Australian Government
Department of the Environment

Referral of proposed action

What is a referral?

The *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act) provides for the protection of the environment, especially matters of national environmental significance (NES). Under the EPBC Act, a person must not take an action that has, will have, or is likely to have a significant impact on any of the matters of NES without approval from the Australian Government Environment Minister or the Minister's delegate. (Further references to 'the Minister' in this form include references to the Minister's delegate.) To obtain approval from the Environment Minister, a proposed action should be referred. The purpose of a referral is to obtain a decision on whether your proposed action will need formal assessment and approval under the EPBC Act.

Your referral will be the principal basis for the Minister's decision as to whether approval is necessary and, if so, the type of assessment that will be undertaken. These decisions are made within 20 business days, provided sufficient information is provided in the referral.

Who can make a referral?

Referrals may be made by or on behalf of a person proposing to take an action, the Commonwealth or a Commonwealth agency, a state or territory government, or agency, provided that the relevant government or agency has administrative responsibilities relating to the action.

When do I need to make a referral?

A referral must be made for actions that are likely to have a significant impact on the following matters protected by Part 3 of the EPBC Act:

- World Heritage properties (sections 12 and 15A)
- National Heritage places (sections 15B and 15C)
- Wetlands of international importance (sections 16 and 17B)
- Listed threatened species and communities (sections 18 and 18A)
- Listed migratory species (sections 20 and 20A)
- Protection of the environment from nuclear actions (sections 21 and 22A)
- Commonwealth marine environment (sections 23 and 24A)
- Great Barrier Reef Marine Park (sections 24B and 24C)
- A water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E)
- The environment, if the action involves Commonwealth land (sections 26 and 27A), including:
    - actions that are likely to have a significant impact on the environment of Commonwealth land (even if taken outside Commonwealth land);
    - actions taken on Commonwealth land that may have a significant impact on the environment generally;
- The environment, if the action is taken by the Commonwealth (section 28)
- Commonwealth Heritage places outside the Australian jurisdiction (sections 27B and 27C)

You may still make a referral if you believe your action is not going to have a significant impact, or if you are unsure. This will provide a greater level of certainty that Commonwealth assessment requirements have been met.

To help you decide whether or not your proposed action requires approval (and therefore, if you should make a referral), the following guidance is available from the Department's website:

- the Policy Statement titled Significant Impact Guidelines 1.1 – Matters of National Environmental Significance. Additional sectoral guidelines are also available.
- the Policy Statement titled Significant Impact Guidelines 1.2 - Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies.
- the Policy Statement titled Significant Impact Guidelines: Coal seam gas and large coal mining developments—Impacts on water resources.
- the interactive map tool (enter a location to obtain a report on what matters of NES may occur in that location).

Can I refer part of a larger action?

In certain circumstances, **the Minister may not accept a referral for an action that is a component of a larger action and may request the person proposing to take the action to refer the larger action for consideration under the EPBC Act (Section 74A, EPBC Act).** If you wish to make a referral for a staged or component referral, read 'Fact Sheet 6 Staged Developments/Split Referrals' and contact the Referrals Gateway (1800 803 772).

Do I need a permit?

Some activities may also require a permit under other sections of the EPBC Act or another law of the Commonwealth. Information is available on the Department's web site.

Is your action in the Great Barrier Reef Marine Park?

If your action is in the Great Barrier Reef Marine Park it may require permission under the *Great Barrier Reef Marine Park Act 1975* (GBRMP Act). If a permission is required, referral of the action under the EPBC Act is deemed to be an application under the GBRMP Act (see section 37AB, GBRMP Act). This referral will be forwarded to the Great Barrier Reef Marine Park Authority (the Authority) for the Authority to commence its permit processes as required under the Great Barrier Reef Marine Park Regulations 1983. If a permission is not required under the GBRMP Act, no approval under the EPBC Act is required (see section 43, EPBC Act). The Authority can provide advice on relevant permission requirements applying to activities in the Marine Park.

The Authority is responsible for assessing applications for permissions under the GBRMP Act, GBRMP Regulations and Zoning Plan. Where assessment and approval is also required under the EPBC Act, a single integrated assessment for the purposes of both Acts will apply in most cases. Further information on environmental approval requirements applying to actions in the Great Barrier Reef Marine Park is available from http://www.gbrmpa.gov.au/ or by contacting GBRMPA's Environmental Assessment and Management Section on (07) 4750 0700.

The Authority may require a permit application assessment fee to be paid in relation to the assessment of applications for permissions required under the GBRMP Act, even if the permission is made as a referral under the EPBC Act. Further information on this is available from the Authority:

Great Barrier Reef Marine Park Authority

2-68 Flinders Street PO Box 1379
Townsville QLD 4810
AUSTRALIA

Phone: + 61 7 4750 0700
Fax: + 61 7 4772 6093

www.gbrmpa.gov.au

What information do I need to provide?

Completing all parts of this form will ensure that you submit the required information and will also assist the Department to process your referral efficiently. If a section of the referral document is not applicable to your proposal enter N/A.

You can complete your referral by entering your information into this Word file.

Instructions

Instructions are provided in blue text throughout the form.

Attachments/supporting information

The referral form should contain sufficient information to provide an adequate basis for a decision on the likely impacts of the proposed action. You should also provide supporting documentation, such as environmental reports or surveys, as attachments.

Coloured maps, figures or photographs to help explain the project and its location should also be submitted with your referral. Aerial photographs, in particular, can provide a useful perspective and context. Figures should be good quality as they may be scanned and viewed electronically as black and white documents. Maps should be of a scale that clearly shows the location of the proposed action and any environmental aspects of interest.

Please ensure any attachments are below three megabytes (3mb) as they will be published on the Department's website for public comment. To minimise file size, enclose maps and figures as separate files if necessary. If unsure, contact the Referrals Gateway (email address below) for advice. Attachments larger than three megabytes (3mb) may delay processing of your referral.

Note: the Minister may decide not to publish information that the Minister is satisfied is commercial-in-confidence.

How do I pay for my referral?

From 1 October 2014 the Australian Government commenced cost recovery arrangements for environmental assessments and some strategic assessments under the EPBC Act. If an action is referred on or after 1 October 2014, then cost recovery will apply to both the referral and any assessment activities undertaken. Further information regarding cost recovery can be found on the Department's website.

Payment of the referral fee can be made using one of the following methods:

- **EFT Payments can be made to:**

  BSB: 092-009
  Bank Account No. 115859
  Amount: $7352
  Account Name: Department of the Environment.
  Bank: Reserve Bank of Australia
  Bank Address: 20-22 London Circuit Canberra ACT 2601
  Description: The reference number provided (see note below)

- **Cheque** - Payable to "Department of the Environment". Include the reference number provided (see note below), and if posted, address:

  The Referrals Gateway
  Environment Assessment Branch
  Department of the Environment
  GPO Box 787
  Canberra ACT 2601

- **Credit Card**

  Please contact the Collector of Public Money (CPM) directly (call (02) 6274 2930 or 6274 20260 and provide the reference number (see note below).

Note: in order to receive a reference number, submit your referral and the Referrals Gateway will email you the reference number.

How do I submit a referral?

Referrals may be submitted by mail or email.

Mail to:

Referrals Gateway
Environment Assessment Branch
Department of Environment
GPO Box 787
CANBERRA ACT 2601

- If submitting via mail, electronic copies of documentation (on CD/DVD or by email) are required.

Email to: epbc.referrals@environment.gov.au

- Clearly mark the email as a 'Referral under the EPBC Act'.
- Attach the referral as a Microsoft Word file and, if possible, a PDF file.
- **Follow up with a mailed hardcopy including copies of any attachments or supporting reports.**

What happens next?

Following receipt of a valid referral (containing all required information) you will be advised of the next steps in the process, and the referral and attachments will be published on the Department's web site for public comment.

The Department will write to you within 20 business days to advise you of the outcome of your referral and whether or not formal assessment and approval under the EPBC Act is required. There are a number of possible decisions regarding your referral:

The proposed action is NOT LIKELY to have a significant impact and does NOT NEED approval

No further consideration is required under the environmental assessment provisions of the EPBC Act and the action can proceed (subject to any other Commonwealth, state or local government requirements).

The proposed action is NOT LIKELY to have a significant impact IF undertaken in a particular manner

The action can proceed if undertaken in a particular manner (subject to any other Commonwealth, state or local government requirements). The particular manner in which you must carry out the action will be identified as part of the final decision. You must report your compliance with the particular manner to the Department.

The proposed action is LIKELY to have a significant impact and does NEED approval

If the action is likely to have a significant impact a decision will be made that it is a *controlled action*. The particular matters upon which the action may have a significant impact (such as World Heritage values or threatened species) are known as the *controlling provisions*.

The controlled action is subject to a public assessment process before a final decision can be made about whether to approve it. The assessment approach will usually be decided at the same time as the controlled action decision. (Further information about the levels of assessment and basis for deciding the approach are available on the Department's web site.)

The proposed action would have UNACCEPTABLE impacts and CANNOT proceed

The Minister may decide, on the basis of the information in the referral, that a referred action would have clearly unacceptable impacts on a protected matter and cannot proceed.

Compliance audits

If a decision is made to approve a project, the Department may audit it at any time to ensure that it is completed in accordance with the approval decision or the information provided in the referral. If the project changes, such that the likelihood of significant impacts could vary, you should write to the Department to advise of the changes. If your project is in the Great Barrier Reef Marine Park and a decision is made to approve it, the Authority may also audit it. (See "*Is your action in the Great Barrier Reef Marine Park,"* p.2, for more details).

For more information

- call the Department of the Environment Community Information Unit on 1800 803 772 or
- visit the web site http://www.environment.gov.au/topics/about-us/legislation/environment-protection-and-biodiversity-conservation-act-1999

All the information you need to make a referral, including documents referenced in this form, can be accessed from the above web site.

Referral of proposed action

Project title: Garden Street extension, Huntingdale, City of Gosnells, Western Australia

1 Summary of proposed action

NOTE: You must also attach a map/plan(s) and associated geographic information system (GIS) vector (shapefile) dataset showing the location and approximate boundaries of the area in which the project is to occur. Maps in A4 size are preferred. You must also attach a map(s)/plan(s) showing the location and boundaries of the project area in respect to any features identified in 3.1 & 3.2, as well as the extent of any freehold, leasehold or other tenure identified in 3.3(i).

1.1 **Short description**
The City of Gosnells is proposing to extend Garden Street in Huntingdale in a south-westerly direction to join Holmes Street, and will widen Holmes at the junction of Holmes and Garden Streets, within the newly defined MRS road reserve (Figure 1). This will involve the clearing of approximately 4.58ha of native vegetation.

1.2 **Latitude and longitude**

Latitude	Longitude
32 05 14.44197S	115 57 15.77634E
32 05 13.18247S	115 57 17.25506E
32 05 13.49146S	115 57 17.20205E
32 05 22.68403S	115 57 23.03238E
32 05 36.14956S	115 57 32.61159E
32 05 37.25748S	115 57 31.31105E
32 05 37.00436S	115 57 30.60864E
32 05 33.96505S	115 57 27.78885E
32 05 35.11356S	115 57 25.36168E
32 05 33.60275S	115 57 21.16939E
32 05 33.83691S	115 57 24.75421E
32 05 33.04703S	115 57 27.24942E
32 05 27.69980S	115 57 24.34881E
32 05 23.64822S	115 57 21.90123E
32 05 17.86807S	115 57 18.24117E
32 05 14.48195S	115 57 16.09710E

1.3 **Locality and property description**
The referral area is located in the suburb of Huntingdale in the City of Gosnells. The referral area is 17km south-east of the Perth Central Business District (Figure 1). The clearing of vegetation for the road extension will be undertaken in the road reserve (Figure 2).

1.4 **Size of the development footprint or work area (hectares)** 4.58ha see Figure 2.

1.5 **Street address of the site** Garden Street, Huntingdale, WA.

1.6 **Lot description** No Lot N°

1.7 **Local Government Area and Council contact (if known)**
City of Gosnells, Glenda Lawrence, Engineering Project Officer, 08 9397 3255, email: GLawrence@gosnells.wa.gov.au.

1.8 **Time frame**
Vegetation clearing and road construction will occur after approvals and between July 2017 and June 2019.

1.9	**Alternatives to proposed action** Were any feasible alternatives to	√	No. It is not possible to achieved the proposed road extension without removing a small area of native vegetation.

	taking the proposed action (including not taking the action) considered but are not proposed?		
1.10	**Alternative time frames etc** Does the proposed action include alternative time frames, locations or activities?	√ 	No
1.11	**State assessment** Is the action subject to a state or territory environmental impact assessment?	 √	Yes, see Section 2.5
1.12	**Component of larger action** Is the proposed action a component of a larger action?	√ 	No
1.13	**Related actions/proposals** Is the proposed action related to other actions or proposals in the region (if known)?	√ 	No
1.14	**Australian Government funding** Has the person proposing to take the action received any Australian Government grant funding to undertake this project?	√ 	No
1.15	**Great Barrier Reef Marine Park** Is the proposed action inside the Great Barrier Reef Marine Park?	√ 	No

2 Detailed description of proposed action

The City of Gosnells is proposing to clear up to 4.58ha of native vegetation (Figures 1 and 2) so that it can construct a road and associated infrastructure (e.g. footpaths, kerbing, etc) that will extend Garden Street in a south-westerly direction to join with the junction of Holmes and Balfour Streets, and widen Holmes Street at the junction. The proposed vegetation clearing for the road extension is in the Holmes Street Bushland, which is a Bush Forever site (N^{o} 125). Site contains approximately 2.89ha of Banksia woodland, 0.71ha wetland and 0.52ha of grassland.

2.1 Description of proposed action

The native vegetation within the 4.58ha will be cleared for the construction of a road and associated infrastructure.

2.2 Alternatives to taking the proposed action

The only alternative was for this road extension to not occur. Based on current Main Roads Western Australia traffic modelling and traffic movement patterns in the area there will be a traffic demand of 32,000 vehicles per day for the Gardens Street extension south of Harpenden Street by 2031. Land developments around this proposed stage of works, between Harpenden Street and Balfour Street, have already been completed/ commenced so that neighbourhood connector roads such as Harpenden, Balfour and Holmes Streets are not capable of taking such a huge volume of traffic through this residential area. Therefore the City of Gosnells has deemed it necessary that vehicles should be able to move from Holmes, Harpenden and Balfour Streets to Garden Street, Huntingdale/southern River, so there are no alternatives to this proposed action.

2.3 Alternative locations, time frames or activities that form part of the referred action

It is proposed that the City of Gosnells will proceed with this development after approvals have been obtained and between July 2017 and June 2019.

2.4 Context, planning framework and state/local government requirements

The existing portion of Garden Street, north-east of the proposed action, a continuation of Nicholson Road, which is an off-ramp for the Roe Highway that currently carries a high volume of traffic. Vehicles moving in a south-westerly direction along Garden Street towards Southern River Road have to deviate via Harpenden and Holmes Streets. The proposed Garden Street extension will form an important part of the proposed road infrastructure to reduce vehicle movements in the neighbouring residential areas by providing a significant 4-lane sub-arterial road connection between Roe Highway and eventually Tonkin Highway.

2.5 Environmental impact assessments under Commonwealth, state or territory legislation

A Native Vegetation Clearing Permit Application (see attachment 1) has been submitted to the WA Department of Environmental Regulation under the Western Australian *Environmental Protection Act, 1986* to clear 4.35ha of native vegetation. Correspondence from this Department dated 29 April 2016 indicated the Department will advertise the City of Gosnells' application seeking public comments and it indicated that the City should seek the approval of the Department of Water, which it currently is doing. The Department's contact person for this assessment is Ms Samara Rogers, Senior Clearing Regulation Officer (ph 9333 7541).

2.6 Public consultation (including with Indigenous stakeholders)

The City of Gosnells' Native Vegetation Clearing Permit application to the Department of Environment Regulation requires that the proposed action is publicly advertised. Comments from affected or concerned people will be assessed when received by both the Council and the State Government.

2.7 A staged development or component of a larger project

A staged development is not proposed for this small section of road construction.

3 Description of environment & likely impacts

3.1 Matters of national environmental significance

Natural Area Consulting Management Services (2016) undertook a flora and fauna assessment of the proposed impact area. No flora listed under the EPBC Act were present, however, four specimens of *Jacksonia gracillima*, a Priority 3 species with the Department of Parks and Wildlife (DPaW) where identified in the project area. This species does not represent a statutory constraint on development. Detailed mapping of the vegetation and flora in the Garden Street road reserve is provided by Natural Area Management Services (2016, see attachment 3).

There are no threatened or priority ecological communities within the Garden Street road reserve (Natural Area Consulting Management Services 2016).

Natural Area Management Services (2016) reported *Calyptorhynchus latirostris* (Carnaby's Black-Cockatoo) being present in the project area and Terrestrial Ecosystems (2014) indicated that *C. latirostris*, *C. banksii naso* (Forest Red-tailed Black-Cockatoo) and *C. baudinii* (Baudin's Black-Cockatoo) could forage in the project area. *Calyptorhynchus latirostris* is listed as Endangered, and *C. baundini* and *C. banksii naso* are listed as Vulnerable. Natural Area Management Services (2016) reported *Merops ornatus* (Rainbow Bee-eater) being present in the project area. This species is listed as a migratory species under the EPBC Act.

3.1 (a) World Heritage Properties

Description
Not applicable.

3.1 (b) National Heritage Places

Description

Nature and extent of likely impact

Not applicable.

3.1 (c) Wetlands of International Importance (declared Ramsar wetlands)

Description

Nature and extent of likely impact

Not applicable.

3.1 (d) Listed threatened species and ecological communities

The list of threatened species provided in Table 1 comes from the EPBC Act Protected Matters search (see attachment 4). Because of the buffer placed around species in the EPBC Act Protected Matters search database, multiple species are listed that are marine or for which there are no recent records of these species being present in or near the project area (e.g. *Leipoa ocellata*, *Setonix brachyurus*, *Pseudocheirus occidentalis, Dasyurus geoffroii, Bettongia penicillata* , etc) and they do not occur in the project area. Only those species likely to occur in the project area have been subsequently considered.

Table 1. Threatened species listed in a search of the EPBC Act Protected Matters search database

Description

Species	Common name	EPBC status	Likelihood of occurrence
Calyptorhynchus latirostris	Carnaby's Black-Cockatoo	Endangered	Known
Calyptorhynchus banksii naso	Forest Red-tailed Black-Cockatoo	Vulnerable	Known
Calyptorhynchus baudinii	Baudin's Black-Cockatoo	Vulnerable	Probably, but infrequently
Anous tenuirostris melanops	Australian Lesser Noddy	Vulnerable	No
Botaurus poiciloptilus	Australasian Bittern	Endangered	No
Calidris canutus	Red Knot	Endangered	No
Calidris ferruginea	Curlew Sandpiper	Critically Endangered	No
Diomedea amsterdamensis	Amsterdam Albatross	Endangered	No
Diomedea epomophora	Southern Royal Albatross	Vulnerable	No
Diomedea exulans	Wandering Albatross	Vulnerable	No
Diomedea sanfordi	Northern Royal Albatross	Endangered	No
Leipoa ocellata	Malleefowl	Vulnerable	No
Macronectes giganteus	Southern Giant Petrel	Endangered	No
Macronectes halli	Northern Giant Petrel	Vulnerable	No
Pachyptila turtur subantarctica	Fairy Prion	Vulnerable	No
Rostratula australis	Australian Painted Snipe	Endangered	No
Thalassarche cauta cauta	Shy Albatross	Vulnerable	No
Thalassarche cauta steadi	White-capped Albatross	Vulnerable	No
Thalassarche impavida	Campbell Albatross	Vulnerable	No
Thalassarche melanophris	Black-browed Albatross	Vulnerable	No
Leioproctus douglasiellus	a short-tongued bee	Critically Endangered	Very low
Neopasiphae simplicior	A native bee	Critically Endangered	Very low
Bettongia penicillata	Woylie	Endangered	No
Dasyurus geoffroii	Chuditch	Vulnerable	No
Pseudocheirus occidentalis	Western Ringtail Possum	Vulnerable	No
Setonix brachyurus	Quokka	Vulnerable	No
Acacia anomala	Grass Wattle	Vulnerable	No
Andersonia gracilis	Slender Andersonia	Endangered	No
Anthocercis gracilis	Slender Tailflower	Vulnerable	No
Banksia mimica	Summer Honeypot	Endangered	No
Caladenia huegelii	King Spider-orchid	Endangered	No
Calytrix breviseta subsp. *breviseta*	Swamp Starflower	Endangered	No
Chamelaucium sp. Gingin	Gingin Wax	Endangered	No
Conospermum undulatum	Wavy-leaved Smokebush	Vulnerable	No
Darwinia apiculata	Scarp Darwinia	Endangered	No
Diuris micrantha	Dwarf Bee-orchid	Vulnerable	No
Diuris purdiei	Purdie's Donkey-orchid	Endangered	No
Drakaea elastica	Glossy-leafed Hammer-orchid	Endangered	No
Drakaea micrantha	Dwarf Hammer-orchid	Vulnerable	No
Eleocharis keigheryi	Keighery's Eleocharis	Vulnerable	No
Eucalyptus balanites	Cadda Road Mallee	Endangered	No
Grevillea curviloba subsp. incurva	Narrow curved-leaf Grevillea	Endangered	No
Lasiopetalum pterocarpum	Wing-fruited Lasiopetalum	Endangered	No
Lepidosperma rostratum	Beaked Lepidosperma	Endangered	No
Macarthuria keigheryi	Keighery's Macarthuria	Endangered	No
Ptilotus pyramidatus	Pyramid Mulla-mulla	Critically Endangered	No
Synaphea sp. Fairbridge Farm	Selena's Synaphea	Critically Endangered	No
Synaphea stenoloba	Dwellingup Synaphea	Endangered	No
Thelymitra dedmaniarum	Cinnamon Sun Orchid	Endangered	No
Thelymitra stellata	Star Sun-orchid	Endangered	No

Nature and extent of likely impact

Carnaby's Black-Cockatoo (*Calyptorhynchus latirostris*)

Carnaby's (or Short-billed) Black-Cockatoo (*Calyptorhynchus latirostris*) is a large, pied, cockatoo. Garnett et al. (2011) and the DSEWPaC (2011) reported that Carnaby's Black-Cockatoo inhabits the south-west of Western Australia, from Kalbarri to the south-east coast near Esperance.

Carnaby's Black-Cockatoos are partly migratory (Higgins 1999). In the drier regions of their geographic range where most of the native vegetation has been cleared (e.g. wheatbelt), Carnaby's Black-Cockatoos are postnuptial migrants (Saunders 1980, Saunders and Ingram 1995). After breeding, individuals in these areas migrate to feed in higher rainfall areas including the Swan Coastal Plain, and to a lesser extent, forests dominated by Jarrah (*E. marginata*), Marri (*C. calophylla*) and Karri (*E. diversicolor*; Saunders 1980). On the Swan Coastal Plain, Carnaby's Black-Cockatoos have been recorded foraging in most suburbs and in pine plantations within the greater Perth metropolitan area (Perry 1948). Vagrants have been recorded on Rottnest Island (Winnett 1989) and Garden Island (Wykes et al. 1999). These later two sightings indicate that Carnaby's Black-Cockatoo will fly considerable distances over non-vegetated areas to forage.

Carnaby's Black-Cockatoo breed between July and November mostly in eucalypt woodland (Saunders 1980, 1986). Carnaby's Black-Cockatoo nests have been recorded in tree hollows that are 2.5-12m above the ground (2-10m in Wandoo and 3-10+ in Salmon Gum), with a hollow entrance of 120-680mm, a hollow depth of 0.5-4.1m and with no particular aspect favoured. Nest hollows are mostly in smooth-barked eucalypts (i.e. Salmon Gum and Wandoo and to a less extent in red Morrell, York Gum, Flooded Gum, Marri and Tuart); however, on the Swan Coastal Plain, most nests are in large Tuarts [diameter at breast height (DBH) >500mm], but also in Flooded Gum, Swamp Yate and Marri. Adults return to the same breeding area each year (Saunders 1977) and some use the same tree hollow for many years in succession to raise their chicks, others shift their nests among a number of trees in the same area (Saunders and Ingram 1998).

Eggs (1 or 2) are laid on a mat of wood chips at the bottom of a large hollow from early July to mid October with an incubation period of 29 days with the time to fledging 70 days. The female broods the hatchlings almost continuously for the first two weeks and then leaves the nest each day at dawn and returns mid-morning to feed the chicks and broods the hatchling for a further week, then both parents leave the chick in the morning and return at night.

Although flocks of Carnaby's Black-Cockatoo are seen foraging in the Perth metropolitan area during summer and autumn there is only a single record of breeding taking place in the greater Perth metropolitan area (i.e. Joondalup campus of Edith Cowan University).

Saunders (1980) reported that Carnaby's Black-Cockatoo at Coomallo Creek (breeding area) foraged mostly on native plants, with the only exception being *Erodium* sp.. Higgins (1999) reported the habitat of Carnaby's Black-Cockatoo was uncleared or remnant woodlands dominated by *Eucalyptus*, particularly Wandoo and Salmon Gum and often in shrubland or kwongan heathland dominated by *Hakea*, *Dryandra*, *Banksia* and *Grevillea* and seasonally in *Pinus* plantations and less often in Marri, Karri or Jarrah.

Based on this information and the reports by Natural Areas Management Services (2016) and Terrestrial Ecosystems (2014), Carnaby's Black-Cockatoos are likely to occasionally forage within the project area but there was no evidence to indicate this species has nested in the project area, nor are there suitable nesting hollows.

Forest Red-tailed Black-Cockatoo (*Calyptorhynchus banksii naso*)

The Forest Red-tailed Black-Cockatoo is one of three large black-cockatoos found in Western Australia. *Calyptorhynchus banksii naso* frequents the humid to sub-humid south-west of Western Australia from Gingin in the north, to Albany in the south and west to Cape Leeuwin and Bunbury (Department of Sustainability Environment Water Population and Communities 2011). It was mostly seen in the hilly interior, but small numbers of birds were seen at Mundijong, Baldivis, Karnup, Stakehill, Pinjarra, Coolup and in the Lake Clifton area (Johnstone and Kirkby 2011). In 2011, there was an increase in the number of Forest Red-tailed Black-Cockatoo on the coastal strip north from Rockingham to the northern metropolitan suburbs. The reason for the recent increase in abundance is unknown.

Forest Red-tailed Black-Cockatoo nest hollows have been recorded in trees with a diameter at breast height of 470-1720mm, between 6.5-43m above the ground, with hollow entrance sizes ranging from 100 x 120mm to 440 x 1500mm, a hollow depth of 0.3-8.2m and a variable entrance aspect. Nests are mostly in marri, but also in jarrah, wandoo, bullich, tuart and karri. Nesting trees are often veteran or stag trees that were much larger than surrounding trees or in an area with remnant old trees and are often clustered in an area. Breeding occurs in all months, but peaks in April-June and August-October with an incubation period of 29-31 days. A female broods her hatchling for the first 3-10 days after hatching and then leaves the nest each day at dawn and returns to feed the chick at dusk. The nesting period is 75-85 days. Forest Red-tailed Black-

Cockatoo have been recorded breeding in multiple locations on the Swan Coastal Plain south of the Swan River.

Johnstone and Kirkby (2011) reported the Forest Red-tailed Black-Cockatoos feed mostly on seeds from Marri, Jarrah, but also on Sheoak (*Allocasuarina fraseriana*), Snottygobble (*Persoonia longifolia*), Blackbutt (*Eucalyptus patens*) and introduced species such as Cape Lilac (*M. azedarach*) and Lemon-scented Gum (*Corymbia citriodora*).

Based on this information, the Forest Red-tailed Black-Cockatoo is likely to forage in the vicinity of the project area. Terrestrial Ecosystems (2014) reported evidence of Forest Red-tailed Black-Cockatoo foraging in the project area but there was no evidence to indicate this species has nested in the project area, nor are there suitable nesting hollows.

Baudin's Black-Cockatoo (*Calyptorhynchus baudinii*)

Baudin's Black-Cockatoo occurs in the humid and sub-humid forests of Western Australia; an area within the 750mm isohyet (Chapman 2007). Its range extends from Gidgegannup and Clackline in the north to about 50km east of Albany and all the forest to the south-west coast (Chapman 2007). It is known to breed in the southern forests north to Collie and east to near Kojonup in large vertical hollows of Karri , Marri and Wando (Johnstone and Kirkby 2008). Johnstone and Storr (1998) reported eggs are laid in August to December, with a clutch of 1-2, but normally only a single chick is fledged. Only the female incubates and broods.

Baudin's Black-Cockatoo is typically found in vagrant flocks and utilises the taller, more open Jarrah, Marri and Karri forests, where it feeds mainly on Marri seeds and various Proteaceous species. Johnstone and Kirkby (2008) reported Baudin's Black-Cockatoo feeding on the seeds of Marri, Jarrah, Sheoak, *Banksia grandis, B. quercifolia, B. littoralis, B. ilicifolia, Hakea erinacea, H. prostrata, H. stenocarpa, H. trifurcata, H. lasianthoides, H. ruscifolia, H. lissocarpha, H. varia, H. cristata, H. marginata, Dryandra sessilis, D. squarrosa, D. praemorsa, Grevillea wilsonii, Xanthorrhoea preissii, Kingia australis, Reedia spathacea, Pinus radiata, Erodium* spp*. Jacaranda* spp*., Macadamia* spp*., Carya illinoinensis, Malus* spp., *Pyrus* spp., *Diospyros* spp. and *Quercus* spp.; and the nectar, buds and flowers of Marri, Jarrah, Wando, *C. citridora, B. grandis, D. sessilis, D. lindleyana, D. squarrosa, Darwinia citriodora* and *Callistemom* spp. They also eat insect larvae and insects from under the bark.

Large flocks arrive in the non-breeding central and northern parts of the Darling Scarp in early February and March. This postnuptial nomad is seen in Collie, Bannister, North Dandalup, Serpentine, Jarrahdale, Wungong, Mundaring and Chidlow, and sometimes venture on to the adjacent coastal plain at Maida Vale, Kelmscott, Armadale, Byford, Mundijong, Lake Clifton, Bunbury, Capel, Busselton and Dunsborough (Johnstone and Kirkby 2008, Johnstone and Kirkby 2011). During the non-breeding period, Baudin's Black-Cockatoo utilises a number of roosts on a regular basis. Johnstone and Kirkby (2008) have recorded some of the larger roosts at Gidgegannup, Piesse Brook, Nganguring, Mundaring, Araluen, Wungong, North Dandalup and Serpentine. Other roosts are at Chidlow, Parkerville, Kalamunda, Kelmscott, Roleystone, Bedfordale, Gleneagle, Mundijong, Jarrahdale, Bannister and Crossman. Most of these roost sites are tall emergent eucalypts or Blackbutt and they are often near watercourses and in sheltered gullies.

Baudin's Black-Cockatoos lay their single egg between August-December, with a 29 day incubation period. Nests are in Karri, Marri, Wandoo and Bullich. In the absence of additional information about the characteristics of nesting sites and breeding behaviour, it is generally presumed that nest characteristics will be similar to those of Carnaby's Black-Cockatoo.

It is known that Baudin's Black-Cockatoo move off the Darling scarp and into the more low lying areas to forage, so it is possible that Baudin's Black-Cockatoo infrequently forages in the project area. It is highly unlikely that Baudin's Black-Cockatoo would nest in the project area.

Foraging area for Black-Cockatoos within 6km radius of the project area

Terrestrial Ecosystems has mapped all potential Black-Cockatoo foraging areas within a 6km radius of the project area (Figure 3). Only those areas where there was a significant foraging opportunity have been mapped. Single trees (e.g in residential properties and road verges) and small groves of trees have been excluded. Figure 3 is therefore an underestimate of the foraging opportunities within a 6km of the project area. There is approximately 1,152ha of Black-Cockatoo foraging habitat within 6km.

Bush Forever sites

Terrestrial Ecosystems has mapped all Bush Forever sites within 6m radius. The State Government has a commitment to retaining the bushland in Bush Forever sites. There is 1,508ha of Bush Forever sites within a 6km radius that contain 738ha of suitable Black-Cockatoo foraging habitat. The vast majority of these Bush Forever sites support Banksia or eucalypt trees that provide a foraging resource for the three species of black-cockatoos – see below.

Bush Forever 125 Holmes Street Bushland. This Bush Forever site contains 121.3ha of bushland with the uplands vegetated with *B. attenuata*, *B. menziesii, B. ilicifolia* and *Allocasuarina fraseriana,* and *M. preissiana*, *Eucalyptus todtiana*, *B. menziesii*, *A. fraseriana* and *Nuytsia floribunda* in the wetland areas.

Bush Forever 253 Harrisdale Swamp and adjacent bushland. This Bush Forever site contains 298.4ha of bushland and open water with the uplands vegetated with *B. attenuata* and *B. menziesii* and scattered *A. fraseriana, M. rhaphiophylla* and *N. floribunda,* and *M. preissiana* and *M. rhaphiophylla* with scattered *B. littoralis, E. rudis* and *M. rhaphiophylla* in the wetland areas.

Bush Forever 413 Balannup Lake and adjacent bushland. This Bush Forever site is 76.6ha of bushland and open water with the uplands vegetated with *E. todtiana, B. attenuata, B. menziesii* and *N. floribunda,* and *M. rhaphiophylla, E. rudis*, *M. preissiana, A. fraseriana, M. rhaphiophylla* and *E. todtiana* in the wetlands.

Bush Forever 342 Anstey / Keane Dampland and adjacent bushland. This Bush Forever site is 311.6ha of bushland with the uplands vegetated with *B. menziesii*, *B. attenuata* and *A. fraseriana,* and the wetland is vegetated with *B. attenuata* and *M. preissiana.*

Bush Forever 465 Passmore Street bushland. This Bush Forever site is 13.7ha of bushland with the uplands vegetated with *C. calophylla* over *E. decipiens* and *B. littoralis,* and *M. preissiana*, *A. fraseriana, N. floribunda* and *B. grandis* in the wetland areas.

Bush Forever 464 Matison Street bushland. This Bush Forever site is 28.9ha of bushland with the uplands vegetated with *A. fraseriana*, *B. menziesii, B. ilicifolia, N. floribunda* and *E. todtiana*, and *C. calophylla* over *M. preissiana* in the wetland areas.

Bush Forever 340 Phobe Street bushland. This Bush Forever site is 7.37ha of bushland with the uplands vegetated with *B. menziesii*, *B. attenuata, B. ilicifolia, A. fraseriana* and scattered *E. todtiana,* and *N. floribunda*, *X. preissii*, *M. preissiana* and *N. floribunda* in the wetland areas.

Bush Forever 246 Canning and Southern Rivers. This Bush Forever site is 181.1ha of bushland with the uplands vegetated with *A. fraseriana*, *B. menziesii, B. ilicifolia, N. floribunda* and *E. todtiana*, and *E. rudis* and *M. rhaphiophylla* in the wetland areas.

Bush Forever 124 Mary Carroll Park and adjacant Bushland. This Bush Forever site is 6.5ha of bushland with the uplands vegetated with *B. menziesii* and *B. attenuata* and the wetlands vegetated with *E. rudis*, *M. rhaphiophylla, C. calophylla* and *M. preissiana.*

Bush Forever 456 Nicholson Road bushland. This Bush Forever site is 13.4ha of bushland with the uplands vegetated with *B. attenuata, B. ilicifolia, A. fraseriana, C. calophylla* and *E. marginata* and the lowlands vegetated with *M. preissiana, E. todtiana, A. fraseriana, N. floribunda* and *B. attenuata.*

Bush Forever 61 Connell Avenue bushland. This Bush Forever site is 19.9ha of bushland with the uplands vegetated with *E. marginata* and *A. fraseriana* and lowlands vegetated with *E. rudis*, *M. rhaphiophylla* and *M. preissiana.*

Bush Forever 245 Ken Hurst Park. This Bush Forever site is 52.7ha of bushland with the uplands vegetated with *B. menziesii*, *B. attenuata, E. todtiana* and *A. fraseriana* and lowlands vegetated with *N. floribunda* and *B. ilicifolia.*

Bush Forever 389 Acourt Road bushland. This Bush Forever site is 295.2ha of bushland with the uplands vegetated with *B. menziesii*, *B. attenuata, B. ilicifolia, E. marginata* and *A. fraseriana* and lowlands vegetated with *E. rudis*, *M. rhaphiophylla* and *M. preissiana.*

Bush Forever 472 Canning Vale Prison bushland. This Bush Forever site is 49.2ha of bushland with the uplands vegetated with *B. menziesii*, *B. attenuata, B. ilicifolia, A. fraseriana and E. todtiana* and lowlands of *M. preissiana.*

Bush Forever 467 Gosnells Golf Course bushland. This Bush Forever site is 7.3ha of bushland with the uplands vegetated with *B. menziesii*, *B. attenuata, B. ilicifolia, A. fraseriana* and *E. todtiana* and lowlands vegetated with *M. preissiana, A. fraseriana* and *E. marginata.*

Bush Forever 262 Piarra Nature Reserve. This Bush Forever site is 35.8ha of bushland with the uplands vegetated with *B. menziesii*, *B. ilicifolia* and *E. marginata* and lowlands vegetated with *M. rhaphiophylla, M. preissiana* and *E. rudis.*

Bush Forever 260 Southern River and adjoining bushland. This Bush Forever site is 7.26ha of bushland that is vegetated with *E. rudis, C. calophylla* and *M. rhaphiophylla.*

Bush Forever 255 Dallen Road Bushland. This Bush Forever site is 26.9ha of bushland with the uplands vegetated with *C. calophylla*, *B. menziesii*, *B. attenuata, A. fraseriana* and *E. todtiana* and lowlands vegetated with *E. rudis* and *M. rhaphiophylla.*

Assessed potential impacts

A summary of potential impacts on these three species of Black-Cockatoo in the project area based on the criteria set out in the Department of Sustainability, Environment, Water, Population and Communities (2012) referral guidelines for Black-Cockatoos is provided in Table 2. This is followed by a more detailed assessment under each of the headings listed in the referral guidelines.

Table 2. Summary assessment of whether an action will have a significant impact on the two species of Black-Cockatoos

High risk of significant impacts: referral recommended	Carnaby's Black-Cockatoo	Baudin's Black-Cockatoo	Forest Red-tailed Black-Cockatoo
Clearing of any known nesting tree.	No nesting or potential nesting hollows were recorded on the project area.	No nesting or potential nesting hollows were recorded on the project area.	No nesting or potential nesting hollows were recorded on the project area.
Clearing or degradation of any part of a vegetation community known to contain breeding habitat.	The project is inside the DPaW mapped potential breeding habitat.	The project area is outside known breeding habitat.	No known breeding habitats nearby.
Clearing of more than 1ha of quality foraging habitat.	Banksia woodland which provides potential foraging habitat was approximately 2.89ha.	Banksia woodland which provides potential foraging habitat was approximately 2.89ha.	There is less than 1ha of foraging habitat for Forest Red-tailed Black-Cockatoos and this was mostly confined to areas supporting *A. fraseriana*.
Clearing or degradation (including pruning the top canopy) of a known night roosting site.	Clearing will not impact on a known roosting site as there is no grove of tall trees present in the project area.	Clearing will not impact on a known roosting site as there is no grove of tall trees present in the project area.	Clearing will not impact on a known roosting site as there is no grove of tall trees present in the project area.
Creating a gap of greater than 4 km between patches of black cockatoo habitat (Breeding, foraging or roosting).	Clearing will not create a gap of greater than 4km between patches of Black-Cockatoo habitat.	Clearing will not create a gap of greater than 4km between patches of Black-Cockatoo habitat.	Clearing will not create a gap of greater than 4km between patches of Black-Cockatoo habitat.
Uncertainty: referral recommended or contact the department			
Degradation (such as through altered hydrology or fire regimes) of more than 1 ha of foraging habitat. Significance will depend on the level and extent of degradation and the quality of the habitat.	Clearing will impact on more than 1ha of foraging habitat.	Clearing will impact on more than 1ha of foraging habitat.	Clearing will impact on less than 1ha of foraging 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 effect, hydrological changes, increased human visitation or fire.	No known roosting site in the vicinity of the project area.	No known roosting site in the vicinity of the project area.	No known roosting site in the vicinity of the project area.
Actions that do not directly affect the listed species but that have a potential for indirect impacts such as increasing competitors for nest hollows.	No known actions that would potentially indirectly affect this species.	No known actions that would potentially indirectly affect this species.	No known actions that would potentially indirectly affect this species.
Actions with the potential to introduce known plant disease such as *Phytophthor*a spp. To an area where the pathogen was not previously known.	With the implementation of appropriate hygiene standards during vegetation clearing, new diseases are unlikely to be introduced to the site.	With the implementation of appropriate hygiene standards during vegetation clearing, new diseases are unlikely to be introduced to the site.	With the implementation of appropriate hygiene standards during vegetation clearing, new diseases are unlikely to be introduced to the site.

Clearing of any known nesting tree (high risk)

The project area is within the circled area for known nesting sites for Carnaby's Black-Cockatoo as shown on the DPaW maps. However, there are no suitable trees with nesting hollows in the project area. Baudin's Black-Cockatoo have not been recorded nesting in the Greater Perth Metropolitan area, however, Forest Red-tailed Black-Cockatoos have nested in 'Cockatubes' at Murdoch University campus and at various locations around Baldivis, west of the project area, mostly in large dead stags or mature Tuart trees.

Clearing of any part or degradation of breeding habitat (high risk)

There is a single significant tree in the project area (UTM WGS 84; 50 401735E 6448778S; DBH 1.56m, ~25m high; Plate 1). However, this tree does not contain a hollow that would provide a suitable nesting site for Black-Cockatoos.

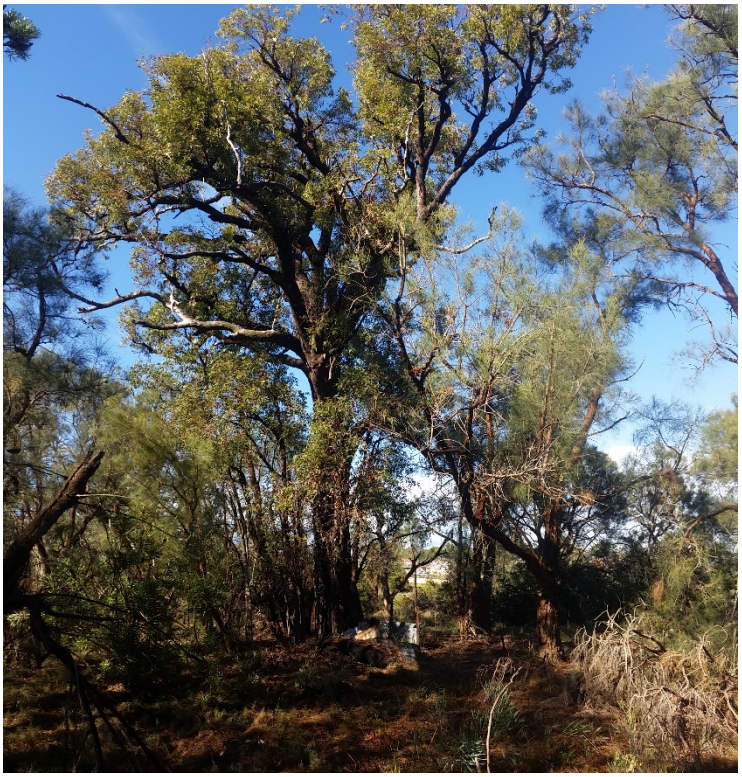

Plate 1. Large Jarrah tree

Clearing of more than 1ha of quality foraging habitat (high risk)

The definition of what is 'quality habitat' is unknown, but some of the trees in the project area are on the Commonwealth governments' list of foraging species for Baudin's, Carnaby's and Forest Red-tailed Black-Cockatoos. There is evidence that Forest Red-tailed Black-Cockatoos have chewed Jarrah nuts in the project area (Plate 2). The project area contains in excess of 1ha of vegetation recorded as potential foraging habitat for Black-Cockatoos.

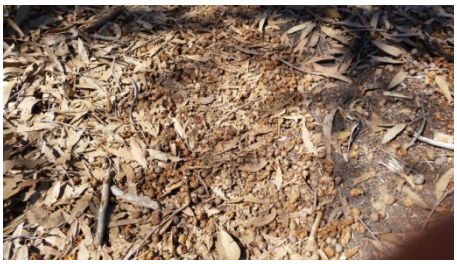

Plate 2. Chewed Jarrah nuts

Clearing or degradation including pruning the top canopy of a known roosting site (high risk)

There is no evidence to indicate that Baudin's, Carnaby's or Forest Red-tailed Black-Cockatoos roost in the project area, and the lack of a grove of large trees would indicate this is unlikely to occur in the future.

Degradation (such as through altered hydrology or fire regimes) of more than 1ha of foraging habitat. Significance will depend on the level and extent of degradation and the quality of the habitat (uncertainty)

It is proposed that in excess of 1ha of Black-Cockatoo foraging habitat will be disturbed or cleared.

Clearing or disturbance in areas surrounding black cockatoo habitat that has the potential to degrade habitat through the introduction of invasive species, edge effects, hydrological changes, increased human visitation or fire (uncertainty)

The area to be cleared will be used for the development of a road, road verge and associated infrastructure. This development will increase traffic and human visitation to the area. Once completed, these changes are unlikely to significantly impact on Black-Cockatoos.

Actions that do not directly affect the listed species but that have the potential for indirect impacts such as increasing competitors for nest hollows (uncertainty)

There are no obvious indirect actions that will impact on Black-Cockatoos other than those already discussed. The area contains a wetland, that may occasionally act as a water source for Black-Cockatoos, however, there are multiple other wetlands and water sources within 6km that also contain water when the Holmes Street Bushland contains surface water.

Action with the potential to introduce know plant diseases such as Phytophthora spp*. (uncertainty)*

Dieback survey (Glevan Consulting 2015) assessed the area as largely infested with *Phytophthora cinnamomi*, although the elevated Banksia woodland area is dieback free. Should this project proceed, then there is the potential for dieback to be introduced to the elevated area, to the potential detriment of the one hectare Banksia woodland area external to the project footprint.

Native Bee (*Neopasiphae simplicior*)

This critically endangered bee has been found at multiple locations including Port Gregory, Cannington, Forrestdale and Kooljerrenup Nature Reserve near Lake Clifton. It has been collected from the flowers of Thread-leaved Goodenia (*Goodenia filiformis*), Slender Lobelia (*Lobelia tenulor*), *Angianthus preissianus* and *Velleia* sp. (Houston 2000).

Terrestrial Ecosystems' assessment is that the proposed vegetation clearing is unlikely to impact on this species, as there is no suitable habitat and it is outside the species known geographic distribution.

Short-tongue bee (*Leioproctus douglasiellus*)

This small black bee occurs at four locations in the Perth metropolitan area, with each location considered a separate population. This bee is found on clay-based wetlands and vegetation that is subject to seasonal inundation. Terrestrial Ecosystems' assessment is that the proposed vegetation clearing is unlikely to impact on this species, as there is no suitable habitat and it is outside the species known geographic distribution.

Malleefowl (*Leipoa ocellata*)

Malleefowl are large, ground-dwelling birds that rarely fly unless alarmed or are perching for the night. Historically, Malleefowl have been found in mallee regions of southern Australia from approximately the 26th parallel of latitude southwards. Recently their range has contracted due to fox predation and land clearance. They have not been recorded in the Perth metropolitan area for many years. Malleefowl build distinctive nests that comprise a large mound of soil/rock covering a central core of leaf litter. These nest mounds range in diameter but can span more than five metres and may be up to one metre high. Malleefowl are generally monogamous and, once breeding commences, they pair for life. The presence of nest mounds provides an indication of the presence of Malleefowl in the area.

Malleefowl are not in the project area and it is Terrestrial Ecosystems' assessment that the proposed clearing in the project area will not have a significant impact on this species.

Chuditch, Western Quoll (*Dasyurus geoffroii*)

The Chuditch was originally found in over 70% of Australian woodlands; however, since European settlement its range has diminished to a patchy distribution throughout the Jarrah forest and mixed Karri - Marri - Jarrah forest of south-west WA. They have been known to occupy a wide range of habitats including woodlands, dry sclerophyll forests, riparian vegetation, beaches and deserts. The Chuditch creates dens in hollow logs or burrows and have also been recorded in tree hollows and

cavities. They are opportunistic feeders, and forage on the ground at night, feeding on invertebrates, small mammals, birds and reptiles.

Terrestrial Ecosystems' believes that the Chuditch is not present in the project area due to a lack of suitable habitat and there are no recent records in the vicinity.

Western Ringtail Possum (*Pseudocheirus occidentalis*)

The Western Ringtail Possums' distribution is patchy across is current range. The closest known population is south of Mandurah. It has a preference for Peppermint woodlands, but is also found in Jarrah/Marri forests and woodlands with adequate hollows, coastal heath, myrtaceous heaths and shrublands and karri forests.

Terrestrial Ecosystems' believes that the Western Ringtail Possum is not present in the project area due to a lack of suitable habitat and there are no recent records in the vicinity of the project area.

Quokka (*Setonix brachyurus*)

Quokkas were originally very common on the Swan Coastal Plain, however, their distribution is now limited to Rottnest Island and a few isolated areas in the south-west of WA. On the mainland, they prefer densely vegetated areas around wetlands and streams, whereas, on Rottnest Island they inhabit low scrubby coastal vegetation where water is not readily available year-round. They are herbivorous, and feed on leaves, bark, succulent plants and grasses. There are no recent records of Quokka being found in the vicinity of the project area.

Quokkas were not seen during the site visit nor caught during the fauna trapping program. Terrestrial Ecosystems believes that Quokkas are not present in the project area due to lack of suitable habitat and the presence of introduced predators.

Woylie (*Bettongia penicillata ogilbyi*)

Woylie numbers have significantly reduced in recent years after it was removed from the conservation significant species lists. The Woylie was once abundant in the south-west forest areas. Fox and cat predation, along with habitat destruction were thought to have significantly reduced its numbers (De Tores and Start 2008). The Woylie diet consists of underground fungi, tubes, bulbs and seeds.

Woylies have not been recorded in the vicinity of the project area in recent years and they were not seen during the site visit. It is Terrestrial Ecosystems' assessment that they are not present in the project area.

3.1 (e) Listed migratory species

The list of threatened species provided in the table below comes from the EPBC Act Protected Matters search (see attached). Because of the buffer placed around species in the EPBC Act Protected Matters search database, multiple species are listed that are marine or for which there are no recent records of these species being present near the project area and are not likely to occur in the project area. Only those species likely to occur in the project area have been subsequently considered.

Description

Table 3. Migratory species listed in a search of the EPBC Act Protected Matters search database

Species	Common name	EPBC status	Likelihood of occurrence
Merops ornatus	Rainbow Bee-eater	Migratory terrestrial	Known
Apus pacificus	Fork-tailed Swift	Migratory terrestrial	May very infrequently fly over the area
Motacilla cinerea	Grey Wagtail	Migratory terrestrial	No
Ardea alba	Great Egret	Migratory terrestrial	Very low
Ardea ibis	Cattle Egret	Migratory terrestrial	Very low
Calidris subminuta	Long-toed Stint	Migratory terrestrial	No
Charadrius dubius	Little Ringed Plover	Migratory terrestrial	No
Gallinago megala	Swinhoe's Snipe	Migratory	No
Gallinago stenura	Pin-tailed Snipe	Migratory	No
Limosa limosa	Black-tailed Godwit	Migratory	No
Limosa limosa	Black-tailed Godwit	Migratory	No
Numenius minutus	Little Curlew	Migratory	No
Pandion haliaetus	Osprey	Migratory	No
Philomachus pugnax	Ruff	Migratory	No
Tringa glareola	Wood Sandpiper	Migratory	No
Tringa nebularia	Common Greenshank	Migratory	No
Tringa stagnatilis	Marsh Sandpiper	Migratory	No

Nature and extent of likely impact

Rainbow Bee-eater (*Merops ornatus*)

Johnstone and Storr (1998) reported the Rainbow Bee-eater is found in the Kimberley, Pilbara, Murchison and South-west of Western Australia. It is generally absent from the sandy deserts. It is found in a diverse range of habitats but seems to prefer open wooded areas over sandy soils where it can dig its nest. It is both a resident, winter migrant and a postnuptial nomad. As a nomadic species it moves south during the warmer months to breed. Boland (2004) described its breeding biology as unusual for a bird, as it digs a burrow and partially colonial with a cooperative breeding behaviour. Pairs will dig nests either solitarily or in colonies containing more than 50 active nests that are attended by socially monogamous pairs or trios. The incubation period is 22-31 days and eggs hatch asynchronously with chicks requiring another 24-36 days to fledge.

It is possible that Rainbow Bee-eaters will nest in the vicinity of the project area, but their abundance and widespread distribution means that the possible loss of a few individuals during the breeding season is not likely to have a significant impact on this species. If vegetation clearing occurs outside the breeding period (October to December) then there is unlikely to be any impact on this species as it will move to adjacent areas to forage.

Great Egret (*Ardea modesta*)

Herons and egrets all depend to some extent upon surface water for hunting. The Great Egret is the largest of the Australian egrets, and is an elegant, white wader dependent upon floodwaters, rivers, shallow wetlands and intertidal mudflats. Its diet consists of a range of small, aquatic invertebrates and small vertebrates (Frith 1976).

Given the dependence of the Great Egret upon substantial wetlands and waterways, it is unlikely to be seen in the project area as the surface water is only present for a short period and at a time when there is an abundance of surface water in numerous other more substantial wetlands in the general area.

Cattle Egret (*Ardea ibis*)

The smallest of the Australian egrets, this species has undertaken an invasion of Australia from the north, where it was originally more common in the Indonesian archipelago than Australia (Simpson and Day 2004). This invasion may have been assisted by the opening up of farming land and irrigation schemes, providing the pasturelands and shallow wetlands in which it prefers to forage. Johnstone and Storr (1998) noted the species distribution in Western Australia as being confined to the irrigation areas surrounding Kununurra, however, its migratory nature and current invasive tendencies suggest that it may occur elsewhere in the state, and may still be expanding its distribution.

Given the dependence of the Cattle Egret upon substantial wetlands, waterways and pastures, it is unlikely to be seen in the project area as the surface water is only present for a short period and at a time when there is an abundance of surface water in numerous other more substantial wetlands in the general area.

Osprey (*Pandion haliaetus*)

Osprey is a large bird of prey that is found along the coast of Western Australia. They are typically found close to the coast, river and occasionally large wetlands. They feed mainly on fish and sea snakes and occasionally on large coastal lizards.

It is highly unlikely that the Osprey would be seen flying over the project area, so clearing the vegetation is unlikely to have a significant impact on this species.

Grey Wagtail (*Motacilla cinerea*)

The Grey Wagtail is a small yellow breasted bird with a grey back and head. Johnstone and Storr (2004) reported this migratory species as breeding in Palearctic from western Europe and north-west Africa to eastern Asia and wintering in Africa, south-east Asia, Indonesia, the Philippines, New Guinea and Australia. Its preferred habitat in Australia is banks and rocks in fast-running fresh water including rivers, streams and creeks where it feeds on insects. The Atlas of Living Australia records two sightings on the south-coast of Western Australia and none around the project area.

It is Terrestrial Ecosystems' view that it is highly unlikely to be seen in the project area due to a lack of suitable habitat.

Fork-tailed Swift (*Apus pacificus*)

The Fork-tailed Swift breeds in north-east and mid-east Asia and winters in Australia and south New Guinea (Johnstone and Storr 1998). They arrive in the Kimberley in late September and in the Pilbara in November and the south-west in December, leaving late in April. Johnstone and Storr (1998) reported them as common in the Kimberley and uncommon to moderately common along the north-west, west and south-east coasts and scarce elsewhere. They are often seen in large flocks and can be attracted to thunderstorms or cyclonic events in the northern parts of the state.

As this is an aerial migratory species, ground disturbance activities on a localised scale are unlikely to significantly impact on Fork-tailed Swifts. They could infrequently be seen flying over the project area.

3.1 (f) Commonwealth marine area
(If the action is in the Commonwealth marine area, complete 3.2(c) instead. This section is for actions taken outside the Commonwealth marine area that may have impacts on that area.)

Description
Not applicable

Nature and extent of likely impact

3.1 (g) Commonwealth land
(If the action is on Commonwealth land, complete 3.2(d) instead. This section is for actions taken outside Commonwealth land that may have impacts on that land.)

Description
The project is not on Commonwealth land.

Nature and extent of likely impact

3.1 (h) The Great Barrier Reef Marine Park

Description
The project is not on the Barrier Reef nor will it impact on the Great Barrier Reef

Nature and extent of likely impact

3.1 (i) A water resource, in relation to coal seam gas development and large coal mining development

The project is not on a water resource related to coal seam gas development or large coal mining development.

Description

Nature and extent of likely impact

3.2 Nuclear actions, actions taken by the Commonwealth (or Commonwealth agency), actions taken in a Commonwealth marine area, actions taken on Commonwealth land, or actions taken in the Great Barrier Reef Marine Park

You must describe the nature and extent of likely impacts (both direct & indirect) on the whole environment if your project:

- is a nuclear action;
- will be taken by the Commonwealth or a Commonwealth agency;
- will be taken in a Commonwealth marine area;
- will be taken on Commonwealth land; or
- will be taken in the Great Barrier Reef marine Park.

Your assessment of impacts should refer to the *Significant Impact Guidelines 1.2 - Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies* and specifically address impacts on:

- ecosystems and their constituent parts, including people and communities;
- natural and physical resources;
- the qualities and characteristics of locations, places and areas;
- the heritage values of places; and
- the social, economic and cultural aspects of the above things.

3.2 (a)	**Is the proposed action a nuclear action?**	√	No
	If yes, nature & extent of likely impact on the whole environment		

3.2 (b)	**Is the proposed action to be taken by the Commonwealth or a Commonwealth agency?**	√	No
	If yes, nature & extent of likely impact on the whole environment		

3.2 (c)	**Is the proposed action to be taken in a Commonwealth marine area?**	√	No
	If yes, nature & extent of likely impact on the whole environment (in addition to 3.1(f))		

3.2 (d)	**Is the proposed action to be taken on Commonwealth land?**	√	No
	If yes, nature & extent of likely impact on the whole environment (in addition to 3.1(g))		

3.2 (e)	**Is the proposed action to be taken in the Great Barrier Reef Marine Park?**	√	No
	If yes, nature & extent of likely impact on the whole environment (in addition to 3.1(h))		

3.3

Other important features of the environment

3.3 (a) Flora and fauna

The Bush Forever documentation (Government of Western Australia 2000) described the Holmes Street Bushland as on Bassendean sands with two broad habitat types: open woodland of *B. attenuata*, *B. menziesii, B. ilicifolia* and *Allocasuarina fraseriana* with a few *Eucalyptus marginata* (Jarrah) and lowlands of *Melaleuca preissiana*, *Eucalyptus todtiana*, *B. menziesii*, *A. fraseriana* and *Nuytsia floribunda*.

Natural Area Management Services (2016) identified the following seven vegetation types in the Holmes Street Reserve

Vegetation Type	Description
Banksia, Allocasuarina fraseriana woodland	*Banksia attenuata* and open woodland over *Eramaea pauciflora*, *Calytrix angulata* and *Stirlingia latifolia.*
Mixed Open Woodland	*Banksia attenuata*, *Kunzea glabrescens*, *Melaleuca preissii* low open woodland.
Melaleuca preissiana woodland over *Astartea scoparia*	*Melaleuca preissiana* low open woodland over *Regelia ciliata* shrubland and a sparse understory of *Dasypogon bromeliifolius* and mixed sedges.
Melaleuca preissiana low open woodland and Regelia shrubland	*Melaleuca preissiana* low open woodland over *Regelia ciliata* shrubland and a sparse understory of *Dasypogon bromeliifolius* and mixed sedges.
Melaleuca systena closed tall scrub	*Melaleuca systena* closed tall scrub with sparse middle and understorey.
Phlebocarya ciliata and *Dasypogon bromeliifolius* closed sedgeland	*Phlebocarya ciliata* and *Dasypogon bromeliifolius* closed sedgeland with scattered *Banksia ilicifolia*, *B. attenuata*, *Eucalyptus todtiana*, *Allocasuarina fraseriana* and *Xanthorrhoea preissii.*
Banksia attenuata and *Eucalyptus todtiana* low open woodland	Low open woodland of *Banksia attenuata*, *Eucalyptus todtiana* over *Xanthorrhoea preissii* and *Xanthorrhoea brunonis* shrubland and *Dasypogon bromeliifolius* and *Phlebocarya ciliata* sedgeland

Natural Area Management Services (2016) recorded the following vertebrate terrestrial fauna in the project area:

Family	Species	Common Name
Canidae	*Canis lupus familiaris*	Dog
	Vulpes vulpes	European Red Fox
Felidae	*Felis catus*	Domestic Cat
Leporidae	*Oryctolagus cuniculus*	European Rabbit
Muridae	*Mus musculus*	House Mouse
Peramelidae	*Isoodon obesulus fusciventer*	Southern Brown Bandicoot
Agamidae	*Pogona minor*	Western Bearded Dragon
Pygopodidae	*Delma fraseri*	Frazer's Legless Lizard
Scincidae	*Ctenotus australis*	Western Limestone Ctenotus
	Ctenotus fallens	West-coast Laterite Ctenotus
	Lerista elegans	Elegant Slider
	Menetia greyii	Common Dwarf Skink
	Morethia obscura	Southern Pale Flecked Morethia
	Cryptoblepharus buchananii	Fence Skink
	Tiliqua rugosa	Bobtail
Myobatrachidae	*Heleioporus eyrei*	Moaning Frog
	Limnodynastes dorsalis	Western Banjo Frog

3.3 (b) Hydrology, including water flows

The centre of the project area traverses an area mapped by the state government as Conservation management category sumpland UFI 15423. It has the lowest elevation so surrounding surface water flows in that direction. The centre of the project area is inundated after heavy rain, which mostly occurs in winter. The proposed development has the potential to disrupt surface water flows between either side of the sumpland that it intersects. This will be addressed in the engineering design for the road and associated infrastructure.

3.3 (c) Soil and Vegetation characteristics

Natural Area Management Services (2016) indicated the following three soils types the Holmes Street Reserve which included Bassendean Dune and Pinjarra Plain formations:

Map Unit	Name	Description
212Bs S8	Bassendean S8 Phase	Sand - very light grey at surface, yellow at depth, fine to medium-grained, sub-rounded quartz, moderately well sorted of eolian origin
213Pj S10	Pinjarra Plain S10 Phase	Sand - relatively thin veneer over sandy clay to clayey sand. Eolian origin
213Pj Sp1	Pinjarra Plain Sp 1 Phase	Peaty sand - grey to black, fine to medium-grained, moderately sorted quartz sand, slightly peaty, lacustrine (lake) origin

3.3 (d) Outstanding natural features
The project area supports a seasonal sumpland identified by the state government as Conservation management classification.

3.3 (e) Remnant native vegetation
Most of the project area is remnant native vegetation of regional significance.

3.3 (f) Gradient (or depth range if action is to be taken in a marine area)
A small water course runs into the centre of the project area from the north-east. This is the lowest point and is often inundated after heavy rain. The elevation of the land rises at either end of the proposed road extension.

3.3 (g) Current state of the environment
Natural Area Management Services (2016) indicated that 3.9% of the area was degraded, 14.3% good, 44.6% very good and 37.2% excellent. There is significant weed growth in some areas, particularly around the periphery and near the cleared areas on the south-western end.

3.3 (h) Commonwealth Heritage Places or other places recognised as having heritage values
There is no listed heritage site in the project area.

3.3 (i) Indigenous heritage values
There are no known indigenous heritage values for the project area.

3.3 (j) Other important or unique values of the environment
There are no other important or unique values for the environment in the project area.

3.3 (k) Tenure of the action area (e.g. freehold, leasehold)
Road reserve is under the control of the City of Gosnells.

3.3 (l) Existing land/marine uses of area
The land is currently used for passive recreation (e.g. dog walking, bush walking).

3.3 (m) Any proposed land/marine uses of area
As indicated above, the City of Gosnells proposes to extend the existing Garden Street in a south-westerly direction to Holmes Street. This is the proposed action.

4 Environmental outcomes

The proposed action will result in clearing 4.58ha of native vegetation that could occasionally be used as foraging habitat by the three species of Black-Cockatoo (i.e. *Calyptorhynchus latirostris*, *C. banksii naso* and *C. baudinii*). This impact will not be significant for any of the three species.

The Rainbow Bee-eater (*Merops ornatus*) may also forage and breed in the area. This species is widespread and abundant, and the possible loss of a few eggs or chicks in a burrow, if the vegetation was cleared between October and December, is not significant in a regional context.

5 Measures to avoid or reduce impacts

The project area supports a single Jarrah tree that has a diameter at breast height greater than 50cm (shown in Figure 2). This tree currently does not contain hollows that could be used as a nesting site for Black-Cockatoos. The trunk is in poor condition due to a fire some years ago, which may reduce the life of the tree. This tree may eventually form hollows that could provide breeding sites for Black-Cockatoos. To compensate for the loss of a potential future breeding site the City of Gosnells will purchase and erect three cockatubes at suitable locations within the City boundaries. These three 'Cockatubes' will be installed within 12 months of the development of the Garden Street extension being completed.

The project area is known to support a population of Southern Brown Bandicoots. A trapping and relocation plan for these bandicoots will be implemented within four weeks of the vegetation clearing program. A zoologist will also be present during the vegetation clearing program to catch and relocate any other vertebrate fauna likely to be impacted by heavy machinery.

The City of Gosnells will only clear native vegetation necessary for the construction of the road and the associated infrastructure. Work areas and vehicle compounds will be located in areas that do not require the unnecessary vegetation being cleared and destroyed.

6 Conclusion on the likelihood of significant impacts

Identify whether or not you believe the action is a controlled action (i.e. whether you think that significant impacts on the matters protected under Part 3 of the EPBC Act are likely) and the reasons why.

6.1 Do you THINK your proposed action is a controlled action?

X	No, complete section 5.2
	Yes, complete section 5.3

6.2 Proposed action IS NOT a controlled action.

Table 2 provides a summary assessment of potential impacts of vegetation clearing on these three species of Black-Cockatoo in the project area based on the criteria set out in the Department of Sustainability, Environment, Water, Population and Communities (2012) referral guidelines for Black-Cockatoos. This is followed by a more detailed assessment under each of the heading listed in the referral guidelines. Data in this Table and the information that follows clearly indicates that the proposed action, (i.e. vegetation clearing and infrastructure development) will not significantly impact on these three species of Black-Cockatoos (i.e. *C. latirostris*, *C. banksii naso* and *C. baudinii*).

There will be the loss of a single tree with a diameter at breast height of greater than 50cm. This tree currently does not contain hollows suitable as a nesting site for Black-Cockatoos, but it may in years to come if it was not cleared. The City of Gosnells will purchase and erect three 'Cockatubes' at suitable locations within its boundary that will compensate for the potential loss of a tree hollow in years to come.

The possible loss of a few Rainbow Bee-eaters nesting in the project area, if the vegetation is cleared between October and December, is not significant impact in a regional context.

6.3 Proposed action IS a controlled action

Type 'x' in the box for the matter(s) protected under the EPBC Act that you think are likely to be significantly impacted. (The 'sections' identified below are the relevant sections of the EPBC Act.)

	Matters likely to be impacted
	World Heritage values (sections 12 and 15A)
	National Heritage places (sections 15B and 15C)
	Wetlands of international importance (sections 16 and 17B)
	Listed threatened species and communities (sections 18 and 18A)
	Listed migratory species (sections 20 and 20A)
	Protection of the environment from nuclear actions (sections 21 and 22A)
	Commonwealth marine environment (sections 23 and 24A)
	Great Barrier Reef Marine Park (sections 24B and 24C)
	A water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E)
	Protection of the environment from actions involving Commonwealth land (sections 26 and 27A)
	Protection of the environment from Commonwealth actions (section 28)
	Commonwealth Heritage places overseas (sections 27B and 27C)

7 Environmental record of the responsible party

NOTE: If a decision is made that a proposal needs approval under the EPBC Act, the Environment Minister will also decide the assessment approach. The EPBC Regulations provide for the environmental history of the party proposing to take the action to be taken into account when deciding the assessment approach.

		Yes	No
7.1	**Does the party taking the action have a satisfactory record of responsible environmental management?** **Provide details** The City of Gosnells is concerned about protecting the natural environment. To demonstrate this commitment it has written policies on rehabilitation and revegetation of natural areas, and the provision of road side remnant vegetation (see: www.gosnells.wa.gov.au/About_us/Policies_and_local_laws/Policies/Environmental_Protection_and_Management).	√	
7.2	**Has either (a) the party proposing to take the action, or (b) if a permit has been applied for in relation to the action, the person making the application - ever been subject to any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources?** **If yes, provide details**		√
7.3	**If the party taking the action is a corporation, will the action be taken in accordance with the corporation's environmental policy and planning framework?** **If yes, provide details of environmental policy and planning framework** The City of Gosnells is taking the action and it is a local government authority.	√	
7.4	**Has the party taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act?** **Provide name of proposal and EPBC reference number (if known)** 2015/7426 - City of Gosnells/Transport - land/Canning Mills Road, Martin/WA/Canning Mills Road Improvement Project, Martin, WA 2014/7115 - City of Gosnells/Transport - land/Maddington, WA/WA/Burslem Drive Bridge Duplication Over Canning River, Maddington, WA 2013/6813 - City of Gosnells/Commercial development/within City of Gosnells approx 19kms east of Perth CBD/WA/Southern River Mixed Business Precinct F, City of Gosnells, WA 2007/3532 - Water Corporation/Transport - water/Armadale/Gosnells/WA/Wungong Transfer Mains Project	√	

8 Information sources and attachments

(For the information provided above)

8.1 References

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De Tores, P. J., and A. N. Start. 2008. Woylie. Pages 291-292. *in* S. Van Dyck and R. Strahan, editors. The Mammals of Australia. Reed New Holland, Sydney.

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Higgins, P. J. 1999. Handbook of Australian, New Zealand and Antarctic Birds. Volume 4: Parrots to Dollarbird. Oxford University Press, Melbourne.

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Johnstone, R. E., and G. M. Storr. 1998. Handbook of Western Australian Birds. Volume 1 - Non-Passerines (Emu to Dollarbird). Western Australian Museum, Perth.

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Perry, D. H. 1948. Black Cockatoos and pine plantations. Western Australian Naturalist 1:133-135.

Saunders, D. A. 1980. Food and movement of the Short-billed form of the White-tailed Black Cockatoo. Australian Wildlife Research 7:257-269.

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Saunders, D. A., and J. A. Ingram. 1995. Birds of Southwestern Australia: An Atlas of Changes in the Distribution and Abundance of the Wheatbelt avifauna. Surrey Beatty, Sydney.

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Wykes, B. J., D. Pearson, and J. Majer. 1999. Fauna Survey of Garden Island, WA, 1996-1997. HMAS Stirling, Environmental Working Paper No. 12, Perth.

All references are publicly available except Glevan Consulting. 2015. Holmes Street Bushland North Phytophthora Dieback occurrence assessment - Version 2.0. Perth.

8.2 Reliability and date of information

The information contained in this referral is current and to the best of our knowledge accurate. Much of the information and data in this referral has been taken from two reports: Natural Areas Consulting Managements Services (2016) and Terrestrial Ecosystems (2014). Potential foraging areas within 6km of the project area were mapped by Terrestrial Ecosystems.

8.3 Attachments

Figure 1. Regional location and Bush Forever sites
Figure 2. Site map showing the project boundaries and the location of the significant Jarrah tree, and the Banksia woodland, wetland and grasses
Figure 3. Black-Cockatoo foraging habitat showing potential foraging areas for Black-Cockatoos within a radius of 6km of the project area and the location of Bush Forever sites
Attachment 1 – Native Vegetation Clearing Permit application to teh Department of Environment Regulation
Attachment 2 - Natural Area Consulting Management Services (2016) Garden Street Road Reserve Environmental Assessment, Unpublished report for the City of Gosnells, Perth.
Attachment 3 - Terrestrial Ecosystems (2014) Black Cockatoo Assessment – Garden Street Extension letter

		✓ attached	Title of attachment(s)
You must attach	figures, maps or aerial photographs showing the project locality (section 1)	✓	Figures 1 and 2
	GIS file delineating the boundary of the referral area (section 1)	✓	
	figures, maps or aerial photographs showing the location of the project in respect to any matters of national environmental significance or important features of the environments (section 3)	✓	Figure 3.
If relevant, attach	copies of any state or local government approvals and consent conditions (section 2.5)		
	copies of any completed assessments to meet state or local government approvals and outcomes of public consultations, if available (section 2.6)	✓	Attachment 1. Application for a clearing permit, lodged with the Department of Environment Regulation
	copies of any flora and fauna investigations and surveys (section 3)	✓	Attachment 2. - Terrestrial Ecosystems (2014) Black Cockatoo Assessment – Garden Street Extension letter Attachment 3. Natural Area Consulting Management Services (2016) Garden Street Road Reserve Environmental Assessment, Unpublished report for the City of Gosnells, Perth. Attachement 4. EPBC online MNES search results.
	technical reports relevant to the assessment of impacts on protected matters that support the arguments and conclusions in the referral (section 3 and 4)		
	report(s) on any public consultations undertaken, including with Indigenous stakeholders (section 3)		

9 Contacts, signatures and declarations

NOTE: Providing false or misleading information is an offence punishable on conviction by imprisonment and fine (s 489, EPBC Act).

Under the EPBC Act a referral can only be made by:

- the person proposing to take the action (which can include a person acting on their behalf); or
- a Commonwealth, state or territory government, or agency that is aware of a proposal by a person to take an action, and that has administrative responsibilities relating to the action[1].

Project title: Garden Street extension, Huntingdale, City of Gosnells, Western Australia

9.1 Person proposing to take action

1. Name and Title:	Glenda Lawrence, Engineering Project Officer
2. Organisation	City of Gosnells
3. EPBC Referral Number	
4: ~~ACN~~ / ABN	18 374 412 891
5. Postal address	PO Box 662 Gosnells WA 6990
6. Telephone:	08 9397 3255
7. Email:	GLawrence@gosnells.wa.gov.au
8. Name of proposed proponent (if not the same person at item 1 above and if applicable):	
9. ACN/ABN of proposed proponent (if not the same person named at item 1 above):	

Organisa

COMPLETE THIS SECTION ONLY IF YOU QUALIFY FOR EXEMPTION FROM THE FEE(S) THAT WOULD OTHERWISE BE PAYABLE

I qualify for exemption from fees under section 520(4C)(e)(v) of the EPBC Act because I am: Not applicable

- ☐ an individual; OR
- ☐ a small business entity (within the meaning given by section 328-110 (other than subsection 328-119(4)) of the *Income Tax Assessment Act 1997*); OR
- ☐ not applicable.

If you are small business entity you must provide the Date/Income Year that you became a small business entity:

COMPLETE THIS SECTION ONLY IF YOU WOULD LIKE TO APPLY FOR A WAIVER

I would like to apply for a waiver of full or partial fees under Schedule 1, 5.21A of the EPBC

- ☐ not applicable.

[1] *If the proposed action is to be taken by a Commonwealth, state or territory government or agency, section 8.1 of this form should be completed. However, if the government or agency is aware of, and has administrative responsibilities relating to, a proposed action that is to be taken by another person which has not otherwise been referred, please contact the Referrals Gateway (1800 803 772) to obtain an alternative contacts, signatures and declarations page.*

Regulations. Under sub regulation 5.21A(5), you must include information about the applicant (if not you) the grounds on which the waiver is sought and the reasons why it should be made:

- Declaration

I declare that to the best of my knowledge the information I have given on, or attached to this form is complete, current and correct.
I understand that giving false or misleading information is a serious offence.
I agree to be the proponent for this action.
I declare that I am not taking the action on behalf of or for the benefit of any other person or entity.

Signature

9.2 Person preparing the referral information (if different from 8.1)

Individual or organisation who has prepared the information contained in this referral form.

Name	Dr Graham Thompson
Title	Partner and Principal Zoologist
Organisation	G&S Thompson P/L as trustee for Thompson Family Trust trading as Terrestrial Ecosystems
ACN / ABN (if applicable)	ABN: 40921131346, ACN: 114847808
Postal address	10 Houston Place, Mt Claremont, WA
Telephone	08 9385 2398
Email	graham@terrestrialecosystems.com

Declaration

I declare that to the best of my knowledge the information I have given on, or attached to this form is complete, current and correct.
I understand that giving false or misleading information is a serious offence.

Signature

Date 29/6/2016

REFERRAL CHECKLIST

NOTE: This checklist is to help ensure that all the relevant referral information has been provided. It is not a part of the referral form and does not need to be sent to the Department.

HAVE YOU:

- √ Completed all required sections of the referral form?
- √ Included accurate coordinates (to allow the location of the proposed action to be mapped)?
- √ Provided a map showing the location and approximate boundaries of the project area?
- √ Provided a map/plan showing the location of the action in relation to any matters of NES?
- √ Provided a digital file (preferably ArcGIS shapefile, refer to guidelines at Attachment A) delineating the boundaries of the referral area?
- √ Provided complete contact details and signed the form?
- √ Provided copies of any documents referenced in the referral form?
- √ Ensured that all attachments are less than three megabytes (3mb)?
- √ Sent the referral to the Department (electronic and hard copy preferred)?

Attachment A

Geographic Information System (GIS) data supply guidelines

If the area is less than 5 hectares, provide the location as a point layer. If the area greater than 5 hectares, please provide as a polygon layer. If the proposed action is linear (eg. a road or pipline) please provide a polyline layer.

GIS data needs to be provided to the Department in the following manner:

- Point, Line or Polygon data types: ESRI file geodatabase feature class (preferred) or as an ESRI shapefile (.shp) zipped and attached with appropriate title
- Raster data types: Raw satellite imagery should be supplied in the vendor specific format.
- Projection as GDA94 coordinate system.

Processed products should be provided as follows:

- For data, uncompressed or lossless compressed formats is required - GeoTIFF or Imagine IMG is the first preference, then JPEG2000 lossless and other simple binary+header formats (ERS, ENVI or BIL).
- For natural/false/pseudo colour RGB imagery:
    - If the imagery is already mosaiced and is ready for display then lossy compression is suitable (JPEG2000 lossy/ECW/MrSID). Prefer 10% compression, up to 20% is acceptable.
    - If the imagery requires any sort of processing prior to display (i.e. mosaicing/colour balancing/etc) then an uncompressed or lossless compressed format is required.

Metadata or 'information about data' will be produced for all spatial data and will be compliant with ANZLIC Metadata Profile. (http://www.anzlic.org.au/policies_guidelines#guidelines).

The Department's preferred method is using ANZMet Lite, however the Department's Service Provider may use any compliant system to generate metadata.

All data will be provide under a Creative Commons license (http://creativecommons.org/licenses/by/3.0/au/)