GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 3731/8
Permit Holder:	City of Wanneroo
Duration of Permit:	19 September 2010 – 19 September 2032

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I –CLEARING AUTHORISED

1. Purpose for which clearing may be done

Clearing for the purpose of road upgrades, relocation of a golf tee and hazard reduction.

2. Land on which clearing is to be done

Lot 9000 on Plan 74654, Carramar
Lot 9000 on Plan 66196, Neerabup
Lot 80 on Plan 7404, Wanneroo
Lot 709 on Plan 61957, Hocking
Lot 708 on Plan 61957, Hocking
Lot 705 on Plan 73319, Wanneroo
Lot 590 on Plan 69319, Nowergup
Lot 56 on Plan 7122, Wanneroo
Lot 568 on Plan 69324, Darch
Lot 55 on Plan 7122, Wanneroo
Lot 55 on Plan 20055, Marangaroo
Lot 54 on Plan 7122, Wanneroo
Lot 505 on Plan 71510, Nowergup
Lot 505 on Plan 70535, Pearsall
Lot 505 on Plan 404876, Neerabup
Lot 504 on Plan 406406, Pinjar
Lot 503 on Plan 60468 (Reserve 50009), Pearsall
Lot 3050 on Plan 202794, Nowergup
Lot 301 on Plan 66196, Neerabup
Lot 300 on Plan 71494, Wanneroo
Lot 300 on Plan 68244, Nowergup
Lot 300 on Plan 66859, Pearsall
Lot 300 on Plan 66196, Neerabup
Lot 26 on Plan 8326, Neerabup
Lot 20 on Plan 7122, Wanneroo
Lot 1 on Diagram 71604, Wanneroo
Lot 1 on Diagram 44141, Wanneroo
Lot 19 on Plan 7122, Wanneroo
Lot 18 on Plan 7122, Wanneroo
Lot 180 on Plan 15552, Wanneroo

2. Land on which clearing is to be done - continued

Lot 179 on Plan 15552, Wanneroo
Lot 178 on Plan 15552, Wanneroo
Lot 177 on Plan 15552, Wanneroo
Lot 176 on Plan 15552, Wanneroo
Lot 175 on Plan 15552, Wanneroo
Lot 171 on Plan 15402, Wanneroo
Lot 170 on Plan 15402, Wanneroo
Lot 169 on Plan 15402, Wanneroo
Lot 168 on Plan 15402, Wanneroo
Lot 154 on Plan 13145, Wanneroo
Lot 153 on Plan 13145, Wanneroo
Lot 15391 on Plan 40237, Wanneroo
Lot 152 on Plan 13145, Wanneroo
Lot 151 on Plan 13145, Wanneroo
Lot 130 on Plan 13145, Wanneroo
Lot 129 on Plan 13145, Wanneroo
Lot 128 on Plan 13145, Wanneroo
Lot 127 on Plan 13145, Wanneroo
Lot 126 on Plan 13145, Wanneroo
Lot 125 on Plan 13145, Wanneroo
Lot 124 on Plan 13145, Wanneroo
Lot 121 on Plan 13145, Wanneroo
Lot 11 on Diagram 57099, Carramar
Lot 1174 on Plan 72656, Wanneroo
Lot 1102 on Plan 72657, Wanneroo
Lot 1101 on Plan 72657, Wanneroo
Lot 10945 on Plan 15552, Wanneroo
Lot 104 on Plan 15552, Wanneroo
Lot 103 on Plan 15552, Wanneroo
Lot 102 on Plan 15552, Wanneroo
Lot 101 on Plan 15552, Wanneroo
Lot 10135 on Plan 13145, Wanneroo
Lot 10130 on Plan 13145, Wanneroo
Lot 100 on Plan 15552, Wanneroo
Lot 701 on Plan 70369, Neerabup
Crown Reserve 11598, Neerabup
Crown Reserve 11598, Neerabup
Bebich Drive road reserve (PIN 11069636), Wanneroo
Belgrade Road reserve (PIN 11023835), Wanneroo
Caporn Street road reserve (PIN 11169479 and PIN 11945171), Wanneroo
Dundebar Road reserve (PIN 11023865), Wanneroo
East Road reserve (PIN 11751774), Hocking
Elliot Road reserve (PIN 11751766 and PIN 11751765), Wanneroo
Evandale Road reserve (PIN 11170064), Darch
Flynn Drive road reserve (PIN 11926268, PIN 7280, PIN 11926267, PIN 11593806, PIN 11926266, PIN 11782987, PIN 11402348; PIN 12309281), Neerabup
Flynn Drive road reserve (PIN 12001800), Carramar
Flynn Drive road reserve (PIN 11751051), Banksia Grove
Franklin Road reserve (PIN 11751756 and PIN 11071334), Jandabup
Hepburn Avenue road reserve (PIN 11092591, PIN 11155699, PIN 11155701 and PIN 11155700), Darch
Hepburn Avenue road reserve (PIN 1149423), Marangaroo
Hepburn Avenue road reserve (PIN 1178774 and PIN 11673650), Madeley
High Road reserve (PIN 1256965), Wanneroo
Joondalup Drive road reserve (PIN 1331918 and PIN 11110582), Tapping
Joondalup Drive road reserve (PIN 1164754), Banksia Grove
Joondalup Drive road reserve (PIN 11170740 and PIN 11309555), Carramar

2. Land on which clearing is to be done - continued

Wanneroo Road road reserve (PIN 11751056), Carramar
Lenore Road reserve (PIN 11819022, PIN 11818964, PIN 11705632, PIN 11069647, PIN 11751757, PIN 11069643, PIN 11705039, PIN 11069644, PIN 11909697, PIN 11909706, PIN 11909700, PIN 11777591, PIN 11069634, PIN 11989940, PIN 11977527 and PIN 11979980), Wanneroo
Lenore Road reserve (PIN 11911176, PIN 11754351 and PIN 11842698), Pearsall
Lenore Road reserve (PIN 11505085, PIN 11909703, PIN 11725200 and PIN 11564908), Hocking
Lyndavale Loop road reserve (PIN 11170744), Carramar
Mary Street road reserve (PIN 11751772), Pearsall
Nicholas Road reserve (PIN 11751758), Wanneroo
Nicholas Road reserve (PIN 11751759), Hocking
Old Yanchep Road reserve (PIN 11751045), Neerabup
Old Yanchep Road reserve (PIN 11543914, PIN 11582355 and PIN 11582356), Pinjar
Orchid Road reserve (PIN 11543910), Nowergup
Pinot Loop road reserve (PIN 12068478), Pearsall
Rome Road reserve (PIN 11023833), Wanneroo
Shenton Road reserve (PIN 11751760), Wanneroo
Travertine Vista Road reserve (PIN 11751055 and PIN 12001799), Neerabup
Travertine Vista Road reserve (PIN 11751053), Carramar
Trichet Road reserve (PIN 11071336), Wanneroo
Unnamed road reserve (PIN 11505083), Hocking
Wanneroo Road reserve (PIN 1136623), Neerabup
Wesco Road reserve (PIN 11543917 and PIN 1262259), Nowergup

3. Area of Clearing

The Permit Holder must not clear more than 16.1248 hectares of native vegetation and 41 trees/shrubs within the combined areas shaded yellow in the attached Schedule 1: Plan 3731/8a, Plan 3731/8b, Plan 3731/8c, Plan 3731/8d, Plan 3731/8e, Plan 3731/8f, Plan 3731/8g, Plan 3731/8h, Plan 3731/8i, and Plan 3731/8j.

4. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the c

5. Period during which clearing is authorised

The permit holder must not clear any native vegetation after 19 September 2027.

6. Type of clearing authorised

This Permit authorises the Permit Holder to clear native vegetation for activities to the extent that the Permit Holder has the power to clear native vegetation for those activities under the *Local Government Act 1995* or any other written law.

7. Compliance with Assessment Sequence and Management Procedures

Prior to clearing any native vegetation under conditions 1, 2 and 3 of this Permit, the Permit Holder must comply with the Assessment Sequence and the Management Procedures set out in Part II of this Permit.

PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

8. Avoid, minimise etc clearing

In determining the amount of native vegetation to be cleared for the authorised purpose of this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

(a) avoid the clearing of native vegetation;
(b) minimise the amount of native vegetation to be cleared; and
(c) reduce the impact of clearing on any environmental value.

9. Weed and dieback management

When undertaking any clearing authorised under this permit, the Permit Holder must take the following measures to minimise the risk of introduction and spread of *weeds* and *dieback*:

(a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;

(b) ensure that no known *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and

(c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

10. Fauna management – directional clearing

The permit holder must conduct clearing activities in a slow, progressive manner toward areas of adjacent native vegetation to allow fauna to move into the adjacent native vegetation ahead of the clearing activity.

11. Fauna management – black cockatoo habitat trees

(a) Within 48 hours of undertaking any clearing authorised under this Permit within the area cross-hatched yellow in the attached Schedule 1 Plan 3731/8c the Permit Holder must engage a *fauna specialist* to conduct a fauna survey to inspect the two trees (Tree 1 and Tree 2) identified in red in the attached Schedule 2 Plan 3731/8a for:

(i) suitability as a *black cockatoo habitat tree* for use as breeding by *black cockatoo species;* and

(ii) evidence of current or past breeding use by *black cockatoo species.*

(b) For each tree characterised as suitable as a *black cockatoo habitat tree* by a *fauna specialist* in accordance with condition 11(a) the Permit Holder must install an artificial black cockatoo nest hollow.

(c) For each tree characterised as suitable as a *black cockatoo habitat tree* by a *fauna specialist* in accordance with condition 11(a) with no evidence of current or past use by *black cockatoo species* that tree must only be cleared immediately after the inspection.

(d) Where a *black cockatoo habitat tree* is identified with evidence of current or past breeding use by *black cockatoo species* under condition 11(a), and clearing of that tree cannot be avoided, that tree must be monitored by a *fauna specialist* to determine when it is no longer in use for that breeding season.

(e) Any *black cockatoo habitat tree* with evidence of current breeding use by *black cockatoo species* must not be cleared whilst it is in use for that breeding season as determined by the *fauna specialist* under condition 11(d).

(f) Any artificial black cockatoo nesting hollow required by condition 11(b) must be installed prior to commencement of the next black cockatoo breeding season following clearing of the related *black cockatoo habitat tree(s)*.

(g) Any artificial black cockatoo nest hollow(s) required by condition 11(b) of this permit must:

(i) be installed within the area cross-hatched red in the attached Schedule 3 Plan 3731/8a (Crown Reserve R 53163);

(ii) be designed and placed in accordance with the specifications detailed in the attached Schedule 4; and

(iii) be monitored and maintained in accordance with the specifications detailed in the attached Schedule 5, for a period of at least ten years.

(h) Within two months of clearing authorised under this permit within the area cross-hatched yellow in the attached Schedule 1 Plan 3731/8c, the Permit Holder must provide the results of the fauna survey in a report to the *CEO*.

(i) The fauna survey report must include the following;

(i) the location of any *black cockatoo habitat tree(s)* recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;

(ii) whether the *black cockatoo habitat tree/s* identified show current or past use by *black cockatoo species;*

(iii) the methodology, used to survey the permit area;

(iv) a photo of the *black cockatoo habitat tree(s)* identified; and
(v) a description of the *black cockatoo habitat tree(s)* identified, including the:
a. species of *black cockatoo habitat tree(s)*; and
b. condition of the *black cockatoo habitat tree(s)*.

12. Offset – Site 1 – Conservation

In relation to the area cross hatched red in the attached Schedule 6 Plan 3731/8a, the Permit Holder shall maintain the management order issued to the Permit Holder for the purpose of "Public Recreation and Conservation".

13. Offset – Site 2 – Conservation

In relation to the area cross hatched red in the attached Schedule 6 Plan 3731/8b, the Permit Holder shall prior to 31 June 2023, provide to the *CEO* a copy of the management order to the Permit Holder from the Department of Planning, Lands and Heritage for the purpose of "Public Recreation and Conservation".

14. Offset – Site 3 – Revegetation

The Permit Holder shall *revegetate* the area cross-hatched red in the attached Schedule 6 Plan 3731/8c by way of:

(a) deliberately planting tube stock and salvaged native vegetation that includes the species composition and structure presented in the attached Schedule 8;
(b) ensuring only *local provenance* seeds and propagating material are used to *revegetate* the area.
(c) water planted vegetation at the optimal time for the first two years post planting as required;
(d) implement hygiene protocols by cleaning earth-moving machinery of soil and vegetation prior to entering and leaving the site;
(e) undertake weed control activities on an 'as needs' basis to maintain the completion criteria stated in the attached Schedule 7;
(f) achieve the completion criteria specified in the attached Schedule 7 and Schedule 8 after a five year monitoring period for areas *revegetated* under this Permit;
(g) undertake remedial actions for area *revegetated* where annual monitoring indicates that *revegetation* has not met the completion criteria in the attached Schedule 7 and Schedule 8 including:
(i) *revegetate* the area by deliberately planting native vegetation that will result in the minimum target in the attached Schedule 7 and Schedule 8 and ensuring only *local provenance* seeds and propagating material are used;
(ii) undertake further weed control activities;
(iii) undertake further watering activities; and
(iv) annual monitoring of the *revegetated* area, until the completion criteria, outline in the attached Schedule 7 and Schedule 8 are met.

PART III - RECORD KEEPING AND REPORTING

15. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit:

(a) In relation to the clearing of native vegetation authorised under this Permit:
(i) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
(ii) the date that the area was cleared; and
(iii) the size of the area cleared (in hectares).

(b) In relation to black cockatoo fauna management pursuant to condition 11 of this Permit:
(i) the time(s) and date of inspection of the two potential *black cockatoo habitat trees* by the *fauna specialist*;

(ii) a description of the inspection methodology employed by the *fauna specialist*;
(iii) details of any *black cockatoo habitat tree(s)* identified by the *fauna specialist;*
(iv) the time and date that any *black cockatoo habitat tree(s)* was cleared.
(v) details of artificial black cockatoo nest hollows installed;
(vi) details of any *black cockatoo habitat tree(s)* identified by the *fauna specialist* to be occupied by *black cockatoo species* including:
a. time and date determined to be no longer occupied; and
b. a description of the evidence by which it was determined to be no longer occupied
(vii) the time and date that any *black cockatoo habitat tree* was cleared.

(c) In relation to offset site *revegetation* pursuant to condition 14 of this Permit:
(i) the location of any area of offsets recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
(ii) the size of the offset area (in hectares);
(iii) the size of the areas *revegetated* (in hectares);
(iv) the dates on which the areas *revegetated* were undertaken; and
(v) evidence supporting compliance with condition 14 of this Permit.

16. Reporting

(a) The Permit Holder must provide to the *CEO*, on or before 30 June of each year, a written report of records required under condition 15 of this Permit and activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.

(b) Prior to 19 June 2027 the Permit Holder must provide to the *CEO* a written report of records required under condition 15 of this Permit where these records have not already been provided under condition 16(a) of this Permit.

Definitions

The following meanings are given to terms used in this Permit:

black cockatoo habitat trees means trees that have a diameter, measured at 130 centimetres from the base of the tree, of 50 centimetres or greater (or 30 centimetres or greater for *Eucalyptus salmonophloia* or *Eucalyptus wandoo*) that contain hollows suitable for breeding by black cockatoo species.

black cockatoo species means one or more of the following species:
(a) *Zanda latirostris* (previously *Calyptorhynchus latirostris*) (Carnaby's cockatoo);
(b) *Zanda baudinii* (previously *Calyptorhynchus baudinii)* (Baudin's cockatoo); and/or
(c) *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo).

CEO means the Chief Executive Officer of the department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*.

clearing has the meaning given under section 3(1) of the EP Act.

condition means a condition to which this clearing permit is subject under section 51H of the EP Act.

dieback means the effect of *Phytophthora* species on native vegetation.

fauna specialist means a person who holds a tertiary qualification specialising in environmental science or equivalent, and has a minimum of two (2) years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, or who is approved by the CEO as a suitable fauna specialist for the bioregion, and who holds a valid fauna licence issued under the Biodiversity Conservation Act 2016.

fill means material used to increase the ground level, or fill a hollow.

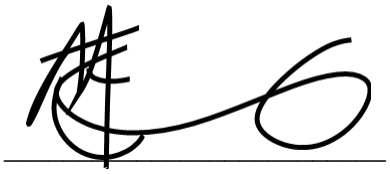
local provenance means native vegetation seeds and propagating material from natural sources within 50 kilometres and the same Interim Biogeographic Regionalisation for Australia (IBRA) subregion of the area cleared.

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation.

revegetate / vegetated /revegetation means the re-establishment of a cover of local provenance native vegetation in an area using methods such as natural regeneration, direct seeding and/or planting, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.

weed/s means any plant -

(a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
(b) published in a Department of Parks and Wildlife Regional Weed Rankings Summary, regardless of ranking; or
(c) not indigenous to the area concerned.



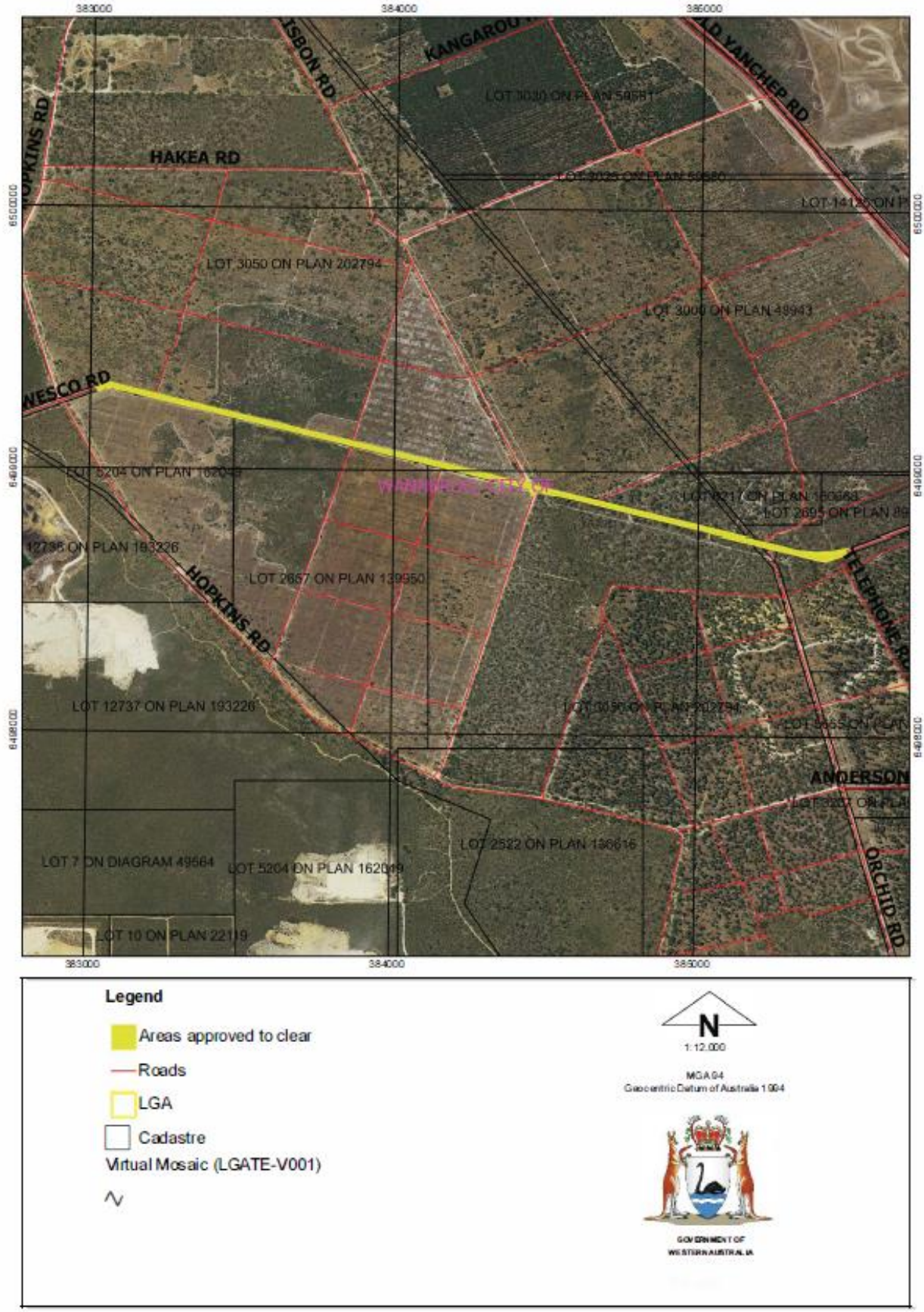
Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

16 September 2022

Schedule 1: The boundary of the areas authorised to be cleared are shown in the map**s** below (Plan 3731/8a to Plan 3731/8j).

Plan 3731/8a



Plan 3731/8b

Legend

- Areas approved to clear
- Roads
- LGA
- Cadastre

Virtual Mosaic (LGATE-V001)

N

1:7,000

MGA 94
Geocentric Datum of Australia 1994

GOVERNMENT OF WESTERN AUSTRALIA

Plan 3731/8c


382400
383200
384000
6494400
6493600
6492800
6492000
LOT 701 ON PLAN 70369
LOT 9004 ON PLAN 72054
LOT 700 ON PLAN 70369
AVERY ST
ORBIT ST
AXIS PDE
AXIS PDE
LOT 1005 ON PLAN 61212
GLOBAL RD
GREENWICH PDE
FLYNN DR
LOT 9000 ON PLAN 74654
LOT 9000 ON PLAN 74654
LOT 28 ON PLAN 8326
LOT 9000 ON PLAN 60196
LOT 251 ON PLAN
LOT 14 ON DIAGRAM 41747
LOT 2 ON DIAGRAM 46843
WANNEROO RD
LOT 12 ON PLAN 9605
WILDFLOWER DR
Legend
Areas approved to clear
Roads
LGA
Cadastre
Virtual Mosaic (LGATE-V001)
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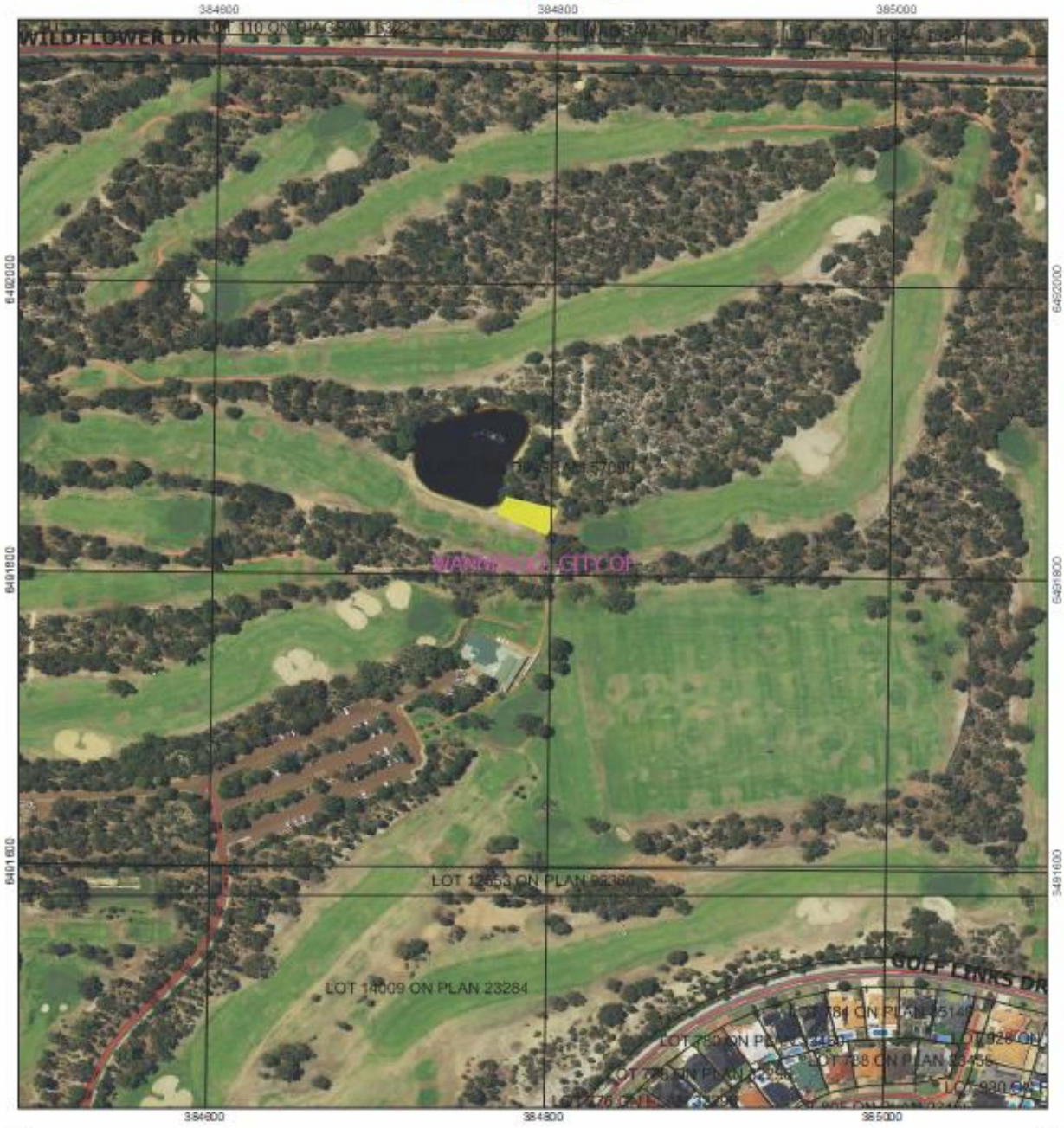
MGA94
Geocentric Datum of Australia 1994
GOVERNMENT OF
WESTERN AUSTRALIA

Plan 3731/8d



Legend

- Areas approved to clear
- Roads
- LGA
- Cadastre

Virtual Mosaic (LGATE-V001)

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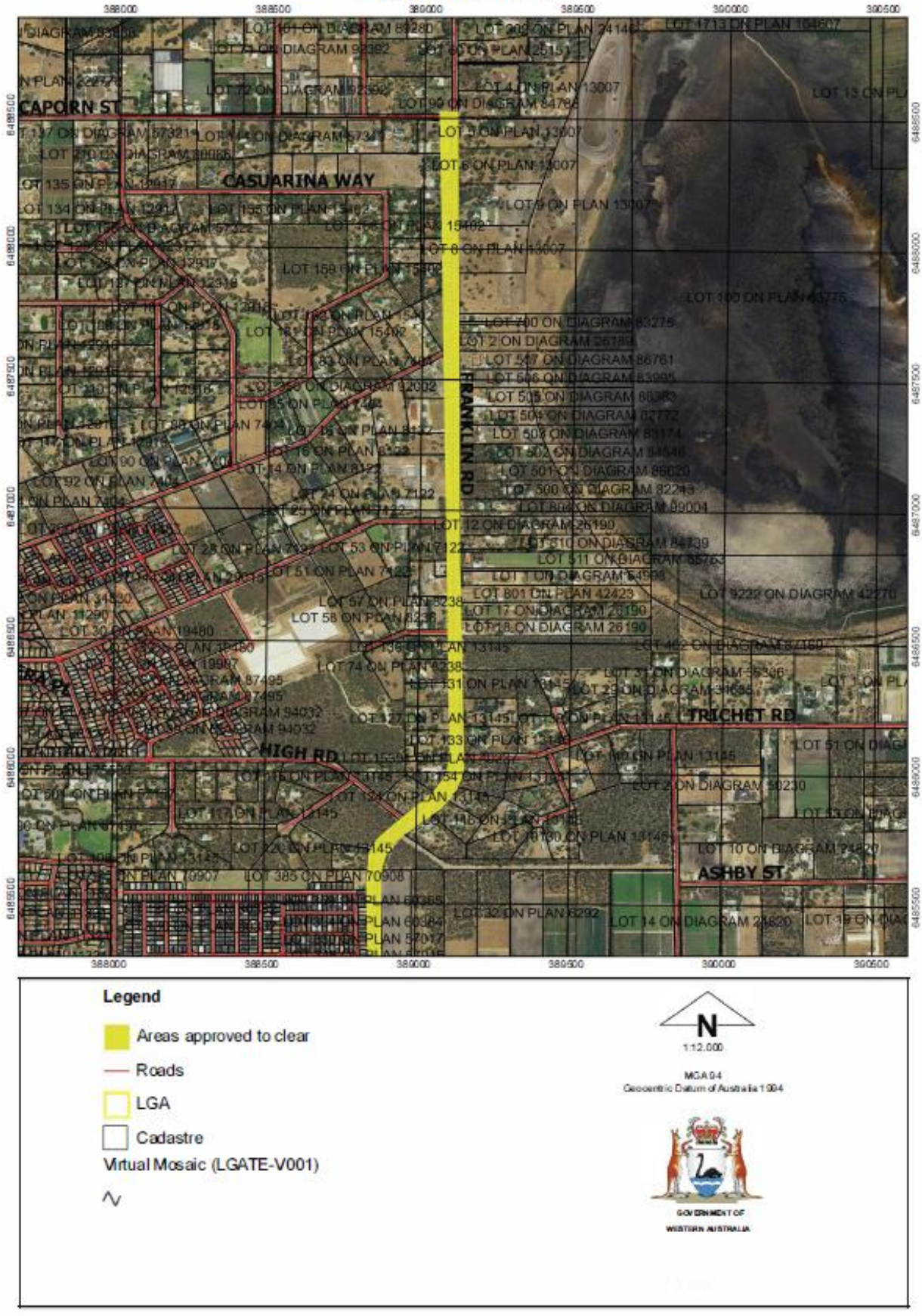
MGA 94
Geocentric Datum of Australia 1994

GOVERNMENT OF WESTERN AUSTRALIA

Plan 3731/8e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388500
389000
389500
390000
390500
6488500
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6487500
6487000
6486500
6486000
6485500
CAPORN ST
CASUARINA WAY
FRANKLIN RD
HIGH RD
TRICHET RD
ASHBY ST
Legend
Areas approved to clear
Roads
LGA
Cadastre
Virtual Mosaic (LGATE-V001)
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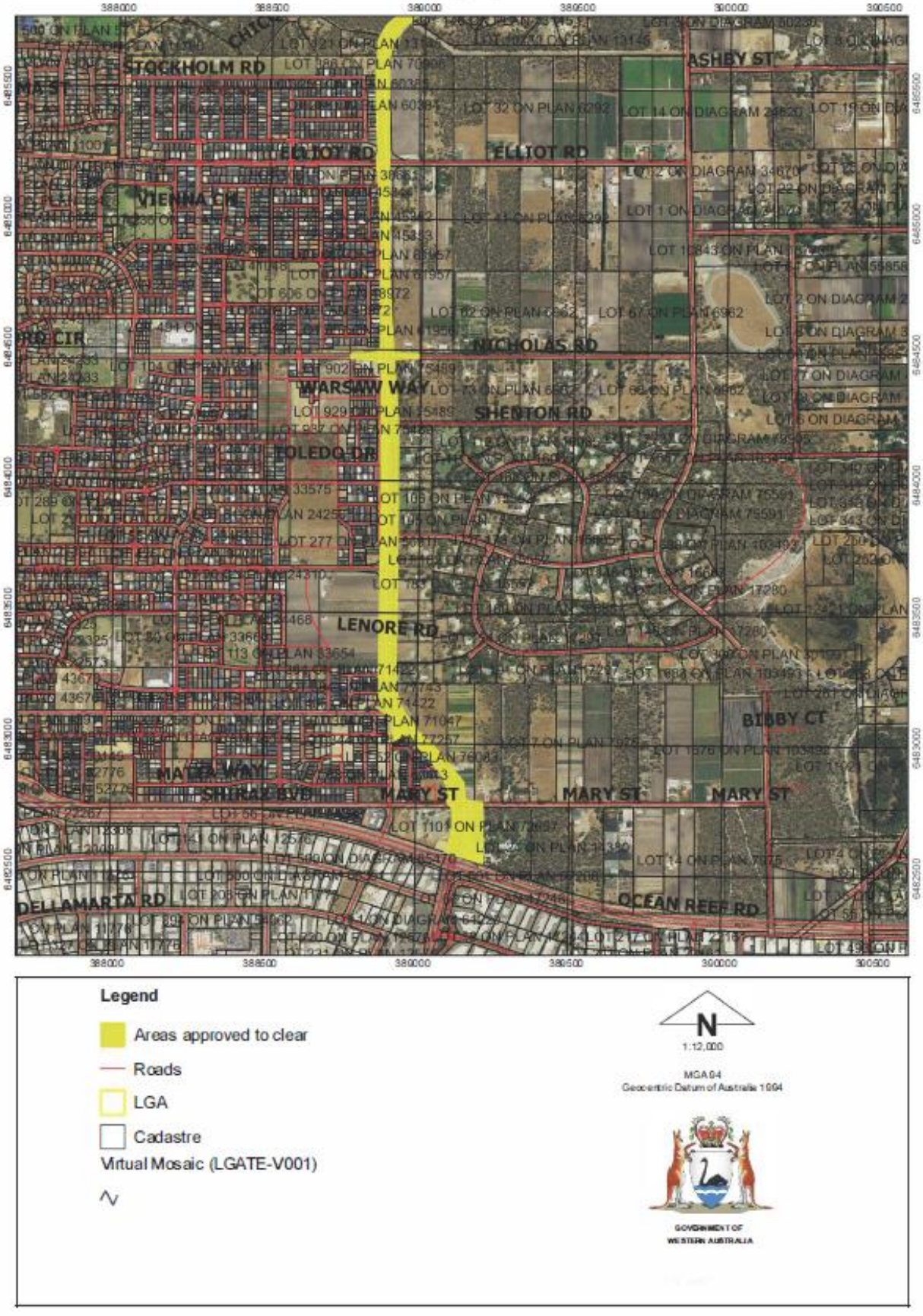
MGA 94
Geocentric Datum of Australia 1994
GOVERNMENT OF
WESTERN AUSTRALIA

Plan 3731/7f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388500
389000
389500
390000
390500
6485500
6485000
6484500
6484000
6483500
6483000
6482500
STOCKHOLM RD
ELLIOT RD
VIENNA CIR
NICHOLAS RD
WARSAW WAY
SHENTON RD
TOLEDO DR
LENORE RD
ASHBY ST
BIBBY CT
MARY ST
SHIRAZ BVD
DELLAMARTA RD
OCEAN REEF RD
Legend
Areas approved to clear
Roads
LGA
Cadastre
Virtual Mosaic (LGATE-V001)
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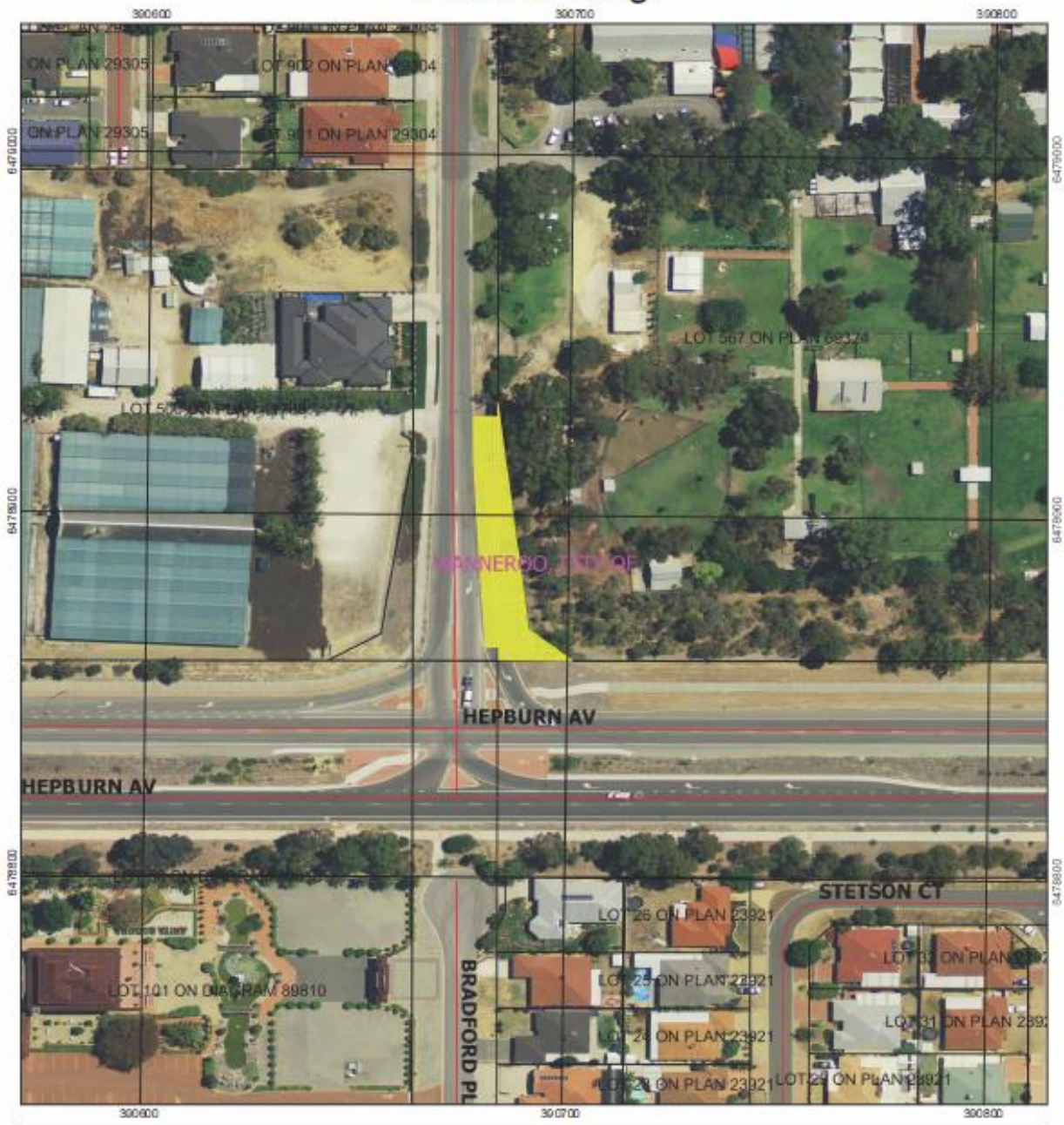
MGA 94
Geocentric Datum of Australia 1994
GOVERNMENT OF
WESTERN AUSTRALIA

Plan 3731/8g



Legend

- Areas approved to clear
- Roads
- LGA
- Cadastre

Virtual Mosaic (LGATE-V001)

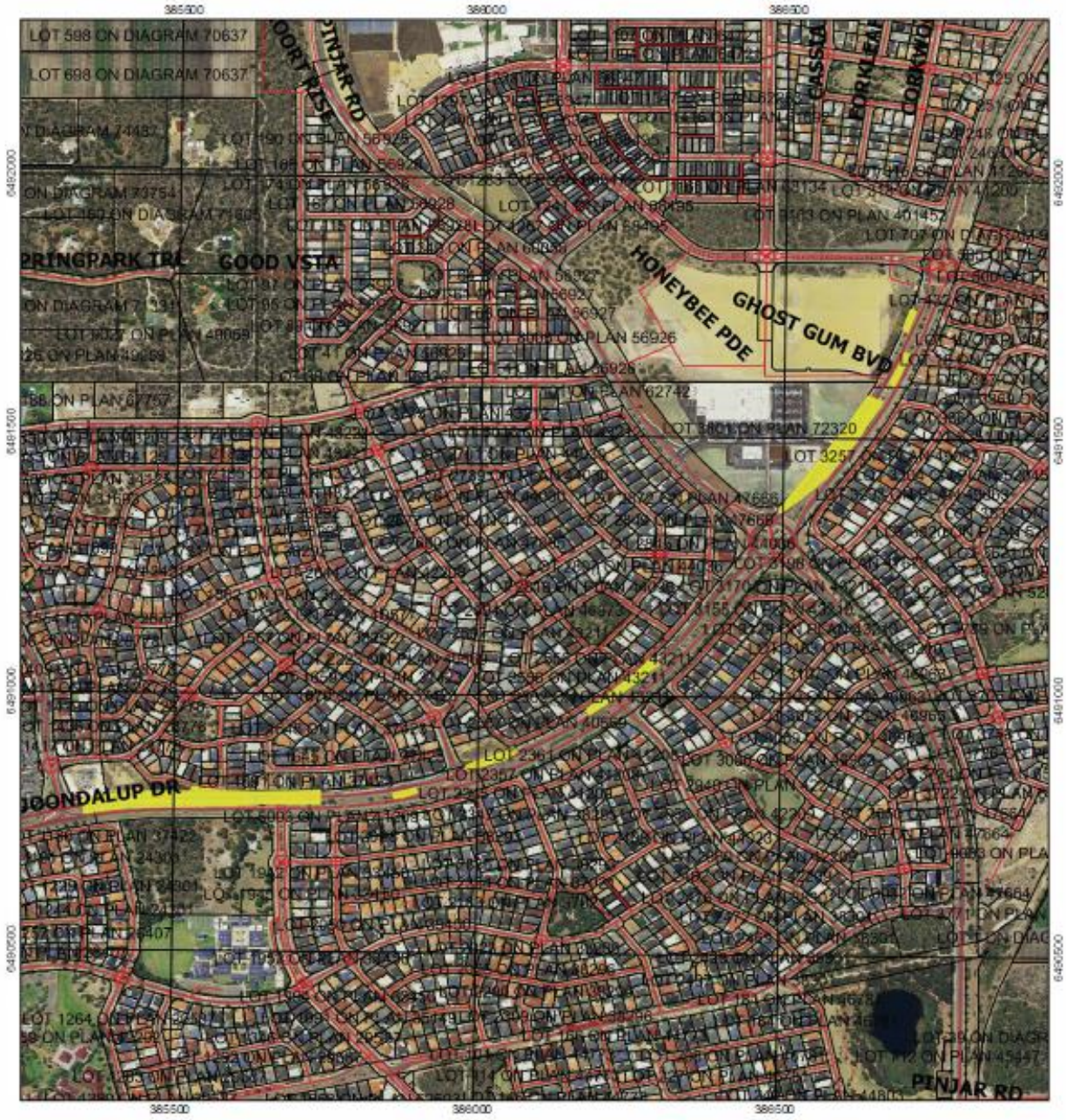
N

1:1,000

MGA 94
Geocentric Datum of Australia 1994

GOVERNMENT OF WESTERN AUSTRALIA

Plan 3731/8h



Legend

- Areas approved to clear
- Roads
- LGA
- Cadastre

Virtual Mosaic (LGATE-V001)

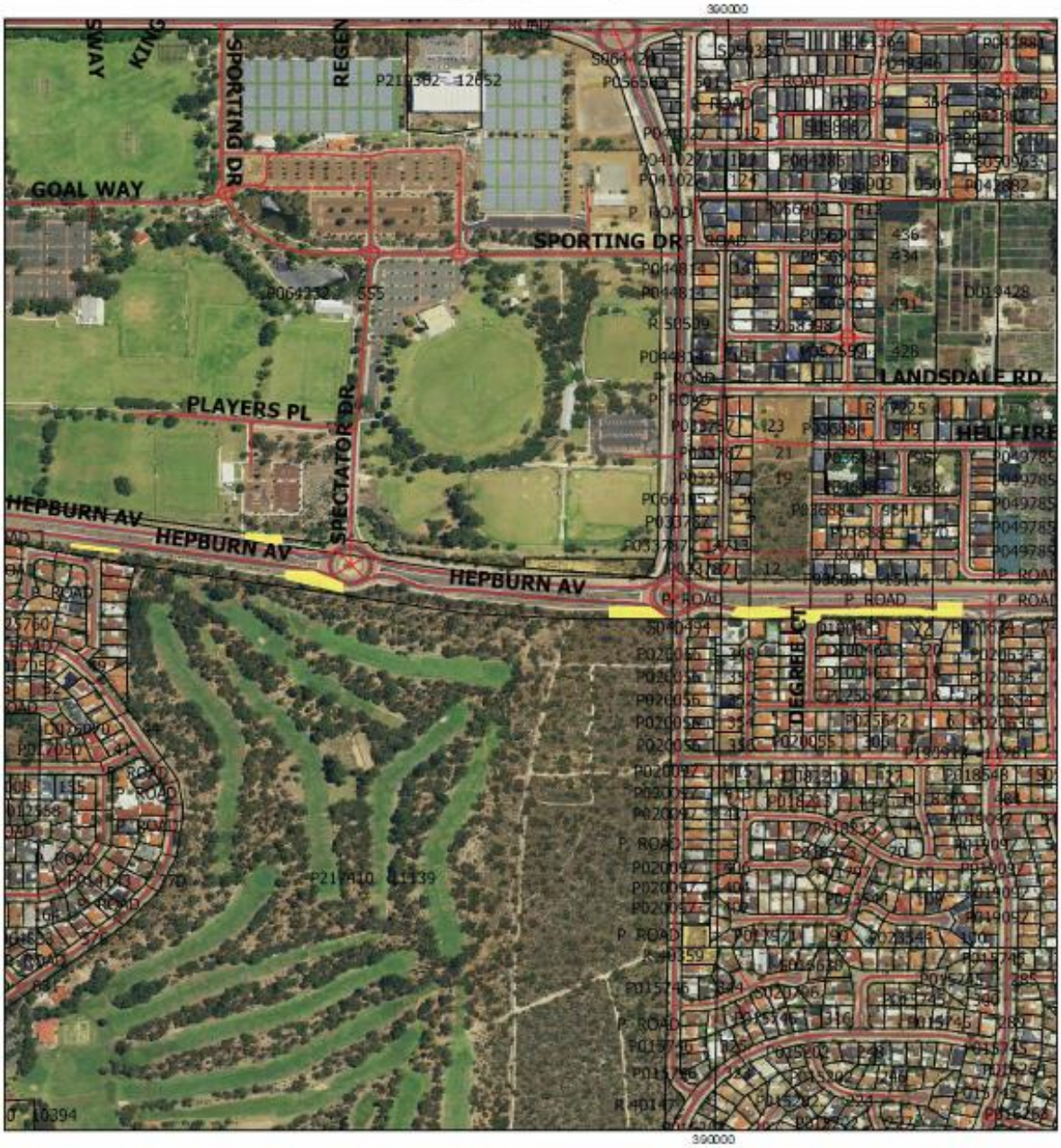
N

1:7,000

MGA 94
Geocentric Datum of Australia 1994

GOVERNMENT OF WESTERN AUSTRALIA

Plan 3731/8i



Legend

- Areas approved to clear
- Roads
- LGA
- Cadastre

Virtual Mosaic (LGATE-V001)

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1:5,500

MGA94
Geocentric Datum of Australia 1994

GOVERNMENT OF WESTERN AUSTRALIA

Plan 3731/8j

Legend

- Areas approved to clear
- Roads
- LGA
- Cadastre

Virtual Mosaic (LGATE-V001)

N

1:1,500

MGA 94
Geocentric Datum of Australia 1994

GOVERNMENT OF WESTERN AUSTRALIA

Schedule 2: Areas subject to conditions - Locations of two trees to be inspected as black cockatoo habitat trees (Plan 3731/8a)

Plan 3731/8a

Legend
Areas approved to clear
Potential black cockatoo habitat trees
Land Tenure
Local Government Authorities

N

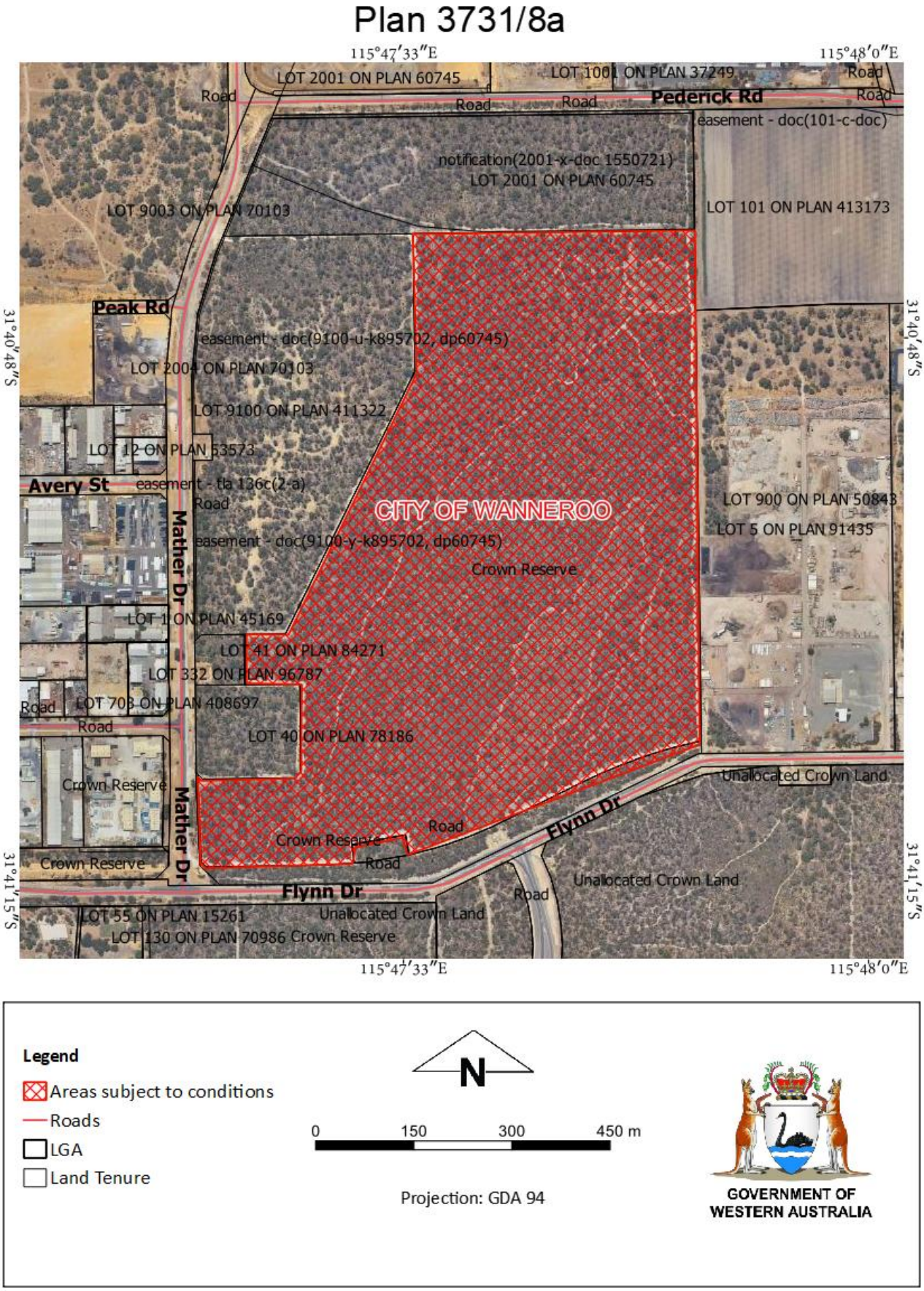
0 150 300 450 m

Projection: GDA 94

1:7,533.988791

GOVERNMENT OF WESTERN AUSTRALIA

Schedule 3: Areas subject to conditions – Artificial hollow placement area (Plan 3731/8a)



Schedule 4: How to design and place artificial hollows for Carnaby's cockatoo

Department of Parks and Wildlife

Fauna notes

Artificial hollows for Carnaby's cockatoo

birdlife AUSTRALIA

WATER CORPORATION

museum

How to design and place artificial hollows for Carnaby's cockatoo

Artificial hollows can be used to help conserve the threatened Carnaby's cockatoo by enabling the cockatoos to breed in areas where natural hollows are limited.

A wide variety of artificial hollow designs have been used with mixed success. Evidence suggests that, while the hollow must meet some basic requirements, other factors such as proximity to existing breeding areas may be more important in determining the success of artificial hollows. Before using this information sheet to construct or install an artificial hollow, you should refer to the criteria listed in the separate information sheet; *When to use artificial hollows for Carnaby's cockatoo*.

This information sheet contains broad guidelines for the design and placement of artificial hollows for Carnaby's cockatoo.

Below are three examples of successful artificial hollows used by Carnaby's cockatoo for nesting. Artificial hollows made from a natural log with cut side entrance (left), white industrial pipe with top entrance (centre) and natural log with natural side entrance (right).

Photos by Christine Groom (left and right) and Rick Dawson (centre)

Page 1 of 5

Walls

The walls of the artificial hollow need to be constructed from a material that is;

- Durable enough to withstand exposure to elements for an extended period of time (i.e. 20+ years).
- Able to simulate the thermal properties of a natural tree hollow.
- Not less than 380 mm in internal diameter.
- Preferably 1.2 m deep overall and 1m deep to top of substrate/nesting material.

Successful artificial hollows have been constructed from sections of salvaged natural hollow, black and white industrial pipe. When using non-natural materials care must be taken to ensure there are no toxic residues and that the materials are safe to ingest.

Base

The base of the artificial hollow must be;

- Able to support the adult and nestling(s).
- Durable enough to last the life of the nest.
- Free draining.
- At least 380 mm in diameter.
- Covered with 200 mm of sterile, dry, free draining material such as charcoal, hardwood woodchips or wood debris.

  Do not use:

  - Saw dust or fibre products that will retain moisture.

Example materials that could be used for artificial hollow bases include heavy duty stainless steel, galvanised or treated metal (e.g. Zincalume ®), thick hardwood timber slab or marine ply (not chipboard or MDF). The base material must be cut to size to fit internally with sharp or rough edges ground away or curled inwards and fixed securely to the walls.

Carnaby's cockatoo eggs in an artificial hollow.
Photo by Rick Dawson

Entrance

The entrance of the artificial hollow must;

- Have a diameter of at least 270 mm).
- Preferably be top entry which will minimise use by non-target species.

Top entry hollows are unattractive to nest competitors such as feral bees, galahs and corellas. Side entry hollows have been successful in areas where feral bees are not a problem and where galahs and corellas are deterred.

Ladder

For artificial hollows made of non-natural materials, or of processed boards, it is necessary to provide a ladder to enable the birds to climb in and out of the hollow easily.

The ladder must be;

- Securely mounted to the inside of the hollow.
- Made from an open heavy wire mesh such as WeldMesh™ with mesh size of 30 - 50 mm, or heavy chain.

Do not use:

- A material that the birds can chew.
- Galvanized because the birds may grip or chew the ladder and ingest harmful compounds.

If using mesh for the ladder, the width will depend on the curvature of the nest walls. A minimum width of about 60 - 100 mm is recommended.

Sacrificial chewing posts

For artificial hollows made of non-natural materials, or of processed boards, it is necessary to provide sacrificial chewing posts. The birds chew material to prepare a dry base on which to lay their egg(s).

The sacrificial chewing posts must:

- Be made of untreated hardwood such as jarrah, marri or wandoo
- Be thick enough to satisfy the birds' needs between maintenance visits.
- Extend beyond the top of the hollow as an aid to see whether the nest is being used.
- Be placed on the inside of the hollow.
- Be attached in such a way that they are easy to replace e.g. hook over the top of hollow or can slide in/out of a pair of U bolts fitted to the side of the hollow.

It is recommended that at least two posts are provided. Posts 70 x 50 mm have been used, but require replacing at least every second breeding season when the nest is active. Birds do vary in their chewing habits and therefore the frequency at which the chewing posts require replacement will also vary.

Bottom of an artificial hollow showing ladder that is fixed to the wall and a chewed sacrificial post which is 200 mm from the floor.

Photo by Rick Dawson

Mountings

The artificial hollows must be mounted such that:

- The fixings used will last the duration of the nest e.g. galvanized bracket or chain fixed with galvanized coach screws.
- It is secured by more than one anchor for security and stability.
- It is positioned vertically or near vertically.

Placement

Sites should be chosen within current breeding areas and where they can be monitored, but preferably not conspicuous to the general public. It is important that artificial hollows are placed where they will be accessible for future monitoring and maintenance. For more detail refer to the separate information sheet; *When to use artificial hollows for Carnaby's cockatoo*.

The height at which artificial hollows should be placed is variable. The average height of natural hollows in dominant tree species in the area is a good guide. Natural hollows used by Carnaby's cockatoos have been recorded as low as 2 m above the ground. If located on private property the hollows can be placed lower to the ground so they are accessible by ladder or a rope and pulley system can be used. Where public access is possible artificial hollows should be placed at least 7 m high (i.e. higher than most ladders) and on the side of the tree away from public view to reduce the chance of interference or poaching.

Carnaby's cockatoo show no preference for aspect of natural hollows, however, it may still be beneficial to place artificial hollows facing away from prevailing weather and where they receive the most shade and protection.

Artificial hollows to be placed in trees require:

- Accessibility of the tree for a vehicle, elevated work platform or cherry picker.
- A section of trunk 2-3 m long suitable for attaching the hollow

If necessary, artificial hollows may be placed on poles, but this may result in excessive exposure to sun during very hot weather. When erected on poles there should be"

- A hinge at the bottom of the pole that can be secured when the pole is in the upright position.
- Access for a vehicle to assist raising the pole.

Safety

Care needs to be taken when placing artificial hollows to ensure safety is considered at all times. Artificial hollows are heavy and require lifting and manoeuvring into position up to 7 m above the ground.

Maintenance and monitoring

Once artificial hollows have been placed they require monitoring and maintenance to ensure they continue to be useful for nesting by Carnaby's cockatoo. It is important to monitor artificial hollows to determine use by Carnaby's cockatoo, other native species as well as pest species. By undertaking monitoring the success of the design and placement of artificial hollows can be determined and areas for improvement identified for future placement of artificial hollows.

Monitoring can also assess whether any maintenance is required. Without regular maintenance artificial hollows are unlikely to achieve their objective (that is, they will fail to provide nesting opportunities for threatened cockatoos). Therefore it is important to continue a regime of regular maintenance while the artificial hollow is required. It may be several (to many) decades until a natural replacement hollow is available.

For further advice on monitoring and maintenance of artificial hollows please refer to the separate information sheet; *How to monitor and maintain artificial hollows for Carnaby's cockatoo*.

Carnaby's cockatoo female prospecting an artificial hollow.
Photo by Rick Dawson

Example fixing for artificial hollow
Photo by Christine Groom

Acknowledgements

This information sheet is a joint initiative of Birdlife Australia, the Western Australian Museum and the Department of Parks and Wildlife. Many individuals have contributed to its preparation. Special acknowledgement is made for the contributions of Ron Johnstone from the WA Museum, Alan Elliott from the Serpentine-Jarrahdale Land care Centre and Denis Saunders. This updated version was compiled by Rick Dawson Department of Parks and Wildlife).

Other information sheets in the series: Artificial hollows for Carnaby's cockatoo

- *How to design and place artificial hollows for Carnaby's cockatoo*
- *How to monitor and maintain artificial hollows for Carnaby's cockatoo*

Information sheets available on the *Saving Carnaby's cockatoo* webpage:
http://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-animals/208-saving-carnaby-s-cockatoo

Further Information **Last updated 28/04/2015**

Contact fauna@dpaw.wa.gov.au or your local office of the Department of Parks and Wildlife

See the department's website for the latest information: www.dpaw.wa.gov.au

Schedule 5: How to monitor and maintain artificial hollows for Carnaby's cockatoo

Department of Parks and Wildlife

Fauna notes

Artificial hollows for Carnaby's cockatoo

birdlife AUSTRALIA

WATER CORPORATION

museum

How to monitor and maintain artificial hollows for Carnaby's cockatoo

It is important to monitor and maintain artificial hollows after they have been erected. Monitoring ensures that the effectiveness of the artificial hollow can be determined. It also means that problems with pest species or any maintenance requirements can be identified and resolved.

Without regular maintenance, artificial hollows are likely to fail to achieve their objective (that is, they will fail to provide nesting opportunities for threatened cockatoos). Therefore it is important to continue a regime of regular maintenance while the artificial hollow is required. It may be several (to many) decades until a natural replacement hollow is available.

Monitoring should be undertaken in order to detect:

- Use by Carnaby's cockatoo
- Maintenance requirements
- Use by other native species
- Use by pest species (e.g. feral bees, galahs, corellas etc.)

Carnaby's cockatoo female prospecting an artificial hollow.
Photo by Rick Dawson

How do I monitor artificial hollows?

Before undertaking monitoring of artificial hollows for Carnaby's cockatoo it is recommended that you seek advice from BirdLife Australia, the WA Museum or the Department of Parks and Wildlife. It is also important to contact Parks and Wildlife, Wildlife Licensing Section, to determine if a scientific licence is required (wildlifelicensing@dpaw.wa.gov.au).

Monitoring artificial hollows requires keen observation and naturalist skills. It is often not possible to observe evidence of breeding directly (i.e. nestlings or eggs) and inferences must be made based on observation. There are many techniques available to monitor artificial hollows. A combination of several is likely to achieve the best results.

Page 1 of 4

Looking for signs of use

Cobwebs covering the entrance to the hollow will indicate that the hollow has not been used recently. This would also apply to other light debris that may have fallen to cover the opening partially. Signs of recent use or interest in the hollow include evidence of chewing.

Observing parent behaviour around the hollow

The behaviour of parent birds around a hollow will indicate an approximate age of young in the nest.

Parent behaviour	Approximate age/stage of young
Prospecting for hollow	Unborn
Male only seen out of hollow	Egg or very young nestling (< 3 - 4 weeks)
Both parents seen entering/exiting the hollow	Nestling(s) have hatched (> 3 - 4 weeks)

Observing feeding flocks

Flocks of all male birds indicate that the females are incubating eggs. When flocks are mixed it suggests the birds have either not laid yet or that the nestlings have hatched and no longer require brooding (approximately 3 - 4 weeks old).

Tapping

When females are sitting on eggs they will usually respond to tapping at the base of their tree (or pole) by appearing at the entrance or flying from the hollow opening. This is not a guarantee of breeding activity, but an indication that it is possibly occurring in the hollow.

Observing insect activity around nest

The faecal matter produced by nestlings in a nest attracts insects, especially flies and ants. The type and number of these insects will help indicate how old any nestlings present may be. Factors such as temperature and humidity will also affect insect activity and so observations of insect activity should only be used as supporting evidence for other indications of age/use. Blowflies around a nest usually indicate that a death has occurred.

Listening for nestlings

With experience it is possible to determine if one or two nestlings are present and a broad estimate of age based on the type and loudness of noises they make.

Looking inside the nest

This can be achieved either with the aid of a telescopic pole and camera or mirror, or with the use of a ladder or other climbing equipment. This method can obtain the most detailed monitoring information for artificial hollows. However it is also the most time consuming and difficult to organise. Special equipment is likely to be needed depending on the height and positioning of artificial hollows. There are also safety issues associated with ladder or rope climbing options to reach nests to undertake observations.

How often should I monitor artificial hollows?

The minimum frequency of monitoring and the techniques used will be determined by the aims of the monitoring and the resources available. It is important to limit disturbance to breeding birds and this should be considered when determining the techniques used and frequency.

How do I maintain artificial hollows?

Artificial hollows require maintenance to ensure they continue to have the greatest chance of them being used by Carnaby's cockatoos. Periodic maintenance checks should be undertaken at least every two years, preferably annually. These checks should be undertaken prior to the breeding season which is between July and January with breeding occurring later in this period in southern areas. It is important to maintain a regime of regular maintenance as long as the artificial hollow is required. It may take several (to many) decades until a natural replacement hollow is available.

Maintenance checks should assess the following as a minimum:

- Condition of chewing posts (if present)
- Condition of attachment points
- Condition of hollow bases
- Stability of tree or pole used to mount the artificial hollow

Artificial hollow base needing repair.
Photo by Christine Groom

Repairing hollows

Any problems identified during maintenance checks should be addressed, and any repairs required done, as soon as possible. If breeding is currently occurring, maintenance may need to be delayed if it is likely to disturb the parents or nestling. Likely maintenance needs include replacement of chewing posts (frequently) or nest bases (occasionally) and repairing of any cracks (infrequently). Maintenance concerns regarding the security of attachment points or the stability of the tree or pole should be addressed as a priority for safety reasons.

For artificial hollows known to be used, spare chewing posts should be taken into the field when undertaking maintenance checks.

Monitoring of artificial hollows:

Monitoring aim	Frequency of visits	Monitoring techniques
To determine possible use by Carnaby's cockatoo	At least once during peak breeding season (i.e. between September and December)	• Observing behaviour of adults around hollow • Tapping to see if female will flush from hollow (best undertaken between 10am and 3pm when females most likely to be sitting) • Listening for nestlings • Looking for evidence of chewing • Looking inside nest
To confirm use by Carnaby's cockatoo	At least two visits during peak breeding season (i.e. between September and December)	To observe at least two of the following: • Breeding behaviour of adults around hollow or evidence of chewing • Female flushed from hollow • Noises from nestlings in hollow Or to observe: • Nestlings or eggs in nest
To determine nesting success by Carnaby's cockatoo	The more visits, the better. Preferably fortnightly visits between July and December. As a minimum, at least 3 visits spread throughout breeding season.	• Looking inside nest to observe eggs or nestlings.
To determine use by any species	As often as possible.	• Inspection from ground as a minimum. • Looking inside nest for detailed observations.
To determine maintenance requirements	At least every two years and preferably annually if hollow fitted with sacrificial chewing posts, can be longer if without.	• A basic maintenance check can be undertaken from the ground. A ladder or elevated work platform will be required for a comprehensive check and to replace sacrificial chewing posts

Acknowledgements

This information sheet is a joint initiative of Birdlife Australia, the Western Australian Museum and the Department of Parks and Wildlife. Many individuals have contributed to its preparation. The updated version was compiled by Rick Dawson (Department of Parks and Wildlife) with assistance from Denis Saunders.

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Information sheets available on the *Saving Carnaby's cockatoo* webpage:
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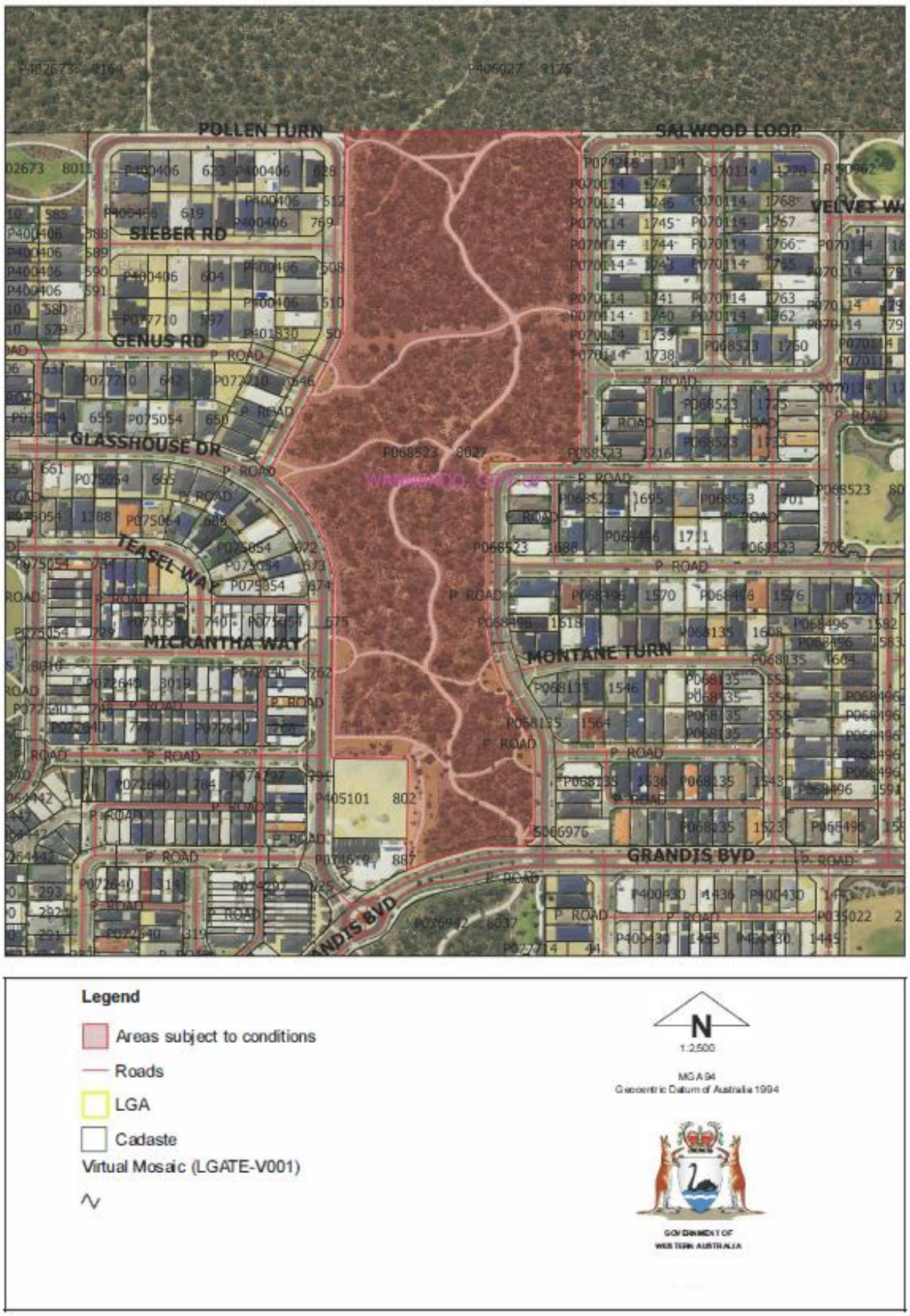
Further Information **Last updated 28/04/2015**

Contact fauna@dpaw.wa.gov.au or your local office of the Department of Parks and Wildlife

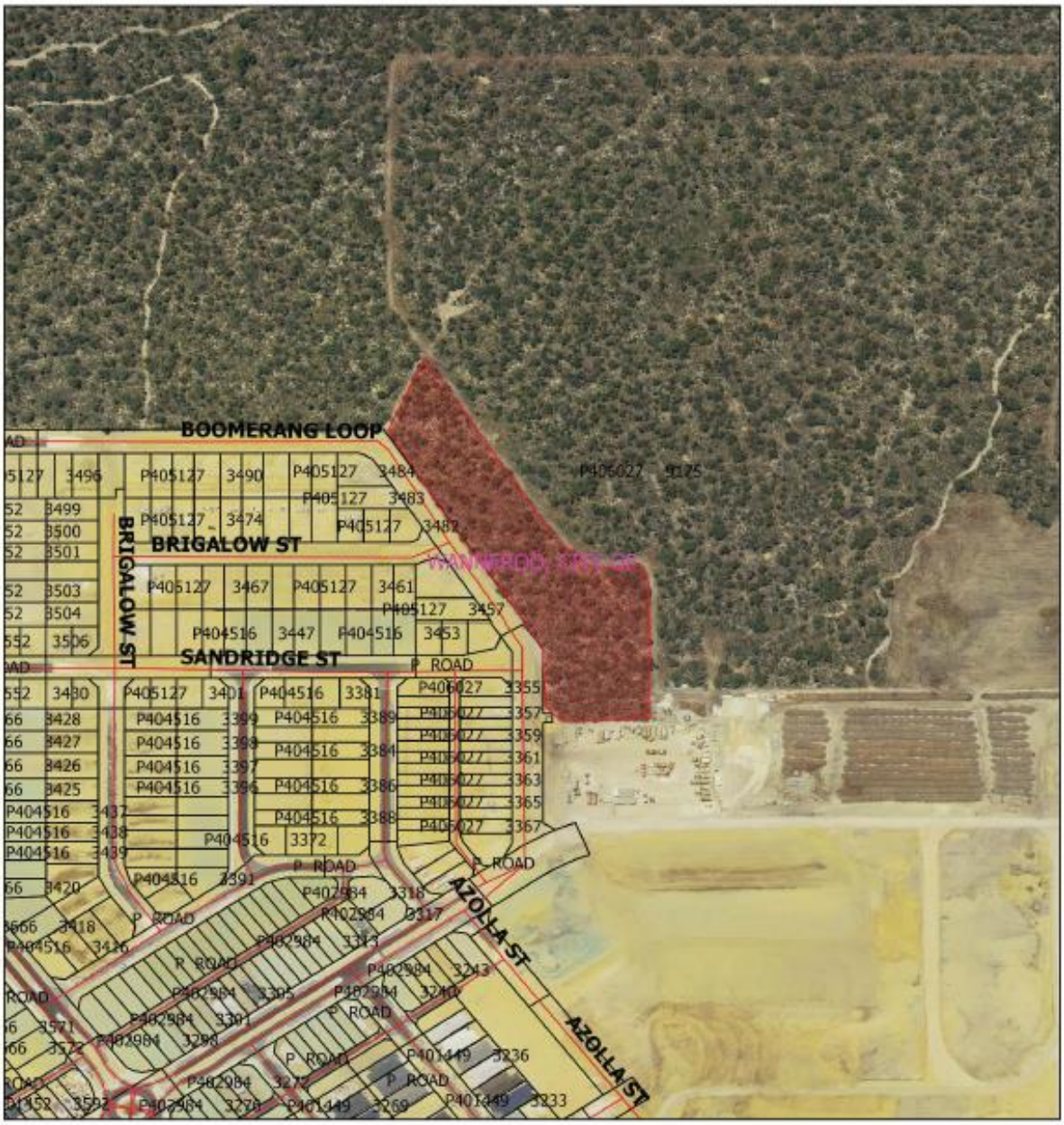
See the department's website for the latest information: www.dpaw.wa.gov.au

Schedule 6: Areas subject to conditions - Locations of offset sites (3) (Plan 3731/8a, Plan 3731/8b, Plan 3731/8c)

Plan 3731/8a



Plan 3731/8b



Legend

- Areas subject to conditions
- Roads
- LGA
- Cadastre

Virtual Mosaic (LGATE-V001)

N

1:2,500

MGA94
Geocentric Datum of Australia 1994

GOVERNMENT OF WESTERN AUSTRALIA

Plan 3731/8c


390000
BISKER RD
GOLFVIEW PL
BENMORE RD
PHILLIPS PL
MARY ST
MARY ST
WANNEROO, CITY OF
Legend
Areas subject to conditions
Roads
LGA
Cadastre
Virtual Mosaic (LGATE-V001)
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MGA 94
Geocentric Datum of Australia 1994
GOVERNMENT OF
WESTERN AUSTRALIA

Schedule 7: Subject to conditions – Revegetation Completion Criteria for the area cross hatched red in Schedule 6 Plan 3731/8c

Criterion	Baseline floristic data	Completion targets	Completion criteria
1	Species richness is based on revegetation Species List (Schedule 8)	Minimum of 60% of native species, as listed in the Species List, returned to the revegetation site based on propagation capacity of species.	Species richness in the revegetation site is 60% of that obtained by the species list.
2	Clearing will result in loss of Carnaby's habitat.	A minimum planting density of 1 foraging species for Black Cockatoo's per 4 metres squared is to be achieved at the revegetation site.	The revegetation site needs to have a minimum of 2,500 stems per hectare of Black Cockatoo foraging species.
3	There are five dominant tree species	Return dominant tree species present in the Species List.	The revegetation site needs to have the five dominant tree species (*Banksia attenuata, B. menziesii, B. ilicifolia* and *Eucalyptus marginata, E. rudis*).
4	Weed cover at the site is ≤10%.	Weed coverage to be maintained at ≤10%.	The revegetation site must have a percentage cover of ≤10% weeds.
5	5% cover of major competitive weeds.	Absent from the revegetation site.	The revegetation site needs to have major competitive weeds absent from the site.
6	Presence of declared weeds	Declared Weeds are managed in accordance with the *Biosecurity* and *Agriculture Management Regulations 2013*.	Declared weeds are absent from the revegetation site.
7	Survival rate to be achieved	If after 5 years of planting a survival rate of at least 2 plants/m^2 is not achieved, all planted tubestock that have not survived must be replanted within 12 months and monitored for a further 2 years.	The revegetation site needs to ensure a survival rate for tubestock of at least 2 plants/m^2 is achieved after five years, and replant any trees within 12 months of dying.

Schedule 8: Subject to conditions – Revegetation species list for the area cross hatched red in Schedule 5 Plan 3731/8c

Number	Species	Number	Species
1	*Acacia cyclops*	34	*Exocarpos sparteus*
2	*Acacia huegelii*	35	*Gastrolobium capitatum*
3	*Acacia pulchella var pulchella*	36	*Gompholobium tomentosum*
4	*Acacia saligna*	37	*Haemodorum spicatum*
5	*Acacia sessilis*	38	*Hakea prostrata*
6	*Acacia truncata*	39	*Hakea ruscifolia*
7	*Adenanthos cygnorum*	40	*Hardenbergia comptoniana*
8	*Allocasuarina fraseriana*	41	*Hibbertia huegelii*
9	*Allocasuarina humilis*	42	*Hibbertia hypericoides*
10	*Anigozanthos humilis*	43	*Hibbertia subvaginata*
11	*Anigozanthos manglesii*	44	*Hovea trisperma var trisperma*
12	*Astartea scoparia*	45	*Hypocalymma angustifolium*
13	*Banksia attenuata*	46	*Hypocalymma robustum*
14	*Banksia grandis*	47	*Jacksonia calcicola*
15	*Banksia ilicifolia*	48	*Jacksonia floribunda*
16	*Banksia menziesii*	49	*Jacksonia furcellata*
17	*Baumea articulata*	50	*Jacksonia sericea*
18	*Baumea preissii*	51	*Jacksonia sternbergiana*
19	*Calytrix fraseri*	52	*Juncus pallidus*
20	*Conospermum stoechadis*	53	*Kennedia prostrata*
21	*Conostylis aculeata*	54	*Kunzea ericifolia*
22	*Conostylis juncea*	55	*Lechenaultia floribunda*
23	*Corymbia calophylla*	56	*Melaleuca preissiana*
24	*Cyanothamnus ramosus (Boronia ramosa)*	57	*Melaleuca teretifolia*
25	*Daviesia divaricata*	58	*Nemcia capitata* *
26	*Daviesia nudiflora*	59	*Patersonia occidentalis*
27	*Daviesia physodes*	60	*Pultenaea reticulata*
28	*Daviesia triflora*	61	*Regelia ciliata*
29	*Dianella revoluta*	62	*Scaevola repens*
30	*Eremaea pauciflora*	63	*Scholtzia involucrata*
31	*Eucalyptus marginata*	64	*Stirlingia latifolia*
32	*Eucalyptus rudis*	65	*Xanthorrhoea preissii*
33	*Eucalyptus todtiana*		

* now ***Gastrolobium capitatum***

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 3731/8
Permit type:	Purpose permit
Applicant name:	City of Wanneroo
Application area:	16.1248 hectares of native vegetation and 41 trees and shrubs
Purpose of clearing:	Road construction and upgrades
Method of clearing:	Mechanical removal
Properties:	Lot 9000 on Plan 74654, Carramar Lot 9000 on Plan 66196, Neerabup Lot 80 on Plan 7404, Wanneroo Lot 709 on Plan 61957, Hocking Lot 708 on Plan 61957, Hocking Lot 705 on Plan 73319, Wanneroo Lot 590 on Plan 69319, Nowergup Lot 56 on Plan 7122, Wanneroo Lot 55 on Plan 20055, Maranagoo Lot 568 on Plan 69324, Darch Lot 55 on Plan 7122, Wanneroo Lot 54 on Plan 7122, Wanneroo Lot 505 on Plan 70535, Pearsall Lot 503 on Plan 60468, Pearsall Lot 3050 on Plan 202794, Nowergup Lot 301 on Plan 66196, Neerabup Lot 300 on Plan 71494, Wanneroo Lot 300 on Plan 68244, Nowergup Lot 300 on Plan 66859, Pearsall Lot 300 On Plan 66196, Neerabup Lot 26 on Plan 8326, Neerabup Lot 505 on Plan 71510, Nowergup Lot 20 on Plan 7122, Wanneroo Lot 1 on Diagram 71604, Wanneroo Lot 1 on Diagram 44141, Wanneroo Lot 19 on Plan 7122, Wanneroo Lot 18 on Plan 7122, Wanneroo Lot 180 on Plan 15552, Wanneroo Lot 179 On Plan 15552, Wanneroo Lot 178 On Plan 15552, Wanneroo Lot 177 on Plan 15552, Wanneroo Lot 176 on Plan 15552, Wanneroo Lot 175 on Plan 15552, Wanneroo Lot 171 on Plan 15402, Wanneroo Lot 170 on Plan 15402, Wanneroo Lot 169 on Plan 15402, Wanneroo Lot 168 on Plan 15402, Wanneroo Lot 154 on Plan 13145, Wanneroo Lot 153 on Plan 13145, Wanneroo Lot 15391 on Plan 40237, Wanneroo Lot 152 on Plan 13145, Wanneroo Lot 151 on Plan 13145, Wanneroo Lot 130 on Plan 13145, Wanneroo Lot 129 on Plan 13145, Wanneroo Lot 128 on Plan 13145, Wanneroo Lot 127 on Plan 13145, Wanneroo Lot 126 on Plan 13145, Wanneroo Lot 125 on Plan 13145, Wanneroo Lot 124 on Plan 13145, Wanneroo

	Lot 121 on Plan 13145, Wanneroo Lot 11 on Diagram 57099, Carramar Lot 1174 on Plan 72656, Wanneroo Lot 1102 on Plan 72657, Wanneroo Lot 1101 on Plan 72657, Wanneroo Lot 10945 on Plan 15552, Wanneroo Lot 504 on Plan 406406, Pinjar Lot 104 on Plan 15552, Wanneroo Lot 103 on Plan 15552, Wanneroo Lot 102 on Plan 15552, Wanneroo Lot 101 on Plan 15552, Wanneroo Lot 10135 on Plan 13145, Wanneroo Lot 10130 on Plan 13145, Wanneroo Lot 100 on Plan 15552, Wanneroo Lot 505 on Plan 404876, Neerabup Lot 700 on Plan 71491, Wanneroo Lot 700 on Plan 70369, Neerabup Crown Reserve 11598, Neerabup Flynn Drive Road Reserve - 11402348, Neerabup Wanneroo Road Reserve - 1136623, Neerabup Evandale Road Reserve - 11170064, Darch Hepburn Avenue Road Reserve - 1149423, Marangaroo Hepburn Avenue Road Reserve - 11155700, Darch Hepburn Avenue Road Reserve - 11155701, Darch Hepburn Avenue Road Reserve - 11155699, Darch Hepburn Avenue Road Reserve - 11092591, Darch Franklin Road Reserve - 11071334, Jandabup Trichet Road Reserve - 11071336, Wanneroo Franklin Road Reserve - 11751756, Jandabup Lenore Road Reserve - 11979980, Wanneroo Lenore Road Reserve - 11842698, Pearsall Caporn Street Road Reserve - 11945171, Wanneroo Hepburn Avenue Road Reserve - 11673650, Madeley Hepburn Avenue Road Reserve - 1178774, Madeley Bebich Drive Road Reserve - 11069636, Wanneroo Lenore Road Reserve - 11977527, Wanneroo Lenore Road Reserve - 11989940, Wanneroo Shenton Road Reserve - 11751760, Wanneroo Lenore Road Reserve - 11069634, Wanneroo Lenore Road Reserve - 11777591, Wanneroo Lenore Road Reserve - 11909700, Wanneroo Elliot Road Reserve - 11751765, Wanneroo Lenore Road Reserve - 11909706, Wanneroo Lenore Road Reserve - 11909697, Wanneroo Lenore Road Reserve - 11754351, Pearsall Nicholas Road Reserve - 11751758, Wanneroo Lenore Road Reserve - 11069644, Wanneroo Lenore Road Reserve - 11911176, Pearsall Lenore Road Reserve - 11069643, Wanneroo Lenore Road Reserve - 11751757, Wanneroo Lenore Road Reserve - 11069647, Wanneroo Lenore Road Reserve - 11705632, Wanneroo Lenore Road Reserve - 11818964, Wanneroo Lenore Road Reserve - 11819022, Wanneroo Rome Road Reserve - 11023833, Wanneroo Unnamed Road Reserve - 11505083, Hocking Pinot Loop Road Reserve - 12068478, Pearsall Lenore Road Reserve - 11564908, Hocking Lenore Road Reserve - 11725200, Hocking Lenore Road Reserve - 11909703, Hocking Lenore Road Reserve - 11505085, Hocking Lenore Road Reserve - 11705039, Wanneroo Dundebar Road Reserve - 11023865, Wanneroo High Road Reserve - 1256965, Wanneroo Belgrade Road Reserve - 11023835, Wanneroo Nicholas Road Reserve - 11751759, Hocking Elliot Road Reserve - 11751766, Wanneroo Old Yanchep Road Reserve - 11751045, Neerabup Mary Street Road Reserve - 11751772, Pearsall

	Caporn Street Road Reserve - 11169479, Wanneroo East Road Reserve - 11751774, Hocking Old Yanchep Road Reserve - 11582356, Pinjar Joondalup Drive Road Reserve - 1164754, Banksia Grove Old Yanchep Road Reserve - 11582355, Pinjar Old Yanchep Road Reserve - 11543914, Pinjar Joondalup Drive Road Reserve - 11309555, Carramar Joondalup Drive Road Reserve - 11170740, Carramar Lyndavale Loop Road Reserve - 11170744, Carramar Joondalup Drive Road Reserve - 11110582, Tapping Wesco Road Reserve - 1262259, Nowergup Orchid Road Reserve - 11543910, Nowergup Joondalup Road Reserve - 1331918, Tapping Flynn Drive Road Reserve - 11751051, Banksia Grove Flynn Drive Road Reserve - 11782987, Neerabup Flynn Drive Road Reserve - 11926266, Neerabup Flynn Drive Road Reserve - 11593806, Neerabup Flynn Drive Road Reserve - 11926267, Neerabup Flynn Drive Road Reserve – 12309281, Neerabup Flynn Drive Road Reserve - 12001800, Carramar Travertine Vista Road Reserve - 11751053, Carramar Travertine Vista Road Reserve - 12001799, Neerabup Travertine Vista Road Reserve - 11751055, Neerabup Flynn Drive Road Reserve - 7280, Neerabup Flynn Drive Road Reserve - 11926268, Neerabup Wesco Road Reserve - 11543917, Nowergup
Location (LGA area):	City of Wanneroo
Locality (suburb):	Carramar and Pearsall and Banksia Grove and Neerabup and Marangaroo and Wanneroo and Nowergup and Tapping and Madeley and Jandabup and Darch and Hocking and Pinjar.

1.2. Decision on application

Decision:	Granted
Decision date:	16 September 2022
Decision area:	16.1248 hectares of native vegetation and 41 trees and shrubs (Section 1.5; Appendix A).

1.3. Description of clearing activities

Purpose Permit CPS 3731/7 is a Strategic Clearing Permit granted to the City of Wanneroo on 3 September 2015 that authorises the mechanical clearing of 16.1248 hectares of native vegetation and 41 trees and shrubs required for road construction and various upgrades including for road works at Wesco Road, Old Yanchep Road, Flynn Drive, Lenore Road/Franklin Road, Evandale Road, Hester Avenue, Joondalup Drive, Lyndavale Loop, Hepburn Avenue, and the intersection of Lenore Road and Nicholas Road (**Figure 1**). The permit also authorises clearing required for the relocation of a golf tee at Carramar Golf Club required for asbestos removal.

An application for an amendment to CPS 3731/7 was received by the Department of Water and Environmental Regulation (DWER) on 7 April 2022. The purpose of the proposed amendment was to maintain the 16.1248 hectares of native vegetation and 41 trees and shrubs required for clearing but to reduce the purpose permit clearing boundary at the Flynn Drive location, and to extend the duration of the permit for a further five years to facilitate uncompleted upgrades proposed for the Flynn Drive upgrade, as well as the Lenore Road/Franklin Road project.

During the assessment, the amendment was revised to maintain the existing CPS 3731/7 clearing boundary (including at the Flynn Drive location). The proposed amendment seeks only to extend the duration of the permit for a further five years with the amount of clearing authorised unchanged.

DWER advertised the application on 21 May 2022 for 21 days for public comment. No submissions were received.

1.4. Reasons for decision

In determining to amend CPS 3731/7 subject to conditions, the Delegated Officer found that the proposed amendment will not increase the amount of native vegetation authorised to clear, and no modifications to the approved clearing

area have been proposed. The extension of permit duration will allow the City of Wanneroo to continue upgrades to the Flynn Drive upgrade and allow for planned upgrades to Lenore Road/Franklin Road.

The assessment identified that the proposed clearing may result in:

- the potential loss of two trees providing potential breeding opportunities for Threatened black cockatoo species;
- the potential introduction and spread of Dieback disease *(Phytophthora* sp) currently not present in the application area that has the potential to impact adjacent areas of native vegetation; and
- the risk to terrestrial fauna that may be present may be present during the clearing activity.

The assessment also identified changes in property identifiers since the CPS 3731/7 permit was granted, and an administrative error in regard to an offset site. Condition 10 of CPS 3731/7, in regard to offset site 2 (Boomerang Park), required the Permit Holder to provide evidence of a management order issued for *'Public Recreation and Conservation'* from the Department of Planning, Lands and Heritage (DPLH). An administrative oversight by DPLH neglected to add the purpose of '*Conservation'* to the issued management order. Actions have been initiated by the Permit Holder and the DPLH to rectify the oversight.

Two black cockatoo habitat trees with potential breeding hollows are located within the Flynn Drive clearing area. If these trees cannot be avoided, the City of Wanneroo have committed to inspecting these hollows prior to clearing, and if deemed suitable by a fauna expert for breeding purposes by black cockatoos will be mitigated by the establishment of artificial hollows at a suitable location in an offset site. The assessment also concluded that proposed clearing may increase the risk of Dieback disease entering adjacent areas on native vegetation in better condition than the application area.

The Delegated Officer determined that although the significant residual impact associated with the amendment is unchanged and that the current offset provided by the City of Wanneroo will adequately counterbalance the resultant significant residual impact, permit conditions have been strengthened. The duration required for the Permit Holder to undertake revegetation actions has been lengthened by five years, and revegetation compliance criteria have been added, that also include criteria pertaining to black cockatoo foraging habitat.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures and associated offset sites, the Delegated Officer determined that proposed clearing is not likely to lead to an unacceptable risk to the environment subject to conditions, and decided to grant an amendment to Purpose Permit CPS 3731/7 to increase the permit duration for five years. Additional conditions have been applied to the permit to:

- take hygiene steps to minimise the risk of the introduction and spread of Dieback;
- engage a fauna specialist to inspect two potential breeding habitat trees for evidence of breeding use prior to clearing, and the suitability of hollows for black cockatoo breeding purposes: and
    - any breeding habitat tree with evidence of current breeding use must not be cleared whilst it is in use for that breeding season,
    - for each hollow assessed by the fauna specialist as suitable for black cockatoo breeding purposes, the applicant must install and maintain an artificial Carnaby's Cockatoo nest hollow, and
    - any artificial nesting hollow must be installed prior to commencement of the next Carnaby's Cockatoo breeding season following clearing of the related breeding habitat tree(s).
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity
- provide evidence of a management order issued for *'Public Recreation and Conservation'* from the Department of Planning, Lands and Heritage (DPLH) in regard to offset site 2 (Boomerang Park).
- continue the revegetation of 3.1 hectares at offset site Site 3 (Lake Badgerup) for a further five years to stipulated revegetation completion criteria.

Remaining conditions are unchanged, including avoidance and minimisation, weed control, and record keeping.

Previous assessmemts determined that the proposed clearing was at variance to principles (a), (b), (f) and (h), may be at variance to principles (c) and (g), and was not likely to be at variance to the remaining principles. No additional clearing areas are required, and the assessment against the clearing principles has not changed.

1.5. Site map

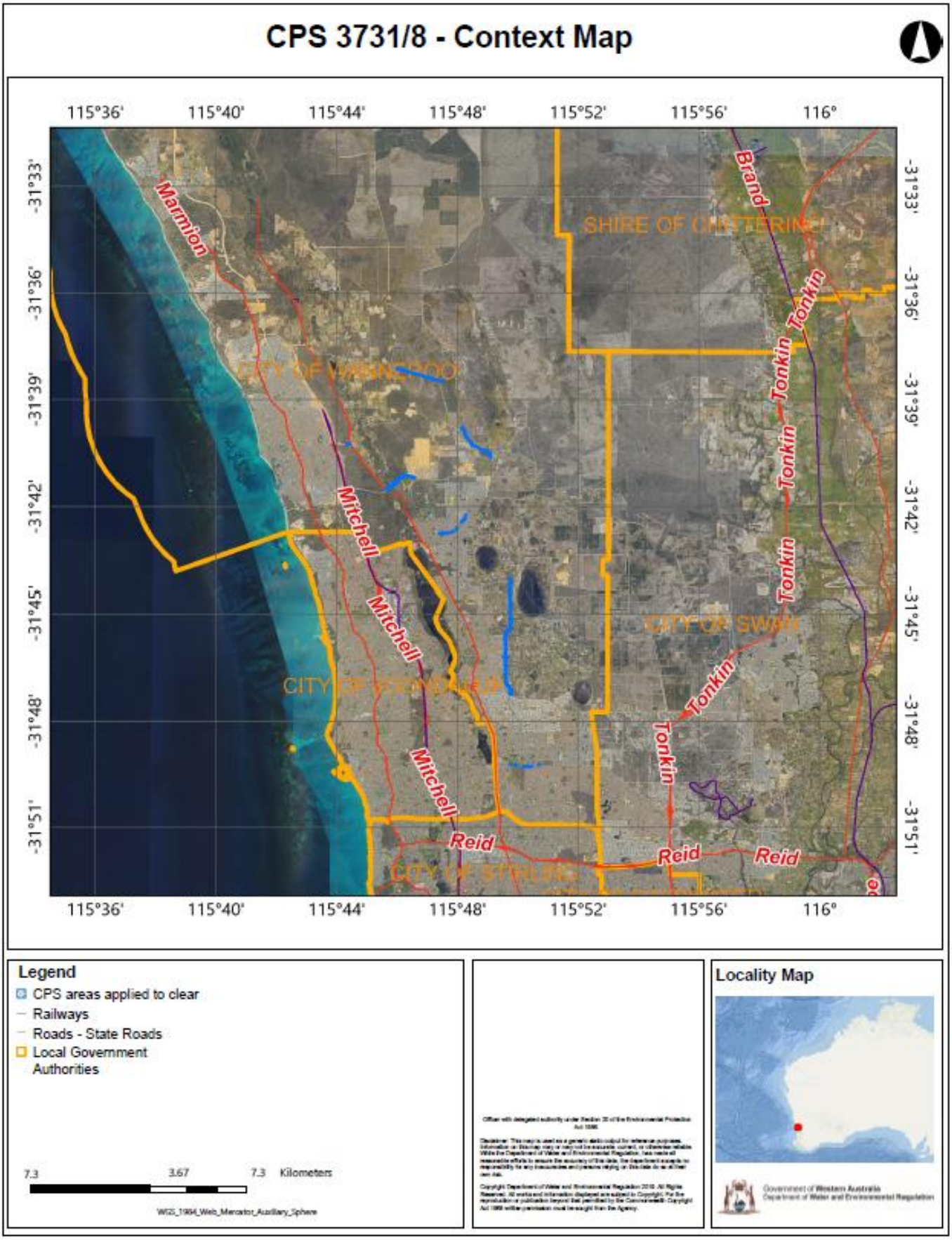

Figure 1: 3731/7 City of Wanneroo Strategic Purpose Permit

2 Background

Previous amendments

The current Purpose Permit CPS 3731/7 granted to the City of Wanneroo (the City) on 3 September 2015 authorises the mechanical clearing of 16.1248 hectares of native vegetation and 41 trees and shrubs required for road construction and various upgrades including: 0.43 hectares for road works at Wesco Road; 3.00 hectares for road works at Old Yanchep Road; 6.70 hectares for road works at Flynn Drive; 4.80 hectares for road works at Lenore Road/Franklin Road; 0.08 hectares for road works at Evandale Road; 0.07 hectares for road works at Hester Avenue; 0.68 hectares and 22 trees/shrubs for road works at Joondalup Drive and Lyndavale Loop; 0.042 hectares and 6 trees/shrubs for road works at Hepburn Avenue; 0.095 hectares and 13 trees/shrubs for road works at Wesco Road and at the intersection of Lenore Road and Nicholas Road; 0.04 hectares for the relocation of a golf tee at Carramar Golf Club and 0.20 hectares required for asbestos removal work.

A number of amendments to CPS 3731 have previously been made and the CPS 3731 permit history is summarised below:

- On 19 August 2010 CPS 3731/1 was granted for the clearing of 14.09 hectares of native vegetation including:
    - 0.4 hectares of native vegetation in degraded to very good (Keighery 1994) condition for road works at Wesco Road;
    - 3 hectares of native vegetation in degraded to pristine (Keighery 1994) condition for road works at Old Yanchep Road;
    - 6.6 hectares of native vegetation in degraded to very good (Keighery 1994) condition for road works at Flynn Drive;
    - 4 hectares of native vegetation in completely degraded to excellent (Keighery 1994) condition for road works at Lenore Road/Franklin Road;
    - 0.05 hectares of native vegetation in degraded (Keighery 1994) condition for road works at Evandale Road; and
    - 0.04 hectares of native vegetation in degraded (Keighery 1994) condition for relocation of a golf tee at Carramar Golf Club.
- On 16 December 2010 CPS 3731/2 was granted for the clearing of an additional 22 trees/shrubs and 0.68 hectares of native vegetation in degraded (Keighery 1994) condition for road works at Joondalup Drive and Lyndavale Loop.
- On 14 September 2011 an application to amend CPS 3731/2 was declined (CPS 3731/3) as the location of additional clearing proposed was not supplied.
- On 1 December 2011 CPS 3731/4 was granted for the clearing of an additional 1.072 hectares of native vegetation and 6 trees/shrubs including:
    - 0.03 hectares of native vegetation in degraded (Keighery 1994) condition for road works at Wesco Road;
    - 0.1 hectares of native vegetation in good (Keighery 1994) condition for road works at Flynn Drive;
    - 0.8 hectares of native vegetation in degraded (Keighery 1994) condition for road works at Lenore Road/Franklin Road;
    - 0.03 hectares of native vegetation in degraded (Keighery 1994) condition for road works at Evandale Road;
    - 0.07 hectares of native vegetation in good (Keighery 1994) condition for road works at Hester Avenue; and
    - 6 trees/shrubs and 0.042 hectares of native vegetation in degraded to excellent (Keighery 1994) condition for road works at Hepburn Avenue.
- On 9 February 2012 an administrative amendment was made to correct the properties listed on the permit (CPS 3731/5).
- On 21 February 2013 CPS 3731/6 was granted for the clearing of an additional 0.2 hectares of native vegetation in degraded (Keighery 1994) condition for asbestos removal works.
- On 3 September 2015 CPS 3731/7 was granted for the clearing of an additional 0.0948 hectares of native vegetation and 13 native shrubs for road works along Wesco Road and at the intersection of Lenore Road and Nicholas Road, and to extend the permit duration by five years. Total clearing authorised under CPS 3731/7 is 16.1248 hectares of native vegetation and 41 trees and shrubs.

Offsets provided

An offset proposal was submitted by the City in February 2010 (City of Wanneroo 2010) in connection with the City's Strategic Clearing Permit 2009-2022, CPS 3731/7 (Condition 10), and approval was granted on the 4 November of 2010 (DEC 2010). The offset proposal included:

- Conservation of approximately 41 hectares of remnant vegetation and wetland, and revegetation of approximately 15 hectares of degraded land, at Lake Badgerup; and
- Conservation of two parcels of land totalling approximately nine hectares at Banksia Grove.

The approved offset proposal also addressed the requirements of offset conditions within additional City of Wanneroo clearing permits: CPS 1964/2, CPS 2184/3 and CPS 2963/1 respectively.

The previous assessment of CPS 3731/7 included an assessment of offset suitability. The Delegated Officer considered the conservation of native vegetation at Banksia Grove (offset sites 1 and 2) and the revegetation of 3.1 hectares at Lake Badgerup (offset site 3) acceptable to counterbalancing residual impacts. A breakdown of the offset allocation currently relating to CPS 3731/7 is provided in the table below.

Table 1: Summary of CPS 3731/7 offset requirements

Permit	Clearing Location	Asset	Residual Impact (ha)	Offset Size (ha)	Offset Type	Offset Location
CPS 3731/1	Wesco Road	*BF, *VC	0.08	0.15	Conservation	Banksia Grove
CPS 3731/1	Old Yanchep Road	*BF, *VC	0.60	1.20	Conservation	Banksia Grove
CPS 3731/1	Flynn Drive	*BF, *VC	3.65	7.30	Conservation	Banksia Grove
CPS 3731/1	Franklin Road	*BF, *VC	1.55	3.10	Revegetation	Lake Badgerup

*BF: Bush Forever
*VC: Vegetation condition at Good or better

3 Assessment

In undertaking the assessment, and in accordance with section 51O of the EP Act, the Delegated Officer has given consideration to the information provided by the applicant, the clearing principles in Schedule 5 of the EP Act, relevant planning instruments, flora and vegetation surveys and any other pertinent matters they deemed relevant to the assessment. The Delegated Officer also took into consideration the purpose of the clearing to enable a time extension only to facilitate forthcoming road upgrades proposed for the Lenore Road/Franklin Road project as well as the Flynn Drive upgrade.

Purpose Permit CPS 3731/7 granted to the City of Wanneroo on 3 September 2015 authorises the mechanical clearing of 16.1248 hectares of native vegetation and 41 trees and shrubs required for road construction and various upgrades within the Shire of Wanneroo. An application for an amendment to CPS 3731/7 was received by the Department of Water and Environmental Regulation (DWER) on 7 April 2022 (City of Wanneroo 2022a). The purpose of the proposed amendment was to maintain the 16.1248 hectares of native vegetation and 41 trees and shrubs required for clearing but to reduce the purpose permit clearing boundary at the Flynn Drive location, and to extend the duration of the permit for a further five years to facilitate forthcoming road upgrades proposed for the Lenore Road/Franklin Road project as well as the Flynn Drive upgrade. During the assessment the amendment was revised to maintain the existing CPS 3731/7 clearing boundary (including at the Flynn Drive location) (City of Wanneroo 2022b).

The majority of the clearing associated with CPS 3731/7 has been completed including 4.67 hectares of the 6.7 hectares associated with the Flynn Drive project. The proposed amendment seeks to extend the duration of the permit for a further five years to enable uncompleted upgrades proposed for the Flynn Drive upgrade, as well as the Lenore Road/Franklin Road project. The total amount of clearing authorised is unchanged.

Relevant recent survey reports were provided with the application amendment by the City, including Ecoscape (2020a); Ecoscape (2020b); Ecoscape (2021a); and Ecoscape (2021b), along with previous relevant surveys including Coffey (2008) and Coffey (2009).

The recent surveys of Ecoscape (2020a) identified three potentially conservation significant flora taxa within the Flynn Drive application area (**Figure 2**); the Critically Endangered *Grevillea thelemanniana,* the Priority 4 *Grevillea olivacea,* and the Priority 4 *Conostylis ?pauciflora subsp. pauciflora*.

Grevillea thelemanniana* and *Grevillea olivacea

Ecoscape (2020a) report that the Critically Endangered *Grevillea thelemanniana* was present at one site, however, did not appear to be a naturally occurring population based on the density and defined boundary of the population, proximity to developed infrastructure and examination of aerial imagery dated 2010 to 2013. The survey site does not fall within the known distribution for the species, however, the taxon is available commercially and commonly used for landscape plantings (Ecoscape 2020a).

The City of Wanneroo (2022c) provided evidence that in November 2007 the City approved Landscaping Plans with associated landscaping species lists for Meridian Park Stage 1. The approved plans proposed the planting of cultivated *Grevillea thelemanniana* within two areas within the Flynn Drive Road reserve and the *Grevillea thelemanniana* shrubs identified within the Flynn Drive road reserve by Ecoscape (2020) are intentionally planted species that do not represent a naturally occurring population.

The Priority 4 *Grevillea olivacea* recorded by Ecoscape (2020a) was observed as a large, single shrub situated in an area of woodland with evidence of supplementary planting, likely for revegetation or enhancement purposes (Ecoscape 2020a). The taxa is not known to be naturally distributed within 90 kilometres of the application area and the taxon is readily available through tree stockists and nurseries. Ecoscape (2020a) consider it likely that this record represents a planted individual (or garden escapee). An occurrence of this taxon was observed at the same location during the previous survey by Coffey (2008) and identified as being planted for landscaping purposes.

The City of Wanneroo (2022c) provided evidence that the 'Kilns Development' located immediately adjacent to Flynn Drive created and planted a 'vegetated bund' along the boundary of the property with Flynn Drive in 2007, creating a visual screen and to reduce vehicle noise from Flynn Drive. At the time the landscaping occurred, the property was privately owned and was not required to submit landscaping drawings or species lists to the City for approval. Figures provided by the City of Wanneroo (2022c) demonstrate that landscaping works occurred within the Flynn Drive road reserve. It should be noted that although these areas are now within the Flynn Drive road reserve prior to subdivision (for the purposes of upgrading Flynn Drive to a dual carriageway) these areas were private property at the time of the landscaping works. The individual *Grevillea olivacea* plant recorded is very likely to be cultivated and not representative of a naturally occurring population.

Under the *Environmental Protection Act 1986* (EP Act) and Regulation 4 of the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* "native vegetation" does not include vegetation that is intentionally sown, planted or propagated unless required under the EP Act or any other written law, or the planting was funded (wholly or partly) by a person who was not the owner of the land and for the purpose of biodiversity conservation, or a conservation covenant, agreement to reserve or other form of binding undertaking to establish and/or maintain the vegetation is in effect.

Under the *Biodiversity Conservation Act 2016* (BC Act) the requirement for a section 40 authorisation to take flora does not apply to cultivated flora. The definition of cultivated flora excludes flora that has been sown, planted or propagated as required under a written law.

It is likely that the individual *Grevillea thelemanniana* and *Grevillea olivacea* plants recorded by Ecoscape (2020a) within the Flynn Drive application area are not native vegetation under the EP Act, and do not require section 40 authorisation under the BC Act.

Conostylis ?pauciflora subsp. pauciflora

Ecoscape (2020a) recorded the Priority 4 taxon *Conostylis ?pauciflora subsp. pauciflora* at two locations within the Flynn Drive application area (**Figure 2**). The presence of the taxon could not be conclusively confirmed at the time due to the absence of mature flowering material required for positive identification. *Conostylis ?pauciflora subsp. pauciflora* has been recorded from the Gnangara Groundwater System area and are considered locally endemic to the Perth IBRA subregion of the Swan Coastal Plain (Valentine *et al.* 2009; WAH 2020). The suitability of adjacent habitat and the scattered distribution of the plants recorded suggests that a population extends into adjacent woodland (Ecoscape 2020a). Fourteen records of the taxon are documented in WAH (1998-) extending for 180 kilometres along the Swan Coastal Plain from Two Rocks to Yalgorup, and inland as far as Waroona. If the recorded specimens are indeed *Conostylis ?pauciflora subsp. pauciflora* impacts to the population at the local or regional scales are unlikely to be significant. The City of Wanneroo (2022c) have committed to undertake savaging of flora of conservation significance prior to clearing by a suitably qualified revegetation contractor and re-planting affected plants into the proposed verge landscaping areas of the Flynn Drive road reserve during the winter planting season once works have been completed.

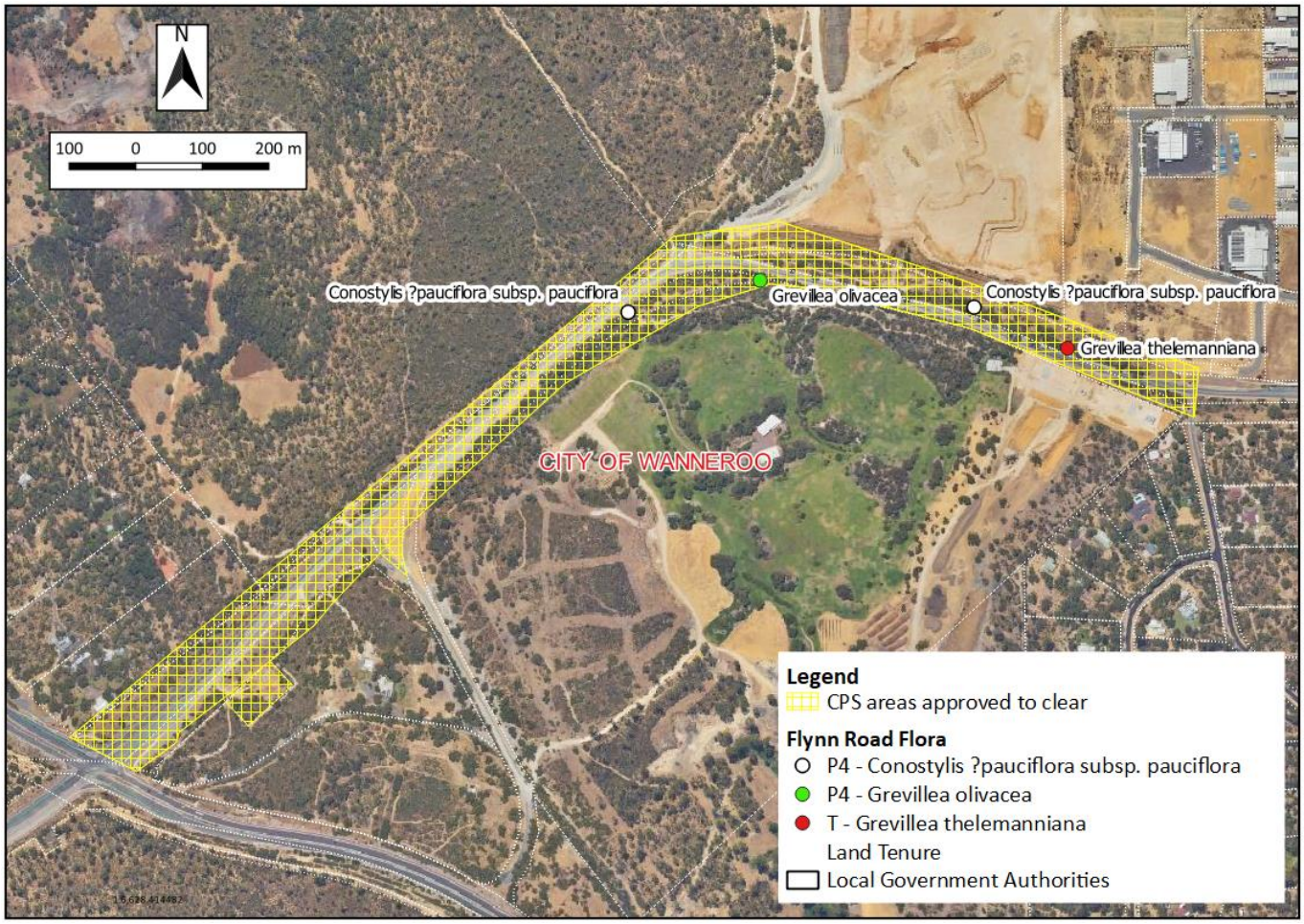

Figure 2: Potentially conservation significant flora taxa recorded over the Flynn Drive application area

The Banksia Woodlands of the Swan Coastal Plain ecological community, and the Tuart *(Eucalyptus gomphocephala)* woodlands and forests of the Swan Coastal Plain ecological community have both been listed as Threatened Ecological Communities under the EPBC Act since the last amendment to CPS 3731/6 in 2015. Both communities are listed as Priority Ecological Communities (PECs) (Priority 3) by the Department of Biodiversity, Conservation, and Attractions (DBCA) in Western Australia.

A Tuart mid open woodland over exotic grasses is present throughout the Flynn Drive application area (Ecoscape 2020a), but was assessed by Ecoscape (2020a) to be of lesser condition rating, and patch size, than what is required in order to satisfy the inclusion criteria for this ecological community as stipulated in the approved conservation advice of TSSC (2019). The remaining 1.9 hectares of Tuart mid open woodland required for clearing over Flynn Drive provides foraging habitat for the Threatened Carnaby's Cockatoo *(Zanda lateriosis* - previously *Calyptorhynchus lateriosi*s). The clearing required represents 0.026 percent of the 7,285 hectares of mapped potential black cockatoo foraging habitat remaining in the local area (**Appendix A**).

An offset to counterbalance the impacts of clearing over the Flynn Drive application area, including approximately 0.53 hectares within Bush Forever site 384 (Neerabup Lake and Adjacent Bushland), includes the conservation of 7.3 hectares of native vegetation at Banksia Grove (**Section 4**) that includes foraging habitat for Carnaby's Cockatoo (and other black cockatoo species).

The fauna survey of Ecoscape (2020b) identified two 'class 3' hollows within Tuarts that have the potential to provide breeding hollows for Threatened black cockatoo species (**Figure 3**). That is; *"a potentially suitable hollow visible but no chew marks present".* Class 3 trees possess the necessary characteristics preferred by the black cockatoos with no evidence of use recorded. If these trees cannot be avoided, the City of Wanneroo have committed to inspecting the identified hollows prior to clearing, and if deemed suitable by a fauna expert for breeding purposes by black cockatoos, will be mitigated by the establishment of artificial hollows at a suitable location in an offset site. Offset Site 3 associated with CPS 3731/7 (Section 4) does not contain suitable large trees required to support artificial hollows, and, Offset Sites 1 and 2 associated with CPS 3731/7 (Section 4) have not been investigated to determine suitability (City of Wanneroo 2022d). An unrelated City of Wanneroo offset site is located immediately north of Flynn Drive,

associated with Clearing Permit CPS 6359/3. That is, Crown Reserve R 53163 (Mather Reserve), Lot 8001 on Plan 411322. Mather Reserve is reserved with a management order to the City of Wanneroo with a purpose of *'conservation'.* The reserve has a Conservation Area Management Plan (AECOM 2020) and contains high-value foraging habitat for Carnaby's Cockatoo, as well ls breeding habitat trees, including those with class 3 *"potentially suitable hollows"* (AECOM 2020). Due to the security of tenure, presence of large trees, vegetation characteristics, and areas of foraging habitat in the local area, Mather Reserve (R 53163) is considered a suitable location to establish artificial hollows by the City, if required (**Appendix B** - **Figure D**).

Terrestrial fauna present within the application area are potentially at risk from the clearing activity and slow, progressive one directional clearing would allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity.

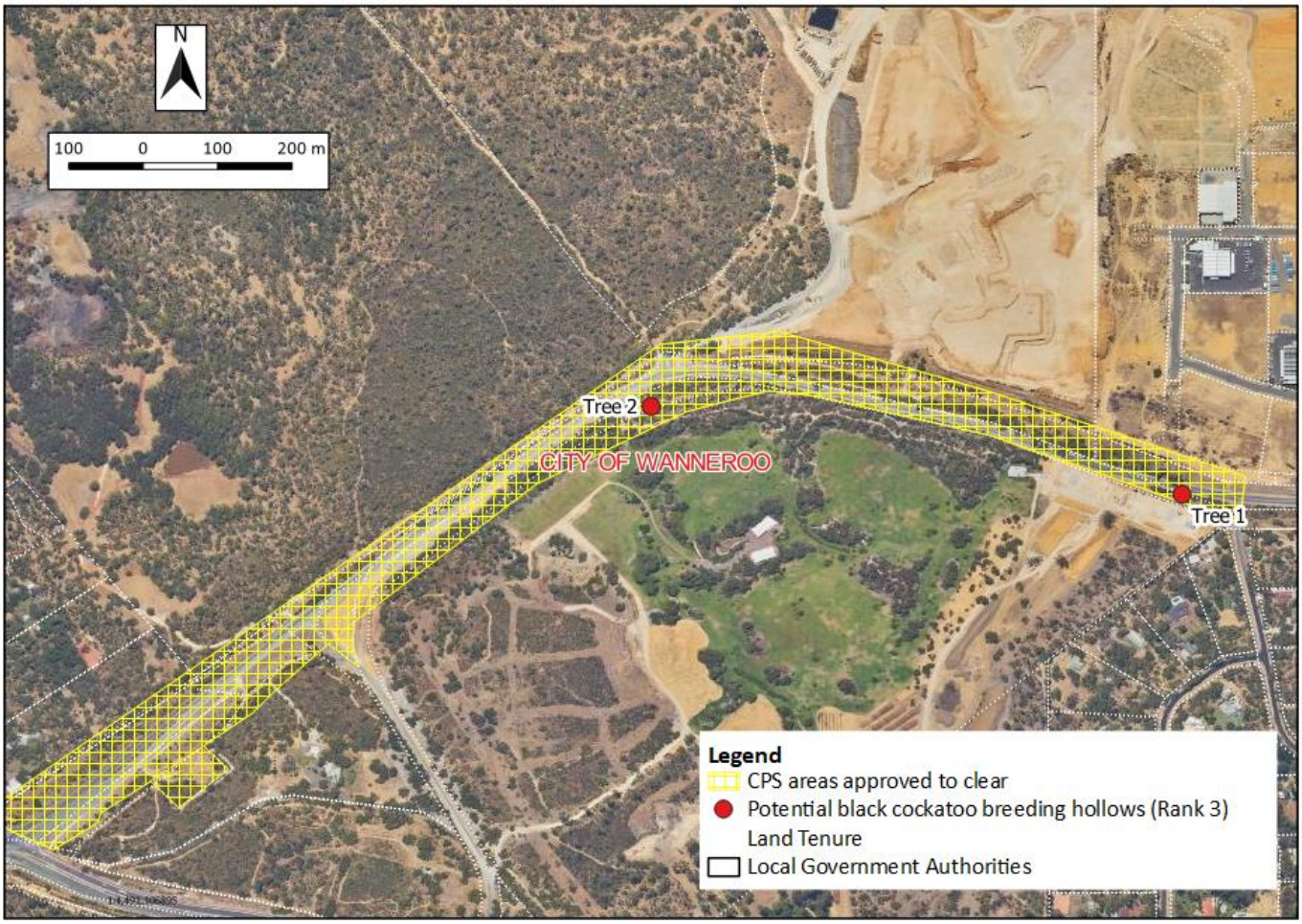

Figure 3: Potential black cockatoo breeding hollows recorded over the Flynn Drive application area

The Lenore Road/Franklin Road application area supports areas of Floristic Community Types (FCTs) 21a, 23a and 28 of Gibson *et al.*, (1994) (Coffey 2009), which are likely to represent components of the Banksia Woodlands community with 0.65 hectares occurring within Bush Forever site 471 (High Road Bushland – Wanneroo). The clearing required represents 0.026 percent of the 5,944 hectares mapped in the local area (**Appendix A**), and is not considered significant. Approximately 1.55 hectares of vegetation in better than 'good' over the Lenore Road/Franklin Road application area provides foraging habitat for Carnaby's Cockatoo. The clearing required represents 0.019 percent of the 7,991 hectares mapped in the local area (**Appendix A**). An offset to counterbalance the impacts of clearing on Bush Forever site 471 includes the revegetation of 3.10 hectares of native vegetation that includes foraging habitat for Carnaby's Cockatoo (and other black cockatoo species) (**Section 4**).

4 Offset status

Annual compliance reports in regard to strategic clearing permit CPS 3731 have been received from the City, including for 2021 (City of Wanneroo 2021 - A2028131; A2112426).

Condition 9 – Offset Site 1 (Banksia Grove - Honey Possum Park)

- The relevant management order issued to the City for the purpose of *"Public Recreation and Conservation"* has been provided to DWER (City of Wanneroo 2015) for the relevant area (**Appendix B - Figure A**), and management actions meet the requirements of Condition 10 of CPS 3731/7.

Condition 10 – Offset Site 2 (Banksia Grove - Boomerang Park)

Condition 10 of CPS 3731/7 requires the Permit Holder to provide evidence that a relevant management order has been issued to the City of Wanneroo for *'Public Recreation and Conservation'* from the Department of Planning, Lands and Heritage (DPLH) for the relevant area (**Appendix B - Figure B**).

The City requested the Management Order for Boomerang Park for the purposes of both *'Public Recreation and Conservation'* in June 2018, however, when the Management Order was issued to the City in November 2019 the purpose of *'Conservation'* had been overlooked by the DPLH, with the stated purpose being '*Public Recreation'* (only). This discrepancy had not been identified by the City.

The City have requested that the DPLH update the relevant management order as a matter of urgency to reflect the original intent (City of Wanneroo 2022). The DPLH have responded to the City that the Assessment Team will undertake the creation of the necessary documentation, being the Revocation of Management Order, Change of Reserve Purpose, and initiation of new Management Order (City of Wanneroo 2022).

An administrative oversight by DPLH neglected to add the purpose of '*Conservation'* to the relevant issued management order. Actions have been initiated by the Permit Holder to rectify the oversight.

- Condition 10 should be amended to require the Permit Holder to provide DWER a copy of the relevant Management Order for the purposes of *'Public Recreation and Conservation'* no later than 31 June 2023.

Condition 11 - Offset Site 3 (Lake Badgerup)

The City of Wanneroo Offset Proposal requires the revegetation of at least 3.1 hectares of native vegetation at Lake Badgerup (**Appendix B - Figure C**). The assessment of the CPS 3731/7 amendment did not require the submission of a Management Plan for Lake Badgerup (nor Banksia Grove). Condition 11 of CPS 3731/7 required the Permit Holder to develop and submit revegetation completion criteria to DWER, to implement the completion criteria, and establish vegetation prior to June 2017. Compliance reports have been received from the City of Wanneroo providing evidence of vegetation re-establishment prior to June 2017, with monitoring reports provided such as Astron (2018) that provide basic criteria for cover values, plant densities, and weeds. Monitoring data indicates that revegetation has not yet achieved cover or plant density criteria in all areas (Astron 2018). The City of Wanneroo (2021) annual report states that the City is continuing to revegetate Badgerup Reserve with native seed being collected on site to meet revegetation requirements, and infill planting with tube stock (10,449 seedlings over five stages). The City of Wanneroo (2021) advised that a planting and maintenance contract has been awarded to a specialist environmental rehabilitation contractor that includes weed control and watering of tube stock to assist with achieving the required plant survival and weed coverage criteria.

- The ten year management agreement approved as part of the Offset Proposal for Offset Site 3 (DEC 2010) has now lapsed. Condition 11 should be maintained to ensure that at least 3.1 hectares of Offset Site 3 reaches agreed and specified completion criteria.

Offsets provided

Offsets provided have considered impacts to Bush Forever sites in relation to State Planning Policy 2.8 (SPP 2.8) and, in particular, consistency with Appendix 4 of State Planning Policy 2.8 (WAPC 2010). Appendix 4 states that an area of 'Very High' conservation significance should have a 'Substantial Net Gain' of at least two times the calculated loss (WAPC 2010). Offsets provided deliver at least two times the calculated loss and are consistent with State Planning Policy 2.8. The offsets provided are also broadly consistent with the Draft WA environmental offsets metric.

5 Planning and other matters

An application for an amendment to CPS 3731/7 was received by DWER and advertised for public comment on 21 May 2022 for three weeks. No submissions were received.

A direct interest letter was sent to DPLH for comment on the proposed amendment to CPS 3731/7. No comments were received. Offsets provided have considered impacts to Bush Forever sites in relation to State Planning Policy 2.8 and are consistent with Appendix 4 of State Planning Policy 2.8 (WAPC 2010).

The application area falls within the Wanneroo Groundwater Area and a direct interest letter was sent to DWER for comment on the proposed amendment to CPS 3731/7 in relation to any further licences or permits required under the *Rights in Water and Irrigation Act 1914* (RIWI Act). No comments were received. No wetlands or water courses intersect the Flynn Drive or Lenore Road/Franklin Road application area and no additional licencing or permitting is likely to be required under the RIWI Act for the proposed land use.

The Flynn Drive application are intersects an Aboriginal Heritage Place; Lake Neerabup (Place ID 3693). It is the Permit Holder's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

6 References

AECOM (2020) Conservation Area Management Plan - Mather Reserve (53163) and Lot 24 Mary Street, Wanneroo. 23 Jun 2020. Prepared for, and endorsed by, the City of Wanneroo.

City of Wanneroo (2015) Notice of proposed amendment to Clearing Permit CPS 3731/6. Correspondence received by the Department of Water and Environmental Regulation (DWER) on 8 September 2015. Commitments (DWERDT655973)

City of Wanneroo (2010) Offset Proposal for Strategic Clearing Permit 3731/1. 3 November 2010 (A345079; DWERDT655800)

City of Wanneroo (2021) Annual Compliance Report for the City Of Wanneroo's Active Clearing Permits. 14 July 2021 (DWERDT656107)

City of Wanneroo (2022a) Application to amend clearing permit CPS 3731/7 received by the Department of Water and Environmental Regulation (DWER) on 7 April 2022 (DWERDT587931), and supporting information received (DWERDT635491, DWERDT649879, DWERDT654944).

City of Wanneroo (2022b) Application to amend clearing permit CPS 3731/7. Confirmation of a revised application area to reflect that of the original CPS3731/7 permit received by the Department of Water and Environmental Regulation (DWER) on 28 August 2022 (DWERDT654940)

City of Wanneroo (2022c) Application to amend clearing permit CPS 3731/7. Response to a request for further information received by the Department of Water and Environmental Regulation (DWER) on 8 September 2022 (DWERDT656329)

City of Wanneroo (2022d) Comments received from the City of Wanneroo on draft permit CPS 3731/8 received by the Department of Water and Environmental Regulation on 15 September 2022 and 16 September 2022 (DWERDT660042; DWERDT 660042)

Coffey Environments (Coffey) (2008) Spring flora and vegetation survey. Flynn Drive re-alignment, Neerabup. Prepared for the City of Wanneroo. 27 May 2008 (DWERDT656329).

Coffey Environments (Coffey) (2009) Flora and fauna assessment, Lenore Road, Wanneroo. Prepared for the City of Wanneroo. 15 December 2009 (DWERDT656329).

Department of Environment and Conservation (DEC) (2010) Department of Environment and Conservation (DEC) (now the Department of Water and Environmental Regulation - DWER) approval to City of Wanneroo's submitted Offset Proposal and ten year management plan for Strategic Clearing Permit 3731/1. 4th November 2010 (DWERDT655800).

Ecoscape Australia Pty Ltd (Ecoscape) (2020a) Flynn Drive Flora and Vegetation Survey 2020 prepared for the City of Wanneroo by Ecoscape Australia Pty Ltd (Ecoscape) (IBSA-2021-0128)

Ecoscape Australia Pty Ltd (Ecoscape) (2020b) Flynn Drive Basic Fauna Survey 2020 prepared for the City of Wanneroo by Ecoscape Australia Pty Ltd (Ecoscape) (IBSA-2021-0127)

Ecoscape Australia Pty Ltd (Ecoscape) (2021a) Flynn Drive (Stage 2) Flora and Vegetation Survey 2020 prepared for the City of Wanneroo by Ecoscape Australia Pty Ltd (Ecoscape)

Ecoscape Australia Pty Ltd (Ecoscape) (2021b) Flynn Drive (Stage 2) Basic Fauna Survey 2020 prepared for the City of Wanneroo by Ecoscape Australia Pty Ltd (Ecoscape)

Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc)*. Nedlands, Western Australia.

Threatened Species Scientific Community (TSSC) (2016) Approved Conservation Advice (including listing advice) for the Banksia Woodlands of the Swan Coastal Plain ecological community. Department of the Environment and Energy, Canberra.

Threatened Species Scientific Committee (TSSC) (2019) Approved Conservation Advice (incorporating listing advice) for the Tuart *(Eucalyptus gomphocephala)* woodlands and forests of the Swan Coastal Plain ecological community. Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) (s266B).

Western Australian Herbarium (WAH) (1998-). FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions. https://florabase.dpaw.wa.gov.au/ Accessed May 2018

Western Australian Planning Commission (WAPC) (2010) State Planning Policy 2.8: Bushland Policy for the Perth Metropolitan Region. Prepared under Section 26 of the Planning and Development Act 2005 by the Western Australian Planning Commission.

7 Appendix A

Figure A: Mapped potential black cockatoo foraging habitat within 10 kilometres of the Flynn Drive application area

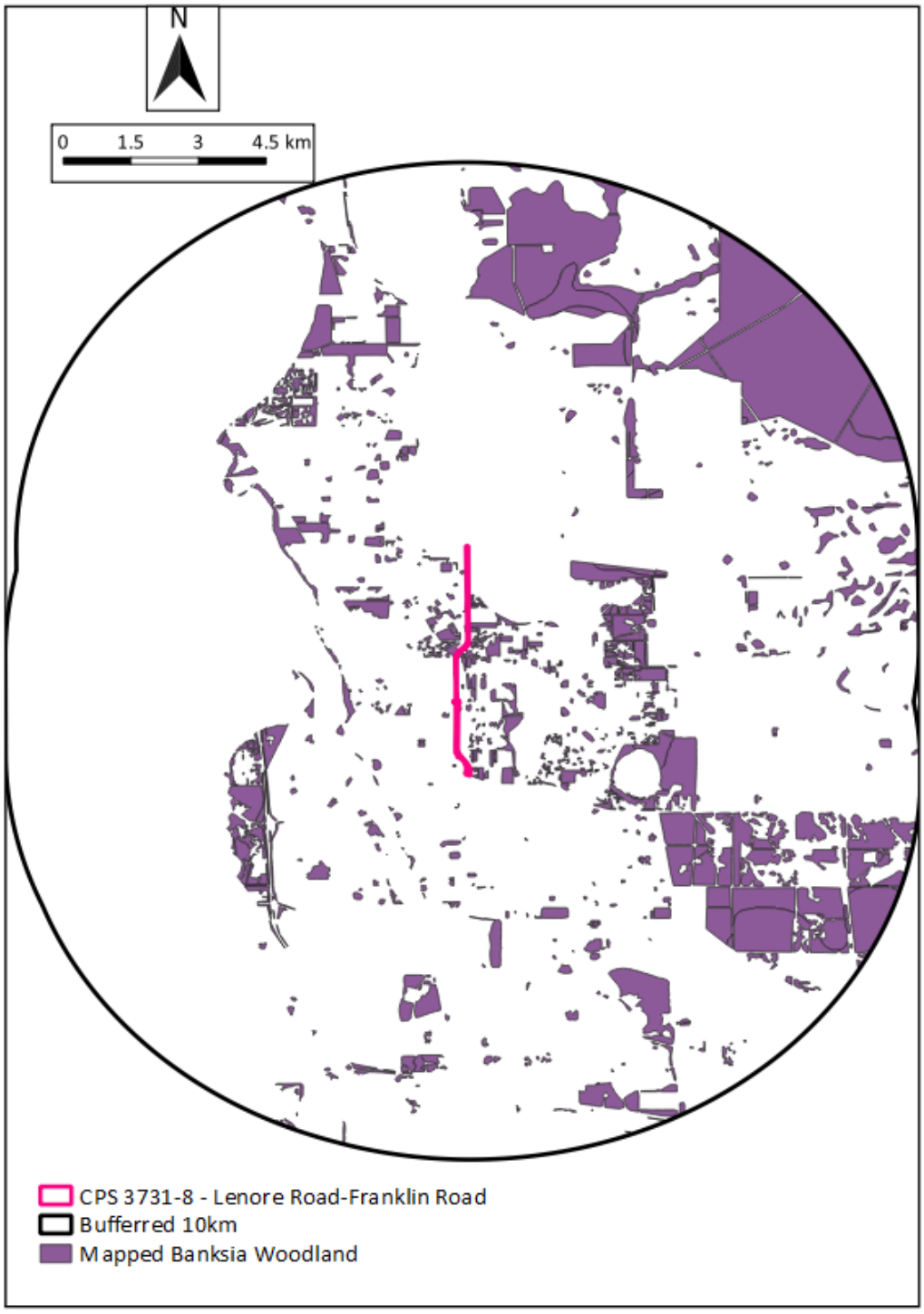

Figure B: Mapped Banksia Woodland within 10 kilometres of the Lenore/Franklin Road application area

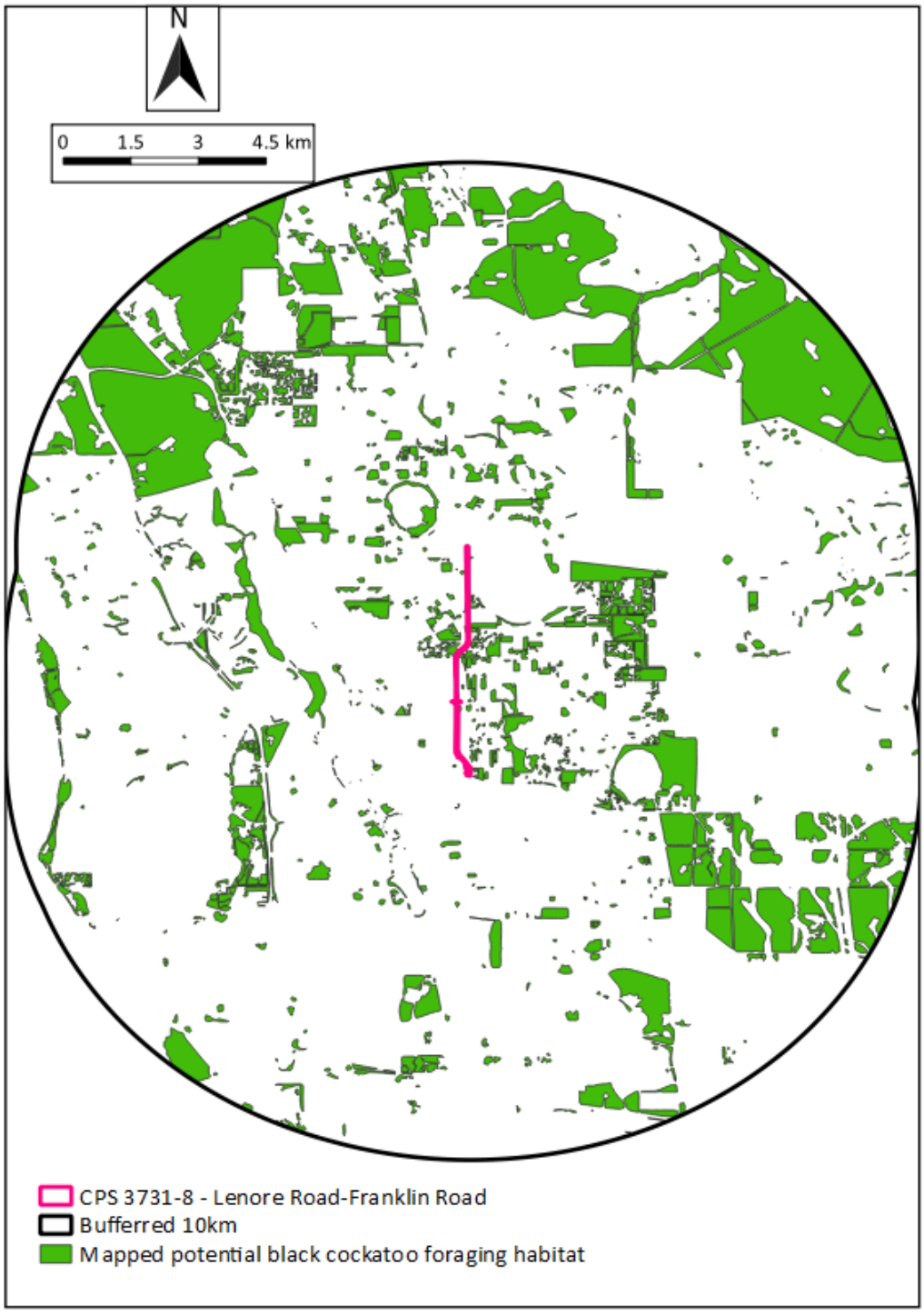

Figure C: Mapped potential black cockatoo foraging habitat within 10 kilometres of the Lenore/Franklin Road application area

8 Appendix B

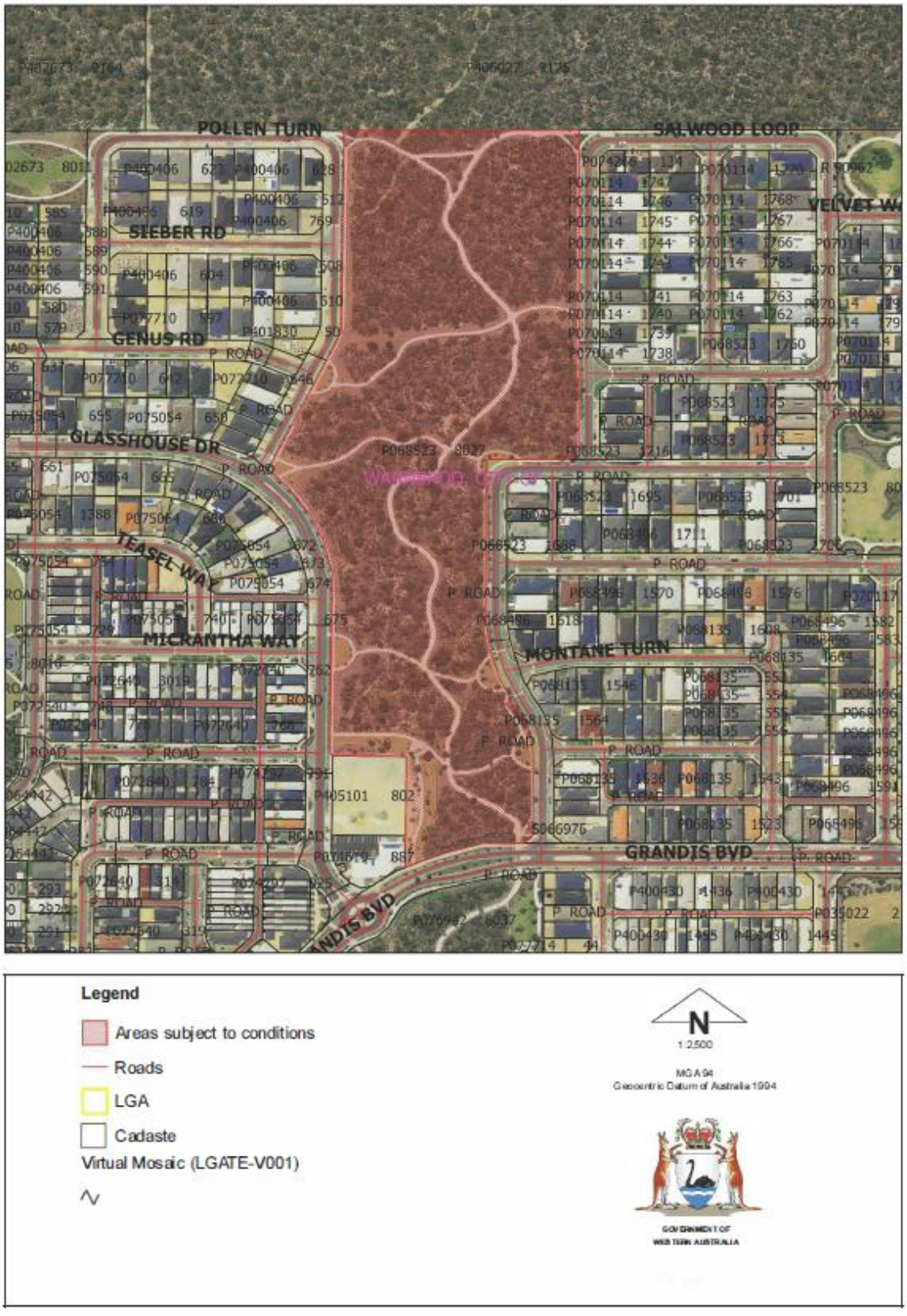

Figure A: Offset Site 1 (Banksia Grove - Honey Possum Park)

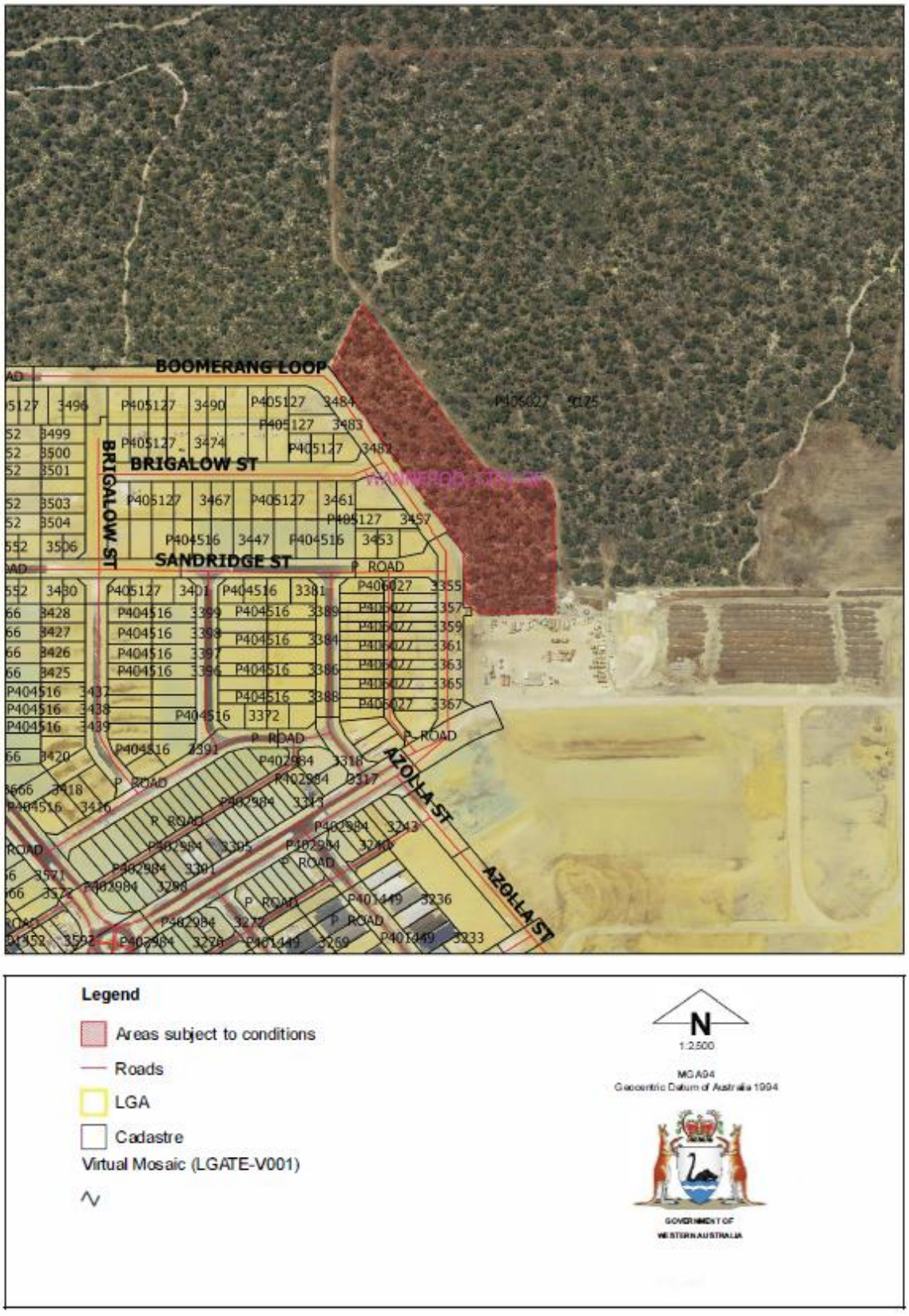

Figure B: Offset Site 2 (Banksia Grove - Boomerang Park)

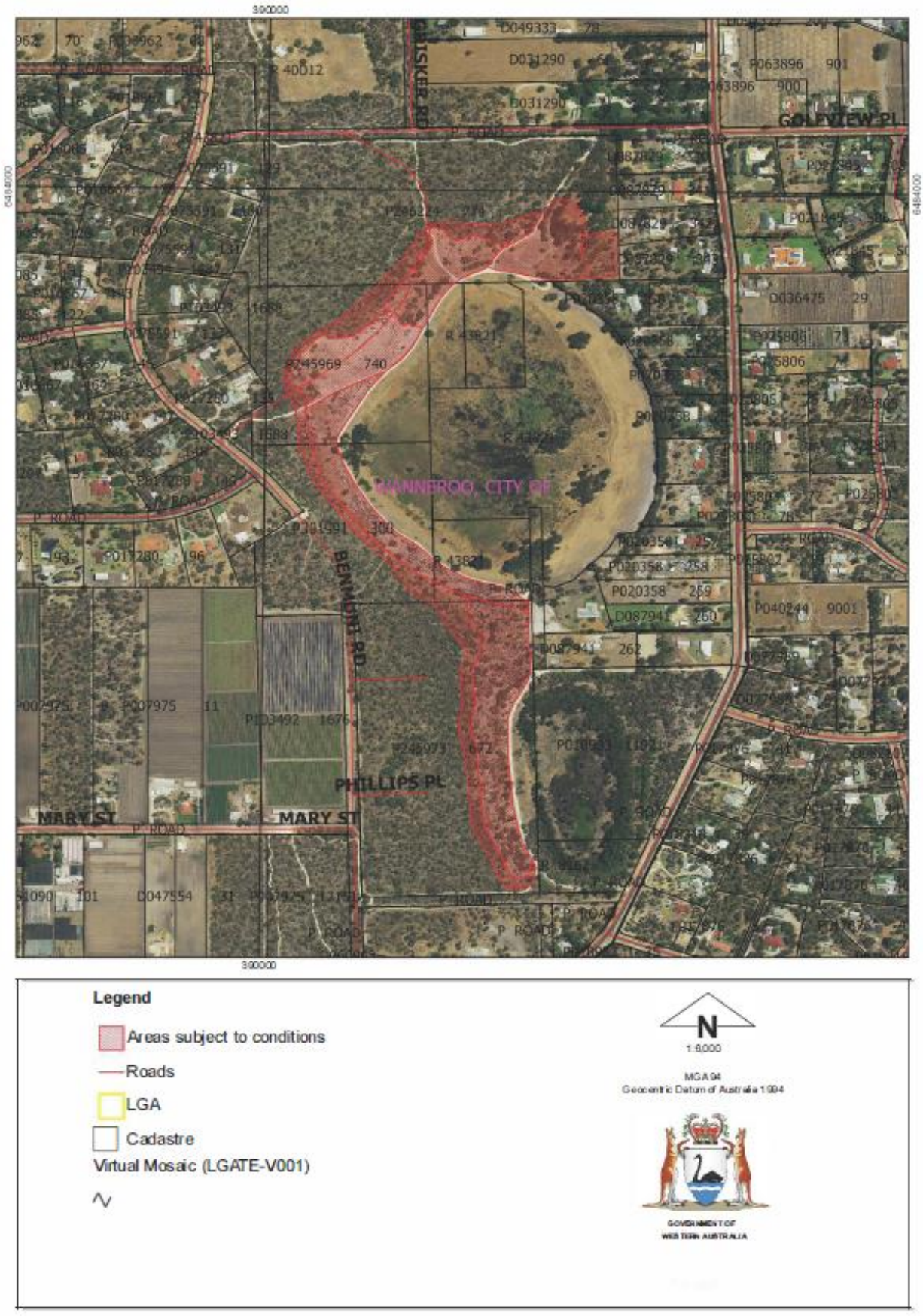

Figure C: Offset Site 3 (Lake Badgerup)

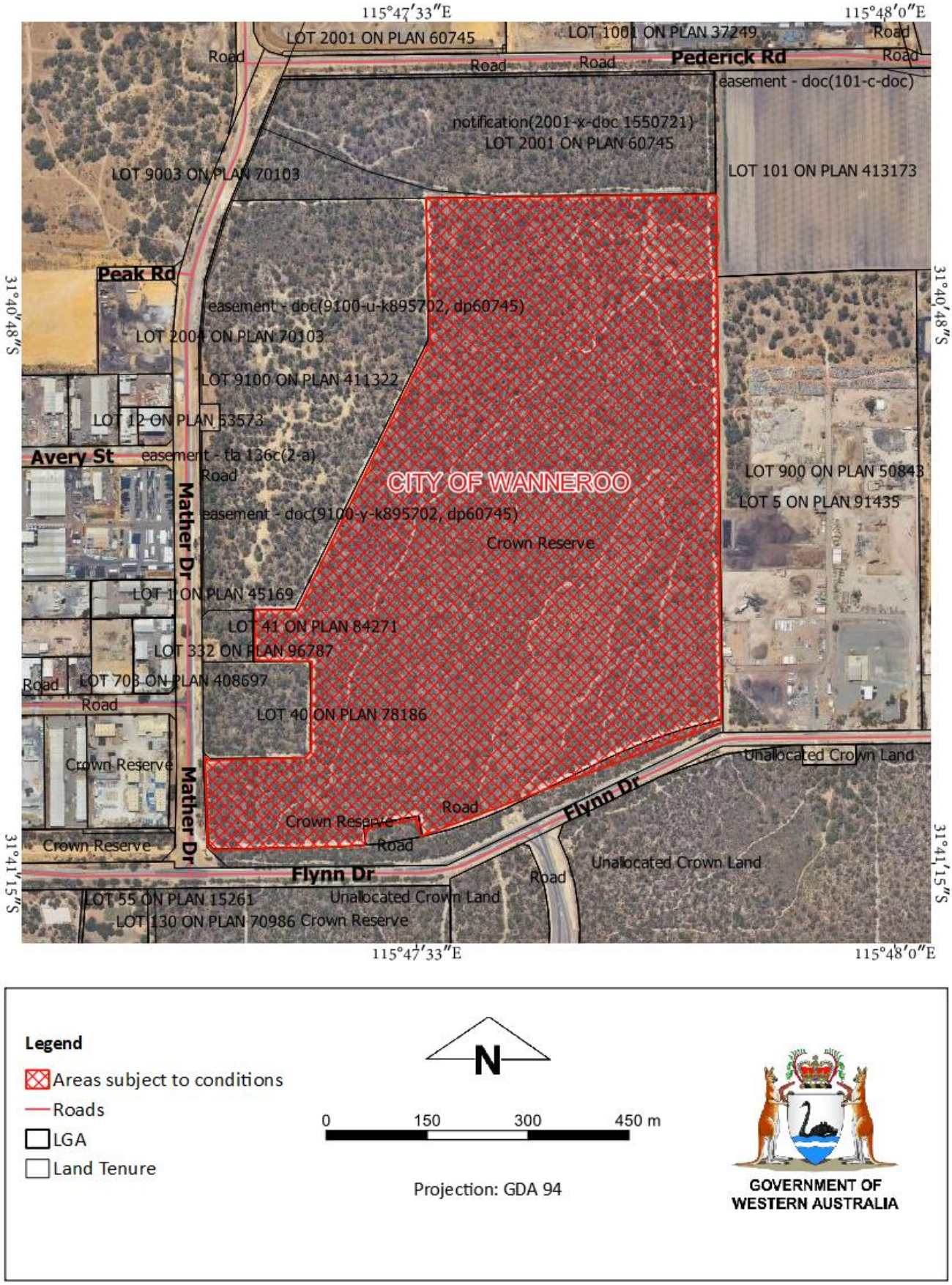

Figure D: City of Wanneroo offset site: Crown Reserve R 53163 (Mather Reserve), Lot 8001 on Plan 411322.