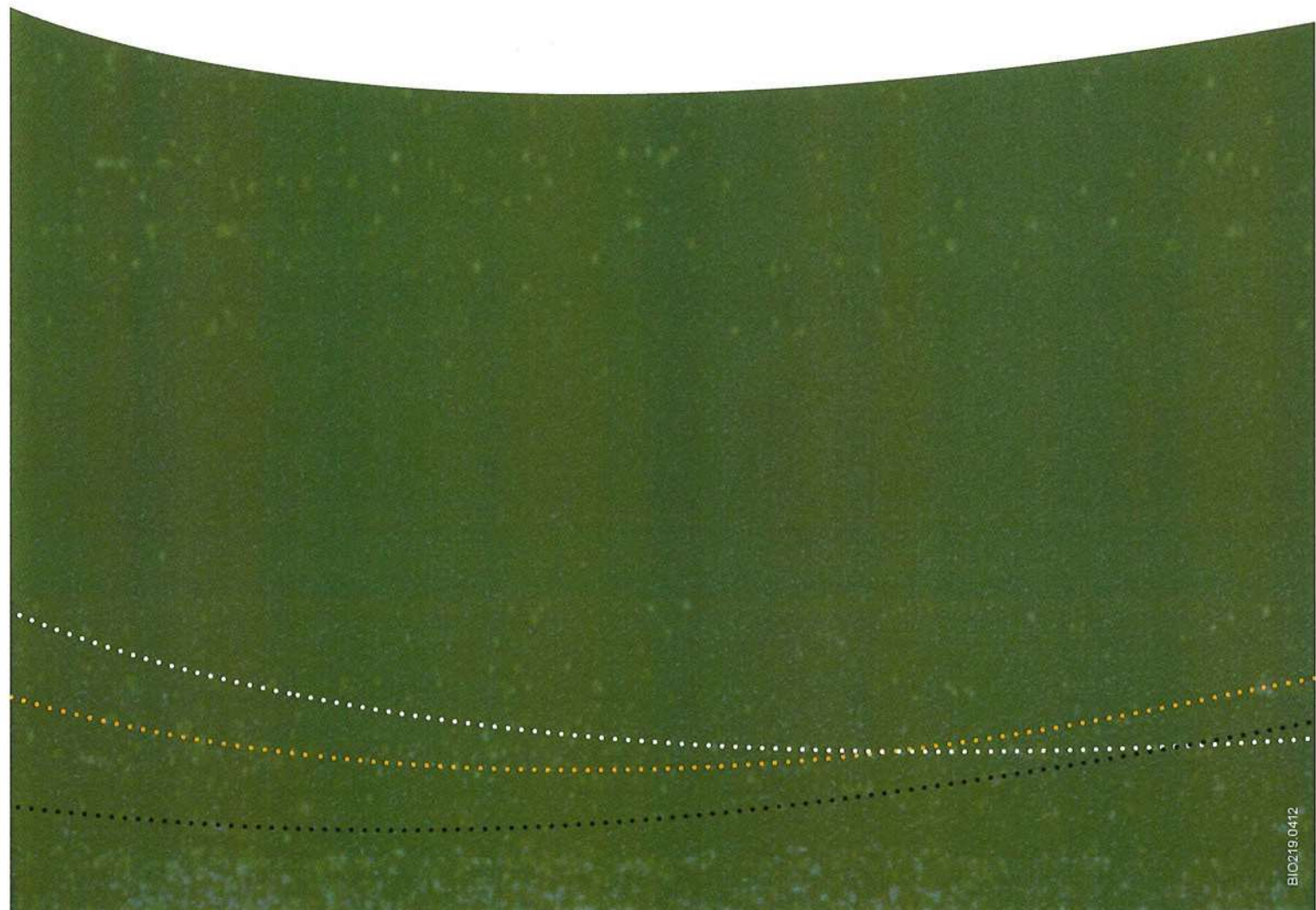
Breeding habitat: Habitat which meets the definition set out in Table 1 for the respective species. This habitat is considered to have the potential to support breeding by the species. Breeding habitat predominantly applies to those areas with the breeding range of the respective species as identified in the maps provided. However, given: incomplete knowledge of breeding activity; the potential for these areas to change; and known breeding sites outside the traditional breeding ranges, habitat that meets the definition set out here, but is outside of the predicted breeding range, is considered breeding habitat unless proven otherwise.

Known nesting trees: Any existing tree in which breeding has been recorded or suspected. Information on known nesting trees within or near the area of an action is available from the Western Australian Department of Environment and Conservation and the Western Australian Museum.

Known night roosting site: A tree or group of trees where there are records or recent evidence of night roosting.

Suitable nest hollow: Any hollow that appears to be deep enough and with an opening large enough to be used by black cockatoos. Usually this will be a natural hollow, but artificial hollows may also be suitable in some circumstances (for example, where the artificial hollow has been specifically designed for use by threatened black cockatoos).





The Environmental Assessment Plan (EAP) compiled by 360 Environmental does not comply with the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), and therefore cannot be considered valid for the purposes of the proposed MRS Minor amendment 1344/57.

Furthermore, the presence of a nationally threatened species within the proposed amendment area is a matter of national environmental significance and must be referred to the Federal Government.

WHAT IS THE EPBC ACT:

According to the Department of Climate Change, Energy, Environment and Water (Link 1):

“The Environment Protection and Biodiversity Conservation Act 1999 (the EPBC Act) is the Australian Government's central piece of environmental legislation.

The EPBC Act provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places—defined in the EPBC Act as matters of national environmental significance.

The nine matters of national environmental significance to which the EPBC Act applies are:

- world heritage properties
- national heritage places
- wetlands of international importance (often called 'Ramsar' wetlands after the international treaty under which such wetlands are listed)
- nationally threatened species and ecological communities
- migratory species
- Commonwealth marine areas
- the Great Barrier Reef Marine Park
- nuclear actions (including uranium mining)
- a water resource, in relation to coal seam gas development and large coal mining development.”

WHO DOES THE EPBC ACT APPLY TO:

According to the Department of Climate Change, Energy, Environment and Water (Link 1):

“The EPBC Act affects any group or individual (including companies) whose actions may have a significant impact on a matter of national environmental significance. This includes:

- landowners
- developers
- industry
- farmers
- councils
- state and territory agencies
- Commonwealth agencies.”

WHEN DOES A PROJECT NEED TO BE ASSESSED BY THE FEDERAL GOVERNMENT:

According to the Department of Climate Change, Energy, Environment and Water (Link 1):

“When a person (a 'proponent') wants an action (often called a 'proposal' or 'project') assessed for environmental impacts under the EPBC Act, he or she must refer the project to the Department of

Sustainability, Environment, Water, Population and Communities. This 'referral' is then released to the public, as well as relevant state, territory and Commonwealth ministers, for comment on whether the project is likely to have a significant impact on matters of national environmental significance.

The minister or the minister's delegate will then decide whether the likely environmental impacts of the project are such that it should be assessed under the EPBC Act. Any relevant public comments are taken into consideration in making that decision."

WHY DOES THE EPBC ACT APPLY:

According to page 4 of the "EPBC Act referral guidelines for three threatened black cockatoo species: Carnaby's Cockatoo, Baudin's Cockatoo, Forest red-tailed black cockatoo" (Attachment 1), the Carnaby's cockatoo, Baudin's cockatoo and the Forest red-tailed black cockatoo are listed as threatened under the EPBC Act. The document also states that "Listed threatened species and ecological communities are matters of national environmental significance under the EPBC Act."

According to Table 28 on page 63 (page 168 of the PDF) of the Environmental Assessment Plan (EAP) conducted by 360 Environmental, both the Carnaby's Cockatoo and the Forest Red-tailed Black Cockatoo were recorded within the proposed amendment area.

The presence of a nationally threatened species within the proposed amendment area is a matter of national environmental significance to which the EPBC Act applies. This means that the Environmental Assessment Plan prepared by 360 Environmental must comply with all aspects of the Environment Protection and Biodiversity Conservation Act 1999.

REASONS WHY THE EAP DOES NOT COMPLY WITH THE EPBC:

Data is too old:

Table 10 on page 29 (page 53 of the PDF) of the EAP shows that the Level 2 Flora and Vegetation and Fauna Report was conducted in September of 2015. This data is now 8 years old and according to the Department of Climate Change, Energy, Environment and Water (Link 2):

"We generally can't accept survey data that's more than 5 years old because:

- populations of species can change due to fires, drought, flooding and land management changes
- some species' ranges can shift due to climate change.

If your data is older than 4 years when you start planning your project, you might need to do another survey."

Appendix F of the EAP contains a supplementary survey that was undertaken in September of 2022. This supplementary survey takes credit for data from the Level 2 Flora and Vegetation and Fauna Report which was 7 years old at the time making it not acceptable by EPBC guidelines. Another full Level 2 Flora and Vegetation and Fauna Survey should be completed to make the data current.

Observations did not occur at dawn/dusk:

Page 65 (page 170 of the PDF) of the EAP states "...dawn/dusk surveys were not conducted (360 Environmental, 2023)". According to the Department of Climate Change, Energy, Environment and Water Carnaby's Black Cockatoo SPRAT Profile Survey Guidelines (Link 3): "Observations should occur at dawn and dusk, when the female is likely to move off the nest to feed." The Survey Guidelines also

go on to say: "Numbers tend to be largest at the roost site between dusk and dawn (Johnstone & Kirkby 2008), and surveys for roosts should occur at these times (30 minutes before and after sunrise and sunset), as birds are leaving or returning to roost sites, over several days."

Surveys not conducted in the non-breeding season:

Table 10 on page 29 (page 53 of the PDF) of the EAP shows that a total of 3 surveys were conducted in September 2015, September 2021 and September 2022. Although this falls within the breeding season, according to the Department of Climate Change, Energy, Environment and Water Carnaby's Black Cockatoo SPRAT Profile Survey Guidelines (Link 3): "To get an accurate picture of the importance of a roost site, surveys should be conducted in both the breeding and non-breeding season." The Survey Guidelines also go on to say: "Observations should occur over several days and in more than one month during the breeding season."

Page 1745 of the EAP says that the supplementary survey "was conducted over eight days between June and September 2022" but does not mention specific dates. As there is no mention of the specific dates that this survey was conducted, this makes it difficult to say whether this survey was conducted in both the breeding and non-breeding season, raising questions about the validity of the data.

Furthermore, this supplementary survey takes credit for data from the Level 2 Flora and Vegetation and Fauna Report which according to page 184 of the EAP took place "On survey dates 16 and 21 September and 7 October 2015" which are both within the breeding season, making the data invalid.

CONCLUSION:

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) applies to the Environmental Assessment Plan (EAP) prepared by 360 Environmental due to the presence of nationally threatened species (Carnaby's cockatoo, Baudin's cockatoo and the Forest red-tailed black cockatoo) within the proposed amendment area.

The EAP references information which is older than 5 years and references surveys which were not conducted as per the Black Cockatoo Survey Guidelines under the EPBC Act. The EPBC Act stipulates that data older than 5 years will not be accepted and recommends that another survey be conducted if the data is more than 4 years old. A "supplementary" survey which takes credit for the old data is not sufficient. Furthermore, the EPBC Act Survey Guidelines for Black Cockatoos state that observations should occur at dusk and dawn, in both the breeding and non-breeding season and in more than one month during the breeding season. 360 Environmental have failed to fulfill these requirements and as such the submitted EAP cannot be considered a valid environmental assessment plan for the purposes of the proposed MRS Minor amendment 1344/57.

RECOMMENDATIONS:

Since the EAP does not comply with various requirements of the EPBC Act, at the very least the WAPC should recommend that 360 Environmental conduct another Level 2 Flora and Vegetation and Fauna Survey as per the EPBC Act Survey Guidelines for Black Cockatoos and present data that is less than 5 years old. Specifically, another Level 2 Flora and Vegetation and Fauna Survey needs to be conducted within 4 years of the EAP submission date, in both the breeding and non-breeding season, in more than one month during the breeding season and with observations occurring at dusk and dawn.

As 360 Environmental was commissioned by Monument (the developer) to prepare the EAP, the WAPC should consider approaching an independent environmental consultancy to prepare a separate EAP to avoid bias.

Finally, as the presence of a nationally threatened species within the proposed amendment area is a matter of national environmental significance, I urge the WAPC to refer this matter to the Federal Government and the Department of Sustainability, Environment, Water, Population and Communities. This will allow the matter to be released to the public, as well as relevant state, territory and Commonwealth ministers, for comment on whether the project is likely to have a significant impact on matters of national environmental significance.

REFERENCES:

Reference Link 1: <https://www.dcceew.gov.au/environment/epbc/publications/factsheet-epbc-act-frequently-asked-questions#:~:text=Who%20does%20the%20EPBC%20Act,landowners>

Reference Link 2: <https://www.dcceew.gov.au/environment/epbc/advice/surveys-and-data>

Reference Link 3: http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?showprofile=Y&taxon_id=59523

Response ID ANON-Z4V8-XZFY-A

Addition to Submission 2

Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-20 14:15:08

About you

1 What is your first name?

First name: **Name and contact details removed at the request of the submitter**

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

I would like to submit the attached file on behalf of EcoVision.

File 1:

Formatted MRS Amendment Maida Vale.pdf was uploaded

File 2:

No file uploaded

File 3:

No file uploaded

File 1:

Formatted MRS Amendment Maida Vale.pdf was uploaded



Photo courtesy of M. Light

MRS AMENDMENT 1344/57

MAIDA VALE URBAN PRECINCT

Submission of EcoVision

18 October 2023

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Maida Vale South proposed MRS Amendment – submission by EcoVision*

PART 1: Planning and Development considerations

Introduction

This document serves as an in-depth examination of the planning and development aspects related to proposed MRS Amendment 1344/57, specifically concerning Maida Vale South. The primary objective is to make a compelling case for the rejection of this Amendment by the WAPC (Western Australian Planning Commission) and EPA (Environmental Protection Authority).

Under the provisions of the *Planning and Development Act 2005*, amendments to the MRS can be categorized as either 'minor' or 'major,' depending on whether they are considered to bring about significant alterations to the MRS.

In this particular case, the Department of Planning has classified the proposed MRS Amendment, which entails changing the land zoning from rural to urban (R30), as a 'minor' amendment. This characterisation is a matter of concern, given the substantial implications it holds for the Maida Vale South community, who were taken by surprise by this development.

The scale of the proposed changes, the potential environmental impact, and the necessity for well-informed community engagement given the potential for land resumptions all strongly indicate that the Amendment should have been designated as a 'major' amendment. This perspective is further reinforced by the fact that the EPA initiated an Environmental Review upon learning of the Amendment, underscoring the mischaracterisation of this matter.

The classification of this Amendment as 'minor' has had tangible consequences, notably resulting in a less rigorous assessment of the infrastructure requirements. It has also failed to adequately address the significant financial burden on the State in terms of providing new utilities and roads, as well as the broader regional implications of rezoning on water resources and the environment. Consequently, this mischaracterisation has hindered the thorough evaluation and mitigation of potential impacts.

Nonetheless, the situation remains as it is, and we maintain our optimism that the WAPC will ultimately decline the Amendment, regardless of its characterisation.

*See Attachment A. 'About EcoVision'

Executive Summary

This document provides a detailed analysis of the proposed MRS Amendment 1344/57, specifically focusing on Maida Vale South. Our primary objective is to present a compelling case for the rejection of this Amendment by the WAPC and the EPA.

At the core of our opposition is the belief that the WAPC should not facilitate the transformation of private property into a scheme for private profit, especially when it threatens the involuntary displacement of residents and the seizure of their properties.

The proposal lacks proper community consent and consultation and undermines the community's identity and environmental values. Maida Vale South's low-density rural housing offers a high quality of life, counters urban heat islands, and actively mitigates climate change.

From a legal and regulatory standpoint, the proposal diverges from the Metropolitan Region Scheme (MRS), the Foothills Structure Plan, and the North-East sub-Regional Framework, highlighting a discordance with established planning frameworks.

There are concerns regarding the mischaracterisation of the proposal as a 'minor' Amendment, which has hampered thorough evaluation, transparency, and community trust.

Furthermore, the proposal conflicts with State Planning Policies, including SPP 2.5, SPP 2.0, and SPP 3.0. It fails to align with the principles of community, environment, infrastructure, and governance outlined in the State Planning Strategy 2050.

Traffic and sewerage infrastructure challenges also pose significant issues, such as costly road network reconstruction and difficulties in providing reticulated sewerage services.

In conclusion, the rejection of this Amendment is crucial to protect the unique character and values of Maida Vale South, ensure responsible and sustainable land use and development, and address the multitude of concerns outlined in this document.

It is our hope that the WAPC and EPA will reject the proposed Amendment in light of these critical issues.

Legal and Regulatory Framework:

We believe that the proposal is in direct contradiction to the State Planning Framework and the pertinent planning policies, which collectively provide a comprehensive guideline for land use in Western Australia. Notable factors include:

- The Metropolitan Region Scheme (MRS), which currently designates the area as rural.
- The Foothills Structure Plan, still in legal effect until 2025, which also classifies the area as rural.
- The Perth and Peel @ 3.5 Million North-East sub-Regional Framework, which was scheduled for review two years ago, designates Maida Vale South for urban expansion.

These factors collectively emphasize the discordance between the proposal and the established planning framework and policies governing land use in Western Australia.

The land use proposals contained in the Framework are based on a number of key principles and objectives including the need to preserve and enhance areas of landscape character and interest in appropriate areas.

The Framework's initial draft maintained the rural designation of Maida Vale South in alignment with the MRS and the Foothills Structure Plan but was altered at the request of the (then) Shire of Kalamunda without community knowledge. This in-house change denied residents the opportunity to voice their concerns regarding the shift to urban expansion and was therefore, arguably unlawful.

Despite the changes made, the 2018 Framework still stressed the conditional nature of designating areas for urban expansion or urban investigation. It emphasized the necessity for thorough planning before considering any rezoning. This cautious approach underscores the importance of conducting further investigations, as articulated in the following quotation:

"The classification of existing special rural zoned areas as urban investigation or urban expansion should not be interpreted as a commitment by the WAPC to endorse any rezoning or support for the increased development of these areas at a higher density. Such decisions hinge on the outcomes of subsequent planning investigations." (2018 Northeast Sub-Regional Framework).

This submission contends that the WAPC/EPA should ultimately reject the provisional 'urban expansion' designation and instead, maintain the rural zoning of the area within the MRS.

Staging and Sequencing:

The Framework states that there is ample undeveloped urban land to meet housing requirements for approximately 32 years.

Urban Growth Monitor 14 (Feb.2023) has updated these projections stating that *'if land consumption continues at a rate consistent with the 20-year average, it would theoretically take an estimated 27 years to deplete existing stocks of non-urbanised land available for urban development in the Perth metropolitan and Peel regions.'*

Therefore, there is no pressing need for urban intensification in Maida Vale South, given the existing land supply and its potential consequences for supply of infrastructure-, including the provision of reticulated sewerage- and traffic flow adjustments in the region.

The State Planning Strategy:

The State Planning Strategy 2050, which represents the highest level of policy, encompasses six fundamental principles: Community, Economy, Environment, Infrastructure, Regional Development, and Governance. This submission focuses on four of the most pertinent principles: Community, Environment, Infrastructure, and Governance.

In terms of the *Community* principle, the proposed MRS amendment is at odds with it, as it poses a threat to the cherished identity and sense of belonging held by the residents of Maida Vale South.

Concerning the *Environment* principle, the proposed amendment fails to recognize and preserve the natural assets of the State. The destruction of biodiversity to accommodate an astonishing number of new dwellings runs counter to the Strategy's sustainability objectives. The proposed MRS amendment is contrary to the Environment principles of the Strategy in that it fails to recognise and conserve the State's natural assets.

Maida Vale South is an integral part of the wider Perth hills context. Existing tree canopy contributes to lowering the heat island effect of urban development, and ecological linkages help to conserve threatened flora and fauna.

The destruction of biodiversity to make way for 5400 + dwellings is therefore inconsistent with the Strategy, Liveable Neighbourhoods, and various climate change considerations.

With regards to the *Infrastructure* principle, the proposed amendment lacks alignment with integrated and staged development processes and will disrupt existing infrastructure planning. Furthermore, it may lead to affected agencies 'leapfrogging' over areas that already have approved development.

In terms of the *Governance* Principle, the community- thus far- lacks confidence in the development processes and practices associated with the proposed Amendment. This lack of confidence arises from a history marked by the following issues:

- **Concealment of 'Urban Expansion' Descriptor:** The insertion of the descriptor 'urban expansion' into the finalised Framework without the knowledge of the affected community has eroded trust in the process.
- **Failure to Notify Residents:** The failure to notify residents in May 2018 about the lodging of the Amendment for Maida Vale raises concerns about the transparency and decision-making process of the WAPC. This omission becomes even more problematic when considering that the WAPC forwarded the proposed Amendment to the EPA. The logical inference of such action indicates WAPC's support for the proposed Amendment. Conversely, if the WAPC did not believe the Amendment should be supported, there would have been no need to involve the EPA at that stage.

This lack of communication and transparency undermines public trust and contradicts the principles of good governance outlined in the State Planning Strategy 2050, which describes good governance as "*participatory, collaborative, accountable, transparent, and responsive*". Furthermore, the failure to engage the community in seeking their views on this matter further diminishes public confidence that their input will be considered with anything more than token consideration in the future. This situation highlights the need for improved transparency and community engagement in the decision-making processes related to significant developments like the Maida Vale Amendment.

- **WAPC Decision Preceding EPA Referral:** The WAPC's decision to seemingly endorse the Amendment on 31 May 2018, prior to its referral to the Environmental Protection Authority (EPA), raises significant concerns. By making this preliminary decision of support for the Amendment before the EPA and the public had the opportunity to weigh in, the WAPC acted prematurely and essentially based its initial decision solely on the information provided by the proponent. This approach undermines the principles of transparency and public engagement that are vital in responsible governance.

These issues indicate a significant breakdown in governance and transparency related to the proposed Amendment, which has eroded the community's trust in the development processes and practices associated with it. In addition to the issues mentioned above, another factor contributing to the community's lack of confidence in the Governance Principle is the mischaracterization of the proposed Amendment as "minor."

This mischaracterisation downplayed the potential impact and significance of the Amendment, further undermining the community's trust in the decision-making process. The misrepresentation not only demonstrates a lack of transparency but also raises questions about the accuracy of the information provided to the public and stakeholders. Such mischaracterisations can lead to scepticism and suspicion regarding the intentions behind the Amendment, making it difficult for the community to have confidence in the development processes and practices associated with it.

State Planning Policies:

The State Planning Framework is intended to provide a comprehensive and sustainable approach to land use and development, with State Planning Policies playing a pivotal role in achieving these objectives.

In assessing the proposed Amendment for Maida Vale South, the Amendment Report has identified four state planning policies as relevant to the matter, which are State Planning Policy 2.8 - Bushland Policy for the Perth Metropolitan Region (SPP 2.8), Draft State Planning Policy 2.9 - Planning for Water, State Planning Policy 3.7 - Planning in Bushfire Prone Areas, and State Planning Policy 5.4 - Road and Rail Noise.

However, it is a cause for concern that the Amendment Report has not considered other, more pertinent, State planning policies that ought to have been taken into account during the evaluation of this proposed Amendment.

State Planning Policy 2.5 Rural planning

Given that the Amendment area is currently zoned rural under the MRS and special rural under the LPS, it is alarming that due regard has not been given to SPP2.5 in considering the proposed Amendment.

This policy is the overarching policy which is meant to guide State and local government planning decision-making involving rural zoned land.

Relevantly, clause 6.4 of SPP 2.5 directs attention to the factors planning decision-makers are required to consider when contemplating zoning proposals or amendments to region or local planning schemes.

In particular, clause 6.4(c)(i) requires decision-makers to consider *'the capacity of the site to accommodate the proposed zone/land use impacts and **only** support proposals which are consistent with endorsed planning strategies, or in exceptional circumstances, where the proposal meets the objectives and intent of WAPC policy.'* (our emphasis)

The proposed MRS amendment contradicts State Planning Policy 2.5 as it does not align with the Foothills Structure Plan, which is effective until 2025, and no exceptional policy circumstances are present to justify approval.

State Planning Policy (SPP) 2.0, the Environment and Natural Resources Policy

State Planning Policy (SPP) 2.0, the Environment and Natural Resources Policy, places a significant emphasis on the preservation of open spaces and natural environments, particularly in areas of environmental significance. It is driven by the objectives of protecting, conserving, and enhancing the natural environment.

SPP 2.0 also seeks to promote sustainable development and responsible environmental practices. However, the proposed Amendment, as detailed in Part 2 of this submission, clearly indicates that it will result in the extensive destruction of the environmental values within the Amendment area, including its tree canopy and the flora and fauna.

This policy further encourages the preservation of community character and heritage values, emphasizing the importance of maintaining the identity and cultural significance of a locality, a consideration that the proposed Amendment does not adequately address, as it seeks to allow a development that would fundamentally alter the character of Maida Vale South.

Furthermore, SPP 2.0 underscores the necessity for meaningful community engagement and consultation in the planning and development process, which has been notably absent from this Amendment process thus far.

This policy also mandates the acknowledgment of the intrinsic value of the environment in planning processes.

This policy also underscores the importance of planning decisions that prioritize the "common good" over private profit and recognize the significance of "community lifestyle preferences" in the decision-making process.

The proponent has not presented any substantiated evidence to the WAPC that they have secured the formal consent of the majority of landowners for the proposed Amendment.

In the absence of such evidence, the proposed Amendment can be viewed as a potential "land grab" orchestrated by a private entity.

It is incumbent upon the WAPC, whose primary responsibility is to act in the best interests of the public of Western Australia, to refrain from colluding with the developer to the detriment of the landowners.

In such a context, the WAPC should exercise its role as a guardian of the public interest and ensure that planning decisions align with the principles of community well-being and the broader public good.

In light of these considerations, it is evident that the proposed MRS Amendment is inconsistent with SPP 2.0 because it will result in unacceptable environmental damage, affecting flora, fauna, and water resources, and further diminishing the tree canopy.

The failure to give due regard to SPP 2.0 is a serious omission that should be rectified by rejecting this proposed Amendment.

State Planning Policy 3.0 - Urban growth and settlement

State Planning Policy 3.0: urban growth and settlement (SPP 3.0) acknowledges that the spread of urban development intensifies pressures on valuable land and water resources and imposes costs in the provision of infrastructure and services.

The proposed MRS amendment will impose costs on the State for the provision of unplanned infrastructure, utilities and sewer services and raises concerns of inconsistency with State Planning Policy (SPP) 3.0 due to several key reasons.

Firstly, it fails to adequately address the principles of sustainable development outlined in SPP 3.0, such as promoting social, environmental, and economic well-being. The Amendment lacks a comprehensive strategy for managing and preserving natural resources, which is a crucial aspect of SPP 3.0.

Additionally, the proposed Amendment does not align with the regional planning framework and goes against the principles of integrated land use and transportation planning, a core element of SPP 3.0. These inconsistencies raise concerns about the long-term sustainability and compatibility of the proposed Amendment with the broader planning objectives outlined in SPP 3.0.

Clause 5.6 of SPP 3.0 states that *'Rural-residential living is an important component of the settlement pattern in rural areas of the State. Rural-residential development also provides for lifestyle choice'*

Given that SPP 2.5: Rural Planning states that within the Perth and Peel regions opportunities for rural living, including rural residential development, will become more limited with rural living proposals being considered by exception, it makes it even more important that Maida Vale South maintains its current rural zoning in order to provide residents of Perth with a range of opportunities for rural residential lifestyles.

Additionally, the proposed new shopping hub will result in additional pressure on existing City of Kalamunda shopping centres which are experiencing very low occupancy rates.

Traffic and Sewerage Considerations:

The proposed Amendment will significantly impact traffic and sewerage infrastructure. It requires extensive road network reconstruction and poses challenges in providing reticulated sewerage services to the area, which contradicts planning principles and environmental considerations.

The proposed MRS amendment will require significant unscheduled and costly intervention in State planning processes for reconstruction of the road network to accommodate an additional 10,800 vehicles in the Amendment area.

With respect to sewerage there is a general presumption against urban development where reticulated sewerage cannot be provided (Liveable Neighbourhoods 2015, p. 86).

The Maida Vale South subject area is not currently serviced by a wastewater scheme. Serious geomorphic, environmental and built form constraints to proposed new sewer works exist include the barrier presented by Roe Highway and intensive urban developments to the south.

Unscheduled sewer works are inconsistent with the proper and orderly planning provision of infrastructure by the State.

Conclusion

In conclusion, this comprehensive examination of the proposed MRS Amendment 1344/57, focusing on Maida Vale South, highlights several critical concerns that collectively underscore the necessity for the rejection of this Amendment by the WAPC and the EPA.

The mischaracterisation of the proposed Amendment as 'minor' is problematic, given its substantial implications for the Maida Vale South community, and its subsequent lack of thorough evaluation and impact mitigation. The mischaracterisation has prevented community engagement and transparency and has eroded trust in the planning process.

The proposed Amendment's impact on the Maida Vale South community is profound. It threatens to compromise the unique environmental values, sense of place, and well-being of its residents, and potentially results in the involuntary displacement of homeowners.

The proposed changes run counter to the advantages of low-density rural living, including enhanced liveability, mitigation of urban heat islands, and active participation in climate change mitigation.

Furthermore, the proposal lacks alignment with the legal and regulatory framework, such as the Metropolitan Region Scheme (MRS) and the Foothills Structure Plan. The State Planning Strategy 2050 emphasizes the principles of community, environment, infrastructure, and governance, all of which are contradicted by the proposed Amendment. Key State Planning Policies, including SPP 2.0 and SPP 3.0, are also not adequately considered in the Amendment's assessment.

Traffic and sewerage considerations present significant challenges, with the proposed Amendment demanding extensive road network reconstruction and facing hurdles in providing reticulated sewerage services to the area. The potential financial burden on the State and the disruption to infrastructure planning are notable concerns.

In light of these numerous issues and inconsistencies, it is imperative that the WAPC and EPA carefully evaluate this proposed Amendment, considering the broader planning and development implications, legal and regulatory framework, and community well-being. The rejection of this Amendment is essential to protect the unique character and values of Maida Vale South and to ensure responsible and sustainable land use and development in Western Australia.

PART 2: EcoVision's Response to the 360 Environmental Report

Introduction

The 360 Environmental Report ("the Environmental Report") sheds light on a matter of paramount significance: the proposed MRS Amendment for rural-to-urban conversion. The Environmental Report confirms the richness and importance of the flora and fauna of the area.

Maida Vale South is entirely in private ownership and the majority of residents have proven to be considerate custodians of this beautiful area as indicated by its increasing tree canopy over time. However, this MRS proposal raises significant, and potentially insurmountable, concerns with respect to preserving the current environmental values within the designated Amendment area.

In accordance with the structure outlined in the EPA Instructions, the following paragraphs address the EPA's concerns regarding Flora and Vegetation, Terrestrial Fauna, and Inland Waters.

In this analysis, it is essential to contextualize these observations within the framework of the anticipated R30 zoning. *'The area is currently zoned as Special Rural, with the intention of rezoning the area to urban with an R coding of R30'.* (City of Kalamunda Submission, draft NE sub Regional Framework 2015).

The Amendment Report only briefly acknowledges this anticipated zoning classification, relegating it to a passing reference on page 2, even though it carries profound implications.

To be precise, it states, *"In 2013, the WAPC endorsed the City of Kalamunda Local Planning Strategy (LPS), which designates the subject land (and the surrounding area) as an Urban Investigation area with a potential residential density of R20 and R30. The proposed amendment aligns with the LPS."*

This MRS Amendment envisions the construction of approximately 5,400 dwellings, accompanied by an astounding influx of around 10,800 additional vehicles (assuming an average of 2 vehicles per household). These vehicles are expected to converge onto Hawtin Road, a local road owned and maintained by the City of Kalamunda, and notably not classified as a state road. Main Roads Western Australia has no authority over this local asset. The road's original design did not account for accommodating such a substantial volume of traffic, which will permanently sever existing environmental linkages between the foothills side of the road and the Amendment area.

The photographs below (not of the same area) vividly illustrate the nature of R30 zoning, characterized by an unbroken expanse of closely packed housing units, featuring small frontages. When viewed from an aerial perspective, it reveals near-complete ground coverage with impervious materials.



Two R30 houses side by side



This stark contrast between the proposed urbanization and the existing rural landscape of Maida Vale South necessitates careful consideration.

The EPA plays a vital role in the state's planning and development processes acting as an independent statutory authority responsible for evaluating and regulating the potential environmental impacts of significant projects and proposals, including this MRS proposal.

By providing a rigorous and science-based assessment of development projects, the EPA contributes to the responsible and sustainable planning and development of Western Australia.

On the other hand, the WAPC also has a responsibility to ensure that planning and development decisions do not have adverse effects on the environment. It has a specific responsibility for ensuring that its planning decisions promote the conservation of ecological systems and the biodiversity they support by adopting a risk-management approach that aims to avoid or minimize environmental degradation.

We strongly urge the WAPC/EPA to reject this Amendment in light of the profound concerns it raises for the environment and community well-being.

Executive Summary

The proposed MRS Amendment for rural-to-urban conversion in Maida Vale South, as detailed in the Environmental Report, has ignited significant environmental concerns. The Environmental Report acknowledges the area's richness and importance in terms of flora, fauna, and inland waters. However, it fails to address these concerns effectively. In response to the outlined concerns about Flora and Vegetation, Terrestrial Fauna, and Inland Waters, we strongly urge the WAPC/EPA to reject this Amendment.

The proposed rezoning carries insurmountable risks to the environment and community well-being.

1. Flora and Vegetation

The proposed Amendment threatens almost 80% of existing vegetation, endangering native and non-native species, including those classified as Vulnerable and Priority under wildlife protection acts. The loss of habitat is further exacerbated by the fragmentation and isolation of vegetation patches and an insufficient offsetting strategy. The proposed development undermines ecological systems' conservation, risking irreversible harm to the environment.

2. Terrestrial Fauna

The Amendment forecasts the elimination of nearly 80% of the existing fauna habitat, particularly impacting threatened bird species like black cockatoos. Their habitat loss disrupts ecological processes, hinders breeding success, and endangers these iconic and culturally significant birds. The urban rezoning could also lead to larger populations foraging in orchards, causing financial losses to growers. Protecting orchards and agricultural activities is essential for preserving cultural, economic, and environmental well-being. Urban rezoning in critical wildlife areas, such as Maida Vale, should be avoided to mitigate these concerns.

3. Inland Waters

The proposed R30 zoning, accommodating around 5,400 residences, brings serious concerns about water drainage systems and impacts on Crumpet Creek and Poison Gully. The increase in impermeable surfaces threatens natural drainage systems, jeopardizing water quality and aquatic life. Replacement of natural landscapes with impermeable surfaces will harm terrestrial fauna, dependent on vegetated porous landscapes for habitat. The proposed drainage methods do not mimic the natural water cycle and need a more sustainable approach.

4. Summary | Holistic Assessment

The proposed MRS Amendment, when holistically assessed, raises formidable concerns about environmental consequences. The loss of vegetation, impact on terrestrial fauna, erosion and sedimentation, habitat fragmentation, insufficient mitigation measures, and interconnected environmental factors necessitate rejecting the Amendment. The proposal risks disturbing delicate ecological balances, potentially causing significant harm to the ecosystem. An alternative approach, such as keeping the area zoned rural residential, engaging private landholders in restoration efforts, and proactively protecting waterways, is more appropriate. Refusing the Amendment aligns with a precautionary approach to ensure the area's preservation and ecological well-being.

In summary, this response underscores the critical need for the responsible and sustainable planning and development of the Maida Vale South area, considering its ecological significance and the potential irreversible harm posed by the proposed Amendment. The rejection of this rezoning is vital for preserving the environment and the community's long-term well-being.

Retention of rural zoning under the Metropolitan Regional Scheme is the ONLY sure way to ensure that the environmental protections currently available in the Environmental Protection Act 1986 will continue to apply to this area in the future.

The Minister for the Environment has confirmed that the EP Act regulates the clearing of native vegetation in Western Australia and that clearing in an urban-zoned area generally **does not** require the developer to obtain a clearing permit. A developer can therefore remove all native vegetation with impunity, as none of the environmental protections in the EP Act have any force in an urban zone.

In December 2017, the EPA reached a significant decision regarding a proposed amendment to the *Shire of Gingin Local Planning Scheme 9*.

The EPA firmly stated that this Amendment was '*incapable of being made environmentally acceptable under Part IV of the Environmental Protection Act 1986 (WA)*'.

Notably, this EPA decision was grounded in the anticipation of substantial environmental impacts, specifically citing concerns such as '*clearing of low representation remnant vegetation, threatened ecological community, and Black Cockatoo habitat.*'

These are the very factors which underpin the issues associated with the proposed Amendment under consideration.

1. Flora and Vegetation

The EPA's environmental objective for the factor Flora and Vegetation is:

"To protect flora and vegetation so that biological diversity and ecological integrity are maintained." In the context of this objective: Ecological integrity is the composition, structure, function and processes of ecosystems, and the natural range of variation of these elements.

- **Irreparable Loss of Native Vegetation:**

The proposed Amendment casts a dark shadow of almost certain, permanent loss upon a substantial portion of native vegetation, including the representation of poorly accounted for vegetation complexes like Forrestfield and Southern River. This impending loss not only threatens the visual aesthetics of the region but, more critically, poses a dire threat to the overall health of the foothills ecosystem.

On page 79 of the Environmental Report, it is stated that *'the MRS amendment will result in the retention of at least 13.91 ha (21.0%) of fauna habitat, including 6.15 ha (43%) of moderate suitability for SRE (Sensitive Reptile Ecosystems)'*. As is to be expected, fauna habitat comprises native and non-native vegetation, fallen logs, shrubbery, and grasses.

The use of the term 'retention' in this context seeks to downplay the extent of planned vegetation loss.

In reality, the Environmental Report **actually foresees the elimination of nearly 80% of the existing vegetation** cover, including native flora. This stark reality becomes even more apparent when we consider that 10.59 ha of the MRS amendment area pertains to the existing City of Kalamunda managed local road reserves, which are protected from development, and an additional 14.10 ha are associated with a Western Power Easement. These figures strongly indicate that only a negligible fraction of the current flora will remain unaffected.

- **Endangered and Vulnerable Species:**

The Amendment will result in the direct clearing of habitat for several threatened species of flora, notably *Conospermum undulatum*, classified as Vulnerable under both the Wildlife Conservation Act and the Environment Protection and Biodiversity Conservation Act. Furthermore, *Isopogon autumnalis*, designated as a Priority species, would also suffer adverse effects. This situation poses a substantial risk to the survival of these species. Adding to the concern is the uncertainty surrounding the future maintenance of the Western Power easement corridor, which is likely to entail further clearing. The potential long-term consequences of the proposed amendment on flora and vegetation are undeniably grave, verging on near-complete eradication.

- **Habitat Fragmentation:**

The proposed development is likely to lead to fragment or isolate existing vegetation and populations of conservation-significant flora. Fragmentation disrupts ecological processes and reduces genetic diversity within populations, making species more vulnerable to extinction.

- **Impact on Waterways:**

The proposed development also impacts two waterways, Crumpet Creek and Poison Gully, which support the mentioned vegetation and potentially threatened species. Any disturbance or pollution in these waterways will have cascading effects on the entire ecosystem.

- **Limited Mitigation Measures:**

The Environmental Report has identified some mitigation measures, often accompanied by qualifiers like '*where possible*' or '*where practicable*'. However, it is evident that these measures fall short in effectively addressing the significant impacts on flora and vegetation. The proposed retention areas cannot fully compensate for the loss of habitat and vegetation, and notably, the Environmental Report itself acknowledges that *"... an offset may be required to address the clearing associated with TECs (Threatened Ecological Communities) and habitat loss."*

Using an "off set" approach to address the loss of threatened and rare vegetation in the ever-diminishing vegetation complexes of Forrestfield and Southern River is inherently inappropriate. These ecosystems possess distinct environmental conditions and species compositions that are extremely challenging to replicate elsewhere. It should be stressed that it would not be possible to offset the area with bushland elsewhere since there is virtually nowhere equivalent in its landforms and biodiversity. Any attempt to replace them within offset areas will inevitably fall short in preserving their ecological value.

Moreover, even if a suitable replacement area could be identified, the lack of comprehensive monitoring and long-term planning for their survival renders the offset strategy impractical. Given these limitations, it is more appropriate to prioritize the protection and conservation of rare and threatened vegetation in its natural habitat through measures such as strict land-use planning, habitat restoration, habitat corridors, and other conservation strategies that prioritize the preservation of biodiversity in situ, rather than relying on offsetting.

In such circumstances, portraying an offset strategy as a valid mitigation measure is patronizing and misleading. It gives the false impression that permanent loss can be averted, when in reality, the ecological impact is likely irreversible.

Summary of Flora and Vegetation Concerns:

The rezoning proposal's potential impact on flora and vegetation, as outlined in the Environmental Report, has raised serious concerns regarding issues such as permanent loss, endangered species, habitat fragmentation, disruption of waterways, and the perceived inadequacy of proposed mitigation measures, especially in terms of offsetting. It is crucial that the proposed Amendment aligns with the EPA's goals of safeguarding flora and vegetation to preserve biological diversity and ecological integrity. There must be a clear demonstration that these goals will be upheld. Unfortunately, the environmental documentation associated with this proposed Amendment does not provide any assurances that effective measures will be implemented to protect and sustain the flora and vegetation in the affected area. Indeed, the Environmental Report itself acknowledges that almost 80% of the existing flora and vegetation will be **permanently cleared**. This being the case, we strongly oppose the MRS rezoning proposal.

2. Terrestrial Fauna

The EPA's environmental objective for the factor Terrestrial Fauna is:

"To protect terrestrial fauna so that biological diversity and ecological integrity are maintained."

Based on the information provided in the Environmental Report regarding the potential impacts on terrestrial fauna in the proposed MRS amendment in Maida Vale, there are compelling reasons to oppose the Amendment seeking to rezone rural Maida Vale to urban. The concerns raised in the Environmental Report in relation to terrestrial fauna highlight the significant ecological consequences that will result from urban intensification of the Amendment area, including the following:

- **Permanent Loss of Habitat:**

On page 79 of the Environmental Report, it states that the MRS amendment will *'result in the retention of at least 13.91 ha (21.0%) of fauna habitat including 6.15 ha (43%) of moderate suitability for SRE'*. The use of the term 'retention' in this context seeks to downplay the extent of planned habitat loss.

The corollary of this statistic is that the Environmental Report predicts **the elimination of nearly 80% of the existing vegetation cover**, including most trees, shrubs and grasses, which provides habitat for terrestrial fauna if the proposed Amendment is approved. This stark reality becomes even more apparent when it is noted that 10.59 ha of the MRS amendment area pertains to the existing City of Kalamunda managed local road reserves, which are purportedly protected from development, and an additional 14.10 ha are associated with a Western Power Easement. These figures strongly indicate that only a negligible fraction of habitat vegetation will remain unaffected.

The authors of the Environmental Report acknowledge that the proposed development will result in the permanent loss of critical fauna habitat, including high-quality foraging habitat for black cockatoos and numerous potential breeding trees. This loss constitutes a direct and severe threat to the survival and breeding success of these already vulnerable bird species. The Environmental Report identifies a high likelihood of the presence of the following species in the Amendment area:

Baudin's Black Cockatoo (*Zanda baudinii*) – Endangered (under the BC Act); Endangered (under the EPBC Act)

Carnaby's Black Cockatoo (*Zanda latirostris*) – Endangered (under the BC Act); Endangered (under the EPBC Act)

Forest Red-tailed Black Cockatoo (*Calyptrorhynchus banksii naso*) – Vulnerable (under the BC Act); Vulnerable (under the EPBC Act)

It's important to note that evidence of these birds in the Amendment area is even more likely to have become apparent if surveys were conducted at dawn and dusk, which would enable a more accurate identification of roosting trees. However, the Environmental Report on pages 9 and 65 confirms that no dawn/dusk surveys were carried out.

Black cockatoos, especially endangered or vulnerable species, play a critical role in maintaining biodiversity. These birds are an integral part of the ecosystem, and their presence helps in seed dispersal and plant regeneration. Their activities help maintain the overall health and resilience of the ecosystem, ensuring that it can adapt to changing environmental conditions.

Losing their breeding trees and foraging habitat will disrupt the natural balance of the local environment. Protection of their habitat is essential for their survival and recovery. The resulting permanent fragmentation of their current habitat within the Amendment area will isolate populations of black cockatoos, making it harder for them to find suitable mates, food, and shelter which will lead to a decline in their overall numbers.

The loss of potential breeding trees, especially those without suitable hollows, can severely limit black cockatoos' ability to reproduce. Suitable nesting sites are critical for their breeding success and any reduction in such sites will inevitably lead to a decline in their populations.

It ought to be noted that black cockatoos hold cultural significance for many indigenous communities. They are also essential components of the ecological and environmental heritage of the region. Preserving them is not only a matter of ecological responsibility but also, respects the cultural heritage of the area.

In May 2023 an article appeared in The Echo, a local community paper raising the concerns of orchardists in the Perth Hills regarding the damage caused by black cockatoos to their orchards. These birds have been forced to forage in orchards due to habitat loss from vegetation clearing and climate change. Orchardists in the Perth Hills claim that they are already facing significant economic losses due to the black cockatoos' damage to their fruit crops.

Permitting the rezoning of Maida Vale would likely lead to a larger population of these birds in search of food, resulting in even greater financial losses for growers who have limited means to protect their orchards from critically endangered birds.

The urban rezoning of Maida Vale would further diminish the cockatoos natural habitat, exacerbating the problem and potentially leading to more frequent negative interactions between the birds and agricultural areas. The WAPC has a significant responsibility to protect orchards and other agricultural pursuits from unfettered urban intensification elsewhere in the region for the following reasons:

- Orchards and agricultural activities are an integral part of the region's heritage and contribute to its cultural and economic identity. Protecting these pursuits ensures the continuity of traditions and livelihoods that have often been passed down through generations as well as the food security of Perth and its broader regions.
- The WAPC's responsibility extends to long-term planning. Decisions made today regarding land use have lasting impacts on the region's future. Protecting orchards and agricultural pursuits involves considering the consequences of development decisions on both the present and future generations.
- The WAPC's responsibility to protect orchards and agricultural pursuits from unfettered urban intensification elsewhere is rooted in its commitment to safeguarding the region's cultural, economic, and environmental well-being. This responsibility involves not only addressing immediate concerns but also, planning for the sustainable growth and resilience of the region in the years to come. Balancing urban development with the preservation of agricultural lands is a crucial aspect of responsible land use planning. Preserving the habitat of endangered species is a shared responsibility, and urban rezoning in critical wildlife areas such as in Maida Vale should be avoided considering the broader ecological impact.

These birds are already under threat, and the proposed development could exacerbate their decline, potentially pushing them closer to extinction. Rejecting the proposed MRS Amendment is essential to ensure the continued survival and well-being of these iconic and ecologically significant birds.

- **Loss of Ecological Connectivity:**

The fragmentation of fauna habitat and loss of ecological connectivity will disrupt the movement of wildlife, making it challenging for them to find food, mates, and suitable habitats. This will lead to decreased genetic diversity and population declines. The future maintenance of the Western Power easement corridor is uncertain. Any clearing or disturbance in this corridor will inevitably have detrimental effects on the terrestrial fauna in the area. Furthermore, the erection of 5400 colour bond fences demarking the boundary of each dwelling in the Amendment area will totally prevent ecological connectivity continuing in this area.

- **Alteration of Fauna Behaviour:**

Human activities associated with urban development, such as noise, lighting, and increased human presence, will inevitably alter the behaviour of terrestrial fauna. These changes will lead to stress and reduced breeding success.

- **Limited Mitigation Measures:**

While some mitigation measures are proposed, they are wholly inadequate. The authors of the Environmental Report openly acknowledge that 80% of the habitat of terrestrial fauna will be permanently removed. In reality, one only has to view the photographs above to see that it is more likely that the natural habitat of most terrestrial fauna will almost certainly be obliterated. The proposed retention areas will not compensate for the massive habitat loss, and there is no guarantee of effective long-term management.

Summary

The proposed amendment must align with the EPA's objectives of safeguarding terrestrial fauna, thereby ensuring the well-being and conservation of land-dwelling animal species and their habitats. This encompasses the protection of endangered, threatened, or vulnerable species and the maintenance of the overall ecological equilibrium and ecosystem health. The EPA's responsibility also entails ensuring that human activities such as development projects and land use changes do not inflict harm upon or obliterate vital wildlife habitats. The extensive urban intensification outlined in this Mrs Amendment runs counter to the EPA's fundamental goal, and it is imperative for the WAPC/EPA to unequivocally reject it.

3. Inland Waters

The EPA goal with respect to Inland Waters is "To maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected".

The subject area currently falls within the Perth Airport Northern and Southern Drainage Catchments. The Water Corporation has confirmed that its drainage system can only take predevelopment flows meaning that the proponent will need to accommodate additional flows generated by the replacement of permeable surfaces in the amendment area with non-permeable surfaces within the Amendment area. The Amendment Report notes that major works (headworks) will be required if this Amendment is approved.

The potential impacts of intense urban development within the Amendment area, designated for R30 zoning, as highlighted in the Environmental Report, raise significant concerns regarding the natural water drainage system and its connections to two vital water courses, Crumpet Creek and Poison Gully. Drainage:

R30 zoning typically signifies a density of 30 dwelling units per hectare and a minimum site area of 260 square metres, accommodating roughly 5,400 small residences. The impending increase in impermeable surfaces poses a substantial threat to the natural drainage system of the amendment area. Additionally, the requirements mandating each residence to cover a minimum of 45% of the total site, with only 24 square metres allocated for outdoor living, and a mandatory minimum setback of 4 metres from the primary street, further compound the potential challenges.

This reality has prompted the Environmental Report to prioritize the improvement and maintenance of the two waterways, one of which -Poison Gully Creek- is a registered Aboriginal Heritage Site as a water source and historical birthplace. It is undeniable that the urban intensification of the remaining portion of the amendment area will significantly and adversely affect natural water filtration by covering most of it with impermeable hard surfaces. Consequently, this will also harm, if not totally destroy, the habitat of terrestrial fauna across most of the Amendment area. Furthermore, the direct impacts on the waterways predict a permanent loss of the existing foreshore area and environmental values due to vegetation clearance, before undertaking restoration measures.

The concerns highlighted in the Environmental Report regarding inland waters emphasize the seriousness of the environmental risks associated with this development. We argue that these risks are insurmountable in terms of the EPA's goal to maintain sufficient groundwater and surface water to protect the current environmental values of the area. As mentioned earlier, terrestrial fauna heavily relies on vegetated porous landscapes for habitat, and passive infiltration mechanisms are vital for the groundwater-dependent ecosystems in the Amendment area. Replacing this vegetated porous landscape with hectares of impermeable hard surfaces in the form of roofs and roads will undoubtedly have a negative impact on the natural habitat of terrestrial fauna.

This aspect of the EPA's consideration necessitates a comprehensive evaluation of the proposed development's ecological implications and potential mitigation strategies to address the formidable challenges posed by urban intensification in the Amendment area. While the Environmental Report notes that the proposed development may not result in the permanent loss of the Crumpet Creek foreshore area, which plays a crucial role in preserving ecological values and managing storm events, any loss can have long-lasting impacts on the natural environment and the protection of waterways.

As mentioned earlier, groundwater "expresses" itself in both Crumpet Creek and Poison Gully water features after navigating through diverse geological formations. Modifying the surface water drainage of the amendment area can significantly alter the natural hydrological regime, potentially leading to adverse effects on significant wetlands and water courses in the broader region. This disruption can upset the delicate balance of the ecosystem and harm aquatic life.

Dependence on traditional "conveyance" methods, as recommended in the Environmental Report and primarily consisting of pipe drainage, engineered linear swales, linear open drains, and detention basins, is fundamentally flawed because it fails to mimic the natural water cycle. As noted by AssocProf Owen Richards, *'True replication of the natural water cycle can only be achieved through genuine source control approaches'*.

Summary

The EPA's primary goal with respect to Inland Waters is to safeguard the existing environmental values of the area through appropriate water management, implying that any development process must not result in any degradation of these values. The Environmental Report, however, falls short of providing a guarantee that this goal will be achieved through the proposed MRS development process.

A significant disparity exists between the environmental values on rural-zoned lands compared to land subject to urban intensification. Despite the Environmental Report's use of pejorative adjectives to describe some of the Amendment area as "completely degraded", inferring that the land has lost its original biodiversity and ecological functions, it does not mean it is entirely devoid of environmental value. Even in seemingly degraded landscapes, several aspects demonstrate that they still play a significant role in the ecosystem and hold value as listed below:

Microbiomes and Soil Health: Even in heavily degraded areas, there are often remnants of native or introduced plant species, and the soil still contains microorganisms crucial for nutrient cycling and organic matter decomposition. These microorganisms help maintain soil health and fertility, which is essential for the overall functioning of ecosystems.

Natural Filtration and Erosion Control: Vegetation, no matter how degraded, still contributes to natural filtration processes. Plants help to filter out pollutants and sediment, improving water quality in nearby streams and rivers. They also control erosion, preventing soil loss and sedimentation in aquatic ecosystems.

Habitat for Wildlife: Even degraded landscapes can provide habitat for various species, especially those that have adapted to human-altered environments. Such landscapes may serve as refuges for certain wildlife and help maintain biodiversity in the face of habitat loss.

Carbon Sequestration: Even when vegetation is sparse and not thriving, plants still capture and store carbon. This is important for mitigating climate change, as carbon sequestration helps reduce greenhouse gas concentrations in the atmosphere.

Potential for Restoration: Declaring a landscape as "completely degraded" doesn't mean it cannot be restored. With appropriate management practices, such as reforestation or habitat restoration efforts, these areas can be rehabilitated, demonstrating their inherent resilience and the potential for recovery.

In conclusion, the term "completely degraded" should not be interpreted as a declaration of environmental worthlessness. While it acknowledges the loss of certain ecological functions and biodiversity, even degraded landscapes have inherent value within the larger ecosystem. Recognizing this value can guide efforts to restore and conserve these areas, ultimately contributing to a more sustainable and biodiverse environment.

However, covering the area with impermeable hard surfaces in the form of roads and roofs as proposed in the MRS Amendment would render the degradation permanent and seal in environmental loss forever.

4. Summary | Holistic Assessment:

The proposed MRS Amendment for Maida Vale raises significant concerns when assessed through the lens of a holistic impact assessment, as per EPA (2021) guidance. This assessment must consider the interconnectedness of various environmental factors and their potential impacts on the entire ecosystem. In this case, the amendment affects key environmental factors: Flora and Vegetation, Terrestrial Fauna, and Inland Waters. The proposed Amendment should be refused for the following reasons:

Loss of Vegetation: The Environmental Report recognizes that almost 80% of the vegetation, which provides habitat for terrestrial fauna, will be lost forever, including the direct loss of 25.05 hectares of native vegetation through clearing. This includes areas in good to excellent condition and those representing Threatened Ecological Communities (TEC). Such losses have profound implications for biodiversity and the overall health of the environment. Native vegetation plays a crucial role in providing habitat, shelter, and food for terrestrial fauna.

Impact on Fauna: Terrestrial fauna heavily relies on flora and vegetation for habitat and sustenance. The clearance of both native and non-native vegetation directly endangers the well-being of numerous species, such as black cockatoos, which depend on these areas for foraging and breeding. The loss of potential breeding trees and high-quality foraging habitat will profoundly harm these species and exacerbate the already decimated habitat available for this species within the City of Kalamunda. The previous development in the 'Kalamunda Wedge,' now identified as the Roe Logistics Park, entirely obliterated the once-rich cockatoo habitat and has led to direct economic loss to orchardists, further underscoring the importance of preserving the remaining cockatoo habitat in the MRS amendment area.

Erosion and Sedimentation: Clearing vegetation, particularly in an area characterised by strong easterlies from October to March, will lead to increased erosion and sedimentation, particularly in areas like Crumpet Creek. Wholesale clearing will result in habitat degradation and negatively affect Inland Waters, affecting not only aquatic species but also those connected to the water bodies.

Fragmentation: Parts of the Amendment area have already undergone extensive clearing, leading to fragmented vegetation. The proposed Amendment threatens to clear most of what remains, except for areas under the control of Western Power and the City of Kalamunda, exacerbating this fragmentation. This fragmentation will further isolate flora and fauna populations and reduce genetic diversity, making species more vulnerable to extinction.

Mitigation Measures: While the proposal acknowledges the potential environmental impacts, it relies heavily on mitigation measures. While these measures are commendable, they are not sufficient to offset the damage caused by the wholesale clearing of such a significant area of native and non-native vegetation and replacing it with impermeable hard surfaces, thereby sealing in environmental loss forever.

Holistic Impact: The interconnectedness of these environmental factors cannot be understated. Flora and fauna are interdependent, and the health of Inland Waters relies on the integrity of the surrounding vegetation. The proposed amendment risks disrupting these delicate balances, potentially causing significant harm to the ecosystem.

Alternative Approaches: Given the high conservation significance of the impacted areas, the area ought to remain zoned rural under the MRS and 'rural residential' under the LPS. Property owners ought to be informed of the ecological significance of this area so that they can assist with preservation, restoration, or mitigation efforts to protect these valuable ecosystems.

In conclusion, the proposed MRS Amendment for Maida Vale, when evaluated through a holistic environmental impact assessment, raises serious concerns about its potential negative consequences on the environment. The loss of native vegetation, the impact on terrestrial fauna, the risks to inland waters, and the reliance on mitigation measures all suggest that refusing the Amendment would be the responsible course of action to protect the overall well-being of the ecosystem.

The area is tentatively designated as an 'Urban Expansion' area under the NE sub -Regional Framework. However, the Framework states that "*The classification of existing special rural zoned areas as urban investigation or urban expansion should not be interpreted as a commitment by the WAPC to endorse any rezoning or support for the increased development of these areas at a higher density. Such decisions hinge on the outcomes of subsequent planning investigations.*" (2018 Northeast Sub-Regional Framework). The Environmental Report has reinforced the precautionary approach adopted by the WAPC and shown that the Amendment area is not suitable for intense urban development.

The area should remain zoned 'rural residential,' with private landholders encouraged to undertake environmental restoration where needed on their properties and the City of Kalamunda proactively engaged in protecting and restoring the two waterways.

From: Allied Bitumen <info@alliedbitumen.com.au>
Sent: Thursday, 5 October 2023 12:25 PM
To: Local Planning Schemes
Subject: Fwd: Proposed Metropolitan Region Scheme Amendment 1344/57 Maida Vale Urban Precinct

You don't often get email from info@alliedbitumen.com.au. [Learn why this is important](#)

----- Forwarded Message -----

Subject: Proposed Metropolitan Region Scheme Amendment 1344/57 Maida Vale Urban Precinct
Date: Thu, 5 Oct 2023 12:20:46 +0800
From: Allied Bitumen <info@alliedbitumen.com.au>
To: regionalplanningschemes@dplh.wa.gov.au

We are in favour of the re-zoning to be completed as soon as possible.

With the urgent need for new infill building to house the fast growing Perth population, this suburb is ideal.

Within 20 minutes of the Perth CBD, 10 minutes from the Perth International Airport, sitting adjacent to the existing Roe Highway and a few minutes from Tonkin Highway, what more do you need?

"The sooner the better" in our opinion and this is from existing home owners in the area for over 20 years.

Thumbs up and total support for the scheme amendment.

Kind regards

Peter Barnes
30 Oxford Court
Maida Vale WA 6057

M: 0418 912 569

Planning and Development Act 2005

Section 57 Amendment (Minor)

Form 57

Submission

Metropolitan Region Scheme Amendment 1344/57

Maida Vale Urban Precinct

OFFICE USE ONLY

SUBMISSION NUMBER

3

RLS/1110

To: Secretary
Western Australian Planning Commission
Locked Bag 2506
PERTH WA 6001

Title (Mr, Mrs, Miss, Ms) Mr First Name Peter
Surname Macasky Barnes (PLEASE PRINT CLEARLY)
Address 30 Oxford Court, Maida Vale Postcode 6057
Contact phone number 0418 912 569 Email address pmacasky@barnes@yahoo.com

Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission? ☐ Yes ☒ No

Submission (Please attach additional pages if required. It is preferred that any additional information be loose rather than bound)

We are in favour of the rezoning to be completed as soon as possible.

With the urgent need for new infill building to house the fast growing Perth population, this Suburb is ideal.

Within 20 minutes of the Perth CBD, 10 minutes from the Perth International Airport, sitting adjacent to the existing Roe Highway and just a few minutes from Tonkin Highway, what more do you need?

The "sooner the better" in our opinion and this is from existing home owners in the area for over 20 years.

Thumbs up and total support for the Scheme amendment.

turn over to complete your submission

[illegible]

- The WAPC is subject to the *Freedom of Information Act 1992* and as such, submissions made to the WAPC may be subject to applications for access under the act.
- In the course of the WAPC assessing submissions, or making its report on these submissions, copies of your submission or the substance of that submission, may be disclosed to third parties.

Signature

Date _____

27-10-23

Contacts: Tel - (08) 6551 8002 Fax: (08) 6551 9001 Email: RegionPlanningSchemes@dplh.wa.gov.au Website: <http://www.dplh.wa.gov.au/mrs-amendments>

Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-16 17:05:48

About you

1 What is your first name?

First name:

Peter

2 What is your surname?

surname:

Macskasy barnes

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

pmacskasybarnes@yahoo.com.au

5 What is your address?

address:

30 Oxford Court

OMaida Vale

6 Contact phone number:

phone number:

0418912569

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

Western Australia desperately need more housing for the ever growing population.

20 minutes from the cbd

5 minutes from the international airport

5 minutes from Tonkin highway

2 minutes from Roe Highway

What more do you need.

Please proceed, the sooner the better

File 1:

No file uploaded

File 2:

No file uploaded

File 3:

No file uploaded

From: Jim Mackintosh <jim.mackintosh@dwer.wa.gov.au>
Sent: Tuesday, 17 October 2023 2:21 PM
To: Region Planning Schemes
Cc: Marija Bubanic; Anthony Muscara; Katrina Cooper; Teresa Bryant
Subject: RE: Notice of Advertising - Proposed Metropolitan Region Scheme Amendment 1344/57 - Maida Vale Urban Precinct (Our Ref: 833-2-24-63 Pt 1 (RLS/0756))

OFFICIAL

Dear DPLH,

Thank you for the above referral. The Department of Water and Environmental Regulation (DWER) has considered the proposal and at this stage is unable to support the proposal progressing for the following reasons:

- District Water Management Strategy (DWMS) – The DWER has previously assessed and provided comments on the DWMS. The DWMS has been revised and is now supported by a Foreshore Assessment Report (as required by the EPA instructions). Re-assessment of the DWMS cannot commence until the Foreshore Assessment Report has been reviewed and endorsed/accepted by DWER.
- Foreshore Assessment Report – the Report has been reviewed by DWER and has been found to be insufficient/incomplete. The following matters must be addressed in a revised report:
 - Water Note 23 – Determining Foreshore Reserves – The process in this note (and referred to in Operational Policy 4.3) has not been properly followed. Several criteria have not been sufficiently identified and addressed, including *‘The extent of the floodway and floodplain’*, *‘Landforms important to watercourse function’*, and *‘Adjacent land use pressures that may affect the foreshore area’*. This last criteria is of particular importance as it should be informing the extent of the proposed foreshore area that is required to protect the waterway from the proposed development. Specifically, the Water Note requires that:
 - *‘The impact of land use on foreshore areas should be considered. Land uses with less impact (such as rural-residential) may permit narrower foreshore reserves than land uses having higher impact (such as rural, industrial and high density residential development). The location of existing or future infrastructure such as road, powerlines and sewerage should be identified, along with any existing or proposed firebreaks, buildings and fencing. The need for public access and recreation nodes should also be identified. Determine adjacent land use from town planning schemes, structure plans, and outline development plans, subdivision proposal, aerial photos and site inspections.’*
 - *Step 3: Finalisation of the alignment and presentation of information* has not been undertaken. Specifically, *‘The areas identified by earlier steps may now be overlayed on a map or sketch of the waterway (see Figure 2). The outer edge of these areas defines the foreshore reserve. Consideration of the purpose or function (recreation, conservation, flood protection or public access for example) of the foreshore reserve will determine which factor to assign greater weighting’*.
 - The Foreshore Assessment Report mentions the *“Local Open Space zone as defined by the City of Kalamunda Local Planning Scheme No. 3 (refer to Appendix A)”* on multiple occasions. The relevance of this has not been discussed, Appendix A has not been provided, and justification for using this to define the foreshore reserve has not been provided.
 - Sections 3.1 and 3.2 state that *“indicative foreshore area boundaries have been provided to guide more detailed investigation and planning at later stages of the planning process. Exact foreshore boundary areas will be identified at the local planning level...”*. While this is consistent with

Operational Policy 4.3, it does not meet the requirements of the EPA's instructions. It is also unclear what further work is required to refine the proposed foreshore reserve, whether it is intended to increase or decrease the reserve size, or why this has not been undertaken consistent with the EPA's instructions.

- Flood management – While a 1% AEP event flood map has been provided it does not define the floodway and flood fringe. The proposal states that culverts will be upgraded and the flooding will change but that post-development flood mapping has not been provided and there is no assessment of the upgrades required, how this will impact the waterway and the flood mapping. There is insufficient information to determine if the proposed foreshore reserve will appropriately manage flood risks. Figure 8 is confusing – what is the “*Preliminary Foreshore*” and the “*Foreshore Buffer*” and is this consistent with Figure 1 which also depicts the “*Proposed Crumpet Creek Foreshore Reserve*” and the “*Proposed Foreshore Buffer*”? In addition, has the waterway been surveyed for accurate data? This would be required in order to appropriately model the 1% AEP event. The 1% AEP event is also not wholly contained within the foreshore area.
- The Foreshore Assessment Report should be part of the DWMS.
- The DWMS figures are not consistent with the FAR.
- Section 3.1 states “*It is recommended that a foreshore area be developed for Crumpet Creek that includes the mapped boundary in Figure 8*”. Which boundary?
- Section 3.2 states “*...to satisfy the minimum 30 metres setbacks by the DoW Operational Policy 4.3*” – Operational Policy 4.3 provides specific circumstances for when the 30 metre setback applies and this has not been considered.
- The assessment has also excluded other important information that should be considered and addressed, including soil types prone to erosion, areas of the waterway with existing erosion problems, existing aquatic habitats, water quality and other significant habitat areas.

Therefore the Department requires that a revised report is submitted that addresses the above matters.

Please don't hesitate to contact me should you require any further information.

Regards

Jim Mackintosh

Department of Water and Environmental Regulation

Program Manager

Swan Avon Region

Planning Advice Section

T 08 6250 8043 |

E jim.mackintosh@dwer.wa.gov.au

Visit our website www.dwer.wa.gov.au

Section 57 Amendment (Minor)
Form 57

Submission

Metropolitan Region Scheme Amendment 1344/57

Maida Vale Urban Precinct

OFFICE USE ONLY

SUBMISSION NUMBER

5

RLS/1110

To: Secretary
Western Australian Planning Commission
Locked Bag 2506
PERTH WA 6001

Title (Mr, Mrs, Miss, Ms) First Name Helen

Surname Kendall (PLEASE PRINT CLEARLY)

Address 6 KENT ROAD MAIDA VALE Postcode 6057

Contact phone number 0406610130 Email address hikendall@doze mail
.com.au

Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission? ☐ Yes ☒ No

Submission (Please attach additional pages if required. It is preferred that any additional information be loose rather than bound)

I fully support the rezoning of MAIDA VALE
SOUTH TO URBAN.

I understand that will take some years
to complete the development, and the final
plan is still a work in progress

After speaking with Johnno Worth the
director of Monument, I feel very
confident with his honest answers to our
questions, and understand the challenges
ahead of him.

turn over to complete your submission

[illegible]

- The WAPC is subject to the *Freedom of Information Act 1992* and as such, submissions made to the WAPC may be subject to applications for access under the act.
- In the course of the WAPC assessing submissions, or making its report on these submissions, copies of your submission or the substance of that submission, may be disclosed to third parties.

Signature  Date 27-10-23

Contacts: Tel - (08) 6551 8002 Fax: (08) 6551 9001 Email: RegionPlanningSchemes@dph.wa.gov.au Website: <http://www.dph.wa.gov.au/mrs-amendments>

Section 57 Amendment (Minor)
Form 57

Submission

Metropolitan Region Scheme Amendment 1344/57

Maida Vale Urban Precinct

OFFICE USE ONLY

SUBMISSION NUMBER

6

RLS/1110

To: Secretary
Western Australian Planning Commission
Locked Bag 2506
PERTH WA 6001

Title (Mr, Mrs, Miss, Ms) First Name IAN

Surname KENDALL (PLEASE PRINT CLEARLY)

Address 6 KENT RD MAIDA VALE Postcode 6057

Contact phone number 0419 119 980 Email address ikendall@ozemail.com.au

Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission? ☐ Yes ☒ No

Submission (Please attach additional pages if required. It is preferred that any additional information be loose rather than bound)

I SUPPORT THE REZONING OF MAIDA VALE SOUTH TO URBAN,
AND I FULLY UNDERSTAND THAT THIS WILL TAKE SOME
YEARS TO COMPLETE.

IAN

turn over to complete your submission

P. 1 of 2

[illegible]

- The WAPC is subject to the *Freedom of Information Act 1992* and as such, submissions made to the WAPC may be subject to applications for access under the act.
- In the course of the WAPC assessing submissions, or making its report on these submissions, copies of your submission or the substance of that submission, may be disclosed to third parties.

Signature 9/11/1 Date 27 Oct 2023

Contacts: Tel - (08) 6551 8002 Fax: (08) 6551 9001 Email: RegionPlanningSchemes@dplh.wa.gov.au Website: <http://www.dplh.wa.gov.au/mrs-amendments>

Marija Bubanic

From: Hatcher, Kim <Kim.Hatcher@atco.com>
Sent: Monday, 2 October 2023 1:33 PM
To: Marija Bubanic
Subject: RE: LM23779 : Notice of Advertising - Proposed Metropolitan Region Scheme Amendment 1344/57 - Maida Vale Urban Precinct (Our Ref: 833-2-24-63 Pt 1 (RLS/0756))

You don't often get email from kim.hatcher@atco.com. [Learn why this is important](#)

OFFICIAL

Good Afternoon,

Re: Maida Vale Urban Precinct (Our Ref: 833-2-24-63 Pt 1 (RLS/0756))
ATCO Reference: LM23779

ATCO Gas Australia (ATCO) has **no objection** to the proposed application, based on the information and plan provided.

Advice notes:

- Anyone proposing to carry out construction or excavation works must contact 'Before You Dig Australia' (www.byda.com.au) to determine the location of buried gas infrastructure. Refer to ATCO document AGA-O&M-PR24- *Additional Information for Working Around Gas Infrastructure* <https://www.atco.com/en-au/for-home/natural-gas/wa-gas-network/working-around-gas.html>
- Proposed construction and excavation works need to be managed in accordance with the ATCO document *Additional Information for Working Around Gas Infrastructure - AGA-O&M-PR24* <https://www.atco.com/en-au/for-home/natural-gas/wa-gas-network/working-around-gas.html>

Please accept this email as ATCO's written response.

Should you have any queries regarding the information above, please contact us on 13 13 56 or eservices@atco.com.

Kind Regards

Kim Hatcher

Land Liaison/Engineering Coordinator
ATCO, Gas Division, Australia

A. 81 Prinsep Road, Jandakot, Western Australia, 6164

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ATCO acknowledges the Traditional Owners of country throughout Australia and their continuing connection to land, sea and community. We pay respect to their Elders past, present and emerging, and in the spirit of reconciliation, we commit to working together for our shared future.

Marija Bubanic

From: Chas Dornac <chasdornac@yahoo.com>
Sent: Wednesday, 18 October 2023 7:47 AM
To: Region Planning Schemes
Subject: MRS Amendment 1344/57 Maida Vale Urban Precinct
Attachments: Formatted MRS Amendment Maida Vale.pdf; Proforma Submission Form.pdf

To Whom it May Concern,

We kindly request your acknowledgment of the attached submission, which serves as our opposition to the proposed amendment.

In light of the recent public advertisement regarding this matter, which specifies that submissions referencing environmental concerns will be shared with the Environmental Protection Agency (EPA), we kindly ask that the entire EcoVision submission be forwarded to the EPA without any modifications. It is essential to recognize that the interconnectedness of planning and environmental considerations is of paramount importance.

Thank you for your attention to this matter.

Yours sincerely,

Bev & Charles Dornan

Joint Coordinators, EcoVision

Planning and Development Act 2005

Section 57 Amendment (Minor)
Form 57

Submission**Metropolitan Region Scheme Amendment 1344/57****Maida Vale Urban Precinct**

OFFICE USE ONLY

SUBMISSION NUMBER

8

RLS/1110

To: Secretary
Western Australian Planning Commission
Locked Bag 2506
PERTH WA 6001

Title (Mr, Mrs, Miss, Ms) *Mr & Mrs* First Name *Charles & Bev*

Surname *DORNAN* (PLEASE PRINT CLEARLY)

Address *28 Easterbrook Place Walla Gore* Postcode *6107*

Contact phone number *0417932541* Email address *chas.dornan@yahoo.com*

Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission? ☐ Yes ☒ No

Submission (Please attach additional pages if required. It is preferred that any additional information be loose rather than bound)

Please see Attached PDF submission

turn over to complete your submission

This image shows a full page of white paper designed for handwriting practice. It features approximately 20 horizontal rows, each defined by two parallel dotted lines. The rows are evenly spaced and extend across the entire width of the page, providing a guide for letter height and placement. There are no margins, text, or other markings on the paper.

- The WAPC is subject to the *Freedom of Information Act 1992* and as such, submissions made to the WAPC may be subject to applications for access under the act.
- In the course of the WAPC assessing submissions, or making its report on these submissions, copies of your submission or the substance of that submission, may be disclosed to third parties.

Signature B. P. Dora Date 18 October 2023

Contacts: Tel - (08) 6551 8002 Fax: (08) 6551 9001 Email: RegionPlanningSchemes@dph.wa.gov.au Website: <http://www.dph.wa.gov.au/mrs-amendments>



Photo courtesy of M. Light

MRS AMENDMENT 1344/57

MAIDA VALE URBAN PRECINCT

Submission of EcoVision

18 October 2023

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Maida Vale South proposed MRS Amendment – submission by EcoVision*

PART 1: Planning and Development considerations

Introduction

This document serves as an in-depth examination of the planning and development aspects related to proposed MRS Amendment 1344/57, specifically concerning Maida Vale South. The primary objective is to make a compelling case for the rejection of this Amendment by the WAPC (Western Australian Planning Commission) and EPA (Environmental Protection Authority).

Under the provisions of the *Planning and Development Act 2005*, amendments to the MRS can be categorized as either 'minor' or 'major,' depending on whether they are considered to bring about significant alterations to the MRS.

In this particular case, the Department of Planning has classified the proposed MRS Amendment, which entails changing the land zoning from rural to urban (R30), as a 'minor' amendment. This characterisation is a matter of concern, given the substantial implications it holds for the Maida Vale South community, who were taken by surprise by this development.

The scale of the proposed changes, the potential environmental impact, and the necessity for well-informed community engagement given the potential for land resumptions all strongly indicate that the Amendment should have been designated as a 'major' amendment. This perspective is further reinforced by the fact that the EPA initiated an Environmental Review upon learning of the Amendment, underscoring the mischaracterisation of this matter.

The classification of this Amendment as 'minor' has had tangible consequences, notably resulting in a less rigorous assessment of the infrastructure requirements. It has also failed to adequately address the significant financial burden on the State in terms of providing new utilities and roads, as well as the broader regional implications of rezoning on water resources and the environment. Consequently, this mischaracterisation has hindered the thorough evaluation and mitigation of potential impacts.

Nonetheless, the situation remains as it is, and we maintain our optimism that the WAPC will ultimately decline the Amendment, regardless of its characterisation.

*See Attachment A. 'About EcoVision'

Executive Summary

This document provides a detailed analysis of the proposed MRS Amendment 1344/57, specifically focusing on Maida Vale South. Our primary objective is to present a compelling case for the rejection of this Amendment by the WAPC and the EPA.

At the core of our opposition is the belief that the WAPC should not facilitate the transformation of private property into a scheme for private profit, especially when it threatens the involuntary displacement of residents and the seizure of their properties.

The proposal lacks proper community consent and consultation and undermines the community's identity and environmental values. Maida Vale South's low-density rural housing offers a high quality of life, counters urban heat islands, and actively mitigates climate change.

From a legal and regulatory standpoint, the proposal diverges from the Metropolitan Region Scheme (MRS), the Foothills Structure Plan, and the North-East sub-Regional Framework, highlighting a discordance with established planning frameworks.

There are concerns regarding the mischaracterisation of the proposal as a 'minor' Amendment, which has hampered thorough evaluation, transparency, and community trust.

Furthermore, the proposal conflicts with State Planning Policies, including SPP 2.5, SPP 2.0, and SPP 3.0. It fails to align with the principles of community, environment, infrastructure, and governance outlined in the State Planning Strategy 2050.

Traffic and sewerage infrastructure challenges also pose significant issues, such as costly road network reconstruction and difficulties in providing reticulated sewerage services.

In conclusion, the rejection of this Amendment is crucial to protect the unique character and values of Maida Vale South, ensure responsible and sustainable land use and development, and address the multitude of concerns outlined in this document.

It is our hope that the WAPC and EPA will reject the proposed Amendment in light of these critical issues.

Legal and Regulatory Framework:

We believe that the proposal is in direct contradiction to the State Planning Framework and the pertinent planning policies, which collectively provide a comprehensive guideline for land use in Western Australia. Notable factors include:

- The Metropolitan Region Scheme (MRS), which currently designates the area as rural.
- The Foothills Structure Plan, still in legal effect until 2025, which also classifies the area as rural.
- The Perth and Peel @ 3.5 Million North-East sub-Regional Framework, which was scheduled for review two years ago, designates Maida Vale South for urban expansion.

These factors collectively emphasize the discordance between the proposal and the established planning framework and policies governing land use in Western Australia.

The land use proposals contained in the Framework are based on a number of key principles and objectives including the need to preserve and enhance areas of landscape character and interest in appropriate areas.

The Framework's initial draft maintained the rural designation of Maida Vale South in alignment with the MRS and the Foothills Structure Plan but was altered at the request of the (then) Shire of Kalamunda without community knowledge. This in-house change denied residents the opportunity to voice their concerns regarding the shift to urban expansion and was therefore, arguably unlawful.

Despite the changes made, the 2018 Framework still stressed the conditional nature of designating areas for urban expansion or urban investigation. It emphasized the necessity for thorough planning before considering any rezoning. This cautious approach underscores the importance of conducting further investigations, as articulated in the following quotation:

"The classification of existing special rural zoned areas as urban investigation or urban expansion should not be interpreted as a commitment by the WAPC to endorse any rezoning or support for the increased development of these areas at a higher density. Such decisions hinge on the outcomes of subsequent planning investigations." (2018 Northeast Sub-Regional Framework).

This submission contends that the WAPC/EPA should ultimately reject the provisional 'urban expansion' designation and instead, maintain the rural zoning of the area within the MRS.

Staging and Sequencing:

The Framework states that there is ample undeveloped urban land to meet housing requirements for approximately 32 years.

Urban Growth Monitor 14 (Feb.2023) has updated these projections stating that *'if land consumption continues at a rate consistent with the 20-year average, it would theoretically take an estimated 27 years to deplete existing stocks of non-urbanised land available for urban development in the Perth metropolitan and Peel regions.'*

Therefore, there is no pressing need for urban intensification in Maida Vale South, given the existing land supply and its potential consequences for supply of infrastructure-, including the provision of reticulated sewerage- and traffic flow adjustments in the region.

The State Planning Strategy:

The State Planning Strategy 2050, which represents the highest level of policy, encompasses six fundamental principles: Community, Economy, Environment, Infrastructure, Regional Development, and Governance. This submission focuses on four of the most pertinent principles: Community, Environment, Infrastructure, and Governance.

In terms of the *Community* principle, the proposed MRS amendment is at odds with it, as it poses a threat to the cherished identity and sense of belonging held by the residents of Maida Vale South.

Concerning the *Environment* principle, the proposed amendment fails to recognize and preserve the natural assets of the State. The destruction of biodiversity to accommodate an astonishing number of new dwellings runs counter to the Strategy's sustainability objectives. The proposed MRS amendment is contrary to the Environment principles of the Strategy in that it fails to recognise and conserve the State's natural assets.

Maida Vale South is an integral part of the wider Perth hills context. Existing tree canopy contributes to lowering the heat island effect of urban development, and ecological linkages help to conserve threatened flora and fauna.

The destruction of biodiversity to make way for 5400 + dwellings is therefore inconsistent with the Strategy, Liveable Neighbourhoods, and various climate change considerations.

With regards to the *Infrastructure* principle, the proposed amendment lacks alignment with integrated and staged development processes and will disrupt existing infrastructure planning. Furthermore, it may lead to affected agencies 'leapfrogging' over areas that already have approved development.

In terms of the *Governance* Principle, the community- thus far- lacks confidence in the development processes and practices associated with the proposed Amendment. This lack of confidence arises from a history marked by the following issues:

- **Concealment of 'Urban Expansion' Descriptor:** The insertion of the descriptor 'urban expansion' into the finalised Framework without the knowledge of the affected community has eroded trust in the process.
- **Failure to Notify Residents:** The failure to notify residents in May 2018 about the lodging of the Amendment for Maida Vale raises concerns about the transparency and decision-making process of the WAPC. This omission becomes even more problematic when considering that the WAPC forwarded the proposed Amendment to the EPA. The logical inference of such action indicates WAPC's support for the proposed Amendment. Conversely, if the WAPC did not believe the Amendment should be supported, there would have been no need to involve the EPA at that stage.

This lack of communication and transparency undermines public trust and contradicts the principles of good governance outlined in the State Planning Strategy 2050, which describes good governance as "*participatory, collaborative, accountable, transparent, and responsive*". Furthermore, the failure to engage the community in seeking their views on this matter further diminishes public confidence that their input will be considered with anything more than token consideration in the future. This situation highlights the need for improved transparency and community engagement in the decision-making processes related to significant developments like the Maida Vale Amendment.

- **WAPC Decision Preceding EPA Referral:** The WAPC's decision to seemingly endorse the Amendment on 31 May 2018, prior to its referral to the Environmental Protection Authority (EPA), raises significant concerns. By making this preliminary decision of support for the Amendment before the EPA and the public had the opportunity to weigh in, the WAPC acted prematurely and essentially based its initial decision solely on the information provided by the proponent. This approach undermines the principles of transparency and public engagement that are vital in responsible governance.

These issues indicate a significant breakdown in governance and transparency related to the proposed Amendment, which has eroded the community's trust in the development processes and practices associated with it. In addition to the issues mentioned above, another factor contributing to the community's lack of confidence in the Governance Principle is the mischaracterization of the proposed Amendment as "minor."

This mischaracterisation downplayed the potential impact and significance of the Amendment, further undermining the community's trust in the decision-making process. The misrepresentation not only demonstrates a lack of transparency but also raises questions about the accuracy of the information provided to the public and stakeholders. Such mischaracterisations can lead to scepticism and suspicion regarding the intentions behind the Amendment, making it difficult for the community to have confidence in the development processes and practices associated with it.

State Planning Policies:

The State Planning Framework is intended to provide a comprehensive and sustainable approach to land use and development, with State Planning Policies playing a pivotal role in achieving these objectives.

In assessing the proposed Amendment for Maida Vale South, the Amendment Report has identified four state planning policies as relevant to the matter, which are State Planning Policy 2.8 - Bushland Policy for the Perth Metropolitan Region (SPP 2.8), Draft State Planning Policy 2.9 - Planning for Water, State Planning Policy 3.7 - Planning in Bushfire Prone Areas, and State Planning Policy 5.4 - Road and Rail Noise.

However, it is a cause for concern that the Amendment Report has not considered other, more pertinent, State planning policies that ought to have been taken into account during the evaluation of this proposed Amendment.

State Planning Policy 2.5 Rural planning

Given that the Amendment area is currently zoned rural under the MRS and special rural under the LPS, it is alarming that due regard has not been given to SPP2.5 in considering the proposed Amendment.

This policy is the overarching policy which is meant to guide State and local government planning decision-making involving rural zoned land.

Relevantly, clause 6.4 of SPP 2.5 directs attention to the factors planning decision-makers are required to consider when contemplating zoning proposals or amendments to region or local planning schemes.

In particular, clause 6.4(c)(i) requires decision-makers to consider *'the capacity of the site to accommodate the proposed zone/land use impacts and **only** support proposals which are consistent with endorsed planning strategies, or in exceptional circumstances, where the proposal meets the objectives and intent of WAPC policy.'* (our emphasis)

The proposed MRS amendment contradicts State Planning Policy 2.5 as it does not align with the Foothills Structure Plan, which is effective until 2025, and no exceptional policy circumstances are present to justify approval.

State Planning Policy (SPP) 2.0, the Environment and Natural Resources Policy

State Planning Policy (SPP) 2.0, the Environment and Natural Resources Policy, places a significant emphasis on the preservation of open spaces and natural environments, particularly in areas of environmental significance. It is driven by the objectives of protecting, conserving, and enhancing the natural environment.

SPP 2.0 also seeks to promote sustainable development and responsible environmental practices. However, the proposed Amendment, as detailed in Part 2 of this submission, clearly indicates that it will result in the extensive destruction of the environmental values within the Amendment area, including its tree canopy and the flora and fauna.

This policy further encourages the preservation of community character and heritage values, emphasizing the importance of maintaining the identity and cultural significance of a locality, a consideration that the proposed Amendment does not adequately address, as it seeks to allow a development that would fundamentally alter the character of Maida Vale South.

Furthermore, SPP 2.0 underscores the necessity for meaningful community engagement and consultation in the planning and development process, which has been notably absent from this Amendment process thus far.

This policy also mandates the acknowledgment of the intrinsic value of the environment in planning processes.

This policy also underscores the importance of planning decisions that prioritize the "common good" over private profit and recognize the significance of "community lifestyle preferences" in the decision-making process.

The proponent has not presented any substantiated evidence to the WAPC that they have secured the formal consent of the majority of landowners for the proposed Amendment.

In the absence of such evidence, the proposed Amendment can be viewed as a potential "land grab" orchestrated by a private entity.

It is incumbent upon the WAPC, whose primary responsibility is to act in the best interests of the public of Western Australia, to refrain from colluding with the developer to the detriment of the landowners.

In such a context, the WAPC should exercise its role as a guardian of the public interest and ensure that planning decisions align with the principles of community well-being and the broader public good.

In light of these considerations, it is evident that the proposed MRS Amendment is inconsistent with SPP 2.0 because it will result in unacceptable environmental damage, affecting flora, fauna, and water resources, and further diminishing the tree canopy.

The failure to give due regard to SPP 2.0 is a serious omission that should be rectified by rejecting this proposed Amendment.

State Planning Policy 3.0 - Urban growth and settlement

State Planning Policy 3.0: urban growth and settlement (SPP 3.0) acknowledges that the spread of urban development intensifies pressures on valuable land and water resources and imposes costs in the provision of infrastructure and services.

The proposed MRS amendment will impose costs on the State for the provision of unplanned infrastructure, utilities and sewer services and raises concerns of inconsistency with State Planning Policy (SPP) 3.0 due to several key reasons.

Firstly, it fails to adequately address the principles of sustainable development outlined in SPP 3.0, such as promoting social, environmental, and economic well-being. The Amendment lacks a comprehensive strategy for managing and preserving natural resources, which is a crucial aspect of SPP 3.0.

Additionally, the proposed Amendment does not align with the regional planning framework and goes against the principles of integrated land use and transportation planning, a core element of SPP 3.0. These inconsistencies raise concerns about the long-term sustainability and compatibility of the proposed Amendment with the broader planning objectives outlined in SPP 3.0.

Clause 5.6 of SPP 3.0 states that *‘Rural-residential living is an important component of the settlement pattern in rural areas of the State. Rural-residential development also provides for lifestyle choice’*

Given that SPP 2.5: Rural Planning states that within the Perth and Peel regions opportunities for rural living, including rural residential development, will become more limited with rural living proposals being considered by exception, it makes it even more important that Maida Vale South maintains its current rural zoning in order to provide residents of Perth with a range of opportunities for rural residential lifestyles.

Additionally, the proposed new shopping hub will result in additional pressure on existing City of Kalamunda shopping centres which are experiencing very low occupancy rates.

Traffic and Sewerage Considerations:

The proposed Amendment will significantly impact traffic and sewerage infrastructure. It requires extensive road network reconstruction and poses challenges in providing reticulated sewerage services to the area, which contradicts planning principles and environmental considerations.

The proposed MRS amendment will require significant unscheduled and costly intervention in State planning processes for reconstruction of the road network to accommodate an additional 10,800 vehicles in the Amendment area.

With respect to sewerage there is a general presumption against urban development where reticulated sewerage cannot be provided (Liveable Neighbourhoods 2015, p. 86).

The Maida Vale South subject area is not currently serviced by a wastewater scheme. Serious geomorphic, environmental and built form constraints to proposed new sewer works exist include the barrier presented by Roe Highway and intensive urban developments to the south.

Unscheduled sewer works are inconsistent with the proper and orderly planning provision of infrastructure by the State.

Conclusion

In conclusion, this comprehensive examination of the proposed MRS Amendment 1344/57, focusing on Maida Vale South, highlights several critical concerns that collectively underscore the necessity for the rejection of this Amendment by the WAPC and the EPA.

The mischaracterisation of the proposed Amendment as 'minor' is problematic, given its substantial implications for the Maida Vale South community, and its subsequent lack of thorough evaluation and impact mitigation. The mischaracterisation has prevented community engagement and transparency and has eroded trust in the planning process.

The proposed Amendment's impact on the Maida Vale South community is profound. It threatens to compromise the unique environmental values, sense of place, and well-being of its residents, and potentially results in the involuntary displacement of homeowners.

The proposed changes run counter to the advantages of low-density rural living, including enhanced liveability, mitigation of urban heat islands, and active participation in climate change mitigation.

Furthermore, the proposal lacks alignment with the legal and regulatory framework, such as the Metropolitan Region Scheme (MRS) and the Foothills Structure Plan. The State Planning Strategy 2050 emphasizes the principles of community, environment, infrastructure, and governance, all of which are contradicted by the proposed Amendment. Key State Planning Policies, including SPP 2.0 and SPP 3.0, are also not adequately considered in the Amendment's assessment.

Traffic and sewerage considerations present significant challenges, with the proposed Amendment demanding extensive road network reconstruction and facing hurdles in providing reticulated sewerage services to the area. The potential financial burden on the State and the disruption to infrastructure planning are notable concerns.

In light of these numerous issues and inconsistencies, it is imperative that the WAPC and EPA carefully evaluate this proposed Amendment, considering the broader planning and development implications, legal and regulatory framework, and community well-being. The rejection of this Amendment is essential to protect the unique character and values of Maida Vale South and to ensure responsible and sustainable land use and development in Western Australia.

PART 2: EcoVision's Response to the 360 Environmental Report

Introduction

The 360 Environmental Report ("the Environmental Report") sheds light on a matter of paramount significance: the proposed MRS Amendment for rural-to-urban conversion. The Environmental Report confirms the richness and importance of the flora and fauna of the area.

Maida Vale South is entirely in private ownership and the majority of residents have proven to be considerate custodians of this beautiful area as indicated by its increasing tree canopy over time. However, this MRS proposal raises significant, and potentially insurmountable, concerns with respect to preserving the current environmental values within the designated Amendment area.

In accordance with the structure outlined in the EPA Instructions, the following paragraphs address the EPA's concerns regarding Flora and Vegetation, Terrestrial Fauna, and Inland Waters.

In this analysis, it is essential to contextualize these observations within the framework of the anticipated R30 zoning. *'The area is currently zoned as Special Rural, with the intention of rezoning the area to urban with an R coding of R30'.* (City of Kalamunda Submission, draft NE sub Regional Framework 2015).

The Amendment Report only briefly acknowledges this anticipated zoning classification, relegating it to a passing reference on page 2, even though it carries profound implications.

To be precise, it states, *"In 2013, the WAPC endorsed the City of Kalamunda Local Planning Strategy (LPS), which designates the subject land (and the surrounding area) as an Urban Investigation area with a potential residential density of R20 and R30. The proposed amendment aligns with the LPS."*

This MRS Amendment envisions the construction of approximately 5,400 dwellings, accompanied by an astounding influx of around 10,800 additional vehicles (assuming an average of 2 vehicles per household). These vehicles are expected to converge onto Hawtin Road, a local road owned and maintained by the City of Kalamunda, and notably not classified as a state road. Main Roads Western Australia has no authority over this local asset. The road's original design did not account for accommodating such a substantial volume of traffic, which will permanently sever existing environmental linkages between the foothills side of the road and the Amendment area.

The photographs below (not of the same area) vividly illustrate the nature of R30 zoning, characterized by an unbroken expanse of closely packed housing units, featuring small frontages. When viewed from an aerial perspective, it reveals near-complete ground coverage with impervious materials.



Two R30 houses side by side



This stark contrast between the proposed urbanization and the existing rural landscape of Maida Vale South necessitates careful consideration.

The EPA plays a vital role in the state's planning and development processes acting as an independent statutory authority responsible for evaluating and regulating the potential environmental impacts of significant projects and proposals, including this MRS proposal.

By providing a rigorous and science-based assessment of development projects, the EPA contributes to the responsible and sustainable planning and development of Western Australia.

On the other hand, the WAPC also has a responsibility to ensure that planning and development decisions do not have adverse effects on the environment. It has a specific responsibility for ensuring that its planning decisions promote the conservation of ecological systems and the biodiversity they support by adopting a risk-management approach that aims to avoid or minimize environmental degradation.

We strongly urge the WAPC/EPA to reject this Amendment in light of the profound concerns it raises for the environment and community well-being.

Executive Summary

The proposed MRS Amendment for rural-to-urban conversion in Maida Vale South, as detailed in the Environmental Report, has ignited significant environmental concerns. The Environmental Report acknowledges the area's richness and importance in terms of flora, fauna, and inland waters. However, it fails to address these concerns effectively. In response to the outlined concerns about Flora and Vegetation, Terrestrial Fauna, and Inland Waters, we strongly urge the WAPC/EPA to reject this Amendment.

The proposed rezoning carries insurmountable risks to the environment and community well-being.

1. Flora and Vegetation

The proposed Amendment threatens almost 80% of existing vegetation, endangering native and non-native species, including those classified as Vulnerable and Priority under wildlife protection acts. The loss of habitat is further exacerbated by the fragmentation and isolation of vegetation patches and an insufficient offsetting strategy. The proposed development undermines ecological systems' conservation, risking irreversible harm to the environment.

2. Terrestrial Fauna

The Amendment forecasts the elimination of nearly 80% of the existing fauna habitat, particularly impacting threatened bird species like black cockatoos. Their habitat loss disrupts ecological processes, hinders breeding success, and endangers these iconic and culturally significant birds. The urban rezoning could also lead to larger populations foraging in orchards, causing financial losses to growers. Protecting orchards and agricultural activities is essential for preserving cultural, economic, and environmental well-being. Urban rezoning in critical wildlife areas, such as Maida Vale, should be avoided to mitigate these concerns.

3. Inland Waters

The proposed R30 zoning, accommodating around 5,400 residences, brings serious concerns about water drainage systems and impacts on Crumpet Creek and Poison Gully. The increase in impermeable surfaces threatens natural drainage systems, jeopardizing water quality and aquatic life. Replacement of natural landscapes with impermeable surfaces will harm terrestrial fauna, dependent on vegetated porous landscapes for habitat. The proposed drainage methods do not mimic the natural water cycle and need a more sustainable approach.

4. Summary | Holistic Assessment

The proposed MRS Amendment, when holistically assessed, raises formidable concerns about environmental consequences. The loss of vegetation, impact on terrestrial fauna, erosion and sedimentation, habitat fragmentation, insufficient mitigation measures, and interconnected environmental factors necessitate rejecting the Amendment. The proposal risks disturbing delicate ecological balances, potentially causing significant harm to the ecosystem. An alternative approach, such as keeping the area zoned rural residential, engaging private landholders in restoration efforts, and proactively protecting waterways, is more appropriate. Refusing the Amendment aligns with a precautionary approach to ensure the area's preservation and ecological well-being.

In summary, this response underscores the critical need for the responsible and sustainable planning and development of the Maida Vale South area, considering its ecological significance and the potential irreversible harm posed by the proposed Amendment. The rejection of this rezoning is vital for preserving the environment and the community's long-term well-being.

Retention of rural zoning under the Metropolitan Regional Scheme is the ONLY sure way to ensure that the environmental protections currently available in the Environmental Protection Act 1986 will continue to apply to this area in the future.

The Minister for the Environment has confirmed that the EP Act regulates the clearing of native vegetation in Western Australia and that clearing in an urban-zoned area generally **does not** require the developer to obtain a clearing permit. A developer can therefore remove all native vegetation with impunity, as none of the environmental protections in the EP Act have any force in an urban zone.

In December 2017, the EPA reached a significant decision regarding a proposed amendment to the *Shire of Gingin Local Planning Scheme 9*.

The EPA firmly stated that this Amendment was *'incapable of being made environmentally acceptable under Part IV of the Environmental Protection Act 1986 (WA)'*.

Notably, this EPA decision was grounded in the anticipation of substantial environmental impacts, specifically citing concerns such as *'clearing of low representation remnant vegetation, threatened ecological community, and Black Cockatoo habitat.'*

These are the very factors which underpin the issues associated with the proposed Amendment under consideration.

1. Flora and Vegetation

The EPA's environmental objective for the factor Flora and Vegetation is:

"To protect flora and vegetation so that biological diversity and ecological integrity are maintained." In the context of this objective: Ecological integrity is the composition, structure, function and processes of ecosystems, and the natural range of variation of these elements.

- **Irreparable Loss of Native Vegetation:**

The proposed Amendment casts a dark shadow of almost certain, permanent loss upon a substantial portion of native vegetation, including the representation of poorly accounted for vegetation complexes like Forrestfield and Southern River. This impending loss not only threatens the visual aesthetics of the region but, more critically, poses a dire threat to the overall health of the foothills ecosystem.

On page 79 of the Environmental Report, it is stated that 'the MRS amendment will result in the retention of at least 13.91 ha (21.0%) of fauna habitat, including 6.15 ha (43%) of moderate suitability for SRE (Sensitive Reptile Ecosystems)'. As is to be expected, fauna habitat comprises native and non-native vegetation, fallen logs, shrubbery, and grasses.

The use of the term 'retention' in this context seeks to downplay the extent of planned vegetation loss.

In reality, the Environmental Report **actually foresees the elimination of nearly 80% of the existing vegetation** cover, including native flora. This stark reality becomes even more apparent when we consider that 10.59 ha of the MRS amendment area pertains to the existing City of Kalamunda managed local road reserves, which are protected from development, and an additional 14.10 ha are associated with a Western Power Easement. These figures strongly indicate that only a negligible fraction of the current flora will remain unaffected.

- **Endangered and Vulnerable Species:**

The Amendment will result in the direct clearing of habitat for several threatened species of flora, notably *Conospermum undulatum*, classified as Vulnerable under both the Wildlife Conservation Act and the Environment Protection and Biodiversity Conservation Act. Furthermore, *Isopogon autumnalis*, designated as a Priority species, would also suffer adverse effects. This situation poses a substantial risk to the survival of these species. Adding to the concern is the uncertainty surrounding the future maintenance of the Western Power easement corridor, which is likely to entail further clearing. The potential long-term consequences of the proposed amendment on flora and vegetation are undeniably grave, verging on near-complete eradication.

- **Habitat Fragmentation:**

The proposed development is likely to lead to fragment or isolate existing vegetation and populations of conservation-significant flora. Fragmentation disrupts ecological processes and reduces genetic diversity within populations, making species more vulnerable to extinction.

- **Impact on Waterways:**

The proposed development also impacts two waterways, Crumpet Creek and Poison Gully, which support the mentioned vegetation and potentially threatened species. Any disturbance or pollution in these waterways will have cascading effects on the entire ecosystem.

- **Limited Mitigation Measures:**

The Environmental Report has identified some mitigation measures, often accompanied by qualifiers like '*where possible*' or '*where practicable*'. However, it is evident that these measures fall short in effectively addressing the significant impacts on flora and vegetation. The proposed retention areas cannot fully compensate for the loss of habitat and vegetation, and notably, the Environmental Report itself acknowledges that "*... an offset may be required to address the clearing associated with TECs (Threatened Ecological Communities) and habitat loss.*"

Using an "off set" approach to address the loss of threatened and rare vegetation in the ever-diminishing vegetation complexes of Forrestfield and Southern River is inherently inappropriate. These ecosystems possess distinct environmental conditions and species compositions that are extremely challenging to replicate elsewhere. It should be stressed that it would not be possible to offset the area with bushland elsewhere since there is virtually nowhere equivalent in its landforms and biodiversity. Any attempt to replace them within offset areas will inevitably fall short in preserving their ecological value.

Moreover, even if a suitable replacement area could be identified, the lack of comprehensive monitoring and long-term planning for their survival renders the offset strategy impractical. Given these limitations, it is more appropriate to prioritize the protection and conservation of rare and threatened vegetation in its natural habitat through measures such as strict land-use planning, habitat restoration, habitat corridors, and other conservation strategies that prioritize the preservation of biodiversity in situ, rather than relying on offsetting.

In such circumstances, portraying an offset strategy as a valid mitigation measure is patronizing and misleading. It gives the false impression that permanent loss can be averted, when in reality, the ecological impact is likely irreversible.

Summary of Flora and Vegetation Concerns:

The rezoning proposal's potential impact on flora and vegetation, as outlined in the Environmental Report, has raised serious concerns regarding issues such as permanent loss, endangered species, habitat fragmentation, disruption of waterways, and the perceived inadequacy of proposed mitigation measures, especially in terms of offsetting. It is crucial that the proposed Amendment aligns with the EPA's goals of safeguarding flora and vegetation to preserve biological diversity and ecological integrity. There must be a clear demonstration that these goals will be upheld. Unfortunately, the environmental documentation associated with this proposed Amendment does not provide any assurances that effective measures will be implemented to protect and sustain the flora and vegetation in the affected area. Indeed, the Environmental Report itself acknowledges that almost 80% of the existing flora and vegetation will be **permanently cleared**. This being the case, we strongly oppose the MRS rezoning proposal.

2. Terrestrial Fauna

The EPA's environmental objective for the factor Terrestrial Fauna is:

"To protect terrestrial fauna so that biological diversity and ecological integrity are maintained."

Based on the information provided in the Environmental Report regarding the potential impacts on terrestrial fauna in the proposed MRS amendment in Maida Vale, there are compelling reasons to oppose the Amendment seeking to rezone rural Maida Vale to urban. The concerns raised in the Environmental Report in relation to terrestrial fauna highlight the significant ecological consequences that will result from urban intensification of the Amendment area, including the following:

- **Permanent Loss of Habitat:**

On page 79 of the Environmental Report, it states that the MRS amendment will '*result in the retention of at least 13.91 ha (21.0%) of fauna habitat including 6.15 ha (43%) of moderate suitability for SRE*'. The use of the term 'retention' in this context seeks to downplay the extent of planned habitat loss.

The corollary of this statistic is that the Environmental Report predicts **the elimination of nearly 80% of the existing vegetation cover**, including most trees, shrubs and grasses, which provides habitat for terrestrial fauna if the proposed Amendment is approved. This stark reality becomes even more apparent when it is noted that 10.59 ha of the MRS amendment area pertains to the existing City of Kalamunda managed local road reserves, which are purportedly protected from development, and an additional 14.10 ha are associated with a Western Power Easement. These figures strongly indicate that only a negligible fraction of habitat vegetation will remain unaffected.

The authors of the Environmental Report acknowledge that the proposed development will result in the permanent loss of critical fauna habitat, including high-quality foraging habitat for black cockatoos and numerous potential breeding trees. This loss constitutes a direct and severe threat to the survival and breeding success of these already vulnerable bird species. The Environmental Report identifies a high likelihood of the presence of the following species in the Amendment area:

Baudin's Black Cockatoo (*Zanda baudinii*) – Endangered (under the BC Act); Endangered (under the EPBC Act)

Carnaby's Black Cockatoo (*Zanda latirostris*) – Endangered (under the BC Act); Endangered (under the EPBC Act)

Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*) – Vulnerable (under the BC Act); Vulnerable (under the EPBC Act)

It's important to note that evidence of these birds in the Amendment area is even more likely to have become apparent if surveys were conducted at dawn and dusk, which would enable a more accurate identification of roosting trees. However, the Environmental Report on pages 9 and 65 confirms that no dawn/dusk surveys were carried out.

Black cockatoos, especially endangered or vulnerable species, play a critical role in maintaining biodiversity. These birds are an integral part of the ecosystem, and their presence helps in seed dispersal and plant regeneration. Their activities help maintain the overall health and resilience of the ecosystem, ensuring that it can adapt to changing environmental conditions.

Losing their breeding trees and foraging habitat will disrupt the natural balance of the local environment. Protection of their habitat is essential for their survival and recovery. The resulting permanent fragmentation of their current habitat within the Amendment area will isolate populations of black cockatoos, making it harder for them to find suitable mates, food, and shelter which will lead to a decline in their overall numbers.

The loss of potential breeding trees, especially those without suitable hollows, can severely limit black cockatoos' ability to reproduce. Suitable nesting sites are critical for their breeding success and any reduction in such sites will inevitably lead to a decline in their populations.

It ought to be noted that black cockatoos hold cultural significance for many indigenous communities. They are also essential components of the ecological and environmental heritage of the region. Preserving them is not only a matter of ecological responsibility but also, respects the cultural heritage of the area.

In May 2023 an article appeared in The Echo, a local community paper raising the concerns of orchardists in the Perth Hills regarding the damage caused by black cockatoos to their orchards. These birds have been forced to forage in orchards due to habitat loss from vegetation clearing and climate change. Orchardists in the Perth Hills claim that they are already facing significant economic losses due to the black cockatoos' damage to their fruit crops.

Permitting the rezoning of Maida Vale would likely lead to a larger population of these birds in search of food, resulting in even greater financial losses for growers who have limited means to protect their orchards from critically endangered birds.

The urban rezoning of Maida Vale would further diminish the cockatoos natural habitat, exacerbating the problem and potentially leading to more frequent negative interactions between the birds and agricultural areas. The WAPC has a significant responsibility to protect orchards and other agricultural pursuits from unfettered urban intensification elsewhere in the region for the following reasons:

- Orchards and agricultural activities are an integral part of the region's heritage and contribute to its cultural and economic identity. Protecting these pursuits ensures the continuity of traditions and livelihoods that have often been passed down through generations as well as the food security of Perth and its broader regions.
- The WAPC's responsibility extends to long-term planning. Decisions made today regarding land use have lasting impacts on the region's future. Protecting orchards and agricultural pursuits involves considering the consequences of development decisions on both the present and future generations.
- The WAPC's responsibility to protect orchards and agricultural pursuits from unfettered urban intensification elsewhere is rooted in its commitment to safeguarding the region's cultural, economic, and environmental well-being. This responsibility involves not only addressing immediate concerns but also, planning for the sustainable growth and resilience of the region in the years to come. Balancing urban development with the preservation of agricultural lands is a crucial aspect of responsible land use planning. Preserving the habitat of endangered species is a shared responsibility, and urban rezoning in critical wildlife areas such as in Maida Vale should be avoided considering the broader ecological impact.

These birds are already under threat, and the proposed development could exacerbate their decline, potentially pushing them closer to extinction. Rejecting the proposed MRS Amendment is essential to ensure the continued survival and well-being of these iconic and ecologically significant birds.

- **Loss of Ecological Connectivity:**

The fragmentation of fauna habitat and loss of ecological connectivity will disrupt the movement of wildlife, making it challenging for them to find food, mates, and suitable habitats. This will lead to decreased genetic diversity and population declines. The future maintenance of the Western Power easement corridor is uncertain. Any clearing or disturbance in this corridor will inevitably have detrimental effects on the terrestrial fauna in the area. Furthermore, the erection of 5400 colour bond fences demarking the boundary of each dwelling in the Amendment area will totally prevent ecological connectivity continuing in this area.

- **Alteration of Fauna Behaviour:**

Human activities associated with urban development, such as noise, lighting, and increased human presence, will inevitably alter the behaviour of terrestrial fauna. These changes will lead to stress and reduced breeding success.

- **Limited Mitigation Measures:**

While some mitigation measures are proposed, they are wholly inadequate. The authors of the Environmental Report openly acknowledge that 80% of the habitat of terrestrial fauna will be permanently removed. In reality, one only has to view the photographs above to see that it is more likely that the natural habitat of most terrestrial fauna will almost certainly be obliterated. The proposed retention areas will not compensate for the massive habitat loss, and there is no guarantee of effective long-term management.

Summary

The proposed amendment must align with the EPA's objectives of safeguarding terrestrial fauna, thereby ensuring the well-being and conservation of land-dwelling animal species and their habitats. This encompasses the protection of endangered, threatened, or vulnerable species and the maintenance of the overall ecological equilibrium and ecosystem health. The EPA's responsibility also entails ensuring that human activities such as development projects and land use changes do not inflict harm upon or obliterate vital wildlife habitats. The extensive urban intensification outlined in this Mrs Amendment runs counter to the EPA's fundamental goal, and it is imperative for the WAPC/EPA to unequivocally reject it.

3. Inland Waters

The EPA goal with respect to Inland Waters is “To maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected”.

The subject area currently falls within the Perth Airport Northern and Southern Drainage Catchments. The Water Corporation has confirmed that its drainage system can only take predevelopment flows meaning that the proponent will need to accommodate additional flows generated by the replacement of permeable surfaces in the amendment area with non-permeable surfaces within the Amendment area. The Amendment Report notes that major works (headworks) will be required this Amendment is approved.

The potential impacts of intense urban development within the Amendment area, designated for R30 zoning, as highlighted in the Environmental Report, raise significant concerns regarding the natural water drainage system and its connections to two vital water courses, Crumpet Creek and Poison Gully. Drainage:

R30 zoning typically signifies a density of 30 dwelling units per hectare and a minimum site area of 260 square metres, accommodating roughly 5,400 small residences. The impending increase in impermeable surfaces poses a substantial threat to the natural drainage system of the amendment area. Additionally, the requirements mandating each residence to cover a minimum of 45% of the total site, with only 24 square metres allocated for outdoor living, and a mandatory minimum setback of 4 metres from the primary street, further compound the potential challenges.

This reality has prompted the Environmental Report to prioritize the improvement and maintenance of the two waterways, one of which -Poison Gully Creek- is a registered Aboriginal Heritage Site as a water source and historical birthplace. It is undeniable that the urban intensification of the remaining portion of the amendment area will significantly and adversely affect natural water filtration by covering most of it with impermeable hard surfaces. Consequently, this will also harm, if not totally destroy, the habitat of terrestrial fauna across most of the Amendment area. Furthermore, the direct impacts on the waterways predict a permanent loss of the existing foreshore area and environmental values due to vegetation clearance, before undertaking restoration measures.

The concerns highlighted in the Environmental Report regarding inland waters emphasize the seriousness of the environmental risks associated with this development. We argue that these risks are insurmountable in terms of the EPA's goal to maintain sufficient groundwater and surface water to protect the current environmental values of the area. As mentioned earlier, terrestrial fauna heavily relies on vegetated porous landscapes for habitat, and passive infiltration mechanisms are vital for the groundwater-dependent ecosystems in the Amendment area. Replacing this vegetated porous landscape with hectares of impermeable hard surfaces in the form of roofs and roads will undoubtedly have a negative impact on the natural habitat of terrestrial fauna.

This aspect of the EPA's consideration necessitates a comprehensive evaluation of the proposed development's ecological implications and potential mitigation strategies to address the formidable challenges posed by urban intensification in the Amendment area. While the Environmental Report notes that the proposed development may not result in the permanent loss of the Crumpet Creek foreshore area, which plays a crucial role in preserving ecological values and managing storm events, any loss can have long-lasting impacts on the natural environment and the protection of waterways.

As mentioned earlier, groundwater "expresses" itself in both Crumpet Creek and Poison Gully water features after navigating through diverse geological formations. Modifying the surface water drainage of the amendment area can significantly alter the natural hydrological regime, potentially leading to adverse effects on significant wetlands and water courses in the broader region. This disruption can upset the delicate balance of the ecosystem and harm aquatic life.

Dependence on traditional "conveyance" methods, as recommended in the Environmental Report and primarily consisting of pipe drainage, engineered linear swales, linear open drains, and detention basins, is fundamentally flawed because it fails to mimic the natural water cycle. As noted by AssocProf Owen Richards, *'True replication of the natural water cycle can only be achieved through genuine source control approaches'*.

Summary

The EPA's primary goal with respect to Inland Waters is to safeguard the existing environmental values of the area through appropriate water management, implying that any development process must not result in any degradation of these values. The Environmental Report, however, falls short of providing a guarantee that this goal will be achieved through the proposed MRS development process.

A significant disparity exists between the environmental values on rural-zoned lands compared to land subject to urban intensification. Despite the Environmental Report's use of pejorative adjectives to describe some of the Amendment area as "completely degraded", inferring that the land has lost its original biodiversity and ecological functions, it does not mean it is entirely devoid of environmental value. Even in seemingly degraded landscapes, several aspects demonstrate that they still play a significant role in the ecosystem and hold value as listed below:

Microbiomes and Soil Health: Even in heavily degraded areas, there are often remnants of native or introduced plant species, and the soil still contains microorganisms crucial for nutrient cycling and organic matter decomposition. These microorganisms help maintain soil health and fertility, which is essential for the overall functioning of ecosystems.

Natural Filtration and Erosion Control: Vegetation, no matter how degraded, still contributes to natural filtration processes. Plants help to filter out pollutants and sediment, improving water quality in nearby streams and rivers. They also control erosion, preventing soil loss and sedimentation in aquatic ecosystems.

Habitat for Wildlife: Even degraded landscapes can provide habitat for various species, especially those that have adapted to human-altered environments. Such landscapes may serve as refuges for certain wildlife and help maintain biodiversity in the face of habitat loss.

Carbon Sequestration: Even when vegetation is sparse and not thriving, plants still capture and store carbon. This is important for mitigating climate change, as carbon sequestration helps reduce greenhouse gas concentrations in the atmosphere.

Potential for Restoration: Declaring a landscape as "completely degraded" doesn't mean it cannot be restored. With appropriate management practices, such as reforestation or habitat restoration efforts, these areas can be rehabilitated, demonstrating their inherent resilience and the potential for recovery.

In conclusion, the term "completely degraded" should not be interpreted as a declaration of environmental worthlessness. While it acknowledges the loss of certain ecological functions and biodiversity, even degraded landscapes have inherent value within the larger ecosystem. Recognizing this value can guide efforts to restore and conserve these areas, ultimately contributing to a more sustainable and biodiverse environment.

However, covering the area with impermeable hard surfaces in the form of roads and roofs as proposed in the MRS Amendment would render the degradation permanent and seal in environmental loss forever.

4. Summary | Holistic Assessment:

The proposed MRS Amendment for Maida Vale raises significant concerns when assessed through the lens of a holistic impact assessment, as per EPA (2021) guidance. This assessment must consider the interconnectedness of various environmental factors and their potential impacts on the entire ecosystem. In this case, the amendment affects key environmental factors: Flora and Vegetation, Terrestrial Fauna, and Inland Waters. The proposed Amendment should be refused for the following reasons:

Loss of Vegetation: The Environmental Report recognizes that almost 80% of the vegetation, which provides habitat for terrestrial fauna, will be lost forever, including the direct loss of 25.05 hectares of native vegetation through clearing. This includes areas in good to excellent condition and those representing Threatened Ecological Communities (TEC). Such losses have profound implications for biodiversity and the overall health of the environment. Native vegetation plays a crucial role in providing habitat, shelter, and food for terrestrial fauna.

Impact on Fauna: Terrestrial fauna heavily relies on flora and vegetation for habitat and sustenance. The clearance of both native and non-native vegetation directly endangers the well-being of numerous species, such as black cockatoos, which depend on these areas for foraging and breeding. The loss of potential breeding trees and high-quality foraging habitat will profoundly harm these species and exacerbate the already decimated habitat available for this species within the City of Kalamunda. The previous development in the 'Kalamunda Wedge,' now identified as the Roe Logistics Park, entirely obliterated the once-rich cockatoo habitat and has led to direct economic loss to orchardists, further underscoring the importance of preserving the remaining cockatoo habitat in the MRS amendment area.

Erosion and Sedimentation: Clearing vegetation, particularly in an area characterised by strong easterlies from October to March, will lead to increased erosion and sedimentation, particularly in areas like Crumpet Creek. Wholesale clearing will result in habitat degradation and negatively affect Inland Waters, affecting not only aquatic species but also those connected to the water bodies.

Fragmentation: Parts of the Amendment area have already undergone extensive clearing, leading to fragmented vegetation. The proposed Amendment threatens to clear most of what remains, except for areas under the control of Western Power and the City of Kalamunda, exacerbating this fragmentation. This fragmentation will further isolate flora and fauna populations and reduce genetic diversity, making species more vulnerable to extinction.

Mitigation Measures: While the proposal acknowledges the potential environmental impacts, it relies heavily on mitigation measures. While these measures are commendable, they are not sufficient to offset the damage caused by the wholesale clearing of such a significant area of native and non-native vegetation and replacing it with impermeable hard surfaces, thereby sealing in environmental loss forever.

Holistic Impact: The interconnectedness of these environmental factors cannot be understated. Flora and fauna are interdependent, and the health of Inland Waters relies on the integrity of the surrounding vegetation. The proposed amendment risks disrupting these delicate balances, potentially causing significant harm to the ecosystem.

Alternative Approaches: Given the high conservation significance of the impacted areas, the area ought to remain zoned rural under the MRS and 'rural residential' under the LPS. Property owners ought to be informed of the ecological significance of this area so that they can assist with preservation, restoration, or mitigation efforts to protect these valuable ecosystems.

In conclusion, the proposed MRS Amendment for Maida Vale, when evaluated through a holistic environmental impact assessment, raises serious concerns about its potential negative consequences on the environment. The loss of native vegetation, the impact on terrestrial fauna, the risks to inland waters, and the reliance on mitigation measures all suggest that refusing the Amendment would be the responsible course of action to protect the overall well-being of the ecosystem.

The area is tentatively designated as an 'Urban Expansion' area under the NE sub -Regional Framework. However, the Framework states that "*The classification of existing special rural zoned areas as urban investigation or urban expansion should not be interpreted as a commitment by the WAPC to endorse any rezoning or support for the increased development of these areas at a higher density. Such decisions hinge on the outcomes of subsequent planning investigations.*" (2018 Northeast Sub-Regional Framework). The Environmental Report has reinforced the precautionary approach adopted by the WAPC and shown that the Amendment area is not suitable for intense urban development.

The area should remain zoned 'rural residential,' with private landholders encouraged to undertake environmental restoration where needed on their properties and the City of Kalamunda proactively engaged in protecting and restoring the two waterways.

Appendix A 'About EcoVision'

EcoVision is a recognized Town Team operating within the jurisdiction of the City of Kalamunda. This organization originated from a grassroots community movement dedicated to opposing the industrial development of up to 310 hectares of rural zoned foothills in Wattle Grove. Over time, EcoVision has transitioned into an active participant in shaping the City's planning strategies, particularly those with potential environmental implications. Our coordinators consistently monitor Council activities and engage by making deputations and posing questions to ensure informed and responsible decision-making.

The campaign against industrialisation garnered widespread support from residents, many of whom subsequently adopted the ecological values and goals championed by EcoVision. These individuals continue to stay connected with our aspirations and values and receive regular updates from the coordinators on issues of mutual concern. Notably, these updates are disseminated through email to over 200 residents living within the City of Kalamunda.

EcoVision, along with its aligned residents, is deeply committed to safeguarding the local community and takes a firm stance on prioritizing the preservation of biodiversity and the natural environment in alignment with the documented directions of the City of Kalamunda. This commitment is rooted in the recognition of the urgent challenges posed by climate change, making it a paramount social value that we are dedicated to preserving.

Bev & Charles Dornan, joint coordinators on behalf of the EcoVision team

Appendix B - City's Environmental Record

Amendment MRS 1344/57 is a proposal that demands careful consideration, especially in light of the City of Kalamunda's environmental record. The implications of this Amendment extend beyond mere rezoning; they reach into the heart of Western Australia's biodiversity and the City's fiscal motives.

This Appendix seeks to persuade the WAPC to factor in the City's environmental record as a crucial element in their assessment of the Amendment, given the apparent connection between rezoning and the City's pursuit of increased rates revenues.

Biodiversity Hotspot in Peril

The south-west of Western Australia is an internationally important biodiversity hotspot. Stretching from Shark Bay to Esperance, it includes the City of Kalamunda, a critical piece of this ecological puzzle.

Alarming Loss of Tree Canopy

The Royal Melbourne Institute of Technology publication *'Where Will All the Trees Be' (2020)* has shown a disconcerting decline in urban tree canopy across the country. The City of Kalamunda, sadly, stands out for all the wrong reasons, with one of the largest reductions in tree canopy cover among local government authorities across all of Australia over the past four years.

Environmental Land Use Planning Strategy (ELUPS)

In 2019, the City adopted the ELUPS, which revealed grim statistics. Over the past decade, High Wycombe lost over 71% of its tree canopy cover, and Forrestfield lost over 65%. Ironically, rural zoned areas, including Maida Vale South, were among the few where tree canopy cover increased slightly.

Recent Reports Highlight Environmental Damage

Two technical reports emphasize the extent of environmental damage in the City:

Nam Natura Consulting (2021)

- Shocking findings reveal that the City has protected a mere 2.2 hectares of conservation land since 2008.
- Over 730 hectares of biodiverse land have been cleared since 2005, including areas mapped as threatened ecological communities.
- The rate of environmental destruction is accelerating, with native vegetation disappearing at a rate of 53 hectares annually.
- The 2008 biodiversity strategy and Local Planning Policies failed to effectively protect natural areas.
- The City's Local Planning Scheme No. 3 allowed for higher-intensity development with limited provisions for vegetation retention.

AECOM Environmental Consultancy (2020)

Despite finding highly significant environmental and conservation values in the Wattle Grove South Amendment area, this study has never been presented at a council meeting or its receipt included in the annual report. In November 2020 Councillors made a decision (7/3) to facilitate the rezoning of Wattle Grove South ignoring the findings of the AECOM Report and despite the views of renown WA academics, environmental scientists and the Conservation Foundation of WA recommending otherwise. This area is now subject to Environmental Review by the EPA.

Weakness in Annual Reporting

The CEO's statement in the 2020 Annual Report '*We have driven the rezoning of key areas of rural land within the City ...*' contradicts the urgent need for biodiversity protection.

The CEO's pride in seeking to rezone rural land knowing while being fully aware of its detrimental impact on biodiversity is manifestly misplaced.

Lack of Alignment with Priority 2: Kalamunda Clean and Green

Successive annual reports make false claims about aligning City activities with Priority 2: Kalamunda Clean and Green. In reality, unfettered planning activities have been permitted, causing irreversible environmental damage.

The Importance of Rural Zonings

Figure 2 from the Nam Natura technical report underscores the need to retain rural zonings for biodiversity protection. However, in 2015 the (then) Shire of Kalamunda made representations to the Department of Planning to alter the draft sub-Regional Framework to facilitate future rezoning of rural areas of the City without community consultation.

Financial Constraints and Rezoning

Recent trends in the Operating Surplus Ratio (OSR) reveal a troubling decline in the City's ability to cover operational costs:

- Rates revenue is not matching operating expenditure.
- Depreciation costs are increasing.
- Costs of services and assets are rising.

At a Special Council Meeting on June 27, 2022, the City expressed its intent to continue rezoning special rural areas as a budgetary measure to address the declining OSR.

Conclusion

In conclusion, the City's environmental record is essential in evaluating Amendment MRS 1344/57.

This Amendment, driven by a pursuit of increased rates revenue, has the potential to harm the environment significantly. Our submission emphasizes the importance of the WAPC considering the environmental record when evaluating this Amendment and urges the preservation of biodiversity while balancing fiscal gains.

The State Planning Framework and the Environmental Protection Act prioritize environmental conservation over mere revenue generation, a balance that must not be overlooked. The City's pursuit of fiscal goals should not come at the cost of Perth's diminishing biodiversity.

Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct

Submitted on 2023-10-03 22:07:06

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

We purchased our lifestyle block to enjoy nature and space, not to be built out and live in density, we have a young family that love the area, nature and space.

We have bandicoots and local flora and fauna that live on our property. The environmental implications of this development will have devastating environmental consequences.

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File 2:

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File 3:

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-04 18:32:01

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-05 09:29:49

About you

1 What is your first name?

First name:
Nita

2 What is your surname?

surname:
Sadler

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:
dawni1@bigpond.com

5 What is your address?

address:

143 Brewer Rd. Maida Vale

6 Contact phone number:

phone number:
94546569

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

- *This area is abounded by Horse Properties and Bridal paths where children are taught to ride.
- *I have lived here for 36 years and the Red-tailed Black Cockatoos are prolific despite, so called, Environmental reviews.
- *We have numerous Bandicoots (Quendas) which are using this only area left to breed due to dense Urbanisation creeping up on them.
- *I have a pair of endangered Red Capped Parrots Breeding in one of my numerous trees.
- *There are several "Bush Blocks" with numerous Native Flora including Black/Red Kangaroo Paws, and Grass trees.
- *Most of the Properties have a Western Power Easement due to the 330KV Transmission Towers and wires running across, so we are "Utilising", otherwise useless for Urban development land.
- *Some of the blocks are Contaminated sites due to previous use as Rubbish Tips.
- * We do NOT wish to subdivide and will be staying put regardless of constant pushes by Developers.

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File 3:
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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-06 08:24:16

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

I do not consent. Mother Earth is to be protected & not used for corporate monitory gain.

I speak on behalf of all the water, rocks, plants & animals in the area.

I will advise you that under universal lore, if you are responsible for the death of an animal, that animal has a right to exist in your body & bring all it's trauma with it. You have been warned.

File 1:

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File 3:

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-06 09:44:11

About you

1 What is your first name?

First name:
Karen

2 What is your surname?

surname:
Marr

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:
kwren2u@gmail.com

5 What is your address?

address:

4 Woonan Pl Karawara

6 Contact phone number:

phone number:
0409 107 101

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

We use the area for horse riding lessons, it is incredibly important that city kids get country activities that are accessible. That's why there is a royal show every year! The area proposed is accessible and wonderful.

File 1:
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File 2:
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File 3:
No file uploaded

Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-06 10:56:54

About you

1 What is your first name?

First name:

Michael

2 What is your surname?

surname:

Brown

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

michaelbrown65@bigpond.com

5 What is your address?

address:

56 Bruce road Maida vale WA 6057

6 Contact phone number:

phone number:

0427 189 586

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

We support the submission to change area zoning.

With young adult children looking to secure land & house very soon. This area with existing infostructure and prime location to employment , transport and education opportunities should be made available.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-07 11:07:44

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

I wish to keep the area rural, for the lifestyle, peacefulness and safety, for the natural environment (which we are running out of) , all the creatures that depend on the natural resources

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File 2:

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File 3:

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-12 11:57:00

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

57

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

My family fully support the proposed amendment to the Maida Vale area.

My family have lived in Maida Vale for many years and now my children are adults they would love to live close to their parents and grandparent so opening up this area to more people is an advantage for the young ones struggling to find property in our shire.

Close location to all facilities like the CBD & airports, I feel, would make this area very attractive to many people that have not been able to consider it before due to lack of availability.

Some of the properties in this area (including ours) are old and needing some TLC so have probably not helped the area grow as far as values are concerned. With the changes outlined in the proposal I think this will have a big impact to existing values.

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File 2:

No file uploaded

File 3:

No file uploaded

Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-12 21:17:26

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

I am writing to express my concern for the Maida Vale Urban Precinct.

My name is _____ and I live with my fiancé, _____, at _____ in Maida Vale. We recently purchased in the area and have been living in our new home for just over a year now. Steve and I both grew up on acreage and always dreamed of buying a rural property as our forever home to raise a family. Last year our dream came true and we found the perfect house in the beautiful suburb of Maida Vale. We love everything about our new found home and honestly couldn't be happier.

Last week we received a letter in the mail informing us that Maida Vale is to be rezoned to Urban Deferred under MRS Minor Amendment 1344/57, in preparation for the proposed future development. We are absolutely devastated by this news and can't believe that the Western Australian Planning Commissioning are even considering the proposal. This future development will transform a once quiet and beautiful rural area into just another built-up suburb, diminishing the uniqueness and appeal of the City of Kalamunda. The hills and foothills areas have always been known for their stunning views, natural bushland, wide open space and beautiful mix of both flora and fauna. Many Perth residents visit the area to escape the city and re-connect with nature. To quote the City of Kalamunda website, the area is advertised as "Approximately 30 minutes from the Perth CBD, we offer a glorious mix of natural bushland, wildflowers, waterways, vineyards, fabulous views, galleries, restaurants & cafés and more". Maida Vale is an important part of what the City of Kalamunda has to offer and the MRS Minor Amendment 1344/57 plans on destroying this.

I completed my Bachelor of Science Degree majoring in Conservation Biology and Zoology at the University of Western Australia in 2016, and then completed my teaching degree in 2018. I have dedicated my life to educating young minds on the importance of conserving the natural environment, as well as, protecting native flora and fauna.

I fear that it is not the younger generation, but in fact government agencies (such as the WAPC) that need to be educated on just how devastating the impacts of urban development can be on our precious endemic species of Western Australia.

Maida Vale is home to many native flora and fauna, including the Red-Tailed Black Cockatoo (Endangered Status: Vulnerable under the WA Wildlife Conservation Act), Baudin Black Cockatoo (Endangered Status: Vulnerable under the WA Wildlife Conservation Act) and the Carnaby's Black Cockatoo (Endangered Status: Specially Protected Fauna under the WA Wildlife Conservation Act). I personally see at least one Black Cockatoo a day, on my property or while walking the dog through the suburb, and have been told that other residents have sent countless photos to Council showing proof of their presence.

Birdlife Australia have found that in the last 50 years, the population of Carnaby's Black cockatoos in the Perth-Peel area has declined by about 50%, with similar results being seen in Baudin's and Forest Red-tailed Black Cockatoo populations.

Numerous conservation cooperations, including The Australian Conservation Foundation, identify the main threats to Black cockatoo's being habitat loss and degradation, competition for nesting sites and declining food supplies.

Not so funnily enough, these threats all stem from urban development. The Environmental Assessment for the proposed future development in Maida Vale under MRS Minor Amendment 1344/57, indicates that numerous potential black cockatoo nesting and foraging trees have been identified for removal (page 171). Additionally, the urbanisation of the area will lead to the encroachment of possums and other rodents that compete for nesting hollows against the Black Cockatoos.

The construction of Roe Highway is a prime example of development which affected the Black Cockatoos, with several studies such as "Effectiveness of biodiversity offsets: An assessment of a controversial offset in Perth, Western Australia" (<https://www.sciencedirect.com/science/article/abs/pii/S0006320718306906>) showing that the offset was not effective. More recently in September of 2018, a Black Cockatoo Habitat Assessment study (attached as a supporting document) was conducted by Strategen Environmental for the (then) proposed Kalamunda road Roe Highway extension. The assessment classed the Black Cockatoo habitat as "Very High Quality" for the survey area which is not even 2km away from the proposed development area under MRS Minor amendment 1344/57. The assessment highlights the importance of high-quality habitats saying that "Availability of foraging habitat plays a particularly critical role in the post-breeding period, when birds need to build condition after breeding". The loss of high-quality habitats as a result of approved developments leads to a diminishing population as "Losing foraging resources across the range increases the likelihood that birds won't regain condition after breeding, and won't breed again the following season, and that juveniles won't survive to become part of the adult population". Despite the outcome of the report, the development was approved.

There are now only approximately 13, 000 Carnaby Cockatoos left in the Perth-Peel region, and research indicates that their numbers are declining at 5% per annum (EPA Advice: Carnaby's Cockatoo in Environmental Impact Assessment in the Perth and Peel Region, May 2019). Can't we learn from our previous mistake and put a stop to MRS Minor Amendment 1344/57?

The reality is if we don't, it will be the nail in the coffin of our iconic Carnaby Cockatoo.

If you had a conscience, you would put a stop to this.

File 1:
CPS 8296 1 - Black Cockatoo H-way Strategen - September 2018.PDF was uploaded

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Carnaby's cockatoo_new FINAL.pdf was uploaded

File 3:
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intelligent outcomes | respected experience

Black Cockatoo Habitat Assessment, Roe Highway

Final Report

Prepared for
Main Roads
by Strategen

September 2018

Black Cockatoo Habitat Assessment, Roe Highway

Final Report

Strategen is a trading name of
Strategen Environmental Consultants Pty Ltd
Level 1, 50 Subiaco Square Road Subiaco WA 6008
ACN: 056 190 419

September 2018

Limitations

Scope of services

This report ("the report") has been prepared by Strategen Environmental Consultants Pty Ltd (Strategen) in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and Strategen. In some circumstances, a range of factors such as time, budget, access and/or site disturbance constraints may have limited the scope of services. This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

Reliance on data

In preparing the report, Strategen has relied upon data and other information provided by the Client and other individuals and organisations, most of which are referred to in the report ("the data"). Except as otherwise expressly stated in the report, Strategen has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ("conclusions") are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. Strategen has also not attempted to determine whether any material matter has been omitted from the data. Strategen will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to Strategen. The making of any assumption does not imply that Strategen has made any enquiry to verify the correctness of that assumption.

The report is based on conditions encountered and information received at the time of preparation of this report or the time that site investigations were carried out. Strategen disclaims responsibility for any changes that may have occurred after this time. This report and any legal issues arising from it are governed by and construed in accordance with the law of Western Australia as at the date of this report.

Environmental conclusions

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made.

Client: Main Roads

Report Version	Revision No.	Purpose	Strategen author/reviewer	Submitted to Client	
				Form	Date
Draft Report	A	Client review	L Stevens/ R Firth	Electronic (email)	05/02/18
Final Report	B	Client	R Firth	Electronic (email)	11/04/18
Final Report	C	Client	L Stevens/ R Firth	Electronic (email)	03/09/18

Filename: MRO18027_01 R001 Rev C - 3 September 2018

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Appendix 1 Conservation significant flora, fauna and ecological community definitions
Appendix 2 Black Cockatoo distribution maps
Appendix 3 Black Cockatoo Potential Breeding Trees
Appendix 4 Hollow Photos

1. Introduction

Strategen Environmental (Strategen) was commissioned by Main Roads Western Australia (Main Roads) to undertake a Black Cockatoo habitat assessment for the Kalamunda Road Roe Highway upgrade.

Strategen understands that Main Roads is proposing to construct a grade separation at the intersection of Roe Highway and Kalamunda Road in Maida Vale (Survey Area), with construction expected to commence in late 2018 (Figure 1). The Survey Area is 80 ha in total and covers approximately 4.6 km with additional areas associated with intersections.

The proposed development of the site has the potential to impact native vegetation and as such, a Black Cockatoo habitat assessment was deemed necessary to determine the environmental values of the potential clearing area.

Clearing of vegetation may result in the removal of vegetation potentially containing habitat for Forest Red-tailed Black-Cockatoos (FRTBC), Baudin's Black Cockatoos (BBC) and Carnaby's Black-Cockatoos (CBC). All three species of Black Cockatoos are listed as Threatened under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the *Wildlife Conservation Act 1950* (WC Act). Given this, an assessment of the habitat values is required to support potential future assessment and approval requirements and to inform development design.

This report presents the findings of the Black Cockatoo habitat assessment undertaken for the Survey Area.

1.1 Objectives

The objectives of the work undertaken were to:

- undertake a Black Cockatoo habitat assessment
- define and map Black Cockatoo habitat within the Survey Area
- prepare a report summarising the findings.

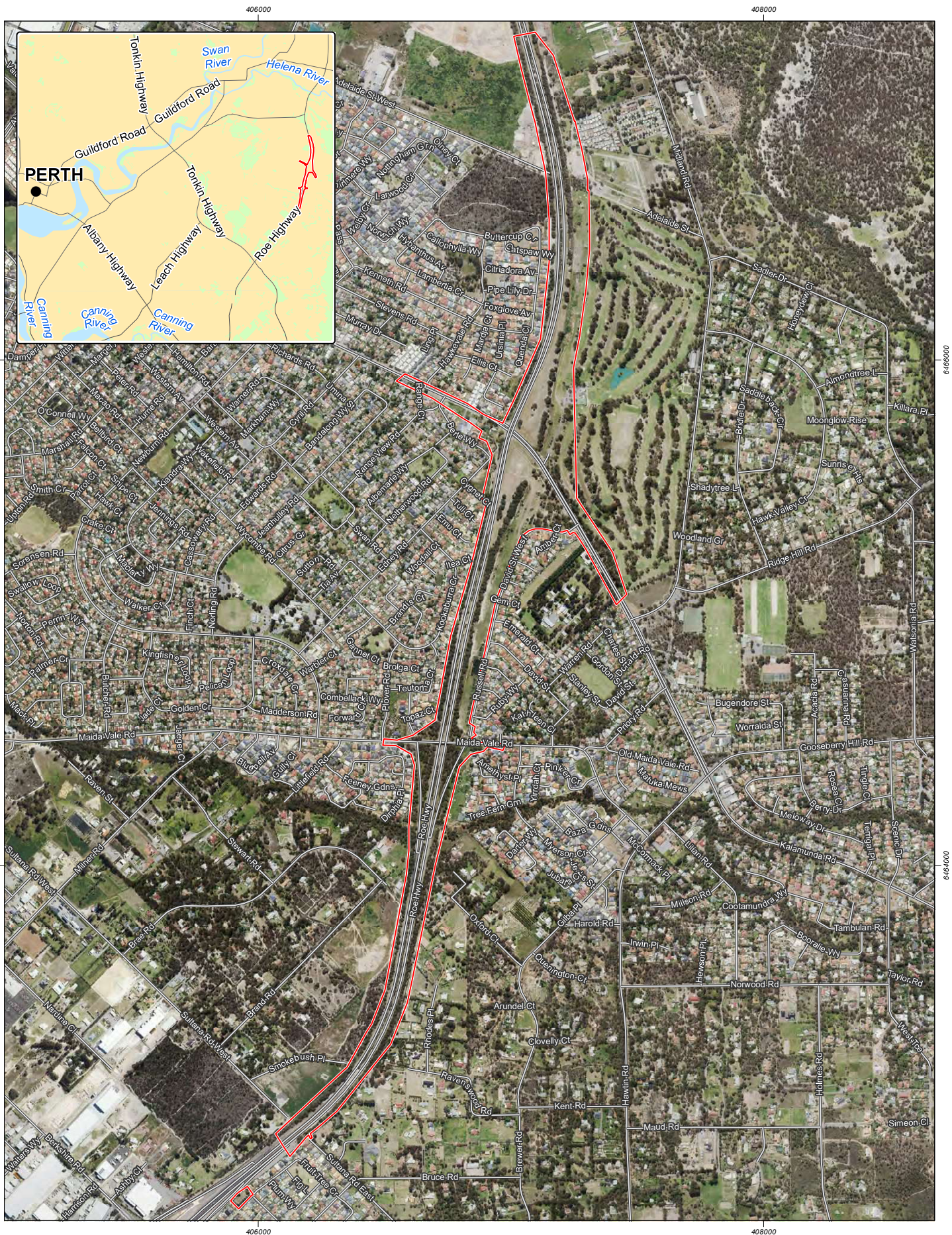


Figure 1: Site location

Scale 1:14,000 at A3
 0 50 100 150 200 250 Meters

Coordinate System: GDA 1994 MGA Zone 50
 Note that positional errors may occur in some areas
 Date: 5/02/2018
 Author: DWhite

Source: Proposed environmental boundary.
 24/01/2018 Main Roads 2018; Aerial: Landgate 2018.

Path: Q:\Consult\2018\MRO\MRO18027\01_GIS_documents\ArcMap_documents\MRO18027_G004_RevA.mxd



Proposed environmental boundary
 Roads

strategen
 ENVIRONMENTAL

info@strategen.com.au
 www.strategen.com.au

1.2 Background to Protected Fauna

Western Australian flora and fauna is protected formally and informally by various legislative and non-legislative measures, which are as follows:

Legislative measures:

- Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)
- Wildlife Conservation Act 1950 (WC Act)
- Environmental Protection Act 1986 (EP Act)
- Biosecurity and Agriculture Management Act 2007 (BAM Act).

Non-legislative measures:

- Western Australian Department of Biodiversity, Conservation and Attractions (DBCA) Priority lists for flora, ecological communities and fauna
- Weeds of National Significance
- Recognition of locally significant populations by the DBCA.

A short description of each is given below. Other definitions, including species conservation categories, are provided in Appendix 1.

1.2.1 EPBC Act

The EPBC Act aims to protect matters of national environmental significance (MNES). Under the EPBC Act, the Commonwealth Department of the Environment and Energy (DEE) lists threatened species and communities in categories determined by criteria set out in the Act (www.environment.gov.au/epbc/index.html) (Appendix 1).

Carnaby's Black Cockatoo (*Calyptrorhynchus latirostris*) and Baudin's Black Cockatoo (*Calyptrorhynchus baudinii*) are listed as Endangered under the EPBC Act. The Forest Red-tailed Black Cockatoo (*Calyptrorhynchus banksii naso*) (FRTBC) is classified as Vulnerable.

Projects likely to cause a significant impact on MNES should be referred to the DEE for assessment under the EPBC Act.

1.2.2 WC Act

The WA DBCA lists flora and fauna under the provisions of the WC Act as protected according to their need for protection (Appendix 1).

Under the WC Act Fauna are classified as Schedule 1 to Schedule 7 according to their need for protection. Under the WC Act both Carnaby's Black Cockatoo and Baudin's Black Cockatoo are listed as Endangered (Schedule 2) and the FRTBC is listed as Vulnerable (Schedule 3).

1.2.3 DBCA Priority Lists

The DBCA lists 'Priority' flora and fauna that have not been assigned statutory protection as Declared Rare or 'Scheduled' under the WC Act, but which are under consideration for declaration as DRF or 'Scheduled' fauna. Flora and fauna assessed as Priority 1-3 are in urgent need of further survey. Priority 4 flora and fauna require monitoring every 5-10 years and Priority 5 flora and fauna are subject to a specific conservation programme (Appendix 1).

The DBCA maintains a list of PECs which identifies ecologically valuable communities that need further investigation before possible nomination for TEC status. Once listed, a community is a PEC, and when endorsed by the Western Australian Minister of Environment becomes a TEC, and protected as an ESA under Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (Appendix 1).

1.3 Background Ecological Information for Black Cockatoos

All three species of Black Cockatoo (Carnaby's Cockatoo, Baudin's Cockatoo and FRTBC) could potentially occur in the Survey Area. The distribution of all three species can be seen in the 2017 DEE distribution maps in Appendix 2.

1.3.1 Carnaby's Black Cockatoo

Carnaby's Cockatoo is endemic to south-west WA, and is distributed from the Murchison River to Esperance and inland to Coorow, Kellerberrin and Lake Cronin (Cale 2003). The species was once common, but the population has declined significantly in the last half century, and is now locally extinct in some areas (Johnstone & Storr 1998; Shah 2006). In the last 45 years (prior to Cale 2003) the species has suffered a 50% reduction in its abundance (Cale 2003). More recent information suggests this decline has continued. This reduction is due to the clearing of core breeding habitat in the wheatbelt, the deterioration of nesting hollows, and clearing of food resources on the Swan Coastal Plain (SCP) (Cale 2003). The total population of Carnaby's Cockatoo was estimated to be 40,000 in 2008 (Johnstone & Kirkby 2008). Since then, trend analyses of the seven Great Cocky Counts 2010 – 2016 identified strong indications that the population of Carnaby's Black-Cockatoo inhabiting the Perth-Peel Coastal Plain continues to decline.

Carnaby's Cockatoos feed on seeds, nuts and flowers of a variety of native and exotic plants. Food plants include a variety of Eucalyptus species, such as Marri (*Corymbia calophylla*), Jarrah (*Eucalyptus marginata*), Swan River Blackbutt (*Eucalyptus patens*), Coastal Blackbutt (*Eucalyptus tottiana*), Caesia (*Eucalyptus caesia*) and Salmon Gum (*Eucalyptus salmonophloia*), as well as Pine trees (*Pinus* sp.), Grevillea, Allocasuarina, and Hakea species (Shah 2006). Marri nuts that are damaged extensively, especially on the main body of the nut, are likely to have been chewed by Carnaby's Cockatoo. The 'levering' of Marri nuts by Carnaby's Cockatoos tends to leave different marks on the fruit casings, particularly in the location of indentations by the lower mandible and in the amount of damage caused to the rim of the fruit casing. Carnaby's Cockatoos also generally feed on green Marri nuts that are soft enough for their beaks to manipulate. The seeds from a variety of Banksia species and the cones of Pine trees provide the highest energetic yield (Cooper *et al.* 2002).

Breeding has been recorded from early July to mid-December, and primarily occurs in the wheatbelt in the semi-arid and subhumid interior (Johnstone & Storr 1998). However, this species is currently expanding its breeding range westward and south into the Jarrah-Marri forests of the Darling Scarp (e.g. Wungong Dam Catchment) and into the Tuart (*Eucalyptus gomphocephala*) forests of the SCP including Yanchep, Baldivis, Lake Clifton and near Bunbury (Johnstone & Kirkby 2011).

Carnaby's Cockatoo display strong pair bonds and mate for life. They nest in hollows of smooth-barked eucalypts particularly Salmon Gum and Wandoo (*Eucalyptus wandoo*) but nests have also been found in other Eucalypt species including York Gum (*Eucalyptus loxophleba*), Flooded Gum (*Eucalyptus rudis*), the rough-barked Marri and Tuart (Johnstone & Kirkby 2011). In most nests in Tuart, eggs are laid on a mat of wood chips at the bottom of a large hollow (mostly top entry hollows) ranging from a few cm's to five m deep (Johnstone & Kirkby 2011). Clutch size is 1–2 eggs, more typically two; only one young is reared (Saunders 1986). Incubation lasts for 29 days and only the female incubates and broods. The nestling is brooded by the female during which time both rely on food from the male. Once brooding is complete, the female then leaves the nest each day at dawn, sometimes returning mid-morning (with the male) to feed the chick (Johnstone & Kirkby 2011). After approximately three weeks she ceases to brood and the chick is fed by one or both parents in the morning and in the late evening (Johnstone & Kirkby 2011).

Approximately 87% (525,732 ha) of potential Carnaby's Cockatoo habitat (i.e. areas of vegetation that contain flora species and vegetation types that could support the species' breeding, feeding and night roosting activities) has been cleared in the wheatbelt since European settlement (DEC 2012). The south-west region is now a severely fragmented landscape and the further loss of foraging habitat, the lack of suitable breeding sites, climate change, alterations in the landscape, changing forest structure with almost every part of the Jarrah-Marri forest logged in the past and with most trees too young to form hollows, and competition with exotic species, exacerbate the future conservation of Carnaby's Cockatoo (Johnstone & Kirkby 2011).

1.3.2 Baudin's Black Cockatoo

This species is distributed through the south-western humid and subhumid zones, from the northern Darling Range and adjacent far east of the SCP (south of the Swan River), south to Bunbury and across to Albany (Johnstone & Kirkby 2011). Baudin's Cockatoo rarely occurs near the coast north of Mandurah, and rarely occurs north of the Swan River (Johnstone & Kirkby 2008, Johnstone & Storr 1998). Baudin's Cockatoo usually occur in small flocks of up to 30, or occasionally up to 50 and rarely in aggregations of up to 1200 (Johnstone & Kirkby 2008). Baudin's Cockatoo is distinguished from Carnaby's Cockatoo by its longer bill and slightly different call.

This species forages primarily in Eucalypt forest, where it feeds on Marri seeds, flowers, nectar and buds. They also feed on a wide range of seeds of Eucalyptus, Banksia, Hakea and Pines (*Pinus* sp.) as well as fruiting apples and pears and beetle larvae from under the bark of trees (Johnstone & Kirkby 2008, Johnstone & Storr 1998). Baudin's Cockatoo forages at all levels of the forest, from the canopy to the ground, often feeding in the understorey on proteaceous trees and shrubs, especially Banksia, and in orchards both in trees and on dropped or fallen fruit on the ground.

The breeding biology of this species is poorly known. It has been recorded breeding in the deep south-west, north to the Whicher Range and Lowden and also isolated records at Wungong Catchment, Serpentine (hills area) and east to Kojonup and near Albany (Johnstone & Kirkby 2008). They nest in large, mostly vertical, hollows of Karri (*E. diversicolor*), Marri, Wandoo, and Bullich (*E. megacarpa*). Baudin's Cockatoos display strong pair bonds are monogamous and most likely mate for life (Johnstone & Kirkby 2008). The pair remains together all year round except when the female is incubating and brooding. Both adults play a part in selecting the nest hollow, but only the female is responsible for renovation and preparing the hollow for breeding. Preparation of the hollow consists of chewing around the entrance of the hollow and down one part of the interior wall. Pairs have also been recorded prospecting for hollows in most months and outside the breeding range (Johnstone & Kirkby 2008).

1.3.3 Forest Red-tailed Black Cockatoo

The FRTBC is distributed through the humid and subhumid south-west of WA from Gingin through the Darling Ranges to the south-west from Bunbury to Albany (primarily in the hilly interior) (Johnstone & Storr 1998, Johnstone *et al.* 2013a). In these areas, the FRTBC inhabits dense Jarrah, Karri, and Marri forests that receive more than 600 mm average annual rainfall (Johnstone & Storr 1998). However, in recent years the FRTBC has moved on to the SCP to forage in the Perth metropolitan area (Johnstone & Kirkby 2011). The FRTBC occurs in pairs or small flocks, or occasionally large flocks of up to 200 birds (Johnstone & Storr 1998).

The FRTBC feeds primarily on Marri and Jarrah fruit, but also Tuart and to a lesser extent on Blackbutt, Albany Blackbutt (*E. staeri*), Karri, Sheoak (*Allocasuarina fraseriana*) and Snottygobble (*Persoonia longifolia*) (Johnstone *et al.* 2013b). The FRTBC can obtain energy faster when feeding on Marri and Jarrah than other food sources (Cooper *et al.* 2002), and these two-plant species make up most of their diet (Johnstone *et al.* 2013b).

FRTBC shear the base of Marri nuts at a 45° angle to remove seeds (the 'bottom slice' method), while Baudin's Cockatoos use their elongated upper mandible to pry seeds out, leaving the nut intact (the 'lever') (Johnstone & Kirkby 1999, Cooper *et al.* 2002). Carnaby's Cockatoos may use either technique to feed on Marri nuts, but generally with some modification, e.g. the 'slicing' of fruits may occur along the side of the fruit casing.

The FRTBC is monogamous and pairs nest in tree hollows from 6.5 – 33 m above ground and most nests are in large and old mature Marri, and these trees are the most important nesting tree throughout the FRTBC range (Johnstone *et al.* 2013a). Nest trees of the FRTBC have a mean circumference at breast height of 2.79 m, a mean estimated age of 222 years and a mean overall height of 20.24 m (Johnstone *et al.* 2013a).

Breeding has been recorded in all months, with peaks in April-June and August-October. Only one egg is laid, which the female incubates for 29 to 31 days, before a nestling hatches and weighs between 27 and 32 g. The female remains in the hollow during incubation and only leaves for a short period in the evening to be fed by the male, usually at dusk (Johnstone *et al.* 2013b). Brooding is for up to 10 days, after which the female leaves the nest between dawn and dusk. Pairs of birds appear to recognise each other by calls, not responding to calls by others in the area. Chicks only respond when the parent is heard and are fully feathered at 48 days (Johnstone *et al.* 2013b).

2. Methods

The Black Cockatoo habitat assessment was undertaken on 29 and 30 January 2018 by two Strategen personnel with relevant experience as specified by the *EPBC Act Revised draft referral guidelines for three threatened black cockatoo species* (DEE 2017).

The habitat assessment involved traversing the Survey Area by foot. Any trees meeting the following criteria for potential breeding and foraging habitat were recorded, marked and electronically logged using a hand held Global Positioning System (GPS) unit:

- native trees (e.g. Jarrah, Tuart, Marri)
- diameter at breast height (DBH) ≥ 500 mm (≥ 300 mm for Wandoo and Salmon Gum)
- suitable sized nest hollow i.e. large enough entrance and adequate depth
- evidence of feeding (chewed cones, seed and nut material)
- opportunistic observations of Black Cockatoos in the Survey Area.

As stated above, the Black Cockatoo habitat assessment considered the recently revised draft referral guidelines for three threatened Black Cockatoo species (DEE 2017) and the previous referral guidelines where relevant (DSEWPaC 2012). These draft guidelines include an assessment of Black Cockatoo foraging habitat quality, by attributing a habitat quality score. The quality score included the elements above as well as the following:

- the presence of all plant species that provide foraging, including non-native food sources used by Black Cockatoos
- use as a roosting site
- the vegetation present in the surrounding area (i.e. at least 12 km from the impact area, including proximity to any breeding habitat, roosting sites or watering points)
- numbers of any known nesting trees.

Revisit – hollow inspection

At the request of Main Roads an additional assessment was undertaken on the 30 August 2018 to reinspect five hollows (originally observed from the ground) in four potential breeding trees. The hollows were inspected in greater detail which included undertaking the following (some of which was undertaken during the original assessment [see dot points above]):

- measure the size of the hollow opening
- height of the hollow off the ground
- angle of the hollow
- depth of the hollow
- examine hollows in detail with binoculars
- assess and photograph hollows in detail with a Canon long lens camera (75 – 300 mm).

If the hollows were identified as being too small from the ground for Black Cockatoos to be able to enter and therefore to potentially breed in, the trees were not climbed for further inspection.

Further to this, please note that not all the hollow features outlined above might be measurable, particularly hollow depth if the tree is deemed unsafe to climb or if the aspect/direction of the hollow makes it too difficult to measure (because it is obstructed in some way).

3. Results

During the habitat assessment, numerous (approximately 30) FRTBC were heard calling from many locations, seen flying overhead and observed feeding on Marri nuts and Cape Lilac in the Survey Area (Plate 1).



Plate 1: FRTBC Feeding in Cape lilac in the Survey Area.

3.1 Potential Breeding Habitat

Four species of Eucalypts, Marri (*Corymbia calophylla*), Jarrah (*Eucalyptus marginata*), Tuart (*Eucalyptus gomphocephala*) and Wandoo (*Eucalyptus wandoo*) recorded in the Survey Area, are considered Black Cockatoo potential breeding habitat when DBH is ≥ 500 mm (≥ 300 mm for Wandoo). The Survey Area contains 547 potential breeding trees with a DBH ≥ 500 mm (≥ 300 for Wandoo) - Marri (418), Jarrah (84), Tuart (18) and Wandoo (27). The dimensions and the locations of the potential breeding trees are displayed in Figure 2 and Appendix 3.

There were few observable hollows present in these trees when viewed from the ground. A total of five hollows were detected from the ground across four potential breeding trees i.e. trees that had a DBH ≥ 500 mm (Appendix 3). Of these five hollows, two were considered to have entrances that were high enough or large enough for Black Cockatoos to utilise (> 5 m and > 100 mm diameter). From the ground, however, it was considered unlikely that any of the five hollows were deep enough for Black Cockatoos to breed in, or European honey bees were present.

Revisit – hollow inspection

The five hollows in the four trees were re-examined. Measurements were estimated and photos were taken to help illustrate the hollows assessed (Table 1, Appendix 3 & Appendix 4). None of the hollows were deemed large enough for Black Cockatoos to enter and therefore to potentially breed in.

Table 1: Reinspected hollows and their related dimensions (measurements are in cm and m). N/A = not applicable because hollow opening was not large enough to warrant further inspection.

*Tree Number	#Hollow opening	Depth of hollow	Height of hollow	Angle of hollow
28	8 x 8 cm	N/A	11 m	45°
116 (hollow 1)	7 x 5 cm	N/A	10 m	90°
116 (hollow 2)	Not a hollow but a large linear opening	N/A	7 m	90°
398	8 x 8 cm	N/A	9 m	45°
420	7 x 7 cm	N/A	5 m	60°

*See Appendix 3 for species and location details.

See Appendix 4 for photos of hollows.

3.2 Foraging Habitat

There is a total of 33 ha of foraging habitat in the Survey Area (Figure 2).

Foraging species in the Survey Area consist of, Coastal Blackbutt (*Eucalyptus tottiana*), *Banksia attenuata*, *Banksia menziesii*, *Allocasuarina* spp., *Acacia* spp., *Callistemon* spp., *Xanthorrhoea preissii* and the introduced Cape Lilac (*Melia azedarach*). It is important to note that the majority of the Survey Area is regrowth, from previous clearing undertaken during road construction.

The same potential breeding trees (above) are also considered foraging species and includes trees that are of various sizes, however, all are considered mature (i.e. had fruit or large enough to produce fruit). Chewed Marri nuts with markings considered likely to be from all three species of Black Cockatoo were observed throughout the site, particularly under Marri trees (Plate 3 and Plate 3). Chewed Jarrah, *Allocasuarina*, Coastal Blackbutt and Cape Lilac nuts were also observed throughout the Survey Area. As noted above, FRTBC were observed feeding on Marri and Cape Lilac nuts in the Survey.

No roosts were identified in the Survey Area during the assessment. The Great Cocky Count data from 2017 was examined and more than 36 roosting sites were within 12 km of the Survey Area, five of which were within 1.5 km (Birdlife 2017).

3.3 Foraging Habitat Quality Score

The Draft Black Cockatoo foraging habitat scoring tool (DEE 2017) was used to determine the quality of Black Cockatoo foraging habitat in the Survey Area (Table 2). As per the scoring tool, the Survey Area has an overall score of either 8 or 10, giving it a habitat quality score of "Very High Quality". The aspects of the table that are applicable to the Survey Area have been highlighted in bold text. The Survey Area contains 6.45 ha of habitat quality score 8 and 26.08 ha of habitat quality score of 10 (Figure 3).

High quality foraging habitat, particularly in proximity to roosting sites and/or breeding sites, demands protection. Foraging habitat with a score of 7 or above is considered high quality and is important for the long-term survival and recovery of Black Cockatoos. Impacts to high quality foraging habitat should be referred.

As previously stated, it is important to note that these guidelines are currently in draft form. As such, the foraging habitat quality score has the potential to be altered in the future, if the final guidelines change considerably.

Table 2: DEE Black Cockatoo foraging habitat scoring tool (DEE 2017).

Starting Score	Foraging habitat for Carnaby's Cockatoo	Foraging habitat for Baudin's Cockatoo	Foraging habitat for FRTBC
10 (Very high quality)	Foraging habitat that is being managed for black cockatoos such as habitat that is the focus of successful rehabilitation, and/or has some level of protection from clearing, and/or is quality habitat described below with attributes contributing to meet a score of ≥ 10 .	Foraging habitat that is being managed for black cockatoos such as habitat that is the focus of, successful rehabilitation, and/or has some level of protection from clearing, and/or is quality habitat described below with attributes contributing to meet a score of ≥ 10 .	Foraging habitat that is being managed for black cockatoos such as habitat that is the focus of successful rehabilitation, and/or has some level of protection from clearing, and/or is quality habitat described below with attributes contributing to meet a score of ≥ 10 .
7 (High quality)	Native shrubland, kwongan heathland and woodland dominated by proteaceous plant species such as Banksia spp. (including Dryandra spp.), Hakea spp. and Grevillea spp., as well as native eucalypt woodland and forest that contains foraging species, including along roadsides. Does not include orchards, canola, or areas under a RFA.	Native eucalypt woodlands and forest, and proteaceous woodland and heath, particularly marri, including along roadsides. Does not include orchards or areas under a RFA.	Jarrah and marri woodlands and forest, and edges of karri forests, including wandoo and blackbutt, within the range of the subspecies, including along roadsides. Does not include areas under a RFA.
5 (Quality)	Pine plantation or introduced eucalypts.	Pine plantation or introduced eucalypts.	Introduced eucalypts as well as the introduced Cape Ilac (Melia azedarach).
1 (Low quality)	Individual foraging plants or small stand of foraging plants.	Individual foraging plants or small stand of foraging plants.	Individual foraging plants or small stand of foraging plants.
Additions	Context adjustor – attributes improving functionality of foraging habitat	Context adjustor – attributes improving functionality of foraging habitat	Context adjustor – attributes improving functionality of foraging habitat
+3	Is within the Swan Coastal Plain (important foraging area).	Is within the known foraging area.	Jarrah and/or marri show good recruitment (i.e. evidence of young trees).
+3	Contains trees with suitable nest hollows.	Contains trees with suitable nest hollows.	Contains trees with suitable nest hollows.
+2	Primarily contains Marri.	Primarily contains Marri.	Primarily contains Marri and/or Jarrah.
+2	Contains trees with potential to be used for breeding (DBH > 500 mm).	Contains trees with potential to be used for breeding (DBH > 500 mm).	Contains trees with potential to be used for breeding (DBH > 500 mm).
+1	Is known to be a roosting site.	Is known to be a roosting site.	Is known to be a roosting site
Subtractions	Context adjustor – attributes reducing functionality of foraging habitat	Context adjustor – attributes reducing functionality of foraging habitat	Context adjustor – attributes reducing functionality of foraging habitat
-2	No clear evidence of feeding debris.	No clear evidence of feeding debris.	No clear evidence of feeding debris.
-2	No other foraging habitat within 6 km.	No other foraging habitat within 6 km.	No other foraging habitat within 6 km.
-1	Is > 12 km from a known breeding location.	Is > 12 km from a known breeding location.	Is > 12 km from a known breeding location.
-1	Is > 12 km from a known roosting site.	Is > 12 km from a known roosting site.	Is > 12 km from a known roosting site.
-1	Is > 2 km from a watering point.	Is > 2 km from a watering point.	Is > 2 km from a watering point.

Final

Black Cockatoo Habitat Assessment, Roe Highway

Starting Score	Foraging habitat for Carnaby's Cockatoo	Foraging habitat for Baudin's Cockatoo	Foraging habitat for FRTBC
10 (Very high quality)	Foraging habitat that is being managed for black cockatoos such as habitat that is the focus of successful rehabilitation, and/or has some level of protection from clearing, and/or is quality habitat described below with attributes contributing to meet a score of ≥ 10 .	Foraging habitat that is being managed for black cockatoos such as habitat that is the focus of, successful rehabilitation, and/or has some level of protection from clearing, and/or is quality habitat described below with attributes contributing to meet a score of ≥ 10 .	Foraging habitat that is being managed for black cockatoos such as habitat that is the focus of successful rehabilitation, and/or has some level of protection from clearing, and/or is quality habitat described below with attributes contributing to meet a score of ≥ 10 .
7 (High quality)	Native shrubland, kwongan heathland and woodland dominated by proteaceous plant species such as Banksia spp. (including Dryandra spp.), Hakea spp. and Grevillea spp., as well as native eucalypt woodland and forest that contains foraging species, including along roadsides. Does not include orchards, canola, or areas under a RFA.	Native eucalypt woodlands and forest, and proteaceous woodland and heath, particularly marri, including along roadsides. Does not include orchards or areas under a RFA.	Jarrah and marri woodlands and forest, and edges of karri forests, including wandoo and blackbutt, within the range of the subspecies, including along roadsides. Does not include areas under a RFA.
5 (Quality)	Pine plantation or introduced eucalypts.	Pine plantation or introduced eucalypts.	Introduced eucalypts as well as the introduced Cape lilac (Melia azedarach).
-1	Disease present (e.g. <i>Phytophthora cinnamomic</i> or marri canker).	Disease present (e.g. <i>Phytophthora cinnamomic</i> or marri canker).	Disease present (e.g. <i>Phytophthora cinnamomic</i> or marri canker).



Plate 2: Evidence of foraging on Marri nuts by FRTBC in the Survey Area



Plate 3: Evidence of foraging on Marri nuts by FRTBC in the Survey Area

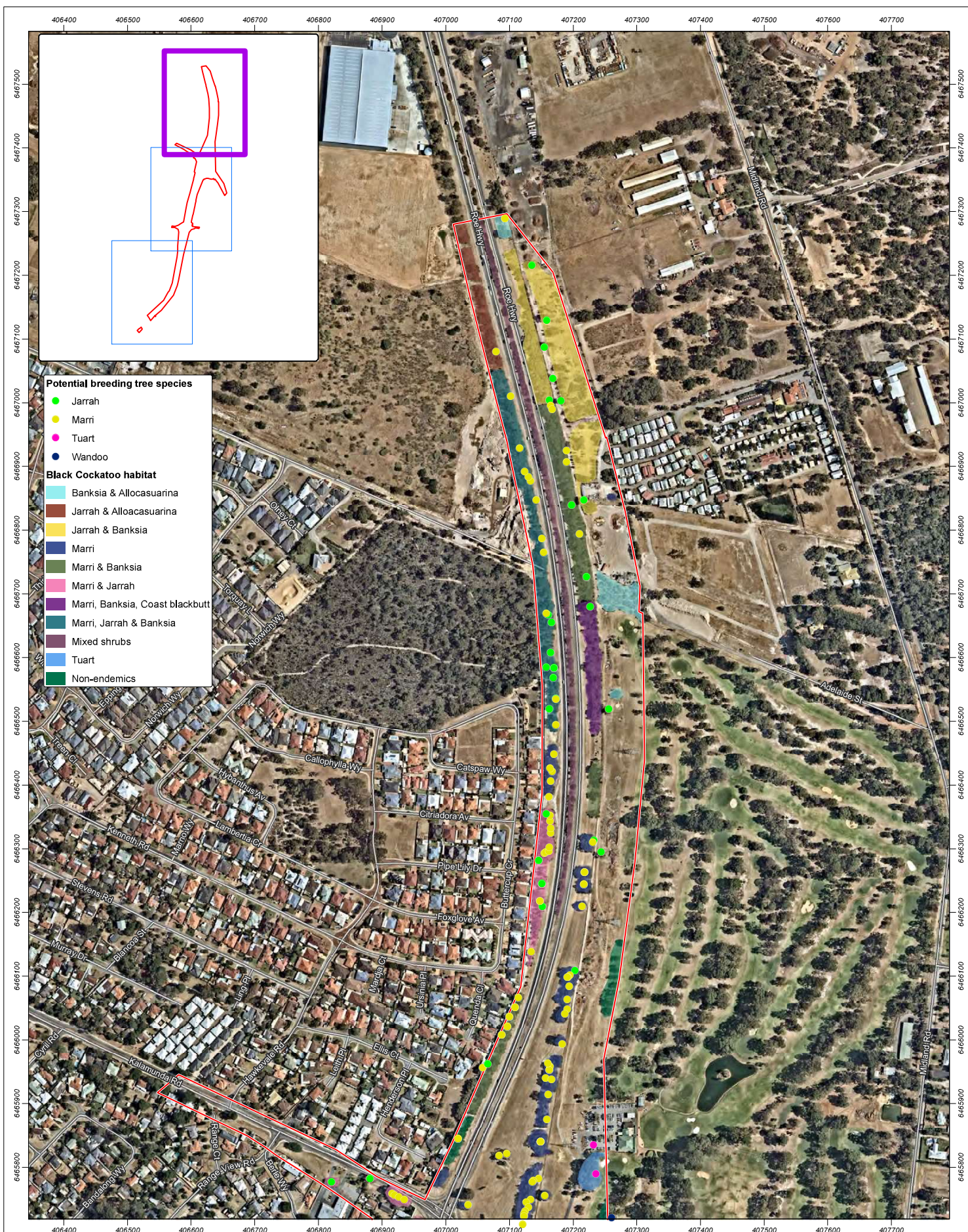


Figure 2: Black Cockatoo foraging and potential breeding habitat

Scale 1:5,500 at A3

0 50 100 150 200 250 Meters

Coordinate System: GDA 1994 MGA Zone 50

Note that positional errors may occur in some areas

Date: 5/02/2018

Author: DWhite

Source: Proposed environmental boundary,
24/01/2018 Main Roads 2018, Aerial: Nearmaps 2017/12,
Roads: Main Roads 2017.

Path: Q:\Consul\2018\MRO\MRO18027\01_GIS_documents\ArcMap_documents\MRO18027_G001_RevA.mxd

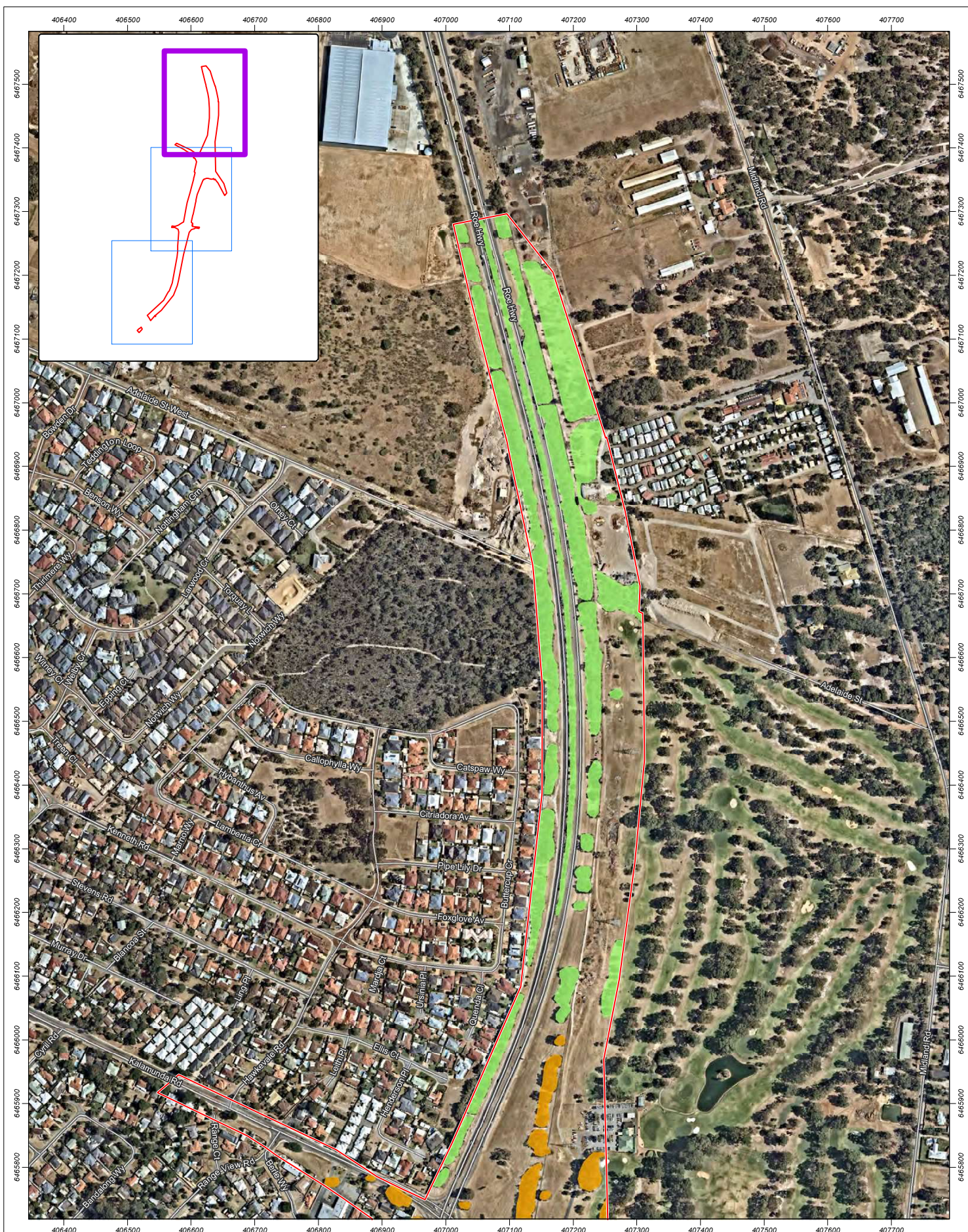


Figure 3: Black Cockatoo foraging quality score

Scale 1:5,500 at A3

0 50 100 150 200 250 Meters

Coordinate System: GDA 1994 MGA Zone 50
Note that positional errors may occur in some areas
Date: 5/02/2018

Author: DWhite

Source: Proposed environmental boundary,
24/01/2018 Main Roads 2018, Aerial: Nearmaps 2017/12,
Roads: Main Roads 2017.

Proposed environmental boundary
Roads

Black Cockatoo foraging quality score

8
10

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4. Discussion

During the Black Cockatoo habitat assessment, potential foraging and breeding habitat was identified in the Survey Area.

4.1 Potential Breeding Habitat

Black Cockatoos breed in large hollow-bearing trees, generally within woodlands or forests (Johnstone *et al.* 2013a). The size of the tree can be a useful indication of the hollow-bearing potential of the tree. Trees of suitable DBH are potentially important for maintaining breeding in the long-term, through maintaining the integrity of the habitat and allowing trees to provide future nest hollows. Maintaining the long-term supply of trees of a size to provide suitable nest hollows is particularly important in woodland stands that are known to support Black Cockatoo breeding (DSEWPac 2012).

The Black Cockatoo habitat assessment revealed that the Survey Area contains Marri, Jarrah, Tuart and Wandoo trees which have reached a size to be considered potential future hollow bearing trees, therefore potential breeding trees (i.e. ≥ 500 mm [≥ 300 mm for Wandoo]) according to the EPBC Act revised draft referral Black Cockatoo guidelines.

In total, 547 trees were recorded which met the criteria to be classed as a potential breeding tree. This suggests that these trees may develop hollows and have the potential to be used for breeding in the future. To be suitable for Black Cockatoos, the hollow entrances need to be large enough for cockatoos to enter and of adequate depth (and the hollows need to have a large enough and relatively flat floor space) (Johnstone *et al.* 2013a).

A total of five hollows in four trees were identified during the first habitat assessment and were not considered suitable for nesting. A reinspection of these hollows, but in greater detail was undertaken and this reinspection also determined that these five hollows were unsuitable for Black Cockatoos to nest in. Primarily because their entrance opening were too small. The minimum entrance size of a hollow to be considered suitable for FRTBC to breed in is 10 x 12 cm and the mean size is 30 x 34 cm (all hollow openings were below the minimum size) (see Table 1 and Appendix 4). Work undertaken on CBC indicate that their hollows have a vertical opening of about 27 cm (Saunders & Dawson 2017) – again all the hollow openings examined during this survey were much smaller (see Table 1 and Appendix 4). In addition, the hollow entrances on all four trees were between five and 11 m above ground and therefore likely too low to be suitable, as Black Cockatoos generally use hollows that are on average at 14.5 m above the ground (Johnstone *et al.* 2013).

4.2 Foraging Habitat

There were other Marri, Jarrah, Tuart and Wandoo trees in the Survey Area, however, they all had a DBH of < 500 mm (< 300 mm for Wandoo) and therefore are not considered as potential breeding trees. These trees, however, are all considered to be foraging habitat. The Survey Area also contained other known foraging species including Coastal Blackbutt, *Banksia attenuata*, *Banksia menziesii*, *Allocasuarina* spp., *Acacia* spp., *Callistemon* spp., *Xanthorrhoea preissii* and Cape Lilac.

All three Black Cockatoo species leave unique feeding patterns on Marri nuts as they extract the seeds. Each species has a different style – from the inelegant “chomp-chomp” style of the FRTBC and Carnaby’s Cockatoo to the delicate style of the Baudin’s Cockatoo which use their long upper beak to extract the Marri seeds (WAM 2013).

During the habitat assessment, approximately 30 FRTBC were heard calling from many locations, seen flying overhead and observed feeding on Marri nuts and Cape Lilac in the Survey Area. Evidence of FRTBC and Carnaby’s foraging was recorded throughout the Survey Area, with many chewed Marri, Cape Lilac and Coastal Blackbutt nuts, as well as Banksia cones were observed (Plate 4 and Plate 5).

No roosts were identified in the Survey Area during the assessment. The Great Cocky Count data from 2017 was examined and five roosts were within 1.5 km of the Survey Area (Birdlife 2017).



Plate 4: Evidence of foraging on Cape lilac nuts by FRTBC in the Survey Area



Plate 5: Evidence of foraging on Marri nuts by FRTBC in the Survey Area

4.3 Habitat Quality

The DEE 2017 foraging habitat scoring tool was used to determine the quality of the habitat. The quality of foraging habitat varies depending upon how Black Cockatoos use that habitat in that location.

Black cockatoos rely on foraging resources to provide sufficient energy for their movements across their range. Availability of foraging habitat plays a particularly critical role in the post-breeding period, when birds need to build condition after breeding, and are teaching juveniles where these foraging resources are located. Losing foraging resources across the range increases the likelihood that birds won't regain condition after breeding, and won't breed again the following season, and that juveniles won't survive to become part of the adult population (DEE 2017).

The Survey Area was given two quality score ratings 8 or 10. Both scores however, result in a classification of "Very High Quality" for the Survey Area. The Survey Area contains 6.45 ha of habitat quality score 8 and 26.08 ha of habitat quality score 10 (Figure 3).

The habitat score was attributed to the Survey Area from applicable starting scores and then additions and subtractions based on functionality of foraging habitat. The difference in the score is mainly because of some areas being considered native shrubland and/or woodland, containing native eucalypts (score 10), or being considered individual trees and small stands of Marri and Jarrah (score 8) at different locations.

Adjustors were applied regarding attributes improving functionality of the foraging habitat. These included location (Swan Coastal Plain) as well as presence of potential breeding habitat and foraging habitat (including Marri and Jarrah). Adjustors were also applied regarding attributes reducing functionality of the foraging habitat, including distance to breeding and roosting sites. It was found that, for example, more than 36 roosting sites from the great Cocky Count 2017 were within 12 km of the Survey Area, five of which were within 1.5 km (Birdlife 2017).

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Appendix 1
Conservation significant flora, fauna
and ecological community definitions

Conservation Codes for Western Australian Flora and Fauna (Parks and Wildlife 2017)

Specially protected fauna or flora are species which have been adequately searched for and are deemed to be, in the wild, either rare, at risk of extinction, or otherwise in need of special protection, and have been gazetted as such.

Categories of specially protected fauna and flora are:

T Threatened species

Published as Specially Protected under the Wildlife Conservation Act 1950, and listed under Schedules 1 to 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

Threatened fauna is that subset of 'Specially Protected Fauna' declared to be 'likely to become extinct' pursuant to section 14(4) of the Wildlife Conservation Act.

Threatened flora is flora that has been declared to be 'likely to become extinct or is rare, or otherwise in need of special protection', pursuant to section 23F(2) of the Wildlife Conservation Act.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

CR Critically endangered species

Threatened species considered to be facing an extremely high risk of extinction in the wild. Published as Specially Protected under the Wildlife Conservation Act 1950, in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

EN Endangered species

Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the Wildlife Conservation Act 1950, in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

VU Vulnerable species

Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the Wildlife Conservation Act 1950, in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

EX Presumed extinct species

Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Specially Protected under the Wildlife Conservation Act 1950, in Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora.

IA Migratory birds protected under an international agreement

Birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and the Bonn Convention, relating to the protection of migratory birds. Published as Specially Protected under the Wildlife Conservation Act 1950, in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.

CD Conservation dependent fauna

Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened. Published as Specially Protected under the Wildlife Conservation Act 1950, in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.

OS Other specially protected fauna

Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the Wildlife Conservation Act 1950, in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.

Priority Flora and Fauna

Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened flora or fauna.

Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.

Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

1 Priority 1: Poorly-known species

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

2 Priority 2: Poorly-known species

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

3 Priority 3: Poorly-known species

Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

4 Priority 4: Rare, Near Threatened and other species in need of monitoring:

(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.

(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for Vulnerable, but are not listed as Conservation Dependent.

(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

Definition of Threatened Ecological Communities (DEC 2013)

A threatened ecological community (TEC) is one which is found to fit into one of the following categories; "presumed totally destroyed", "critically endangered", "endangered" or "vulnerable".

Presumed Totally Destroyed (PD)

An ecological community that has been adequately searched for but for which no representative occurrences have been located. The community has been found to be totally destroyed or so extensively modified throughout its range that no occurrence of it is likely to recover its species composition and/or structure in the foreseeable future.

An ecological community will be listed as presumed totally destroyed if there are no recent records of the community being extant and either of the following applies (A or B):

A) Records within the last 50 years have not been confirmed despite thorough searches of known or likely habitats, or

B) All occurrences recorded within the last 50 years have since been destroyed.

Critically Endangered (CR)

An ecological community will be listed as Critically Endangered when it has been adequately surveyed and is found to be facing an extremely high risk of total destruction in the immediate future. This will be determined on the basis of the best available information, by it meeting any one or more of the following criteria (A, B or C):

A) The estimated geographic range, and/or total area occupied, and/or number of discrete occurrences since European settlement have been reduced by at least 90% and either or both of the following apply:

- geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is imminent (within approximately 10 years)
- modification throughout its range is continuing such that in the immediate future (within approximately 10 years) the community is unlikely to be capable of being substantially rehabilitated.

B) Current distribution is limited, and one or more of the following apply:

- geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the immediate future (within approximately 10 years)
- there are very few occurrences, each of which is small and/or isolated and extremely vulnerable to known threatening processes
- there may be many occurrences but total area is very small and each occurrence is small and/or isolated and extremely vulnerable to known threatening processes.

C) The ecological community exists only as highly modified occurrences that may be capable of being rehabilitated if such work begins in the immediate future (within approximately 10 years).

Endangered (EN)

An ecological community that has been adequately surveyed and found to have been subject to a major contraction in area and/or was originally of limited distribution and is in danger of significant modification throughout its range or severe modification or destruction over most of its range in the near future.

An ecological community will be listed as Endangered when it has been adequately surveyed and is not Critically Endangered but is facing a very high risk of total destruction in the near future. This will be determined on the basis of the best available information by it meeting any one or more of the following criteria (A, B, or C):

A) The geographic range, and/or total area occupied, and/or number of discrete occurrences have been reduced by at least 70% since European settlement and either or both of the following apply:

- the estimated geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is likely in the short term future (within approximately 20 years)
- modification throughout its range is continuing such that in the short term future (within approximately 20 years) the community is unlikely to be capable of being substantially restored or rehabilitated.

B) Current distribution is limited, and one or more of the following apply”

- geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the short term future (within approximately 20 years)
- there are few occurrences, each of which is small and/or isolated and all or most occurrences are very vulnerable to known threatening processes
- there may be many occurrences but total area is small and all or most occurrences are small and/or isolated and very vulnerable to known threatening processes.

C) The ecological community exists only as very modified occurrences that may be capable of being substantially restored or rehabilitated if such work begins in the short-term future (within approximately 20 years).

Vulnerable (VU)

An ecological community that has been adequately surveyed and is found to be declining and/or has declined in distribution and/or condition and whose ultimate security has not yet been assured and/or a community that is still widespread but is believed likely to move into a category of higher threat in the near future if threatening processes continue or begin operating throughout its range.

An ecological community will be listed as Vulnerable when it has been adequately surveyed and is not Critically Endangered or Endangered but is facing a high risk of total destruction or significant modification in the medium (within approximately 50 years) to long-term future. This will be determined on the basis of the best available information by it meeting any one or more of the following criteria (A, B or C):

A) The ecological community exists largely as modified occurrences that are likely to be capable of being substantially restored or rehabilitated.

B) The ecological community may already be modified and would be vulnerable to threatening processes, is restricted in area and/or range and/or is only found at a few locations.

C) The ecological community may be still widespread but is believed likely to move into a category of higher threat in the medium to long term future because of existing or impending threatening processes.

Definition of Priority Ecological Communities (DEC 2013)

Possible threatened ecological communities that do not meet survey criteria or that are not adequately defined are added to the Priority Ecological Community List under priorities 1, 2 and 3. These three categories are ranked in order of priority for survey and/or definition of the community. Ecological communities that are adequately known, and are rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list, are placed in Priority 4. These ecological communities require regular monitoring. Conservation Dependent ecological communities are placed in Priority 5.

Priority One: Poorly-known ecological communities

Ecological communities with apparently few, small occurrences, all or most not actively managed for conservation (e.g. within agricultural or pastoral lands, urban areas, active mineral leases) and for which current threats exist. Communities may be included if they are comparatively well-known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under immediate threat from known threatening processes across their range.

Priority Two: Poorly-known ecological communities

Communities that are known from few small occurrences, all or most of which are actively managed for conservation (e.g. within national parks, conservation parks, nature reserves, State forest, unallocated Crown land, water reserves, etc.) and not under imminent threat of destruction or degradation. Communities may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under threat from known threatening processes.

Priority Three: Poorly known ecological communities

- Communities that are known from several to many occurrences, a significant number or area of which are not under threat of habitat destruction or degradation
- communities known from a few widespread occurrences, which are either large or within significant remaining areas of habitat in which other occurrences may occur, much of it not under imminent threat
- communities made up of large, and/or widespread occurrences, that may or not be represented in the reserve system, but are under threat of modification across much of their range from processes such as grazing by domestic and/or feral stock, and inappropriate fire regimes.

Communities may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and/or are not well defined, and known threatening processes exist that could affect them.

Priority Four

Ecological communities that are adequately known, rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list. These communities require regular monitoring. These include:

a) Rare. Ecological communities known from few occurrences that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These communities are usually represented on conservation lands.

b) Near Threatened. Ecological communities that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.

c) Ecological communities that have been removed from the list of threatened communities during the past five years.

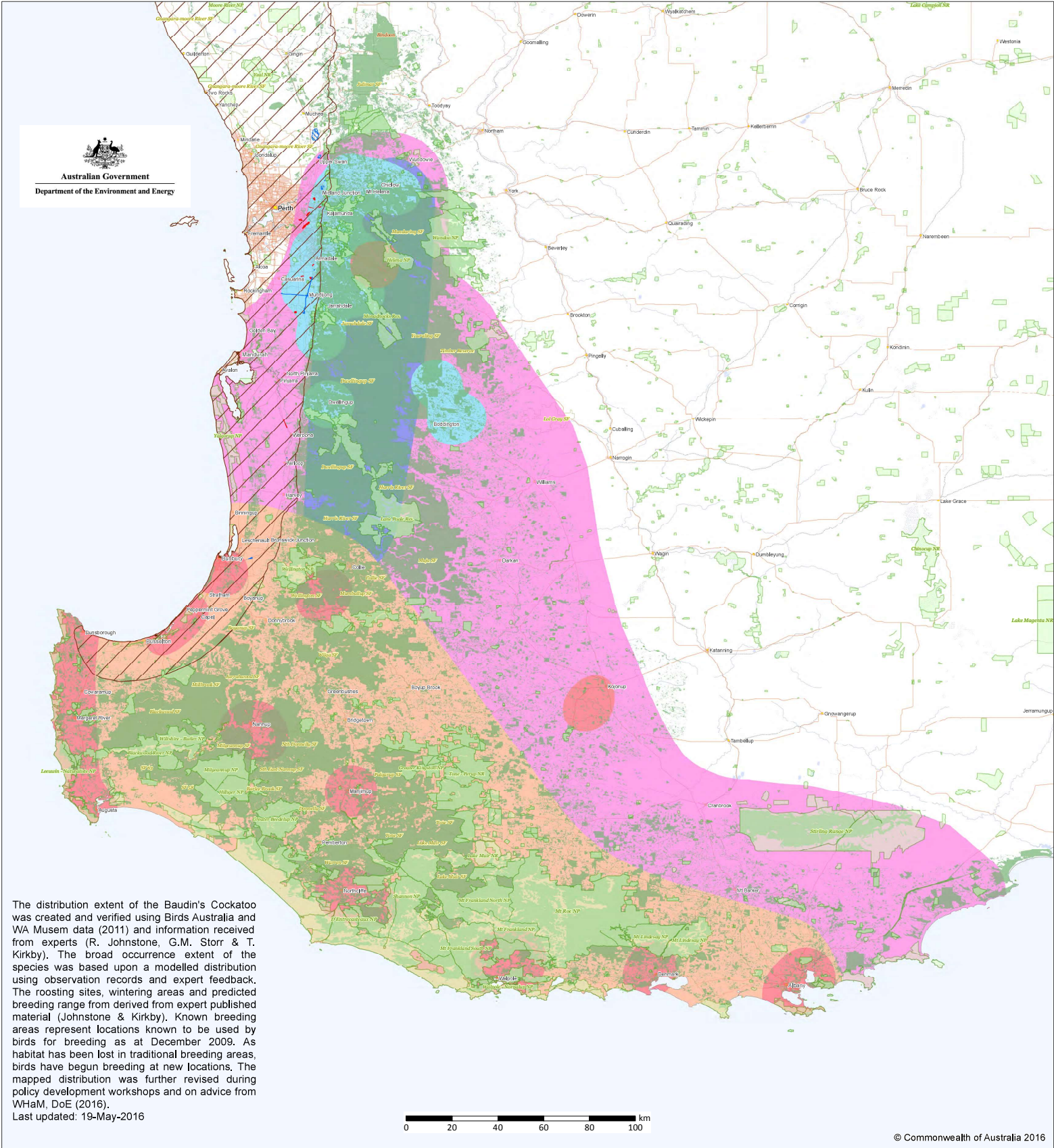
Priority Five: Conservation Dependent ecological communities

Ecological communities that are not threatened but are subject to a specific conservation program, the cessation of which would result in the community becoming threatened within five years.

Appendix 2

Black Cockatoo distribution maps

Map 2: Modelled distribution for Baudin's Cockatoo (*Calyptorhynchus baudinii*)



INDICATIVE MAP ONLY: For the latest departmental information, please refer to the Protected Matters Search Tool and the Species Profiles & Threats Database at <http://www.environment.gov.au/biodiversity/threatened/index.html>

Produced by:
Environmental Resources Information Network 2016

Contextual data source:
National Vegetation Information System (NVIS 4.2) 2016
Interim Biogeographic Regionalisation for Australia (IBRA) version 7 2012
Collaborative Australian Protected Area Database (CAPAD) 2014
Geoscience Australia GEODATA TOPO 250K Topographic Data Series 3 2006

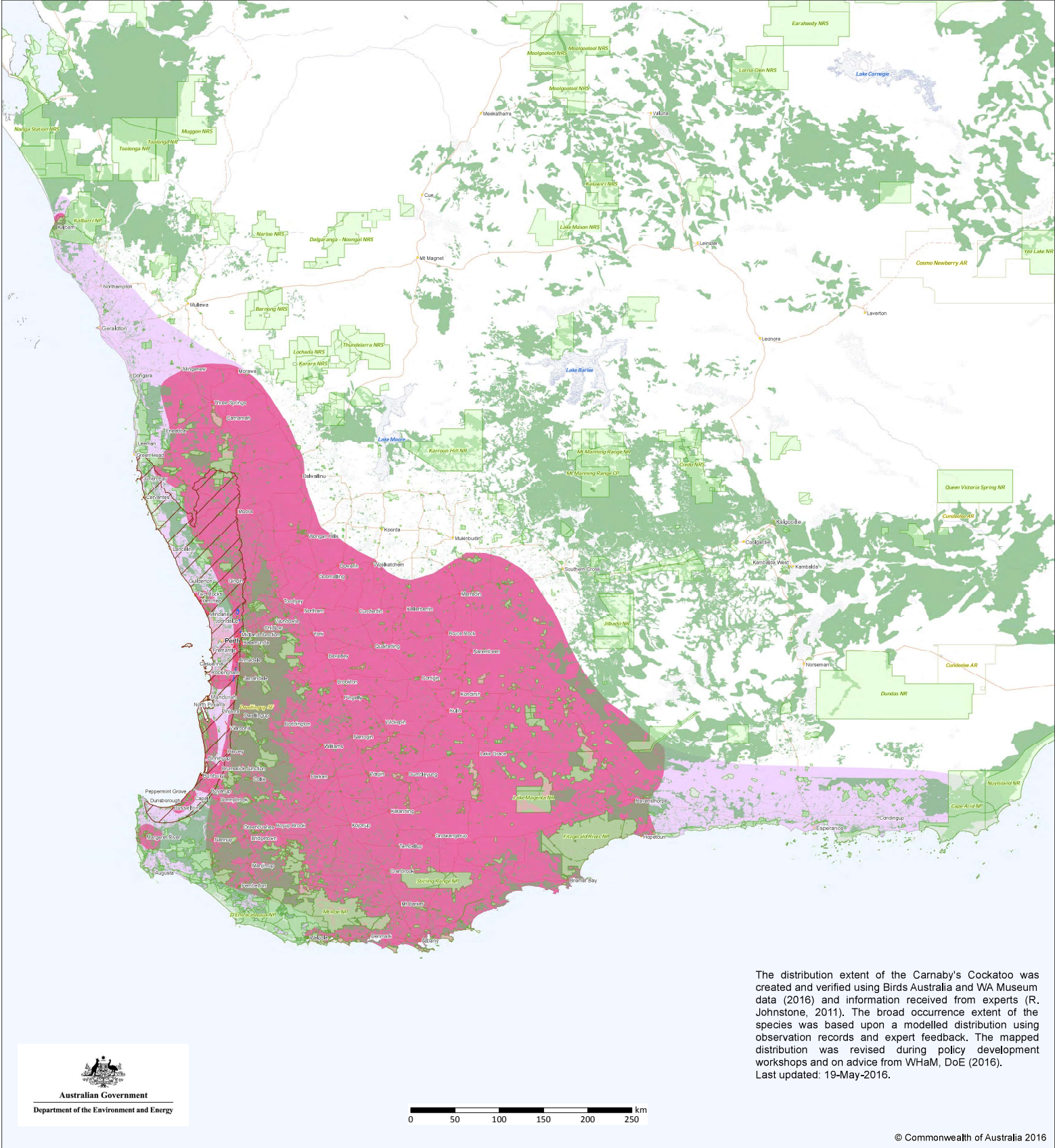
Projection: Geographic
Datum: GDA94

- Ecological Communities**
 - Corymbia calophylla - Xanthorrhoea preissii woodlands and shrublands of the Swan Coastal Plain
 - Corymbia calophylla - Kingia australis woodlands on heavy soils of the Swan Coastal Plain
 - Banksia Woodlands of the Swan Coastal Plain
 - Conservation Areas
 - Jarrah, Karri and Marri (NVIS 4.2)

Species
 - Known Breeding Areas
 - Predicted Breeding Range
 - Known Foraging Areas
 - Main Wintering Area
 - Species Likely to Occur

- Cities & Towns
 - Roads (sealed)
 - Roads (unsealed)
 - Railways
 - State Border
 - Major Rivers
 - Lakes/Reservoirs
 - Non-perennial Lakes

Map 3: Modelled distribution for Carnaby's Cockatoo (*Calyptorhynchus latirostris*)



INDICATIVE MAP ONLY: For the latest departmental information, please refer to the Protected Matters Search Tool and the Species Profiles & Threats Database at <http://www.environment.gov.au/biodiversity/threatened/index.html>

Produced by:
Environmental Resources Information Network 2016

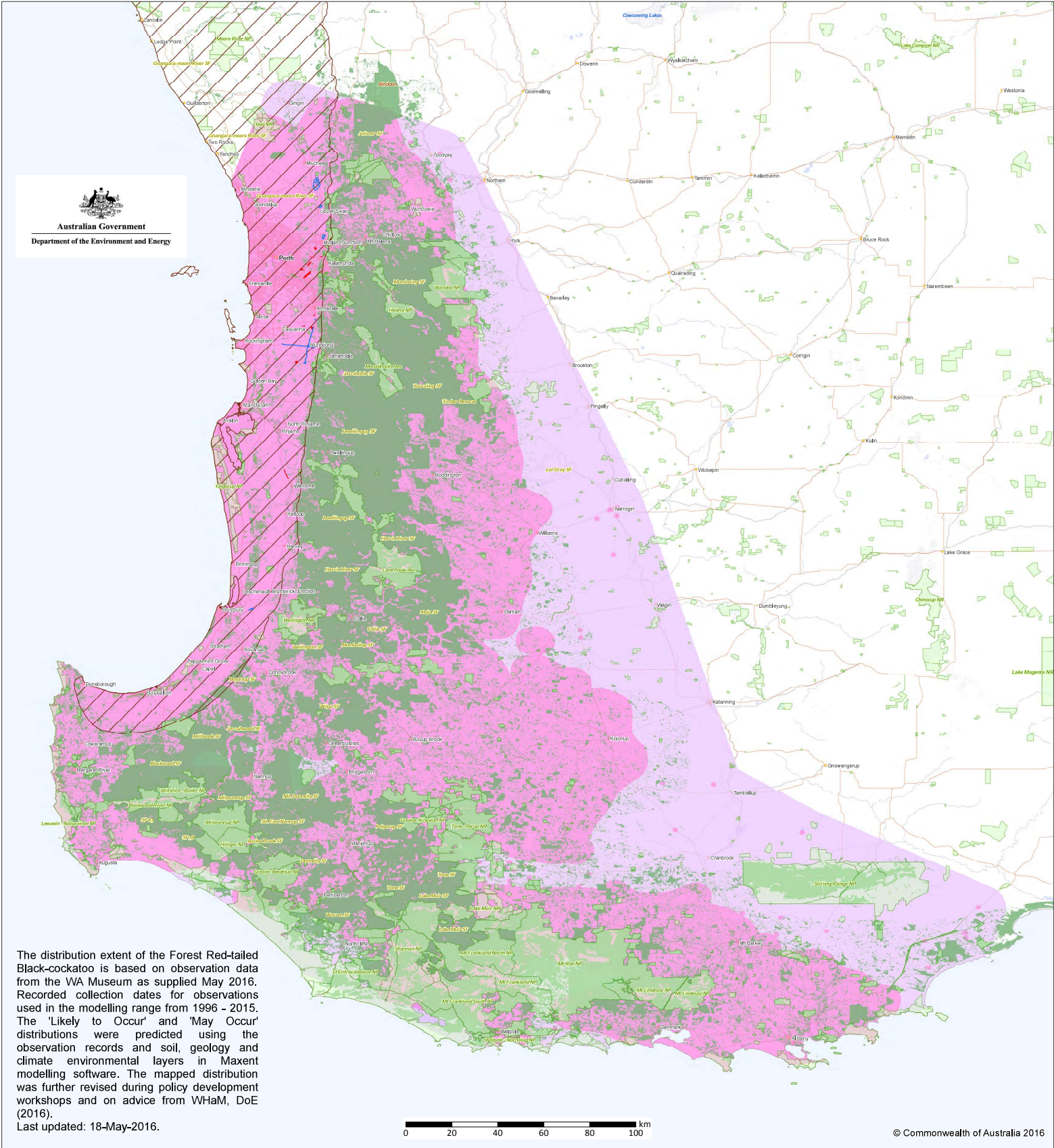
Contextual data source:
National Vegetation Information System (NVIS 4.2) 2016
Interim Biogeographic Regionalisation for Australia (IBRA) version 7 2012
Collaborative Australian Protected Area Database (CAPAD) 2014
Geoscience Australia GEODATA TOPO 250K Topographic Data Series 3 2006

Projection: Geographic
Datum: GDA94

- Conservation Areas
- Jarrah, Karri, Marri, Salmon Gum, Wandoo, Banksia, Grevillea, Dryandra and Hakea (NVIS 4.2)
- Species**
- Breeding Range
- Non-breeding Range
- Ecological Communities**
- Corymbia calophylla - Xanthorrhoea preissii woodlands and shrublands of the Swan Coastal Plain
- Corymbia calophylla - Kingia australis woodlands on heavy soils of the Swan Coastal Plain
- Banksia Woodlands of the Swan Coastal Plain

- Cities & Towns
- Roads (sealed)
- Roads (unsealed)
- State Border
- Major Rivers
- Lakes/Reservoirs
- Non-perennial Lakes

Map 4: Modelled distribution for Forest Red-tailed Black-Cockatoo (*Calyptorhynchus banksii naso*)



INDICATIVE MAP ONLY: For the latest departmental information, please refer to the Protected Matters Search Tool and the Species Profiles & Threats Database at <http://www.environment.gov.au/biodiversity/threatened/index.html>

Produced by:
Environmental Resources Information Network 2016

Contextual data source:
National Vegetation Information System (NVIS 4.2) 2016
Interim Biogeographic Regionalisation for Australia (IBRA) version 7 2012
Collaborative Australian Protected Area Database (CAPAD) 2014
Geoscience Australia GEODATA TOPO 250K Topographic Data Series 3 2006

Projection: Geographic
Datum: GDA94

- Conservation Areas

Jarrah, Karri and Marri (NVIS 4.2)
- Species
- Likely to Occur
- May Occur
- Ecological Communities
- Corymbia calophylla - Xanthorhea preissii woodlands and shrublands of the Swan Coastal Plain
- Corymbia calophylla - Kingia australis woodlands on heavy soils of the Swan Coastal Plain
- Banksia Woodlands of the Swan Coastal Plain
- Cities & Towns
- Roads (sealed)
- Roads (unsealed)
- Railways
- State Border
- Major Rivers
- Lakes/Reservoirs
- Non-perennial Lakes

Appendix 3
Black Cockatoo Potential Breeding
Trees

Tree No.	Species	Easting	Northing	DBH Size	No. Hollows	Hollow Size	Notes
1	Marri	407093	6467289	A	0	N/A	
2	Marri	407093	6467289	A	0	N/A	
3	Jarrah	407159	6467129	A	0	N/A	
4	Jarrah	407155	6467087	A	0	N/A	
5	Jarrah	407168	6467038	A	0	N/A	
6	Jarrah	407163	6467004	B	0	N/A	
7	Marri	407165	6466995	A	0	N/A	
8	Marri	407167	6466990	A	0	N/A	
9	Jarrah	407181	6467003	B	0	N/A	
10	Marri	407174	6467960	A	0	N/A	
11	Marri	407190	6466925	A	0	N/A	
12	Marri	407190	6466907	A	0	N/A	
13	Jarrah	407217	6466847	A	0	N/A	
14	Jarrah	407198	6466839	A	0	N/A	
15	Marri	407210	6466794	A	0	N/A	
16	Jarrah	407221	6466727	A	0	N/A	
17	Jarrah	407227	6466680	B	0	N/A	
18	Jarrah	407256	6466519	A	0	N/A	Burnt
19	Jarrah	407233	6466313	A	0	N/A	
20	Marri	407231	6466310	A	0	N/A	
21	Jarrah	407244	6466295	A	0	N/A	
22	Marri	407218	6466263	A	0	N/A	
23	Marri	407218	6466263	A	0	N/A	
24	Marri	407218	6466263	A	0	N/A	
25	Marri	407217	6466244	A	0	N/A	
26	Marri	407217	6466244	A	0	N/A	
27	Marri	407214	6466210	A	0	N/A	
28	Jarrah	407203	6466109	B	1	<100 mm	
29	Marri	407195	6466102	A	0	N/A	Splits at 2m
30	Marri	407192	6466098	A	0	N/A	Chewed nuts
31	Marri	407191	6466098	A	0	N/A	Chewed nuts
32	Marri	407194	6466084	A	0	N/A	Chewed nuts
33	Marri	407191	6466063	A	0	N/A	Chewed nuts
34	Marri	407191	6466048	A	0	N/A	Chewed nuts
35	Marri	407187	6466041	A	0	N/A	Chewed nuts
36	Marri	407183	6465994	A	0	N/A	Chewed nuts
37	Marri	407164	6465958	A	0	N/A	Chewed nuts
38	Marri	407163	6465953	A	0	N/A	Chewed nuts
39	Marri	407163	6465953	A	0	N/A	Chewed nuts
40	Marri	407160	6465963	A	0	N/A	Chewed nuts
41	Marri	407157	6465940	A	0	N/A	Chewed nuts
42	Marri	407166	6465938	A	0	N/A	Chewed nuts
43	Marri	407161	6465914	A	0	N/A	Chewed nuts
44	Marri	407159	6465875	A	0	N/A	Chewed nuts
45	Marri	407149	6465840	A	0	N/A	Chewed nuts
46	Marri	407149	6465840	A	0	N/A	Chewed nuts
47	Marri	407149	6465840	A	0	N/A	Chewed nuts
48	Marri	407149	6465840	A	0	N/A	Chewed nuts
49	Marri	407149	6465840	A	0	N/A	Chewed nuts
50	Marri	407096	6465821	A	0	N/A	Chewed nuts
51	Marri	407084	6465818	A	0	N/A	Chewed nuts
52	Marri	407146	6465782	A	0	N/A	Chewed nuts

53	Marri	407138	6465779	A	0	N/A	Chewed nuts
54	Marri	407136	6465777	A	0	N/A	Chewed nuts
55	Marri	407133	6465749	A	0	N/A	Chewed nuts
56	Marri	407126	6465745	A	0	N/A	Chewed nuts
57	Marri	407130	6465737	A	0	N/A	Chewed nuts
58	Marri	407125	6465731	A	0	N/A	Chewed nuts
59	Marri	407123	6465727	A	0	N/A	Chewed nuts
60	Marri	407123	6465723	A	0	N/A	Chewed nuts
61	Marri	407123	6465723	A	0	N/A	Chewed nuts
62	Marri	407121	6465710	A	0	N/A	Chewed nuts
63	Marri	407121	6465710	A	0	N/A	Chewed nuts
64	Marri	407118	6465697	A	0	N/A	Chewed nuts
65	Marri	407113	6465674	A	0	N/A	Chewed nuts
66	Marri	407114	6465668	A	0	N/A	Chewed nuts
67	Marri	407111	6465657	A	0	N/A	Chewed nuts
68	Marri	407107	6465653	A	0	N/A	Chewed nuts
69	Marri	407035	6465741	A	0	N/A	Chewed nuts
70	Marri	407019	6465845	A	0	N/A	Chewed nuts
71	Marri	407019	6465845	A	0	N/A	Chewed nuts
72	Marri	407059	6465641	A	0	N/A	Chewed nuts
73	Marri	407058	6465956	A	0	N/A	Chewed nuts
74	Jarrah	407066	6465962	A	0	N/A	Chewed nuts
75	Marri	407088	6466008	A	0	N/A	Chewed nuts
76	Marri	407088	6466008	A	0	N/A	Chewed nuts
77	Marri	407097	6466021	A	0	N/A	Chewed nuts
78	Marri	407097	6466021	A	0	N/A	Chewed nuts
79	Marri	407100	6466036	A	0	N/A	Chewed nuts
80	Marri	407100	6466036	A	0	N/A	Chewed nuts
81	Marri	407109	6466051	A	0	N/A	Chewed nuts
82	Marri	407109	6466051	A	0	N/A	Chewed nuts
83	Marri	407114	6466066	A	0	N/A	Chewed nuts
84	Marri	407134	6466138	A	0	N/A	Chewed nuts
85	Jarrah	407152	6466209	A	0	N/A	Chewed nuts
86	Marri	407148	6466218	A	0	N/A	Chewed nuts
87	Marri	407148	6466218	A	0	N/A	
88	Jarrah	407151	6466245	A	0	N/A	
89	Jarrah	407151	6466245	A	0	N/A	
90	Jarrah	407146	6466281	A	0	N/A	
91	Jarrah	407146	6466281	A	0	N/A	
92	Marri	407155	6466293	A	0	N/A	
93	Marri	407157	6466294	A	0	N/A	
94	Marri	407162	6466296	A	0	N/A	
95	Marri	407163	6466302	A	0	N/A	
96	Marri	407165	6466325	A	0	N/A	
97	Marri	407165	6466332	A	0	N/A	
98	Marri	407164	6466343	A	0	N/A	
99	Marri	407164	6466352	A	0	N/A	
100	Jarrah	407158	6466355	A	0	N/A	
101	Marri	407162	6466382	A	0	N/A	
102	Marri	407165	6466406	A	0	N/A	
103	Marri	407167	6466421	A	0	N/A	
104	Marri	407164	6466426	A	0	N/A	
105	Marri	407170	6466448	A	0	N/A	

106	Marri	407173	6466494	A	0	N/A	
107	Jarrah	407163	6466519	A	0	N/A	
108	Jarrah	407173	6466536	A	0	Stag	
109	Marri	407173	6466535	A	0	N/A	
110	Jarrah	407169	6466568	A	0	N/A	
111	Jarrah	407170	6466584	A	0	N/A	
112	Jarrah	407170	6466584	A	0	N/A	
113	Jarrah	407158	6466585	A	0	N/A	
114	Jarrah	407165	6466608	A	0	N/A	
115	Jarrah	407166	6466655	A	0	N/A	
116	Jarrah	407161	6466667	B	2	1x > 100 mm. Not suitable. 1 x < 100 mm	
117	Marri	407158	6466669	A	0	N/A	
118	Marri	407154	6466765	A	0	N/A	
119	Marri	407151	6466787	A	0	N/A	
120	Marri	407142	6466847	A	0	N/A	
121	Marri	407133	6466877	A	0	N/A	
122	Marri	407130	6466884	A	0	N/A	
123	Marri	407124	6466892	A	0	N/A	
124	Marri	407116	6466928	A	0	N/A	
125	Marri	407102	6467010	A	0	N/A	
126	Marri	407079	6467080	A	0	N/A	
127	Tuart	407111	6465348	A	0	N/A	
128	Tuart	407110	6465350	A	0	N/A	
129	Tuart	407113	6465358	A	0	N/A	
130	Tuart	407118	6465351	A	0	N/A	
131	Jarrah	407141	6465349	A	0	N/A	
132	Jarrah	407144	6465344	A	0	N/A	
133	Wandoo	407163	6465348	A	0	N/A	
134	Wandoo	407171	6465346	A	0	N/A	
135	Wandoo	407171	6465346	A	0	N/A	
136	Wandoo	407171	6465346	A	0	N/A	
137	Wandoo	407171	6465346	A	0	N/A	
138	Wandoo	407171	6465346	A	0	N/A	
139	Wandoo	407196	6465343	A	0	N/A	
140	Wandoo	407196	6465343	A	0	N/A	
141	Wandoo	407196	6465343	A	0	N/A	
142	Wandoo	407224	6465342	A	0	N/A	
143	Wandoo	407224	6465342	A	0	N/A	
144	Wandoo	407224	6465342	A	0	N/A	
145	Wandoo	407222	6465367	A	0	N/A	
146	Wandoo	407221	6465373	A	0	N/A	
147	Wandoo	407218	6465376	A	0	N/A	
148	Wandoo	407209	6465377	A	0	N/A	
149	Wandoo	407199	6465381	A	0	N/A	
150	Marri	407196	6465392	A	0	N/A	
151	Wandoo	407192	6465401	A	0	N/A	
152	Wandoo	407186	6465426	A	0	N/A	
153	Jarrah	407174	6465454	A	0	N/A	
154	Jarrah	407156	6465461	A	0	N/A	
155	Wandoo	407129	6465470	A	0	N/A	
156	Wandoo	407116	6465556	A	0	N/A	
157	Wandoo	407092	6465563	A	0	N/A	
158	Wandoo	407093	6465554	A	0	N/A	

159	Jarrah	407057	6465515	A	0	N/A	
160	Marri	407044	6465510	A	0	N/A	
161	Marri	407036	6465500	A	0	N/A	
162	Marri	407034	6465494	A	0	N/A	
163	Jarrah	407032	6465491	A	0	N/A	
164	Jarrah	407026	6465483	A	0	N/A	
165	Marri	407031	6465478	A	0	N/A	
166	Marri	407033	6465471	A	0	N/A	
167	Marri	407037	6465469	A	0	N/A	
168	Jarrah	407037	6465468	A	0	N/A	
169	Marri	407035	6465465	A	0	N/A	
170	Jarrah	407035	6465460	A	0	N/A	
171	Jarrah	407034	6465461	A	0	N/A	
172	Marri	407026	6465453	A	0	N/A	
173	Jarrah	407020	6465449	A	0	N/A	
174	Marri	407020	6465448	A	0	N/A	
175	Marri	407016	6465424	A	0	N/A	
176	Marri	407015	6465424	A	0	N/A	
177	Marri	407012	6465417	A	0	N/A	
178	Marri	407011	6465413	A	0	N/A	
179	Marri	407010	6465403	A	0	N/A	
180	Marri	406995	6465389	A	0	N/A	
181	Marri	406996	6465393	A	0	N/A	
182	Marri	406977	6465461	A	0	N/A	
183	Marri	406976	6465436	A	0	N/A	
184	Marri	406979	6465410	A	0	N/A	
185	Marri	406955	6465409	A	0	N/A	
186	Marri	406951	6465393	A	0	N/A	
187	Marri	406956	6465385	A	0	N/A	
188	Marri	406959	6465383	A	0	N/A	
189	Marri	406982	6465368	A	0	N/A	
190	Marri	406981	6465368	A	0	N/A	
191	Marri	406983	6465362	A	0	N/A	
192	Marri	406982	6465337	A	0	N/A	
193	Jarrah	406961	6465324	A	0	N/A	
194	Marri	406961	6465324	A	0	N/A	
195	Jarrah	406966	6465320	A	0	N/A	
196	Jarrah	406949	6465287	A	0	N/A	
197	Marri	406948	6465286	A	0	N/A	
198	Jarrah	406944	6465272	A	0	N/A	
199	Marri	406943	6465271	A	0	N/A	
200	Marri	406943	6465260	A	0	N/A	
201	Marri	406943	6465252	A	0	N/A	
202	Marri	406939	6465254	A	0	N/A	
203	Marri	406935	6465251	A	0	N/A	
204	Marri	406935	6465251	A	0	N/A	
205	Marri	406935	6465251	A	0	N/A	
206	Marri	406929	6465249	A	0	N/A	
207	Marri	406918	6465218	A	0	N/A	
208	Marri	406920	6465209	A	0	N/A	
209	Marri	406920	6465209	A	0	N/A	
210	Jarrah	406918	6465198	A	0	N/A	
211	Marri	406922	6465193	A	0	N/A	
212	Marri	406913	6465184	A	0	N/A	

213	Marri	406913	6465184	A	0	N/A	
214	Marri	406908	6465173	A	0	N/A	
215	Marri	406901	6465150	A	0	N/A	
216	Marri	406903	6465146	A	0	N/A	
217	Marri	406900	6465141	A	0	N/A	
218	Marri	406900	6465130	A	0	N/A	
219	Marri	406898	6465125	A	0	N/A	
220	Marri	406899	6465105	A	0	N/A	
221	Marri	406898	6465101	A	0	N/A	
222	Marri	406898	6465101	A	0	N/A	
223	Marri	406897	6465087	A	0	N/A	
224	Marri	406897	6465087	A	0	N/A	
225	Marri	406894	6465077	A	0	N/A	
226	Marri	406890	6465065	A	0	N/A	
227	Marri	406872	6465046	A	0	N/A	
228	Marri	406873	6465035	A	0	N/A	
229	Marri	406873	6465022	A	0	N/A	
230	Marri	406871	6465014	A	0	N/A	
231	Marri	406871	6465014	A	0	N/A	
232	Marri	406869	6465006	A	0	N/A	
233	Marri	406859	6464992	A	0	N/A	
234	Marri	406859	6464992	A	0	N/A	
235	Marri	406859	6464992	A	0	N/A	
236	Marri	406859	6464992	A	0	N/A	
237	Marri	406859	6464992	A	0	N/A	
238	Marri	406859	6464992	A	0	N/A	
239	Marri	406849	6464943	A	0	N/A	
240	Marri	406848	6464940	A	0	N/A	
241	Marri	406848	6464910	A	0	N/A	
242	Marri	406837	6464892	A	0	N/A	
243	Marri	406838	6464884	A	0	N/A	
244	Marri	406839	6464882	A	0	N/A	
245	Marri	406837	6464862	A	0	N/A	
246	Marri	406837	6464862	A	0	N/A	
247	Marri	406837	6464849	A	0	N/A	
248	Marri	406837	6464849	A	0	N/A	
249	Marri	406837	6464849	A	0	N/A	
250	Marri	406833	6464843	A	0	N/A	
251	Marri	406827	6464828	A	0	N/A	
252	Marri	406830	6464824	A	0	N/A	
253	Marri	406830	6464824	A	0	N/A	
254	Marri	406825	6464818	A	0	N/A	
255	Marri	406825	6464818	A	0	N/A	
256	Marri	406824	6464806	A	0	N/A	
257	Marri	406824	6464806	A	0	N/A	
258	Marri	406824	6464806	A	0	N/A	
259	Marri	406824	6464799	A	0	N/A	
260	Marri	406816	6464786	A	0	N/A	
261	Marri	406814	6464782	A	0	N/A	
262	Marri	406810	6464755	A	0	N/A	
263	Marri	406809	6464742	A	0	N/A	
264	Marri	406808	6464733	A	0	N/A	
265	Marri	406806	6464732	A	0	N/A	
266	Marri	406806	6464732	A	0	N/A	

267	Marri	406800	6464717	A	0	N/A	
268	Marri	406800	6464709	A	0	N/A	
269	Marri	407661	6464555	A	0	N/A	
270	Marri	406805	6464695	A	0	N/A	
271	Marri	406804	6464694	A	0	N/A	
272	Marri	406801	6464674	A	0	N/A	
273	Marri	406798	6464672	A	0	N/A	
274	Marri	406792	6464669	A	0	N/A	
275	Marri	406792	6464633	A	0	N/A	
276	Marri	406791	6464629	A	0	N/A	
277	Marri	406790	6464625	A	0	N/A	
278	Marri	406646	646445	A	0	N/A	
279	Marri	406785	6464608	A	0	N/A	
280	Marri	406643	6464446	A	0	N/A	
281	Marri	406781	6464571	A	0	N/A	
282	Marri	406774	6464564	A	0	N/A	
283	Marri	406772	6464553	A	0	N/A	
284	Marri	406801	6464532	A	0	N/A	
285	Marri	406658	6464370	A	0	N/A	
286	Marri	406658	6464370	A	0	N/A	
287	Marri	406658	6464370	A	0	N/A	
288	Marri	406697	6464342	A	0	N/A	
289	Marri	406697	6464342	A	0	N/A	
290	Marri	406697	6464342	A	0	N/A	
291	Marri	406712	6464342	A	0	N/A	
292	Marri	406622	6464503	A	0	N/A	
293	Marri	406622	6464505	A	0	N/A	
294	Marri	406627	6464508	A	0	N/A	
295	Marri	406636	6464512	A	0	N/A	
296	Marri	406645	6464505	A	0	N/A	
297	Marri	406643	6464522	A	0	N/A	
298	Marri	406647	6464532	A	0	N/A	
299	Marri	406685	6464528	A	0	N/A	
300	Marri	406691	6464529	A	0	N/A	
301	Marri	406695	6464524	A	0	N/A	
302	Marri	406707	6464540	A	0	N/A	
303	Marri	406633	6464523	A	0	N/A	
304	Marri	406633	6464523	A	0	N/A	
305	Marri	406633	6464523	A	0	N/A	
306	Marri	406633	6464523	A	0	N/A	
307	Marri	406715	6464543	A	0	N/A	
308	Marri	406718	6464554	A	0	N/A	
309	Marri	406701	6464555	A	0	N/A	
310	Marri	406717	6464598	A	0	N/A	
311	Marri	406717	6464598	A	0	N/A	
312	Marri	406719	6464612	A	0	N/A	
313	Marri	406719	6464619	A	0	N/A	
314	Marri	406719	6464623	A	0	N/A	
315	Marri	406726	6464634	A	0	N/A	
316	Marri	406725	6464636	A	0	N/A	
317	Marri	406729	6464662	A	0	N/A	
318	Marri	406732	6464663	A	0	N/A	
319	Marri	406732	6464663	A	0	N/A	
320	Marri	406738	6464671	A	0	N/A	

321	Marri	406738	6464671	A	0	N/A	
322	Marri	406734	6464680	A	0	N/A	
323	Marri	406736	6464690	A	0	N/A	
324	Marri	406738	6464714	A	0	N/A	
325	Marri	406740	6464729	A	0	N/A	
326	Marri	406738	6464735	A	0	N/A	
327	Marri	406744	6464746	A	0	N/A	
328	Marri	406751	6464777	A	0	N/A	
329	Marri	406750	6464789	A	0	N/A	
330	Marri	406750	6464800	A	0	N/A	
331	Jarrah	406756	6464809	A	0	N/A	
332	Jarrah	406757	6464827	A	0	N/A	
333	Marri	406763	6464836	A	0	N/A	
334	Marri	406761	6464854	A	0	N/A	
335	Marri	406772	6464871	A	0	N/A	
336	Marri	406769	6464872	A	0	N/A	
337	Marri	406798	6465021	A	0	N/A	
338	Marri	406803	6465031	A	0	N/A	
339	Marri	406811	6465033	A	0	N/A	
340	Marri	406831	6465136	A	0	N/A	
341	Marri	406406	6465014	A	0	N/A	
342	Marri	406849	6465192	A	0	N/A	
343	Marri	406871	6465255	A	0	N/A	
344	Marri	406871	6465284	A	0	N/A	
345	Marri	406875	6465310	A	0	N/A	
346	Marri	406883	6465331	A	0	N/A	
347	Marri	406890	6465368	A	0	N/A	
348	Marri	406956	6465626	A	0	N/A	
349	Jarrah	406957	6465642	A	0	N/A	
350	Marri	406955	6465652	A	0	N/A	
351	Marri	406959	6465658	A	0	N/A	
352	Marri	406959	6465658	A	0	N/A	
353	Marri	406961	6465663	A	0	N/A	
354	Marri	406964	6465680	A	0	N/A	
355	Marri	406965	6465688	A	0	N/A	
356	Marri	406767	6464502	A	0	N/A	
357	Marri	406767	6464502	A	0	N/A	
358	Marri	406769	6464498	A	0	N/A	
359	Marri	406765	6464506	A	0	N/A	
360	Marri	406768	6464515	A	0	N/A	
361	Marri	406754	6464472	A	0	N/A	
362	Marri	406757	6464461	A	0	N/A	Chewed nuts
363	Marri	406757	6464461	A	0	N/A	Chewed nuts
364	Marri	406758	6464463	A	0	N/A	
365	Marri	406774	6464465	A	0	N/A	Chewed nuts
366	Marri	406787	6464459	A	0	N/A	Chewed nuts
367	Marri	406788	6464453	A	0	N/A	Chewed nuts
368	Marri	406760	6464437	A	0	N/A	
369	Marri	406752	6464433	A	0	N/A	
370	Marri	406749	6464426	A	0	N/A	
371	Marri	406746	6464423	A	0	N/A	
372	Marri	406774	6464416	A	0	N/A	
373	Marri	406740	6464390	A	0	N/A	
374	Marri	406754	6464366	A	0	N/A	

375	Marri	406805	6464417	A	0	N/A	Burnt
376	Marri	406794	6464403	A	0	N/A	Burnt
377	Marri	406794	6464403	A	0	N/A	
378	Tuart	406774	6464355	A	0	N/A	
379	Marri	406752	6464320	A	0	N/A	
380	Marri	406752	6464281	A	0	N/A	
381	Marri	406750	6464262	A	0	N/A	
382	Marri	406734	6464256	A	0	N/A	Chewed nuts
383	Marri	406742	6464225	A	0	N/A	
384	Marri	406739	6464215	A	0	N/A	
385	Marri	406732	6464197	A	0	N/A	
386	Marri	406711	6464088	A	0	N/A	
387	Marri	406692	6464016	A	0	N/A	
388	Marri	406688	6463995	A	0	N/A	
389	Jarrah	406676	6463968	A	0	N/A	
390	Jarrah	406677	6463949	A	0	N/A	
391	Jarrah	406663	6463919	A	0	N/A	
392	Jarrah	406662	6463911	A	0	N/A	
393	Marri	406661	6463900	A	0	N/A	
394	Marri	406658	6463871	A	0	N/A	Chewed nuts
395	Marri	406654	6463863	A	0	N/A	
396	Jarrah	406658	6463863	A	0	N/A	
397	Jarrah	406654	6463844	A	0	N/A	
398	Jarrah	406654	6463824	A	1	< 100 mm. Not suitable	
399	Marri	406641	6463774	A	0	N/A	
400	Marri	406623	6463744	A	0	N/A	
401	Marri	406623	6463740	A	0	N/A	
402	Marri	406623	6463740	A	0	N/A	
403	Marri	406611	6463697	A	0	N/A	
404	Marri	406607	6463688	A	0	N/A	
405	Marri	406599	6463616	A	0	N/A	
406	Jarrah	406604	6463613	A	0	N/A	
407	Marri	406601	6463559	A	0	N/A	
408	Marri	406584	6463534	A	0	N/A	Chewed nuts
409	Marri	406584	6463533	A	0	N/A	
410	Jarrah	406584	6463529	A	0	N/A	
411	Marri	406573	6463513	A	0	N/A	
412	Marri	406571	6463503	A	0	N/A	
413	Marri	406567	6463469	A	0	N/A	Chewed nuts
414	Marri	406564	6463463	A	0	N/A	
415	Marri	406553	6463443	A	0	N/A	
416	Jarrah	406553	6463442	A	0	N/A	
417	Marri	406547	6463427	A	0	N/A	
418	Marri	406550	6463414	A	0	N/A	
419	Jarrah	406550	6463389	A	0	N/A	
420	Jarrah	406475	6463248	A	1	<100 mm	Bees in hollow
421	Jarrah	406475	6463248	A	0	N/A	
422	Jarrah	406471	6463240	A	0	N/A	
423	Jarrah	406449	6463208	A	0	N/A	
424	Jarrah	406441	6463193	A	0	N/A	
425	Jarrah	406434	6463175	A	0	N/A	
426	Marri	406397	6463130	A	0	N/A	
427	Marri	406380	6463103	A	0	N/A	

428	Marri	406367	6463106	A	0	N/A	
429	Jarrah	406350	6463091	A	0	N/A	
430	Tuart	406359	6463076	A	0	N/A	
431	Tuart	406347	6463057	A	0	N/A	
432	Marri	406328	6463040	A	0	N/A	
433	Marri	406314	6463046	A	0	N/A	
434	Marri	406304	6463030	A	0	N/A	
435	Jarrah	406291	6463011	B	0	N/A	Chewed nuts
436	Marri	406283	6463005	A	0	N/A	
437	Jarrah	406273	6462998	A	0	N/A	
438	Marri	406255	6462994	A	0	N/A	
439	Marri	406252	6462992	A	0	N/A	
440	Marri	406164	6462925	B	0	N/A	Chewed nuts
441	Marri	406161	6462910	A	0	N/A	
442	Marri	406170	6463007	A	0	N/A	
443	Marri	406173	6463009	A	0	N/A	
444	Marri	406202	6463042	A	0	N/A	
445	Marri	406213	6463050	A	0	N/A	
446	Marri	406225	6463055	A	0	N/A	
447	Marri	406244	6463065	A	0	N/A	
448	Marri	406245	6463072	A	0	N/A	
449	Marri	406250	6463076	A	0	N/A	
450	Marri	406263	6463086	A	0	N/A	
451	Marri	406278	6463099	A	0	N/A	
452	Marri	406300	6463115	A	0	N/A	
453	Marri	406302	6463134	A	0	N/A	
454	Marri	406300	6463140	A	0	N/A	
455	Marri	406310	6463141	A	0	N/A	
456	Marri	406327	6463150	A	0	N/A	
457	Marri	406331	6463154	A	0	N/A	
458	Marri	406338	6463170	A	0	N/A	
459	Marri	406343	6463179	A	0	N/A	
460	Jarrah	406425	646326	A	0	N/A	
461	Marri	406450	6463369	A	0	N/A	
462	Marri	406459	6463380	A	0	N/A	
463	Marri	406463	6463385	A	0	N/A	
464	Marri	406472	6463395	A	0	N/A	
465	Marri	406470	6463409	A	0	N/A	2 branches > 500
466	Marri	406472	6463416	A	0	N/A	
467	Marri	406476	6463418	A	0	N/A	Chewed nuts
468	Marri	406482	6463421	A	0	N/A	
469	Jarrah	406481	6463431	A	0	N/A	3 branches > 500
470	Marri	406488	6463440	A	0	N/A	
471	Marri	406493	6463478	A	0	N/A	
472	Marri	406517	6463516	A	0	N/A	
473	Marri	406526	6463550	A	0	N/A	Chewed nuts
474	Marri	406526	6463550	A	0	N/A	Chewed nuts
475	Jarrah	406524	6463563	A	0	N/A	
476	Marri	406527	6463585	A	0	N/A	Chewed nuts
477	Marri	406553	6463700	A	0	N/A	
478	Marri	406566	6463788	A	0	N/A	Chewed nuts
479	Marri	406586	6463906	A	0	N/A	
480	Jarrah	406585	6463923	A	0	N/A	
481	Jarrah	406586	6463948	A	0	N/A	

482	Jarrah	406583	6463951	A	0	N/A	
483	Jarrah	406585	6463953	A	0	N/A	
484	Jarrah	406591	6463965	A	0	N/A	
485	Marri	406600	6463972	A	0	N/A	
486	Marri	406599	6463978	A	0	N/A	
487	Jarrah	406600	6463998	A	0	N/A	
488	Marri	406601	6464002	A	0	N/A	
489	Marri	406600	6464010	A	0	N/A	
490	Marri	406603	6464043	A	0	N/A	
491	Marri	406608	6464048	A	0	N/A	
492	Marri	406597	6464076	A	0	N/A	
493	Jarrah	406608	6464093	A	0	N/A	
494	Marri	406608	6464093	A	0	N/A	
495	Marri	406609	6464104	A	0	N/A	
496	Marri	406608	6464109	A	0	N/A	
497	Wandoo	406598	6464114	A	0	N/A	
498	Wandoo	406598	6464116	A	0	N/A	
499	Marri	406611	6464192	A	0	N/A	
500	Marri	406611	6464209	A	0	N/A	
501	Marri	406614	6464253	A	0	N/A	
502	Marri	406621	6464259	A	0	N/A	
503	Marri	406628	6464271	A	0	N/A	
504	Marri	406617	6464298	A	0	N/A	
505	Jarrah	406609	6464459	A	0	N/A	
506	Marri	406628	6464455	A	0	N/A	Chewed
507	Marri	406636	6464463	A	0	N/A	
508	Marri	406637	6464473	A	0	N/A	
509	Marri	406641	6464449	A	0	N/A	Chewed nuts
510	Marri	406653	6464371	A	0	N/A	
511	Marri	406658	6464327	A	0	N/A	
512	Jarrah	406662	6464326	A	0	N/A	
513	Marri	406673	6464341	A	0	N/A	
514	Marri	406676	6464370	A	0	N/A	
515	Marri	406687	6464410	A	0	N/A	
516	Marri	406686	6464421	A	0	N/A	Chewed nuts
517	Marri	406703	6464466	A	0	N/A	
518	Marri	406703	6464466	A	0	N/A	
519	Tuart	407232	6465835	B	0	N/A	
520	Tuart	407236	6465790	B	0	N/A	
521	Wandoo	407261	6465721	A	0	N/A	
522	Jarrah	407255	6465684	B	0	N/A	
523	Marri	407259	6465669	B	0	N/A	
524	Wandoo	407236	6465660	A	0	N/A	
525	Tuart	407300	6465407	B	0	N/A	4 branches > 500
526	Tuart	407416	6465111	A	0	N/A	
527	Marri	407390	6465200	A	0	N/A	
528	Tuart	407373	6465231	A	0	N/A	
529	Tuart	407377	6465238	A	0	N/A	
530	Tuart	407385	6465254	A	0	N/A	
531	Tuart	407365	6465287	A	0	N/A	
532	Tuart	407345	6465300	A	0	N/A	
533	Tuart	407327	6465304	A	0	N/A	
534	Marri	407251	6465413	A	0	N/A	
535	Tuart	407179	6465571	B	0	N/A	

536	Marri	407413	6465080	B	0	N/A	Chewed nuts
537	Marri	407408	6465086	A	0	N/A	Chewed nuts
538	Marri	407396	6465106	A	0	N/A	Chewed nuts
539	Marri	407385	6465118	A	0	N/A	Chewed nuts
540	Jarrah	407135	6467215	A	0	N/A	
541	Marri	407155	6465755	A	0	N/A	
542	Marri	406916	6465759	A	0	N/A	
543	Marri	406919	6465756	A	0	N/A	
544	Marri	406926	6465753	A	0	N/A	
545	Marri	406935	6465749	A	0	N/A	
546	Jarrah	406881	6465782	A	0	N/A	
547	Jarrah	406821	6465777	A	0	N/A	

Appendix 4

Hollow Photo

Jarrah 28

Plate 12: Hollow < 100 mm

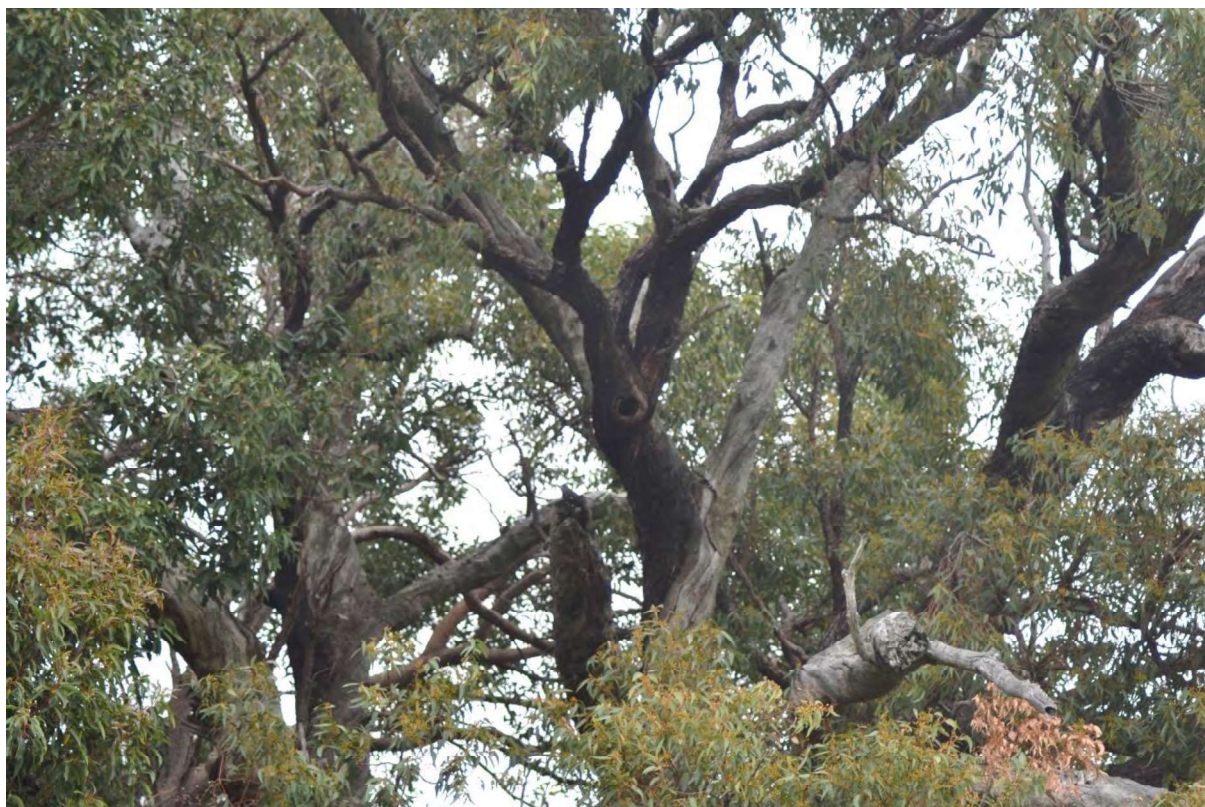
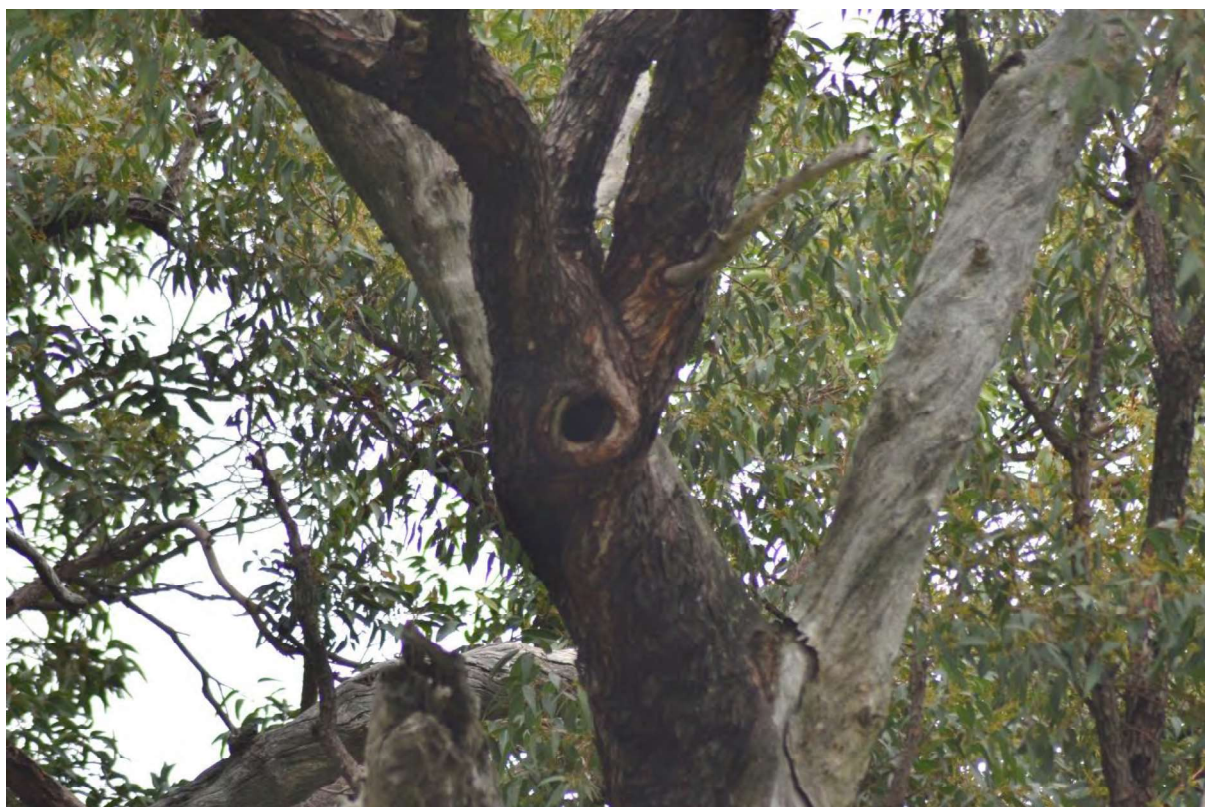


Plate 13: Hollow < 100 mm



Jarrah 116

Plate 6: Hollow < 100 mm



Plate 7: Hollow < 100 mm



Jarraah 116

Plate 8: Hollow > 100 mm



Plate 9: Hollow > 100 mm



Jarraah 398

Plate 14: Hollow < 100 mm



Plate 15: Hollow < 100 mm



Jarrah 420

Plate 10: Hollow < 100 mm



Plate 11: Hollow < 100 mm



File 2:

Carnaby's cockatoo_new FINAL.pdf was uploaded



EPA Advice: Carnaby's Cockatoo in Environmental Impact Assessment in the Perth and Peel Region

In accordance with section 16(j) of the
Environmental Protection Act 1986



Environmental Protection Authority

May 2019

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Environmental Protection Authority, 2019, *Carnaby's Cockatoo in Environmental Impact Assessment in the Perth and Peel Region*, EPA, Western Australia.

The content of this document is the same as *EPA Technical Report: Carnaby's Cockatoo in Environmental Impact Assessment in the Perth and Peel Region*. The cover and title have changed to be consistent with the EPA's Policy Framework.

All images of cockatoos are courtesy of the WA Museum.

Summary

The Perth and Peel regions are experiencing rapid growth and the population is forecast to reach 3.5 million by 2050. This increasing population will put greater pressure on our environment for land and groundwater resources. The Environmental Protection Authority (EPA) is concerned about the cumulative impacts of a growing city, against a backdrop of historical clearing, on Carnaby's cockatoo.

Carnaby's cockatoo is a seasonal visitor to the Swan Coastal Plain, which provides important foraging and roosting habitat during the non-breeding season. It is often encountered during environmental impact assessment (EIA) where its habitat intersects with land proposed for clearing and development. The species and its habitat are threatened by land clearing, invasive species, disease and fire, and increasing proximity to people, impacts potentially exacerbated by climate change.

The species is reliant on the maintenance of resources over multiple bioregions, which adds an extra complexity to its conservation. To address this, mitigation must be applied across the species range. Mitigation measures focused on:

- protection and retention of habitat, including important breeding sites and associated foraging habitat
- management, including habitat restoration and rehabilitation
- reducing adult mortality and increasing breeding rates
- research to better inform environmental impact assessment

will lead to better conservation outcomes for Carnaby's cockatoo, provide more certainty for regulators and industry, and enable more timely assessment.

Scope

This report considers the issues affecting Carnaby's cockatoo *Calyptorhynchus [Zanda] latirostris*, focusing on the Perth and Peel portions of the Swan Coastal Plain region, from Yanchep in the north to Preston Beach in the south (referred to as the Perth-Peel region) (Figure 1), and acknowledging breeding areas in the northern Avon-Wheatbelt and Geraldton Sandplains bioregions, as appropriate (Figure 2).

This report outlines the known threats to Carnaby's cockatoo in the Perth-Peel region, evaluates the risks to the population and suggests priorities for research to inform environmental assessment, management and monitoring.

This report is intended to inform EIA under Part IV of the *Environmental Protection Act 1986* (EP Act). However, the information included in this report is equally relevant to other decision makers, such as those assessing native vegetation clearing permits under Part V of the EP Act.



Figure 1: The Perth and Peel portions of the Swan Coastal Plain, showing the location of the original extent of the Gnangara-Pinjar pine plantation (dark green) and the approximate urban extent (grey). Data sources: IBRA v7 Region 2012, Department of Environment and Energy; Urban boundary, Department of Planning; Gnangara-Pinjar Pine Plantation, Forest Products Commission

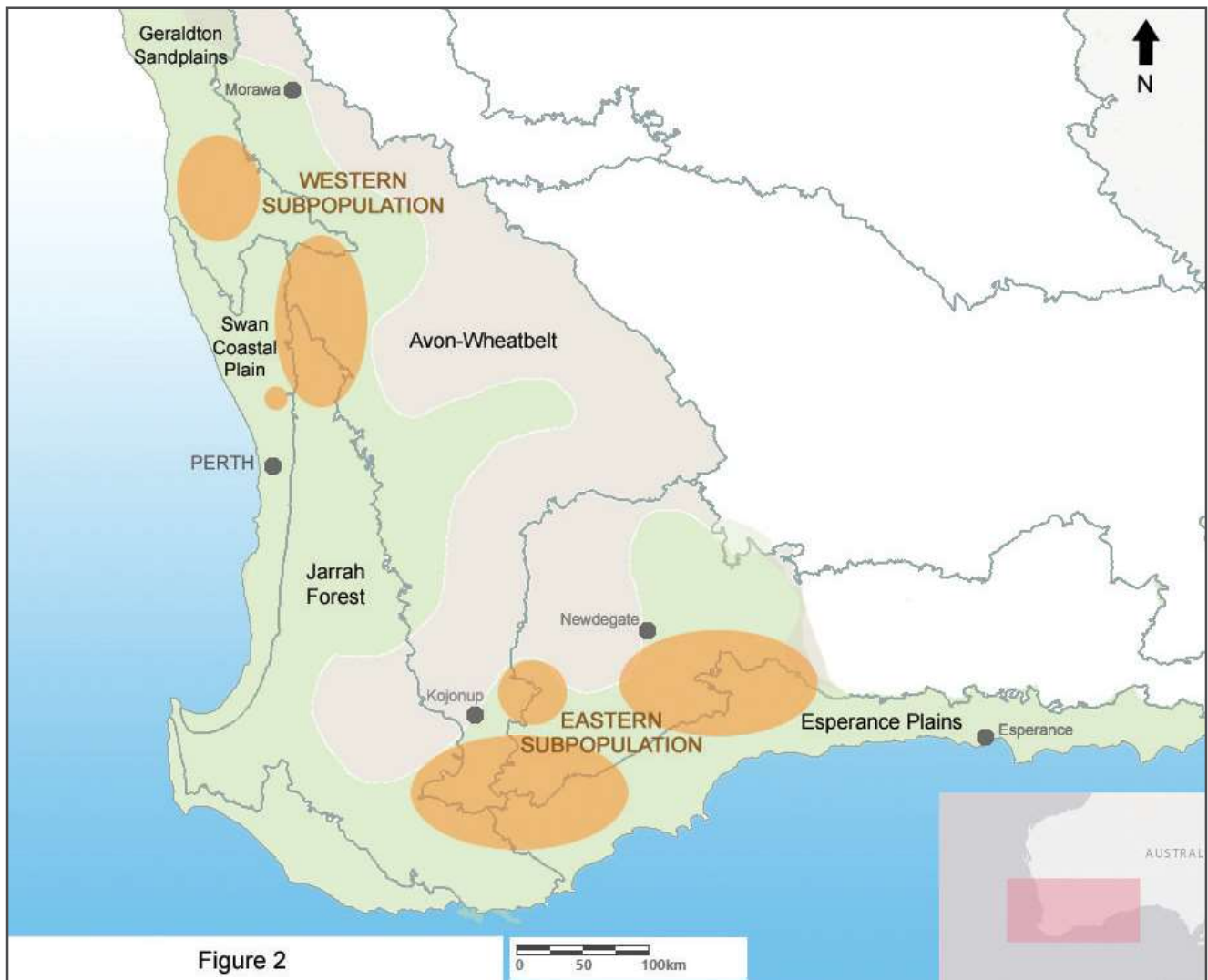


Figure 2: The estimated distribution of Carnaby's cockatoo showing the western and eastern subpopulations, with the former distribution (pre-1987) shaded in grey. Approximate breeding zones are indicated in orange. Indicative distribution is based on Saunders and Ingram, 1987, and contemporary records, as extracted from NatureMap (Birdlife Australia Atlas dataset) and the Atlas of Living Australia, from 2000 to 2018. Data sources: IBRA v7 Region 2012, Department of Environment and Energy

Background

Carnaby's cockatoo is endemic to the south-west of Western Australia (WA). It is the predominant black cockatoo species on the Swan Coastal Plain. The species is an iconic and conspicuous bird, and its conservation attracts a high level of public interest.

General information on the ecology and biology of Carnaby's cockatoo is widely available in the literature, including the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) *Carnaby's Cockatoo Species Profile and Threats Database* (Department of Environment and Energy (DEE), 2016a). Key outcomes of existing research are presented in Appendix 1.

Status

Carnaby's cockatoo was once considered vermin because of the damage it caused to commercial orchards and pine plantations (Perry, 1948). However, in 1990 the species was listed by the State, recognising the need for their protection, and federally in 1998. Carnaby's cockatoo is currently listed as Endangered under the *Western Australian Biodiversity Conservation Act 2016* (BC Act) and Endangered under the Commonwealth EPBC Act.

In 2012, the WA Threatened Species Scientific Committee reviewed and recommended retention of the listing of Carnaby's cockatoo based on available data and the recommendation of the 2010 Action Plan for Australian Birds (Garnett et al., 2011), which stated the reasons for listing as “*rapid decline >50% in last three generations (58 years) likely to continue, based on sample counts, areas of occupancy and quality of habitat, nest robbing, disease and competition.*”

Distribution

Carnaby's cockatoo occurs widely throughout south-western WA, from the lower Murchison in the north and south to Esperance, and as far east as Forrestania (Storr and Johnstone, 1998).

Clearing in the southern Wheatbelt has resulted in two genetically distinct subpopulations: a western and an eastern (White et al., 2014) (Figure 2). The focus of this report is the western subpopulation, which breeds in the Avon-Wheatbelt, Geraldton Sandplains and Jarrah Forest IBRA bioregions, as far as Morawa in the north, and migrates to the Swan Coastal Plain during the non-breeding season, between January and June. The eastern subpopulation breeds in the southern Wheatbelt region, from Kojonup to Newdegate, and migrates to the south-east coast to the Esperance Plain.

It has been estimated that Carnaby's cockatoo has disappeared from more than one-third of its historical breeding range because of extensive habitat loss in the Avon-Wheatbelt region (Saunders, 1990). Subsequently, the breeding distribution of Carnaby's cockatoo has shifted westward through the Jarrah Forest region, where it now also breeds (Johnstone and Kirkby, 2008a; Storr and Johnstone, 1998).

Population estimates

While no total population census of Carnaby's cockatoo is available, estimates have been made based on long-term monitoring and surveys in the Geraldton Sandplain and Avon-Wheatbelt regions, and existing survey and census data from sites scattered throughout the species range (Garnett et al., 2011).

In 1985, the total population of Carnaby's cockatoo was estimated to be a maximum of 60 000 birds (Saunders et al., 1985; Garnett and Crowley, 2000). Recent population estimates consider the total population to be around 40 000 birds (Department of Parks and Wildlife (DPAW), 2013).

The Perth-Peel region represents just 3.7% of the total mapped distribution of the species, but is estimated to account for about 25% of the greater population (DPAW, 2013). The population in the Perth-Peel region is estimated at about 13 000 birds (Peck et al., 2018).

The numbers of Carnaby's cockatoo utilising the Perth-Peel region vary from year-to-year. The Great Cocky Count – a citizen science project undertaking an annual count on a single day in April each year from 2010 to 2018 - has recorded numbers of roosting cockatoos ranging from 3 912 to 12 465 birds in the Swan Coastal Plain portion of the Greater Perth-Peel Region (Peck et al., 2018). Based on counts between 2010 and 2015, the population of Carnaby's cockatoo on the Perth-Peel Coastal Plain was estimated to be declining by an average of 15% per annum (Byrne et al., 2015). Over the last three years, total counts in the region have increased to 10 919 (2016), 10 248 (2017) and 12 465 (2018), and the trend since 2015 has increased slightly, with the rate of decline revised to 5% per year (Peck et al., 2018).

In 2017, the CSIRO undertook a reanalysis of the 2010 to 2017 Great Cocky Count data, using different analytical assumptions to Peck et al., (2017), and concluded that the Perth-Peel subpopulation of Carnaby's cockatoos was slightly increasing or was at least stable (Cayley et al., 2018). Estimates and trends of population size based on the Great Cocky Count are expected to become more accurate as counts continue (Cayley et al., 2018)

Changes in the counts may be attributable to change over time in survey effort. However, it is not understood how impacts outside of the Perth-Peel region influence the numbers of cockatoos using the region during the non-breeding season. For example, whether an increase in the number of cockatoos in the Perth-Peel region is due to the documented westward shift in the population (Johnstone and Kirkby, 2008a; Storr and Johnstone, 1998), due to habitat loss.

State of knowledge

Over the last 50 years, considerable research has been undertaken on Carnaby's cockatoo by Commonwealth and State government agencies (including the CSIRO, Department of Biodiversity, Conservation and Attractions (DBCA), the WA Museum and Perth Zoo), universities and non-government organisations (including BirdLife Australia).

Since 2000, over 40 research articles and papers have been published on Carnaby's cockatoo. This research has focused on habitat use, foraging behaviour, roost occupancy and movement on the Swan Coastal Plain; and long-term research in the Avon-Wheatbelt and Geraldton Sandplain regions on the breeding ecology, longevity, distribution and migration of the species. In addition, research has been undertaken on developing techniques to increase survival and breeding rates, including the design and installation of artificial nesting hollows.

Based on this literature, there is a sound understanding of distribution, breeding ecology, feeding ecology including nutritional value of foods, habitat requirements, and threats and threatening processes; there is some information on migration patterns (see Appendix 1). This research underpins our knowledge of the species throughout its range.

Despite the large amount of research conducted and available information, significant knowledge gaps remain in relation to the ecology of the species and likely impacts of the threatening processes (Table 1).

Table 1: Key knowledge gaps for Carnaby's cockatoo in the Perth-Peel region and research to inform these gaps.

Question	References	Current research
Knowledge gaps that may be addressed in the short-term		
How many Carnaby's cockatoos directly rely on plantation pine habitat?	Cockerill et al. 2013	Ongoing annual census of cockatoos using pine habitat collected by Birdlife Australia Great Cocky Count.
What is the breeding origin of those birds that use the Gnangara-Pinjar pine plantations?	Cockerill et al. 2013	Pine habitat use and movement of cockatoos in the northern Swan Coastal Plain is being investigated by Murdoch University, sponsored by Forest Products Commission (2018). Further investigation required to determine breeding origins of flocks.
How will Carnaby's cockatoo respond to clearing of pine in the Gnangara-Pinjar area? What impacts have occurred from clearing of pine in the Gnangara-Pinjar plantation?	The Department of Premier & Cabinet (DPC) 2015a	The predicted impacts of pine clearing on carrying capacity and estimated minimum abundance were modelled through population viability analysis (Williams et al. 2017), but there is no known on-ground research to verify the assumptions of the model.
What proportion of protected and offset habitat is actually used by Carnaby's cockatoos? How adequate have offset actions been to date?	Richards 2016; Thorn et al. 2018	No current known research
What proportion of habitat is protected or at risk?	Identified in this review	Cumulative risk in Perth-Peel examined through SAPPR (DPC 2015a) and independent review (Whitehead et al. 2017). Proportion of habitat protected addressed in this review.
What is the cause and significance of Carnaby's Hindlimb Paralysis Syndrome?	Vaughan-Higgins et al. 2018	Investigations commenced by Perth Zoo (DBCA) and Murdoch University.

Question	References	Current research
Knowledge gaps that may be addressed in the longer term		
What is the carrying capacity of the remaining foraging habitat on the Swan Coastal Plain? Can Banksia woodland on the northern Swan Coastal Plain continue to support Carnaby's cockatoo once plantation pine habitat is harvested?	Finn et al. 2009; Stock et al. 2013; Valentine et al. 2014	Carrying capacity of foraging habitat (pine and mixed Banksia woodland) in Perth-Peel region estimated through a population viability analysis (Williams et al. 2017)
What factors outside of the Perth-Peel region (food resources, past and future land-use changes, nest hollow abundance and loss) are affecting the population?	Cockerill et al. 2013 DPC 2015a Williams et al. 2017	Ongoing research in breeding areas (Murdoch University, CSIRO, DBCA, WA Museum and Birdlife Australia) and analysis and publication of long-term research in these areas may help to address this knowledge gap.
What factors influence the number of birds using the Perth-Peel region, and are numbers increasing? If so, why?	Identified in this review	No current known research. Analysis of existing long-term data may help to address this knowledge gap.
How does the availability of non-breeding foraging habitat in the Perth-Peel region influence breeding success and juvenile survival in the Avon-Wheatbelt and Geraldton Sandplains regions?	Identified in this review	No current known research
What is the total population size? Is it possible to derive reliable estimates of sub-population size, and if so what are they?	Cockerill et al. 2013; DPC 2015a; Williams et al. 2017	Birdlife Australia CockyWatch program launched in 2018 and extension of the Great Cocky Count into rural areas aim to help to address this knowledge gap.
Knowledge gaps that are unlikely to be addressed in the foreseeable future		
What are the predicted impacts of climate change on population size and health, and habitat?	DPC 2015a	No current known research
What minimum population size is required to maintain viability of the species?	DPC 2015a	No current known research

Key threats and impacts

The threats and impacts to Carnaby's cockatoo are well known (Table 2). The species is primarily threatened by the loss and fragmentation of breeding and foraging habitat as a result of vegetation clearing. This is particularly so on the Swan Coastal Plain and Avon-Wheatbelt regions where extensive historical clearing has occurred.

Table 2: Key threats and contributing actions impacting Carnaby's cockatoo.

Key Threats	Contributing Actions
<ul style="list-style-type: none"> • Habitat loss (breeding, foraging, roosting) • Habitat fragmentation and degradation • Loss of breeding hollows and nest availability • Mortality of individuals 	<ul style="list-style-type: none"> • Land clearing for: <ul style="list-style-type: none"> - Agriculture - Urban development - Infrastructure - Forestry - Mining (e.g. Basic Raw Materials) • Historical clearing • Plantation pine harvesting • Fire • Drought • Declining vegetation health including Phytophthora dieback • Aging hollows (hollow degradation) and destruction • Aging population, reduced breeding rates and success • Nest competition (feral bees and native invasive species) • Roost competition • Vehicle strike • Illegal shooting, poisoning and poaching • Disease (e.g. Beak and Feather Disease (BFDV), Avian Polymovirus (APV), Carnaby's Hindlimb Paralysis Syndrome (CHiPs)) • Climate change and stochastic natural events

When moving between roosting, water and food resources, Carnaby's cockatoo flocks follow vegetation corridors and actively avoid cleared and open areas, including dense urban areas. Habitat fragmentation increases the distances cockatoos need to travel between resources. Proximity of foraging habitat and water has been demonstrated to be critical to support roosting and breeding sites (Groom, 2015; Le Roux, 2017; Saunders, 1990). Foraging habitat within 7 km of a breeding site is important to adequately support breeding cockatoos (Saunders, 1982; Saunders, 1990). In the Perth-Peel region, individual night roosts need food and water within 6km, with overlapping foraging ranges within 12 km, to support roosting sites and maintain habitat connectivity and movement across the landscape (Le Roux, 2017; Shah, 2006).

Carnaby's cockatoo has been significantly impacted by historical clearing of its habitat for agriculture throughout most of its breeding range during the last century. Broad-scale clearing of native vegetation has resulted in fragmentation of breeding and foraging habitat; and loss of breeding hollows (Saunders and Ingram, 1987); changes in the species distribution (Johnstone and Kirkby 2008a) and genetic partitioning (White et al., 2014); and degradation of vegetation from fire, salinity, groundwater drawdown and grazing.

Increased foraging distances have been linked to poor chick health and lower breeding success rates, leading to abandonment of breeding areas because of a lack of food availability (Saunders, 1982; Saunders, 1990; Saunders et al., 1985; Saunders and Ingram, 1987). For example, Saunders observed that the chicks of adult birds that had to travel greater distances, up to 12 km, to find food, had lower growth rates and fledging success, compared to the chicks of adult birds that had foraging habitat available within 7 km of a nest site (Saunders, 1980; Saunders, 1982). These impacts have had long-term effects that are likely to be contributing to a contemporary downwards population trend.

In the Perth-Peel region, the key threatening process to Carnaby's cockatoo is the clearing of foraging habitat, both native and pine. Actions that contribute to the loss of habitat in the region include urban and infrastructure development, plantation forestry and basic raw material extraction.

Carnaby's cockatoo's most important natural food resource on the Swan Coastal Plain is *Banksia* species (predominantly *B. attenuata*, *B. menziesii* and *B. sessilis*), and it also feeds frequently on *Corymbia calophylla* (Marri) (Groom et al., 2014). *Banksia* woodland in the Perth metropolitan area has been reduced to one third of its original extent since European settlement and the remaining portions are fragmented into smaller patches, with the majority (82%) of remnant patches under 10 ha size (DEE, 2016b). The significant clearing and fragmentation of *Banksia* woodland was recognised by the Commonwealth in 2016 when it listed the *Banksia Woodland on the Swan Coastal Plain* as an Endangered Threatened Ecological Community under the EPBC Act (DEE, 2016b). The importance of *Banksia* woodland habitat for Carnaby's cockatoo has been demonstrated through foraging studies, which determined that Carnaby's cockatoo exploit all areas of available *Banksia* food resources on the Swan Coastal Plain (Johnson et al., 2016).

Climate change is likely to exacerbate impacts to Carnaby's cockatoo. The drying climate trend has caused a reduction in the availability of groundwater resources for environmental, social and economic requirements. Reduced rainfall affects the health and seed productivity of *Banksia* species and increases tree death, leading to a decrease in food availability (DEE, 2016b). An increase in the frequency of stochastic fire and extreme weather events, such as heat waves and severe storms, because of climate change, is likely to result in habitat loss and increase the incidents of mass deaths of individual cockatoos due to exposure (Saunders et al., 2011).

The reduction in habitat, together with fragmentation, has resulted in an increase in the numbers of Carnaby's cockatoo using habitats that intersect with urban areas. This increases the incidents of mortality to individual cockatoos, due to vehicle collision where they fly to the ground to drink from water pools, feed on dropped seeds and nuts on roadsides, or when flying across roads between areas of foraging habitat. The Perth Zoo Veterinary Department receives hundreds of black cockatoos each year with 85 Carnaby's cockatoo admitted for the 2017-18 financial year, of which 21.2% were due to vehicle collision (Data supplied DBCA, 29 August 2018). This figure is likely to be an under-representation of the number that are hit by vehicles because of unreported deaths or injuries.

The urban landscape may also support the species through provision of artificial water sources and roosting resources via planted street trees and residential gardens. However, these resources may be temporary and are not guaranteed.

A relatively recent issue, Carnaby's Hindlimb Paralysis Syndrome (CHiPs mortality), resulting in death or paralysis of affected cockatoos, is thought to be a result of contact with agricultural pesticides or similar products in breeding areas (Vaughan-Higgins et al., 2018). The agent responsible and source of the contamination has not yet been identified and further investigation is required to fully understand the cause and management of this threat.

Plantation pines

Carnaby's cockatoo has adapted to feeding on pines (mostly *Pinus pinaster*), established for forestry throughout the south-west last century, which now form a major part of their diet (Groom et al., 2014; Shah, 2006; Valentine and Stock, 2008).

The introduction of pine plantations to the Perth and Peel region may have influenced the number and distribution of Carnaby's cockatoo (Perry, 1948). This new food resource is likely to have partially counterbalanced the loss of native Banksia woodland foraging habitat in the region, to an unknown degree.

From the early 1900s, Carnaby's cockatoo flocks as large as 2 000 were recorded from the Yanchep area, and were observed feeding in pine plantations (Perry, 1948). Contemporary counts of flocks of over 6 000 Carnaby's cockatoos have been recorded feeding and roosting in the pine plantations in the Gnangara, Wanneroo, Pinjar and Yanchep areas (Finn et al., 2009; Peck et al., 2018; Stock et al., 2013; Storr and Johnstone, 1998) in plantations collectively referred to here as the Gnangara-Pinjar pine plantation.

The original Gnangara-Pinjar pine plantation was 23 000 ha extending over 50 km from Gnangara through to Pinjar, near Yanchep, in the northern Swan Coastal Plain. The plantation has been commercially harvested since 2002 at an average rate of 1 500 ha/year (DPC, 2015b), to reduce pressure on the Gnangara groundwater allocation area and to manage the environmental values, social and economic water requirements for Perth in a drying climate.

Studies of Carnaby's cockatoo foraging behaviour in the Gnangara-Pinjar plantation indicate that all of the available pine is exploited for food, with flocks timing their arrival in the area to coincide with the pine seed maturation from January to June, with abundance peaking in May (Stock et al., 2013). Mature pines have become an important food source as they produce a larger number of seeds over a smaller area and provide a higher calorific content compared to Banksia seeds (Appendix B, Williams et al., 2017). In addition, pine trees provide valuable roosting habitat, which protects flocks during the day from high summer temperatures (Stock et al., 2013).

Even though flocks of Carnaby's cockatoo are regularly counted in the plantation as part of the Great Cocky Count, there is limited understanding of their roosting and foraging behaviour in response to pine clearing activity. For example, once the pines have been removed, it is not known whether Carnaby's cockatoo will increase their reliance on native vegetation in the Perth-Peel region; disperse to forage on alternative habitat outside of the region; or whether mortality rates and breeding success will be affected.

Anecdotal observations, from the DBCA, suggest that Carnaby's cockatoo feed on regenerated pine wildings within the Gnangara-Pinjar plantation, and begin feeding on wildings as soon as the trees are mature enough to produce cones, at about seven to ten years old. However, young pine wildings will not produce the same volume or density of food as mature trees, and cockatoos prefer to forage on older pine 18 to 80 years old (Stock et al., 2013). No quantitative study has been undertaken to document foraging on the pine wildings, and as a result, predicting the significance of the impact of pine clearing on Carnaby's cockatoo is difficult.

There will be a time lag between the harvesting of mature pine trees in the Gnangara-Pinjar plantation and maturation of pine wildings. To reduce the impact of pine clearing, about 800 to 1 500 ha of regenerated pine wildings per year have been retained since 2002. It is proposed that these pine wildings could be actively managed to maximise future foraging options for Carnaby's cockatoo. An additional 2 000 ha of commercial plantation pine, planted since 2012, will provide some foraging habitat until 2029, when they will be harvested.

A population viability analysis (PVA) modelled the relative impacts of clearing the Gngangara-Pinjar plantation on the Perth-Peel subpopulation of Carnaby's cockatoo (Williams et al., 2017). Three scenarios were modelled based on different land use and mitigation options from 2001 to 2050:

- Cessation – immediately (as of 2015) stop further clearing of pine.
- Mitigation – harvesting of plantations to maximise groundwater recharge, but retention of large areas of pine wildings at low densities (40-50 stems/ha) as food for Carnaby's cockatoo.
- Maximum Water – harvesting existing plantations on the Gngangara water mound to maximise groundwater recharge.

Later versions of the PVA (Mitigation 3) tested the effect of measures to increase vital rates (reduced mortality and increased breeding rates) (DBCA, 2017), and the additional mitigation measures recommended in the *Strategic Assessment of the Perth-Peel Region* (SAPPR) (Green Growth Plan) (DPC, 2015a). The revised Mitigation 3 scenario included replacement of pine plantation with about 18 000 ha of pine wildings, retention of 150 ha of existing pine trees (Dick Perry reserve), about 10 000 ha of native Banksia woodland regeneration, avoidance of clearing foraging habitat and roosting sites, creation of conservation reserves, urban forest planting on the Swan Coastal Plain, with additional habitat management in the broader Avon-Wheatbelt breeding range (DPC, 2015a).

Based on the estimated carrying capacity of each scenario, the PVA model projected the likely estimated minimum abundance and mean population size for each of the scenarios, up to 2050 (Williams et al., 2017) (Table 3).

Table 3: Modelled scenarios for the Population Viability Analysis (PVA) showing estimated carrying capacity, minimum abundance and mean population size, based on an initial population size of 8,000 birds (2000).

PVA Modelled Scenarios	Carrying Capacity	Est. Minimum Abundance	Mean Population Size	% Decline in Mean Population Size by 2050
Cessation ¹	9,310	4,278	5,246	34%
Mitigation 2 ¹	7,118	3,640	4,344	46%
Mitigation 3 ²	7,587	3,603	4,344	46%
Mitigation 3 with an increase of +1.19% in all vital rates ²	7,587	4,008	5,220	35%
Maximum Water ¹	5,624	3,012	3,550	56%

The PVA projections identified that clearing of the Gngangara-Pinjar plantation may result in a sudden decline in the abundance and population size of Carnaby's cockatoo in the Perth-Peel region because of a decrease in the available foraging habitat and potential carrying capacity. However, the additional measures in Mitigation 3 have the potential to reduce the severity of decline and enable the population to stabilise at a higher level following decline. The decline may further be reduced through increasing the vital rates by improved breeding success, in areas outside of the Perth-Peel region, and reducing adult mortality. The PVA also indicated that the potential for a sharp population declines because of stochastic bottlenecks in food resources could be averted if the pine clearing rates were reduced each year, spreading the rate of clearing over a longer timeframe and allowing replacement habitat to mature.

¹ As extracted from Williams et al 2017.

² DBCA 2017.

The State Government has committed [11 April 2018] to temporarily slow clearing of the remaining 6 300 ha of mature pines in the Gnangara-Pinjar plantation, from 2 200 ha to 500 ha per year and source pine from alternative locations, until July 2019 when clearing will recommence (Government of Western Australia, 2018a). This delayed clearing is intended to temporarily postpone the predicted population decline until 2023, and provides the opportunity to implement mitigation strategies to help stabilise the population.

Cumulative impacts

Currently, environmental impacts to Carnaby's cockatoo are assessed on a project-by-project basis at the local scale and there is limited knowledge of the cumulative impacts from multiple proposals in the Perth-Peel region.

Population decline and impacts resulting from historical clearing over the last 70 years, combined with ongoing threats of further habitat clearing, disease, mortality and climate change, pose a cumulative risk to Carnaby's cockatoo. The species' migration between the Swan Coastal Plain and breeding areas means the cumulative impacts occur over a temporal and spatial scale, increasing the difficulty for management.

The SAPPR considered a strategic and co-ordinated response to address cumulative impacts to Carnaby's cockatoo in the Perth-Peel region through planning strategies to avoid impacts to habitat, and a strategic approach to address classes of action (i.e. proposed development) that could impact the species. This included the impacts of pine harvesting and the clearing of native vegetation for urban and industrial development, basic raw materials extraction and infrastructure development in the region (DPC, 2015a; DPC, 2015c).

Cumulative impact of the actions included in the SAPPR anticipated there would be about 12% loss of native vegetation foraging habitat and up to 89% of pine foraging habitat on the Swan Coastal Plain (DPC, 2015a). Pine plantations accounted for about 59% of the total foraging habitat intersected by the classes of action. As mitigation, the SAPPR included delivery of a large-scale conservation package across the Perth-Peel and Avon-Wheatbelt region.

In April 2018, the State Government suspended work on SAPPR pending a critical review, which is anticipated to be released in early 2019.



Other black cockatoos of the south-west

Baudin's cockatoo *Calyptorhynchus baudinii*

ENDANGERED (EBPC Act, 1999; BC Act 2016)

Baudin's cockatoo is similar in appearance and behaviour to Carnaby's cockatoo, but differs having a longer thinner bill adapted for feeding on Marri nuts, its primary food source. It is largely restricted to the wet forest regions of the lower south-west region of WA and migrates from south to north in the summer. The species has a more restricted distribution and smaller total population size than Carnaby's, estimated at 15 000 birds.

Baudin's cockatoo has declined greatly in the last 50 years (Johnstone and Kirkby, 2008b), with counts at traditional roosts declining by over 90% since 2009 (Johnstone and Kirkby, 2016). The severe population decline has been recognised by the recent upgrading of its conservation status from Vulnerable to Endangered (Threatened Species Scientific Committee, 2018). Baudin's cockatoo has been demonstrated to be less adaptable than Carnaby's and has a lower fecundity, meaning population growth is slower. It is threatened by loss of nesting habitat as a result of forestry and clearing, competition with bees and other birds for nest hollows, vehicle strikes and illegal shooting by orchardists.

Due to its preferred habitat of denser vegetation, which is located away from populated areas, it has a lower public profile and is more difficult to study than Carnaby's resulting in fewer studies being undertaken on Baudin's. As the species is not easily distinguishable from Carnaby's it is not recorded separately in the Great Cocky Count, as it is likely to be misreported. Baudin's shares a Recovery Plan with the Forest red-tailed black cockatoo, but this plan has not been updated or reviewed since 2008 (DEC, 2008).

Forest red-tailed black cockatoo *Calyptorhynchus banksii naso*

VULNERABLE (EPBC Act, 1999; BC Act 2016)

The Forest red-tailed black cockatoo is mostly sedentary and has a traditional range within the Jarrah Forest and Warren bioregions of the south-west, where it breeds. In its natural range, the Forest red-tailed black cockatoo feeds predominately on Jarrah and Marri.

Since 2005, the species has rapidly changed its foraging behaviour to exploit the fruit of exotic Cape Lilac planted throughout the Perth metropolitan area, and the species has expanded its distribution onto the Swan Coastal Plain (Johnstone et al., 2017). Over the last six years, the Great Cocky Count has recorded a significant increase in the number of Forest red-tailed black cockatoos at sites in the Perth-Peel portion of the Swan Coastal Plain, increasing from 601 birds in 2014 to 1,934 birds in 2017 and 4,037 in 2018 (Peck et al., 2018). In addition, the species has been recorded at 23 roost sites where Carnaby's cockatoo has previously been recorded. Despite increases in the number of Forest red-tailed black cockatoos recorded in the Perth-Peel region, there has been a significant decline in breeding success at monitored sites in the northern Jarrah Forest, suggesting that the increase in numbers is not due to breeding success, but that impacts in its natural range are influencing the change in distribution of the species (Johnstone et al., 2017).

The species is threatened by loss of nesting habitat from forestry and clearing in the Jarrah Forest, and changes in food availability caused by a drying climate. As a result, the Forest red-tailed black cockatoo may be becoming more reliant on the Perth-Peel region for foraging and nesting habitat. In addition, like Carnaby's, its incursion into urban areas has increased the incidents of mortality from vehicle strikes. Further information is required to determine the drivers for its change in distribution, the influence of food resources on breeding success, including Cape Lilac, and the significance of the Perth-Peel region to the species and what impact this change will have on Carnaby's cockatoo.

Environmental impact assessment

Impacts to Carnaby's cockatoo are a consideration in environmental impact assessment, at State level under Part IV and Part V of the EP Act and Commonwealth level under the EPBC Act, where proposals and schemes intersect habitat, both native and pine.

The Recovery Plan (DPaW, 2013) and EPBC Act *Referral guidelines for three threatened black cockatoo species* (DSEWPAC, 2012) outline those activities that may have an impact on Carnaby's cockatoo or its habitat. Guidance for proponents on determining the significance of an impact on Carnaby's cockatoo is outlined in the EPBC Act *Referral guidelines for three threatened black cockatoo species* (DSEWPAC, 2012).

As part of the environmental impact assessment process, impacts should first be avoided or minimised, with rehabilitation efforts applied before offsets are considered. Where the residual impacts are determined to be significant, proponents are required to offset the impact (Government of Western Australia, 2011; Government of Western Australia, 2014).

Between 2000 and 2018, the EPA has reported on 41 proposals in the south-west where Carnaby's cockatoo habitat was assessed. Ministerial Statement conditions were set on 13 of those proposals, nine of which included offsets. In addition, the Department of Water and Environmental Regulation (DWER) has applied offset conditions on 107 applications (2009 – 2018) under Part V (EP Act) for the clearing of native vegetation as habitat for Carnaby's cockatoo (Table 4).

Table 4: Offsets under the EP Act for approved clearing of areas supporting Carnaby's cockatoo habitat from 2009 to 2018¹, by IBRA (Interim Biogeographic Regionalisation for Australia) region.

IBRA Region	Approved Area Cleared (ha)	Number of proposals by process (EP Act 1986)		Offset Area (ha)	
		Part IV (EIA)	Part V	Rehabilitation	Land Acquisition
Swan Coastal Plain	1,800	6	56	370	10,626
Jarrah Forest	2,090	3	30	85	3,779
Avon-Wheatbelt	169	0	11	0	1,337
Geraldton Sandplain	1,717	1	4	0	3,942
Esperance Plain	24	0	2	0	273
Warren	10	0	2	5	14
Mallee	72	0	1	0	243
Total (Consolidated)*	5,806	9	107	420	19,148

Land acquisition is the option most frequently adopted as an offset for Carnaby's cockatoo (Table 4). Between 2009 and July 2018, about 1 800 ha of native vegetation supporting Carnaby's cockatoo habitat was approved to be cleared on the Swan Coastal Plain under the EP Act. To offset this, 10 262 ha of land has been (or will be) acquired and protected, and about 370 ha of habitat will be created, rehabilitated or revegetated to provide new foraging habitat (see Table 4). Overall, about 98% of the total offset area has been for habitat acquisition, with over \$5.5 million of offset funds held by the State Government to purchase the land (Government of Western Australia, 2018b).

¹ Data sourced from Government of Western Australia (2018b) Offsets Register [Accessed 27 July 2018].

* Totals are consolidated over all proposals that include Carnaby's Cockatoo habitat. Proposals may include one or more regions and may also include habitat values for other black cockatoo species (e.g. Jarrah Forest).

Proposals with the potential to impact Carnaby's cockatoo habitat are also referred under the Commonwealth EPBC Act. Between 2009 and 2017, 45 parcels of land covering 25 000 ha were purchased, for inclusion in conservation reserves managed by the DBCA, to protect Carnaby's cockatoo throughout its distribution, at a cost of \$44.7 million, mainly through offsets under the EPBC Act approvals (Office of the Auditor General, 2017).

This emphasis on land acquisition as an offset is consistent with the actions of the Recovery Plan (DEC, 2013) that emphasises the protection and management of existing habitat over habitat rehabilitation. Although the purchase of land for conservation increases the amount of protected habitat, it does not improve or increase the area of habitat available for cockatoos in the long-term. This point was made in the National Environmental Law Review, which stated that "a net loss of biodiversity will occur if offsets seek only to protect existing, high quality assets, rather than restoring degraded ecosystems and functions" (Briggs, 2013).

The decreasing availability of suitable land for offsets within the Perth-Peel region, because of the existing highly fragmented landscape, means that purchasing land as an offset is unlikely to be a sustainable long-term strategy, for any species (EPA, 2015). Greater emphasis on rehabilitation and restoration of degraded areas within close proximity of the impacted area would increase or improve the habitat available for Carnaby's cockatoo and enhance local environmental values, acknowledging that these actions will take a long time to provide outcomes.

The EPBC Act *Environmental Offset Policy* (Department of Sustainability, Environment, Water, Population and Communities (DSEWPAC), 2012) includes a provision allowing allocation of up to 10% of 'other compensatory measures' as an indirect offset, which may include research. Research as an offset is rarely applied under the EP Act because it can only be applied for proposals assessed under Part IV. However, the majority of offsets for Carnaby's cockatoo are generated through Part V (Table 4), where research is not an option for an offset.

The application of management and mitigation actions for significant impacts to Carnaby's cockatoo should be consistent with the EPBC Act *Referral Guidelines for Black Cockatoos* (DSEWPAC, 2012). Any offset applied should be relevant to the impact and provide equal value, consistent with the *WA Environmental Offsets Guidelines* (Government of Western Australia, 2014), preferably in the region of the impact. For example, removal of tree hollows, food trees or roost sites should be offset with protection or replacement of habitat that provides the same ecological role e.g. breeding, foraging or roosting habitat.



Research, management and protection

Recovery Plan

The objective of the Carnaby's Cockatoo Recovery Plan is: *"To stop further decline in the distribution and abundance of Carnaby's Cockatoo by protecting the birds throughout their life stages and enhancing habitat critical for survival throughout the breeding range, ensuring that the reproductive capacity of the species remains stable or increases"* (DPaW, 2013).

The six Recovery Plan actions are:

1. Protect and manage important habitat.
2. Undertake regular monitoring.
3. Conduct research to inform management.
4. Manage other impacts.
5. Engage with broader community.
6. Undertake information and communication activities.

The actions are addressed by major research programs, which are coordinated by a recovery team overseen by DBCA and consisting of experts and regulators from government (DBCA, WA Museum, CSIRO), non-government (Birdlife Australia, WWF) and academia, with additional contributions through university research, wildlife rescue and conservation. Maintaining a collaborative and coordinated effort between government and non-government participants is important to achieve the aims of the Recovery Plan. The actions outlined in the Recovery Plan are estimated to cost \$7.73 million over ten years.

The effectiveness of the Recovery Plan will be measured against a series of performance criteria, over ten years, ending 2023, and reviewed every five years. The performance criteria are summarised as: no decline in the species area of occupancy; the number of breeding pairs remains stable or increases (over three consecutive years); estimates of the number of adults and proportion of juveniles across the entirety of known roost sites remains stable or increases (over three consecutive years); and the extent of nesting, feeding and night roosting habitat are maintained throughout the species range.

The Recovery Plan is not yet approved under Part 6 of the *Biodiversity Conservation Act 2016* (BC Act, effective 1 January 2019). However, the EPA may have regard to the plan as guidance in considering proposals.

Management

Management can include short-term measures such as those for improving habitat values, and those that increase vital rates by improving breeding success and reducing mortality, and long-term measures that retain and increase habitat (Table 5).

Measures for improving habitat values for Carnaby's cockatoo include increased management and protection of existing habitat from threatening processes (fire, weeds, pests, and diseases), rehabilitation and restoration of degraded or cleared land, and enhancement of habitat, such as the use of artificial hollows.

Increasing the amount of habitat available for cockatoos is only achievable through rehabilitation and restoration of degraded habitat or cleared land (Saunders and Dawson, 2018).

The Recovery Plan acknowledges that "planting of species that support Carnaby's cockatoo is effective over the long-term and encouraged" (DPaW, 2013). While not yet demonstrated at scale, it is considered that rehabilitation for cockatoo foraging habitat is achievable (Brundrett et al., 2018). However, successful rehabilitation requires considerable effort in terms of time, resources and commitment.

For example, rehabilitation of Banksia woodland is estimated to cost between \$5 000 to over \$70 000 per hectare (Brundrett et al., 2016; Government of Western Australia, 2014; Government of Western Australia, 2009; PGV Environmental, 2014), depending on the methods used, scale, restoration targets and ongoing annual management.

Significant investment is required to achieve an increase in habitat in the long-term because of the time lag between planting and maturation of habitat species. Carnaby's cockatoo has been observed feeding on Banksia at rehabilitated mine sites in the Jarrah Forest within eight years (Lee et al., 2012). After fire, regenerated Banksia woodland may take over 15 years to provide substantial foraging habitat for cockatoos (Johnson et al., 2016; Valentine et al., 2014). Wheatbelt eucalypts may take from 100 to 200 years to produce hollows suitable for breeding (Rose, 1993), representing a significant time lag between loss and replacement of habitat.

Restoration of degraded habitat through active management may be a more achievable strategy to increase the amount or quality of habitat available within a shorter timeframe than rehabilitation of completely cleared habitat. For example, management of Banksia woodland fire regimes may increase the food resources in foraging habitat as the amount of seed produced is highest in long, unburnt woodland between 15 and 30 years since fire, depending on the species (Johnson et al., 2016; Valentine et al., 2014).

Habitat enhancement such as nest hollow repair, nest competitor control (e.g. feral bees), installation of artificial hollows, and improved access to water sources has the potential to increase habitat quality within a short timeframe and at less cost compared to revegetation, provided the existing habitat values in the area are maintained. Appropriate monitoring is required to ensure these measures are implemented effectively and are providing a benefit.

Management actions that increase vital rates, will help to stabilise or improve the population of Carnaby's cockatoo. The PVA found that reducing adult mortality and increasing breeding rates, by 1.19% per year, will result in an increase in the size of the Perth-Peel subpopulation, when implemented in conjunction with actions to increase food supply.

Breeding rates can be improved by increasing breeding participation and fledging success. As an interim measure, artificial hollows have an estimated life of 20 years or more (Groom, 2010). The provision of artificial hollows and repair of existing old hollows has been demonstrated to be successful in increasing breeding success, providing 60% to 97% of the hollows used by Carnaby's cockatoo at some sites in monitored breeding areas (Saunders and Dawson, 2018). However, to be effective artificial hollows need to be appropriately designed, managed to control nest competitors, and be installed in areas that are supported by adequate foraging resources nearby to enable the birds to breed (see DPaW, 2015a and DPaW, 2015b). Programs such as nest box deployment would benefit by being informed by a coordinated landscape approach identifying suitable locations for the installation of artificial nest boxes.

The Perth Zoo Veterinary Department receives about 300 injured black cockatoos annually of which 40% are returned to the wild (DBCA, 2018). For a species that is long-lived, this represents a significant number of adult Carnaby's cockatoo that would otherwise have been lost from the population as they may go on to breed for many more years. To reduce the number of cockatoos requiring treatment, programs are needed to prevent mortality and injury as a result of vehicle collision and illegal shooting, as well as research to reduce mortality caused by disease and toxicity.

Table 5: Summary of management options for impacts to Carnaby's cockatoo.

SHORT-TERM	Habitat management	<ul style="list-style-type: none"> • Feral animal and nest competitor control • Disease and pest control (e.g. Phytophthora and Marri Canker) • Fire management • Fencing • Weed control
	Habitat enhancement	<ul style="list-style-type: none"> • Natural nest hollow repair • Installation of artificial nest boxes (with long-term management) • Improve access to drinking water near roosts and breeding sites • Urban forest planning for cockatoos
	Increase vital rates	<ul style="list-style-type: none"> • Rehabilitation of injured cockatoos to wild • Disease and toxicity prevention • Reduce cockatoo road mortality (road signage, speed limits, appropriate verge planting) • Prevent illegal shooting and poaching
LONG-TERM	Retain and protect habitat	<ul style="list-style-type: none"> • Avoidance of important habitat and sites • Minimise native vegetation clearing • Land acquisition of existing important habitat and sites, and accession into parks and reserves
	Rehabilitation and restoration	<ul style="list-style-type: none"> • Improve succession of natural nest hollows • Increase amount of breeding habitat • Increase amount and quality of foraging habitat
	Population monitoring	<ul style="list-style-type: none"> • Population trends • Breeding rates and juvenile survival • Health of breeding populations
INFORMATION MANAGEMENT		<ul style="list-style-type: none"> • Data sharing (including compliance reporting and monitoring) • Habitat modelling • Climatic modelling • Population viability analysis and modelling

In the Perth-Peel region, Carnaby's cockatoo have adapted to the urban environment, utilising non-native species in plantations and residential trees for foraging and roosting. These areas are generally not protected but offer potentially significant resources beyond native habitat. The urban environment can also provide opportunities to supplement foraging habitat through plantings in residential gardens and enhancement of existing parks and reserves. Urban Forest Projects (implemented independently by local governments) designed to address human environmental and social issues associated with living in an urban environment, could also be designed with consideration of Carnaby's cockatoo habitat requirements. Guidelines are required to support these projects to ensure the outcomes for cockatoos align with the Recovery Plan. For example, avoidance of road verges when planting habitat trees, and the use of appropriate food trees that do not attract competitor species, such as corellas. Such guidelines would assist regulators responsible for urban planning.



Protection

Protection of existing habitat and minimising habitat loss will support efforts to increase the population and is important to achieve the success criteria of the Recovery Plan. The EPA considers that the best way to conserve key environmental values is in situ (EPA, 2015).

The complexity of protecting habitat is increased when much of the habitat is located on private land. While 64% of known roosts in the Perth-Peel region intersect with parks or reserves, the remaining roosts are on private land. The majority of confirmed breeding sites (73%) throughout the species range are located on private land (Table 6).

Table 6: Distribution of known Carnaby's cockatoo roosting and breeding sites in Perth-Peel region (PPR) (data courtesy of DBCA 7 September 2018)².

Tenure Categories	% White-tailed black cockatoo (WTBC) night roosts within PPR* (No. WTBC roosts)	% Confirmed breeding locations in PPR (No. sites)	% All confirmed breeding locations (No. sites)
Crown Reserves	19% (55)	16% (9)	21% (103)
DBCA Nature Reserves	3% (5)	7% (4)	2% (9)
National Park	7% (14)	0% (0)	2% (10)
DBCA State Forest	26% (51)	14% (8)	2% (9)
Bush Forever (sites overlap with other categories)	16% (31)	0%	0%
Total Parks & Reserves	64% (125)	37% (21)	27% (131)
Private Land	37% (72)	63% (35)	73% (357)
Total	197	56	488

² An undetermined number of roosts are mixed roosts with Carnaby's, Baudin's and/or Red-tailed Black-Cockatoos.

There are opportunities to increase the protection of Carnaby's cockatoo by giving the most important habitat areas a higher level of tenure security.

The Recovery Plan identifies the importance of mapping habitat to assist in conservation planning, recovery activities and strategic land use planning (DPaW, 2013). The Western Australian Natural Resources Management (NRM) Program funded a project that collated and mapped known and potential critical breeding, roosting and foraging habitat for Carnaby's cockatoo on the Swan Coastal Plain and Jarrah Forest bioregions (Glossop et al., 2011). Geographic information system (GIS) shapefiles and maps are available to regulators and proponents through the Data Toolkit (<http://data.wa.gov.au>) for use in decision-making.

The opportunity exists to prioritise the selection of sites for protection based on a robust understanding of the habitat requirements of Carnaby's cockatoo, including site use, role and importance within the landscape, such as habitat that maintains connectivity, or supports roosting or breeding locations; or has high value as foraging habitat; or the future value of habitat, such as the presence of mature trees likely to develop potential nest hollows.

Existing datasets from long-term monitoring and research programs offer a valuable resource that could be analysed to underpin the selection of habitat for protection. For example, over ten years of data has been collected through the Great Cocky Count, which could be used to identify important roost sites for priority protection in the Perth-Peel region.

The protection and management of habitat for Carnaby's cockatoo will also benefit other fauna species including other black cockatoo species, flora species, and vegetation communities such as the *Banksia Woodlands of the Swan Coastal Plain* threatened ecological community.

Monitoring

Monitoring programs need to be implemented so that mitigation actions are effective and can be adapted in response to any observed changes in the population.

The long-term datasets from programs, such as the Avon-Wheatbelt studies (DBCA, CSIRO), Cockatoo Care (WA Museum), and the Great Cocky Count, offer the best available baseline to measure changes and detect trends. For example, breeding data collected from over 40 years of research can be used as a historic baseline to monitor nesting success rates and chick health, providing an understanding of the health of the population and habitat condition over successive seasons, with the potential to predict declines (Saunders et al., 2014a; Saunders and Dawson, 2018).

Population monitoring needs to be undertaken across the species range and over consecutive seasons to determine if observed changes are unique to an area or indicative of a broader trend.

The Great Cocky Count can be used to estimate a minimum abundance of cockatoos utilising the Perth-Peel region each year. However, the current analysis and interpretation of results (e.g. Peck et al., 2018) does not consider ecological factors that vary from year to year that may influence the numbers and distribution of Carnaby's cockatoos in the Perth-Peel region. For example, annual changes in the timing and duration of the breeding season, rainfall and food availability may affect the timing and number of Carnaby's cockatoos arriving in the Perth-Peel region. Counts conducted over multiple days or seasonally, and taking account of the variable ecological factors, may allow trends to be measured more accurately and better inform management and mitigation.

Research

Targeted research is critical to reduce uncertainty and inform evidence-based policy, regulation, management and strategic planning.

The suspension of clearing of the Gngangara-Pinjar plantation, to June 2019, provides an opportunity to initiate research to resolve uncertainty regarding the impact of pine removal on Carnaby's cockatoo and test the projections of the PVA, specifically:

1. Determine the how Carnaby's cockatoos are responding to pine clearing, including their distribution, movements and abundance, feeding and roosting requirements.
2. Quantify how Carnaby's cockatoo use pine wildings and native revegetation in the post-pine areas.
3. Determine how reliant Carnaby's cockatoo is on the Gngangara-Pinjar plantations and the availability of alternative foraging resources within and outside the Perth-Peel region (e.g. Midwest pine plantations), including pine wildings.
4. Determine the breeding origin of flocks that utilise the Gngangara-Pinjar plantations.

Outcomes of the above research can be used to inform decision-making regarding the pine harvesting rates, post-pine landscape use and habitat replacement, and future clearing of Carnaby's cockatoo habitat, particularly in the northern Swan Coastal Plain.

Research questions to address key knowledge gaps and inform EIA are identified as:

5. Model habitat characteristics that influence roost and foraging site choice.
6. Identify and prioritize areas for rehabilitation or protection.
7. Determine appropriate buffer sizes around known breeding sites or high use roosts.
8. Make publicly available information for proponents, decision makers and planners, of areas suitable for land use planning, land acquisition and/or rehabilitation offsets.
9. Determine how Carnaby's cockatoo use offset areas.

Further research questions identified in this review to be addressed in the longer-term include:

10. Develop improved techniques at scale for rehabilitation of post-disturbance landscape.
11. Determine how impacts, for example on population size and distribution, in one part of the Carnaby's cockatoo range (e.g. Avon-Wheatbelt) influences other parts of their range (Swan Coastal Plain/Jarrah Forrest).
12. Investigate how non-breeding foraging habitat influences breeding success and juvenile survival.
13. Model and predict impacts of climate change on Carnaby's cockatoo habitat.

Consolidating existing datasets and research (published and unpublished) may provide some of the information required to address research questions and knowledge gaps. The outcomes of previous research should be consolidated and data shared to improve decision-making, protection and management.

The five-year review of the Recovery Plan provides the opportunity to adapt the Plan actions in response to changing priorities or questions, such as determining the effectiveness of mitigation measures (e.g. nest box programs, offsets, rehabilitation).

Conclusion

There is considerable knowledge available on the foraging and breeding ecology of Carnaby's cockatoo, which provides a sound understanding of the biological and habitat requirements. However, significant knowledge gaps remain in relation to the ecology of the species and likely impacts of the threatening processes, including carrying capacity of remaining foraging habitat, clearing of Gnangara-Pinjar pine plantation, and the effectiveness of offsets.

Further research is required to better understand cumulative impacts and the interdependency of ecological requirements and impacts between the Swan Coastal Plain and the Avon-Wheatbelt, Geraldton Sandplains and Jarrah Forest breeding regions. For example, understanding how clearing pine foraging habitat in the Perth-Peel region affects breeding success in other regions. Such research and monitoring is critical to determine the effectiveness of offsets (e.g. reserves and rehabilitated areas) and mitigation (e.g. buffers), and to inform decision-making and achieve conservation objectives.

Outcomes of existing research can inform management programs to improve breeding and reduce mortality. Regular review of management programs and the Recovery Plan based on outcomes from new research will enable priorities and actions to be adapted.

The EPA will take a holistic approach when considering proposals that may impact on Carnaby's cockatoo. The information outlined in this report provides context for EIA and should be considered by proponents when preparing schemes and proposals.



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Appendix 1: Literature Review

Research outcome or observation	References
Taxonomy	
Carnaby's cockatoo is recognised as a separate species from Baudin's cockatoo based on the differences in bill morphology and call, and foraging behaviour and distributional differences. However, recent analysis, based on microsatellite data, suggests that there is little genetic difference between the two species.	Johnstone et al. 2014; Saunders 1974; Saunders 1979; White et al. 2011; White et al. 2014
Genetic analysis has determined that large-scale clearing and habitat loss has resulted in recent geographical structuring (genetic drift) into two genetic populations of Carnaby's cockatoo, east and west of the extensively cleared habitat in the southern Wheatbelt.	White et al. 2014
Population	
The total population of Carnaby's cockatoo is currently estimated at 40 000 birds.	DPaW 2013; Garnett et al. 2011
The minimum number of Carnaby's cockatoo counted in the Perth-Peel region between 2010 and 2018 is 3 791 – 12 465 birds.	Peck et al. 2018
Total counts of cockatoos observed at roosts in the Perth-Peel region change from year to year.	Peck et al. 2018; Williams et al. 2016
The Atlas of Australian Birds reported a decline of 46%, between 1977 and 2002, in the northern part of the range.	DPaW 2013; Garnett and Crowley 2000; Garnett et al. 2011
Large-scale clearing in the Wheatbelt in the 1900s has been identified as being responsible for contraction of over one third its former breeding range and reduced breeding success.	Garnett et al. 2011; Johnstone and Kirkby 2010; Saunders et al. 1985; Saunders 1990; Saunders et al. 2014a
The northern population has shifted its distribution westwards and southwards, including breeding on the Swan Coastal Plain, in response to loss of breeding and feeding habitat in the Wheatbelt.	Johnstone and Kirkby 2008; Johnstone and Kirkby 2010; Stock et al. 2013; Storr and Johnstone 1998
Since 2010 a decline in the number of Carnaby's cockatoos roosting at individual sites in the Perth-Peel region has been observed.	Peck et al. 2016; Williams et al. 2016
Foraging	
Carnaby's cockatoo exploit agricultural crops such as canola as a novel food source during nesting periods, in Wheatbelt breeding areas.	Saunders et al. 2014b
Carnaby's cockatoo feed on native (Proteacea mostly <i>Banksia</i> spp.) and non-native food sources (mostly pine) during non-breeding periods on the Swan Coastal Plain. Marri and jarrah also form part of the diet in the eastern Swan Coastal Plain and Jarrah Forest. They use a matrix of foraging habitats daily, sometimes feeding on both <i>Banksia</i> and pine in the same foraging area.	Finn et al. 2009; Groom 2011; Groom 2015; Groom et al. 2014; Johnston 2013; Johnston et al. 2016; Shah 2006; Valentine and Stock 2013
Large flocks (~5 000) of Carnaby's cockatoo have been observed feeding in pine plantations since 1948. Large flocks (~3 000 – 6 000 birds) roost in the pine plantations associated with the Gngangara and Wanneroo areas.	Finn et al. 2009; Johnstone and Kirkby 2008a; Peck et al. 2017; Perry 1948; Stock et al. 2013; Valentine and Stock 2013
Carnaby's cockatoo uses a variety of novel watering sources in the metropolitan region including bird baths, roadside puddles, market gardens, and stock troughs, as well as natural features such as lakes and streams.	Groom et al. 2014

Research outcome or observation	References
Roosting	
Flocks show site fidelity to a particular area, but will move between roost trees from day-to-day apparently in response to environmental factors (i.e. distance to food and water, influence of wind and predators).	Berry 2008; Berry and Owen 2009; Berry and Owen 2018; Finn et al. 2009; Groom 2015; Shah 2006
Flocks roost in tall, large trees in the urban landscape, over 8m in height, often relictual native vegetation (e.g. Tuart) or non-native vegetation (e.g. River red gum, Spotted gum, Lemon-scented gum and pine) in residential parks and gardens, including street trees.	Glossop et al. 2011; Groom et al. 2014; Le Roux 2017
Roosts are preferred in close proximity to water (100m – 1km) and within 6km of potential feeding habitat.	Glossop et al. 2011; Le Roux 2017
Carnaby's cockatoo travel approximately 3-13km per day from their roost when foraging on the Swan Coastal Plain.	Cockerill et al. 2013; Groom 2015; Shah 2006
Forest red-tailed black cockatoos have been recorded using roosts previously occupied by Carnaby's cockatoos at sites on the Swan Coastal Plain.	Peck et al. 2016
Breeding	
Carnaby's cockatoo matures at four years old, with an estimated generation time of 15 years. Female Carnaby's cockatoos have been recorded attempting breeding at three years old.	Saunders 1982; Saunders et al. 2016
Egg laying is strongly correlated with rainfall, with earlier breeding in seasons of preceding heavier rainfall.	Saunders et al. 2013, 2014b
Clutches of two eggs are laid, but usually only one chick is reared to fledging age. Two chicks are possible to be reared to fledging when there is adequate food availability.	Saunders 1982; Saunders et al. 2014a
Females show nest site fidelity to the area from which they fledged. Females return to the same breeding area each year and will reuse the same hollows, provided the hollow is vacant, otherwise moving to a new hollow nearby.	Saunders 1982; Saunders et al. 2016; Saunders et al. 2018
In the Wheatbelt, Carnaby's nest in hollows with a vertical aspect, 2.5-12m above the ground, an entrance of approximately 27cm (23-30cm), depth of 1.2m (1-2.5m) and a floor diameter of 40cm (for Salmon gum; Wandoo hollows lower and shallower).	Saunders 1979; Saunders et al. 2014c; Storr and Johnstone 1998
Carnaby's cockatoo will successfully use artificial nest hollows and repaired natural hollows.	DEC 2010; Saunders et al. 2014b
Carnaby's cockatoos has been recorded breeding in the Jarrah Forest and using hollows previously used by Forest red-tailed black cockatoos.	Johnstone et al. 2013

Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-19 17:40:08

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

My name is and I am opposed to the rezoning of Maida Vale South to Urban Deferred.

I am a conservation biologist, zoologist and Science teacher. After reading the '360 Environmental Assessment Report' for the amendment area and comparing it to the 'Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment' set by the EPA, I have found MANY concerning discrepancies that indicate a sheer LACK of surveying effort conducted by 360 Environmental.

In addition, after also reading the "Australian Government- Department of climate change, energy, the environment and water: Threatened Species and Ecological communities (SPRAT Profile)" for Black Cockatoo Species and comparing it with the '360 Environmental Assessment Report', I have further found discrepancies which if left unaddressed will result in the destruction of 39 hectares of valuable cockatoo foraging grounds and 485 nesting trees!

I have summarised these findings in an easy to read document attached.

For the sake of saving our endangered Black Cockatoo Species, please review the document and enforce that further surveying is conducted to increase the surveying effort implemented in the amendment area in compliance with these government regulations.

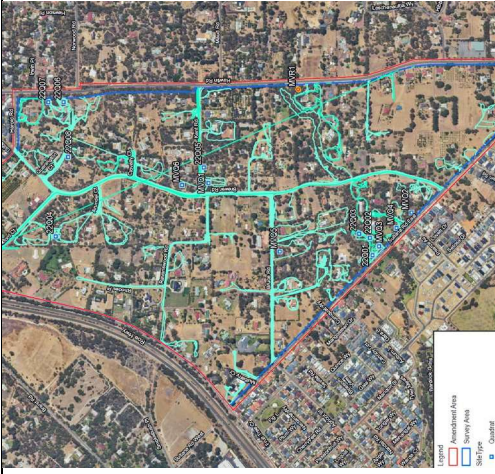
On an additional note, it seems controversial that the developer (Monument) employs the environmental company that carries out the environmental assessment within the amendment area. To avoid bias an independent environmental consultancy should be commissioned by the government and NOT by the developer.

File 1:

Technical Guidance EPA vs 360 Enviro Survey.docx was uploaded

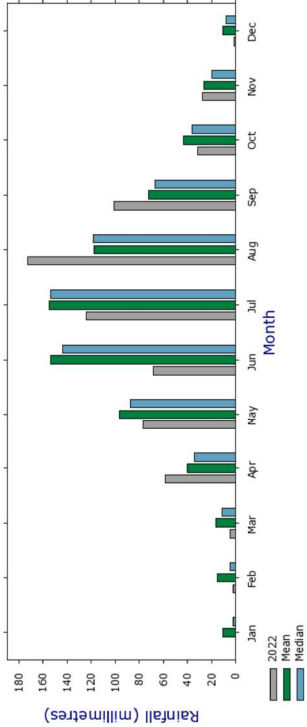
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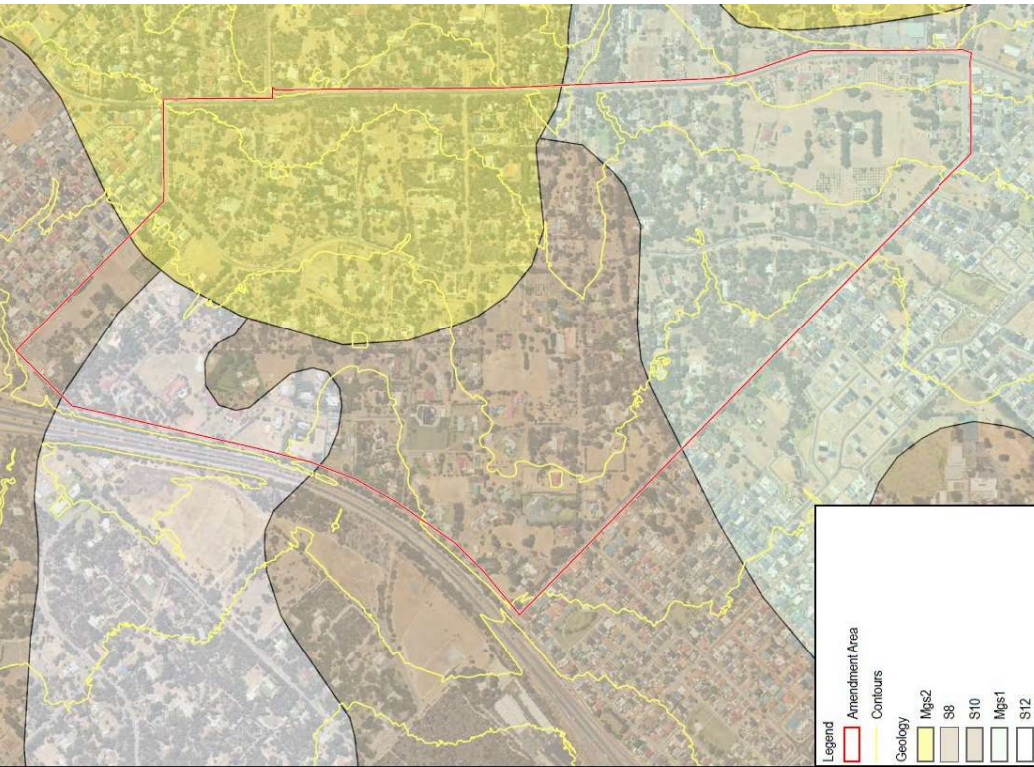
360 Environmental Assessment	Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment	Discrepancies
<p>"In 2015, 11 flora sites (comprising six quadrats and five relevés) were established within the Survey Area. In 2022, four relevés were upgraded to quadrats, and four additional quadrats were established, resulting in a total of 14 quadrats and one relevé across the site."</p> <p>Page 623 of 1142</p> <p>"Quadrats are vegetation survey plots which are accurately measured out as 10 x 10 m (or an area equivalent to 100 m²) and marked at the NW corner using a handheld Garmin GPS unit."</p>	<p>"Quadrat sampling is necessary for a detailed survey. The number of quadrats required will be dependent on the diversity of vegetation units present, heterogeneity within these vegetation units, the size of the vegetation units mapped and the size of the survey area. A minimum of three quadrats should be sampled in each vegetation unit. Quadrats within a widespread vegetation unit should be located to sample throughout its geographic range therefore the number of quadrats required within a vegetation unit is proportional to the area (hectares) of the unit."</p> <p>Page 13</p>	<p>Sampling 0.14 hectares of a 178 hectare site is not enough "proportional to the area of the unit."</p>
 <p>"In addition to the associations, 15 vegetation units were also mapped, which included mature trees in isolation or over gardens and weeds."</p> <p>Page 229 of 1142</p>	<p>"A minimum of three quadrats should be sampled in each vegetation unit."</p> <p>Page 13</p>	<p>Maths:</p> <p>15 vegetation units mapped x 3 quadrats= 45 quadrats...</p> <p>ONLY 14 quadrats were completed.</p>

360 Environmental Assessment	Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment	Discrepancies
<p>“resulting in a total of 14 quadrats and one relevé across the site.”</p> <p>Page 623 of 1142</p>		
<p>Two vegetated portions of the Survey Area could not be accessed in 2022 or 2015 due to access not being granted during the field surveys (Figure 3). Therefore, no flora sites were established, and targeted searching and field vegetation mapping were not undertaken in these ‘No Access’ areas. In addition, numerous small portions of the Survey Area were not assessed due to access issues or because they were Parkland Cleared or garden.</p> <p>Page 630 of 1142</p>	<p>“Where this information is not available, it is necessary to survey beyond the proposal area to provide suitable local and/or regional context.”</p> <p>Page 6</p>	<p>Due to numerous portions of the survey area being not surveyed due to “No access” the survey of species in a 10 km(flora) and 20km (fauna) radius should be greatly taken into consideration.</p> <p>The database searches identified 109 conservation significant species occurring within the Study Area. The potential species comprise of:</p> <ul style="list-style-type: none"> • 72 bird species • 25 mammal species • 12 reptile species. <p>The DBCA database search identified 96 conservation significant taxa as occurring within 10 km of the Amendment Area (360 Environmental 2022).</p> <ul style="list-style-type: none"> • Three taxa, <i>Conospermum undulatum</i> (T), <i>Isopogon autumnalis</i> (P3), and <i>Banksia pteridifolia</i> subsp. <i>vernalis</i> (P3), were considered to have a high likelihood of occurrence in the Amendment Area

360 Environmental Assessment	Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment	Discrepancies
		<ul style="list-style-type: none"> • 30 were considered to have a high likelihood • 61 were considered to have a medium likelihood • 49 had a low likelihood
<p>“The information recorded at each quadrat included landscape features, surface soil colour and texture, bare ground, litter cover, disturbance, fire age, aspect and vegetation condition (Government of Western Australia 2000). Each species of plant at each quadrat was recorded, including information on height and percentage cover. The information from each quadrat was recorded on a single occasion.”</p> <p>Page 220 of 1142</p>	<p>Information collected in each quadrat should include:</p> <ul style="list-style-type: none"> • site code; • location, with GPS coordinates (estimate of their accuracy) and datum; • size and shape of quadrat; • photograph/s from north-west corner; • landform and soil description; • dominant growth form, height, cover and species for the three traditional strata (upper, mid and ground) compatible with NVIS Level V (Executive Steering Committee for Australian Vegetation Information ESCAVI 2003); • any other location information that might be useful in vegetation classification including slope, aspect, litter, fire history, vegetation/landform/soil correlations; • assessment of vegetation condition and description of disturbances; • a comprehensive species list, including weeds; and • quadrat marking method. <p>Page 8</p>	<p>-Fair bit of information missing..</p> <p>-The quadrat data does not meet the specification of the Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment</p>
<p>“resulting in a total of 14 quadrats and one relevé across the site.”</p> <p>Page 623 of 1142</p>	<p>When undertaking a detailed survey, a botanist should not rely on quadrats to obtain a comprehensive inventory of an area. Opportunistic collections, systematic transects and targeted inspections of potential habitat are also required to verify that the survey area has been well characterised and important values identified.</p> <p>Page 13</p>	<p>Only 1 revele was conducted...</p> <p>No transects</p> <p>The botanist did not implement enough sampling effort.</p>

360 Environmental Assessment	Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment	Discrepancies
<p>“Crumpet Creek, an ephemeral stream”</p> <p>Page 106 of 1142</p> <p>“Poison Gully is an ephemeral creek”</p> <p>Page 109 of 1142</p>	<p>It may also be appropriate to increase the survey effort in areas that appear to have unusual habitat or potential to provide habitat for significant flora or vegetation, such as permanent or ephemeral wetlands, salt lakes, rocky outcrops, claypans, unusual geologies and cliffs. In such areas, it may be appropriate to install additional quadrats, survey along a transect and/or expend more time on opportunistic sampling (Figure 2).</p> <p>Page 13</p>	<p>2 ephemeral wetlands in the area.. where is the “increased survey efforts?”</p>
<p>2015 survey:</p> <p>“The Perth Airport weather station recorded 477.4 mm of rain in the eight months prior to the Spring survey (January 2015 – August 2015) which is 134.4 mm below the long term average rainfall of 611.8 mm for the same period (BoM 2016). The three months prior to survey (June 2015 – August 2015), Perth Airport recorded 301.8 mm of rainfall, 30.1 % below the 431.6 mm average rainfall for the same period (BoM 2016).”</p> <p>Page 214 of 1142</p>	<p>The amount and timing of winter rainfall may impact on appropriate survey timing in the South-West and Interzone Botanical Province. Flexibility in survey timing may be required to ensure the best chance of detection and collection of adequate survey data.</p> <p>Surveys should be conducted during the season that is most suitable for detection and identification of the range of flora likely to occur in the survey area. This is particularly important where ephemeral or cryptic flora may be the target of survey.</p> <p>Page 15</p>	<p>Lower than usual rainfall before BOTH the 2015 and 2022 surveys may have impacted the detection and identification of flora in the South-West and Interzone Botanical Province. Therefore adequate survey data was not collected.</p>
<p>2022 sup survey:</p>  <p>2022 survey was conducted between June and Sep 2022.</p>		

360 Environmental Assessment	Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment	Discrepancies
<p>The monthly rainfall in majority of the months leading up to the survey period experienced lower monthly rainfall than historically recorded monthly rainfall.</p> <p>From Bureau of Meteorology</p>		
<p>“The remaining three species are annual; <i>Asteridea gracilis</i> and <i>Thelymitra variegata</i> would have been detectable during the survey based on the species flowering period. <i>Haemodorum loratum</i>, however, may not of been identifiable at the time of the survey based on the species November flowering period.”</p> <p>Page 243 of 1142</p>	<p>Less conspicuous flora such as annuals or geophytes and cryptic or disturbance sensitive species (whether threatened, priority or otherwise significant) will require more intensive survey effort.</p> <p>Page 15</p>	<p>Several priority flora were not detectable during the survey period.. most likely due to less rainfall. This should require “more intensive survey efforts”.</p>



In a detailed survey, sampling sites should be placed at representative locations throughout the survey area considering landform, geology, elevation, slope, aspect, surface or groundwater expression, and **soil type**, as well as structure, composition and condition of vegetation.

Page 14

Only 1 quadrat placed in the S10 soil type area..
Quadrat sampling sites were not placed at representative locations throughout the survey area.

360 Environmental Assessment	Australian Government- Department of climate change, energy, the environment and water Threatened Species and Ecological communities (SPRAT Profile)	Discrepancies
<p>Page 65 (page 170 of the PDF) of the EAP states “...dawn/dusk surveys were not conducted (360 Environmental, 2023).”.</p>	<p>“Observations should occur at dawn and dusk”</p> <p>“Numbers tend to be largest at the roost site between dusk and dawn (Johnstone & Kirkby 2008), and surveys for roosts should occur at these times (30 minutes before and after sunrise and sunset), as birds are leaving or returning to roost sites, over several days.”</p> <p>“The first two hours after dawn and before dark are therefore the best times to search for foraging black cockatoos.”</p>	<p>It is quoted again and again that dawn and dusk are the best times to observe/survey black cockatoos.. HOWEVER, 360 Environment have FAILED to do so.</p> <p>Therefore, the observation numbers of cockatoos in the amendment area is severely under estimated due to lack of surveying effort.</p>

Reference:

http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?showprofile=Y&taxon_id=59523

Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-19 18:33:20

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

After reveiwng the 360 Environement Assessment Report I have identified the following:

1. 360 Environment have not adequately implemented a high enough survey effort in the amendment area, leading to the under-estimation the the environmental impacts.
2. The environmental impact that would occur if the amendement area was to be developed would be astronomical!
3. The 360 Environmental employees have shown incompetence in idenitfyng species within the area.
4. The 360 Environmental employees have shown incompetence in not surveying the area during peak times of significant, threatened and priority fauna activity.
5. Other consultancies and govervment agencies should be further engaged in this process such as the EPA and DER to ensure that regulatory acts are being followed.

These 5 points have been summarised in the attached document.

File 1:

Summary of Environmental impacts. .docx was uploaded

File 2:

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File 3:

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SUMMARY OF SPECIES

Species within the amendment area	Facts and Statistics on their Environmental Importance	360 Environmental Assessment Plan quotes	Reasons to NOT approve the MRS Amendment 1344/57
Black cockatoos	<ul style="list-style-type: none"> 3 threatened species present in area: <ul style="list-style-type: none"> -Carnaby: Specially protected fauna (WA listing) -Baudin: Vulnerable (WA listing) -Red-tailed: Vulnerable (WA listing) Numerous conservation cooperations, including The Australian Conservation Foundation, identify the main threats to Black cockatoo's being habitat loss and degradation, competition for nesting sites and declining food supplies. There are now only approximately 15, 000 Carnaby Cockatoos left in the Perth-Peel region, and research indicates that their numbers are declining at 5% per annum (EPA Advice: Carnaby's Cockatoo in Environmental Impact Assessment in the Perth and Peel Region, May 2019). <p>References:</p> <p>https://www.acf.org.au/black-cockatoos#:~:text=In%20Western%20Australia%2C%20the%20Carnaby%20s.and%20WA%20Biodiversity%20Conservation%20Act.</p> <p>https://www.epa.wa.gov.au/policies-guidance/carnaby%E2%80%99s-cockatoo-environmental-impact-assessment-perth-and-peel-region</p> <p>https://ftp.dwer.wa.gov.au/permit/8296/CPS%208296%201%20%20-%20Black%20Cockatoo%20H~way%20Strategen%20-%20September%202018.PDF</p> <p>https://birdlife.org.au/projects/southwest-black-cockatoo-recovery/</p>	<ul style="list-style-type: none"> Permanent loss of fauna habitat, including up to 36 hectares of black cockatoo habitat and 485 potential black cockatoo breeding trees identified on site. Fragmentation of fauna habitat and loss of ecological connectivity Altered fauna behavior due to noise, lighting and human presence. Page 171 figure shows removal or potential foraging and nesting black cockatoo areas. Page 1181 figure shows limited number of cockatoo siting, calls heard, nesting and foraging. Page 65 (page 170 of the PDF) of the EAP states "...dawn/dusk surveys were not conducted (360 Environmental, 2023)." Table 10 on page 29 (page 53 of the PDF) of the EAP shows that a total of 3 surveys were conducted in September 2015, September 2021 and September 2022. 	<ul style="list-style-type: none"> Loss of black cockatoo species Lack of surveying effort to adequately estimate the population size of Black Cockatoo Species within the area and the nesting and foraging habitat within the area <p>Example.</p> <ul style="list-style-type: none"> -NOT survey at dawn and dusk -NOT surveying in different months/seasons of the year -surveying over a LIMITED number of days.
Banksia Woodland Ecological Community	<ul style="list-style-type: none"> "The ecological community was listed as endangered under Australia's national environment law, the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), on 16 September 2016." about 60 percent of the Banksia Woodlands ecological community has been lost, with most remaining patches small in size." "Banksia Woodlands provide vital habitat for over 20 nationally threatened species such as Carnaby's and forest red-tailed black cockatoos" Listing the Banksia Woodlands ecological community under the EPBC Act means that an activity that is likely to have a 	<ul style="list-style-type: none"> four conservation significant vegetation types or their associated buffers occurring within the Amendment Area, SCP 20a, SCP 20b, SCP 20c and Banksia WL SCP. (SCP20a <i>Banksia attenuata</i> woodlands over species rich dense shrublands, SCP20b <i>Banksia attenuata</i> and/or Eucalyptus marginata woodlands of the eastern side of the Swan Coastal Plain, SCP3b <i>Corymbia calophylla</i> - Eucalyptus marginata woodlands on sandy clay soils of the southern Swan Coastal Plain) SCP 20a and SCP 20b are regarded as sub-communities of the national ecological community, where they occur 	<p>Although the botanists FAILED to identify any of the following species (<i>Banksia menziesii</i>, <i>Banksia attenuata</i>, <i>Banksia prionotes</i> or <i>Banksia ilicifolia</i>) within the amendment area... TWO conservation biologists (myself: Chelsea Morgan and Eleanor Palmer), have positively identified Banksia Attenuata within the area (see images below from the amendment area).</p>

significant impact on the ecological community needs to be considered and approved at the national level before proceeding — activities such as major new developments, works or infrastructure. For example, clearing large areas of intact and high-quality native vegetation for mining or residential subdivision. These activities will need to now avoid or mitigate impacts on highest quality woodlands.”

- A national Conservation Advice identifies current threats to the ecological community, including land clearing for development”

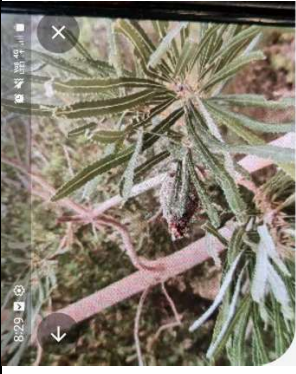

Reference:

<https://www.agriculture.gov.au/sites/default/files/documents/banksia-woodlands-scp-guide.pdf>

within the defined distribution of the TEC, however one of the key diagnostic criteria for the Banksia WL SCP TEC is that it must contain at least one of the following species: *Banksia menziesii*, *Banksia attenuata*, *Banksia prionotes* or *Banksia ilicifolia*. None of these species were recorded within the Survey Area and therefore none of the vegetation patches within the Survey Area meet the requirements to be considered Banksia WL SCP.


This again shows the **INCOMPETENCE** and **BIAS** shown by 360 Environments surveying efforts.



<p><i>Conospermum undulatum</i></p>	<ul style="list-style-type: none">• “<i>Conospermum undulatum</i> was declared as Rare Flora under the Western Australian <i>Wildlife Conservation Act 1950</i> in 1997 and is currently ranked as Vulnerable under World Conservation Union (IUCN 1994) Red List criteria B1+2c”• “The main threats are further land clearing”• only 25 populations of <i>Conospermum undulatum</i> left• 20 of the 25 population have extant plants• The species is known from the Shires of Kalamunda and Gosnells in the Department of Environment and Conservation’s Swan Coastal and Perth Hills Districts. <p>https://www.dcceew.gov.au/environment/biodiversity/threatened/recovery-plans/waxy-leaved-smokebush-conospermum-undulatum-recovery-plan</p> <ul style="list-style-type: none">• “Perth that is rapidly being developed for housing and industry and this has resulted in the fragmentation of much of the remnant bushland in which the plant occurs. The species was declared as Rare Flora in 1997.” <p>https://www.dcceew.gov.au/sites/default/files/documents/conospermum-undulatum.pdf</p> <ul style="list-style-type: none">• “Land clearing. The area where <i>Conospermum undulatum</i> occurs is undergoing rapid urbanization with approximately 23 percent of known plants being located on subdivided blocks and many other populations affected by clearing for urban development. Three populations and five subpopulations are now extinct due to land clearance.”		<div><p>Coast banksia Also known as Slender banksia Botanical name Banksia attenuata</p></div>	<ul style="list-style-type: none">• One Threatened flora species, <i>Conospermum undulatum</i> (T), was recorded within the Amendment Area. All records of <i>Conospermum undulatum</i> were from vegetation in Very Good or Excellent condition (360 Environmental, 2022).	<ul style="list-style-type: none">• 5/11 population locations are threatened by land clearing and development!• Very few healthy population is left. Maida vale population is in “very good” or “excellent condition”• Approving the rezoning may result in the loss of this rare flora species.
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	<table><tr><th>Locations of 25 population:</th><th>Threats</th></tr><tr><td>Maida Vale:</td><td>Land clearing</td></tr><tr><td>Gooseberry Hill</td><td></td></tr><tr><td>High Wycombe</td><td>Land clearing, poor habitat health, weeds</td></tr><tr><td>Forrestfield</td><td>Land clearing and development</td></tr><tr><td>Wattle Grove</td><td>Urban development, firebreak maintenance, uncontrolled access, poor habitat, weeds</td></tr><tr><td>Maddinton</td><td></td></tr><tr><td>Martin</td><td></td></tr><tr><td>Orange grove</td><td></td></tr><tr><td>Kewdale</td><td></td></tr><tr><td>Perth International Airport</td><td></td></tr><tr><td>Lesmurdie</td><td>Land clearing and development</td></tr></table> <p>https://www.dcceew.gov.au/sites/default/files/documents/conospermum-undulatum.pdf</p>	Locations of 25 population:	Threats	Maida Vale:	Land clearing	Gooseberry Hill		High Wycombe	Land clearing, poor habitat health, weeds	Forrestfield	Land clearing and development	Wattle Grove	Urban development, firebreak maintenance, uncontrolled access, poor habitat, weeds	Maddinton		Martin		Orange grove		Kewdale		Perth International Airport		Lesmurdie	Land clearing and development		
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<u>Oblong turtle</u>	<ul style="list-style-type: none">The Oblong turtle (<i>Chelodina oblonga</i>) is an iconic keystone species that inhabits the wetlands within southwestern Western Australia.The species is the underwater apex predator within its range and is a generalist feeder and an opportunistic carnivore (Wolding 2001). As an apex predator, <i>C. oblonga</i> plays a crucial role in aquatic ecosystems and is valuable to humans as it helps to control insect populations.<i>Chelodina oblonga</i> is currently listed as ‘near threatened’ by the IUCN (Tortoise & Freshwater Turtle Specialist Group 1996), although its status has not been assessed for over 20 years.most comprehensive study on the species was recently conducted by (Santoro, Chambers et al. 2020), and involved surveying 35 Perth wetlands to explicitly determine the factors influencing the status and viability of the remnant populations. The study revealed abundances of <i>C. oblonga</i> in most Perth wetlands were alarmingly low. At ~60% of wetlands less than 25 turtles were captured, and no juvenile turtles were captured in ~40% of wetlands studied (Santoro, Chambers et al. 2020).Santoro, Chambers et al. (2020) identified that the accessibility of native vegetation surrounding urban wetlands was a significant factor impacting upon the abundances of <i>C.</i>	<ul style="list-style-type: none">The Oblong turtle (<i>Chelodina oblonga</i>) is an iconic keystone species that inhabits the wetlands within southwestern Western Australia.The species is the underwater apex predator within its range and is a generalist feeder and an opportunistic carnivore (Wolding 2001). As an apex predator, <i>C. oblonga</i> plays a crucial role in aquatic ecosystems and is valuable to humans as it helps to control insect populations.<i>Chelodina oblonga</i> is currently listed as ‘near threatened’ by the IUCN (Tortoise & Freshwater Turtle Specialist Group 1996), although its status has not been assessed for over 20 years.Most comprehensive study on the species was recently conducted by (Santoro, Chambers et al. 2020), and involved surveying 35 Perth wetlands to explicitly determine the factors influencing the status and viability of the remnant populations. The study revealed abundances of <i>C. oblonga</i> in most Perth wetlands were alarmingly low. At ~60% of wetlands less than 25 turtles were captured, and no juvenile turtles were captured in ~40% of wetlands less than 25 turtles were captured, and no juvenile turtles were captured in ~40% of wetlands studied (Santoro, Chambers et al. 2020).	<ul style="list-style-type: none">Urbanisation of the area will result in degradation, fragmentation or permanent loss of Oblong turtle habitat and nesting ground.This may result in the loss of this keystone species.As the Oblong turtle is a key stone species. The loss of this organisms will have multiple flow on effects on other flora and fauna species in the amendment area.																								

	<p>oblonga and the presence of juveniles within the populations, likely owing to it providing suitable nesting sites.</p> <p>http://aglg.org.au/wp-content/uploads/2020/11/Santoro-2020-Population-status-of-the-Oblong-turtle-in-Armadales-wetlands-2.pdf</p>	<ul style="list-style-type: none"> Santoro, Chambers et al. (2020) identified that the accessibility of native vegetation surrounding urban wetlands was a significant factor impacting upon the abundances of C. oblonga and the presence of juveniles within the populations, likely owing to it providing suitable nesting sites. <p>http://aglg.org.au/wp-content/uploads/2020/11/Santoro-2020-Population-status-of-the-Oblong-turtle-in-Armadales-wetlands-2.pdf</p>	<ul style="list-style-type: none"> Santoro, Chambers et al. (2020) identified that the accessibility of native vegetation surrounding urban wetlands was a significant factor impacting upon the abundances of C. oblonga and the presence of juveniles within the populations, likely owing to it providing suitable nesting sites.
<p><u>Wambenger Brushtailed Phascogale</u></p>	<ul style="list-style-type: none"> Fauna that is rare or is likely to become extinct (Threatened ranked as Vulnerable) CD- conservation status= Conservation Dependent Taxa whose survival depends upon ongoing conservation measures. <p>https://www.epa.gov.au/sites/default/files/Referral_Documentation/App%20A.1_Lv1%20Fauna%20and%20Single%20Ph%20Lv%20%20F%20ra%20and%20Veg%20Survey%20Vol%204.pdf</p> <ul style="list-style-type: none"> The Brush-tailed Phascogale is active between dusk and dawn, with individuals foraging almost exclusively among the tree canopy. “Threatening processes Habitat clearing, fragmentation” Fragmentation of land leading to inbreeding in the population, reducing genetic diversity. <p>https://library.dbca.wa.gov.au/Static/FullTextFiles/925273.pdf</p>	<ul style="list-style-type: none"> Habitats contain vegetation which may be suitable for the Wambenger Brushtailed Phascogale. The presence of hollows, logs and stags within this habitat may provide sheltering opportunities for the species. Database searches identified 48 records within a 20 km radius of the Survey Area, and it is likely that they may utilize parts of the Survey Area. Page 65 (page 170 of the PDF) of the EAP states “...dawn/dusk surveys were not conducted (360 Environmental, 2023).” 	<ul style="list-style-type: none"> Wambenger Brushtailed Phascogale is likely to become EXTINCT. Urbanisation of the area will result in degradation, fragmentation or permanent loss their habitats. Additionally, because surveys were not conducted at dawn and dusk when Brush-tailed Phascogale are active it again shows a LACK of surveying effort conducted by 360 Environment and therefore an underestimation in the population size of this threatened species.
<p><u>AMPHIBIANS</u></p>		<ul style="list-style-type: none"> From the database searches, nine amphibian species have been previously recorded from the following three families in the surrounding area: Limnodynastidae, Myobatrachidae Hylidae (Appendix E). During the survey, no amphibians were recorded during the survey. 	<ul style="list-style-type: none"> AGAIN because surveys were not conducted at dawn and dusk when amphibians are active it shows a LACK of surveying effort conducted by 360 Environment and therefore an underestimation in the population size of amphibious species. To prove that there are indeed amphibian species within the area, I have attached an image below of a motorbike frog at our property (11 Arundel Court Maida Vale)

<p><u>Chuditch,</u> <u>Western Quoll</u> <u>(<i>Dasyurus</i></u> <u><i>geoffroyi fortis</i>)</u> <u>– VU (State)</u></p>	<ul style="list-style-type: none">• Current status of taxon: Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act): Vulnerable.• Western Australia Wildlife Conservation Act 1950, Wildlife Conservation (Specially Protected Fauna)• Notice 2010: Schedule 1, and ranked as Vulnerable using IUCN criteria.• only present in approximately 5% of their former range.• Chuditch had not been recorded on the Swan Coastal Plain since the 1930s, however there have been records in the outer metropolitan areas such as Gooseberry Hill, East Martin and on the Swan Coastal Plain, Upper Swan Valley, High Wycombe, Wand, Yalgorup National Park and Leschenault Conservation Park.• Their solitary and nomadic lifestyle makes populations very difficult to estimate; for example, numbers of mature chuditch present in the jarrah forest has been estimated by various different studies at various dates between 1,368 and 12,500 individuals (Serena et al. 1991; Morris 1998; Morris et al. 2000; DEC 2007). All populations of chuditch are considered important to the survival of the species.• Developments in the immediate vicinity of the population or within the habitat that is defined as critical to survival may require assessment.• any person proposing to undertake actions which may have a significant impact on any listed threatened species or ecological community should refer the action to the Minister for Environment. The Minister will determine whether the action requires EPBC Act assessment and approval.• Actions that remove native vegetation (e.g. increased fire frequency, clearing for development, mineral exploration and extraction, forestry) can result in a significant impact on the chuditch, particularly if these actions remove habitat critical for survival, or occur within 15 km of habitat critical to survival.		<ul style="list-style-type: none">• The database searches identified 92 records of the species occurring within a 20 km radius of the Survey Area, with one record occurring approximately 3 km to the east in 2017 (Department of Biodiversity Conservation and Attractions, 2022a).• Although the species was not recorded during the field survey it may utilise the Marri Woodland and Crumpet Creek Fauna habitats given the connectivity between these and the broader remnant vegetation to the east of the Survey Area.	 <ul style="list-style-type: none">• “Their solitary and nomadic lifestyle makes populations very difficult to estimate”. This is why weren’t observed during the 360 Enviro Survey period.• Sightings have been recorded in: Gooseberry Hill, East Martin and on the Swan Coastal Plain, Upper Swan Valley, High Wycombe, Wand, Yalgorup National Park and Leschenault Conservation Park.• AGAIN. This indicates a lack of surveying effort implemented by 360 Environment and as a result the underestimation in the population of this vulnerable species within the amendment area.
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	<ul style="list-style-type: none"> The major threats to chuditch currently are: Land clearing, particularly of riparian vegetation, and the removal of suitable den logs and den sites from chuditch habitat; Chuditch occupy the higher trophic levels in the forest, woodland and shrubland communities of south-west WA and may be regarded as an indicator species (i.e. presence of chuditch indicates high productivity within the lower trophic levels). <p>https://www.dceew.gov.au/sites/default/files/documents/dasyurus-geoffroi-2012.pdf</p>			
Blue-billed Duck (<i>Oxyura</i> <i>australis</i>) – P4 (State)	<ul style="list-style-type: none"> Threats: Destruction of habitat threatens the Blue-billed Duck, in particular land clearing, cropping, drainage and salinisation of water bodies and burning of riparian vegetation. nest between September and February. <p>https://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10580</p> <p>https://perthzoo.wa.gov.au/animal/blue-billed-duck</p>	<ul style="list-style-type: none"> Threats: Destruction of habitat threatens the Blue-billed Duck, in particular land clearing, cropping, drainage and salinisation of water bodies and burning of riparian vegetation. nest between September and February. <p>https://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10580</p> <p>https://perthzoo.wa.gov.au/animal/blue-billed-duck</p>	<ul style="list-style-type: none"> The surveys were only complete in September. This is nesting season for the blue-billed duck, therefore you are very unlikely to observe them. AGAIN. This indicates a lack of surveying effort implemented by 360 Environment and as a result the underestimation in the population of this priority species within the amendment area. 	
Southern Brown Bandicoot	<ul style="list-style-type: none"> Quenda are classified as a Priority 4 (Species of Conservation Concern) under the Western Australian Wildlife Conservation Act 1950. Quenda have declined within their range in south-western Australia, and in abundance since European arrival. <p>https://www.nespthreatenedspecies.edu.au/media/2aghs4r/4-1-7-more-than-just-diggers-quenda-and-woylie-disperse-viable-seed-findings-factsheet_v3.pdf</p> <ul style="list-style-type: none"> This means they are in Rare, Near Threatened and (Department of Justice 2019). their historical range distribution has contracted by 40% (Abbott, 2008). The main reasons for their decline include: habitat loss via land clearing for human development. considered ecosystem engineers, because: <ol style="list-style-type: none"> Turning over large volumes of soil: By turning over the soil, organic matter is mixed, which increases the soil heterogeneity over the 	<ul style="list-style-type: none"> The Southern Brown Bandicoot is listed as Priority 5 under the DPaW Priority List. The DPaW threatened fauna database returned 154 records from a four km radial search, 22 of which were from Maida Vale. During the survey, one Southern Brown Bandicoot was observed running across an open paddock towards a grassy area. Diggings were also observed throughout the Survey Area. 	<ul style="list-style-type: none"> Although Quendas aren't endangered. They are VERY important ecosystem engineers that disperse our threatened plant seeds! Urbanisation of the area will result in degradation, fragmentation or permanent loss of quenda habitat. This will lead to inbreeding and the decline in population numbers. Because they are ecosystem engineers this will result in the further degradation of soil. Additionally, the reduction of the quenda population will result in the reduction in the threatened plant species that they help disperse the seeds of. 	

	<p>landscape, reduces soil density and brings buried nutrients to the surface for plants to access.</p> <p>2. Water infiltration is increased: Many eucalypt leaves are high in resins, waxes and aromatic oils (and are not readily eaten by herbivores). As the leaves decay, they create a hydrophobic crust-like layer on the top of the soil profile, which reduces water infiltration. Quendas break up this water repellent layer and allow an increase in the infiltration rate of rainwater. This increases the soil moisture content.</p> <p>3. Organic matter is captured: As quendas dig, they capture leaf litter and debris and turn it over allowing soil microbes and invertebrates to continue the nutrient cycle.</p> <p>4. Seed dispersal and plant recruitment: Seeds may become trapped or actively cached in foraging digs or burrows across the landscape and are then protected from wind and run-off, which may help seedling recruitment.</p> <p>5. Fungal dispersal and recruitment: There is a symbiotic tripartite relationship between quenda, plants and mycorrhizal fungi (Tay et al., 2018):</p> <p>a) The fungi provide food for quenda and in return the fungal spores are moved around the landscape either on the quenda (e.g. claws or nose) or contained within their scats.</p> <p>b) Plants benefit from a fungal association to help reach water and some nutrients and the plants provide fungi with photosynthates.</p> <p>https://www.natureconservation.org.au/wp-content/uploads/2019/11/Quenda-Our-Ecosystem-Engineers.pdf</p>		
<p><u>Water Rat</u></p>	<ul style="list-style-type: none"> • <i>Hydromys chrysogaster</i> is listed by the Department of Biodiversity Conservation and Attractions as a Priority 4 species (Rare, Near Threatened and other species in need of monitoring). https://rivers.dwer.wa.gov.au/species/hydromys-chrysogaster/ • Rakali play an important role in ecosystems. One way is by dispersing fungi spores which assist plants to extract water and nutrients from the soil. Rakali eat the fungi and spread it around the soil through their droppings. Australia's soil is nutrient-poor and ancient, so the fungi helps introduce nutrients, particularly phosphorous and nitrogen, and promotes native plant growth and resilience to diseases and droughts. 	<ul style="list-style-type: none"> • The Water Rat is listed as Priority 4 under the DPaW Priority List. • The DPaW threatened fauna database returned just two records of the Water Rat. This species is notoriously cryptic and not often detected during wildlife surveys. Suitable habitat (Crumpet Creek) is present in the Survey Area, therefore the Water Rat is considered as Possibly occurring in the Survey Area. 	<ul style="list-style-type: none"> • They were not observed in the area due to their cryptic nature. Further surveying effort by 360 Environment would result in better population size estimations. • Urbanisation of the area will result in degradation, fragmentation or permanent loss of water rat habitat. This will lead to inbreeding and the decline in population numbers. • A decline in water rat population numbers will result in a decline in the dispersal of

	https://riversofcarbon.org.au/guide-recognising-and-caring-for-rakali-our-australian-water-rat/		fungi spores which assist plants to extract water and nutrients from the soil. This will therefore further degrade the flora populations within the area.
- <i>Grevillea thelemanniana</i> subsp. <i>thelemanniana</i> - <i>Banksia mimica</i> - <i>Thelymitra stellata</i>		Potential Threatened species in the area that were not recorded by are likely to be present: - <i>Grevillea thelemanniana</i> subsp. <i>thelemanniana</i> - <i>Banksia mimica</i> - <i>Thelymitra stellata</i>	<ul style="list-style-type: none"> The fact that 360 Enviro did not find these species that are likely to be present within the area further emphasises the lack of surveying effort. They failed to survey the area after significant rainfall. Therefore, numerous flora species were not able to be identified.
- <i>Asteridea gracilis</i> - <i>Thelymitra variegata</i>		Potential priority species in the area that were not recorded by are likely to be present: - <i>Asteridea gracilis</i> - <i>Thelymitra variegata</i>	<ul style="list-style-type: none"> AGAIN, the fact that 360 Enviro did not find these species that are likely to be present within the area further emphasises the lack of surveying effort. They failed to survey the area after significant rainfall. Therefore, numerous flora species were not able to be identified.
<i>Haemodorum loratum</i> (priority)		INFO: <i>Haemodorum loratum</i> (priority) 360 ENVIRO: may not of been identifiable at the time of the survey based on the species November flowering period.	<ul style="list-style-type: none"> AGAIN, the fact that 360 Enviro did not find these species that are likely to be present within the area further emphasises the lack of surveying effort. They failed to survey the area after significant rainfall. Therefore, numerous flora species were not able to be identified.
<i>Isopogon drummondii</i> (priority 3)		There is no written policy on how to respond to the presence of priority flora species within proposed development sites. The presence of the species is dealt with by DER on a case by case basis.	<ul style="list-style-type: none"> The DER should be contacted and engaged to prevent the loss of this priority species. Failure may result in the loss of biodiversity.

Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-19 18:54:14

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

After reading the 360 Environmental Assessment Report. It has been identified that contaminated sites are within the area. This poses a significant health risk to people that would inhabit this area if developed.

The passage below was deirectly taken from the 360 Environmental Assessment Report.

"Contaminated Sites

- Two registered contaminated sites are located approximately 1.5 km to the west of the site and are classified as "Contaminated – Restricted Use" and "Remediated for Restricted Use" (Figure 10). Historical land use analysis of Lots 44, 45 and 46 Brewer Road, Maida Vale indicate a potential for asbestos contamination. The site has since been removed from the Contaminated Sites Register. The extent and severity of contamination (if any) is unknown. Further assessments may need to be undertaken at a later stage in the planning process."

The following health impacts are quoted from the Cancer Cousil Website:

"Asbestos is extremely fibrous and the tiny fibres are easily breathed in where they can become trapped in the lungs. Being exposed to asbestos increases the risk of developing cancers of the lung, ovary and larynx as well as mesothelioma (cancer of the lining of the lung)."

"Today, all states and territories in Australia have work health and safety laws that explain duty of care for employers and workers' responsibilities to reduce the risk of asbestos exposure."

<https://www.cancer.org.au/cancer-information/causes-and-prevention/workplace-cancer/asbestos>

If employers and workers have a responsibility to reduce the risk of asbestos exposure... doesn't the Western Australian Planning Comission too?

Stopping the development of this area will prevent exposing innocent member of the public to asbestos. This prevents people being exposed to a potentially life-threatening substance.

Further assessments of these areas MUST be undertaken not "later in the planning process" but BEFORE the rezoning and planning process is approved. Failure to do so would illustrate a disregard for the health and wellbeing of members of the community and result in the loss of trust that the public would have in the Australian Government.

File 1:

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File 2:

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File 3:

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-19 18:59:14

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

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surname:

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phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

I am _____, the owner of _____ I am writing to express my concern for the Maida Vale Urban Precinct as I am opposed to the rezoning.

All 147 lots that are affected by the Maida Vale Urban Precinct are governed under the City of Kalamunda Council.

The City of Kalamunda released a "KALAMUNDA ADVANCING 2031 Strategic Community Plan" which highlights the values and priorities of councillors and community members. In the creation of the KALAMUNDA ADVANCING 2031 Strategic Community Plan, 23 survey were returned, 9 submissions were received, 16 social media posts were published, 3753 emails were sent/collected, resulting in 6,585 impressions being expressed.

The values and priorities emphasised by our city councillors and community members in the KALAMUNDA ADVANCING 2031 Strategic Community Plan are greatly focused on our love and want to conserve the natural environment and wildlife within the city of Kalamunda.

Examples have been provided below to support this statement:

Example 1. Mayor, Margaret Thomas, wrote:

"All of us who live, work and visit the City of Kalamunda know what a fantastic place it is. We have much to be grateful for from our unique bushland environment to the abundant wildlife that calls this place home."

"Your feedback confirms the need to continue our focus on:"

"2. Protection and enhancement of the natural environment through the continued development and implementation of our Local Environment, Urban Forest and Biodiversity strategies and the Environmental Land Use Planning Strategy (ELUPS)."

Example 2. Our Future – Emergent Themes

"2. The City of Kalamunda continues to be a biodiversity hotspot needing conservation"

"12. Growth slower than anticipated but increases in Wattle Grove, Maida Vale and High Wycombe occurring"

"18. Increased demand for transparency, accountability, community consultation and engagement"

"19. Strong focus on natural assets including bushland and wetlands of national and international environmental and aboriginal cultural significance"

"28. Increased focus on greening the City by planting more trees down residential streets, along with the importance of protecting and enhancing our natural setting. There were also comments about preparing for emergencies, specifically bushfire prevention actions like clearing verges and trimming over hanging trees."

Example 3. Our Vision

"Connected Communities, Valuing Nature and Creating our Future Together"

Example 4. Our Vision Story

"Valuing Nature- In 2031 our cherished forests, bushlands, waterways, habitats and open space are protected and flourish. Our stewardship of the natural environment includes protecting and enhancing our natural bush areas and biodiversity,"

Your proposal in Maida Vale Urban Precinct to rezone 147 rural block into urban deferred does NOT align with the values of myself or what the community has reflected in the KALAMUNDA ADVANCING 2031 Strategic Community Plan.

Your Maida Vale Urban Precinct plans on the clearing and destruction of the natural bushland within our local area leading to flow on negative impacts on our native wildlife.

Page 157 of the Environmental Assessment clearly shows established *Banksia sessilis*, *Casuarina* sp. *Eucalyptus marginata*, *Corymbia calophylla*, *Eucalyptus rudis*, Jarrah (*Eucalyptus marginata*), Marri (*Corymbia calophylla*), Stag, Tuart (*Eucalyptus gomphocephala*) and Wandoo (*Eucalyptus wandoo*) trees identified for removal!

Less trees will lead to less nesting and foraging sites for our native bird life (especially for the endangered and critically endangered black cockatoos in the area). Specifically this development would result in the permanent loss of up to 36 hectares of black cockatoo habitat and 485 potential black cockatoo breeding trees.

More roads will lead to more roadkill of native wildlife. More houses will lead to less natural bushland habitat for our native wildlife and more fragmentation of native bushland potentially leading to inbreeding within population.

Introduced weeds species in household gardens will further lead to the degradation of soil and habitats. Lastly, increased human presence may alter the migration patterns and behaviour of wildlife due to noise and light pollution.

By pushing to rezone the proposed Maida Vale area, you have shown an utter disregard for the strong value of natural environment and wildlife conservation of the landowners within the area. That is why you will not get my support.

File 1:

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File 2:

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File 3:

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-13 08:51:06

About you

1 What is your first name?

First name:
Mareshet

2 What is your surname?

surname:
Meshesha

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:
mareshetmeshesha@gmail.com

5 What is your address?

address:

224 Hawtin Road, Maida Vale, WA 6057

6 Contact phone number:

phone number:
+61459462377

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

My property can see a huge increase in value when rezoned.

I can build, extend, subdivide or change the use of my land. Rezoning will allow me to subdivide or sell all or parts of my land to a developer who can subdivide and build residential unit blocks or commercial and industrial properties. Maida Vale is close to the airport, has the High Wycombe train near by, major shopping canters such as Midland and Carousel within a few kilometers. These advantages make Maida Vale suitable to rezoning to urban which will allow the building of houses for thousands families instead of the 170 property owners who occupy this large tract of valuable land.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-19 07:09:35

About you

1 What is your first name?

First name:
Emma

2 What is your surname?

surname:
Murray

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:
emlouisemurray@gmail.com

5 What is your address?

address:

1 Mundanup close Kelmscott
But I conduct a lease horse at 5 Bruce rd Maidavale

6 Contact phone number:

phone number:
0416301100

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

It will be taking away the opportunity of of leasing a horse which helps my mental health.
Secondly you will be removing important flora and fauna which help the survival of the black cockatoos and small marsupials.
Lastly it will be destroying the livelihood of the current business owners in the area.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-19 07:14:08

About you

1 What is your first name?

First name:

Aimee

2 What is your surname?

surname:

Winter

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

Aimzz_2@hotmail.com

5 What is your address?

address:

25 Lorikeet Loop, High Wycombe

6 Contact phone number:

phone number:

0401248463

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

I dont want to live in an area where there are only tiny blocks for people and houses. Large properties that accommodate for animals helps the wider community. My daughter has ridden horses in Maida Vale since she was 2, if the area is re-zoned then where would we take her? We would have to drive too far to another school which we just couldn't do between the lack of time and cost of fuel. The City of Kalamunda is known for nature and large blocks. Don't destroy that and become like every other Shire.

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File 2:

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File 1:
inbound6913783831526754004.heic was uploaded



Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-19 08:52:00

About you

1 What is your first name?

First name:
Brenda

2 What is your surname?

surname:
Smith

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:
accounts@starfitout.com.au

5 What is your address?

address:

309 sultana road east, maida vale

6 Contact phone number:

phone number:
0413702543

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

We currently reside in the area in question and would like it to remain special rural. It is a great lifestyle and I'm sure there are many families that would like a larger plot of land to raise their children and animals or just enjoy some space. Not everyone wants a 400m2 block. We have native animals and birds living on our land and have spent 26 years here and do not support the change.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-19 16:38:15

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

It's a lovely area and by opening it up future generations will be able to get into the housing market.

File 1:

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-19 18:15:58

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

As a young person cracking into the housing market is very difficult. I want to stay in this area to be close to friends and family as well as being close to the airport for work. I look forward to having the opportunity to buy where my family is.

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No file uploaded

Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-20 10:21:23

About you

1 What is your first name?

First name:

David

2 What is your surname?

surname:

sadler

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

davni1@bigpond.com

5 What is your address?

address:

143 Brewer Rd. Maida Vale

6 Contact phone number:

phone number:

+61412776788

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

This area is of Ecological significance. We have numerous Quendas, Many Red tailed Black cockatoos nesting in our trees. The Environment report was carried out but not at times when these cockatoos are roosting at dusk or early morning. Since "The Hales" development has been built, all the Wildlife from the area has moved into this area. If this area is bulldozed then there is nowhere for them to go. Several properties have Contaminated site registration. Western Power has an 80 mtr easement down Brewer Rd. Please save this only remaining area from the bulldozer and allow us to remain enjoying it's beauty.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-15 08:32:12

About you

1 What is your first name?

First name:

David

2 What is your surname?

surname:

sadler

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

davni1@bigpond.com

5 What is your address?

address:

143 Brewer Rd. Maida Vale

6 Contact phone number:

phone number:

+61412776788

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

*There are numerous constraints in the area including high voltage power lines and an easement to Western Power with provision for a further 330kv transmission line. Most of the properties in Brewer Rd have an 80mtr easement to Western Power.

*Several properties have also got easements to the Water Authority.

*Several of the properties are Contaminated sites listed on the Contaminated sites register, due to previous use as rubbish tips.

*The cost of infrastructure would be astronomical as all properties are on Septics with no Deep Sewerage.

* Quendas are also prolific throughout the area.

* Established horse business are in the area with the usage by many children to learn to ride.

* It is a fully treed area with a few bush blocks of rare flora, and many very old Native Trees.

*Red tailed Cockatoo are prolific in this area despite the Developers report to the contrary.

* The wildlife -Goannas, Birds, Bandicoots, etc.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-22 07:51:20

About you

1 What is your first name?

First name:

Tara

2 What is your surname?

surname:

Abeleira

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

ttopliff@hotmail.com

5 What is your address?

address:

34 Waterloo Crescent Lesmurdie WA 6076

6 Contact phone number:

phone number:

0437320427

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

Rosevale Park riding Bruce Road -reasons to preserve this riding school:

1. One of the last city accessible riding schools in Perth Metro.
2. Keeping this business alive provides many children with an opportunity to learn to ride. Important for recreational diversity.
3. Rosevale will be providing horse therapy in 2024. The mental health benefits are becoming increasingly in todays mental health crisis.
4. Urban living require recreation. It is important we don't swap recreational facilities for more houses and industrial sprawl. Instead we should be smarter with our living space e.g apartments and units over houses.
5. Planning needs to balance with leisure facilities and open spaces.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-22 10:37:11

About you

1 What is your first name?

First name:

Emma

2 What is your surname?

surname:

Cunnane

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

emmabonnie96@gmail.com

5 What is your address?

address:

5 balga place gooseberry hill

6 Contact phone number:

phone number:

0405149405

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

We enjoy the area , my daughter attends horse riding which she absolutely loves and has made a great change in her life , and would be ashame for it to end , we also are looking to buy large land in that area it would be a great shame if we can't , this area is beautiful the way it is and I do hope it does not change thank you

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-25 12:36:48

About you

1 What is your first name?

First name:
Steve

2 What is your surname?

surname:
Bennett

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:
bennettsteve58@gmail.com

5 What is your address?

address:

10 Bruce Road Maida Vale 6057

6 Contact phone number:

phone number:
0474185412

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

My family reasons for purchasing this block were many and varied and have not diminished in any way, the reasons have in fact been validated and expanded since moving in nearly 25 years ago, from giving the kids room to move and grow , run a few horses , sheep and a goat or two on occasion, grow some fruit and create a safe space away from neighbours for the kids, more recently grandkids and currently my wife with continuing mental health problems.

With the subdivisions surrounding us at present we have had a steady increase with traffic using our boundary roads as traffic corridors , hooning is a regular event with the majority of events attributable to vehicles coming from the latest subdivisions, we've had three vehicles in the last few years through our fences with one ending up in the pool. Petty theft and vandalism have noticeably increased with a number of violent incidents happening within walking distance from our property.

We now have one small area being referred to as the Maida Vale south development area that supports the entire subdivisions with people able to walk their animals , see a few trees with wildlife, cockatoos, Parrots, and the odd bandicoot , pat a horse or two, get to view the hills uninterrupted that is entirely unavailable in the subdivisions despite attempts from the planners to incorporate totally inadequate open spaces and tiny parks .. We currently have two horses in the paddocks that have families from recently developed areas bringing the kids and grandkids for regular visits , video and petting sessions.

I'm also running an Adhoc men's shed with a growing number of locals that have an appetite to work on a few project vehicles or motorbikes, borrow a few tools or just have a chat that is not available to them in the subdivisions. We also have a number of the local kids that regularly make use of the gym facilities in the shed .

The sense of community in this small pocket in the foothills and the opportunities that will be lost to the broader community if small areas like this are lost would be totally at odds with providing a sense of community within the shire.

With the amount of push from the realtors and property developers over many years failing to get a majority of numbers to support any development through the shire it's incredibly frustrating and disappointing that there is any push at all to develop this small parcel of land and is something the majority of us have no appetite for.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-26 17:19:50

About you

1 What is your first name?

First name:
Steve

2 What is your surname?

surname:
Bennett

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:
bennettsteve58@gmail.com

5 What is your address?

address:

10 Bruce Road Maida Vale W.A. 6057

6 Contact phone number:

phone number:
0474185412

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

After re-reading submissions and reports and attempting to follow the processes I have yet to see any reference to a process whereby the realtor and/or developer are able to basically conduct a door knock program offering inducements in the form of promised financial transfers prior to development if landholders sign up to support the development. I'm also yet to find where the landholders in any published process are able to stipulate the size of the landholdings they'd like to hold onto while development progresses around them.

Having been subject to this method of inducement I question the validity and ethics of this process and remain strongly opposed to both the proposed rezoning leading to sub development and the methods of the realtor and developer in garnering support for developing same.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-25 17:56:47

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

My name is _____ and I have lived on _____ for 60 years (both at _____). I am opposed to the proposed amendment to the Metropolitan Region Scheme because:

- I have been a truck driver for the past 30 years and park my truck on my property, which I wouldn't be able to do if the re-zoning is approved. This will have detrimental affects to my livelihood.
- I enjoy the rural lifestyle, open space and abundance of birds (including the endangered black cockatoos) that visit my property.
- The rezoning will involve clearing of trees which are home to the endangered black cockatoos (I see them in the trees along Hawtin road every day).
- We get many native animals on our property including Ducks, Bob Tailed Lizards, Quendas, Magpies, Kookaburras, Wattle Birds, Rainbow Bee Eaters (photos uploaded which were taken on 19 November 2015 on our property) and the three species of endangered black cockatoos (Carnaby: Specially protected fauna, Baudin: Vulnerable, Red-tailed: Vulnerable). Developing will destroy the habitat for these animals and result in population decrease.
- I remember when there was a rubbish tip off Kent road along Brewer road and this is a contaminated site.
- We have seen smokebush on the corner of Kent and Brewer which is endangered and will be cleared if the area is developed. Smoke bush was declared as Rare Flora under the Western Australian Wildlife Conservation Act 1950 in 1997 and is currently ranked as Vulnerable under World Conservation Union (IUCN 1994) Red List criteria B1+2c. The main threats are further land clearing. Only 25 populations of Conospermum undulatum left. 20 of the 25 population have extant plants.
- I am concerned about contamination to Crumpet Creek and Poison Gully Creek if development is to go ahead. The 360 EAP already shows degradation to these areas. The Blue-billed Ducks use these creeks and will be affected by the contamination.
- The big overhead powerlines are a health hazard and will affect more people if the area is developed and more houses are built. Although they propose to put a buffer zone in this area, housing in close proximity are still at risk of health implications such as cancer.

QUENDAS:

- Quendas are classified as a Priority 4 (Species of Conservation Concern) under the Western Australian Wildlife Conservation Act 1950. Quenda have declined within their range in south-western Australia, and in abundance since European arrival. This means they are Rare (Department of Justice 2019).
- Although Quendas aren't endangered. They are VERY important ecosystem engineers that disperse our native plant seeds! The main reasons for their decline include: habitat loss via land clearing for human development.
- They are responsible for the dispersal of native seeds which is important for environment sustainability.

RAINBOW BEE EATER:

- The population has declined by 50% since 2001.

BLACK COCKATOOS:

- There are now only approximately 15, 000 Carnaby Cockatoos left in the Perth-Peel region, and research indicates that their numbers are declining at 5% per annum (EPA Advice: Carnaby's Cockatoo in Environmental Impact Assessment in the Perth and Peel Region, May 2019).
- The EAP says the development will result in Permanent loss of fauna habitat, including up to 36 hectares of black cockatoo habitat and 485 potential black cockatoo breeding trees identified on site.
- EAP Page 171 figure shows removal or potential foraging and nesting black cockatoo areas.
- EAP Page 1181 figure shows limited number of cockatoo siting, calls heard, nesting and foraging.

CONTAMINATED SITES:

- Two registered contaminated sites are located approximately 1.5 km to the west of the site and are classified as "Contaminated – Restricted Use" and "Remediated for Restricted Use" (Figure 10). Historical land use analysis of Lots 44, 45 and 46 Brewer Road, Maida Vale indicate a potential for asbestos contamination. The site has since been removed from the Contaminated Sites Register. The extent and severity of contamination (if any) is unknown. Further assessments may need to be undertaken at a later stage in the planning process.

BLUE BILLED DUCKS:

- Threat to species: Destruction of habitat threatens the Blue-billed Duck, in particular land clearing, cropping, drainage and salinisation of water bodies and burning of riparian vegetation.

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Image.jpeg was uploaded

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File 1:
IMG_8842.jpeg was uploaded



File 2:
Image.jpeg was uploaded



Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-26 13:57:32

About you

1 What is your first name?

First name:

Andrew

2 What is your surname?

surname:

Gorman

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

agorman23@hotmail.com

5 What is your address?

address:

227 Hawtin Rd Maida Vale

6 Contact phone number:

phone number:

0497829476

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

Keep the foothills as they are,don't turn them into a sea of houses.We need green zones for rain catchment and wildlife

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-26 16:37:01

About you

1 What is your first name?

First name:

Shari

2 What is your surname?

surname:

Moore

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

jersha@bigpond.com

5 What is your address?

address:

165 Grove Road, Lesmurdie 6076

6 Contact phone number:

phone number:

0437784235

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

The removal of all vegetation for new housing is detrimental to the local wildlife, who suddenly have no home or habitat. Larger areas of trees and bush should be included in planning not destroyed then replanted.

The extra traffic to the whole surrounding area would be enormous. Extra pressure on all the local infrastructure including shops and schools. Creating new precincts without the proper insight creates traffic bottlenecks as can clearly be experienced in Midland, no thought to the size of road and volume of traffic. The whole area is a disaster traffic wise.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-26 17:14:51

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

28

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

We are supportive of this scheme and look forward to the process moving forward.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-26 19:25:45

About you

1 What is your first name?

First name:
Domenica

2 What is your surname?

surname:
Dobkowski

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:
domenicad@iinet.net.au

5 What is your address?

address:

175 Brewer Road
MAIDA VALE

6 Contact phone number:

phone number:
0402201447

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

To Whom it may concern

I am writing to express my strong opposition to the amendment proposed to rezone-land in maida vale from rural to urban

Kalamunda and surrounds are turning into another concrete suburb with tiny little blocks, thanks to greedy developers who are only interested in making money. The hills will no longer be the hills if this is allowed to happen. What is going to happen to all our native animals and birds? where are they going to go when all their habitat is destroyed? We need to preserve our wildlife and bush land not bulldoze the remaining habitat that they have left. Wildlife has been observed in this area and any development will definitely destroy their habitat. We have a large variety of birds, bandicoots and bobtails that we have the pleasure of seeing on our property. We need to give them all as much natural habitat we can, to breed and to feed.

We are sick and tired of developers trying to take over our beautiful unique semi rural properties, we just want to maintain our chosen lifestyle, we've been here 26 years and it's heartbreaking seeing the changes that have taken place so far, please preserve what we have left because there's not many areas like this left. We don't all want to live on tiny blocks, we chose to live here because of the peace and quiet, the open spaces, wildlife and the beautiful bushland. Nearly all residents in this area are completely opposed to the rezoning and subdivision but the developers just won't take no for an answer.

This rural area is very unique, we get many compliments from family and friends regarding how beautiful the area is. We have neighbours with horses, sheep and emus, it's wonderful seeing people park their cars and get out to show their children. We even have children having horse riding lessons around the block.

Subdivision will cause more traffic, more noise and more crime.

Please we beg you to disapprove the proposed rezoning, and from recent meetings and discussions with my neighbours, I know my opinions are shared by many.

Kind regards
Domenica Dobkowski

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-27 14:15:54

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

On behalf of the property at

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

*WA is experiencing a land and housing shortage. The land under consideration is close to major road infrastructure. Rail infrastructure is also planned, with a station considered in High Wycombe. This will provide transport infrastructure which will benefit all persons living in the surrounding area including an increased population.

*Maida Vale South, the area under consideration for development, has seen the land on its east and west boundaries already developed as housing. This means Maida Vale south is a small parcel of land in the middle of well established housing developments which has already impacted on the ideals of a rural setting as argued by those petitioning to stop the re-zoning of Maida Vale south. It seems illogical to maintain this parcel of land as rural.

*Monument, M/Group Brand, suggests that it may take up to 20 years for the development to be completed. It could be suggested that current landowners who currently support a "stop to re-zoning" may cease living in the area within that timeframe which would make their arguments null and void.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-10-30 18:41:02

About you

1 What is your first name?

First name:

Alison

2 What is your surname?

surname:

Bishop

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

alisonlbishop88@gmail.com

5 What is your address?

address:

910 Coulston Road Boya WA

6 Contact phone number:

phone number:

0401451489

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

I am an ecologist and hills community member. Urban infill is removing important ecological linkages between bushland remnants. This area should remained zoned as semi rural, being on the outskirts of Perth and within the foothills of the darling scarp. We have the scientific knowledge and indigenous understanding that bushland and green space needs our priority protection, not only for nature protection but also for human health. Kalamunda Shire use to pride itself with the amount of tree canopy it had, a home among the forest. Our legislation is poor at protecting our biodiversity hotspot in Western Australia, and council shires are allowing death by a thousand cuts. The Amendment would allow for clearing of remnant bushland and destruction of our important ecological linkages of now limited urban bushland. habitat trees, shrubs and grasses including as an ecological linkage for our iconic black cockatoos. In addition, removal of trees increases the heat island effect, contributes to climate change and removes the aesthetic value of having nature in our suburbs. It contradicts the Native vegetation policy for Western Australia to have a net gain in native vegetation – not an ongoing deficit. The current vegetation also contributes significantly to the The 3-30-300 Rule for Healthier and Greener Cities : NBSI where everyone has:

- 3 medium-large trees within sight of their home
- 30% canopy cover in their suburb and
- a park or green space within 300m (not just offset parks created with nature play areas and no trees)

The Federal government has signed up to protect 30% of our lands and waters through conservation and restoration by 2030, yet at the state and local government levels, this has not been strategically defined. It will always be someone else's remit to do this, but really it starts at this level. Our neighbourhood level, of pushing back Strategic Assessments to pass land zone changes for housing developments to occur. The EPA needs to reject this proposal.

File 1:

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File 2:

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File 3:

No file uploaded

Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-01 09:43:58

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

Reasons for support:

1. Current acute shortage of new residential lots in Perth metro seriously demands subdivision in this area without further delay.
2. This subdivision will increase use of public transport, particularly for the train services from the new train station in High Wycombe to the airports and Perth suburbs.
3. With newly developed residential areas to the north and south of the proposed subdivision area (Maida Vale South), it is imperative that this subdivision should proceed to maximise the use of the current and proposed infrastructure in this region.
4. The subdivision will reduce the risk of bushland fires in this region.

File 1:

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-04 11:49:13

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

The government is being racist to Australian's.

"The Aussie dream is to have a quarter acre block with a house" Stop making Australian's live like we are living in India or China. On top of each other.

I enjoy being around my bandicoots, blue tongue lizards, cockatoos and kookaburras. People from the city come out to our areas to visit to get away from living on top of each other.

File 1:

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File 2:

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File 3:

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-04 12:02:05

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

Stop carving up our Rural areas. We will have nothing left. Australia contains native animals that deserve to live, not to be bulldozed over by the Government's greed. You have not completed Bushmead which has caused massive road interruptions.

File 1:

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-04 12:07:05

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

There is no reason supporting this Zone change other than government greed. Where are all the animals going to? Be run over on Roe Highway?

File 1:

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File 2:

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File 3:

No file uploaded

Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-05 18:56:25

About you

1 What is your first name?

First name:

Sharon and Gavin

2 What is your surname?

surname:

Nairn

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

gsnairn@bigpond.com

5 What is your address?

address:

32 Rhodes Place
MAIDA VALE WA 6057

6 Contact phone number:

phone number:

0410003815

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

We SUPPORT the development of the Maida Vale Urban Precinct (MRS Amendment 1344/57) because it is an opportunity to develop this area (sometime in the future) in the most aesthetically pleasing, well planned, well considered way. The plans that have been put forward by the Developer, City of Kalamunda, Infrastructure Planners and Environmental Departments have taken into account the current environment and the local amenities/facilities. Based on many discussions and presentations (with all parties involved) and existing lands already developed by the Developer (M/Group), it is evident that a huge amount of care has been and will continue to be given to the development of the Maida Vale area. M/Group has been extremely transparent in their planning for the area while considering the feelings of the current residents. The staff involved have been very approachable and open to answering any questions by residents.

Due to its location, Maida Vale is very close to the new High Wycombe Train Station, Kalamunda, Midland and Forrestfield (to name a few) and Roe Highway is very easily accessible and public transport (buses) between the abovementioned suburbs is very convenient. For this reason, this land is perfect for families to live and grow in this area. This block of land is close to many existing schools close by, community sports/ovals and has existing trees and bush areas, so when blocks are made available for families to build their homes on, it won't take long for it to look established with all of these amenities in the area immediately available to them.

There is no doubt that this land will eventually be re-zoned, and we would prefer it be re-zoned now and developed by M/Group in its entirety, so it can be developed in a well-considered, aesthetically pleasing and consistent way, utilising the existing environmental features.

File 1:

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File 2:

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No file uploaded

Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-08 13:57:49

About you

1 What is your first name?

First ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

This is a unique area of special rural lots where I have lived for 41 years.

We have a tree canopy which is sadly missing from new developments and I feel this is the "Kings Park" of the foothills.

We have many birds, bandicoots, goannas etc., that live on these blocks. How sad it would be to lose all this and have nowhere for nature to thrive.

Surely there are other areas more suited to the intense development that is now starting to surround us, they are a "sea of roofs" and are not environmentally acceptable.

Perth has very hot summers and needs a greenbelt around it with trees to cool and help it breathe.

Please think very deeply and carefully before allowing this area to be ruined - it is something that can never be replaced.

File 1:

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File 2:

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File 3:

No file uploaded

Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-08 14:42:22

About you

1 What is your first name?

First name:

Linda

2 What is your surname?

surname:

Ferguson

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

fergz4@bigpond.com

5 What is your address?

address:

4 Quenington Court, Maida vale 6057

6 Contact phone number:

phone number:

0414089041

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

File 1:

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-16 13:47:34

About you

1 What is your first name?

First name:

Linda

2 What is your surname?

surname:

Ferguson

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

fergz4@bigpond.com

5 What is your address?

address:

4 Quenington Court, Maida vale

6 Contact phone number:

phone number:

0414089041

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

I support this new amendment 100%. The blocks just now are way too big and the majority of the home owners only use small sections of their land. Being so close to the city, airport and public transport would be a huge draw for families and it is much needed in this area. We need to build more housing to keep up with the times and the demand, Maida Vale is perfect for this.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-16 13:59:46

About you

1 What is your first name?

First name:

Linda

2 What is your surname?

surname:

Ferguson

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

fergz4@bigpond.com

5 What is your address?

address:

4 Quenington court, Maida Vale

6 Contact phone number:

phone number:

0414089041

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

I support this new amendment 100%. The blocks just now are way too big and the majority of the home owners only use small sections of their land. Being so close to the city, airport and public transport would be a huge draw for families and it is much needed in this area. We need to build more housing to keep up with the times and the demand, Maida Vale is perfect for this.

File 1:

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-08 14:44:09

About you

1 What is your first name?

First name:
William Scott

2 What is your surname?

surname:
Ferguson

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:
fergz4@bigpond.com

5 What is your address?

address:

4 Quenington Court, Maida vale 6057

6 Contact phone number:

phone number:
0417957833

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

File 1:
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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-16 13:53:22

About you

1 What is your first name?

First name:
William Scott

2 What is your surname?

surname:
Ferguson

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:
fergz4@bigpond.com

5 What is your address?

address:

4 Quenington Court, Maida Vale

6 Contact phone number:

phone number:
0417957833

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

I am in support of the subdivision of land in Maida vale. The proximity to the airport, public transport and local shopping areas is a huge draw for people looking at purchasing land. More houses are needed in this area

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File 2:
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File 3:
No file uploaded

Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-16 14:02:44

About you

1 What is your first name?

First name:
William Scott

2 What is your surname?

surname:
Ferguson

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:
fergz4@bigpond.com

5 What is your address?

address:

4 Quenington Court, Maida Vale

6 Contact phone number:

phone number:
0417957833

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

I am in support of the subdivision of land in Maida vale. The proximity to the airport, public transport and local shopping areas is a huge draw for people looking at purchasing land. More houses are needed in this area.

File 1:
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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-09 11:43:16

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

I am concerned that this amendment will result in the removal of habitat trees, shrubs and grasses including as an ecological linkage for our iconic black cockatoos. In addition, removal of trees increases the heat island effect, contributes to climate change and removes the aesthetic value of having nature in our suburbs. It contradicts the Native vegetation policy for Western Australia to have a net gain in native vegetation – not an ongoing deficit. The current vegetation also contributes significantly to the The 3-30-300 Rule for Healthier and Greener Cities : NBSI where everyone has:

- * 3 medium-large trees within sight of their home
- * 30% canopy cover in their suburb and
- * a park or green space within 300m.

File 1:

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File 2:

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File 3:

No file uploaded

Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-09 19:29:57

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

There needs to be a limit to how much land is being cleared for housing developments. The City of Kalamunda has always promoted itself as a 'home in the hills' and people who have chosen to live there do so because of the diverse flora and fauna. Already, huge areas have been cleared along Midland Road, Wattle Grove, etc. Where are we providing safe spaces for the wildlife to thrive? With all the talk about global warming, one would think that there would be more consideration about preserving the natural environment rather than dense housing developments being approved which required vast areas of vegetation to be cleared. Already the black cockatoos are endangered so losing their habitat in Maida Vale can only add to the problem. Housing is needed, but proper planning is essential to ensure that our wildlife is protected.

File 1:

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-12 23:23:34

About you

1 What is your first name?

First name:

Joyce & Charlie

2 What is your surname?

surname:

Marrell

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

joyce_workshops@yahoo.com.au

5 What is your address?

address:

10 Arundel Court, Maida Vale

6 Contact phone number:

phone number:

0417 069 501

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

To Whom It May Concern,

We live, like many others in the proposed area for subdivision, on two and a half acres which is home not only to us, but to a wide variety of flora and fauna. We have bandicoots, blue tongue goannas, frogs, bees, small skinks and lizards, bush rats plus kookaburras, red tailed black cockatoos, magpies, fairy wrens, willy wagtails, rainbow eaters, swallows, crows, mudlarks, butcher birds, doves, honey eaters, little greenies, parrots and so many more I could keep going. We have multiple pockets of Australian Christmas Trees, Grass Trees, Kangaroo Paws, Smoke Bush, Milkmaids, Bacon & Egg, Geraldton Wax, Leschenaultia, Gum trees, Wattles, Orchids and many others we don't know the name of. How many suburbs do you know that can claim this?

Subdivision will put all of these plants and animals under threat by either eradicating them completely or taking away their nesting habitats! Have they not got a voice?

Developers always promise to protect these areas but from past subdivisions, it is obvious from Wattle Grove, Forrestfield and through to Maida Vale, they have totally eradicated the natural bushlands. Did you know that Forrestfield and along Roe Highway used to flourish with wildflowers? Where are they now? Surely, we should be preserving our natural fauna and flora??

We live here for the peace, tranquility and harmony. It's a special pocket, once zoned Special Rural and the home to many protected species.

Today, new developments have smaller blocks, homes built so closely you can hear what's going on in neighbours' private conversations, narrower roads, limited or no parking for visitors etc.

Trees are gone and the blocks are so small, none can be planted by the owners. Aren't trees part of the water cycle? No wonder Perth is getting dryer and hotter!

Isn't it well known around the world that nature is valuable for mental health, well-being, stress decoders, health enhancers? Doctors and psychologists encourage people to get out and walk, to be amongst nature. This reduces blood pressure, clears the mind, enhances health etc. Hospitals and businesses have "green" areas to give people places to relax, calm down and go to during their lunch breaks.

There's a problem in society with kids and adults being glued to technology. People in built up areas have homes with no large areas outdoors. There's no room for pretend play, kicking a ball, throwing a netball into a hoop. Kids used to play together, be creative, make cubbies, play marbles, kick the ball. They used to learn how to look after animals, gardens and work with their parents outdoors. Not now!

Why should we be punished and have our choice of living taken away all because someone sees the need to make money, become rich and think this is the way because others should have a new home and lifestyle in our area??? That's an excuse for them to make money at our expense. Let the people who want to downsize, sell to someone who wants to live and/or bring up their family with nature, space and tranquility. We don't need a new road link to connect us to High Wycombe station as it's less than a ten minute drive. We are close to major places: the airport, Cannington, Midland, Highways, Perth. We don't need any other access as we are well catered for.

This development will take away people's businesses! These people have worked hard to establish their business in their home. This is how they make their money to survive. What traumas will you cause them with mental anguish as to where they could relocate if they could afford to? After the devastating effects Covid had on employment, is this necessary?

It's well documented that the survival of bees is in jeopardy. Home owners rarely plant gardens with flowers. Our trees blossom and the wildflowers bloom which swarm with bees! What happens then, when the area is flattened for homes to be built? Where will birds and butterflies get their nectar? How will other plants be pollinated? Where will the cockatoos, parrots and wildlife eat to survive when our land is flattened? What will happen to the survival of the frogs?

Anything man-made can be destroyed but it can also be rebuilt or replaced. Can nature be replaced once it's roots have been removed?

Koalas are only expected to live another 25 years. How long before our native birds and animals will be extinct? Why is there a worldwide push for saving the Earth, protecting the environment and looking after the natural habitats of wildlife, not being adhered to in our pocket of residence? Aren't we our future for helping to conserve instead of destroy?

Fairy Wrens need thickets to build nests, willy wag tails need small trees, cockatoos need hollows in tree trunks, rainbow eaters need to burrow in the ground, bees need blossoms in great quantities. We offer that in our properties.

When a fire goes through an area, everyone is worried about the wildlife. Are our developers worried about taking the natural habitats of our local wildlife? Increased traffic will kill them as they cross roads!

At the moment, our wildlife exists in harmony with our environments. Subdivision will destroy this.

Please leave our area alone. It's a precious place filled with history, rare species and protected flora and fauna. Don't destroy this natural pocket. It's unique and that's why the developers want it because our properties are big enough for multiple homes to be built which equals money in their pockets. Leave our homes and businesses as they are. Let the ones who want to subdivide, sell and move on to allow another generation to live in peace, harmony and tranquility whilst at the same time, preserving our precious West Australian plants and animals. This is our choice of a lifestyle. We are not in the business of wanting to make money from where we live. We want to live and enjoy the life we purposely chose when we bought our land and built our homes.

Please consider our points of interest for preserving where we live, not only because it's our home but because we are the caretakers of the land and animals which live harmoniously amongst us.

Thank you,

Joyce & Charlie Marrell

File 1:
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File 2:
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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-13 11:25:55

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

The City of Gosnells supports the Metropolitan Region Scheme Amendment 1344/57

File 1:

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File 3:

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-13 14:59:28

About you

1 What is your first name?

First name:
Sheryl

2 What is your surname?

surname:
Gibbings

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:
gibbos666@gmail.com

5 What is your address?

address:

11 Clovelly court
Maida Vale WA

6 Contact phone number:

phone number:
0414299643

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

When we purchased our property in early 2000s we were told by City of Kalamunda that our area would be rezoned residential. It has always been our intention to sell part of our property for housing and with the proceeds top up our pension.

File 1:
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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-16 22:30:04

About you

1 What is your first name?

First name:

Sheryl

2 What is your surname?

surname:

Gibbings

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

gibbos666@gmail.com

5 What is your address?

address:

11 Clovelly court Maida Vale WA

6 Contact phone number:

phone number:

0414299643

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

We moved into Maida Vale in early 2000s and at that time were told about rezoning by the City of Kalamunda would be. happening in this area. This suited us and the main reason for buying in this area. I believe the developer will maintain enough bushland for all the animals and the residents to be content with the outcome. I fully support the development and am looking forward to when it happens.

File 1:

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-15 09:37:32

About you

1 What is your first name?

First name:

Ian

2 What is your surname?

surname:

Burns

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

solaris@iinet.net.au

5 What is your address?

address:

188 Forrest Rd
Pickering Brook
WA 6076

6 Contact phone number:

phone number:

0892938347

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

We live on 20 acres in Pickering Brook, and our land is half-orchard a,d half-forrest.

The forest is habitat for a family of 10 red kangaroos, native birds and other native fauna.

It is also a food and living space of a family of 9 red-tailed cockatoos. They have a ranging area of around 3 sq. km. in Pickering Brook.

The cockatoos do not eat orchard fruit or other introduced flora species. They depend on native flora for their food, shelter and existence.

And they are shy of people and do not come into the orchard, even for a brief rest.

So the idea, proposed by the developer, that an urban development can enhance the rural environment needed by these birds to survive, is a self-interested lie. it is green-wash.

Red-tailed cockatoos simply do not live in urban areas. There is insufficient food and shelter, not to mention the cats, dogs and humans which they stay well clear of.

We live with these birds on this land. We are clear about what we see.

And we don't see red-tailed cockatoos when we go shopping in Kalamunda.

File 1:
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File 2:
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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-16 12:54:07

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

We have a property that we would like to rezone and we need more housing in the area.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-16 19:45:06

About you

1 What is your first name?

First name:

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

Myself and my wife support the development/ rezoning because we think this would be good for this area. We believe it will be a great development with shopping precincts, schools parks and other infrastructure which isn't here at the moment

File 1:

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-16 17:12:17

About you

1 What is your first name?

First name:

Lynn

2 What is your surname?

surname:

Macskasy

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

lynnmacskasy@hotmail.com

5 What is your address?

address:

30 Oxford Court

Maida vale

6 Contact phone number:

phone number:

0419769532

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

Please rezone ASAP.

We have been waiting for 13 years.

This is my superannuation as well as wanting to stay in the area but live on a smaller,easy to look after block.

We need more housing

We need more infill

We are ready for development.

Please go ahead and populate the area.

File 1:

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-16 22:23:19

About you

1 What is your first name?

First name:
Ian

2 What is your surname?

surname:
Gibbings

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:
igibbos66@gmail.com

5 What is your address?

address:

11 Clovelly court,
Maida Vale
Was 6057

6 Contact phone number:

phone number:
0449196195

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

As a long time resident of the Maida Vale South area, I see so much vacant and unused land.
Being so close to the city, the new development in Midland and the new rail service from High Wycombe and the need for additional housing for our growing population, I think the time has come to rezone and developed this area.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-16 22:33:52

About you

1 What is your first name?

First name:

Ian

2 What is your surname?

surname:

Gibbings

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

igibbos66@gmail.com

5 What is your address?

address:

11 Clovelly court

Maida Vale

Was 6057

6 Contact phone number:

phone number:

0449196195

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

As a long time resident of the Maida Vale South area, I see so much unused vacant land.

With its close proximity to the city, all the new development in nearby Midland and the new rail service at High Wycombe and with the need for housing to accommodate our growing population, the time has come to rezone and develop.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-18 16:07:31

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

I would like to register my opposition to the proposed development of Maida Vale South by Monument. Some of my concerns are as follows :

Cockatoo

There are 3 threatened species of cockatoo present in the area including Carnaby: Specially protected fauna (WA listing), Baudin: Vulnerable (WA listing) and Red-tailed: Vulnerable (WA listing)

Numerous conservation entities, including the Australian Conservation Foundation, identify the main threats to Black cockatoo's being habitat loss and degradation, competition for nesting sites and declining food supplies

There are now only approximately 15, 000 Carnaby Cockatoos left in the Perth-Peel region, and research indicates that their numbers are declining at 5% per annum (EPA Advice: Carnaby's Cockatoo in Environmental Impact Assessment in the Perth and Peel Region, May 2019). Fragmentation of land leading to inbreeding in animal populations, reduces genetic diversity.

Amphibians

The ER states no amphibians were recorded during the surveys carried out. These surveys were apparently carried out during the daylight hours, we have seen frogs at night at this location particularly late winter/ early spring

Quenda

Quenda are classified as a Priority 4 (Species of Conservation Concern) under the Western Australian Wildlife Conservation Act 1950. Quenda have declined within their range in south-western Australia, and in abundance since European arrival - we have noticed a significant decline in the number of quendas at this location over the last few years. A real concern is the number of quenda hit and killed by cars as they attempt to cross the road. The loss of quenda will increase substantially with this proposed development because of the huge increase in traffic.

Environmental Factors

Three preliminary environment factors have been identified by the EPA with the following objectives

Flora & vegetation - "To protect flora and vegetation so that biological diversity and ecological integrity are maintained"

Terrestrial fauna - "to protect terrestrial fauna so that biological diversity and ecological integrity are maintained"

Inland waters - "to maintain hydrological regimes and quality of groundwater so that environmental values are protected"

This proposed development, should it go ahead, will have a detrimental effect on the remnant vegetation, remaining terrestrial fauna and local water ways (including Crumpet Creek). It will increase the risk of becoming a "heat sink" region with the probability of a high number of residences having metal/tile roofs, kilometres of black asphalt roads to enable access to the approximately 2,122 properties.

There will be permanent loss of fauna habitat including black cockatoo habitat and breeding trees, detrimental effects on fauna behaviour due to noise, lighting, human presence and in the development stage, earthmoving and machinery activities. There will be impacts on water quality both ground water and surface water during construction as well as draw down of groundwater for subsequent reticulation activities

This approximately 177 hectares should be retained as a "green" buffer between current dense housing developments (eg neighbouring Forrestfield area between Apricot Street and Hawtin Road – barely a tree in sight) surrounding this area and the Darling Scarp

Concerns for *Conospermum undulatum* (SmokeBush) which is found in this area - development for housing and industry has resulted in the fragmentation of much of the remnant bushland in which the plant occurs. The species was declared as Rare Flora in 1997

Quotes from ER - "No Blue-billed ducks were recorded within the Survey Area... Although the species may utilize the Crumpet Creek Fauna habitat it is unlikely the species will be reliant on the Survey Area" - the ducks return to the Crumpet Creek reserve each year to breed, they have been observed nesting in a hollow tree on Sultana Road East every year for the past 35 years in which we have lived on Sultana Road East. The ducks have also graze on adjacent areas of grasses

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-20 09:45:03

About you

1 What is your first name?

First name:

Ada Mary

2 What is your surname?

surname:

Holford

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

rane_haulage@bigpond.com

5 What is your address?

address:

188 Hawtin Road Maida Vale 6057

6 Contact phone number:

phone number:

0438414472

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

As a senior living on my daughters property I can see and understand the need for the area to be rezoned.

My grandchildren are keen to stay in the area close to myself and their parents and the opportunity of some blocks becoming available is encouraging for them.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-21 06:25:47

About you

1 What is your first name?

First name:

Lauren

2 What is your surname?

surname:

Brunalli

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

laurenhbrunalli@gmail.com

5 What is your address?

address:

188 Hawtin Road, Maida Vale

6 Contact phone number:

phone number:

+61400066462

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

As I have grown up in this area I would like to continue living in the area. I work fifo so prefer to be close to the area. My family want to continue living in Maida Vale and I hope to be able to stay close to them.

With this in mind I feel we have limited opportunities to purchase land around Maida Vale and feel the re-zoning will provide more possibilities.

With the urban spread of Perth, and Maida Vale's close proximity to the CBD and facilities I feel the re-zoning is crucial.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-21 08:42:58

About you

1 What is your first name?

First name:
Keith

2 What is your surname?

surname:
James

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:
stackair@gmail.com

5 What is your address?

address:

178A Birkett street, Dianella. 6059. WA.

6 Contact phone number:

phone number:
0407986489

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

I am making this submission on behalf of Birdlife WA, and as a member of the Birdlife WA Advocacy group. We are concerned that such a large number of potential roosting trees for the Red-tailed Black Cockatoo (485 according to the EPA ER) and that such a large area (36 hectares) of habitat would be lost to this bird species. It has come to our recent attention (Saunders and Pickett, 2023) that the Forest Red-tailed Black Cockatoo (C. banksii) is a separate species of black cockatoo from other Australian species of Red-tailed Black Cockatoos, which may as a result raise its status from Threatened to Endangered.

We believe that every effort should be made to preserve healthy forest in this context, and to maintain forest corridors to enable free movement of fauna across the northern Jarrah forest.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-21 12:22:37

About you

1 What is your first name?

First name:
Diane

2 What is your surname?

surname:
Demetriou

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:
dididemetriou@gmail.com

5 What is your address?

address:

22a Abercorn Road
Forrestfield
WA
6058

6 Contact phone number:

phone number:
0420639587

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

I live just down the road from where this proposed development is meant to be happening. This is so unfortunate, this is such a beautiful area where you see lots of wildlife like the endangered Black cockatoos, the quendas and there families and many other animals that will have there habitat destroyed. Ducks are already struggling to navigate to where they usually nest due to works in the area happening already. Snakes are going into recently built properties as they have no where else to go due to the works being done already. Traffic has already increased in the area and making it harder to get in and out of not only Forrestfield but also Maida Vale.

We have a horse on an agistment centre and riding school which we love going to, where would we move our horse to that I not more than over an hours drive away? People love this area and have been there for many years, a lifestyle they have chosen only to be forced to move and start all over again, many elderly they don't want to be uprooted and see the property they have built up be torn apart. Please put yourself in their shoes? The wildlife having homes destroyed is devastating and awful.

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File 3:
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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-21 16:56:46

About you

1 What is your first name?

First name:
Leonie

2 What is your surname?

surname:
Stubbs

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:
lbs_read@westnet.com.au

5 What is your address?

address:

4 Bentley Street, Singleton WA 6175

6 Contact phone number:

phone number:
0439 921 298

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

I oppose any change in zoning because it will result in a loss of Carnaby's Cockatoo habitat. Any loss of Carnaby's Cockatoo habitat increases the threat of extinction for this species. I consider this to be unacceptable when government, industry and developers know the precarious nature of that species' current situation and yet it appears are quite prepared to accept the consequences.

As with government and industries' approach to climate change, where they know exactly what needs to be done but wilfully ignore the science and continue with "business as usual", the same is happening with clearing on the Swan Coastal Plain. The scientific facts are clear in terms of threatened ecological communities and fauna species at risk of extinction, yet clearing of bushland continues apace. Offsets are an illusion - if the vegetation is cockatoo habitat then it is being utilised by the cockatoos. If land clearing of cockatoo habitat occurs then that is a loss of cockatoo habitat irrespective of how many hectares of offsets or revegetation projects are included in the project. Our cockatoo species desperately need foraging habitat now, not in ten or fifteen years time.

Currently this area is minimising the heat island effect of the surrounding residential areas. This is not inconsequential considering the fact that this November is shaping up to break records for the number of sequential extremely hot days, etc.

A further point is just from a casual glance at the reasons given for why people love living in Maida Vale is the number of parks, the rural aspect so close to the city and its friendliness. These important aspects will be lost if development occurs.

We need to maintain our rural areas and rather than clear them for residential development, instead provide incentives to improve biodiversity in the degraded areas and along the creeklines. This would align with the government's Native Vegetation Policy for Western Australia.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-21 19:00:32

About you

1 What is your first name?

First name:

Penny

2 What is your surname?

surname:

Lee

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:

penny_lee@iinet.net.au

5 What is your address?

address:

PO Box 39, Maylands WA 6931

6 Contact phone number:

phone number:

0448543755

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

I support the amendment because I understand the necessity to expand medium density and medium and low cost housing in the metropolitan area. I am, however, very concerned that all current and proposed new developments need to take into account the fact that Perth is expected to become much hotter within the near future. This has not been highlighted in the EPA requirements. Nor has it been addressed in the proponent's response. Record temperatures are already being experienced. Housing built today needs to take into account increasing costs of power into the future. For this reason, new housing precincts need to be designed from the beginning to incorporate as much low water requiring vegetation as possible. Suburbs like Maida Vale already sustain much hotter average temperatures than coastal suburbs. This is going to get worse in future. It is important that as much existing native vegetation is retained as possible and that local area planning be required to include such features as shaded dual purpose walkway/cycle paths. For instance, workers may want to cycle to the High Wycombe rail station and children should be able to walk or cycle to nearby schools. The retention of some areas of existing vegetation with mature trees plus understory and the proposal to revegetate additional areas is to be commended, both for the comfort of residents moving into the area and living in the area into future decades and also for the maintenance and enhancement of existing biodiversity and habitat for foraging fauna. It is true that native vegetation is already fragmented but the proposal confirms that it is likely to become more so. This problem is significant and must be addressed by the EPA. The developers need to be required to retain a much greater number of existing trees by incorporating them into local nature links, for instance along dual purpose paths to and from schools and shops. As it stands, the vegetation to be retained seems to be the bare minimum to meet EPA requirements. Where existing trees do not have native understory currently, revegetation should be required at the same time as houses are built.

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Submission urging Rejection of MRS Amendment 1344/57 Maida Vale Urban Precinct

Dear WAPC/EPA Members

I urge you to emphatically reject proposed MRS Amendment 1344/57 Maida Vale Urban Precinct. This proposal, aiming to introduce 5,400 homes via R30 subdivision, in an area of profound environmental significance, is poised not just as a threat to the present community but as a dire infringement upon the sanctity of Perth's future.

Photographs of R30 developments.



Currently inhabited by 147 families, the Amendment area is more than just a piece of land. It's a thriving community, a delicate ecosystem, and a haven for diverse flora and fauna, including threatened species. The proposal, if approved, would not only displace these families but also ravage the ecological balance that this area sustains.

The echoes of past decisions by the Environmental Protection Authority (EPA) in 2017 against the *Shire of Gingin Local Planning Scheme 9* resonate loudly here. The EPA then, with unequivocal clarity, highlighted the irreversible environmental damage that would result from similar rezoning actions.

The clearing of low representation remnant vegetation, the destruction of threatened ecological communities, and the habitat endangerment of species such as the Black Cockatoo were highlighted in its Reasons for Decision —**ALL** factors ominously present in this current proposal.

In this instance, the EPA rightly concluded that the rezoning proposal was *'incapable of being made environmentally acceptable under Part IV of the Environmental Protection Act 1986 (WA)*

Moreover, the Department of Planning, Lands, and Heritage (DPLH) at that time wisely voiced their opposition to the rezoning proposal due to the absence of a genuine necessity to permit intense develop in an area recognized for its significant environmental values.

These stances resoundingly align with the fundamental principles embedded in both the State Planning Framework and the EPA Act—a commitment to conserving natural assets, ensuring intergenerational equity, and conserving biological diversity and ecological integrity.

The proposed Amendment seeks to obliterate invaluable environmental elements. It acknowledges the removal of over 80% of foraging habitat and native vegetation, completely decimating riparian vegetation associated with crucial waterways and anticipates damaging reserved land under power lines.

This planned destruction also extends beneath the land surface with a future requirement to install reticulated sewerage, posing a severe burden to taxpayers while perpetuating irreversible environmental losses.

This proposal is diametrically opposite to the ethos of sustainable development, blatantly disregarding the definition that advocates for meeting present needs without compromising future generations. It locks in environmental degradation through the transformation of water permeable surfaces into impermeable ones, exacerbating heat sink effects, worsening the impacts of climate change, and worsening water scarcity—a detrimental legacy for generations of Perth families to come.

In environmentally sensitive areas like these, the most sustainable and ethical residential approach is 'rural residential' living characterized by larger plots of land, each a minimum of one hectare. This form of living is an endorsed model under the State Planning Framework.

In my view, this model, coupled with open fencing to enable unimpeded movement of wildlife, should be prioritized and purposefully integrated into the planning strategies for all of Perth's foothills and water catchment areas. This deliberate approach ensures the preservation of the area's natural integrity while accommodating human habitation in harmony with the surrounding ecosystem for the benefit of Perth city overall.

The manner in which this proposal was initiated, devoid of engagement with the affected community and seemingly neglecting fundamental common law property rights, including the

imperative need for express written consent from property owners, raises substantial ethical and procedural concerns.

It appears that the proponent aims to exploit the pressing need for more affordable housing in Perth, disguising profit-driven motives behind a veneer of public benefit. However, this exploitation comes at a considerable cost, jeopardizing both the tranquillity of rural living and the essential preservation of the environment. This approach starkly highlights a crude prioritization of financial gains at the expense of community well-being and the delicate balance of the protecting the surrounding natural habitat.

In conclusion, no amount of advertising rhetoric or promises of 'offsets' can veil the glaring environmental catastrophe that this rezoning proposal embodies. I implore the WAPC and EPA to stand steadfastly by the principles they are entrusted to uphold. Let logic, ethics, and long-term public interest guide your decision-making process to firmly reject MRS Amendment 1344/57.

The legacy we leave for future generations hinges on the choices made today. Let those choices be ones that prioritize the preservation of our natural heritage over short-term gains for individuals.

Yours sincerely

Jacqui Jeavons

29 Johnson Place Wattle Grove WA



Your ref 833-2-24-63 Pt 1 - RLS/0756
Our ref A0148/202301
Enquiries Steven Batty — 9222 3104
Steven.BATTY@dmirs.wa.gov.au

Anthony Muscara
Principal Planner
Department of Planning, Lands and Heritage
Sent by Email — Anthony.muscara@dplh.wa.gov.au
Locked Bag 2506 Perth WA 6001

Dear Anthony Muscara

**PROPOSED MRS AMENDMENT 1344/57 - MAIDA VALE URBAN PRECINCT -
DPLH REF 833-2-24-63 PT 1 - RLS/0756**

Thank you for your letter dated 29 September 2023 inviting comment on the proposed Metropolitan Region Scheme (MRS) Amendment 1344/57, Maida Vale Urban Precinct.

The Department of Mines, Industry Regulation and Safety (DMIRS) has determined that this proposal raises no significant issues with respect to mineral and petroleum resources, geothermal energy, and basic raw materials.

DMIRS lodges no objections to the above MRS amendment.

Yours sincerely

Steven Batty | Senior Geologist
Mineral and Energy Resources Directorate
17 November 2023

Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-22 23:40:48

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

The area of maida vale is made up of large bush blocks maintaining the forrest feeling of the area. There are many businesses and people that live there because they want to be close to town but still have land. If trees and bushland are removed it will impact native wildlife and reduce the amount of natural space we have to explore in our area. Just walking the dog around that area is much better than walking around the houses closer to Berkshire Rd.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-23 13:07:53

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

The infrastructure does not support 100,000 more people in this area - each new house you build has two more cars, 5 more people.

File 1:

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File 3:

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-23 13:12:19

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

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Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

It already takes an ambulance 35 minutes to get from Kwinana to this area, as Midland has rezoning and Bushmead gets more rezoned there is no infrastructure. Forrestfield Police station is only open school hours Monday to Friday. You are going to create a crime zone.

File 1:

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-23 13:15:08

About you

1 What is your first name?

First name: ***Name and contact details removed at the request of the submitter***

2 What is your surname?

surname:

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

Yes

4 What is your email address?

Email:

5 What is your address?

address:

6 Contact phone number:

phone number:

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

I am writing on behalf of both myself and the WA Naturalists' Club.

We are concerned that this amendment will result in the removal of habitat trees, shrubs and grasses that form an ecological linkage for our threatened black cockatoos (foraging and nesting trees), as well as other bird life and fauna such as quenda, also various reptile and invertebrate species.

The proposed clearing will include removal of poorly represented vegetation complexes and flora of significant conservation value such as *Conospermum undulatum* and *Isopogon autumnalis*. Such complexes cannot be replaced with offsets or re-vegetation works as listed in Table 18, as they take many decades to establish.

The habitat fragmentation that will result from this proposal will significantly impact all fauna currently relying on the area to move between foraging and nesting/denning sites. Mitigation measures proposed in table 31 will not help quenda, reptiles, possums and numerous other species which will suddenly lose their homes and their food sources.

In addition, the proposed removal of mature trees increases the 'heat island effect', contributes to climate change and removes the aesthetic and health values of having natural areas in our suburbs. It contradicts the Native vegetation policy for Western Australia which aims to have a net gain in native vegetation – not an ongoing deficit.

The current vegetation also contributes significantly to the The 3-30-300 Rule for Healthier and Greener Cities : NBSI where everyone has:

3 medium-large trees within sight of their home

30% canopy cover in their suburb and

a park or green space within 300m.

We ask that this proposal be rejected as it stands and that another, more thorough environmental review be conducted before it is brought up for consideration again in future.

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-23 19:00:58

About you

1 What is your first name?

First name:
Chris

2 What is your surname?

surname:
Caruso

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:
business@carusoinc.com.au

5 What is your address?

address:

29 Bruce Road Maida Vale.

6 Contact phone number:

phone number:
0412 958 693

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Support

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

Chris Caruso,
29 Bruce Road, Maida Vale,
WA, 6057.

I refer to the proposed submission for rezoning,
Metropolitan Region Scheme Amendment 1344/57 – Maida Vale Urban Precinct.

I personally have no objection to the future rezoning our area providing the goal is to provide a high quality estate that is well designed for the purpose of amenity, moderate density and in harmony with the semi-rural origins of the area.

A unique opportunity exists in this area to create a highly desirable urban development that is nature based and still close to all domestic services, schools and shops, including public transport and arterial roads. Whilst the typical temptation would be to maximize the density of the lot sizes, I feel it is important to attract families to a more traditional open environment with a variety of lot sizes to live in. I would be surprised if the appeal for this type of life style is not very high when going to market.

Although we are not ready to move out of the area, and quite enjoy the existing status, it is obvious that these central areas will be required in the future to provide for a higher density of population. It is my hope that this area can eventually still represent its origins as a model of what can be achieved with a more thoughtful development process.

I would also like to make note of some objections and petitions canvassed from outside of the area and submitted by non-residents or landowners. I would hope that these submissions are not held in the same status as those received by landowners within the defined area.

It should also be noted that some of the objections circulating are from landowners within the area, and, by and large they themselves can be guilty of neglecting the care and maintenance of the semi-rural land and environment by which they claim to be protecting. In effect this is a facade of the pseudo environmentalist that actually devalues the area both economically and environmentally.

Yours Faithfully,
Chris Caruso
0412 958 693

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Submitted to Metropolitan Region Scheme Minor Amendment 1344/57 Maida Vale Urban Precinct
Submitted on 2023-11-24 01:00:22

About you

1 What is your first name?

First name:
melissa

2 What is your surname?

surname:
rivers

3 Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?

No

4 What is your email address?

Email:
melissarivers97@hotmail.com

5 What is your address?

address:

4 2b Frost street, Swan View, 6056, WA

6 Contact phone number:

phone number:
0481108586

Submissions

7 Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?

Oppose

8 Please type your submission (reasons for support/opposition) into the the box below. Any supporting documents may be uploaded.

Submission:

I'm writing my submission because I support the full conservation of the environment and wild life you plan to urbanise. I believe we should be taking steps to further protect and preserve the wildlife biodiversity the area has to offer for future generations. The area needs conserving to retain the diversity of the plant and bird. For example the area is currently home to some Australian Red Tailed Black Cockatoos which are currently noted as rare and likely to become extinct in the near future. Please find attached the report on the Red Tailed Black Cockatoo. There are also a number of small businesses ran within the area that the proposed plan would dramatically affect if not fully shut them down. I am fully against the plan to urbanise/subdivide the properties and land and hope that you will reconsider.

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red tailed black cockatoo.pdf was uploaded

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**Advice to the Minister for the Environment, Heritage and the Arts
from the Threatened Species Scientific Committee (the Committee)
on Amendment to the list of Threatened Species
under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)**

1. Scientific name (common name)

Calyptorhynchus banksii naso (Forest Red-tailed Black Cockatoo)

2. Reason for Conservation Assessment by the Committee

This advice follows assessment of information gathered through the Commonwealth's Species Information Partnership with the Western Australian Department of Environment and Conservation which is aimed at systematically reviewing species that are inconsistently listed under the EPBC Act and Western Australian legislation.

The Forest Red-tailed Black Cockatoo is listed as fauna that is rare or likely to become extinct under Schedule 1 of the Western Australian *Wildlife Conservation Act 1950* and is managed as 'vulnerable' (according to IUCN criteria) by the Western Australian Government. The Committee provides the following assessment of the appropriateness of the subspecies' inclusion in the EPBC Act list of threatened species.

This is the Committee's first consideration of the subspecies under the EPBC Act.

3. Summary of Conclusion

The Committee judges that the subspecies has been demonstrated to have met sufficient elements of Criterion 1 to make it **eligible** for listing as **vulnerable**.

The highest category for which the subspecies is eligible to be listed is **vulnerable**.

4. Taxonomy

The subspecies is conventionally accepted as *Calyptorhynchus banksii naso* (Forest Red-tailed Black Cockatoo) (Gould, 1837).

5. Description

The Forest Red-tailed Black Cockatoo is 55 to 60 cm in length and 570 to 870 g in weight. Males and females are mostly glossy black with a pair of black central tail feathers, a crest, robust bill and bright red, orange or yellow barring in the tail (Higgins, 1999).

Males of the subspecies are distinguished by broad red tail panels that are only visible when alighting. They have a dark brown iris, dark grey eye-ring and blackish legs. Females are distinguished by yellow or whitish spots on the feathers of the head and upper wing. Their tail feathers are bright red and orange, grading to yellow on the inner margins, and have variable black horizontal barring. Females have yellow or orange barring on the tips of the feathers of the throat, breast, belly and under-tail coverts and a light grey bill with a dark grey tip. The juvenile is similar to the adult female but has a white eye-ring (Johnstone and Storr, 1998; Higgins, 1999). The Forest Red-tailed Black Cockatoo has a loud cry of 'Karee' or 'Krar-raak' (Johnstone and Storr, 1998).

6. National Context

The Forest Red-tailed Black Cockatoo is endemic to the south-west humid and sub-humid zones of Western Australia (Mawson and Johnstone, 1997).

The current distribution is north of Perth and east to Mount Helena, Christmas Tree Well, North Banister, Mt Saddleback, Rocky Gully and the upper King River (Johnstone, 1997).

The Forest Red-tailed Black Cockatoo is listed as fauna that is rare or likely to become extinct under Schedule 1 of the Western Australian *Wildlife Conservation Act 1950*.

7. Relevant Biology/Ecology

In 2006, the population of Forest Red-tailed Black Cockatoos was estimated to be approximately 15,000 birds (CALM, 2006). This estimate was derived through surveys and observations. The subspecies occurs in one population.

The Forest Red-tailed Black Cockatoo inhabits the dense *Eucalyptus marginata* (Jarrah), *E. diversicolor* (Karri) and *Corymbia calophylla* (Marri) forests of south-west Australia. These forests receive more than 600 mm of annual average rainfall (Saunders et al., 1985; Saunders and Ingram, 1995).

Similar to *C. baudinii* (Baudin's Cockatoo), the Forest Red-tailed Black Cockatoo nests in the large hollows of Marri, Jarrah and Karri (Johnstone and Kirkby, 1999). The subspecies has also been sighted nesting in *E. wandoo* (Wandoo) and *E. megacarpa* (Bullich) (CALM, 2006). The habitat in which the subspecies occurs at Bungendore Park and Jarrahdale, has an understorey of *Banksia grandis* (Bull Banksia), *Persoonia longifolia* (Snottygobble), *Allocasuarina fraseriana* (Western Sheoak) and *Dryandra* spp. with scattered *E. patens* (Blackbutt) and Wandoo (Johnstone and Kirkby, 1999).

There have been reports of extreme fluctuations in regional population numbers, especially on the eastern side of the subspecies' range. These fluctuations occur in late summer, when large aggregations of the subspecies occur as a response to food availability. Population fluctuations have also occurred in response to devastating fires (CALM, 2006; Chapman, 2005).

The Forest Red-tailed Black Cockatoo is monogamous and pairs probably form a lifetime bond (Smith and Saunders, 1986). They begin to breed when they are four to six years old (Shephard, 1989; Sindel and Lynn, 1989). However, birds less than four years old have been recorded breeding by Western Australian Museum staff (Chapman, 2005). Breeding usually occurs in October and November, although in years with good autumn rainfall they may breed in March and April (Johnstone, 1997).

The generation length is likely to be somewhere between 6 and 25 years. Recent information suggests that less than 10% of the population is capable of breeding in any one year and most birds only breed every two to three years (Johnstone, pers. comm., 2008). The life expectancy of wild birds is unknown; however, it is predicted to be between 25 and 50 years (Johnstone, 1999).

The effective clutch size of the Forest Red-tailed Black Cockatoo is one, because although two eggs are sometimes laid, only one chick fledges (Johnstone and Storr, 1998). During the incubation period, the male feeds with the flock and flies back to the nest to feed the female once or twice a day (Johnstone and Kirkby, 1999). During the nestling stage the female forages for herself outside the nest (Johnstone and Kirkby, 1999). The young can be fed by the parents for up to a year after fledging (Johnstone and Kirkby, 1999).

While the Forest Red-tailed Black Cockatoo feeds on the seeds of multiple plant species, around 90% of its diet comes from the seeds from Marri and Jarrah fruits (Johnstone and Kirkby, 1999). The other species utilised for foraging include Blackbutt, *E. staeri* (Albany Blackbutt), Western Sheoak, Snottygobble and the non-indigenous native *E. maculata* (Spotted Gum) and *Melia azederach* (Cape Lilac) (Johnstone and Storr, 1998; Johnstone and Kirkby, 1999).

The subspecies feeds in selected Marri trees which carry nuts of greater seed number and total seed weight than trees not used for foraging, indicating that Forest Red-tailed Black Cockatoos selectively forage from trees that have fruits with a higher energy content (Cooper et al., 2002). However, the subspecies' method for determining which trees have the highest seed yield is unclear (Cooper et al., 2002). A feed tree with a high fruit yield in one year requires at least three years to replenish sufficient resources to fruit successfully again. Therefore, the cockatoos cannot feed from the same trees each year, so they must assess the energy yield of the fruits from individual trees each time they fruit (Cooper et al., 2002). In most years, only about 20% to 50% of Marri trees produce a large crop of fruits and a small proportion of the trees produce only male flowers, which fail to fruit (Mawson, 1995).

8. Description of Threats

Key threats to the Forest Red-tailed Black Cockatoo are illegal shooting, habitat loss, nest hollow shortage and competition from other species, and injury or death from *Apis mellifera* (European Honeybee) (Chapman, 2005). Climate change is an additional threat that is likely to exacerbate other threats as a result of changes to biodiversity and ecosystem function (Chambers et al., 2005).

Habitat loss is an historic, current and future threat to the subspecies. It appears to be the principal cause of the historic decline of the subspecies as a result of agriculture, timber harvesting, woodchipping and mining within the subspecies' range (Johnstone, 1997; Mawson and Johnstone, 1997). The long-term effects of this threat may not yet have been fully realised because of the subspecies' long life-span (Brouwer et al., 2000). In the remaining habitat suitable for the Forest Red-tailed Black Cockatoo, selective removal of Marri for timber, mining, woodchipping and agriculture has resulted in further declines in the subspecies (Garnett and Crowley, 2000). The impacts of previous forest management practices for timber and woodchipping on Forest Red-tailed Black Cockatoo populations have not yet been quantified. However, forestry practices such as clear felling and 80-year cut rotations may restrict the availability of nest hollows (Saunders and Ingram, 1995). Many forms of mining in south-west Western Australia also initially involve clear felling of forests (Chapman, 2005).

Another historic threat to the subspecies is fatality from illegal shooting. Anecdotal evidence suggests that this may still occur. During the late 1800s and early 1900s, Forest Red-tailed Black Cockatoos were shot for food, for sport, and to obtain their tail feathers for ornamental and decorative purposes (Abbott, 2001). Records of Forest Red-tailed Black Cockatoos being illegally shot were also collected during a 1999-2000 survey (Abbott, 2001). These observations show that illegal shooting of Forest Red-tailed Black Cockatoos is likely to have had an impact on the population in the early 1990s and this impact continues to the present day. Reports of orchardists shooting Forest Red-tailed Black Cockatoos are received in Western Australia in most years. Prosecutions for these acts are undertaken whenever sufficient evidence is available.

Competition for nest hollows and injury or death by European Honeybees is a current and future threat to the subspecies. The honeybee can form long-term hives in tree hollows and kill nesting female Forest Red-tailed Black Cockatoos and their chicks through multiple stinging. European Honeybees pose a significant threat to the ability of the Forest Red-tailed Black Cockatoo to survive and breed, and this is likely to increase with the southward movement of bees in response to change to a warmer climate in southern Western Australia (Chapman, 2005).

Nest hollow shortage is an historic, current and future threat to the subspecies, though the extent of the impact of nest hollow shortages is unknown. The number of nest sites available may be limiting the subspecies' ability to breed (Garnett and Crowley, 2000) as they nest in large hollows, 80 to 90cm in diameter (Johnstone, 1997). The landscape in the south-west of Western Australia is highly modified with only about 10% of the original vegetation remaining. Hollows suitable for use by Forest Red-tailed Black Cockatoos are considered scarce (Chapman, 2005). Analyses have shown that trees with hollows large enough for use by Forest Red-tailed Black Cockatoos may need to be at least 130 to 220 years of age (Abbott and Whitford, 2002; Johnstone, 1997). Competition for available nest hollows with other bird species is an additional threat. Observations of competition for nest sites between the subspecies and *Chenonetta jubatta* (Wood Ducks), *C. latirostris* (Carnaby's Cockatoo), *Cacatua roseicapilla* (Galahs) and *Cacatua* spp. (Corellas) are increasing within the range of the Forest Red-tailed Black Cockatoo (Chapman, 2005; CALM, 2006, Johnstone and Cassarchis, 2004).

Recent changes to silvicultural prescriptions ensure five primary habitat trees and six to eight secondary habitat trees are retained per hectare during timber harvesting. The establishment of designated fauna habitat zones (excluded from logging) within each logging coupe has also increased the number of tree hollows protected in State Forest reserves (EPA and Conservation Commission, 2003). However, it is important to note that the presence of large trees does not indicate that they are suitable for use by a particular subspecies. There are many factors that affect tree hollow usage, including the tree hollow's proximity to water and food and other competitors' requirements. While opposing views exist as to whether nest hollow shortage is a threat, the majority of evidence available suggests that it is likely to be a significant constraint on reproductive success of the Forest Red-tailed Black Cockatoo.

9. Public Consultation

The information used in this assessment was made available for public exhibition and comment for 30 business days. The Committee has had regard to all public comment that was relevant to the survival of the subspecies. Three submissions were received.

10. How judged by the Committee in relation to the criteria of the EPBC Act and Regulations

The Committee judges that the subspecies is **eligible** for listing as **vulnerable** under the EPBC Act. The assessment against the criteria is as follows:

Criterion 1: It has undergone, is suspected to have undergone or is likely to undergo in the immediate future a very severe, severe or substantial reduction in numbers

The Forest Red-tailed Black Cockatoo was once common in the south-west forests of Western Australia, but decline was observed following timber harvesting in the early 1900s (Carter, 1923). There is qualitative evidence to suggest that the subspecies has declined in range by 25 to 30% as a result of clearing of the margins of the forests for agriculture in the early 1900s (Mawson and Johnstone, 1997). The subspecies has also declined in density over a further 14% of its range that has been partially cleared (Garnett and Crowley, 2000). While there are insufficient data available to quantify an historic decline in population size, the Committee considers that the observed reduction in distribution and abundance of the Forest Red-tailed Black Cockatoo is likely to have resulted in a similar decline in population size. The Forest Red-tailed Black Cockatoo is subject to a number of ongoing threats including habitat loss, competition for nest hollows and injury/death by European Honeybees and nest hollow competition and shortage from other species. The available information suggests that these threats may be causing an ongoing reduction in the subspecies' numbers.

Key biological and ecological characteristics (see Section 7) of the Forest Red-tailed Black Cockatoo combined with the historic and ongoing threats (see Section 8) suggest that the Forest Red-tailed Black Cockatoo has undergone a substantial reduction in numbers and that the decline may be ongoing. Recent information suggests that less than 10% of the population is capable of breeding in any one year and most birds only breed every two to three years. Additionally, data collected in 2007 suggests that breeding success for the subspecies is low. From the 60 nests that were monitored in 2007, only one pair raised a chick successfully (Johnstone, pers. comm., 2008). Therefore, the subspecies has been demonstrated to have met the relevant elements of Criterion 1 to make it **eligible** for listing as **vulnerable**.

Criterion 2: Its geographic distribution is precarious for the survival of the species and is very restricted, restricted or limited

In 2006, the extent of occurrence of the Forest Red-tailed Black Cockatoo was estimated to be approximately 66 500 km² (CALM, 2006). This estimate suggests that the geographic distribution is not precarious for the survival of the subspecies.

The Committee does not consider that the subspecies' geographic distribution is either precarious for the survival of the subspecies or limited. Therefore, as the subspecies has not been demonstrated to have met the required elements of Criterion 2, it is **not eligible** for listing in any category under this criterion.

- Criterion 3: The estimated total number of mature individuals is limited to a particular degree; and either**
- (a) evidence suggests that the number will continue to decline at a particular rate; or**
 - (b) the number is likely to continue to decline and its geographic distribution is precarious for its survival**

In 2006, the estimated total number of mature individuals of the Forest Red-tailed Black Cockatoo was 15,000 (CALM, 2006) which the Committee does not consider to be limited to a particular degree. Its geographic distribution is not precarious for its survival. Although there is evidence suggesting that the number of individuals will decline, there are no data available to suggest that this will occur at a very high, high, or substantial rate. Therefore, as the subspecies has not been demonstrated to have met the required elements of Criterion 3, it is **not eligible** for listing in any category under this criterion.

- Criterion 4: The estimated total number of mature individuals is extremely low, very low or low**

In 2006, the estimated total number of mature individuals of the Forest Red-tailed Black Cockatoo was 15,000 (CALM, 2006). The Committee does not consider that the estimated total number of mature individuals of the subspecies is extremely low, very low or low. Therefore, as the subspecies has not been demonstrated to have met any required element of Criterion 4, it is **not eligible** for listing in any category under this criterion.

- Criterion 5: Probability of extinction in the wild that is at least:**

- a) 50% in the immediate future; or**
- b) 20% in the near future; or**
- c) 10% in the medium-term future.**

There are no data available to estimate a probability of extinction of the Forest Red-tailed Black Cockatoo in the wild over a relevant timeframe. Therefore, as the subspecies has not been demonstrated to have met the required elements of Criterion 5, it is **not eligible** for listing in any category under this criterion.

11. CONCLUSION

Conservation Status

This advice follows assessment of information gathered through the Commonwealth's Species Information Partnership with the Western Australian Department of Environment and Conservation which is aimed at systematically reviewing species that are inconsistently listed under the EPBC Act and Western Australian legislation.

The Committee accepts that key biological and ecological characteristics of the Forest Red-tailed Black Cockatoo combined with the historic and ongoing threats of habitat loss, competition for nest hollows and injury/death by European Honeybees and nest hollow shortage and competition from other species suggest that the subspecies has undergone a substantial reduction in numbers. Therefore, the subspecies has been demonstrated to have met sufficient elements of Criterion 1 to make it **eligible** for listing as **vulnerable**.

The highest category for which the subspecies is **eligible** to be listed is **vulnerable**.

Recovery Plan

The Committee considers that there should be a recovery plan for this subspecies. Key biological and ecological characteristics of Forest Red-tailed Black Cockatoo combined with the ongoing threats of habitat loss, competition for nest hollows and injury/death by European Honeybees and nest hollow shortage and competition from other species indicate that the species can be better managed with a recovery plan in place.

12. Recommendations

- (i) The Committee recommends that the list referred to in section 178 of the EPBC Act be amended by **including** in the list in the **vulnerable** category:

***Calyptorhynchus banksii naso* (Forest Red-tailed Black Cockatoo)**

- (ii) The Committee recommends that there should be a recovery plan for this subspecies.

Associate Professor Robert J.S. Beeton *AM FEIANZ*

Chair

Threatened Species Scientific Committee

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