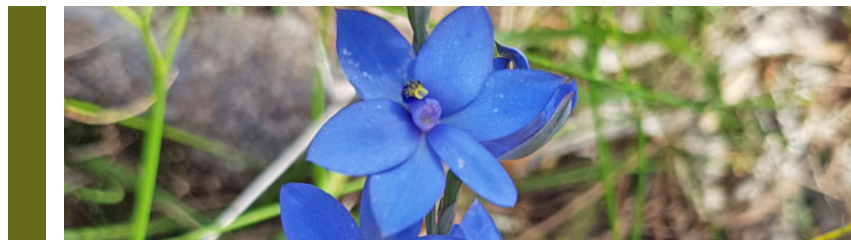




Perth Children's Hospital Pedestrian Bridge Vegetation, Flora and Black cockatoo Assessment



Prepared for Main Roads WA

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PCH Pedestrian Bridge Vegetation, Flora and Black-cockatoo Assessment

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1.0 Executive Summary

Main Roads Western Australia (Main Roads) on behalf of the Perth Children's Hospital Foundation (PCHF) and Department of Health is proposing to construct a pedestrian bridge from the Perth Children's Hospital to the Western Path within Kings Park bushland (the PCHF Pedestrian Bridge). Main Roads required a desktop review and biological survey to identify vegetation, flora and fauna values that may be impacted through clearing for construction of the bridge.

The survey was completed in September-October 2019 by biologists from Biota Environmental Sciences (Biota), with some field assistance from staff from the Botanic Gardens and Parks Authority (BGPA). The survey area comprised an 8.59 ha area on the western edge of Kings Park; survey tasks included assessment of eight standard floristic survey quadrats, review of existing vegetation mapping, assessment of vegetation condition, targeted sampling for conservation significant flora, and survey of black-cockatoo potential breeding trees and foraging habitat. A 1.33 ha section of this survey area was identified as the area in which the pedestrian bridge was proposed to be constructed; this area (the "targeted flora survey area") was systematically searched for Threatened and Priority flora.

Two native vegetation sub-associations were identified within the survey area, comprising *Allocasuarina fraseriana*, *Eucalyptus marginata* subsp. *marginata* mid-height woodland over *Banksia attenuata*, *B. menziesii* low woodland; and *Allocasuarina fraseriana* mid-height woodland over *Banksia attenuata*, *B. menziesii* low woodland. These sub-associations were confirmed as belonging to the Swan Coastal Plain Floristic Community Type 28. Both units are representative of the Commonwealth listed "Banksia Woodlands of the Swan Coastal Plain" Threatened Ecological Community (TEC), as well as the State-listed "Banksia dominated woodlands of the Swan Coastal Plain IBRA region" Priority Ecological Community (PEC). Two other mapping units in the survey area comprised parkland cleared areas and cleared areas.

A total of 124 native flora taxa from 75 genera belonging to 35 families have been recorded from the survey area based on all sampling to date. No Threatened flora species have been recorded from the survey area, and none would be expected to occur. One Priority 4 shrub species, *Jacksonia sericea*, was relatively common: 219 individuals were recorded at 127 locations in the survey area, including 124 individuals at 92 locations in the targeted flora survey area. This species is well-documented as occurring through Kings Park, being recorded from 75 additional locations during the monitoring by BGPA in 2018. *Jacksonia sericea* is distributed over a range of approximately 100 km on the Swan Coastal Plain. In addition, three Priority 3 fungi species (*Amanita fibrilloses*, *A. wadjukiorum* and *A. preissii*) and the Priority 2 small herb *Poranthera moorokatta* have some potential to occur in the survey area, although only the two former species are considered likely.

A total of 33 introduced species have been recorded from the survey area. One of these, *Asparagus asparagoides* (Bridal Creeper), is a Weed of National Significance and is listed as a declared pest under the WA *Biosecurity and Agriculture Management Act 2007*. Bridal Creeper occurred as scattered plants through the bushland in the survey area. Several of the other species recorded are serious environmental weeds of urban bushland.

Forest Red-tailed Black-Cockatoos were recorded from the survey area, both by direct observation and foraging evidence. Evidence of foraging by Carnaby's Black-Cockatoo was also recorded within the survey area and there is a known roost within Kings Park. Baudin's Black-Cockatoos are considered unlikely to occur.

The black-cockatoo breeding habitat assessment recorded 40 trees of hollow-forming species with a diameter at breast height of 500 mm or greater. Two trees each contained a single hollow that was potentially suitable for breeding.

Evidence of foraging was common throughout the survey area, particularly by the Forest Red-tailed Black-Cockatoo. The two vegetation units mapped over the survey area are dominated by foraging plants, and together represent 7.44 ha of foraging habitat.

In addition to the black-cockatoo species, four other conservation significant fauna species have some potential to occur within the survey area, based on the habitat present and local records:

- Peregrine Falcon (Other specially protected fauna) – likely to occur as a foraging visitor only (there is no suitable habitat for breeding);
- Swan Coastal Plain Shield-backed Trapdoor Spider (Priority 3) – may potentially occur; four previous records place the species within 2 km of the survey area and suitable habitat is available;
- Black-striped Snake (Priority 3) – may potentially occur as there is suitable habitat and scattered previous records place the species within 5 km of the survey area; and
- Southern Brown Bandicoot, Quenda (Priority 4) – may potentially occur, as the introduced population in the park is expanding and may result in eventual occurrence within the survey area.

2.0 Introduction

2.1 Project Background

Main Roads on behalf of the PCHF and Department of Health is proposing to construct the PCHF Pedestrian Bridge from the Perth Children's Hospital to the Western Path in Kings Park, to connect with the May Drive Parkland area. In 2019, Main Roads commissioned Biota to undertake a desktop review and biological survey to identify vegetation, flora and fauna values that may be impacted through clearing for construction of the bridge.

2.2 Objectives of the Study

The primary objectives of the study were as follows:

- Undertake a desktop review to identify vegetation, flora and fauna features of conservation significance that are known from the broader area, and assess the likelihood that those occur or may potentially occur in the survey area;
- Undertake a detailed field survey in spring, consistent with EPA (2016a), to characterise vegetation of the survey area, including identification of the presence of any Commonwealth-listed TECs;
- Undertake a targeted field survey to search for conservation significant flora and fungi species;
- Record populations of weed species that are listed as declared pests under the WA *Biosecurity and Agriculture Management Act 2007* (the BAM Act), or Weeds of National Significance (WoNS);
- Undertake a targeted field survey for black-cockatoo species and an assessment of habitat consistent with relevant guidelines (DSEWPaC 2012a, DoTEE 2017); and
- Document any opportunistic sightings or signs of other conservation significant fauna species, such as the Priority 4 Quenda (*Isoodon fusciventer*).

The extent of the survey area, and the study area for the desktop review (which comprised a 5 km radius around the survey area), are shown in Figure 2.1. The survey area comprised an 8.59 ha area on the western edge of Kings Park. Within the survey area, a 1.33 ha section was identified as the area in which the pedestrian bridge was proposed to be constructed; this area is referred to as the "targeted flora survey area". The clearing footprint associated with the pedestrian bridge is expected to be less than 0.2 ha.

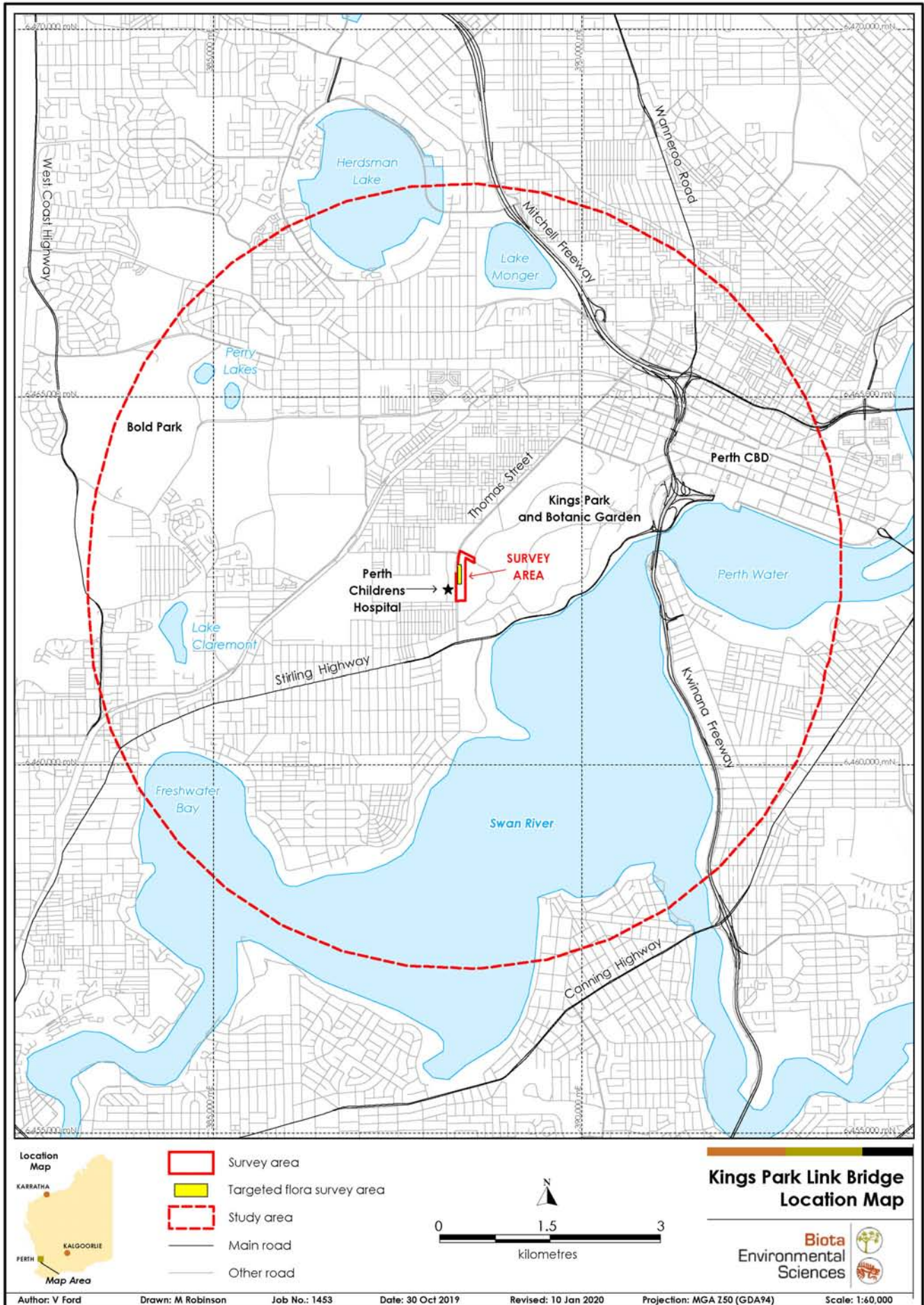


Figure 2.1: Location of the Kings Park Link Bridge survey area and the desktop review study area.

3.0 Methodology

3.1 Desktop Assessment

The aim of the desktop review was to identify key flora, vegetation and fauna features of conservation significance of relevance to the proposed development. Existing data were sought from public and privately held databases to analyse and identify Threatened and Priority flora and fauna species found near or within the study area (see Section 3.1.1), and a small amount of literature was also reviewed (Section 3.1.2).

3.1.1 Database Searches

The following databases were searched to assist in the determination of vegetation, flora and fauna of conservation significance:

1. The Commonwealth Department of the Environment and Energy's (DotEE) *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Protected Matters database¹. This database includes species and communities considered to be Matters of National Environmental Significance (MNES). Species returned by this search were included in the likelihood assessments for flora and fauna species (see Appendix 4 and 5 respectively).
2. The WA Department of Biodiversity, Conservation and Attractions (DBCA) NatureMap database². This database is the most comprehensive source of information on the distribution of WA's flora and fauna, and includes location records from the WA Museum and WA Herbarium Specimen Databases (derived from lodgement of voucher specimens), as well as records from Threatened and Priority Flora and Fauna Report Forms submitted to the DBCA. NatureMap was searched on the 15th October 2019, using a 5 km radius around an approximate central point for the survey area (-31.96757°S, 115.81831°E). Individual location records from the WA Herbarium Specimen Database and the Threatened and Priority Flora Report Forms Database were also supplied by Main Roads for further interrogation. Records from these searches were included in the assessment of species that may occur in the study area (see Appendices 3 to 5)³.
3. Site data from quadrats completed as part of the Floristic Survey of the Southern Swan Coastal Plain by Gibson et al. (1994) were reviewed, including two quadrats (KING-1 and KING-2) completed in Kings Park (east of the current survey area). Conservation significant species recorded through this survey were included in the assessment of species that may occur in the study area.
4. BGPA staff supplied data from floristic sampling sites in the vicinity of the survey area. Sites distributed in regular intervals across Kings Park are regularly monitored for flora (and signs of Quenda), most recently in the spring of 2018. At each of these sites, all understorey species within a 5 m radius around the central point are recorded, together with all overstorey tree species within a 20 m radius. Flora species from 18 sampling sites in the current survey area were included in the species list generated for the survey area (see Appendix 11). Conservation significant flora records were also compiled for the study area, and weeds were compiled for the survey area; these have been discussed where relevant in this report.

¹ <http://www.environment.gov.au/epbc/protected-matters-search-tool>

² <https://naturemap.dbca.wa.gov.au>

³ Note that a record of the Priority 1 species *Typhonium peltandroides* from the Kimberley and a record of the Priority 3 *Verticordia venusta* from the Midwest were incorrectly returned by the NatureMap search; these have not been discussed further.

3.1.2 Literature Review

Considerable literature is available for Kings Park, including numerous historical surveys and management plans completed since the 1960s. The most relevant literature reviewed are listed below:

- Two tree mapping exercises have been completed within the current survey area, which measured and located all individuals of tree species with a trunk diameter >100 millimetres (mm). One was completed in 2014 within a 0.45 ha area in the central section of the survey area (Arbor Centre 2014), while the second was completed in 2019 in a 0.13 ha area just to the north (Biota in prep.). Tree species from these surveys were included in the flora species list.
- A description of the plant communities of Kings Park bushland and associated vegetation mapping was prepared by BGPA (McChesney 2017).
- An assessment of black-cockatoo habitat within the survey area was completed by BGPA in 2014 (Easton 2014).
- A study by How and Dell (2000) addressed ground vertebrate fauna across Perth. This included three pit-fall trapping sites within Kings Park, one of which ("KP2") was located within the current survey area. The site comprised nine pitfall traps which were run for >50 days in each of three years (1992 – 1994).
- The Great Cocky Count has now been running for 10 years, and while the 2019 results were not published at the time of writing this report, the 2018 report includes data on roost sites assessed within Kings Park over the years (Peck et al. 2018).
- The Bush Forever report includes a description for the Kings Park Bushland site 317 (WA Planning Commission 2000a).
- The Royal Australasian Ornithologists Union (RAOU) Tracking Database Park Sightings Report for Kings Park (M49) (RAOU 1996) contains a brief list of bird species recorded from the area.
- The Floristic Survey of the Southern Swan Coastal Plain by Gibson et al. (1994) details Floristic community types (FCTs) from the study area, including Kings Park.
- A soil survey has been completed for Kings Park (Bessell-Browne 1990).

3.2 Field Survey

3.2.1 Study Team and Survey Timing

Four botanists from Biota and two botanists from BGPA completed the botanical field surveys, while one zoologist completed the targeted conservation significant fauna survey (see Table 3.1). Flora specimens were identified in-house by Biota botanists.

A total of 13 person-days were spent on the survey work. The field surveys were completed as follows:

- Six floristic survey quadrats (KPI01-KPI06) were selected and established on 12th September 2019 by three botanists from Biota (Scott Werner, Michi Maier and Ayesha Lapinski); assistance with sampling was provided by Catherine McChesney from BGPA.
- On 8th October 2019, three botanists from Biota (Scott Werner, Chloe Flaherty and Ayesha Lapinski) established two additional quadrats (KPI07 and KPI08) in the northern section of the survey area, again with assistance provided by Catherine McChesney from BGPA. The single quadrat located within the targeted flora survey area (KPI03) was also resampled; it was considered that insufficient time had elapsed since the previous survey to warrant resampling of all quadrats. Targeted searches were also undertaken in the survey area for significant flora and weeds.
- Catherine McChesney and Ryan Glowacki from BGPA completed the systematic targeted searches for Threatened and Priority flora in the targeted flora survey area between the 1st and 3rd and 6th and 9th of October 2019. In total, approximately 4 person days were spent on this task.
- Black-cockatoo habitat was assessed on 8th October 2019 by a zoologist from Biota (Victoria Ford).

Table 3.1: Summary of key personnel involved in the current study.

Name	Position (at Biota, unless specified)	Qualification	Years of Experience	Survey Role	DBCA Licence No.
Michi Maier (Project Director)	Director / Principal Botanist	BSc (Bot & Zool) Hons (Zool)	28	Project Director Quadrat sampling Specimen confirmations Report review	FB62000033
Scott Werner (Project Manager - Flora)	Senior Botanist	BSc (Cons Biol & Mgt) Hons	8	Project Manager Vegetation mapping confirmation Quadrat sampling Significant flora searches Reporting	FB62000038
Victoria Ford (Project Manager - Fauna)	Senior Zoologist	BSc (Zool) PhD (Zool)	10	Fauna survey Reporting	N/A
Ayesha Lapinski	Graduate Botanist	Grad Dip Sc (Bot)	1	Quadrat sampling Significant flora searches Specimen identifications Data entry Reporting	FB62000106
Chloe Flaherty	Senior Botanist	BSc Hons (NRM)	9	Quadrat sampling Significant flora searches	FB62000167
Catherine McChesney	Ecological Scientist at BGPA	BSc (Bot & Zool) Hons (Bot)	25	BGPA liaison Assistance with quadrat sampling Significant flora searches	N/A
Ryan Glowacki	Kings Park Bushland Manager, BGPA	BSc (Cons Biol)	14	Significant flora searches	N/A
Pierre-Louis de Kock	Senior Botanist / Specialist Taxonomist	BSc (Envtal Mgt)	14	Specimen confirmations	N/A

3.2.2 Survey Conditions

The weather conditions preceding a field survey can directly affect the number and type of flora species that are recorded from an area. Total monthly rainfall data for the year prior to the survey were sourced from the Department of Primary Industries and Regional Development (DPIRD) weather recording station in Kings Park (station number BG001). These data were compared with long-term climate-normal (1989-2018) median monthly rainfall data for the closest Bureau of Meteorology weather recording station at Subiaco Treatment Plant (station number 9151), located 2.8 km north-west of the survey area (see Figure 3.1).

The flora surveys followed a wetter winter period than normal; this was due mainly to considerably higher rainfall in June 2019, as rainfall in July was well below average. Conditions in September and October 2019 were considered favourable for collecting most flora species, however some specimens were lacking flowering material (particularly some *Lomandra* and orchids), and no fungi were observed.

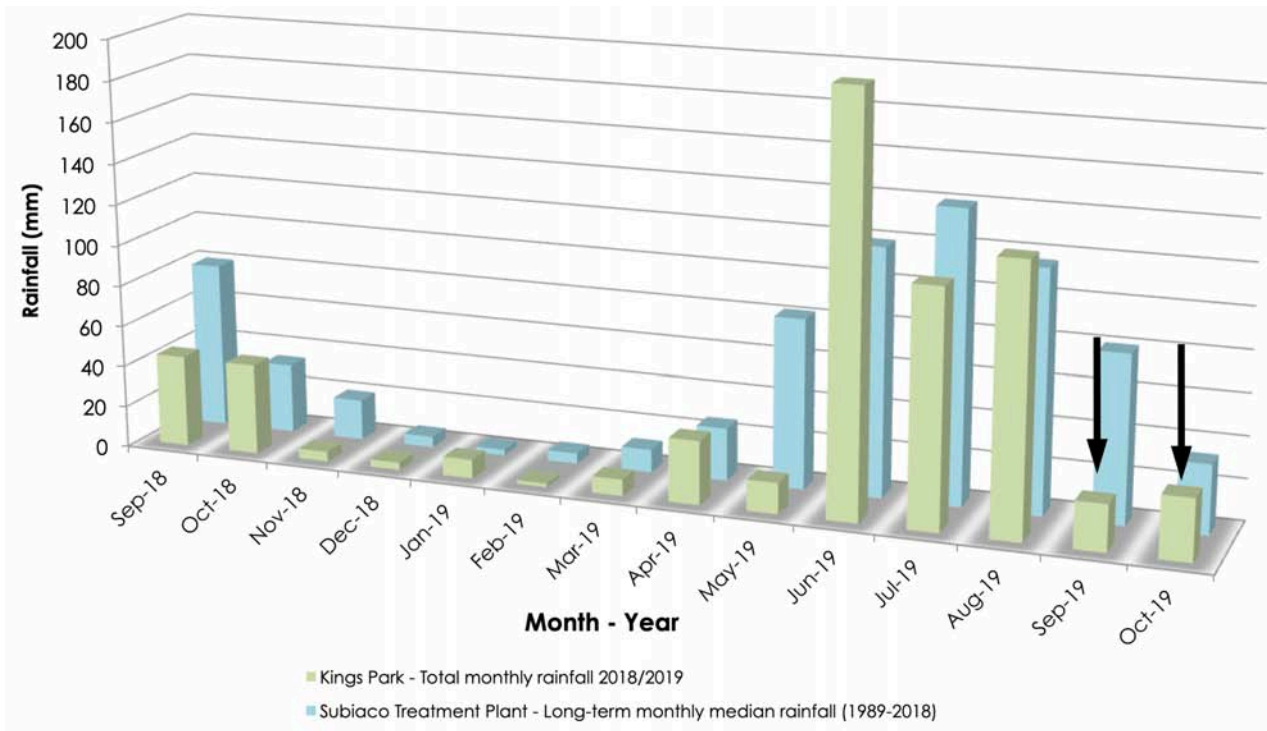


Figure 3.1: Total monthly rainfall for September 2018 to October 2019 from the DPIRD Kings Park weather station compared to the long-term climate-normal (1989-2018) median rainfall for the same months from the Bureau of Meteorology Subiaco Treatment Plant weather station. Arrows indicate survey timing.

3.2.3 Detailed Vegetation Survey

3.2.3.1 Validation of Existing Vegetation Mapping and Mapping of Vegetation Condition

Two vegetation communities have been mapped over a 7.57 ha section of the survey area by McChesney (2017) (see Table 3.2 and Appendix 6). The intention of the 2019 field survey was to verify these vegetation units in the field, and amend the descriptions and unit boundaries if necessary. The units were to be described at sub-association level (level VI) as per the National Vegetation Information (NVIS) framework for vegetation classification (see ESCAVI 2003).

Once the vegetation sub-associations were validated, they were also then compared against the published descriptions of TECs and PECs to determine their resemblance to listed community types. A floristic analysis was conducted to assist with this determination (see Section 3.2.3.6).

Table 3.2: Vegetation types mapped previously in the survey area by McChesney (2017).

Vegetation Category	Description	Area (ha)
FCT Description	Mixed <i>Eucalyptus/Corymbia - Allocasuarina - Banksia</i> Woodland on Karrakatta Sands derived from Tamala Limestone (corresponding to FCT 28; see Section 4.6.2).	7.57
Vegetation Type Description	Mixed <i>Eucalyptus/Corymbia - Allocasuarina fraseriana - Banksia</i> Woodland with high relative abundance of <i>Banksia attenuata</i> and <i>Banksia menziesii</i> - Plateau on Karrakatta Sands.	
Vegetation Communities	DBm: Mixed <i>Allocasuarina fraseriana - Banksia attenuata - Eucalyptus marginata - Corymbia calophylla - Eucalyptus gomphocephala</i> Woodland with higher relative abundance of <i>Banksia attenuata</i> and <i>Banksia menziesii</i> - Plateau on Karrakatta Sands. This vegetation was mapped in the northern section of the survey area.	4.82
	DBg: Mixed <i>Allocasuarina fraseriana - Banksia attenuata - Eucalyptus marginata - Corymbia calophylla - Eucalyptus gomphocephala</i> Woodland with higher relative abundance of <i>Banksia grandis</i> and <i>Banksia ilicifolia</i> - Plateau on Karrakatta Sands. This vegetation was mapped mainly in the southern section of the survey area, with a small section in the north-eastern corner.	2.75

Vegetation condition was also assessed in the field and ranked according to the scale in EPA (2016a) (see Appendix 7). Field data (quadrat data, mapping notes, vegetation boundaries and locations of weeds) and the most current aerial imagery available were used to determine the boundaries of areas of differing condition, which were then mapped at an appropriate scale. It should be noted that the greater survey effort within the targeted flora survey area was thought to be a factor in the larger number of weed records in this area, and these records were therefore considered in this context during the condition assessment process.

3.2.3.2 Site Selection

Indicative sampling locations were selected prior to the field survey. The survey area boundary was overlain on aerial imagery, and sampling sites were then selected based on the broad habitats apparent and the vegetation types that were mapped over the area.

During the September survey, six sites were selected and established within the survey area; three in each of the two vegetation types mapped in the vicinity. Following the September survey, an area was added at the northern end, and two sites were selected and established in this area. Of the total eight sites, one site was located within the targeted flora survey area, while the remaining seven sites were in the broader survey area. All sites were established so that they were located as close as possible to one of the existing regular monitoring sites for BGPA (recognising that these latter sites include a larger (20m) radius for overstorey tree species).

3.2.3.3 Floristic Data Collection: Assessment of Quadrats

Sampling sites were established as standard 10 m by 10 m floristic survey quadrats. Quadrats were measured using optical squares and measuring tapes, and permanently marked using a steel fence dropper at the north-west corner; the fence dropper was removed after the second survey.

Eight quadrats were assessed in 2019; these were assigned the prefix 'KPI' followed by consecutive numbers. Locations of sampling sites are provided in Appendix 8. Raw data from the current quadrats are summarised in Appendix 10.

The following parameters were recorded for all quadrats:

- location using MGA coordinates (WGS84 datum, Zone 50K) recorded with a handheld Global Positioning System (GPS) unit with accuracy <2 m; coordinates were recorded for all four corners of the quadrat;
- a digital photograph of each site (usually taken from the north-west corner of a quadrat);
- habitat description;
- broad soil type;
- fire history (approximate time since last fire, where applicable);
- vegetation description based on the height and estimated percent foliar cover of dominant species, and coded as per the NVIS classification (ESCAVI 2003) (see Appendix 7);
- vegetation condition ranking according to EPA (2016a) (see Appendix 7); and
- the estimated percent foliar cover of each flora species present within the quadrat.

3.2.3.4 Searches for Conservation Significant Flora and Weeds

Systematic searches for conservation significant flora were completed through the targeted flora survey area, and targeted searches were completed through the remainder of the survey area. All searches were completed on foot, with spacings of 2-5 m between observers through the targeted flora survey area and spacings of 20-30 m through the broader survey area (see Appendix 8 for an indication of survey effort; note that not all track logs were recorded). Where such species were found, the number of individuals was recorded, along with a location coordinate.

During this work, opportunistic records of weed species were also recorded, with a focus on species that are listed as declared plants under the BAM Act or are listed as WONS.

3.2.3.5 Specimen Identification, Nomenclature and Data Entry

Common taxa that were well known to the survey botanists were confirmed in the field. A voucher specimen was collected if the taxon was either difficult to determine without closer examination, belonged to a recognised species complex, was poorly collected or otherwise unusual. Each voucher specimen was assigned a unique internal code to facilitate tracking of data. Specimens were pressed in the field and then examined and confirmed in the office.

Voucher specimens were identified using flora keys, consulting appropriate publications and checking reference collections. Biota botanists identified most specimens, the majority of which were confirmed by Pierre-Louis de Kock (Senior Botanist/Specialist Taxonomist) and Michi Maier (Principal Botanist/Director).

All data were entered into an Access database structure held at Biota (the 'Site Species Database' developed by Ted Griffin at the request of Malcolm Trudgen of M.E. Trudgen and Associates). Species recorded from previous work within the survey area were also entered to ensure these would be included in the flora list for this study. As part of this process, old species nomenclature was updated as required.

A full flora species list for the survey area is provided in Appendix 11. Nomenclature and conservation significance rankings used in this report are consistent with the current listing of flora recognised by the WA Herbarium on FloraBase⁴ at the time of preparation of this report.

3.2.3.6 Floristic Analysis

To assist with determining which FCTs described by Gibson et al. (1994) were equivalent to the vegetation types in the survey area, hierarchical clustering analyses were conducted using PATN v3.12 (Belbin 2013) to investigate the similarity of sampling sites based on their floristic composition. The floristic analyses for the current study utilised the data set from the Swan Coastal Plain survey by Gibson et al. (1994), together with the presence / absence data from each quadrat sampled in the survey area in 2019. In keeping with the original analysis by Gibson et al. (1994), all weeds were included; singleton species and taxa identified only to genera were removed; and some species were combined in the data set (see list of species in Table 1 in Appendix 14).

The analyses comprised:

1. Classification of sites and species using an agglomerative hierarchical fusion technique (sites: 30 groups, Bray Curtis association followed by flexible "unweighted pair-group mean average" (UPGMA); species: 35 groups, TWOSTEP association followed by flexible UPGMA).
2. Nearest Neighbour (NNB) analysis of sites to identify the 10 most similar sites to each new quadrat (Bray Curtis association followed by NNB).

Each quadrat was added individually to the Gibson et al. (1994) data set. The dendrograms produced from the floristic classifications were investigated together with the results of the NNB analysis to identify the most probable FCT for each quadrat, and then an overall FCT for the vegetation type.

3.2.4 Black-cockatoo Habitat Assessment

The aim of the black cockatoo field assessment was to describe foraging, roosting and breeding habitat for black-cockatoos within the survey area.

The Commonwealth referral guidelines in relation to black-cockatoos (DSEWPac 2012a, DoEE 2017) defines breeding habitat as; those species of trees known to support breeding within the range of the species, which either have a suitable nest hollow or are of a suitable diameter at

⁴ <http://florabase.dpaw.wa.gov.au>

breast height to develop a nest hollow (being greater than 50 cm DBH for most Eucalypts, or 30 cm in the case of Wandoo and Salmon Gum). To ensure that all potential breeding habitat trees were recorded, a systematic approach was applied, whereby strip-transects of 20 m wide were overlain on the survey area in GIS. A 0.45 ha sub-area of the current survey area was previously subject to an arborist inspection (Arbor Centre 2014), during which all trees of DBH >100 mm or greater were described. The location of all trees of hollow-forming species recorded during that study were loaded onto the field GPS unit to ensure that any trees that had been measured as >50 cm DBH at that time (n=2) or that had the potential to have grown to 50 cm DBH in the intervening 5 year period, were captured. A zoologist then walked down the middle of each 20 m transect, and recorded the location of all trees >50 cm DBH within the strip. This method was continued until the entire survey area had been searched (see Appendix 9 for routes of the foot traverses).

All individual trees with the potential to form hollows (Jarrah, Marri and Tuart) and with sufficient diameter to be considered breeding habitat trees (DBH >50 cm) were recorded. For any tree supporting hollow/s considered to have any potential for breeding, details of the hollows were recorded. A GPS with accuracy <2 m was used to record an accurate location of all trees.

The following parameters were scored.

- DBH (diameter at breast height; approximately 1.3 m above the ground);
- tree height using a laser rangefinder;
- tree species;
- the number and height above the ground of observed hollows;
- the entrance diameter of the hollow/s;
- suitability of entry/egress angle of the hollow/s;
- hollow connected to suitably large branch or trunk;
- signs of cockatoo use (including wear around hollows, nut chews, scarring, scratch marks on trunks and branches, secondary evidence of feeding sites and moulted feathers); and,
- photographs were also taken as a visual reference and to aid future identification of the tree.

In considering the quality of foraging habitat in relation to black-cockatoos the criteria detailed in both the current referral guideline (DSEWPaC 2012a) and the draft revised referral guideline (DotEE 2017) were considered. These include foraging plant composition and density, the provision of continuity to wider areas of foraging habitat, foraging evidence, proximity to known roosting areas and proximity to known breeding areas. The quality of the habitat was assessed against the Foraging Habitat Scoring Tool from DotEE (2017), however it is important to note that this is a draft guidance only (see Appendix 15).

In the course of conducting the breeding habitat assessment, the survey area was also searched for evidence of foraging. The potential of the habitat to support foraging was described, and any evidence was recorded, along with sightings of any black-cockatoo individuals.

BGPA staff provided an anecdotal report of potential roosting within the May Drive Parkland locality, as indicated by the congregation of black-cockatoos late in the day. Given the proximity of the parkland to the survey area and suitable roosting habitat in the form of stands of large foraging trees in proximity to water, a search was conducted around the parkland for any evidence of roosting such as scat piles or feeding debris on the ground (see Appendix 9).

3.3 Assessment of Likelihood of Occurrence

3.3.1 Conservation Significant Flora and Fauna

The results from the literature review and database searches were used to compile a list of conservation significant flora and fauna species that had previously been recorded from the study area (see Appendix 4 and 5 respectively).

The likelihood that each species would occur in the survey area was then assessed using the rankings and criteria provided in Table 3.3:

1. An initial assessment was made during the desktop review. This was based on consideration of the overall distribution of the species, the proximity of the survey area to known populations, the reliability and age of any historic records, and, if the species was known to be linked to particular habitats, whether suitable habitat appeared to be present in the survey area based on inspection of aerial photography and/or existing information. Any species identified as being recorded, likely to occur, or having the potential to occur then became a target species for the purpose of the current surveys.
2. The likelihood rankings were subsequently revised as necessary based on the findings of the field surveys. Only the final likelihood rankings are provided in Appendix 4 and 5.

Table 3.3: Ranking system used to assign the likelihood that a species would occur in the survey area.

Rank	Criteria
Known to occur	1. The species has been recorded in the survey area during this survey or in previous surveys.
Likely to occur	1. There are existing records of the species in close proximity to the survey area (within 2 km); and <ul style="list-style-type: none"> • the species is strongly linked to a specific habitat, which is present in the survey area; or • the species has more general habitat preferences, and suitable habitat is present.
May potentially occur	1. There are existing records of the species from the locality (within 5 km), however <ul style="list-style-type: none"> • the species is strongly linked to a specific habitat, of which only a small amount is present in the survey area; or • the species has more general habitat preferences, but only some suitable habitat is present. 2. There is suitable habitat in the survey area, but the species is recorded infrequently in the locality.
Unlikely to occur	1. The species is linked to a specific habitat, which is absent from the survey area; or 2. Suitable habitat is present, however there are no current records of the species from the locality despite reasonable previous search effort in suitable habitat; or 3. There is some suitable habitat in the survey area, however the species is very infrequently recorded in the locality.
Would not occur	1. The species is strongly linked to a specific habitat, which is absent from the survey area; and/or 2. The species' range is very restricted and would not include the survey area. 3. The species is considered locally extinct or the only records are old (>30 years).

3.3.2 Criteria to Determine the Presence of the Commonwealth Banksia Woodlands TEC

The criteria used to assess presence of the Commonwealth Banksia Woodlands TEC are listed in Table 3.4. The vegetation types in the survey area were assessed against these, particularly taking into account the results of the condition rankings and the floristic analysis.

Table 3.4: Diagnostic characteristics and condition thresholds to determine the Commonwealth Banksia Woodlands TEC (DotEE 2016).

Diagnostic Characteristics / Condition Thresholds	Criteria
Determination of Floristic Community Type:	<p>Location and physical environment:</p> <ul style="list-style-type: none"> Occurs in the Swan Coastal Plain IBRA bioregion. <p>Soil and landform:</p> <ul style="list-style-type: none"> Typically occurs on well-drained, low-nutrient soils on sandplain landforms, particularly deep Bassendean and Spearwood sands and occasionally on Quindalup sands. <p>Structure and composition:</p> <ul style="list-style-type: none"> The TEC encompasses a number of recognised sub-communities (FCTs). The community in question must be representative of the relevant FCT.
Vegetation condition and minimum patch size threshold:	<ul style="list-style-type: none"> 'Pristine' – no minimum 'Excellent' – 0.5 ha or 5,000 m² 'Very Good' – 1 ha or 10,000 m² 'Good' – 2 ha or 20,000 m²
Surrounding context:	<p>Relevant criteria to consider:</p> <ul style="list-style-type: none"> "A patch is a discrete and mostly continuous area of the ecological community. A patch may include small-scale (<30 m) variations, gaps and disturbances, such as tracks, that do not significantly alter the overall functionality of the ecological community. Such breaks are generally included in patch size calculation. The landscape position of the patch, including its position relative to surrounding vegetation also influences how important it is in the broader landscape."

3.4 Limitations of the Study

The results of the field surveys provide a good representation of the flora and vegetation values of the survey area, and the value of the habitat for black-cockatoo species and other conservation significant fauna. However, there are limitations to this study that must be considered when reviewing and applying the results detailed in this report. As per the EPA's Technical Guidance for flora and fauna surveys for EIA (EPA 2016a, 2016b), potential constraints and consequent limitations of this survey assessment are summarised in Table 3.5.

Table 3.5: Potential constraints and limitations of the current surveys.

Potential Constraint	Statement of Limitations
1. Availability of contextual information at a regional and local scale	<p>Kings Park has been subject to considerable botanical survey work over several decades, including regular monitoring of flora species over a systematic grid of sites spread across the area. This has included 18 sites in the current survey area. Specific assessments targeting conservation significant fauna have also been completed. Available literature was reviewed, and publicly available databases of information relating to rare species and communities were also searched. The current surveys added considerable new data specific to the survey area.</p> <p>Contextual information is therefore not considered to be a limiting factor for this study.</p>
2. Competency / experience of the team carrying out the survey, including experience in the bioregion surveyed	<p>The field personnel were suitably qualified to identify flora and fauna, and were led by team members with at least five years of experience in conducting biological surveys in the region. Staff from BGPA with extensive familiarity with the area also assisted with the botanical sampling, particularly the rare flora searches. There were therefore no limitations due to experience of personnel.</p>

Potential Constraint	Statement of Limitations
3. Proportion of flora recorded and/or collected, any identification issues	<p>All vascular flora encountered in the survey area were recorded in 2019, comprising 94 native taxa from 61 genera and 30 families, and 22 weed species. Most of the flora specimens collected during the current field survey (90%) were of sufficient quality to be fully determined to the lowest relevant taxonomic level; 11 native taxa and one weed had inadequate material for complete identification. A further 30 native taxa and 11 weed species have been recorded in the survey area during previous survey work in 2018 and 2014.</p> <p>The proportion of flora recorded was not considered to be a limitation.</p>
4. Appropriate area fully surveyed (effort and extent)	<p>The scope of works required a suitably timed (spring) detailed survey for vegetation and flora, together with a targeted survey for conservation significant flora (terms as described in EPA 2016a). A total of eight person days were spent surveying the flora and vegetation of the survey area. The entire targeted survey area within the wider survey area was systematically searched on foot for significant flora, and targeted searches were completed through the remainder of the survey area. Vegetation mapping had been completed for the survey area, and was validated through the field survey. Eight quadrats were completed in the survey area, meeting the minimum requirement of three replicate sites per vegetation type in EPA (2016a). The single site in the targeted flora survey area was resampled.</p> <p>The scope of works also required a targeted black-cockatoo survey, with recording of opportunistic signs of any other conservation significant fauna species (terms as described in EPA 2016b). It is acknowledged that the timing of the survey was not ideal for the observation of Carnaby's Black-cockatoo individuals, which are generally present on the Swan Coastal Plain from late summer to early winter. However, the primary aim of the study was to describe the availability of black-cockatoo habitat and it is often possible to infer the presence of black-cockatoo species from secondary feeding evidence. The entire survey area was subject to foot traverses to assess habitat trees for black-cockatoo species.</p> <p>It is noted that it is extremely difficult to assess the suitability of a tree hollow for black-cockatoo nesting from ground level (or indeed whether a hollow is actually present). A conservative approach has been taken here, wherein characters consistent with published nest characteristics (e.g. Whitford and Williams 2002, Johnstone et al. 2013) have been applied using minimum dimensions (e.g. hollow entrances of 10 cm, entering a branch or trunk allowing for a floor base of at least 17 cm diameter). This would undoubtedly result in an overestimate of the number of suitable hollows.</p> <p>Given the above, the survey is considered to have been of appropriate effort and extent.</p>
5. Access restrictions within the survey area	<p>The survey area was relatively small and all sections were easily accessed on foot. Access was not a limitation.</p>
6. Survey timing, rainfall, season of survey	<p>The flora surveys were completed in September and October 2019, while the fauna survey was completed in October 2019. While these timings were generally appropriate (see Section 3.2.1), no fungi or non-vascular flora (algae, mosses and liverworts) were observed, and some vascular species lacked suitable material for identification. Given the low rainfall in June and early spring, it is possible that some species that would normally be present may not have been recorded.</p>
7. Disturbance that may have affected the results of survey such as fire, flood or clearing	<p>No disturbance factors appeared to have affected the results of the survey; the last fire through the area was in January 1989. Clearing is stringently controlled within Kings Park, and cleared areas were limited to the existing dual-use paths.</p>

4.0 Existing Environment

4.1 IBRA Bioregion

The survey area lies within the Perth (SWA02) subregion of the Swan Coastal Plain bioregion, as defined by the Interim Biographic Regionalisation for Australia (IBRA) (DSEWPaC 2012b). The Perth (SWA02) subregion is described by Mitchell et al. (2003) as:

"A low lying coastal plain, mainly covered with woodlands. It is dominated by Banksia or Tuart on sandy soils, *Casuarina obesa* on outwash plains, and paperbark in swampy areas. In the east, the plain rises to duricrusted Mesozoic sediments dominated by Jarrah woodland. The climate is warm Mediterranean. Three phases of marine sand dune development provide relief. The outwash plains, once dominated by *C. obesa*-Marri woodlands and *Melaleuca* shrublands, are extensive only in the south."

4.2 Geology and Soils

The survey area is located within the Spearwood Dunes system, and features soils of the Karrakatta Soil Association:

- "The Spearwood Dune System forms a belt 3 to 15 km wide, west of the Bassendean Dune System. The dunes are large-scale, convex, asymmetric, topographically irregular ridges that reach heights of 95 m in places. The Spearwood dunes are younger than the Bassendean dunes, but are still late Quaternary (Pleistocene) in age. The shape of the dunes suggests that they were formed as large-scale, bare, dune sheets that advanced over the land surface." (Gozzard 2007)

The Atlas of Australian Soils mapped one soil type within the survey area (Northcote et al. 1960):

- "Coastal dune formations backed by the low-lying deposits of inlets and estuaries: chief soils are calcareous sands (Uc1.11) on the dunes. Associated are various (Uc), (Um), (Uf), (Ug), and acid peat (O) soils in the swale behind the coastal dunes, similar to unit Kf10."

4.3 Conservation Reserves in the Locality

Several conservation reserves occur in the study area (Figure 4.1), only one of which is directly relevant to the current exercise:

- The survey area is located at the western edge of the Kings Park Class-A reserve (R 1720).

Other reserves in the locality are associated with:

- the Swan River and fringing habitats to the south of Kings Park (e.g. the Swan Estuary Marine Park, Matilda Bay Reserve, and Milyu Nature Reserve);
- wetlands to the north and west of Kings Park (e.g. Herdsman Lake and Lake Monger); and
- urban bushland remnants, in particular the Bold Park Class-A Reserve (R 45409), 4 km northwest of Kings Park.

At over 400 ha, Kings Park contains one of the largest inner city bushland remnants, which is regionally significant as a Bush Forever site (see Section 4.4). Kings Park is managed (together with Bold Park) under the *Botanic Gardens and Parks Authority Act 1998* (BGPA Act) and Regulations, with a mandate to "conserve and enhance the native biological diversity of the designated lands". The bushland supports a rich diversity of native flora, fauna and fungi, including 325 native vascular flora, over 200 fungi, over 100 vertebrate species and hundreds of invertebrates (BGPA 2014). It is a key ecological linkage to other urban bushland remnants, particularly riparian vegetation along the Swan River (Greenway 24), and bushland between Kings Park and Bold Park (e.g. Underwood Avenue and Shenton Bushland; Greenway 19). Kings Park is also valued by the community for its high conservation, indigenous cultural and recreational values.

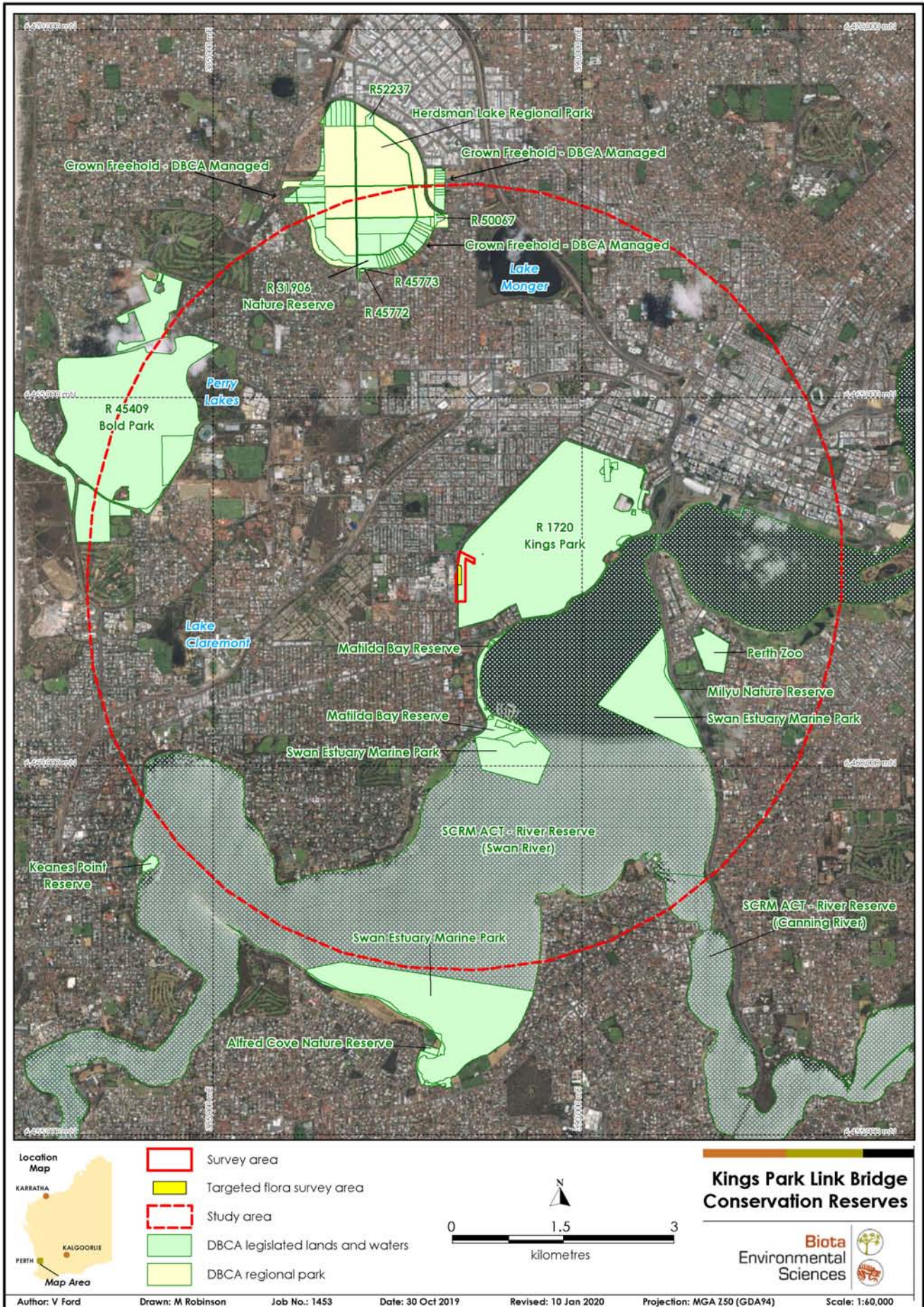


Figure 4.1: Conservation reserves in the study area.

4.4 Bush Forever

Bush Forever was a State government policy and program, which identified 51,200 ha of regionally significant bushland on the Swan Coastal Plain for protection (WA Planning Commission 2000b). Bush Forever sites are protected as ESAs pursuant to the EP Act.

The survey area lies within Bush Forever site 317, 'Kings Park' (Figure 4.2). Site 317 is situated on the Spearwood Dunes and covers 320.8 ha of bushland, including river-limestone cliffs and vegetated uplands. The WA Planning Commission (2000a) stated that a single FCT of Gibson et al. (1994) dominated this Bush Forever site (FCT 28: Spearwood *Banksia attenuata* or *B. attenuata* – *Eucalyptus* woodlands), while another (FCT 27: Species poor mallees and shrublands on limestone scarp) was inferred to be present but had not been sampled.

4.5 Regional Vegetation

4.5.1 Pre-European Vegetation Mapping of Beard (1981)

John Beard mapped the vegetation of the Swan Coastal Plain at 1:1,000,000 scale (Beard 1981). Based on Beard's mapping, the survey area lies within a broad extent of one vegetation system association:

- Spearwood 6: Jarrah (*Eucalyptus marginata*) – Marri (*Corymbia calophylla*) – Wandoo (*E. wandoo*) woodland.

Much of this system association has been cleared for development of the Perth metropolitan area, with less than a quarter of the original extent mapped by Beard remaining in the Swan Coastal Plain bioregion and Perth local government area (LGA) (Table 4.1). However, almost the entire current extent of this system association in the Perth LGA occurs in land managed by the DBCA.

Table 4.1: Statistics for extent of the Spearwood 6.1 vegetation system association (Government of Western Australia 2019a).

	Swan Coastal Plain bioregion	City of Perth LGA
Total Pre-European Extent		
Total pre-European extent	54,427.13 ha	1,342.82 ha
Current extent	13,287.64 ha	322.49 ha
Percentage remaining	24.4%	24.0%
Extent in DBCA-managed Lands		
Pre-European extent in all DBCA-managed lands	12,286.81 ha	447.32 ha
Current extent	5,320.63 ha	320.04 ha
Percentage currently reserved, as a proportion of the total pre-European extent	9.8%	23.8%
Percentage currently reserved, as a proportion of the current extent	40.0%	99.2%

4.5.2 Vegetation Complex Mapping of Heddle et al. (1980)

The vegetation complexes of the Swan Coastal Plain have been mapped by Heddle et al. (1980) at a scale of 1:250,000. The study area lies within a single vegetation complex as outlined by Heddle et al. (1980):

- Karrakatta Complex – Central and South: "Predominantly open forest of *Eucalyptus gomphocephala* (Tuart) – *Eucalyptus marginata* (Jarrah) – *Corymbia calophylla* (Marri) and woodland of *Eucalyptus marginata* (Jarrah) – *Banksia* species. *Agonis flexuosa* (Peppermint) is co-dominant south of the Capel River."

An extension of the vegetation complex mapping of Heddle et al. (1980) was conducted by Webb et al. (2016), including an update of the vegetation complex extents. The current extent of the Karrakatta Complex – Central and South within the Swan Coastal Plain is shown in Table 4.2. As this complex is largely equivalent to Beard's system association Spearwood 6.1, it has similarly been extensively cleared through development of the Perth metropolitan area; over 75% of its original extent on the Swan Coastal Plain has been cleared, although 37% of its historical extent in the City of Perth LGA remains. The current extent of this complex within 12 km of the survey area is shown in Figure 7.2.

Table 4.2: Statistics for extent of the Karrakatta Complex – Central and South vegetation complex (Government of Western Australia 2019b).

	Swan Coastal Plain bioregion	City of Perth LGA
Total pre-European extent	53,080.99 ha	849.19 ha
Current extent	12,467.20 ha	315.42 ha
Percentage remaining	23.5%	37.1%

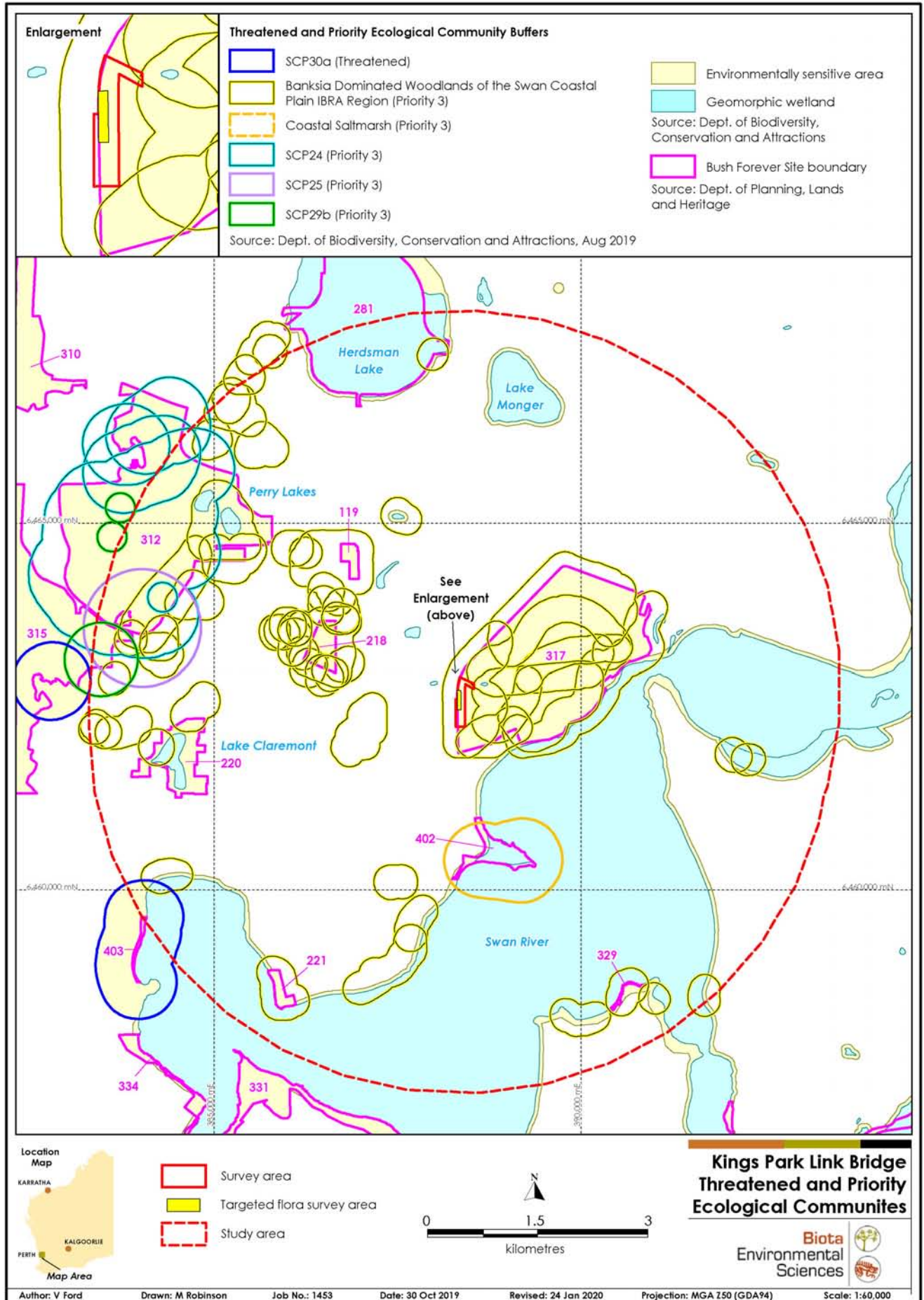


Figure 4.2: Areas of ecological significance in the study area.

4.6 Vegetation of Conservation Significance

4.6.1 Threatened and Priority Ecological Communities

Based on database search results, three Commonwealth-listed TECs and one State-listed TEC were identified as occurring within the study area (Table 4.3). The three Commonwealth-listed TECs are listed as PECs at the State level, and two additional PECs listed for WA occur in the study area. The likelihood that each vegetation community would occur in the survey area was assessed, taking into account the units determined from existing vegetation mapping (see Section 5.1), and the species and habitats known to occur in Kings Park. Only one of these communities is relevant to the current study:

- The survey area is located entirely within an area mapped as the “Banksia Woodlands of the Swan Coastal Plain”, which is a Commonwealth TEC and a Priority 3 PEC for WA (Figure 4.2).

Table 4.3: TECs and PECs that occur on the Swan Coastal Plain within the study area, and the likelihood that they would occur in the survey area.

Community Name	Conservation Status		Likelihood of Occurrence in the Survey Area
	Federal	State	
Tuart (<i>Eucalyptus gomphocephala</i>) Woodlands and forests of the Swan Coastal Plain†	Threatened (Critically Endangered)	Priority 3	Would not occur: Occurs 4 km north-west of the survey area; no suitable habitat is present in the survey area.
Banksia Woodlands of the Swan Coastal Plain	Threatened (Endangered)	Priority 3	Occurs: The survey area occurs within an area mapped as this TEC, and the dominant species in the mapped vegetation types DBg and DBm are characteristic of the TEC and PEC.
Coastal Saltmarsh: Subtropical and Temperate Coastal Saltmarsh	Threatened (Vulnerable)	Priority 3	Would not occur: occurs 1.5 km south of the survey area; no suitable habitat is present in the survey area.
SCP30a: <i>Callitris preissii</i> (or <i>Melaleuca lanceolata</i>) forests and woodlands, Swan Coastal Plain	–	Threatened (Vulnerable)	Would not occur: Occurs 5 km west and south-west of the survey area; no suitable habitat is present in the survey area.
SCP24: Northern Spearwood shrublands and woodlands	–	Priority 3	Would not occur: Occurs 4 km north-west of the survey area; no suitable habitat is present in the survey area.
SCP29b: Acacia shrublands on taller dunes	–	Priority 3	Would not occur: Occurs 4.4 km west of the survey area; no suitable habitat is present in the survey area.

† PEC title is SCP25: Southern Swan Coastal Plain *Eucalyptus gomphocephala* - *Agonis flexuosa* woodlands.

4.6.2 Floristic Community Types Known from the Locality

FCTs are an alternate classification system for regional vegetation, which define groupings based on floristic composition instead of structural vegetation units. FCTs are particularly important as they provide context for determining whether sampled vegetation types represent TECs and/or PECs. The WA Planning Commission (2000a) stated that one FCT described by Gibson et al. (1994) has been identified within Bush Forever site 317, Kings Park Bushland: FCT 28 comprises “Spearwood *Banksia attenuata* or *Banksia attenuata* – *Eucalyptus* woodlands”; this community is part of Floristic Supergroup 4 “Uplands centred on Spearwood and Quindalup Dunes”. Another FCT was inferred to be present but had not been sampled: FCT 27 comprises “Species poor mallees and shrublands on limestone scarp”, and would only be expected to occur along the scarp areas fringing the Swan River.

4.7 Flora Species Likelihood of Occurrence

A total of 12 Threatened flora species (one of which is presumed extinct), 26 Priority flora species and four Priority fungi species have been recorded to date from the study area⁵ (i.e. within 5 km of the survey area; see Appendix 4). Location records of species from the WA Herbarium and DBCA Threatened and Priority flora databases are provided in Figure 4.3. Species identified only through the EPBC Act Protected Matters database search have not been included, as these are not represented by any confirmed records in the study area.

An assessment of the likelihood of occurrence of each of these species within the survey area was completed, based on the habitats and vegetation types known to be present, as well as the currency of records in close proximity.

Prior to the field survey, one Priority 4 species (*Jacksonia sericea*) was known to be present in the survey area, and it was considered that six other species were either likely to occur or could potentially occur. These comprised the Priority 2 shrub *Acacia benthamii*, the small Priority 2 herb *Poranthera moorokatta*, three Priority 3 fungi species (*Amanita fibrilloses*, *A. preissii* and *A. wadjukiorum*) and the Priority 4 shrub *Dodonaea hackettiana*. Together, these species comprised the target species for the current field surveys.

⁵ NB. This excludes a record of cultivated plants of the Kimberley species *Typhonium peltandroides*.

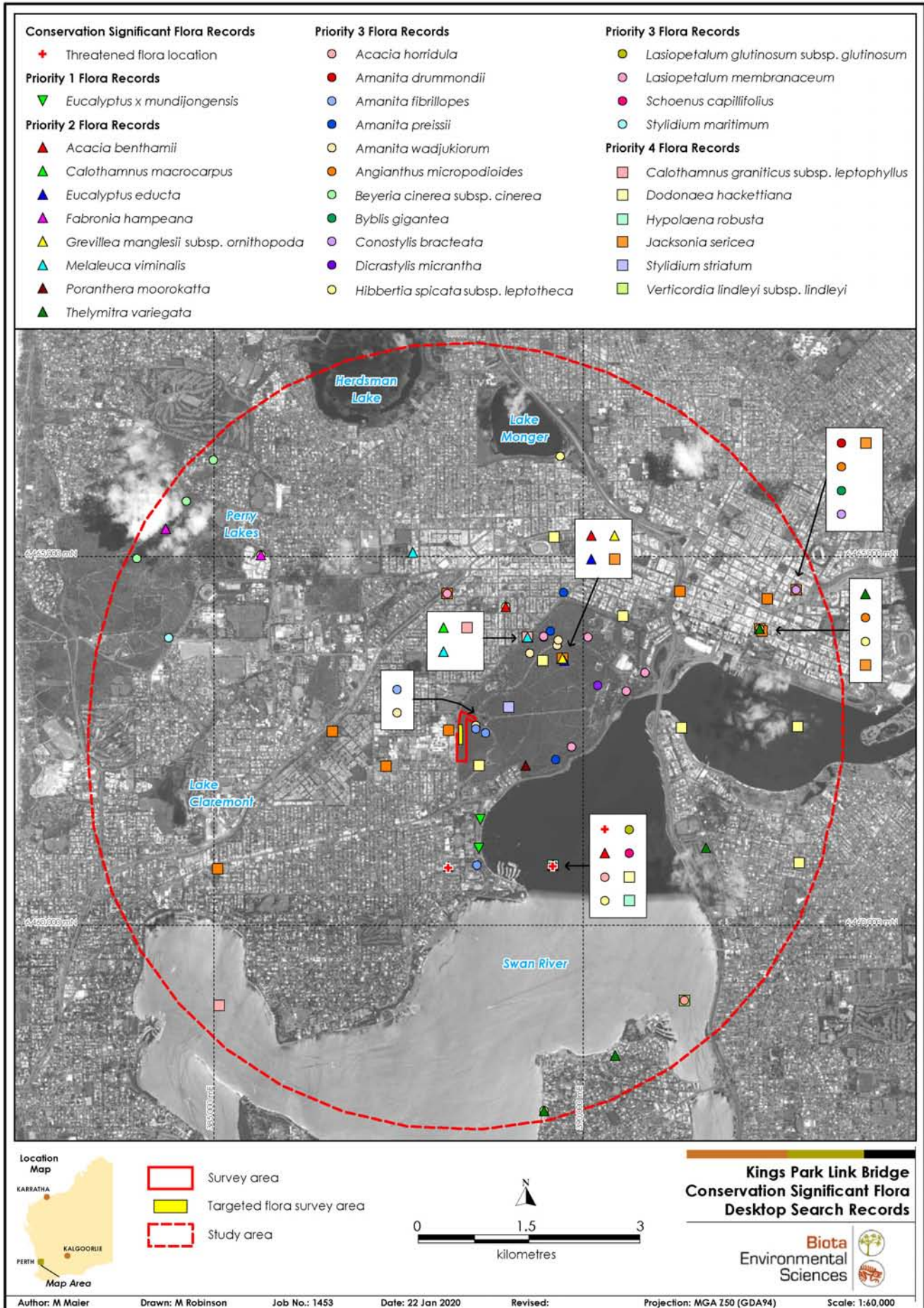


Figure 4.3: Records of Threatened and Priority species identified through searches of the WA Herbarium and DBCA databases of conservation significant flora.

NB. Threatened flora species not identified by name due to restrictions on data distribution. Some historical records have only indicative locations (e.g. those plotting in the Swan River).

5.0 Vegetation

5.1 Vegetation Mapping for the Survey Area

At the finest scale available, two vegetation types had been mapped in the survey area and surrounds by BGPA (McChesney 2017; see Section 3.2.3.1). These plant communities were derived from multivariate analysis of native plant cover data sampled on a 100 m grid throughout the plateau of Kings Park bushland. The data gathered during the current field surveys did not identify any need to change the mapping boundary between these units. It should be noted that a small area in the south of the survey area contains *Banksia ilicifolia*, which is uncommon in Kings Park, along with a range of other understorey species with limited distributions; it is therefore possible that a third community may be recognised in this area. Additional sites have been sampled recently, however the data have not yet been analysed (C. McChesney, BGPA, pers. comm. 2019).

However, the descriptions were refined to more closely reflect the dominant species in the survey area (multivariate analysis techniques were not used), and completely cleared areas within the existing historical mapping were separately mapped. In addition, an area of parkland cleared vegetation containing some planted trees was mapped in the median strip of Winthrop Avenue, to the west of the existing mapping. Note that no flora sampling was completed in these areas, as they were considered of negligible conservation value from a botanical perspective.

The mapping units from the current study are summarised in Table 5.1 and shown in Figure 5.1, with representative photographs provided in Plate 5.1 to Plate 5.4. The vegetation sub-associations are described in more detail in Section 5.1.1. Both units are representative of FCT 28 from Gibson et al. (1994) (see Section 5.3).

Table 5.1: Vegetation sub-associations and other mapping units identified for the survey area.

Mapping Code	Sub-association Description	FCT from Gibson et al. (1994)	Area (ha)
DBm	<i>Allocasuarina fraseriana</i> , <i>Eucalyptus marginata</i> subsp. <i>marginata</i> mid-height woodland over <i>Banksia attenuata</i> , <i>B. menziesii</i> low woodland over <i>Acacia saligna</i> , <i>Banksia sessilis</i> var. <i>cygnorum</i> isolated tall shrubs over <i>Xanthorrhoea preissii</i> , <i>X. brunonis</i> subsp. <i>brunonis</i> sparse shrubland over <i>Hibbertia hypericoides</i> subsp. <i>hypericoides</i> sparse low shrubland over <i>Tetraria octandra</i> , <i>Mesomelaena pseudostygia</i> sparse low sedgeland to open low sedgeland.	28	4.72
DBg	<i>Allocasuarina fraseriana</i> mid-height woodland over <i>Banksia attenuata</i> , <i>B. menziesii</i> low woodland over <i>Acacia saligna</i> , <i>Banksia sessilis</i> var. <i>cygnorum</i> sparse tall shrubland over <i>Xanthorrhoea preissii</i> sparse shrubland over <i>Tetraria octandra</i> , <i>Mesomelaena pseudostygia</i> sparse low sedgeland.	28	2.72
PC	Parkland cleared areas, including some planted trees, in the median strip of Winthrop Avenue.	NA	0.53
C	Cleared areas, comprising roads, dual-use paths and a fire-break.	NA	0.62
		Total	8.59

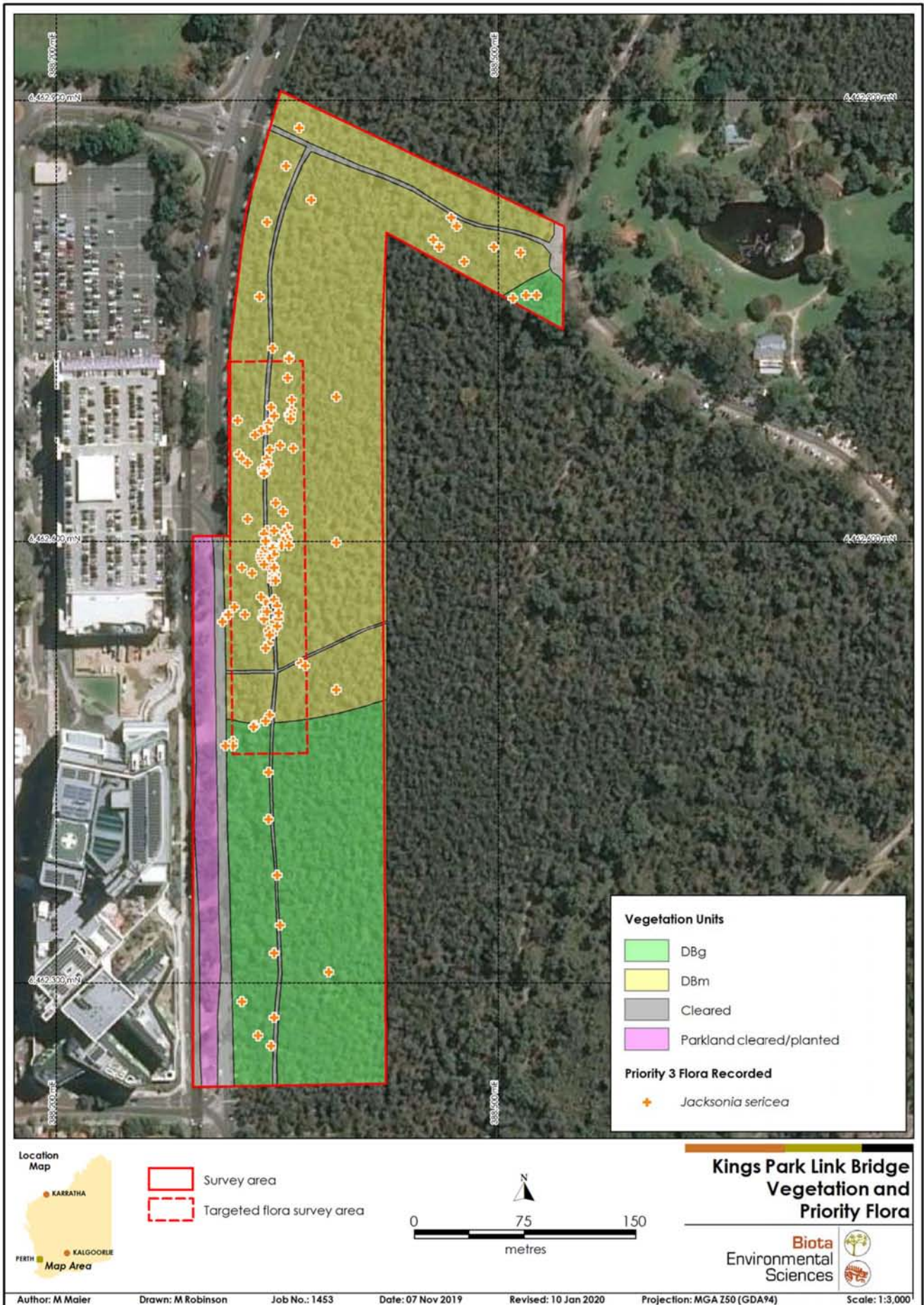


Figure 5.1: Distribution of vegetation sub-associations (from historical mapping by BGPA), parkland cleared and entirely cleared areas within the survey area, together with Priority flora locations.

5.1.1 Vegetation Sub-associations of the Survey Area

The two vegetation sub-associations identified within the survey area are described below and mapped in Figure 5.1.

Sub-Association	DBm
NVIS Code	U1+ ^Allocasuarina fraseriana,Eucalyptus marginata subsp. marginata\Allocasuarina\^tree\7\i; U2 ^Banksia attenuata,Banksia menziesii\Banksia\^tree\6\i; M1 ^Acacia saligna,Banksia sessilis var. cygnorum\Acacia\^shrub\4\r; M2 ^Xanthorrhoea preissii,Xanthorrhoea brunonis subsp. brunonis\Xanthorrhoea\^grass-tree\3\r; M3 ^Hibbertia hypericoides subsp. hypericoides,Hovea trisperma var. trisperma,Hypocalymma robustum\Hibbertia\^shrub\1\r; G1 ^Tetraria octandra,Mesomelaena pseudostygia,Lepidosperma apricola,Lepidosperma oldhamii,Microlaena stipoides var. stipoides\Tetraria\^sedge,rush,other grass\2\i; G2 ^Desmocladius flexuosus,Burchardia congesta,Caesia micrantha,Freesia alba x leichtlinii,Monotaxis grandiflora var. grandiflora\Desmocladius\^rush,forb\1\r
Distribution and Extent	This vegetation sub-association (Plate 5.1 and Plate 5.2) occurred through most of the northern section of the survey area, with the exception of a small area in the north-eastern corner (see Figure 5.1). It covered 4.72 ha (55% of the survey area), which included all of the intact vegetation in the targeted flora survey area.
Associated Native Species	<u>Shrubs:</u> <i>Conostephium pendulum</i> , <i>Daviesia nudiflora</i> subsp. <i>nudiflora</i> , <i>D. triflora</i> , <i>Gastrolobium capitatum</i> , <i>Gompholobium tomentosum</i> , <i>Hovea trisperma</i> var. <i>trisperma</i> , <i>Hypocalymma robustum</i> , <i>Jacksonia sericea</i> (Priority 4), <i>Scaevola canescens</i> , <i>S. repens</i> var. <i>repens</i> , <i>Stirlingia latifolia</i> . <u>Grasses/Sedges:</u> <i>Desmocladius flexuosus</i> , <i>Lepidosperma apricola</i> , <i>L. oldhamii</i> , <i>Microlaena stipoides</i> var. <i>stipoides</i> . <u>Herbs/Climbers:</u> <i>Burchardia congesta</i> , <i>Caesia micrantha</i> , <i>Caladenia flava</i> subsp. <i>flava</i> , <i>Conostylis aculeata</i> subsp. <i>cygnorum</i> , <i>Dianella revoluta</i> var. <i>divaricata</i> , <i>Kennedia prostrata</i> , <i>Lomandra preissii</i> , <i>Monotaxis grandiflora</i> var. <i>grandiflora</i> , <i>Sowerbaea laxiflora</i> , <i>Thysanotus manglesianus</i> , <i>Trachymene pilosa</i> .
Associated Weed Species	* <i>Asparagus asparagoides</i> , * <i>Briza maxima</i> , * <i>Ehrharta calycina</i> , * <i>Freesia alba</i> x <i>leichtlinii</i> . * <i>Gladiolus caryophyllaceus</i> , * <i>Hypochaeris glabra</i> .
Quadrats	KPI01, KPI02 and KPI03 established in September 2019 (KPI03 within the targeted flora survey area was resampled in October); KPI07 and KPI08 established in October 2019.
Notes	Long unburnt; the last fire through the survey area was in 1989. Vegetation sub-association DBm had a considerably more intact understorey than DBg. On average, there were eight more native species per quadrat in 2019 in DBm than in DBg; mean of 39 (range 34-46) compared to 31 (range: 28-35). The Priority 4 low spreading shrub <i>Jacksonia sericea</i> was scattered through this unit, and tall shrubs of <i>Acacia saligna</i> (Orange Wattle) and <i>Banksia sessilis</i> var. <i>cygnorum</i> (Parrot Bush) occurred in small patches.

Sub-Association	DBg
NVIS Code	U1+ ^Allocasuarina fraseriana\Allocasuarina\^tree\7\c,i; U2 ^Banksia attenuata,Banksia menziesii\Banksia\^tree\6\i; M1 ^Acacia saligna,Banksia sessilis var. cygnorum\Acacia\^shrub\4\r; M2 ^Xanthorrhoea preissii,Macrozamia fraseri\Xanthorrhoea\^grass-tree,cycad\3\r; M3 ^Acacia pulchella var. glaberrima,Gompholobium tomentosum,Hibbertia hypericoides subsp. hypericoides,Hypocalymma robustum,Scaevola canescens\Acacia\^shrub\2\r; G1 ^Tetraria octandra,Mesomelaena pseudostygia,Lepidosperma apricola,Lepidosperma scabrum,Microlaena stipoides var. stipoides\Tetraria\^sedge,rush,other grass\2\r; G2 ^Freesia alba x leichtlinii,Burchardia congesta,Dianella revoluta var. divaricata,Pterostylis recurva,Desmoclodus flexuosus\Freesia\^forb,rush\1\r
Distribution and Extent	This vegetation unit (Plate 5.3 and Plate 5.4) occurred through the southern section of the survey area and in a small patch in the north-eastern corner (see Figure 5.1). Unit DBg covered 2.72 ha (32% of the survey area), all outside the targeted flora survey area.
Associated Native Species	<u>Shrubs</u> : <i>Acacia pulchella</i> var. <i>glaberrima</i> , <i>Gompholobium tomentosum</i> , <i>Hibbertia hypericoides</i> subsp. <i>hypericoides</i> , <i>Hovea trisperma</i> var. <i>trisperma</i> , <i>Hypocalymma robustum</i> , <i>Jacksonia sericea</i> (Priority 4), <i>Macrozamia fraseri</i> , <i>Scaevola canescens</i> , <i>S. repens</i> var. <i>repens</i> . <u>Grasses/Sedges</u> : <i>Desmoclodus flexuosus</i> , <i>Lepidosperma apricola</i> , <i>L. scabrum</i> , <i>Microlaena stipoides</i> var. <i>stipoides</i> . <u>Herbs/Climbers</u> : <i>Burchardia congesta</i> , <i>Conostylis aculeata</i> subsp. <i>cygnorum</i> , <i>Dianella revoluta</i> var. <i>divaricata</i> , <i>Kennedia prostrata</i> , <i>Monotaxis grandiflora</i> var. <i>grandiflora</i> , <i>Pterostylis recurva</i> , <i>Thysanotus manglesianus</i> .
Associated Weed Species	* <i>Briza maxima</i> , * <i>Freesia alba x leichtlinii</i> . * <i>Gladiolus caryophyllaceus</i> .
Quadrats	KPI04, KPI05 and KPI06 established in September 2019.
Notes	Long unburnt; the last fire through the survey area was in 1989. <i>Banksia sessilis</i> var. <i>cygnorum</i> (Parrot Bush) occurred in small patches or as scattered tall shrubs in this unit.

5.1.2 Other Mapping Units

5.1.2.1 PC: Parkland Cleared

Areas within the median strip of Winthrop Avenue were designated as PC: Parkland Cleared. These areas contained scattered remnant native trees (particularly Jarrah), together with plantings of non-native eucalypts, other trees (e.g. Norfolk Island Pines) and shrubs, not forming a coherent vegetation association. No quadrats were established in this unit and the introduced planted species were not surveyed in detail or included in the species list. The Parkland Cleared mapping unit covered 0.53 ha (6% of the survey area).

5.1.2.2 C: Cleared Areas

These areas, which were devoid of vegetation, had been cleared for roads, dual-use paths or firebreaks. Cleared areas accounted for 0.62 ha (7% of the survey area).



Plate 5.1: Examples of the DBm vegetation sub-association overstorey and understorey (quadrat KPI03, south-west corner).



Plate 5.2: Examples of the DBm vegetation sub-association overstorey and understorey (quadrat KPI01, south-east corner).



Plate 5.3: Examples of the DBg vegetation sub-association overstorey and understorey (quadrat KPI05, north-east corner).



Plate 5.4: Examples of the DBg vegetation sub-association overstorey and understorey (quadrat KPI06, south-west corner).

5.2 Vegetation Condition

The condition of vegetation in the survey area is mapped in Figure 5.2. The condition assessments were based on the ranking scale of Keighery (1994) as presented in EPA (2016a). The rankings considered the degree of invasion by introduced flora (weeds), impact from historical and ongoing human activity, and the structural integrity of the vegetation (see Appendix 7).

Locations of introduced species recorded from the survey area during the current survey (see Section 6.3) are mapped and tabulated in Appendix 13. The spread of introduced flora taxa, particularly of grasses and low-growing herbs, was the main contributor to habitat deterioration and degradation. A small section of the survey area (7%) had been completely cleared, while 6% was parkland cleared and assigned a condition ranking of 'Degraded'. The remainder of the survey area, which comprised the intact woodland vegetation, was generally in 'Excellent' condition (63%), with narrow bands of 'Very Good' condition mapped around existing disturbance corridors (24%).

Numerous weed species were encountered (see Section 6.3), and the locations recorded represent an underestimate of their extent (particularly outside the targeted flora survey area, as this area received less survey effort). Dense patches of herbaceous weed species occurred through the entirety of the survey area along the edges of roads, tracks, and dual-use paths. Despite this, the bushland in the survey area is in better condition than much of the bushland in Kings Park, particularly as it is relatively infrequently burnt (the last fire being in 1989).

Table 5.2: Extent of vegetation condition categories within the survey area.

Condition Ranking	Area (ha)	Proportion of Survey Area
Pristine	–	–
Excellent	5.37	63%
Very Good	2.07	24%
Good	–	–
Degraded	0.53	6%
Cleared	0.62	7%

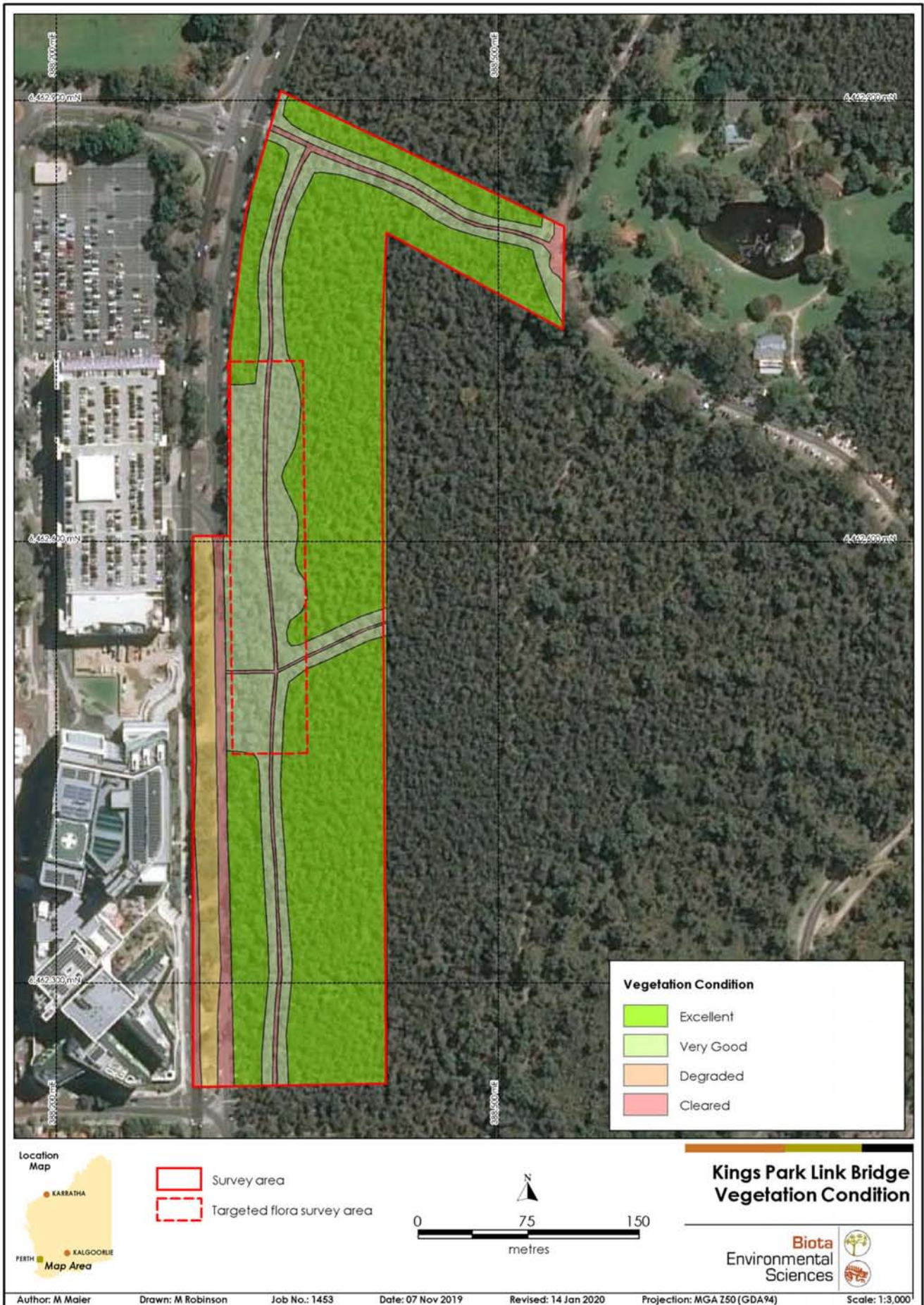


Figure 5.2: Condition of vegetation within the survey area (see Appendix 13 for weed locations).

5.3 Floristic Analysis

The floristic analyses completed for all quadrats sampled in 2019 clearly identified that both vegetation types in the survey area are representative of FCT 28 from Gibson et al. (1994): the "Spearwood *Banksia attenuata* or *Banksia attenuata* – *Eucalyptus* woodlands" from Supergroup 4 – Uplands centred on Spearwood and Quindalup Dunes.

Extracts of the dendrograms from the SSI process are provided in Figures 1 to 8 in Appendix 14. Each quadrat clustered with sites from FCT 28, and this was supported by the NNB analysis (Table 2 in Appendix 14). This identified sites from FCT 28 as most similar for all 10 nearest neighbours for KPI01, KPI03 and KPI07. For KPI02, KPI04 and KPI08, nine of the 10 most similar sites were from FCT 28, with the remaining sites being from FCT 21a or FCT 24. For KPI05, the seven most similar sites were from FCT 28, with the remaining three sites from FCT 21a. For KPI06, six of the 10 nearest neighbours were from FCT 28 (including the two most similar sites); the remaining sites were from FCT 21a, FCT 21c and FCT 24. All of these FCTs (28, 21a, 21c and 24) form the Commonwealth *Banksia* Woodlands TEC, according to the Approved Conservation Advice (DotEE 2016).

5.4 Vegetation of Conservation Significance

The two vegetation sub-associations were assessed against the diagnostic criteria and condition thresholds from DotEE (2016) (see Section 3.3.2). A summary of these assessments is provided in Table 5.3. Both vegetation sub-associations meet all criteria for the Commonwealth *Banksia* Woodlands TEC, which is consistent with the existing mapping for this area (Figure 4.2).

These two sub-associations are also equivalent to the State-listed "Banksia dominated woodlands of the Swan Coastal Plain IBRA region" PEC (DBCA 2019).

Table 5.3: Assessment of vegetation sub-associations from the survey area against DoTEE (2016) criteria for the Commonwealth Banksia Woodlands TEC.

Diagnostic Characteristics / Condition Thresholds	Criteria	Assessment for Sub-association	
		DBm	DBg
Determination of Floristic Community Type:	<u>Location and physical environment:</u> <ul style="list-style-type: none"> Occurs in the Swan Coastal Plain IBRA bioregion. 	Meets criterion.	Meets criterion.
	<u>Soil and landform:</u> <ul style="list-style-type: none"> Typically occurs on well-drained, low-nutrient soils on sandplain landforms, particularly deep Bassendean and Spearwood sands and occasionally on Quindalup sands. 	Meets criterion; occurs on Spearwood sands.	Meets criterion; occurs on Spearwood sands.
	<u>Structure and composition:</u> The TEC encompasses a number of recognised sub-communities (Floristic Community Types; FCTs). The community in question must be representative of the relevant FCT.	Meets criterion; comprises FCT 28.	Meets criterion; comprises FCT 28.
Vegetation condition and minimum patch size threshold:	<ul style="list-style-type: none"> 'Pristine' – no minimum 'Excellent' – 0.5 ha or 5,000 m² 'Very Good' – 1 ha or 10,000 m² 'Good' – 2 ha or 20,000 m² 	Meets criterion; lowest condition ranking for this vegetation was Very Good; survey area contains a 4.72 ha portion of a 122.5 ha "patch" of unit DBm within Kings Park, made up of several individual areas separated by only narrow cleared corridors (<30 m wide).	Meets criterion; lowest condition ranking for this vegetation was Very Good; survey area contains a 2.72 ha portion of a 14.4 ha "patch" of unit DBg within Kings Park, made up of two individual areas separated by only narrow cleared corridors (<30 m wide).
Surrounding context:	Relevant criteria to consider: <ul style="list-style-type: none"> "A patch is a discrete and mostly continuous area of the ecological community. A patch may include small-scale (<30 m) variations, gaps and disturbances, such as tracks, that do not significantly alter the overall functionality of the ecological community. Such breaks are generally included in patch size calculation. The landscape position of the patch, including its position relative to surrounding vegetation also influences how important it is in the broader landscape." 		
Comprises Commonwealth Banksia Woodland TEC?		Yes	Yes

6.0 Flora

6.1 Overview

A total of 124 native flora taxa from 75 genera belonging to 35 families have been recorded from the survey area based on the 2019 sampling by Biota and BGPA, the 2018 monitoring survey by BGPA and the earlier survey by Arbor Centre (2014). It is likely that at least some of the indeterminate native taxa on the list represent named species already recorded, however it is also likely that additional species would be recorded with additional survey effort.

The families and genera with the highest species richness in the survey area are shown in Table 6.1. These are typical dominant groups in vegetation in the locality.

Table 6.1: Most species-rich families and genera in the survey area, based on all sampling to date.

Family (Common Names)	No. of Native Species	Genus (Common Names)	No. of Native Species
Orchidaceae (orchids)	19	<i>Banksia</i> (banksias, dryandras)	6
Fabaceae (peas, wattles)	13	<i>Thysanotus</i> (fringe-lilies)	6
Asparagaceae (mat-rushes, fringe-lilies)	12	<i>Caladenia</i> (spider-orchids)	5
Proteaceae (banksias, hakeas, grevilleas)	11	<i>Lepidosperma</i> (sword-sedges)	5
Cyperaceae (sedges)	9	<i>Lomandra</i> (mat-rushes)	5

6.2 Flora of Conservation Significance

6.2.1 Threatened Flora

No Threatened flora have been confirmed as being recorded from Kings Park to date, and no species are considered to have the potential to occur in the survey area.

6.2.2 Priority Flora

One Priority species has been recorded from the survey area:

- Jacksonia sericea* Priority 4**
 This low sprawling shrub has orange pea flowers and occurs on sandy calcareous soils (see Plate 6.1). A total of 219 individuals have been recorded from 127 locations within the survey area from all sampling to date, including 124 individuals at 92 locations in the targeted flora survey area. This species was recorded from 75 additional locations distributed throughout Kings Park during the monitoring by BGPA in 2018. This species is clearly widespread and not uncommon within the intact bushland in this area; it was described as 'scattered' in Kings Park by Barrett and Tay (2018).

With respect to the broader distribution of *Jacksonia sericea*, there are 88 recorded locations of this species on NatureMap, indicating a distribution spanning approximately 100 km north-south from Neerabup to Mandurah⁶.

⁶ AVH also indicates two outlying records from Moora and Cunderdin, however these are not supported by any vouchers in the WA Herbarium, nor any submitted Rare Flora Report Forms.



Plate 6.1: *Jacksonia sericea*.

Photography by I.R. Dixon. Image used with the permission of the WA Herbarium, DBCA (<https://florabase.dpaw.wa.gov.au/help/copyright>). Accessed on Monday, 4 November 2019.

It is considered that the following species have some potential to occur in the survey area, despite not being recorded from the area to date:

- *Poranthera moorokatta* (Priority 2): This species has previously been recorded from a location 800 m east in vegetation sub-association DBm, and may potentially occur in the survey area. This very small herb would only be recorded through intensive searches (e.g. using 1 x 1 m quadrats) in late winter to mid spring.
- *Amanita wadjukiorum*, *A. fibrilopes* and *A. preissii* (all Priority 3): These fungi species have been recorded as close as 40 m, 80 m and 1.2 km south-east respectively from the north-eastern section of the survey area. The nearby locations of *A. wadjukiorum* and *A. fibrilopes* were visited by Scott Werner (Biota) during the field survey but no sign of either species was found. These species would generally only be found under optimal conditions (during winter months and following good rainfall). Given the close proximity of records of *A. wadjukiorum* and *A. fibrilopes*, these species are considered likely to occur in the survey area, while *A. preissii* may potentially occur.

6.3 Introduced Flora

A total of 33 introduced species from 30 genera and 14 families have been recorded from the survey area based on all sampling to date (Table 6.2). These species included weeds from outside of Australia, along with species that are native to WA or Australia but have been introduced to Kings Park. The families with the highest number of weeds comprised the Asteraceae (daisies) and Poaceae (grasses), each with seven species; followed by the Iridaceae, with five species. Four Myrtaceae species recorded are native to the Southwest of WA or to the eastern states, but introduced to Kings Park.

Two of the weeds recorded are new records for Kings Park: **Brachypodium distachyon* and **Moraea setifolia*. The former species has been vouchered with the WA Herbarium; the **Moraea* specimen was inadequate and not suitable for lodgement.

6.3.1 Weeds of National Significance and Declared Pest Plants

One species recorded from the survey area is both a declared pest under the *Biosecurity and Agriculture Management Act 2007* (the BAM Act) and a WoNS species:

- A total of 60 plants of **Asparagus asparagoides* (Bridal Creeper) were recorded from 18 locations in the survey area in 2019; 17 within the targeted flora survey area and one immediately north, with observed cover for this species generally being low. **Asparagus asparagoides* was recorded at two additional sites in the north-east and south of the survey area during the 2018 monitoring by BGPA, and would be widespread as scattered plants through the area. Bridal Creeper is a declared pest under section s22(2) and is already subject to weed control in Kings Park.

6.3.2 Other Weeds

Several of the other weed species are widespread in Kings Park and have become naturalised. A number of these comprise serious environmental weeds, particularly the perennial grass **Ehrharta calycina*, and the cormous/tuberous herbs **Freesia alba x leichtlinii* and **Romulea rosea* var. *australis* (Bettink and Keighery 2008). Others such as the annual grass **Briza maxima*, the orchid **Disa bracteata* and the daisy **Ursinia anthemoides* generally occur in low numbers and do not appear to compete aggressively with native species. A brief summary of the distribution and abundance of each species is provided in Table 6.2, with locations mapped in Appendix 13.

Table 6.2: Introduced species recorded from the survey area based on all sampling to date.

Family	Species	Distribution / Abundance in the Survey Area
Weeds from outside Australia		
Asparagaceae	* <i>Asparagus asparagoides</i> (Bridal Creeper)	59 individuals from 17 locations in the targeted flora survey area in 2019, and 1 individual just to the north; two records from the NE and SW of survey area in 2018.
Asteraceae	* <i>Cotula turbinata</i> (Funnel Weed)	Single record of 30 individuals in the S of the targeted flora survey area in 2019.
	* <i>Hypochaeris glabra</i> (Smooth Cats-ear)	Widespread throughout the survey area; recorded in low numbers from 9 locations in 2019 and 8 locations in 2018.
	* <i>Hypochaeris radicata</i> (Flat Weed)	Recorded in low numbers at 2 locations in the N of the survey area in 2018.
	* <i>Sonchus oleraceus</i> (Common Sowthistle)	Recorded in low numbers in 2018 at 1 location in the N half of the targeted flora survey area and 1 location in the NE of the survey area.
	* <i>Taraxacum khatoonae</i> (Dandelion)	Recorded in low numbers at 2 locations in the targeted flora survey area in 2019, and 2 locations nearby in the survey area in 2018.
	* <i>Urospermum picroides</i> (False Hawkbit)	Recorded from 1 location in the targeted flora survey area in 2019; recorded from 3 locations in the S and 1 location in the NE of the survey area in 2018.
	* <i>Ursinia anthemoides</i> subsp. <i>anthemoides</i> (Ursinia)	Recorded in low numbers at 3 locations in 2019 and 7 locations in 2018, including 2 locations in the targeted flora survey area.
Euphorbiaceae	* <i>Euphorbia peplus</i> (Petty Spurge)	Single record from the NE of the survey area in 2018.
Fabaceae	* <i>Trifolium campestre</i> var. <i>campestre</i> (Hop Clover)	Recorded at 1 location in the targeted flora survey area in 2018; recorded at another location in the targeted flora survey area in 2018, and at 1 location just to the S in the survey area.
Iridaceae	* <i>Freesia alba</i> x <i>leichtlinii</i> (Freesia)	Widespread throughout the survey area; recorded from 27 locations in 2019 and 12 locations in 2018; generally scattered, but one patch of 500 plants in the centre of the targeted flora survey area.
	* <i>Gladiolus caryophyllaceus</i> (Wild Gladiolus)	Widespread throughout the survey area; recorded in low numbers from 35 locations in 2019 and 15 locations in 2018.
	* <i>Ixia maculata</i> (Yellow Ixia)	Single record in the N of the survey area in 2018.
	* <i>Moraea setifolia</i> (Thread Iris)	10 individuals recorded from 1 location in the SW of the targeted flora survey area in 2019.
	* <i>Romulea rosea</i> var. <i>australis</i> (Guildford Grass)	Recorded in low numbers at 4 locations in 2018, including 2 in the targeted flora survey area; recorded from 1 of the same locations in the targeted flora survey area in 2019.
Poaceae	* <i>Avena barbata</i> (Bearded Oat)	Recorded in low numbers at 5 locations in the targeted flora survey area in 2019; recorded in low numbers in the N of survey area in 2018, and more dense in the NE corner at Q04.
	* <i>Brachypodium distachyon</i> (False Brome)	Recorded in low numbers at 4 locations in the targeted flora survey area in 2019.
	* <i>Briza maxima</i> (Blowfly Grass)	Widespread throughout the survey area; recorded from 21 locations in 2019 and 11 locations in 2018.
	* <i>Ehrharta calycina</i> (Perennial Veldt Grass)	Widespread throughout the survey area; recorded in low numbers from 22 locations in 2019 and 13 locations in 2018.
	* <i>Ehrharta longiflora</i> (Annual Veldt Grass)	Single record from the NE of the survey area in 2018.
	* <i>Eragrostis curvula</i> (African Lovegrass)	Single record from the S of the targeted flora survey area in 2019.
	* <i>Pentameris airoides</i> var. <i>airoides</i> (False Hairgrass)	Single record from the centre of the survey area in 2018.

Family	Species	Distribution / Abundance in the Survey Area
Malvaceae	* <i>Brachychiton populneus</i> subsp. <i>populneus</i> (Kurrajong)	2 plants recorded at 1 location in the targeted flora survey area in 2019; single individuals recorded from 6 locations spread throughout the survey area in 2018.
Orchidaceae	* <i>Disa bracteata</i>	Single record from the NE of the survey area in 2018.
Oxalidaceae	* <i>Oxalis purpurea</i> (Largeflower Wood Sorrel)	Recorded in low numbers at 10 locations in the targeted flora survey area in 2019; another 2 locations nearby in 2018, along with 2 locations in the N of the survey area.
Papaveraceae	* <i>Fumaria capreolata</i> (Whiteflower Fumitory)	Single record from the NW of the survey area in 2019.
Plantaginaceae	* <i>Plantago lanceolata</i> (Ribwort Plantain)	5 individuals recorded from 1 location in the SW of the targeted flora survey area in 2019.
Primulaceae	* <i>Lysimachia arvensis</i> (Pimpernel)	Single record from the NE of the survey area in 2018.
Scrophulariaceae	* <i>Phyllopodium cordatum</i>	Single record from the centre of the survey area in 2019.
Introduced species that are native to other areas of Australia		
Myrtaceae	* <i>Agonis flexuosa</i> var. <i>flexuosa</i> (Peppermint)	1 individual from the SE of the survey area in 2018.
	* <i>Eucalyptus botryoides</i> (Southern Mahogany)	Single record from the NE of the survey area in 2018.
	* <i>Eucalyptus</i> sp. (indeterminate saplings)	Single individuals at 2 locations in the N of the targeted flora survey area in 2019.
	* <i>Melaleuca armillaris</i> (Bracelet Honey Myrtle)	Single individual in the centre of the targeted flora survey area in 2014.

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7.0 Fauna

7.1 Potential Fauna

Appendix 3 presents all vertebrate fauna species returned from the searches of major fauna databases, as well as local studies within Kings Park. This desktop review was conducted based on a 5 km radius around the survey area, which included habitats not contained within the survey area, most notably freshwater aquatic habitats. The total assemblage returned from the wider 5 km area comprised 32 mammals (19 native), 159 birds (153 native), 53 native reptiles and 10 native amphibians.

When consideration is given to the habitats available within the survey area and those species reliant on aquatic habitats for breeding and feeding are removed, the potential vertebrate assemblage is reduced to 30 mammals (18 native), 112 birds (106 native), 52 native reptiles and three native amphibians. This also excludes one species (European Cattle) that would not be resident within Kings Park and was only returned from the EPBC Act Protected Matters Search Tool.

With regard to invertebrate fauna, we have considered only those fauna returned from the NatureMap database and the Protected Matters Search Tool database that are of conservation significance (i.e. are listed at State or Commonwealth level) (see Section 7.2).

7.2 Conservation Significant Fauna Likelihood

The likelihood of those conservation significant fauna species identified during the desktop review process occurring within the 8.59 ha survey area was assessed, with results tabulated in Appendix 5. For species assessed as having some potential to occur (i.e. known to occur, likely to occur or may potentially occur), further detail is provided in Sections 7.2.1 to 7.2.5.

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

Conservation Status: EPBC Act Endangered, BC Act Endangered

Distribution and habitat: Carnaby's Black-Cockatoo is endemic to the Southwest region of Western Australia, approximately south-west of a line from Kalbarri to Esperance. This species inhabits mainly proteaceous shrubs and heaths, and eucalypt woodlands and forests (Johnstone and Storr 1998).

Ecology: Carnaby's Black-Cockatoo is a long-lived species, and breeds annually from four years of age (Saunders 1986). Breeding takes place from July to mid-December, primarily in the Wheatbelt within smooth-barked eucalypts, including Salmon Gum and Wandoo (Johnstone and Storr 1998). However, there has been a noted shift in breeding distribution further west and south to include the Jarrah-Marri forests of the Darling Scarp and the Tuart forests of the Swan Coastal Plain (Johnstone et al. 2010). Following breeding, many disperse towards the coast, and during this time they are common in the Perth metropolitan area. The species feeds primarily on the seeds of hakeas, banksias, grevilleas, eucalypts and introduced pines, as well as insect larvae (Johnstone and Storr 1998).

Likelihood of occurrence: Known to occur. Carnaby's Black-Cockatoo is a common visitor to the Perth area, particularly during the non-breeding season, and there are over 2,000 records from Kings Park and its immediate surrounds. Marri nuts with chew marks indicative of Carnaby's Black-Cockatoo were found in the survey area. The breeding distribution of Carnaby's Black-Cockatoo on the Swan Coastal Plain includes coastal areas such as Yanchep, Baldivis and Lake Clifton near Bunbury. While programmes using artificial nest boxes around Perth have had some success, no wild breeding has been reported in Perth's inner urban areas.

7.2.2 Forest Red-tailed Black-Cockatoo (*Galyptorhynchus banksii naso*)

Conservation Status: EPBC Act Vulnerable, BC Act Vulnerable

Distribution and habitat: Forest Red-tailed Black-Cockatoos are restricted to the south-west corner of WA, from Gingin to the Albany area. This species occurs primarily in eucalypt forests of the Darling Scarp and the far Southwest region, but has become more common in suburban Perth in the last 10 years.

Ecology: Forest Red-tailed Black-Cockatoos nest in hollows in Jarrah, Marri and Karri trees, with eggs laid in October and November. They feed primarily on seeds of eucalypts, and other species such as *Allocasuarina* (Johnstone and Storr 1998). More recently, they have begun foraging on Cape Lilac (**Melia azedarach*) on the coastal plain.

Likelihood of occurrence: Known to occur. The species was recorded from the survey area on two occasions during the current assessment; both records were sightings of two birds overflying the survey area. A third record was made of three individuals perched in a *Eucalyptus megacarpa* just outside the survey area.

7.2.3 Peregrine Falcon (*Falco peregrinus*)

Conservation Status: BC Act Other Specially Protected Fauna

Distribution and habitat: The Peregrine Falcon occurs throughout Australia, except perhaps for some desert areas and the Nullarbor Plain (Johnstone and Storr 1998). It occupies a wide range of habitats including woodlands, wetlands, open country, and built-up areas. This species breeds primarily on ledges in cliffs, granite outcrops, quarries, and tall buildings, but will also use hollow trees and old nests of raptors or corvids (Johnstone and Storr 1998).

Ecology: Peregrine Falcons are hunters and feed almost entirely on other birds, often caught in flight. In the South-west of WA, breeding takes place primarily in spring (Johnstone and Storr 1998).

Likelihood of occurrence: Likely to occur in the survey area as a foraging visitor, but unlikely to breed. Peregrine Falcons are seen regularly in central Perth, and breed on tall buildings in the CBD. There are several records from Kings Park.

7.2.4 Black-striped Snake (*Neelaps calonotos*)

Conservation Status: DBCA Priority 3

Distribution and habitat: Restricted to the sandy coastal strip of the Swan Coastal Plain between Mandurah and Lancelin, with some records inland at Gingin, Bullsbrook and Caversham. This species primarily occurs on dunes and sandplains vegetated with heaths and eucalypt or banksia woodlands. The species is considered under threat from increasing urban development within its distribution.

Ecology: This burrowing snake is bright orange-red with a black vertebral stripe, and a black band across the head and top of head. It feeds largely on the skink *Lerista praepedita*, and is oviparous.

Likelihood of occurrence: May potentially occur. There is suitable habitat for this species within the survey area and the primary prey species, *Lerista praepedita*, occurs in Kings Park. Scattered records of the species place it within 5 km.

7.2.5 Quenda (*Isodon fusciventer*)

Conservation Status: DBCA Priority 4

Distribution and habitat: The Quenda occurs patchily through the South-west of WA, from just north of Perth through to Esperance. It occurs in a variety of habitat types, including forest, woodland, shrubland and heathland, but prefers areas with dense undergrowth for shelter. It also favours sandy substrates to allow for digging up food, and often occurs in association with wetland areas (van Dyck and Strahan 2008, van Dyck et al. 2013).

Ecology: The Quenda is a medium-sized ground-dwelling marsupial that is primarily nocturnal, but may also be active during the day. It is territorial and defends a home range. Breeding in this species is opportunistic, but typically begins in winter and peaks in spring, lasting 6 – 8 months. Nests of ground litter over shallow depressions are constructed next to or under logs, shrubs or debris piles. This species feeds on invertebrates, fungi and subterranean plant material (van Dyck and Strahan 2008, van Dyck et al. 2013).

Likelihood of occurrence: May potentially occur. Quenda have recently (around seven years ago) been re-introduced into some parts of Kings Park, by uncertain means, and are becoming established. However, they reportedly do not yet occur in the vicinity of the survey area and no observations of individuals or secondary evidence were made during the current assessment. In addition, the habitat within the survey area lacks the dense ground cover preferred by Quenda, although it is noted that they do currently occur in areas elsewhere in Kings Park bushland with a similar density of ground cover (C. McChesney, BGPA, pers. comm. 2019). In future, it is possible that the species may occur within the survey area.

7.2.6 Swan Coastal Plain Shield-backed Trapdoor Spider (*Idiosoma sigillatum*)

Conservation Status: DBCA Priority 3.

Distribution and habitat: *Idiosoma sigillatum* has a widespread distribution throughout the Swan Coastal Plain from Dalyellup north to at least Ledge Point (including Rottnest Island and Garden Island). However, over much of this range, particularly in the Perth metropolitan area, clearing for urban expansion has resulted in local extinctions from the species' previous range. The species is known to persist in the remnant bushlands of Kings Park, Bold Park and Shenton Park (Rix et al. 2018). The spider is restricted to *Banksia* woodland and heathland on sandy soils (Rix et al. 2018).

Ecology: The spider forms a burrow with a door surrounded by a 'moustache-like' arrangement of twig-lines. Males wander in search of females during the cool winter months.

Likelihood of occurrence: May potentially occur. The spider has previously been recorded within Kings Park and four NatureMap records occur within 2 km of the survey area. No burrows of the species were observed during the day spent on site by the zoologist, however given that the focus of the field survey work was black-cockatoo habitat assessment, the lack of burrows recorded cannot be taken to conclusively indicate absence (dedicated searching would be required, given the cryptic nature of the burrows). Potentially suitable habitat occurs throughout the survey area.

7.3 Black-cockatoo Targeted Survey

7.3.1 Desktop Review: Black-cockatoos in Kings Park

Of the three species in the Southwest of WA, only Carnaby's Black-Cockatoo and the Forest Red-tailed Black-Cockatoo have likelihood of occurring based on their known (and predicted) distributions, as described in the Commonwealth guidelines (DSEWPaC 2012a, DotEE 2017) and indicated by the results of the desktop review.

The Great Cockatoo Count of 2017 recorded eight white-tailed black-cockatoos (most likely Carnaby's) at a known roosting site within Kings Park (KINPERR001, located 1.5 km east-north-east of the north-eastern corner of the survey area) (Peck et al. 2017). However, no white-tailed black-cockatoos were recorded at the same site in 2018, nor during any of the counts at the site in the five years prior to 2017 (see Peck et al. 2018).

Both BGPS data and NatureMap indicate recent records of Forest Red-tailed Black-Cockatoo and Carnaby's Black-Cockatoo within Kings Park. Early records (pre-1995) denoted as Baudin's Black-Cockatoo are most likely attributable to Carnaby's Black-Cockatoo, which was only recognised as a separate species in 1979 (Saunders 1979).

7.3.2 Breeding Habitat Assessment

Studies of the breeding behaviours of the three threatened black-cockatoo species have identified variation between the three species and characteristics of hollows chosen for nesting. For example, hollows formed in Jarrah are typically smaller than those in Marri. Forest Red-tailed Black-Cockatoos breed predominantly in Marri in the Jarrah-Marri forest of the south-west; of 128 nests found across the eastern Swan Coastal Plain, Darling Scarp and southern Jarrah forests, 95 were in live Marri and 12 were in dead Marri (84%) (Johnstone et al. 2013). Breeding records of Carnaby's Black-Cockatoo on the Swan Coastal Plain indicate that the majority of their nests are in Tuart (Johnstone and Kirkby 2011).

In accordance with Commonwealth guidelines (DSEWPaC 2012a, DoEE 2017), black-cockatoo breeding habitat trees were considered to be those of hollow-forming species with a DBH of 50 cm or greater. The survey area was found to contain 40 trees that reached the 50 cm DBH threshold; these comprised 30 Jarrah, four Marri, three dead stags of indeterminate species (likely Jarrah), one Tuart and two eucalypts of unknown species (likely introduced), which were recorded from the Winthrop Avenue median strip. Without knowing the species of the median strip eucalypts, their likelihood to form hollows cannot be ascribed, however we have assumed that they may form hollows. The locations of all trees with DBH >50 cm are illustrated in Figure 7.1. The large majority of these trees (38 of 40) did not support hollows of any kind, which is consistent with their size (the average DBH of trees measured was 70 cm). The full table of habitat tree descriptions is included as Appendix 16.

Two hollows with potential suitability were recorded within the survey area, as far as could be assessed from the ground. In both cases, it was not possible to conclusively determine that these did actually comprise hollows, as the entrances were on vertical spouts (see Plate 7.1 and Plate 7.2). Both hollows were on Jarrah trees: one on a tree with 95 cm DBH and hollow entrance dimensions of 35 cm x 35 cm; and the second on a tree with 77 cm DBH and hollow entrance dimensions approaching the minimum at 15 cm x 15 cm. It was also noted that this latter hollow looked potentially difficult to enter, given the narrow vertical spout.



Plate 7.1: Photograph of hollow 1 in the survey area with potential suitability for breeding.



Plate 7.2: Photograph of hollow 2 in the survey area with potential suitability for breeding.

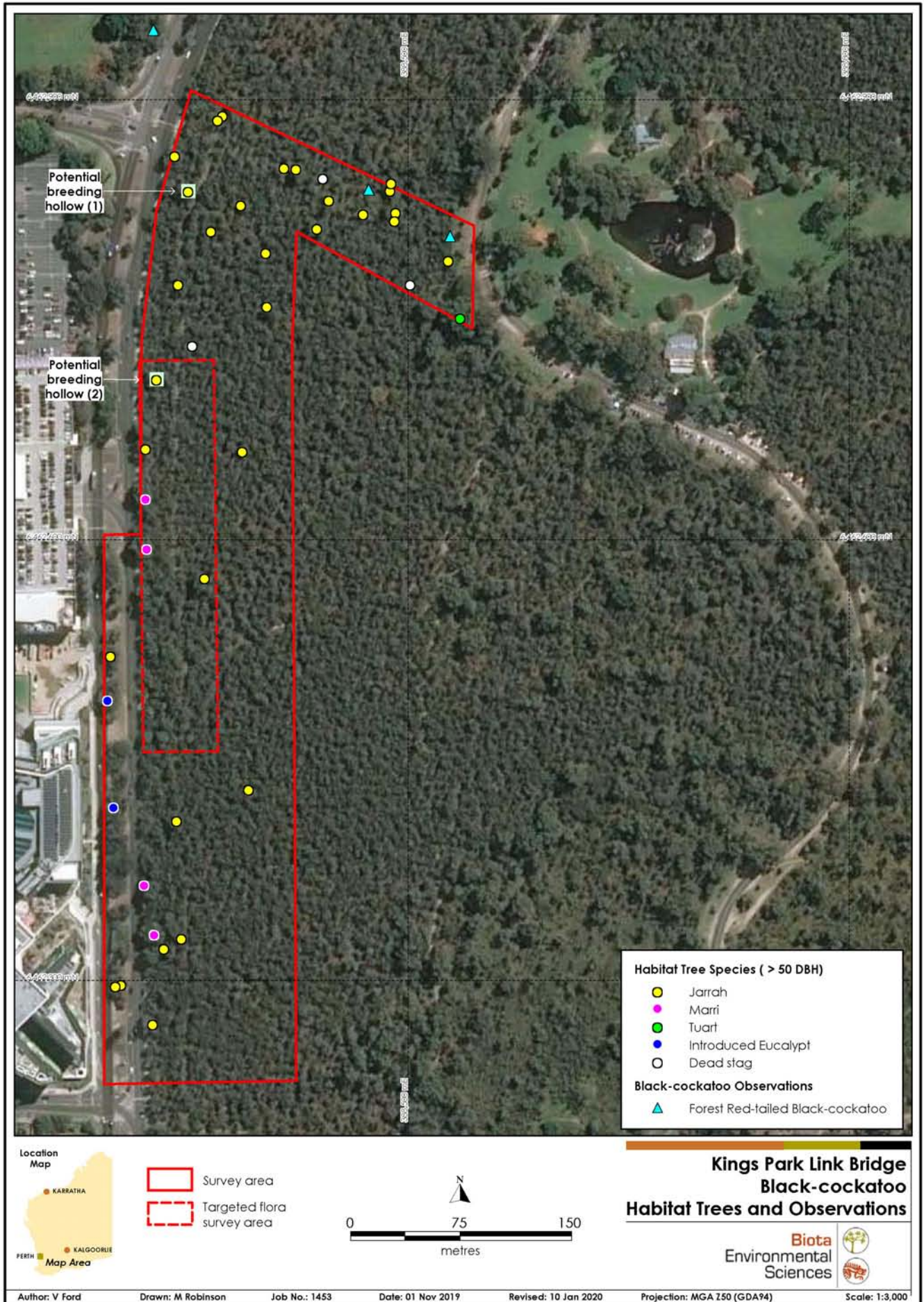


Figure 7.1: Trees of hollow-forming species in the survey area with DBH greater than 50 cm.

7.3.3 Foraging Habitat Assessment

The Swan Coastal Plain is generally of most importance to black-cockatoo species as a feeding ground, and only relatively small and specific known areas support breeding (Johnstone et al. 2010). Foraging habitat is defined as areas including plants of species known to support foraging within the range of each cockatoo species (DSEWPaC 2012b, DoEE 2017). Marri and Jarrah woodlands are particularly important to Baudin's Black-Cockatoo and the Forest Red-tailed Black-Cockatoo; while proteaceous heaths (i.e. shrublands dominated by *Banksia*, *Hakea* and *Grevillea* species) are also important to Carnaby's Black-Cockatoo (DSEWPaC 2012a), as are areas of introduced pine species, particularly on the Swan Coastal Plain (Johnstone and Kirkby 2011).

The two vegetation units mapped over the survey area were dominated by suitable foraging plants; as such, the survey area is considered to include 7.44 ha of foraging habitat (see Section 5.1 for vegetation descriptions and Figure 5.1 for their mapped extent). Overstorey trees favourable to Forest Red-tailed Black-Cockatoos included *Allocasuarina fraseriana* and *Eucalyptus marginata*, while the lower vegetation strata supported some of the most favourable Carnaby's Black-Cockatoo foraging plants (Groom 2011) including *Banksia attenuata*, *B. menziesii* and *B. sessilis*, as well as moderately favourable foraging plants such as *Xanthorrhoea preissii* and *Mesomelaena* sedges. Marri trees were recorded in the southern half of the survey area, particularly along the western margin adjacent to Winthrop Avenue, which represent foraging plants for both Forest Red-tailed Black-Cockatoo and Carnaby's Black-Cockatoo (Figure 7.1 displays those trees with DBH >500 mm). Two small Norfolk Island Pines were also noted within the median strip of Winthrop Avenue, which may represent a foraging plant for Carnaby's Black-Cockatoo, however these trees were small and in poor condition.

Examples of foraging evidence recorded within the survey area are shown in Plate 7.3 to Plate 7.6.



Plate 7.3: Foraging evidence: Marri nut (likely Carnaby's Black-Cockatoo).



Plate 7.4: Foraging evidence: Banksia cone.



Plate 7.5: Foraging evidence: Jarrah nut (likely Forest Red-tailed Black-Cockatoo).



Plate 7.6: Foraging evidence: Allocasuarina cone (likely Forest Red-tailed Black-Cockatoo).

The consistent recording of Carnaby's Black-Cockatoos within Kings Park, including a known (albeit small) roost location, would indicate the presence of quality foraging habitat in the survey area. High quality foraging habitat in proximity to roosting locations is necessary for the maintenance of population size, particularly outside of the breeding season (DoTEE 2017), and is therefore an important consideration in the application of the foraging habitat scoring tool. In addition to the known roost within Kings Park, a number of roosts supporting considerably larger numbers of white-tailed black-cockatoos occur within 12 km of the survey area, as indicated by numbers in the 2018 Great Cocky Count (Peck et al. 2018). These include Floreat (259), Nedlands (222) and Como (470). Kings Park is not indicated as a known roosting locality for the Forest Red-tailed Black-Cockatoo but a number of significant roosts occur within 12 km, as indicated by the 2018 counts at Floreat (400), Yokine (276) and Morley (300) (Peck et al. 2018).

The foraging habitat scoring tool from the draft Commonwealth referral guidelines is DoTEE (2017) was applied to the survey area, with the results shown in Table 7.1. It is important to note that this is a draft referral guideline and so this scoring is indicative only. The survey area was scored as having high – very high quality foraging habitat for all three black-cockatoo species. Baudin's Black-

Cockatoo are considered unlikely to occur within the survey area but have been included in the assessment to take a conservative approach.

Table 7.1: Application of foraging habitat scoring tool (DoEE 2017).

Species:	Carnaby's Black-Cockatoo	Forest Red-tailed Black-Cockatoo	Baudin's Black-Cockatoo
Foraging plants in the survey area	<i>Banksia attenuata</i> , <i>B. menziesii</i> low woodland over <i>B. sessilis</i> , <i>Xanthorrhoea preissii</i> and <i>Mesomelaena</i> sedges.	<i>Allocasuarina fraseriana</i> , <i>Eucalyptus marginata</i> woodland. Scattered <i>Corymbia calophylla</i> .	<i>Eucalyptus marginata</i> woodland. <i>Banksia attenuata</i> , <i>B. menziesii</i> low woodland over <i>B. sessilis</i> . Scattered <i>Corymbia calophylla</i> .
Applicable Starting Score	7: Native shrubland, kwongan heathland and woodland dominated by proteaceous plant species such as <i>Banksia</i> spp., <i>Hakea</i> spp. and <i>Grevillea</i> spp., as well as native eucalypt woodland and forest that contains foraging species, including along roadsides. Does not include orchards, canola, or areas under a Regional Forestry Agreement (RFA).	7: Jarrah and Marri woodlands and forest, and edges of karri forests, including Wandoo and Blackbutt, within the range of the subspecies, including along roadsides. Does not include areas under a RFA.	7: Native eucalypt woodlands and forest, and proteaceous woodland and heath, particularly Marri, including along roadsides. Does not include orchards or areas under a RFA.
Additions	+3: is within the Swan Coastal Plain (important foraging area)		
	+2: contains trees with potential to be used for breeding (>50 cm DBH)	+2: contains trees with potential to be used for breeding (>50 cm DBH)	+2: contains trees with potential to be used for breeding (>50 cm DBH)
	+1: is known to be a roosting site		
Subtractions	None	None	-1: Is >12 km from a known breeding location.
FINAL SCORE†:	>10: Very High Quality	9: Very High Quality	8: High Quality

† Maximum score being 10.

The black-cockatoo foraging habitat within the survey area has been considered in the context of wider availability by mapping the occurrence of each Swan Coastal Plain vegetation complex (Government of Western Australia 2019b), both within the survey area and in remnant vegetation out to a 12 km radius around the survey area (Figure 7.2).

This figure clearly illustrates the lack of similar foraging habitat outside of Kings Park within a 12 km radius. The entire survey area is mapped as the Swan Coastal Plain Karrakatta Complex of Heddlé (1980). A total of 725.8 ha of this complex remains in vegetation remnants within 12 km of the survey area, and the 7.44 ha of this complex that occurs within the survey area represents 1.0% of this occurrence within 12 km. Outside of Kings Park, which is by far the largest remaining example of this complex, the majority of the Karrakatta Complex occurrence within 12 km occurs within protected areas, particularly in Bush Forever sites 119: Underwood Avenue and 218: Shenton Bushland, as well as in Bold Park (refer Figure 4.2 and Figure 7.2; and WA Planning Commission (2000c)).

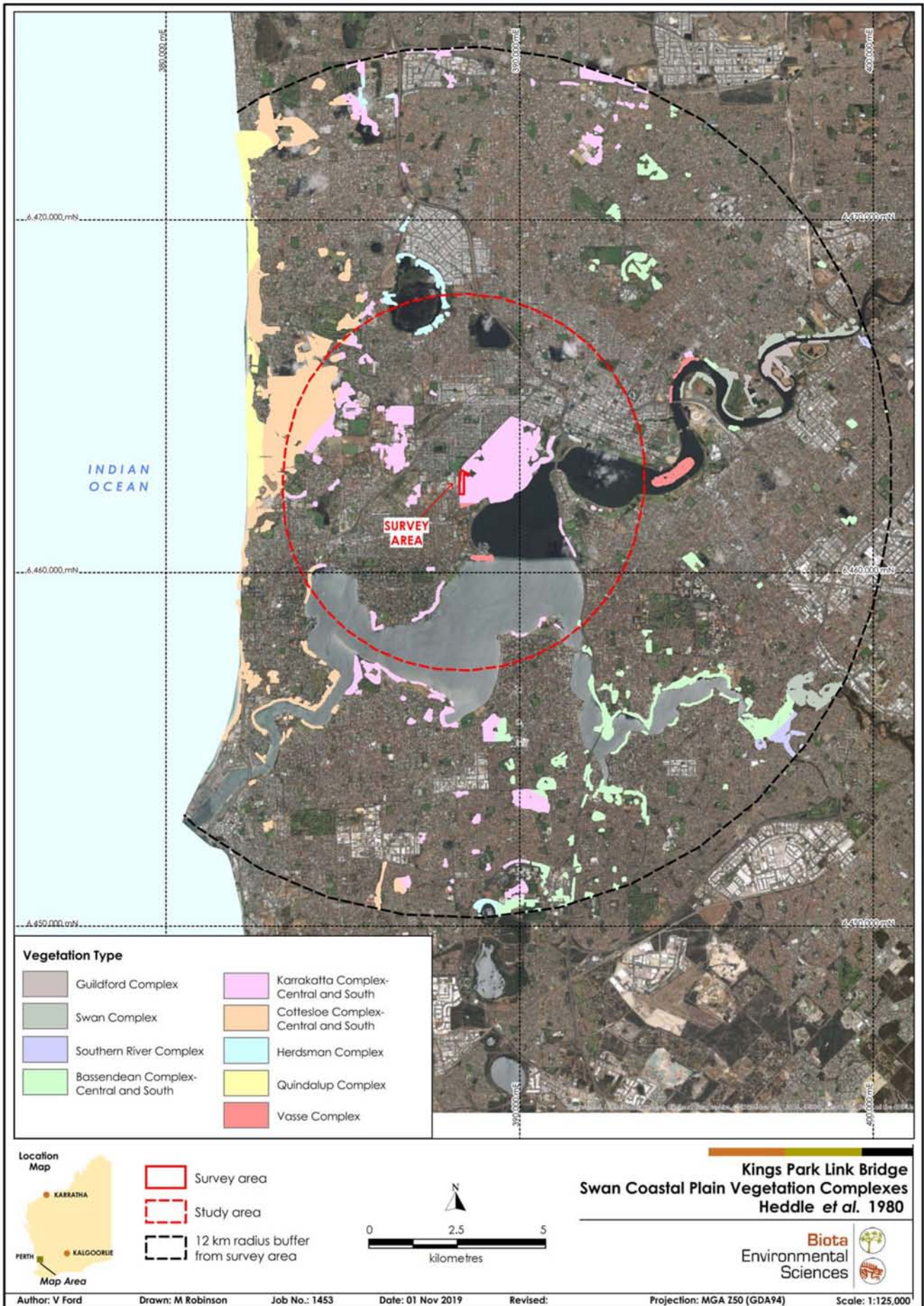


Figure 7.2: Remnant vegetation and Swan Coastal Plain Vegetation Complexes (Government of Western Australia 2019b) in a 12 km radius around the survey area.

8.0 Key Findings

8.1 Vegetation and Flora

The survey area is located at the western edge of the large bushland remnant within Kings Park. The vegetation east of Winthrop Avenue is largely intact, except for some narrow cleared or disturbed corridors associated with roads, dual-use paths and firebreaks. This vegetation was considered to be in Very Good to Excellent condition; while weed species were scattered throughout, these were not generally in high numbers, except adjacent to disturbance corridors.

Two vegetation sub-associations occur in this area, DBm and DBg, both of which are representative of FCT 28 from Gibson et al. (1994). FCT 28 is one of the communities included under the Commonwealth listed "Banksia Woodlands of the Swan Coastal Plain" TEC. DBm and DBg also comprise the State-listed "Banksia dominated woodlands of the Swan Coastal Plain IBRA region" PEC.

A total of 124 native flora taxa from 75 genera belonging to 35 families have been recorded from the survey area based on the recent sampling. No Threatened flora species have been recorded from the survey area to date, and none would be expected to occur. One Priority 4 shrub species, *Jacksonia sericea*, was recorded at numerous locations through the survey area. A total of 124 individuals were recorded within the targeted flora survey area, representing 57% of the 219 total individuals recorded in the survey area. With regards to the broader extent of this species, it was recorded from 75 additional locations in Kings Park in 2018; the number of individuals was not recorded at each of these locations, so no comparison of population size is possible. However, the 92 locations within the targeted flora survey area represent 46% of the 202 total locations within Kings Park, based on data from the current sampling and monitoring by BGPA staff in 2018. *Jacksonia sericea* would clearly be present at numerous locations between the regular grid of monitoring sites, so this proportion of the local population occurring in the survey area is an overestimate. Given that the distribution of *Jacksonia sericea* extends over approximately 100 km on the Swan Coastal Plain, from Neerabup to Mandurah, the individuals within the targeted flora survey area would make up only a small proportion of the total population.

Other conservation significant flora have distributions which encompass the survey area, but most are considered unlikely to occur due to an absence of suitable habitat. However, two Priority 3 fungi species are considered likely to occur in the survey area (*Amanita wadjukiorum* and *A. fibrilloses*), while the Priority 3 *Amanita preissii* and Priority 2 *Poranthera moorokatta* may potentially occur.

A total of 33 introduced species have been recorded from the survey area. One of these, *Asparagus asparagoides* (Bridal Creeper), is a WoNS species and listed as a declared pest under the BAM Act. Bridal Creeper occurred as scattered plants through the bushland in the survey area, including in the targeted flora survey area, but always provided low cover. Some other species comprised serious environmental weeds as per Bettink and Keighery (2008), specifically *Ehrharta calycina* (Perennial Veldt Grass), *Freesia alba x leichtlinii* (Freesia) and *Romulea rosea* var. *australis* (Guildford Grass). However, these weeds can be prioritised for removal by the BGPA and therefore their presence does not necessarily imply future proliferation at the site, particularly when they are in low density and/or cover.

8.2 Fauna

8.2.1 Black-Cockatoos

Of the three threatened black-cockatoos of the Southwest, only Forest Red-tailed Black-Cockatoos were recorded from the survey area by direct observation (foraging evidence was also recorded). The lack of observations of Carnaby's Black-Cockatoo was not unexpected given the timing of the survey (September/October, when the species is generally further inland in breeding areas). However, foraging evidence consistent with Carnaby's Black-Cockatoo was recorded within the survey area and there is also a known roost within Kings Park; this species is therefore considered likely to utilise the survey area, at least for foraging. Baudin's Black-Cockatoos are considered unlikely to occur.

The black-cockatoo breeding habitat assessment recorded 40 trees of hollow-forming species with a DBH of 50 cm or greater in the survey area; of these, two Marri and three Jarrah trees were located within the targeted flora survey area. Two hollows with some potential suitability for breeding were identified, one of which was located in the north-west corner of the targeted flora survey area.

The Swan Coastal Plain has historically been more important as a foraging area than for breeding of black-cockatoos, with the birds moving into the area in the autumn and winter months, after summer breeding. Breeding information is summarised below for each species:

- While the breeding stronghold of Carnaby's Black-Cockatoo is in the Wheatbelt, they have been moving onto the Swan Coastal Plain more recently (DotEE 2017). Expansion in the breeding range further south and west towards the Jarrah–Marri forests of the Darling Scarp and Tuart forests of the Swan Coastal Plain has occurred in the past 10 to 30 years (Johnstone et al. 2010).
- Relatively little is known about the breeding biology and distribution of Baudin's Black-Cockatoo, nonetheless they are considered unlikely to breed in the local area based on the general paucity of records of this species in Perth. The known breeding areas indicated in the draft Commonwealth guidelines (DotEE 2017), including the Wungong catchment and Serpentine, are also mentioned in Johnstone and Kirkby (2011), however nothing further west of the Darling Scarp has been detailed to date.
- Forest Red-tailed Black-Cockatoos are commonly recorded foraging in the Perth area, however the large majority of the nesting locations listed in Johnstone et al. (2013) are on the Darling Scarp.

The Swan Coastal Plain is considered a critical foraging area for Carnaby's Black-Cockatoo outside the breeding season and also supports Forest Red-tailed Black-Cockatoos. The two vegetation units mapped over the survey area were dominated by foraging plants and as such the survey area is considered to include 7.44 ha of foraging habitat. Foraging habitat quality for black-cockatoos was assessed as high to very high using the criteria of the DotEE (2017) scoring tool. Evidence of foraging, particularly by Forest Red-tailed Black-Cockatoos, was common throughout the survey area.

8.2.2 Non-target Conservation Significant Species

In addition to the black-cockatoo species, it was determined that the following four conservation significant species have some potential to occur within the survey area based on the habitats present and local records:

- The Peregrine Falcon, which is listed as "Other specially protected species" in WA, is likely to forage over the survey area, however there is no suitable habitat in the area for breeding.
- The DBCA Priority 3 Black-striped Snake may potentially occur in the survey area as suitable habitat is available, however there are no recent records from Kings Park.
- The DBCA Priority 4 Quenda appears to be increasing in numbers in Kings Park following a recent re-introduction. No signs of this species were recorded in the survey area to date, and the vegetation is more open than generally preferred by the species, although it has been

observed in similar habitat elsewhere in the park. The Quenda may potentially occur in the area if their range within the park continues to increase.

- The DBCA Priority 3 Swan Coastal Plain Shield-backed Trapdoor Spider has been recorded within Kings Park and habitat is available within the survey area. It has therefore been assessed as having the potential to occur within the survey area.

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9.0 Glossary

*	Used prior to a species name to denote an introduced (weed) species.
Annual (plant)	A plant that lives for only one year.
AVH	The Australasian Virtual Herbarium; collates records from all major herbaria in Australian and New Zealand; see http://avh.chah.org.au .
BAM Act	The WA <i>Biosecurity and Agriculture Management Act 2007</i> .
BC Act	The WA <i>Biodiversity Conservation Act 2016</i> .
BGPA	Botanic Gardens and Parks Authority.
Biota	Biota Environmental Sciences Pty Ltd.
Black-cockatoos	Refers to all three species of black-cockatoo endemic to the south-west of Western Australia: Carnaby's Black-Cockatoo, Baudin's Black-Cockatoo and Forest Red-tailed Black-Cockatoo.
Breeding habitat (black-cockatoo)	Defined in the referral guidelines as species of trees known to support breeding within the range of the species, which either have a suitable nest hollow OR are of a suitable diameter at breast height (DBH) to develop a nest hollow. For most species of trees, suitable DBH is 500 mm. For Salmon Gum and Wandoo, suitable DBH is 300 mm.
Conservation significant	A plant, animal, community or habitat that has a formally assigned conservation ranking, usually because it is recognised to be rare, unusual, new or poorly sampled.
DBCA	WA Department of Biodiversity, Conservation and Attractions.
DBH	Diameter at breast height (approximately 1.3 m from base).
DotEE	The then Federal Department of the Environment and Energy.
Dominant species	The species that occur most abundantly in an area or vegetation stratum.
DSEWPaC	The then Federal Department of Sustainability, Environment, Water, Population and Communities.
EP Act	WA <i>Environmental Protection Act 1986</i> .
EPA	Environmental Protection Authority of Western Australia.
EPBC Act	The Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> .
ESA	Environmentally Sensitive Area protected under the WA <i>Environmental Protection Act 1986</i> .
FCT	Floristic Community Types identified by Gibson et al. (1994).
Flora keys	Botanical publications containing a series of questions (regarding the plant's characteristics) aiding in the identification of a taxon.
IBRA	Interim Biogeographical Regionalisation for Australia.
MNES	A Matter of National Environmental Significance listed under the Commonwealth EPBC Act.
NVIS	National Vegetation Information System.
PATN	Pattern analysis software (Belbin 2013).
PEC	Priority Ecological Community (see Appendix 1 for more on the WA conservation framework).
Pedestrian bridge clearing footprint	Clearing footprint of up to 0.2 ha, located within the targeted flora survey area.
Perennial	A plant that lives for more than two growing seasons.
Priority flora	Flora listed by the DBCA as requiring additional information to properly evaluate their conservation significance or requiring ongoing monitoring; see Appendix 1 for more information on the Priority flora rankings.

RFA	Regional Forestry Agreement; see https://www.aph.gov.au/parliamentary_business/committees/senate/environment_and_communications/completed_inquiries/2008-10/epbcact/finalreport/c01 .
Roosting habitat (black-cockatoo)	Defined as a suitable tree (generally the tallest) or group of tall trees, native or introduced, usually close to an important water source, and within an area of quality foraging habitat within the range of the species.
SCP	Swan Coastal Plain.
Study area	The area within 5 km of the survey area, which was used for the desktop review to place the survey area in regional context.
Survey area	The 8.59 ha area of interest to which the field surveys were constrained.
Targeted flora survey area	The 1.33 ha component of the survey area in which systematic targeted flora surveys were completed, and in which the PCHF pedestrian bridge is proposed to be constructed.
TEC	Threatened Ecological Community (see Appendix 1 for more on the WA conservation framework).
Threatened flora/fauna	Flora protected by legislation, either listed under the Commonwealth EPBC Act or the WA <i>Biodiversity Conservation Act 2016</i> ; see Appendix 1 for more on the WA conservation framework.
WA	Western Australia.
WoNS	Weeds of National Significance; see https://www.environment.gov.au/biodiversity/invasive/weeds/weeds/lists/wons.html .

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Appendix 1

Framework for Conservation Significance Ranking of Communities and Species in WA



A. Definitions, Categories and Criteria for Threatened and Priority Ecological Communities (DEC 2010)

1. **General Definitions**

Ecological Community

A naturally occurring biological assemblage that occurs in a particular type of habitat.

Note: The scale at which biological communities are defined will often depend on the level of detail in the information source, therefore no particular scale is specified.

A **threatened ecological community** (TEC) is one which is found to fit into one of the following categories; "presumed totally destroyed", "critically endangered", "endangered" or "vulnerable".

Possible threatened ecological communities that do not meet survey criteria are added to the DBCA's Priority Ecological Community Lists under Priorities 1, 2 and 3. Ecological Communities that are adequately known, are rare but not threatened, or meet criteria for Near Threatened, or that have been recently removed from the threatened list, are placed in Priority 4. These ecological communities require regular monitoring. Conservation Dependent ecological communities are placed in Priority 5.

An **assemblage** is a defined group of biological entities.

Habitat is defined as the areas in which an organism and/or assemblage of organisms lives. It includes the abiotic factors (e.g. substrate and topography), and the biotic factors.

Occurrence: a discrete example of an ecological community, separated from other examples of the same community by more than 20 metres of a different ecological community, an artificial surface or a totally destroyed community.

By ensuring that every discrete occurrence is recognised and recorded future changes in status can be readily monitored.

Adequately Surveyed is defined as follows:

"An ecological community that has been searched for thoroughly in most likely habitats, by relevant experts."

Community structure is defined as follows:

"The spatial organisation, construction and arrangement of the biological elements comprising a biological assemblage" (e.g. *Eucalyptus salmonophloia* woodland over scattered small shrubs over dense herbs; structure in a faunal assemblage could refer to trophic structure, e.g. dominance by feeders on detritus as distinct from feeders on live plants).

Definitions of **Modification** and **Destruction** of an ecological community:

Modification: "changes to some or all of ecological processes (including abiotic processes such as hydrology), species composition and community structure as a direct or indirect result of human activities. The level of damage involved could be ameliorated naturally or by human intervention."

Destruction: "modification such that reestablishment of ecological processes, species composition and community structure within the range of variability exhibited by the original community is unlikely within the foreseeable future even with positive human intervention."

Note: Modification and destruction are difficult concepts to quantify, and their application will be determined by scientific judgement. Examples of modification and total destruction are cited below:

Modification of ecological processes: The hydrology of Toolibin Lake has been altered by clearing of the catchment such that death of some of the original flora has occurred due to dependence on fresh water. The system may be bought back to a semblance of the original state by redirecting saline runoff and pumping waters of the rising underground watertable away to restore the hydrological balance. Total destruction of downstream lakes has occurred due to hydrology being altered to the point that few of the original flora or fauna species are able to tolerate the level of salinity and/or water logging.

Modification of structure: The understorey of a plant community may be altered by weed invasion due to nutrient enrichment by addition of fertiliser. Should the additional nutrients be removed from the system the balance may be restored, and the original plant species better able to compete. Total destruction may occur if additional nutrients continue to be added to the system causing the understorey to be completely replaced by weed species, and death of overstorey species due to inability to tolerate high nutrient levels.

Modification of species composition: Pollution may cause alteration of the invertebrate species present in a freshwater lake. Removal of pollutants may allow the return of the original inhabitant species. Addition of residual highly toxic substances may cause permanent changes to water quality, and total destruction of the community.

Threatening processes are defined as follows:

“Any process or activity that threatens to destroy or significantly modify the ecological community and/or affect the continuing evolutionary processes within any ecological community.”

Examples of some of the continuing threatening processes in Western Australia include: general pollution; competition, predation and change induced in ecological communities as a result of introduced animals; competition and displacement of native plants by introduced species; hydrological changes; inappropriate fire regimes; diseases resulting from introduced micro-organisms; direct human exploitation and disturbance of ecological communities.

Restoration is defined as returning an ecological community to its pre-disturbance or natural state in terms of abiotic conditions, community structure and species composition.

Rehabilitation is defined as the re-establishment of ecological attributes in a damaged ecological community although the community will remain modified.

2. Definitions and Criteria for Presumed Totally Destroyed, Critically Endangered, Endangered and Vulnerable Ecological Communities

ECOLOGICAL COMMUNITIES

Presumed Totally Destroyed (PD)

An ecological community that has been adequately searched for but for which no representative occurrences have been located. The community has been found to be totally destroyed or so extensively modified throughout its range that no occurrence of it is likely to recover its species composition and/or structure in the foreseeable future.

An ecological community will be listed as presumed totally destroyed if there are no recent records of the community being extant and either of the following applies (A or B):

- A) Records within the last 50 years have not been confirmed despite thorough searches of known or likely habitats or
- B) All occurrences recorded within the last 50 years have since been destroyed

Critically Endangered (CR)

An ecological community that has been adequately surveyed and found to have been subject to a major contraction in area and/or that was originally of limited distribution and is facing severe modification or destruction throughout its range in the immediate future, or is already severely degraded throughout its range but capable of being substantially restored or rehabilitated.

An ecological community will be listed as Critically Endangered when it has been adequately surveyed and is found to be facing an extremely high risk of total destruction in the immediate future. This will be determined on the basis of the best available information, by it meeting any one or more of the following criteria (A, B or C):

- A) The estimated geographic range, and/or total area occupied, and/or number of discrete occurrences since European settlement have been reduced by at least 90% and either or both of the following apply (i or ii):
 - i) geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is imminent (within approximately 10 years);
 - ii) modification throughout its range is continuing such that in the immediate future (within approximately 10 years) the community is unlikely to be capable of being substantially rehabilitated.
- B) Current distribution is limited, and one or more of the following apply (i, ii or iii):
 - i) geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the immediate future (within approximately 10 years);
 - ii) there are very few occurrences, each of which is small and/or isolated and extremely vulnerable to known threatening processes;

- iii) there may be many occurrences but total area is very small and each occurrence is small and/or isolated and extremely vulnerable to known threatening processes.

C) The ecological community exists only as highly modified occurrences that may be capable of being rehabilitated if such work begins in the immediate future (within approximately 10 years).

Endangered (EN)

An ecological community that has been adequately surveyed and found to have been subject to a major contraction in area and/or was originally of limited distribution and is in danger of significant modification throughout its range or severe modification or destruction over most of its range in the near future.

An ecological community will be listed as Endangered when it has been adequately surveyed and is not Critically Endangered but is facing a very high risk of total destruction in the near future. This will be determined on the basis of the best available information by it meeting any one or more of the following criteria (A, B, or C):

- A) The geographic range, and/or total area occupied, and/or number of discrete occurrences have been reduced by at least 70% since European settlement and either or both of the following apply (i or ii):
 - i) the estimated geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is likely in the short term future (within approximately 20 years);
 - ii) modification throughout its range is continuing such that in the short term future (within approximately 20 years) the community is unlikely to be capable of being substantially restored or rehabilitated.
- B) Current distribution is limited, and one or more of the following apply (i, ii or iii):
 - i) geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the short term future (within approximately 20 years);
 - ii) there are few occurrences, each of which is small and/or isolated and all or most occurrences are very vulnerable to known threatening processes;
 - iii) there may be many occurrences but total area is small and all or most occurrences are small and/or isolated and very vulnerable to known threatening processes.
- C) The ecological community exists only as very modified occurrences that may be capable of being substantially restored or rehabilitated if such work begins in the short-term future (within approximately 20 years).

Vulnerable (VU)

An ecological community that has been adequately surveyed and is found to be declining and/or has declined in distribution and/or condition and whose ultimate security has not yet been assured and/or a community that is still widespread but is believed likely to move into a category of higher threat in the near future if threatening processes continue or begin operating throughout its range.

An ecological community will be listed as Vulnerable when it has been adequately surveyed and is not Critically Endangered or Endangered but is facing a high risk of total destruction or significant modification in the medium to long-term future. This will be determined on the basis of the best available information by it meeting any one or more of the following criteria (A, B or C):

- A) The ecological community exists largely as modified occurrences that are likely to be capable of being substantially restored or rehabilitated.
- B) The ecological community may already be modified and would be vulnerable to threatening processes, is restricted in area and/or range and/or is only found at a few locations.
- C) The ecological community may be still widespread but is believed likely to move into a category of higher threat in the medium to long term future because of existing or impending threatening processes.

3. Definitions and Criteria for Priority Ecological Communities

PRIORITY ECOLOGICAL COMMUNITY LIST

Possible threatened ecological communities that do not meet survey criteria or that are not adequately defined are added to the Priority Ecological Community Lists under Priorities 1, 2 and 3. These three categories are ranked in order of priority for survey and/or definition of the community, and evaluation of conservation status, so that consideration can be given to their declaration as threatened ecological communities. Ecological Communities that are adequately known, and are rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list, are placed in Priority 4. These ecological communities require regular monitoring. Conservation Dependent ecological communities are placed in Priority 5.

Priority One: Poorly-known ecological communities

Ecological communities with apparently few, small occurrences, all or most not actively managed for conservation (e.g. within agricultural or pastoral lands, urban areas, active mineral leases) and for which current threats exist. Communities may be included if they are comparatively well-known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under immediate threat from known threatening processes across their range.

Priority Two: Poorly-known ecological communities

Communities that are known from few small occurrences, all or most of which are actively managed for conservation (e.g. within national parks, conservation parks, nature reserves, State forest, unallocated Crown land, water reserves, etc.) and not under imminent threat of destruction or degradation. Communities may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under threat from known threatening processes.

Priority Three: Poorly known ecological communities

- (i) Communities that are known from several to many occurrences, a significant number or area of which are not under threat of habitat destruction or degradation or:
- (ii) communities known from a few widespread occurrences, which are either large or within significant remaining areas of habitat in which other occurrences may occur, much of it not under imminent threat, or;
- (iii) communities made up of large, and/or widespread occurrences, that may or not be represented in the reserve system, but are under threat of modification across much of their range from processes such as grazing by domestic and/or feral stock, and inappropriate fire regimes.

Communities may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and/or are not well defined, and known threatening processes exist that could affect them.

Priority Four: Ecological communities that are adequately known, rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list. These communities require regular monitoring.

- (a) Rare. Ecological communities known from few occurrences that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These communities are usually represented on conservation lands.
- (b) Near Threatened. Ecological communities that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.
- (c) Ecological communities that have been removed from the list of threatened communities during the past five years.

Priority Five: Conservation Dependent ecological communities

Ecological communities that are not threatened but are subject to a specific conservation program, the cessation of which would result in the community becoming threatened within five years.

B. Categories for Flora and Fauna Species

1. Western Australian Biodiversity Conservation Act 2016, and Priority Species Classification

In Western Australia, 'Threatened', 'Extinct' and 'Specially Protected' fauna and flora species are protected under the *Biodiversity Conservation Act 2016* (the BC Act), making it an offence to take or disturb these species without Ministerial approval. The definition of 'take' is broad, and includes killing, injuring, harvesting or capturing fauna, and gathering, cutting, destroying, harvesting or damaging flora.

Such species are classified within a framework of several categories.

Species of the highest conservation significance are designated as Threatened species and are protected under sections 19(1)(a), 19(1)(b) and 19(1)(c) of the BC Act. Species are listed within one of three categories:

- Critically endangered (CR), Endangered (EN), or Vulnerable (V), representing those species listed in Schedules 1 to 3 respectively of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* or the *Wildlife Conservation (Rare Flora) Notice 2018*.

Presumed extinct species are protected under sections 24 and 25 of the BC Act and are listed in one of two categories:

- Extinct (EX), representing those species listed in Schedule 4 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* or the *Wildlife Conservation (Rare Flora) Notice 2018*; or
- Extinct in the wild (EW); there are currently no listed species under this category.

Specially protected species are protected under section 13(1) of the BC Act, and include species of special conservation interest, migratory species, cetaceans, species subject to international agreement, or species otherwise in need of special protection. Of these:

- Migratory species (MI) are those listed under schedule 5 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*;
- Species of special conservation interest (conservation dependent fauna) (CD) are those listed under schedule 6 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*; and
- Other specially protected fauna (OS) are those listed under schedule 7 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*;

In addition to the species formally designated as protected under the BC Act, the WA Department of Biodiversity, Conservation and Attractions (DBCA) also maintains a list of 'Priority species'.

Species that appear to be rare or threatened, but for which there is insufficient information to properly evaluate their conservation significance, are assigned to one of three Priority categories (Priority 1 to Priority 3), while species that are adequately known but require regular monitoring are assigned to Priority 4.

Note that of the above classifications, only 'Threatened', 'Extinct' and 'Specially Protected' species have statutory standing. The Priority flora and fauna classifications are employed by the WA DBCA to manage and classify their database of species considered potentially rare or at risk, but these categories have no legislative status.

Further explanations of the categories is provided in more detail in the following pages.



CONSERVATION CODES

For Western Australian Flora and Fauna

Threatened, Extinct and Specially Protected fauna or flora¹ are species² which have been adequately searched for and are deemed to be, in the wild, threatened, extinct or in need of special protection, and have been gazetted as such.

The *Wildlife Conservation (Specially Protected Fauna) Notice 2018* and the *Wildlife Conservation (Rare Flora) Notice 2018* have been transitioned under regulations 170, 171 and 172 of the *Biodiversity Conservation Regulations 2018* to be the lists of Threatened, Extinct and Specially Protected species under Part 2 of the *Biodiversity Conservation Act 2016*.

Categories of Threatened, Extinct and Specially Protected fauna and flora are:

T **Threatened species**

Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the *Biodiversity Conservation Act 2016* (BC Act).

Threatened fauna is that subset of 'Specially Protected Fauna' listed under schedules 1 to 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for Threatened Fauna.

Threatened flora is that subset of 'Rare Flora' listed under schedules 1 to 3 of the *Wildlife Conservation (Rare Flora) Notice 2018* for Threatened Flora.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

CR **Critically endangered species**

Threatened species considered to be "*facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines*".

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines. Published under schedule 1 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for critically endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for critically endangered flora.

EN **Endangered species**

Threatened species considered to be "*facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines*".

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines. Published under schedule 2 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for endangered flora.

VU **Vulnerable species**

Threatened species considered to be "*facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines*".

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines. Published under schedule 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for vulnerable fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for vulnerable flora.

Extinct species

Listed by order of the Minister as extinct under section 23(1) of the BC Act as extinct or extinct in the wild.

EX Extinct species

Species where “*there is no reasonable doubt that the last member of the species has died*”, and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).

Published as presumed extinct under schedule 4 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for extinct fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for extinct flora.

EW Extinct in the wild species

Species that “*is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form*”, and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.

Specially protected species

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered or vulnerable) or extinct species under the BC Act cannot also be listed as Specially Protected species.

MI Migratory species

Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).

Includes birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

Published as migratory birds protected under an international agreement under schedule 5 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

CD Species of special conservation interest (conservation dependent fauna)

Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act).

Published as conservation dependent fauna under schedule 6 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

OS Other specially protected species

Fauna otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).

Published as other specially protected fauna under schedule 7 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

P Priority species

Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora.

Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.

Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

1 Priority 1: Poorly-known species

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

2 Priority 2: Poorly-known species

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

3 Priority 3: Poorly-known species

Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

4 Priority 4: Rare, Near Threatened and other species in need of monitoring

(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands.

(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as Conservation Dependent.

(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

¹ The definition of flora includes algae, fungi and lichens

² Species includes all taxa (plural of taxon - a classificatory group of any taxonomic rank, e.g. a family, genus, species or any infraspecific category i.e. subspecies or variety, or a distinct population).

2. Commonwealth Environment Protection and Biodiversity Conservation Act 1999

Many of the species that are specially protected at State level are also listed as Threatened species at the Federal level, as one of the Matters of National Environmental Significance (MNES) identified under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act). These may be classified as 'critically endangered', 'endangered', 'vulnerable' or 'lower risk', consistent with IUCN categories:

1. **Critically Endangered (CR):** a taxon is Critically Endangered when it is facing an extremely high risk of extinction in the wild in the immediate future.
2. **Endangered (EN):** a taxon is Endangered when it is not Critically Endangered but is facing a very high risk of extinction in the wild in the near future.
3. **Vulnerable (VU):** a taxon is Vulnerable when it is not Critically Endangered or Endangered but is facing a high risk of extinction in the wild in the medium-term future.
4. **Lower Risk (LR):** a taxon is Lower Risk when it has been evaluated, does not satisfy the criteria for any of the categories Critically Endangered, Endangered or Vulnerable. Taxa included in the Lower Risk category can be separated into three subcategories:
 - **Conservation Dependent (CD).** Taxa which are the focus of a continuing taxon-specific or habitat-specific conservation program targeted towards the taxon in question, the cessation of which would result in the taxon qualifying for one of the threatened categories above within a period of five years.
 - **Near Threatened (NT).** Taxa which do not qualify for Conservation Dependent, but which are close to qualifying for Vulnerable.
 - **Least Concern (LC).** Taxa which do not qualify for Conservation Dependent or Near Threatened.

In addition, numerous Migratory species are listed as MNES under the EPBC Act (some of which are also listed as Threatened). Migratory species are those animals that migrate to Australia and its external territories, or pass through or over Australian waters during their annual migrations. The list of migratory species consists of those species listed under the following international conventions:

1. Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention);
2. China-Australia Migratory Bird Agreement (CAMBA);
3. Japan-Australia Migratory Bird Agreement (JAMBA); and,
4. Republic of Korea-Australia Migratory Bird Agreement (ROKAMBA).

Marine species are also protected under the EPBC Act, and are listed to ensure the long-term conservation of the species. Marine species include all Australian sea snakes, seals, crocodiles, dugongs, marine turtles, seahorses and seabirds that naturally occur in the Commonwealth marine area.

Under the terms of the EPBC Act, an action (e.g. a project or development) is required to be referred to the Australian Government Environment Minister for approval if it has, will have, or is likely to have, a significant impact on an MNES. The term 'action' includes projects and developments subsequent to commencement of the Act, however there are a number of exemptions (e.g. projects in Commonwealth areas). According to Department of the Environment (2013), a 'significant impact' is an impact which is important, notable, or of consequence, having regard to its context or intensity. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value, and quality of the environment which is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts.

References:

Department of the Environment (2013). Matters of National Environmental Significance - Significant Impact Guidelines 1.1 *Environment Protection and Biodiversity Conservation Act 1999*. Department of the Environment, Canberra, Australia.

Appendix 2

EPBC Act and NatureMap Search Results





EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 15/10/19 16:40:09

[Summary](#)

[Details](#)

[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

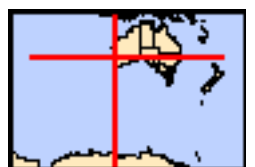
[Acknowledgements](#)



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2010

[Coordinates](#)

Buffer: 5.0Km



Summary

Matters of National Environmental Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	2
Listed Threatened Species:	45
Listed Migratory Species:	50

Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Land:	2
Commonwealth Heritage Places:	4
Listed Marine Species:	59
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

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

State and Territory Reserves:	10
Regional Forest Agreements:	None
Invasive Species:	40
Nationally Important Wetlands:	2
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities

[\[Resource Information \]](#)

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

Name	Status	Type of Presence
Banksia Woodlands of the Swan Coastal Plain ecological community	Endangered	Community likely to occur within area
Tuart (Eucalyptus gomphocephala) Woodlands and Forests of the Swan Coastal Plain ecological community	Critically Endangered	Community likely to occur within area

Listed Threatened Species

[\[Resource Information \]](#)

Name	Status	Type of Presence
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Birds

Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Species or species habitat may occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Roosting known to occur within area
Calyptorhynchus banksii naso Forest Red-tailed Black-Cockatoo, Karrak [67034]	Vulnerable	Species or species habitat known to occur within area
Calyptorhynchus latirostris Carnaby's Cockatoo, Short-billed Black-Cockatoo [59523]	Endangered	Species or species habitat known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Roosting known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Species or species habitat likely to occur

Name	Status	Type of Presence within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat likely to occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica baueri Bar-tailed Godwit (baueri), Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat known to occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Bar-tailed Godwit (menzbieri) [86432]	Critically Endangered	Species or species habitat may occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat known to occur within area
Rostratula australis Australian Painted-snipe, Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Species or species habitat known to occur within area
Thalassarche cauta cauta Shy Albatross, Tasmanian Shy Albatross [82345]	Vulnerable	Species or species habitat likely to occur within area
Thalassarche cauta steadi White-capped Albatross [82344]	Vulnerable	Species or species habitat likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Insects		
Hesperocolletes douglasi Douglas' Broad-headed Bee, Rottnest Bee [66734]	Critically Endangered	Species or species habitat may occur within area
Mammals		
Bettongia penicillata ogilbyi Woylie [66844]	Endangered	Species or species habitat may occur within area
Dasyurus geoffroii Chuditch, Western Quoll [330]	Vulnerable	Species or species

Name	Status	Type of Presence
Neophoca cinerea Australian Sea-lion, Australian Sea Lion [22]	Vulnerable	habitat may occur within area Species or species habitat known to occur within area
Pseudocheirus occidentalis Western Ringtail Possum, Ngwayir, Womp, Woder, Ngoor, Ngoolangit [25911]	Critically Endangered	Species or species habitat likely to occur within area
Plants		
Andersonia gracilis Slender Andersonia [14470]	Endangered	Species or species habitat may occur within area
Anigozanthos viridis subsp. terraspectans Dwarf Green Kangaroo Paw [3435]	Vulnerable	Species or species habitat may occur within area
Caladenia huegelii King Spider-orchid, Grand Spider-orchid, Rusty Spider-orchid [7309]	Endangered	Species or species habitat may occur within area
Diuris micrantha Dwarf Bee-orchid [55082]	Vulnerable	Species or species habitat likely to occur within area
Diuris purdiei Purdie's Donkey-orchid [12950]	Endangered	Species or species habitat may occur within area
Drakaea elastica Glossy-leaved Hammer Orchid, Glossy-leaved Hammer Orchid, Warty Hammer Orchid [16753]	Endangered	Species or species habitat likely to occur within area
Drakaea micrantha Dwarf Hammer-orchid [56755]	Vulnerable	Species or species habitat likely to occur within area
Eleocharis keigheryi Keighery's Eleocharis [64893]	Vulnerable	Species or species habitat may occur within area
Thelymitra dedmaniarum Cinnamon Sun Orchid [65105]	Endangered	Species or species habitat may occur within area
Thelymitra stellata Star Sun-orchid [7060]	Endangered	Species or species habitat may occur within area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		

Name	Threatened	Type of Presence
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Species or species habitat likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat likely to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Sterna dougallii Roseate Tern [817]		Foraging, feeding or related behaviour likely to occur within area
Thalassarche cauta Tasmanian Shy Albatross [89224]	Vulnerable*	Species or species habitat likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Species or species habitat likely to occur within area
Migratory Marine Species		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat may occur within area
Manta alfredi Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray [84994]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Manta birostris Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]		Species or species habitat may occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Migratory Terrestrial Species		
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Arenaria interpres Ruddy Turnstone [872]		Roosting known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Roosting known to occur within area
Calidris alba Sanderling [875]		Roosting known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area
Calidris ruficollis Red-necked Stint [860]		Roosting known to occur within area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Roosting known to occur within area
Charadrius bicinctus Double-banded Plover [895]		Roosting known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Roosting known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Limosa limosa Black-tailed Godwit [845]		Roosting known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area
Pandion haliaetus Osprey [952]		Breeding known to occur within area
Phalaropus lobatus Red-necked Phalarope [838]		Roosting known to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur within area
Pluvialis squatarola Grey Plover [865]		Roosting known to occur within area
Tringa brevipes Grey-tailed Tattler [851]		Roosting known to occur within area
Tringa glareola Wood Sandpiper [829]		Species or species habitat known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area
Tringa totanus Common Redshank, Redshank [835]		Roosting known to occur within area
Xenus cinereus Terek Sandpiper [59300]		Roosting known to occur within area

Other Matters Protected by the EPBC Act

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

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

Name
Commonwealth Land - Defence - IRWIN BARRACKS - KARRAKATTA

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

Name	State	Status
Historic		
Army Magazine Buildings Irwin Barracks	WA	Listed place
Claremont Post Office	WA	Listed place
Perth General Post Office	WA	Listed place
South Perth Post Office	WA	Listed place

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

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Breeding known to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Arenaria interpres Ruddy Turnstone [872]		Roosting known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Roosting known to occur within area
Calidris alba Sanderling [875]		Roosting known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area
Calidris ruficollis Red-necked Stint [860]		Roosting known to occur within area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Roosting known to occur within area
Charadrius bicinctus Double-banded Plover [895]		Roosting known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Roosting known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
Charadrius ruficapillus Red-capped Plover [881]		Roosting known to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Species or species habitat likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat likely to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area

Name	Threatened	Type of Presence
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Heteroscelus brevipes Grey-tailed Tattler [59311]		Roosting known to occur within area
Himantopus himantopus Pied Stilt, Black-winged Stilt [870]		Roosting known to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Limosa limosa Black-tailed Godwit [845]		Roosting known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat known to occur within area
Pandion haliaetus Osprey [952]		Breeding known to occur within area
Phalaropus lobatus Red-necked Phalarope [838]		Roosting known to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur within area
Pluvialis squatarola Grey Plover [865]		Roosting known to occur within area
Recurvirostra novaehollandiae Red-necked Avocet [871]		Roosting known to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat known to occur within area
Sterna dougallii Roseate Tern [817]		Foraging, feeding or related behaviour likely to occur within area

Name	Threatened	Type of Presence
Thalassarche cauta Tasmanian Shy Albatross [89224]	Vulnerable*	Species or species habitat likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Species or species habitat likely to occur within area
Thinornis rubricollis Hooded Plover [59510]		Species or species habitat known to occur within area
Tringa glareola Wood Sandpiper [829]		Species or species habitat known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area
Tringa totanus Common Redshank, Redshank [835]		Roosting known to occur within area
Xenus cinereus Terek Sandpiper [59300]		Roosting known to occur within area
Mammals		
Neophoca cinerea Australian Sea-lion, Australian Sea Lion [22]	Vulnerable	Species or species habitat known to occur within area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Bold Park	WA
Kings Park	WA
Matilda Bay Reserve	WA
Milyu	WA
Perth Zoo	WA
Swan River	WA
Unnamed WA31906	WA

Name	State
Unnamed WA45772	WA
Unnamed WA45773	WA
Unnamed WA50067	WA

Invasive Species [\[Resource Information \]](#)

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit, 2001.

Name	Status	Type of Presence
Birds		
<p><i>Acridotheres tristis</i> Common Myna, Indian Myna [387]</p>		Species or species habitat likely to occur within area
<p><i>Anas platyrhynchos</i> Mallard [974]</p>		Species or species habitat likely to occur within area
<p><i>Carduelis carduelis</i> European Goldfinch [403]</p>		Species or species habitat likely to occur within area
<p><i>Columba livia</i> Rock Pigeon, Rock Dove, Domestic Pigeon [803]</p>		Species or species habitat likely to occur within area
<p><i>Passer domesticus</i> House Sparrow [405]</p>		Species or species habitat likely to occur within area
<p><i>Passer montanus</i> Eurasian Tree Sparrow [406]</p>		Species or species habitat likely to occur within area
<p><i>Streptopelia chinensis</i> Spotted Turtle-Dove [780]</p>		Species or species habitat likely to occur within area
<p><i>Streptopelia senegalensis</i> Laughing Turtle-dove, Laughing Dove [781]</p>		Species or species habitat likely to occur within area
<p><i>Sturnus vulgaris</i> Common Starling [389]</p>		Species or species habitat likely to occur within area
<p><i>Turdus merula</i> Common Blackbird, Eurasian Blackbird [596]</p>		Species or species habitat likely to occur within area
Mammals		
<p><i>Bos taurus</i> Domestic Cattle [16]</p>		Species or species habitat likely to occur within area
<p><i>Canis lupus familiaris</i> Domestic Dog [82654]</p>		Species or species habitat likely to occur within area
<p><i>Felis catus</i> Cat, House Cat, Domestic Cat [19]</p>		Species or species habitat likely to occur within area
<p><i>Funambulus pennantii</i> Northern Palm Squirrel, Five-striped Palm Squirrel [129]</p>		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus aethiopicus Asparagus Fern, Ground Asparagus, Basket Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus [62425]		Species or species habitat likely to occur within area
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Asparagus declinatus Bridal Veil, Bridal Veil Creeper, Pale Berry Asparagus Fern, Asparagus Fern, South African Creeper [66908]		Species or species habitat likely to occur within area
Asparagus plumosus Climbing Asparagus-fern [48993]		Species or species habitat likely to occur within area
Brachiaria mutica Para Grass [5879]		Species or species habitat may occur within area
Cenchrus ciliaris Buffel-grass, Black Buffel-grass [20213]		Species or species habitat may occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
Chrysanthemoides monilifera subsp. monilifera Boneseed [16905]		Species or species habitat likely to occur within area
Genista sp. X Genista monspessulana Broom [67538]		Species or species habitat may occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Olea europaea Olive, Common Olive [9160]		Species or species habitat may occur within

Name	Status	Type of Presence area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Pinus radiata Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Sagittaria platyphylla Delta Arrowhead, Arrowhead, Slender Arrowhead [68483]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Tamarix aphylla Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar [16018]		Species or species habitat likely to occur within area
Reptiles		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to occur within area

Nationally Important Wetlands		[Resource Information]
Name	State	
Herdsman Lake	WA	
Swan-Canning Estuary	WA	

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

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

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

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

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

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

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

Coordinates

-31.96667 115.81889

Acknowledgements

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

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

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

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

KP Link Bridge Cons Sig Flora

Created By Guest user on 15/10/2019

Conservation Status Conservation Taxon (T, X, IA, S, P1-P5)
Current Names Only Yes
Core Datasets Only Yes
Species Group All Plants
Method 'By Circle'
Centre 115° 49' 06" E, 31° 58' 03" S
Buffer 5km
Group By Conservation Status

Conservation Status	Species	Records
Presumed extinct	1	1
Priority 1	2	4
Priority 2	8	21
Priority 3	12	32
Priority 4	6	43
Rare or likely to become extinct	2	3
TOTAL	31	104

Name ID	Species Name	Naturalised	Conservation Code	Endemic To Query Area
Rare or likely to become extinct				
1.	1596 <i>Caladenia huegelii</i> (Grand Spider Orchid)		T	
2.	10796 <i>Diuris drummondii</i> (Tall Donkey Orchid)		T	
Presumed extinct				
3.	14180 <i>Picris compacta</i>		X	Y
Priority 1				
4.	16915 <i>Eucalyptus x mundijongensis</i>		P1	
5.	19209 <i>Typhonium peltandroides</i>		P1	
Priority 2				
6.	3237 <i>Acacia benthamii</i>		P2	
7.	5418 <i>Calothamnus macrocarpus</i>		P2	
8.	13097 <i>Eucalyptus educta</i>		P2	
9.	20162 <i>Fabronia hampeana</i>		P2	
10.	13452 <i>Grevillea manglesii</i> subsp. <i>ornithopoda</i>		P2	
11.	37683 <i>Melaleuca viminalis</i>		P2	
12.	42022 <i>Poranthera moorokatta</i>		P2	
13.	1717 <i>Thelymitra variegata</i> (Queen of Sheba)		P2	
Priority 3				
14.	3373 <i>Acacia horridula</i>		P3	
15.	7831 <i>Angianthus micropodioides</i>		P3	
16.	34236 <i>Beyeria cinerea</i> subsp. <i>cinerea</i>		P3	
17.	3178 <i>Byblis gigantea</i> (Rainbow Plant)		P3	
18.	1425 <i>Conostylis bracteata</i>		P3	
19.	6766 <i>Dicrastylis micrantha</i>		P3	
20.	11461 <i>Hibbertia spicata</i> subsp. <i>leptotheca</i>		P3	
21.	45081 <i>Lasiopetalum glutinosum</i> subsp. <i>glutinosum</i>		P3	
22.	5038 <i>Lasiopetalum membranaceum</i>		P3	
23.	980 <i>Schoenus capillifolius</i>		P3	
24.	13127 <i>Stylidium maritimum</i>		P3	
25.	12468 <i>Verticordia venusta</i>		P3	
Priority 4				
26.	11333 <i>Calothamnus graniticus</i> subsp. <i>leptophyllus</i>		P4	
27.	4763 <i>Dodonaea hackettiana</i> (Hackett's Hopbush)		P4	
28.	17622 <i>Hypolaena robusta</i>		P4	
29.	4027 <i>Jacksonia sericea</i> (Waldjumi)		P4	
30.	7803 <i>Stylidium striatum</i> (Fan-leaved Triggerplant)		P4	
31.	14714 <i>Verticordia lindleyi</i> subsp. <i>lindleyi</i>		P4	

KP Link Bridge Cons Sig Fungi

Created By Guest user on 15/10/2019

Kingdom Fungi

Conservation Status Conservation Taxon (T, X, IA, S, P1-P5)

Current Names Only Yes

Core Datasets Only Yes

Method 'By Circle'

Centre 115° 49' 06" E, 31° 58' 03" S

Buffer 5km

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
1.	45013	<i>Amanita drummondii</i>		P3	
2.	43543	<i>Amanita fibrilloses</i>		P3	
3.	48332	<i>Amanita preissii</i> (Cinnamon-ring Lepidella)		P3	
4.	43542	<i>Amanita wadjukiorum</i>		P3	

Conservation Codes

T - Rare or likely to become extinct
 X - Presumed extinct
 IA - Protected under international agreement
 S - Other specially protected fauna
 1 - Priority 1
 2 - Priority 2
 3 - Priority 3
 4 - Priority 4
 5 - Priority 5

¹ For NatureMap's purposes, species flagged as endemic are those whose records are wholly contained within the search area. Note that only those records complying with the search criterion are included in the calculation. For example, if you limit records to those from a specific datasource, only records from that datasource are used to determine if a species is restricted to the query area.

NatureMap Species Report

Created By John Graff on 15/10/2019

Current Names Only Yes
Core Datasets Only Yes
Method 'By Circle'
Centre 115° 49' 08" E, 31° 58' 00" S
Buffer 5km
Group By Species Group

Species Group	Species	Records
Alga	46	107
Amphibian	11	314
Bird	288	33186
Bryopsid (Moss)	27	72
Dicotyledon	840	2736
Fish	64	101
Fungus	189	580
Gymnosperm	6	11
Hepatic (Liverwort)	3	5
Invertebrate	129	967
Lichen	5	5
Mammal	35	556
Monocotyledon	369	1226
Pteridophyte (Fern)	4	5
Reptile	61	1255
Slime Mould	43	70
TOTAL	2120	41196

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
Alga				
1.	48409 <i>Acetabularia caliculus</i>			
2.	<i>Acrochaetium savianum</i>			
3.	26501 <i>Bangia atropurpurea</i>			
4.	49098 <i>Bangia fuscopurpurea</i>			
5.	26525 <i>Bryopsis plumosa</i>			
6.	26532 <i>Callithamnion perpusillum</i>			Y
7.	27380 <i>Caulerpa flexilis</i> var. <i>muelleri</i>			
8.	26566 <i>Caulerpa lagara</i>			Y
9.	26607 <i>Chaetomorpha aerea</i>			
10.	26631 <i>Chondria capillaris</i>			Y
11.	26634 <i>Chondria dasyphylla</i>			
12.	26649 <i>Cladophora albida</i>			
13.	36316 <i>Cladophora herpestica</i>			
14.	26653 <i>Cladophora laetevirens</i>			
15.	26658 <i>Cladophora vagabunda</i>			
16.	26674 <i>Codium harveyi</i>			
17.	26675 <i>Codium laminarioides</i>			
18.	26678 <i>Codium muelleri</i>			
19.	49139 <i>Colaconema daviesii</i>			
20.	26694 <i>Colpomenia sinuosa</i>			
21.	26776 <i>Dictyota dichotoma</i>			
22.	26778 <i>Dictyota furcellata</i>			
23.	48244 <i>Feldmannia mitchelliae</i>			
24.	48872 <i>Fushitsunagia catenata</i>	Y		Y
25.	26849 <i>Gelidium pusillum</i>			
26.	26876 <i>Gracilaria verrucosa</i>			
27.	26877 <i>Grateloupia filicina</i>			
28.	36701 <i>Grateloupia subpectinata</i>			
29.	26880 <i>Griffithsia corallinoides</i>			Y
30.	26881 <i>Griffithsia crassiuscula</i>			
31.	26900 <i>Haloplegma preissii</i>			
32.	26927 <i>Heterodoxia denticulata</i>			
33.	26999 <i>Laurencia clavata</i>			
34.	27007 <i>Laurencia obtusa</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
35.	27071 <i>Microcoleus acutissimus</i>			Y
36.	27239 <i>Sargassum fallax</i>			
37.	42785 <i>Sirophysis trinodis</i>			
38.	27294 <i>Sphacelaria tribuloides</i>			
39.	27345 <i>Turbinaria gracilis</i>			
40.	27350 <i>Ulothrix subflaccida</i>			Y
41.	35261 <i>Ulva clathrata</i>			
42.	35263 <i>Ulva flexuosa</i>			
43.	35262 <i>Ulva intestinalis</i>			
44.	27352 <i>Ulva lactuca</i>			
45.	35126 <i>Ulva linza</i>			
46.	35861 <i>Ulva prolifera</i>			

Amphibian

47.	25398 <i>Crinia georgiana</i> (Quacking Frog)			
48.	25399 <i>Crinia glauerti</i> (Clicking Frog)			
49.	25400 <i>Crinia insignifera</i> (Squelching Froglet)			
50.	25410 <i>Heleioporus eyrei</i> (Moaning Frog)			
51.	25412 <i>Heleioporus psammophilus</i> (Sand Frog)			
52.	25415 <i>Limnodynastes dorsalis</i> (Western Banjo Frog)			
53.	25378 <i>Litoria adelaidensis</i> (Slender Tree Frog)			
54.	25388 <i>Litoria moorei</i> (Motorbike Frog)			
55.	25420 <i>Myobatrachus gouldii</i> (Turtle Frog)			
56.	25433 <i>Pseudophryne guentheri</i> (Crawling Toadlet)			
57.	25434 <i>Pseudophryne occidentalis</i> (Western Toadlet)			

Bird

58.	24260 <i>Acanthiza apicalis</i> (Broad-tailed Thornbill, Inland Thornbill)			
59.	24261 <i>Acanthiza chrysorrhoa</i> (Yellow-rumped Thornbill)			
60.	24262 <i>Acanthiza inornata</i> (Western Thornbill)			
61.	24560 <i>Acanthorhynchus superciliosus</i> (Western Spinebill)			
62.	25535 <i>Accipiter cirrocephalus</i> (Collared Sparrowhawk)			
63.	24281 <i>Accipiter cirrocephalus</i> subsp. <i>cirrocephalus</i> (Collared Sparrowhawk)			
64.	25536 <i>Accipiter fasciatus</i> (Brown Goshawk)			
65.	24283 <i>Accipiter fasciatus</i> subsp. <i>didimus</i> (Brown Goshawk)			
66.	24282 <i>Accipiter fasciatus</i> subsp. <i>fasciatus</i> (Brown Goshawk)			
67.	25755 <i>Acrocephalus australis</i> (Australian Reed Warbler)			
68.	24831 <i>Acrocephalus australis</i> subsp. <i>gouldi</i> (Australian Reed Warbler)			
69.	41323 <i>Actitis hypoleucos</i> (Common Sandpiper)		IA	
70.	24301 <i>Aegotheles cristatus</i> subsp. <i>cristatus</i> (Australian Owlet-nightjar)			
71.	24310 <i>Anas castanea</i> (Chestnut Teal)			
72.	24312 <i>Anas gracilis</i> (Grey Teal)			
73.	24313 <i>Anas platyrhynchos</i> (Mallard)			
74.	<i>Anas platyrhynchos</i> subsp. <i>domesticus</i>			
75.	24315 <i>Anas rhynchotis</i> (Australasian Shoveler)			
76.	24316 <i>Anas superciliosa</i> (Pacific Black Duck)			
77.	<i>Anas superciliosa</i> subsp. <i>x platyrhynchos</i>			Y
78.	47414 <i>Anhinga novaehollandiae</i> (Australasian Darter)			
79.	<i>Anser anser</i>			
80.	24561 <i>Anthochaera carunculata</i> (Red Wattlebird)			
81.	24562 <i>Anthochaera lunulata</i> (Western Little Wattlebird)			
82.	24599 <i>Anthus australis</i> subsp. <i>australis</i> (Australian Pipit)			
83.	25554 <i>Apus pacificus</i> (Fork-tailed Swift, Pacific Swift)		IA	
84.	24334 <i>Apus pacificus</i> subsp. <i>pacificus</i> (Fork-tailed Swift, Pacific Swift)		IA	
85.	24285 <i>Aquila audax</i> (Wedge-tailed Eagle)			
86.	<i>Ara ararauna</i>			Y
87.	25558 <i>Ardea ibis</i> (Cattle Egret)			
88.	41324 <i>Ardea modesta</i> (great egret, white egret)			
89.	24340 <i>Ardea novaehollandiae</i> (White-faced Heron)			
90.	24341 <i>Ardea pacifica</i> (White-necked Heron)			
91.	24610 <i>Ardeotis australis</i> (Australian Bustard)			
92.	25566 <i>Artamus cinereus</i> (Black-faced Woodswallow)			
93.	24356 <i>Artamus personatus</i> (Masked Woodswallow)			
94.	24318 <i>Aythya australis</i> (Hardhead)			
95.	<i>Barnardius zonarius</i>			
96.	24319 <i>Biziura lobata</i> (Musk Duck)			
97.	24345 <i>Botaurus poiciloptilus</i> (Australasian Bittern)		T	
98.	24359 <i>Burhinus grallarius</i> (Bush Stone-curlew)			
99.	25713 <i>Cacatua galerita</i> (Sulphur-crested Cockatoo)			
100.	24721 <i>Cacatua galerita</i> subsp. <i>galerita</i> (Sulphur-crested Cockatoo)	Y		
101.	25714 <i>Cacatua pastinator</i> (Western Long-billed Corella)			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
102.	25715 <i>Cacatua roseicapilla</i> (Galah)			
103.	25716 <i>Cacatua sanguinea</i> (Little Corella)			
104.	24727 <i>Cacatua sanguinea</i> subsp. <i>westralensis</i> (Little Corella)			
105.	24729 <i>Cacatua tenuirostris</i> (Eastern Long-billed Corella)	Y		
106.	25598 <i>Cacomantis flabelliformis</i> (Fan-tailed Cuckoo)			
107.	24427 <i>Cacomantis flabelliformis</i> subsp. <i>flabelliformis</i> (Fan-tailed Cuckoo)			
108.	42307 <i>Cacomantis pallidus</i> (Pallid Cuckoo)			
109.	24779 <i>Calidris acuminata</i> (Sharp-tailed Sandpiper)		IA	
110.	25738 <i>Calidris canutus</i> (Red Knot, knot)		IA	
111.	24784 <i>Calidris ferruginea</i> (Curlew Sandpiper)		T	
112.	24786 <i>Calidris melanotos</i> (Pectoral Sandpiper)		IA	
113.	24788 <i>Calidris ruficollis</i> (Red-necked Stint)		IA	
114.	24789 <i>Calidris subminuta</i> (Long-toed Stint)		IA	
115.	24790 <i>Calidris tenuirostris</i> (Great Knot)		T	
116.	25717 <i>Calyptorhynchus banksii</i> (Red-tailed Black-Cockatoo)			
117.	24731 <i>Calyptorhynchus banksii</i> subsp. <i>naso</i> (Forest Red-tailed Black Cockatoo)		T	
118.	24733 <i>Calyptorhynchus baudinii</i> (Baudin's Cockatoo, White-tailed Long-billed Black Cockatoo)		T	
119.	24734 <i>Calyptorhynchus latirostris</i> (Carnaby's Cockatoo, White-tailed Short-billed Black Cockatoo)		T	
120.	48400 <i>Calyptorhynchus</i> sp. (white-tailed black cockatoo)		T	
121.	25625 <i>Carduelis carduelis</i> (Goldfinch, European Goldfinch)	Y		
122.	24480 <i>Carduelis carduelis</i> subsp. <i>britannica</i> (Goldfinch)	Y		
123.	25575 <i>Charadrius leschenaultii</i> (Greater Sand Plover)		T	
124.	25576 <i>Charadrius mongolus</i> (Lesser Sand Plover)		T	
125.	24377 <i>Charadrius ruficapillus</i> (Red-capped Plover)			
126.	24321 <i>Chenonetta jubata</i> (Australian Wood Duck, Wood Duck)			
127.	47909 <i>Cheramoeca leucosterna</i> (White-backed Swallow)			
128.	<i>Chroicocephalus novaehollandiae</i>			
129.	24432 <i>Chrysococcyx lucidus</i> subsp. <i>plagosus</i> (Shining Bronze Cuckoo)			
130.	24288 <i>Circus approximans</i> (Swamp Harrier)			
131.	24774 <i>Cladorhynchus leucocephalus</i> (Banded Stilt)			
132.	<i>Collocalia esculenta</i>			
133.	25675 <i>Colluricincla harmonica</i> (Grey Shrike-thrush)			
134.	24613 <i>Colluricincla harmonica</i> subsp. <i>rufiventris</i> (Grey Shrike-thrush)			
135.	24399 <i>Columba livia</i> (Domestic Pigeon)	Y		
136.	24361 <i>Coracina maxima</i> (Ground Cuckoo-shrike)			
137.	25568 <i>Coracina novaehollandiae</i> (Black-faced Cuckoo-shrike)			
138.	24362 <i>Coracina novaehollandiae</i> subsp. <i>novaehollandiae</i> (Black-faced Cuckoo-shrike)			
139.	24416 <i>Corvus bennetti</i> (Little Crow)			
140.	25592 <i>Corvus coronoides</i> (Australian Raven)			
141.	24417 <i>Corvus coronoides</i> subsp. <i>perplexus</i> (Australian Raven)			
142.	24419 <i>Corvus splendens</i> (House Crow)			
143.	24671 <i>Coturnix pectoralis</i> (Stubble Quail)			
144.	24420 <i>Cracticus nigrogularis</i> (Pied Butcherbird)			
145.	25595 <i>Cracticus tibicen</i> (Australian Magpie)			
146.	24422 <i>Cracticus tibicen</i> subsp. <i>dorsalis</i> (White-backed Magpie)			
147.	<i>Cracticus torquatus</i>			
148.	25596 <i>Cracticus torquatus</i> (Grey Butcherbird)			
149.	24322 <i>Cygnus atratus</i> (Black Swan)			
150.	24323 <i>Cygnus olor</i> (Mute Swan)	Y		
151.	30901 <i>Dacelo novaeguineae</i> (Laughing Kookaburra)	Y		
152.	30902 <i>Dacelo novaeguineae</i> subsp. <i>novaeguineae</i> (Laughing Kookaburra)	Y		
153.	25673 <i>Daphoenositta chrysoptera</i> (Varied Sittella)			
154.	24606 <i>Daphoenositta chrysoptera</i> subsp. <i>pileata</i> (Varied Sittella, Black-capped Sittella)			
155.	24687 <i>Daption capense</i> (Cape Petrel)			
156.	24440 <i>Dasyornis longirostris</i> (Western Bristlebird)		T	
157.	25607 <i>Dicaeum hirundinaceum</i> (Mistletoebird)			
158.	24442 <i>Dicrurus bracteatus</i> subsp. <i>bracteatus</i> (Spangled Drongo)			
159.	<i>Egretta garzetta</i>			
160.	<i>Egretta novaehollandiae</i>			
161.	<i>Elanus axillaris</i>			
162.	24290 <i>Elanus caeruleus</i> subsp. <i>axillaris</i> (Australian Black-shouldered Kite)			
163.	47937 <i>Eiseyornis melanops</i> (Black-fronted Dotterel)			
164.	<i>Eolophus roseicapillus</i>			
165.	24651 <i>Eopsaltria australis</i> subsp. <i>griseogularis</i> (Western Yellow Robin)			
166.	24652 <i>Eopsaltria georgiana</i> (White-breasted Robin)			
167.	24567 <i>Epthianura albifrons</i> (White-fronted Chat)			
168.	24379 <i>Erythronyx cinctus</i> (Red-kneed Dotterel)			
169.	24818 <i>Eudyptula minor</i> subsp. <i>novaehollandiae</i> (Little Penguin)			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
170.	25621 <i>Falco berigora</i> (Brown Falcon)			
171.	24471 <i>Falco berigora</i> subsp. <i>berigora</i> (Brown Falcon)			
172.	25622 <i>Falco cenchroides</i> (Australian Kestrel, Nankeen Kestrel)			
173.	24472 <i>Falco cenchroides</i> subsp. <i>cenchroides</i> (Australian Kestrel, Nankeen Kestrel)			
174.	25623 <i>Falco longipennis</i> (Australian Hobby)			
175.	24474 <i>Falco longipennis</i> subsp. <i>longipennis</i> (Australian Hobby)			
176.	25624 <i>Falco peregrinus</i> (Peregrine Falcon)		S	
177.	24475 <i>Falco peregrinus</i> subsp. <i>macropus</i> (Australian Peregrine Falcon)		S	
178.	<i>Fringilla coelebs</i>			Y
179.	25727 <i>Fulica atra</i> (Eurasian Coot)			
180.	24761 <i>Fulica atra</i> subsp. <i>australis</i> (Eurasian Coot)			
181.	<i>Gallicolumba jobiensis</i>			Y
182.	25729 <i>Gallinula tenebrosa</i> (Dusky Moorhen)			
183.	24763 <i>Gallinula tenebrosa</i> subsp. <i>tenebrosa</i> (Dusky Moorhen)			
184.	25730 <i>Gallirallus philippensis</i> (Buff-banded Rail)			
185.	24765 <i>Gallirallus philippensis</i> subsp. <i>mellori</i> (Buff-banded Rail)			
186.	<i>Gallus gallus</i>			
187.	42314 <i>Gavicalis virescens</i> (Singing Honeyeater)			
188.	25530 <i>Gerygone fusca</i> (Western Gerygone)			
189.	24271 <i>Gerygone fusca</i> subsp. <i>fusca</i> (Western Gerygone)			
190.	47962 <i>Glycyphila melanops</i> (Tawny-crowned Honeyeater)			
191.	<i>Gracula religiosa</i>			
192.	24443 <i>Grallina cyanoleuca</i> (Magpie-lark)			
193.	25627 <i>Haematopus fuliginosus</i> (Sooty Oystercatcher)			
194.	24487 <i>Haematopus longirostris</i> (Pied Oystercatcher)			
195.	24293 <i>Haliaeetus leucogaster</i> (White-bellied Sea-Eagle)			
196.	24295 <i>Haliaeetus sphenurus</i> (Whistling Kite)			
197.	24689 <i>Halobaena caerulea</i> (Blue Petrel)			
198.	47965 <i>Hieraaetus morphnoides</i> (Little Eagle)			
199.	25734 <i>Himantopus himantopus</i> (Black-winged Stilt)			
200.	24491 <i>Hirundo neoxena</i> (Welcome Swallow)			
201.	48587 <i>Hydroprogne caspia</i> (Caspian Tern)		IA	
202.	34001 <i>Hylacola cauta</i> subsp. <i>whitlocki</i> (Shy Groundwren)			
203.	47975 <i>Ixobrychus dubius</i> (Australian Little Bittern)		P4	
204.	24347 <i>Ixobrychus flavicollis</i> subsp. <i>australis</i> (Black Bittern (southwest subpop.), Australian Black Bittern)		P2	
205.	24367 <i>Lalage tricolor</i> (White-winged Triller)			
206.	24510 <i>Larus dominicanus</i> (Kelp Gull)			
207.	24511 <i>Larus novaehollandiae</i> subsp. <i>novaehollandiae</i> (Silver Gull)			
208.	25638 <i>Larus pacificus</i> (Pacific Gull)			
209.	24557 <i>Leipoa ocellata</i> (Malleefowl)		T	
210.	25659 <i>Lichenostomus leucotis</i> (White-eared Honeyeater)			
211.	25661 <i>Lichmera indistincta</i> (Brown Honeyeater)			
212.	24582 <i>Lichmera indistincta</i> subsp. <i>indistincta</i> (Brown Honeyeater)			
213.	30932 <i>Limosa lapponica</i> (Bar-tailed Godwit)		IA	
214.	25741 <i>Limosa limosa</i> (Black-tailed Godwit)		IA	
215.	25683 <i>Lonchura castaneothorax</i> (Chestnut-breasted Mannikin)			
216.	24690 <i>Macronectes giganteus</i> (Southern Giant Petrel)		IA	
217.	24326 <i>Malacorhynchus membranaceus</i> (Pink-eared Duck)			
218.	25650 <i>Malurus elegans</i> (Red-winged Fairy-wren)			
219.	25651 <i>Malurus lamberti</i> (Variegated Fairy-wren)			
220.	25652 <i>Malurus leucopterus</i> (White-winged Fairy-wren)			
221.	24551 <i>Malurus pulcherrimus</i> (Blue-breasted Fairy-wren)			
222.	25654 <i>Malurus splendens</i> (Splendid Fairy-wren)			
223.	24583 <i>Manorina flavigula</i> (Yellow-throated Miner)			
224.	25758 <i>Megalurus gramineus</i> (Little Grassbird)			
225.	24838 <i>Megalurus gramineus</i> subsp. <i>gramineus</i> (Little Grassbird)			
226.	25663 <i>Melithreptus brevirostris</i> (Brown-headed Honeyeater)			
227.	24586 <i>Melithreptus brevirostris</i> subsp. <i>leucogenys</i> (Brown-headed Honeyeater)			
228.	24587 <i>Melithreptus chloropsis</i> (Western White-naped Honeyeater)			
229.	24736 <i>Melopsittacus undulatus</i> (Budgerigar)			
230.	24598 <i>Merops ornatus</i> (Rainbow Bee-eater)			
231.	<i>Microcarbo melanoleucos</i>			
232.	48008 <i>Morus serrator</i> (Australasian Gannet)			
233.	25610 <i>Myiagra inquieta</i> (Restless Flycatcher)			
234.	24738 <i>Neophema elegans</i> (Elegant Parrot)			
235.	<i>Ninox novaeseelandiae</i> subsp. <i>rufigaster</i>			Y
236.	24798 <i>Numenius madagascariensis</i> (Eastern Curlew)		T	
237.	<i>Numenius madagascariensis</i> subsp. <i>cyanopus</i>			
238.	25564 <i>Nycticorax caledonicus</i> (Rufous Night Heron)			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
239.	24742 <i>Nymphicus hollandicus</i> (Cockatiel)			
240.	24407 <i>Ocyphaps lophotes</i> (Crested Pigeon)			
241.	24328 <i>Oxyura australis</i> (Blue-billed Duck)		P4	
242.	25680 <i>Pachycephala rufiventris</i> (Rufous Whistler)			
243.	24624 <i>Pachycephala rufiventris</i> subsp. <i>rufiventris</i> (Rufous Whistler)			
244.	24692 <i>Pachyptila belcheri</i> (Slender-billed Prion)			
245.	24693 <i>Pachyptila desolata</i> (Antarctic Prion)			
246.	25707 <i>Pachyptila salvini</i> (Salvin's Prion)			
247.	24696 <i>Pachyptila turtur</i> (Fairy Prion)			
248.	<i>Padda oryzivora</i>			
249.	48591 <i>Pandion cristatus</i> (Osprey, Eastern Osprey)		IA	
250.	25681 <i>Pardalotus punctatus</i> (Spotted Pardalote)			
251.	24625 <i>Pardalotus punctatus</i> subsp. <i>punctatus</i> (Spotted Pardalote)			
252.	24626 <i>Pardalotus punctatus</i> subsp. <i>xanthopyge</i> (Yellow-rumped Pardalote)			
253.	25682 <i>Pardalotus striatus</i> (Striated Pardalote)			
254.	24630 <i>Pardalotus striatus</i> subsp. <i>westraliensis</i> (Striated Pardalote)			
255.	<i>Paroaria coronata</i>			Y
256.	25687 <i>Passer domesticus</i> (House Sparrow)	Y		
257.	24649 <i>Pelecanoides urinatrix</i> subsp. <i>exsul</i> (Common Diving Petrel)			
258.	24648 <i>Pelecanus conspicillatus</i> (Australian Pelican)			
259.	48060 <i>Petrochelidon ariel</i> (Fairy Martin)			
260.	48061 <i>Petrochelidon nigricans</i> (Tree Martin)			
261.	48066 <i>Petroica boodang</i> (Scarlet Robin)			
262.	24659 <i>Petroica goodenovii</i> (Red-capped Robin)			
263.	25697 <i>Phalacrocorax carbo</i> (Great Cormorant)			
264.	24664 <i>Phalacrocorax carbo</i> subsp. <i>novaehollandiae</i> (Great Cormorant)			
265.	24665 <i>Phalacrocorax fuscescens</i> (Black-faced Cormorant)			
266.	25698 <i>Phalacrocorax melanoleucos</i> (Little Pied Cormorant)			
267.	24666 <i>Phalacrocorax melanoleucos</i> subsp. <i>melanoleucos</i> (Little Pied Cormorant)			
268.	<i>Phalacrocorax</i> sp.			
269.	24667 <i>Phalacrocorax sulcirostris</i> (Little Black Cormorant)			
270.	25699 <i>Phalacrocorax varius</i> (Pied Cormorant)			
271.	24409 <i>Phaps chalcoptera</i> (Common Bronzewing)			
272.	24462 <i>Phoebastria fusca</i> (Sooty Albatross)		T	
273.	48071 <i>Phylidonyris niger</i> (White-cheeked Honeyeater)			
274.	24596 <i>Phylidonyris novaehollandiae</i> (New Holland Honeyeater)			
275.	24841 <i>Platalea flavipes</i> (Yellow-billed Spoonbill)			
276.	24842 <i>Platalea regia</i> (Royal Spoonbill)			
277.	25720 <i>Platycercus icterotis</i> (Western Rosella)			
278.	24747 <i>Platycercus spurius</i> (Red-capped Parrot)			
279.	25721 <i>Platycercus zonarius</i> (Australian Ringneck, Ring-necked Parrot)			
280.	24750 <i>Platycercus zonarius</i> subsp. <i>semitorquatus</i> (Twenty-eight Parrot)			
281.	24751 <i>Platycercus zonarius</i> subsp. <i>zonarius</i> (Port Lincoln Parrot)			
282.	24843 <i>Plegadis falcinellus</i> (Glossy Ibis)		IA	
283.	24382 <i>Pluvialis fulva</i> (Pacific Golden Plover)		IA	
284.	24383 <i>Pluvialis squatarola</i> (Grey Plover)		IA	
285.	25703 <i>Podargus strigoides</i> (Tawny Frogmouth)			
286.	24679 <i>Podargus strigoides</i> subsp. <i>brachypterus</i> (Tawny Frogmouth)			
287.	25704 <i>Podiceps cristatus</i> (Great Crested Grebe)			
288.	<i>Poephila cincta</i>			
289.	24681 <i>Poliiocephalus poliocephalus</i> (Hoary-headed Grebe)			
290.	25731 <i>Porphyrio porphyrio</i> (Purple Swamphen)			
291.	24767 <i>Porphyrio porphyrio</i> subsp. <i>bellus</i> (Purple Swamphen)			
292.	24769 <i>Porzana fluminea</i> (Australian Spotted Crane)			
293.	25732 <i>Porzana pusilla</i> (Baillon's Crane)			
294.	24770 <i>Porzana pusilla</i> subsp. <i>palustris</i> (Baillon's Crane)			
295.	24771 <i>Porzana tabuensis</i> (Spotless Crane)			
296.	<i>Psephotus dissimilis</i>			Y
297.	48085 <i>Psittacula krameri</i> (Indian Ringnecked Parrot, Rose-ringed Parakeet)	Y		
298.	<i>Psittacus erithacus</i>			Y
299.	24702 <i>Pterodroma brevirostris</i> (Kerguelen Petrel)			
300.	<i>Purpleicephalus spurius</i>			
301.	24776 <i>Recurvirostra novaehollandiae</i> (Red-necked Avocet)			
302.	48096 <i>Rhipidura albiscapa</i> (Grey Fantail)			
303.	25614 <i>Rhipidura leucophrys</i> (Willie Wagtail)			
304.	24454 <i>Rhipidura leucophrys</i> subsp. <i>leucophrys</i> (Willie Wagtail)			
305.	48237 <i>Rostratula australis</i> (Australian Painted Snipe)		T	
306.	25534 <i>Sericornis frontalis</i> (White-browed Scrubwren)			
307.	<i>Serinus canarius</i>			
308.	30948 <i>Smicrornis brevirostris</i> (Weebill)			

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309.	24522 <i>Sterna bergii</i> (Crested Tern)			
310.	24525 <i>Sterna fuscata</i> subsp. <i>nubilosa</i> (Sooty Tern)			
311.	24533 <i>Sterna paradisaea</i> (Arctic Tern)			
312.	48594 <i>Sternula nereis</i> (Fairy Tern)			
313.	48595 <i>Sternula nereis</i> subsp. <i>nereis</i> (Fairy Tern)		T	
314.	24329 <i>Stictonetta naevosa</i> (Freckled Duck)			
315.	25597 <i>Strepera versicolor</i> (Grey Currawong)			
316.	25589 <i>Streptopelia chinensis</i> (Spotted Turtle-Dove)	Y		
317.	30951 <i>Streptopelia chinensis</i> subsp. <i>tigrina</i> (Spotted Turtle-Dove)	Y		
318.	25590 <i>Streptopelia senegalensis</i> (Laughing Turtle-Dove)	Y		
319.	30950 <i>Streptopelia senegalensis</i> subsp. <i>senegalensis</i> (Laughing Turtle-Dove)	Y		
320.	25752 <i>Sturnus vulgaris</i> (Common Starling)	Y		
321.	25705 <i>Tachybaptus novaehollandiae</i> (Australasian Grebe, Black-throated Grebe)			
322.	24682 <i>Tachybaptus novaehollandiae</i> subsp. <i>novaehollandiae</i> (Australasian Grebe, Black-throated Grebe)			
323.	<i>Tachybaptus</i> sp.			
324.	25552 <i>Tadorna radjah</i> (Radjah Shelduck)			
325.	24331 <i>Tadorna tadornoides</i> (Australian Shelduck, Mountain Duck)			
326.	30871 <i>Taeniopygia guttata</i> subsp. <i>castanotis</i> (Zebra Finch)			
327.	48597 <i>Thalasseus bergii</i> (Crested Tern)		IA	
328.	48135 <i>Thinornis rubricollis</i> (Hooded Plover, Hooded Dotterel)		P4	
329.	24845 <i>Threskiornis spinicollis</i> (Straw-necked Ibis)			
330.	25549 <i>Todiramphus sanctus</i> (Sacred Kingfisher)			
331.	24309 <i>Todiramphus sanctus</i> subsp. <i>sanctus</i> (Sacred Kingfisher)			
332.	48141 <i>Tribonyx ventralis</i> (Black-tailed Native-hen)			
333.	25723 <i>Trichoglossus haematodus</i> (Rainbow Lorikeet)			
334.	24755 <i>Trichoglossus haematodus</i> subsp. <i>moluccanus</i> (Rainbow Lorikeet)	Y		
335.	24754 <i>Trichoglossus haematodus</i> subsp. <i>rubitorquis</i> (Red-collared Lorikeet)			
336.	24803 <i>Tringa brevipes</i> (Grey-tailed Tattler)		P4	
337.	24806 <i>Tringa glareola</i> (Wood Sandpiper)		IA	
338.	24808 <i>Tringa nebularia</i> (Common Greenshank, greenshank)		IA	
339.	48147 <i>Turnix varius</i> (Painted Button-quail)			
340.	24852 <i>Tyto alba</i> subsp. <i>delicatula</i> (Barn Owl)			
341.	24855 <i>Tyto novaehollandiae</i> subsp. <i>novaehollandiae</i> (Masked Owl (southwest))		P3	
342.	25577 <i>Vanellus miles</i> (Masked Lapwing)			
343.	24386 <i>Vanellus tricolor</i> (Banded Lapwing)			
344.	41351 <i>Xenus cinereus</i> (Terek Sandpiper)		IA	
345.	25765 <i>Zosterops lateralis</i> (Grey-breasted White-eye, Silvereye)			

Bryopsid (Moss)

346.	32315 <i>Barbula calycina</i>			
347.	32330 <i>Bryum argenteum</i>			
348.	<i>Bryum</i> sp.			
349.	32338 <i>Campylopus introflexus</i>	Y		
350.	32462 <i>Ceratodon purpureus</i> subsp. <i>convolutus</i>			
351.	32345 <i>Didymodon australasiae</i>			
352.	32346 <i>Didymodon torquatus</i>			
353.	20162 <i>Fabronia hampeana</i>		P2	
354.	32466 <i>Fissidens curvatus</i> var. <i>curvatus</i>			
355.	32367 <i>Fissidens megalotis</i>			
356.	32370 <i>Funaria hygrometrica</i>			
357.	32376 <i>Gemmabryum dichotomum</i>			
358.	32380 <i>Gemmabryum pachythecum</i>			
359.	32381 <i>Gemmabryum preissianum</i>			
360.	32390 <i>Gymnostomum calcareum</i>			
361.	32398 <i>Leptobryum pyriforme</i>			
362.	36219 <i>Pseudocrossidium hornschurchianum</i>			
363.	32417 <i>Ptychostomum angustifolium</i>			
364.	32480 <i>Racopilum cuspidigerum</i> var. <i>convolutaceum</i>			
365.	32424 <i>Rosulabryum albolimbatum</i>			
366.	44608 <i>Rosulabryum billardieri</i>			
367.	32426 <i>Rosulabryum campylotheicum</i>			
368.	32437 <i>Syntrichia antarctica</i>			
369.	32438 <i>Syntrichia pagorum</i>			
370.	32445 <i>Tortula muralis</i>			
371.	32450 <i>Trichostomum eckelianum</i>			
372.	32455 <i>Weissia controversa</i>			

Dicotyledon

373.	19708 <i>Abutilon grandifolium</i>	Y		
374.	3200 <i>Acacia acuminata</i> (Jam, Mangard)			

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375.	15466 <i>Acacia applanata</i>			
376.	15469 <i>Acacia barbinervis</i> subsp. <i>barbinervis</i>			
377.	3237 <i>Acacia benthamii</i>		P2	
378.	3242 <i>Acacia blakelyi</i>			
379.	3262 <i>Acacia cochlearis</i> (Rigid Wattle)			
380.	12253 <i>Acacia consobrina</i>			
381.	3273 <i>Acacia craspedocarpa</i> (Hop Mulga)			
382.	3282 <i>Acacia cyclops</i> (Coastal Wattle)			
383.	11661 <i>Acacia drummondii</i> subsp. <i>drummondii</i>			
384.	3323 <i>Acacia ericifolia</i>			
385.	3373 <i>Acacia horridula</i>		P3	
386.	3374 <i>Acacia huegelii</i>			
387.	3383 <i>Acacia incurva</i>			
388.	18217 <i>Acacia iteaphylla</i>	Y		
389.	3395 <i>Acacia jibberdingensis</i>			
390.	3408 <i>Acacia lasiocalyx</i> (Silver Wattle, Wilyurwur)			
391.	11611 <i>Acacia lasiocarpa</i> var. <i>lasiocarpa</i>			
392.	15721 <i>Acacia lasiocarpa</i> var. <i>sedifolia</i>			
393.	3424 <i>Acacia littorea</i>			
394.	18597 <i>Acacia longifolia</i> subsp. <i>sophorae</i>	Y		
395.	10955 <i>Acacia melanoxylon</i>	Y		
396.	3442 <i>Acacia microbotrya</i> (Manna Wattle, Kalyang)			
397.	3454 <i>Acacia nervosa</i> (Rib Wattle)			
398.	3482 <i>Acacia paradoxa</i> (Kangaroo Thorn)	Y		
399.	17860 <i>Acacia podalyriifolia</i>	Y		
400.	3502 <i>Acacia pulchella</i> (Prickly Moses)			
401.	15481 <i>Acacia pulchella</i> var. <i>glaberrima</i>			
402.	15483 <i>Acacia pulchella</i> var. <i>pulchella</i>			
403.	3505 <i>Acacia pycnocephala</i>			
404.	3515 <i>Acacia restiacea</i>			
405.	42600 <i>Acacia salicina</i>			
406.	3527 <i>Acacia saligna</i> (Orange Wattle, Kudjong)			
407.	30032 <i>Acacia saligna</i> subsp. <i>saligna</i>			
408.	3541 <i>Acacia sessilis</i>			
409.	3557 <i>Acacia stenoptera</i> (Narrow Winged Wattle)			
410.	3564 <i>Acacia subcaerulea</i>			
411.	3576 <i>Acacia tetragonocarpa</i>			
412.	3584 <i>Acacia truncata</i>			
413.	3602 <i>Acacia willdenowiana</i> (Grass Wattle)			
414.	3604 <i>Acacia xanthina</i> (White-stemmed Wattle)			
415.	3184 <i>Acaena echinata</i> (Sheep's Burr)			
416.	40761 <i>Acer negundo</i>	Y		
417.	7812 <i>Achillea millefolium</i> (Yarrow, Milfoil)	Y		
418.	6203 <i>Actinotus glomeratus</i>			
419.	14970 <i>Adenanthos barbiger</i>			
420.	11837 <i>Adenanthos cygnorum</i> subsp. <i>cygnorum</i> (Common Woollybush)			
421.	18306 <i>Ageratina adenophora</i> (Crofton Weed)	Y		
422.	5316 <i>Agonis flexuosa</i> (Peppermint, Wonil)			
423.	17202 <i>Agonis flexuosa</i> var. <i>flexuosa</i>			
424.	17028 <i>Ailanthus altissima</i> (Tree of Heaven)	Y		
425.	1728 <i>Allocasuarina fraseriana</i> (Sheoak, Kondil)			
426.	1731 <i>Allocasuarina huegeliana</i> (Rock Sheoak, Kwowl)			
427.	1732 <i>Allocasuarina humilis</i> (Dwarf Sheoak)			
428.	13908 <i>Allocasuarina lehmanniana</i> subsp. <i>lehmanniana</i>			
429.	2656 <i>Amaranthus caudatus</i> (Love Lies Bleeding)	Y		
430.	2659 <i>Amaranthus cruentus</i> (Redshank)	Y		
431.	2662 <i>Amaranthus hybridus</i> (Slim Amaranth)	Y		
432.	2671 <i>Amaranthus viridis</i> (Green Amaranth)	Y		
433.	7821 <i>Ambrosia psilostachya</i> (Perennial Ragweed)	Y		
434.	6671 <i>Amsinckia calycina</i> (Yellow Burrweed)	Y		
435.	13267 <i>Amyema linophylla</i> subsp. <i>linophylla</i>			
436.	2380 <i>Amyema miquelii</i> (Stalked Mistletoe)			
437.	6314 <i>Andersonia lehmanniana</i>			
438.	7827 <i>Angianthus cunninghamii</i> (Coast Angianthus)			
439.	7831 <i>Angianthus micropodioides</i>		P3	
440.	46236 <i>Anisomeles farinacea</i>			
441.	17455 <i>Anredera cordifolia</i>	Y		
442.	11725 <i>Anthocercis ilicifolia</i> subsp. <i>ilicifolia</i>			
443.	6949 <i>Anthocercis littorea</i> (Yellow Tailflower)			
444.	3686 <i>Aotus cordifolia</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
445.	3688 <i>Aotus gracillima</i>			
446.	3186 <i>Aphanes arvensis</i> (Parsley Piert)	Y		
447.	6210 <i>Apium annuum</i>			
448.	12040 <i>Apium prostratum</i> subsp. <i>prostratum</i> var. <i>prostratum</i> (Sea Celery)			
449.	7838 <i>Arctotheca calendula</i> (Cape Weed, African Marigold)	Y		
450.	7840 <i>Arctotis stoechadifolia</i> (White Arctotis, Silver Arctotis)	Y		
451.	17797 <i>Argemone ochroleuca</i> subsp. <i>ochroleuca</i>	Y		
452.	28293 <i>Argyranthemum frutescens</i> subsp. <i>foeniculaceum</i>	Y		
453.	20350 <i>Astartea affinis</i> (West-coast Astartea)			
454.	20283 <i>Astartea scoparia</i> (Common Astartea)			
455.	7851 <i>Asteridea pulverulenta</i> (Common Bristle Daisy)			
456.	6323 <i>Astroloma ciliatum</i> (Candle Cranberry)			
457.	6330 <i>Astroloma macrocalyx</i> (Swan Berry)			
458.	6331 <i>Astroloma microcalyx</i> (Native Cranberry)			
459.	6334 <i>Astroloma pallidum</i> (Kick Bush)			
460.	6339 <i>Astroloma xerophyllum</i>			
461.	2462 <i>Atriplex hypoleuca</i>			
462.	2463 <i>Atriplex isatidea</i> (Coast Saltbush)			
463.	2471 <i>Atriplex prostrata</i> (Hastate Orache)	Y		
464.	2475 <i>Atriplex semibaccata</i> (Berry Saltbush)			
465.	36441 <i>Babingtonia camphorosmae</i> (Camphor Myrtle)			
466.	16346 <i>Bacopa monnieri</i>	Y		
467.	32682 <i>Banksia armata</i> var. <i>armata</i>			
468.	1799 <i>Banksia ashbyi</i> (Ashby's Banksia)			
469.	1800 <i>Banksia attenuata</i> (Slender Banksia, Piara)			
470.	32580 <i>Banksia dallanneyi</i> subsp. <i>dallanneyi</i> var. <i>dallanneyi</i>			
471.	32523 <i>Banksia fraseri</i> var. <i>fraseri</i>			
472.	1822 <i>Banksia ilicifolia</i> (Holly-leaved Banksia)			
473.	1830 <i>Banksia littoralis</i> (Swamp Banksia, Pungura)			
474.	1834 <i>Banksia menziesii</i> (Firewood Banksia)			
475.	1842 <i>Banksia prionotes</i> (Acorn Banksia)			
476.	1847 <i>Banksia sceptrum</i> (Sceptre Banksia)			
477.	32076 <i>Banksia sessilis</i> (Parrot Bush, Pudjak)			
478.	32077 <i>Banksia sessilis</i> var. <i>cygnorum</i>			
479.	1851 <i>Banksia sphaerocarpa</i> (Round-fruit Banksia)			
480.	32054 <i>Banksia undata</i> var. <i>undata</i>			
481.	1855 <i>Banksia victoriae</i> (Woolly Orange Banksia)			
482.	5382 <i>Beaufortia elegans</i> (Elegant Beaufortia)			
483.	7046 <i>Bellardia trixago</i> (Bellardia)	Y		
484.	7853 <i>Berkheya rigida</i> (African Thistle, Hamelin Thistle)	Y		
485.	34236 <i>Beyeria cinerea</i> subsp. <i>cinerea</i>		P3	
486.	7855 <i>Bidens pilosa</i> (Cobbler's Pegs)	Y		
487.	25788 <i>Billardiera fraseri</i> (Elegant Pronaya)			
488.	25798 <i>Billardiera fusiformis</i> (Australian Bluebell)			
489.	11381 <i>Boronia ramosa</i> subsp. <i>anethifolia</i>			
490.	16639 <i>Boronia scabra</i> subsp. <i>scabra</i>			
491.	3710 <i>Bossiaea eriocarpa</i> (Common Brown Pea)			
492.	3714 <i>Bossiaea ornata</i> (Broad Leaved Brown Pea)			
493.	10915 <i>Brachychiton populneus</i> (Kurrajong)	Y		
494.	15000 <i>Brachychiton populneus</i> subsp. <i>populneus</i>	Y		
495.	6341 <i>Brachyloma preissii</i> (Globe Heath)			
496.	7867 <i>Brachyscome bellidioides</i>			
497.	7878 <i>Brachyscome iberidifolia</i>			
498.	11187 <i>Brassica barrelieri</i> subsp. <i>oxyrrhina</i> (Smooth-stem Turnip)	Y		
499.	2993 <i>Brassica fruticulosa</i> (Twiggy Turnip)	Y		
500.	2999 <i>Brassica rapa</i>	Y		
501.	3000 <i>Brassica tournefortii</i> (Mediterranean Turnip)	Y		
502.	2995 <i>Brassica x napus</i>	Y		
503.	14157 <i>Buddleja dysophylla</i>	Y		Y
504.	6537 <i>Buddleja madagascariensis</i>	Y		
505.	6675 <i>Buglossoides arvensis</i> (Corn Gromwell)	Y		
506.	3178 <i>Byblis gigantea</i> (Rainbow Plant)		P3	
507.	3002 <i>Cakile maritima</i> (Sea Rocket)	Y		
508.	2848 <i>Calandrinia corrigioloides</i> (Strap Purslane)			
509.	48988 <i>Callistemon citrinus</i>	Y		
510.	5395 <i>Callistemon phoeniceus</i> (Lesser Bottlebrush, Dubarda)			
511.	4717 <i>Callitriche stagnalis</i> (Common Starwort)	Y		
512.	5408 <i>Calothamnus gilesii</i>			
513.	5410 <i>Calothamnus graniticus</i>			
514.	11333 <i>Calothamnus graniticus</i> subsp. <i>leptophyllum</i>			

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Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
515.	5415 <i>Calothamnus lateralis</i>			
516.	5418 <i>Calothamnus macrocarpus</i>		P2	
517.	5426 <i>Calothamnus quadrifidus</i> (One-sided Bottlebrush, Kwojdjard)			
518.	35756 <i>Calothamnus quadrifidus</i> subsp. <i>angustifolius</i>			
519.	35758 <i>Calothamnus quadrifidus</i> subsp. <i>homalophyllus</i> (Murchison Clawflower)			
520.	35816 <i>Calothamnus quadrifidus</i> subsp. <i>quadrifidus</i>			
521.	5428 <i>Calothamnus rupestris</i> (Mouse Ears)			
522.	5429 <i>Calothamnus sanguineus</i> (Silky-leaved Blood flower, Pindak)			
523.	5439 <i>Calytrix angulata</i> (Yellow Starflower)			
524.	5441 <i>Calytrix aurea</i>			
525.	5458 <i>Calytrix flavescens</i> (Summer Starflower)			
526.	5460 <i>Calytrix fraseri</i> (Pink Summer Calytrix)			
527.	5461 <i>Calytrix glutinosa</i>			
528.	5465 <i>Calytrix leschenaultii</i>			
529.	5476 <i>Calytrix sapphirina</i>			
530.	5481 <i>Calytrix sylvana</i>			
531.	18134 <i>Cannabis sativa</i>	Y		
532.	3004 <i>Capsella bursa-pastoris</i> (Shepherd's Purse)	Y		
533.	3005 <i>Cardamine hirsuta</i> (Common Bittercress)	Y		
534.	2795 <i>Carpobrotus edulis</i> (Hottentot Fig)	Y		
535.	2951 <i>Cassythia flava</i> (Dodder Laurel)			
536.	2957 <i>Cassythia racemosa</i> (Dodder Laurel)			
537.	18321 <i>Casuarina glauca</i>	Y		
538.	1742 <i>Casuarina obesa</i> (Swamp Sheoak, Kuli)			
539.	6539 <i>Centaureum erythraea</i> (Common Centaury)	Y		
540.	6542 <i>Centaureum tenuiflorum</i>	Y		
541.	6214 <i>Centella asiatica</i>			
542.	7918 <i>Centipeda cunninghamii</i> (Common Sneezewood, Gukwonderuk, Old Man Weed)			
543.	7366 <i>Centranthus macrosiphon</i>	Y		
544.	2889 <i>Cerastium glomeratum</i> (Mouse Ear Chickweed)	Y		
545.	18156 <i>Chamaecytisus palmensis</i> (Tagasaste)	Y		
546.	35598 <i>Chamelaucium</i> sp. <i>Winchester</i> (C. <i>Chapman</i> s.n. PERTH 07879180)			
547.	5498 <i>Chamelaucium uncinatum</i> (Geraldton Wax)			
548.	2483 <i>Chenopodium album</i> (Fat Hen)	Y		
549.	2494 <i>Chenopodium murale</i> (Nettle-leaf Goosefoot)	Y		
550.	7925 <i>Chondrilla juncea</i> (Skeleton Weed)	Y		
551.	17585 <i>Chrysocoma coma-aurea</i>	Y		Y
552.	3766 <i>Cicer arietinum</i> (Chickpea)	Y		
553.	18303 <i>Cinnamomum camphora</i>	Y		
554.	7937 <i>Cirsium vulgare</i> (Spear Thistle, Scotch Thistle)	Y		
555.	10804 <i>Clematis linearifolia</i>			
556.	2929 <i>Clematis pubescens</i> (Common Clematis)			
557.	44593 <i>Coleonema pulchellum</i>	Y		
558.	4550 <i>Comesperma calymega</i> (Blue-spike Milkwort)			
559.	4552 <i>Comesperma confertum</i>			
560.	4555 <i>Comesperma integerrimum</i>			
561.	15516 <i>Conospermum canaliculatum</i> subsp. <i>canaliculatum</i>			
562.	1875 <i>Conospermum huegelii</i> (Slender Smokebush)			
563.	15520 <i>Conospermum stoechadis</i> subsp. <i>sclerophyllum</i>			
564.	15611 <i>Conospermum stoechadis</i> subsp. <i>stoechadis</i> (Common Smokebush)			
565.	1885 <i>Conospermum triplinervium</i> (Tree Smokebush)			
566.	6348 <i>Conostephium pendulum</i> (Pearl Flower)			
567.	6349 <i>Conostephium preissii</i>			
568.	17361 <i>Convolvulus sabatius</i> subsp. <i>mauritanicus</i>	Y		Y
569.	7939 <i>Conyza bonariensis</i> (Flaxleaf Fleabane)	Y		
570.	16391 <i>Conyza canadensis</i> var. <i>canadensis</i>	Y		
571.	7941 <i>Conyza parva</i>	Y		
572.	20074 <i>Conyza sumatrensis</i>	Y		
573.	17104 <i>Corymbia calophylla</i> (Marri)			
574.	44790 <i>Corymbia citriodora</i>	Y		
575.	44791 <i>Corymbia maculata</i>	Y		
576.	38383 <i>Cosmos bipinnatus</i> (Cosmos)	Y		Y
577.	7943 <i>Cotula australis</i> (Common Cotula)			
578.	7945 <i>Cotula coronopifolia</i> (Waterbuttons)	Y		
579.	7947 <i>Cotula turbinata</i> (Funnel Weed)	Y		
580.	3136 <i>Crassula alata</i>	Y		
581.	11221 <i>Crassula alata</i> var. <i>alata</i>	Y		
582.	3137 <i>Crassula colorata</i> (Dense Stonecrop)			
583.	11709 <i>Crassula colorata</i> var. <i>acuminata</i>			
584.	11563 <i>Crassula colorata</i> var. <i>colorata</i>			

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585.	3138 <i>Crassula decumbens</i> (Rufous Stonecrop)			
586.	11349 <i>Crassula decumbens</i> var. <i>decumbens</i>			
587.	3140 <i>Crassula glomerata</i>	Y		
588.	15706 <i>Crassula natans</i> var. <i>minus</i>	Y		
589.	11345 <i>Crassula thunbergiana</i> subsp. <i>thunbergiana</i>	Y		
590.	29054 <i>Crepis foetida</i> subsp. <i>foetida</i> (Stinking Hawksbeard)	Y		
591.	35838 <i>Cristonia biloba</i> subsp. <i>biloba</i>			
592.	4792 <i>Cryptandra arbutiflora</i> (Waxy Cryptandra)			
593.	13470 <i>Cryptandra arbutiflora</i> var. <i>arbutiflora</i>			
594.	13484 <i>Cryptandra arbutiflora</i> var. <i>tubulosa</i>			
595.	4802 <i>Cryptandra mutila</i>			
596.	4810 <i>Cryptandra scoparia</i>			
597.	13732 <i>Cuscuta campestris</i> (Golden dodder)	Y		
598.	6663 <i>Cuscuta epithymum</i> (Lesser Dodder, Greater Dodder)	Y		
599.	19625 <i>Cymbalaria muralis</i> subsp. <i>muralis</i>	Y		
600.	7454 <i>Dampiera linearis</i> (Common Dampiera)			
601.	5508 <i>Darwinia citriodora</i> (Lemon-scented Darwinia)			
602.	6963 <i>Datura metel</i> (Downy Thornapple)	Y		
603.	6964 <i>Datura stramonium</i> (Common Thornapple)	Y		
604.	6218 <i>Daucus glochidiatus</i> (Australian Carrot)			
605.	3793 <i>Daviesia angulata</i>			
606.	3805 <i>Daviesia decurrens</i> (Prickly Bitter-pea)			
607.	19747 <i>Daviesia decurrens</i> subsp. <i>decurrens</i>			
608.	18560 <i>Daviesia divaricata</i> subsp. <i>divaricata</i>			
609.	11879 <i>Daviesia hakeoides</i> subsp. <i>hakeoides</i>			
610.	3815 <i>Daviesia horrida</i> (Prickly Bitter-pea)			
611.	15505 <i>Daviesia incrassata</i> subsp. <i>incrassata</i>			
612.	16585 <i>Daviesia nudiflora</i> subsp. <i>nudiflora</i>			
613.	3832 <i>Daviesia physodes</i>			
614.	3845 <i>Daviesia triflora</i>			
615.	6766 <i>Dicrastylis micrantha</i>		P3	
616.	18549 <i>Dicrastylis soliparma</i>			
617.	4453 <i>Diplolaena angustifolia</i> (Yanchep Rose)			
618.	18541 <i>Diplopeltis huegelii</i> subsp. <i>huegelii</i>			
619.	18589 <i>Diplopeltis huegelii</i> subsp. <i>lehmannii</i>			
620.	3011 <i>Diplotaxis muralis</i> (Wall Rocket)	Y		
621.	7054 <i>Dischisma arenarium</i>	Y		
622.	7055 <i>Dischisma capitatum</i> (Woolly-headed Dischisma)	Y		
623.	48737 <i>Distimake dissectus</i>	Y		Y
624.	7961 <i>Dittrichia graveolens</i> (Stinkwort)	Y		
625.	4754 <i>Dodonaea aptera</i> (Coast Hop-bush)			
626.	4763 <i>Dodonaea hackettiana</i> (Hackett's Hopbush)		P4	
627.	2800 <i>Drosanthemum candens</i> (Redondo Creeper)	Y		
628.	48751 <i>Drosera drummondii</i>			
629.	3095 <i>Drosera erythrorhiza</i> (Red Ink Sundew)			
630.	3097 <i>Drosera gigantea</i> (Giant Sundew)			
631.	48768 <i>Drosera hirsuta</i>			
632.	3106 <i>Drosera macrantha</i> (Bridal Rainbow)			
633.	3109 <i>Drosera menziesii</i> (Pink Rainbow)			
634.	3110 <i>Drosera microphylla</i> (Golden Rainbow)			
635.	3114 <i>Drosera nitidula</i> (Shining Sundew)			
636.	3118 <i>Drosera pallida</i> (Pale Rainbow)			
637.	29178 <i>Drosera porrecta</i>			
638.	3128 <i>Drosera ramellosa</i> (Branched Sundew)			
639.	8911 <i>Drosera rosulata</i>			
640.	49090 <i>Drosera</i> sp. <i>Branched styles</i> (S.C. Coffey 193)			
641.	13185 <i>Drosera pilos</i>			
642.	3131 <i>Drosera stolonifera</i> (Leafy Sundew)			
643.	33500 <i>Dysphania ambrosioides</i> (Mexican Tea)	Y		
644.	11368 <i>Dysphania glomulifera</i> subsp. <i>glomulifera</i>			
645.	33517 <i>Dysphania multifida</i> (Scented Goosefoot)	Y		
646.	6681 <i>Echium plantagineum</i> (Paterson's Curse)	Y		
647.	8450 <i>Eclipta prostrata</i>	Y		
648.	11756 <i>Epilobium billardioreanum</i> subsp. <i>cinereum</i> (Variable Willow Herb)			
649.	11992 <i>Epilobium billardioreanum</i> subsp. <i>intermedium</i>			
650.	6132 <i>Epilobium ciliatum</i>	Y		
651.	14289 <i>Epilobium tetragonum</i> subsp. <i>tetragonum</i>	Y		
652.	13950 <i>Eremaea asterocarpa</i> subsp. <i>asterocarpa</i>			
653.	5541 <i>Eremaea pauciflora</i>			
654.	14104 <i>Eremaea pauciflora</i> var. <i>pauciflora</i>			

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655.	17175 <i>Eremophila glabra</i> subsp. <i>albicans</i>			
656.	7968 <i>Erigeron karvinskianus</i>	Y		
657.	4332 <i>Erodium botrys</i> (Long Storksbill)	Y		
658.	4333 <i>Erodium cicutarium</i> (Common Storksbill)	Y		
659.	4336 <i>Erodium moschatum</i> (Musky Crowfoot)	Y		
660.	6219 <i>Eryngium pinnatifidum</i> (Blue Devils)			
661.	12895 <i>Eucalyptus arachnaea</i> subsp. <i>arachnaea</i>			
662.	48189 <i>Eucalyptus cladocalyx</i> subsp. <i>petila</i>	Y		Y
663.	5615 <i>Eucalyptus decipiens</i> (Limestone Marlock, Moit)			
664.	13097 <i>Eucalyptus educta</i>		P2	
665.	5638 <i>Eucalyptus erythrocorys</i> (Illyarrie)			
666.	5649 <i>Eucalyptus foecunda</i> (Narrow-leaved Red Mallee)			
667.	5659 <i>Eucalyptus gomphocephala</i> (Tuart, Duart)			
668.	5708 <i>Eucalyptus marginata</i> (Jarrah, Djara)			
669.	13547 <i>Eucalyptus marginata</i> subsp. <i>marginata</i> (Jarrah)			
670.	13541 <i>Eucalyptus petrensis</i>			
671.	5763 <i>Eucalyptus rudis</i> (Flooded Gum, Kulurda)			
672.	5790 <i>Eucalyptus todtiana</i> (Coastal Blackbutt)			
673.	16915 <i>Eucalyptus x mundijongensis</i>		P1	
674.	3872 <i>Euchilopsis linearis</i> (Swamp Pea)			
675.	4624 <i>Euphorbia dendroides</i>	Y		
676.	4627 <i>Euphorbia helioscopia</i> (Sun Spurge)	Y		
677.	34160 <i>Euphorbia lathyris</i> (Caper Spurge)	Y		
678.	29940 <i>Euphorbia maculata</i>	Y		
679.	4633 <i>Euphorbia marginata</i> (Snow-on-the-mountain)	Y		
680.	4636 <i>Euphorbia paralias</i> (Sea Spurge)	Y		
681.	4638 <i>Euphorbia peplus</i> (Petty Spurge)	Y		
682.	4648 <i>Euphorbia terracina</i> (Geraldton Carnation Weed)	Y		
683.	3880 <i>Eutaxia virgata</i>			
684.	10765 <i>Exocarpos sparteus</i> (Broom Ballart, Djuk)			
685.	8850 <i>Fallopia convolvulus</i>	Y		
686.	1747 <i>Ficus carica</i> (Common Fig)	Y		
687.	<i>Ficus macrophylla</i>			
688.	6221 <i>Foeniculum vulgare</i> (Fennel)	Y		
689.	5209 <i>Frankenia pauciflora</i> (Seaheath)			
690.	8365 <i>Fumaria bastardii</i>	Y		
691.	2969 <i>Fumaria capreolata</i> (Whiteflower Fumitory)	Y		
692.	2971 <i>Fumaria muralis</i> (Wall Fumitory)	Y		
693.	31532 <i>Fumaria muralis</i> subsp. <i>muralis</i>	Y		
694.	7976 <i>Galinsoga parviflora</i> (Potato Weed)	Y		
695.	17348 <i>Galium aparine</i> (Goosegrass)	Y		
696.	7321 <i>Galium divaricatum</i>	Y		
697.	7323 <i>Galium murale</i> (Small Goosegrass)	Y		
698.	20346 <i>Gamochaeta coarctata</i>	Y		
699.	19195 <i>Gamochaeta pensylvanica</i>	Y		
700.	20475 <i>Gastrolobium capitatum</i>			
701.	20473 <i>Gastrolobium ebracteolatum</i>			
702.	20483 <i>Gastrolobium linearifolium</i>			
703.	20482 <i>Gastrolobium nervosum</i>			
704.	20512 <i>Gastrolobium praemorsum</i>			
705.	3924 <i>Gastrolobium spinosum</i> (Prickly Poison)			
706.	4339 <i>Geranium molle</i> (Dove's Foot Cranesbill)	Y		
707.	4341 <i>Geranium solanderi</i> (Native Geranium)			
708.	29836 <i>Glandularia aristigera</i>	Y		
709.	46135 <i>Glebionis coronaria</i> (Summer Chrysanthemum)	Y		
710.	3663 <i>Gleditsia triacanthos</i> (Honey Locust)	Y		
711.	33620 <i>Glischrocaryon angustifolium</i>			
712.	6143 <i>Glischrocaryon aureum</i> (Common Popflower)			
713.	12624 <i>Gnephosis angianthoides</i>			
714.	8002 <i>Gnephosis tenuissima</i>			
715.	6587 <i>Gomphocarpus fruticosus</i> (Narrowleaf Cottonbush)	Y		
716.	11051 <i>Gomphocarpus physocarpus</i>	Y		
717.	3945 <i>Gompholobium aristatum</i>			
718.	10909 <i>Gompholobium confertum</i>			
719.	3954 <i>Gompholobium polymorphum</i>			
720.	3956 <i>Gompholobium shuttleworthii</i>			
721.	3957 <i>Gompholobium tomentosum</i> (Hairy Yellow Pea)			
722.	6161 <i>Gonocarpus pthyoides</i>			
723.	7534 <i>Goodenia pinifolia</i> (Pine-leaved Goodenia)			
724.	37500 <i>Grammatotheca bergiana</i> var. <i>bergiana</i>	Y		

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
725.	14282 <i>Gratiola pubescens</i>			
726.	19628 <i>Grevillea bipinnatifida</i> subsp. <i>bipinnatifida</i>			
727.	1982 <i>Grevillea crithmifolia</i>			
728.	1997 <i>Grevillea endlicheriana</i> (Spindly Grevillea)			
729.	13450 <i>Grevillea manglesii</i> subsp. <i>manglesii</i>			
730.	13452 <i>Grevillea manglesii</i> subsp. <i>ornithopoda</i>		P2	
731.	8836 <i>Grevillea obtusifolia</i> (Obtuse Leaved Grevillea)			
732.	2066 <i>Grevillea pilulifera</i> (Woolly-flowered Grevillea)			
733.	15839 <i>Grevillea preissii</i> subsp. <i>preissii</i>			
734.	14421 <i>Grevillea synapheae</i> subsp. <i>synapheae</i>			
735.	2119 <i>Grevillea vestita</i>			
736.	12824 <i>Grevillea vestita</i> subsp. <i>vestita</i>			
737.	5014 <i>Guichenotia sarotes</i>			
738.	2784 <i>Gyrostemon ramulosus</i> (Corkybark)			
739.	2135 <i>Hakea bucculenta</i> (Red Pokers)			
740.	2136 <i>Hakea candolleana</i>			
741.	2143 <i>Hakea conchifolia</i> (Shell-leaved Hakea)			
742.	2146 <i>Hakea costata</i> (Ribbed Hakea)			
743.	2166 <i>Hakea incrassata</i> (Marble Hakea)			
744.	2175 <i>Hakea lissocarpha</i> (Honey Bush)			
745.	2185 <i>Hakea myrtoides</i> (Myrtle Hakea)			
746.	2194 <i>Hakea petiolaris</i> (Sea Urchin Hakea)			
747.	2197 <i>Hakea prostrata</i> (Harsh Hakea)			
748.	2214 <i>Hakea trifurcata</i> (Two-leaf Hakea)			
749.	2215 <i>Hakea undulata</i> (Wavy-leaved Hakea)			
750.	2216 <i>Hakea varia</i> (Variable-leaved Hakea)			
751.	3961 <i>Hardenbergia comptoniana</i> (Native Wisteria)			
752.	8008 <i>Helianthus annuus</i> (Sunflower, Common Sunflower)	Y		
753.	12016 <i>Helianthus debilis</i> subsp. <i>cucumerifolius</i>	Y		
754.	3016 <i>Heliophila pusilla</i>	Y		
755.	6707 <i>Heliotropium curassavicum</i> (Smooth Heliotrope)			
756.	8084 <i>Helminthotheca echioides</i> (Ox-tongue, Prickly Ox-tongue)	Y		
757.	16933 <i>Hemiandra glabra</i>			
758.	6838 <i>Hemiandra linearis</i> (Speckled Snakebush)			
759.	6839 <i>Hemiandra pungens</i> (Snakebush)			
760.	5112 <i>Hibbertia aurea</i>			
761.	5117 <i>Hibbertia cuneiformis</i> (Cutleaf Hibbertia)			
762.	20051 <i>Hibbertia diamesogenos</i>			
763.	5134 <i>Hibbertia huegelii</i>			
764.	5135 <i>Hibbertia hypericoides</i> (Yellow Buttercups)			
765.	45534 <i>Hibbertia hypericoides</i> subsp. <i>hypericoides</i>			
766.	5162 <i>Hibbertia racemosa</i> (Stalked Guinea Flower)			
767.	<i>Hibbertia</i> sp.			
768.	11461 <i>Hibbertia spicata</i> subsp. <i>leptotheca</i>		P3	
769.	5172 <i>Hibbertia stellaris</i> (Orange Stars)			
770.	48381 <i>Hibbertia striata</i>			
771.	5173 <i>Hibbertia subvaginata</i>			
772.	5176 <i>Hibbertia vaginata</i>			
773.	43080 <i>Hibiscus tridactylites</i>	Y		
774.	6222 <i>Homalosciadium homalocarpum</i>			
775.	3966 <i>Hovea pungens</i> (Devil's Pins, Puyenak)			
776.	3968 <i>Hovea trisperma</i> (Common Hovea)			
777.	12859 <i>Hovea trisperma</i> var. <i>trisperma</i>			
778.	12741 <i>Hyalosperma cotula</i>			
779.	5216 <i>Hybanthus calycinus</i> (Wild Violet)			
780.	6224 <i>Hydrocotyle blepharocarpa</i>			
781.	6225 <i>Hydrocotyle bonariensis</i>	Y		
782.	6229 <i>Hydrocotyle diantha</i>			
783.	11546 <i>Hydrocotyle pilifera</i> var. <i>glabrata</i>			
784.	6241 <i>Hydrocotyle tetragonocarpa</i>			
785.	20043 <i>Hypericum canariense</i>	Y		
786.	5180 <i>Hypericum gramineum</i> (Small St John's Wort)			
787.	5817 <i>Hypocalymma angustifolium</i> (White Myrtle, Kudjid)			
788.	35070 <i>Hypocalymma angustifolium</i> subsp. <i>Swan Coastal Plain</i> (G.J. Keighery 16777)			
789.	5825 <i>Hypocalymma robustum</i> (Swan River Myrtle)			
790.	8086 <i>Hypochaeris glabra</i> (Smooth Catsear)	Y		
791.	9352 <i>Hypochaeris radicata</i> (Flat Weed, Cats-ear)	Y		
792.	6620 <i>Ipomoea cairica</i> (Coast Morning Glory)	Y		
793.	6630 <i>Ipomoea indica</i> (Morning Glory)	Y		
794.	2229 <i>Isopogon dubius</i> (Pincushion Coneflower)			

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795.	2237 <i>Isopogon sphaerocephalus</i> (Drumstick Isopogon)			
796.	7396 <i>Isotoma hypocraeteriformis</i> (Woodbridge Poison)			
797.	3992 <i>Isotropis cuneifolia</i> (Granny Bonnets)			
798.	19700 <i>Isotropis cuneifolia</i> subsp. <i>cuneifolia</i>			
799.	4012 <i>Jacksonia furcellata</i> (Grey Stinkwood)			
800.	4018 <i>Jacksonia lehmannii</i>			
801.	4027 <i>Jacksonia sericea</i> (Waldjumi)		P4	
802.	4029 <i>Jacksonia sternbergiana</i> (Stinkwood, Kapur)			
803.	4037 <i>Kennedia coccinea</i> (Coral Vine)			
804.	4044 <i>Kennedia prostrata</i> (Scarlet Runner)			
805.	<i>Kennedia rubicunda</i>			
806.	4045 <i>Kennedia stirlingii</i> (Bushy Kennedia)			
807.	11898 <i>Kickxia elatine</i> subsp. <i>elatine</i>	Y		
808.	7068 <i>Kickxia spuria</i> (Roundleaf Toadflax)	Y		
809.	15498 <i>Kunzea glabrescens</i> (Spearwood)			
810.	17461 <i>Kunzea micrantha</i> subsp. <i>micrantha</i>			
811.	3667 <i>Labichea lanceolata</i> (Tall Labichea)			
812.	17209 <i>Lachnostachys verbascifolia</i> var. <i>verbascifolia</i>			
813.	8095 <i>Lactuca saligna</i> (Wild Lettuce, Willow-leaf Lettuce)	Y		
814.	29046 <i>Lactuca serriola</i> forma <i>serriola</i>	Y		
815.	18585 <i>Lagenophora huegelii</i>			
816.	14646 <i>Lagunaria patersonia</i>	Y		
817.	14083 <i>Lambertia multiflora</i> var. <i>darlingensis</i>			
818.	6733 <i>Lantana camara</i> (Common Lantana)	Y		
819.	17022 <i>Lantana camara</i> var. <i>camara</i>	Y		
820.	45081 <i>Lasiopetalum glutinosum</i> subsp. <i>glutinosum</i>		P3	
821.	5038 <i>Lasiopetalum membranaceum</i>		P3	
822.	4047 <i>Lathyrus tingitanus</i> (Tangier Pea)	Y		
823.	13284 <i>Lawrencella rosea</i>			
824.	4958 <i>Lawrenzia spicata</i>			
825.	7568 <i>Lechenaultia biloba</i> (Blue Leschenaultia)			
826.	7574 <i>Lechenaultia floribunda</i> (Free-flowering Leschenaultia)			
827.	7580 <i>Lechenaultia linarioides</i> (Yellow Leschenaultia)			
828.	6880 <i>Leonotis leonurus</i> (Lion's Ear)	Y		
829.	18312 <i>Leonotis nepetifolia</i>	Y		
830.	44490 <i>Leontodon rhagadioloides</i>	Y		
831.	8099 <i>Leontodon saxatilis</i> (Hairy Hawkbit)	Y		
832.	19989 <i>Lepidium didymum</i>	Y		
833.	3044 <i>Lepidium rotundum</i> (Veined Peppergrass)			
834.	2344 <i>Leptomeria empetrifolmis</i>			
835.	2352 <i>Leptomeria preissiana</i>			
836.	5847 <i>Leptospermum erubescens</i> (Roadside Teatree)			
837.	5850 <i>Leptospermum laevigatum</i> (Coast Teatree)	Y		
838.	5857 <i>Leptospermum spinescens</i>			
839.	3613 <i>Leucaena leucocephala</i> (Leucaena)	Y		
840.	6360 <i>Leucopogon australis</i> (Spiked Beard-heath)			
841.	6374 <i>Leucopogon conostephioides</i>			
842.	6421 <i>Leucopogon oliganthus</i>			
843.	6427 <i>Leucopogon parviflorus</i> (Coast Beard-heath)			
844.	6434 <i>Leucopogon polymorphus</i>			
845.	6436 <i>Leucopogon propinquus</i>			
846.	6439 <i>Leucopogon pulchellus</i> (Beard-heath)			
847.	6440 <i>Leucopogon racemosus</i>			
848.	6444 <i>Leucopogon sprengeioides</i>			
849.	6454 <i>Leucopogon verticillatus</i> (Tassel Flower)			
850.	7677 <i>Levenhookia stipitata</i> (Common Stylewort)			
851.	41780 <i>Limonium hyblaem</i>	Y		
852.	4364 <i>Linum usitatissimum</i> (Flax)	Y		
853.	36160 <i>Liparophyllum capitatum</i>			
854.	9289 <i>Lobelia anceps</i> (Angled Lobelia)			
855.	7407 <i>Lobelia rhytidosperra</i> (Wrinkled-seeded Lobelia)			
856.	7408 <i>Lobelia tenuior</i> (Slender Lobelia)			
857.	3048 <i>Lobularia maritima</i> (Sweet Alyssum)	Y		
858.	6515 <i>Logania vaginalis</i> (White Spray)			
859.	4059 <i>Lotus angustissimus</i> (Narrowleaf Trefoil)	Y		
860.	4063 <i>Lotus uliginosus</i> (Greater Lotus)	Y		
861.	4065 <i>Lupinus angustifolius</i> (Narrowleaf Lupin)	Y		
862.	4066 <i>Lupinus cosentinii</i>	Y		
863.	4067 <i>Lupinus luteus</i> (Yellow Lupin)	Y		
864.	6968 <i>Lycium ferocissimum</i> (African Boxthorn)	Y		

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865.	36375 <i>Lysimachia arvensis</i> (Pimpernel)	Y		
866.	34736 <i>Lysinema pentapetalum</i>			
867.	5281 <i>Lythrum hyssopifolia</i> (Lesser Loosestrife)	Y		
868.	2839 <i>Macarthuria australis</i>			
869.	5866 <i>Malleostemon tuberculatus</i>			
870.	36480 <i>Malva arborea</i> (Tree Mallow)	Y		
871.	4961 <i>Malva parviflora</i> (Marshmallow)	Y		
872.	36522 <i>Malva pseudolavatera</i>	Y		
873.	17633 <i>Marianthus erubescens</i>			
874.	31237 <i>Mauranthemum paludosum</i>	Y		
875.	4074 <i>Medicago laciniata</i> (Cutleaf Medic)	Y		
876.	4075 <i>Medicago littoralis</i> (Strand Medic)	Y		
877.	4077 <i>Medicago minima</i> (Small Burr Medic)	Y		
878.	4079 <i>Medicago polymorpha</i> (Burr Medic)	Y		
879.	4080 <i>Medicago sativa</i> (Alfalfa)	Y		
880.	34676 <i>Meionectes brownii</i> (Swamp Raspwort)			
881.	36296 <i>Melaleuca armillaris</i> subsp. <i>armillaris</i>	Y		
882.	5884 <i>Melaleuca calothamnoides</i>			
883.	5887 <i>Melaleuca cardiophylla</i> (Tangling Melaleuca)			
884.	15603 <i>Melaleuca fulgens</i> subsp. <i>fulgens</i>			
885.	5920 <i>Melaleuca huegelii</i> (Chenille Honeymyrtle)			
886.	13271 <i>Melaleuca huegelii</i> subsp. <i>huegelii</i>			
887.	5922 <i>Melaleuca lanceolata</i> (Rottnest Teatree, Moonah)			
888.	5926 <i>Melaleuca lateritia</i> (Robin Redbreast Bush)			
889.	5936 <i>Melaleuca megacephala</i>			
890.	5943 <i>Melaleuca nesophila</i> (Mindiyed)			
891.	18394 <i>Melaleuca parviceps</i>			
892.	5952 <i>Melaleuca preissiana</i> (Moonah)			
893.	48990 <i>Melaleuca quinquenervia</i>	Y		
894.	5959 <i>Melaleuca raphiophylla</i> (Swamp Paperbark)			
895.	19365 <i>Melaleuca ryeae</i>			
896.	5964 <i>Melaleuca seriata</i>			
897.	18598 <i>Melaleuca systema</i>			
898.	5978 <i>Melaleuca teretifolia</i> (Banbar)			
899.	5980 <i>Melaleuca thymoides</i>			
900.	5983 <i>Melaleuca trichophylla</i>			
901.	37683 <i>Melaleuca viminalis</i>		P2	
902.	13280 <i>Melaleuca viminea</i> subsp. <i>viminea</i>			
903.	4516 <i>Melia azedarach</i> (White Cedar)			
904.	4084 <i>Melilotus albus</i>	Y		
905.	4085 <i>Melilotus indicus</i>	Y		
906.	6884 <i>Mentha spicata</i> (Spearmint)	Y		
907.	8105 <i>Millotia myosotidifolia</i>			
908.	16693 <i>Minuartia mediterranea</i>	Y		
909.	18322 <i>Mirabilis jalapa</i>	Y		
910.	4091 <i>Mirbelia floribunda</i> (Purple Mirbelia)			
911.	7085 <i>Misopates orontium</i> (Lesser Snapdragon)	Y		
912.	2894 <i>Moenchia erecta</i> (Erect Chickweed)	Y		
913.	29418 <i>Monoculus monstrosus</i>	Y		
914.	37440 <i>Monopsis debilis</i> var. <i>depressa</i>	Y		
915.	4662 <i>Monotaxis grandiflora</i> (Diamond of the Desert)			
916.	19585 <i>Monotaxis grandiflora</i> var. <i>grandiflora</i>			
917.	17503 <i>Morus alba</i>	Y		Y
918.	7289 <i>Myoporum caprarioides</i> (Slender Myoporum)			
919.	7291 <i>Myoporum insulare</i> (Blueberry Tree, boobialla)			
920.	6199 <i>Myriophyllum tillaeoides</i>			
921.	6464 <i>Needhamiella pumilio</i>			
922.	6974 <i>Nicotiana glauca</i> (Tree Tobacco)	Y		
923.	2401 <i>Nuytsia floribunda</i> (Christmas Tree, Mudja)			
924.	6139 <i>Oenothera glazioviana</i> (Evening Primrose)	Y		
925.	16347 <i>Oenothera laciniata</i>	Y		
926.	6141 <i>Oenothera speciosa</i> (White Evening Primrose)	Y		
927.	2365 <i>Olex benthamiana</i>			
928.	6503 <i>Olea europaea</i> (Olive)	Y		
929.	11937 <i>Olea europaea</i> subsp. <i>europaea</i>	Y		
930.	8127 <i>Olearia axillaris</i> (Coastal Daisybush)			
931.	8133 <i>Olearia elaeophila</i>			
932.	8143 <i>Olearia paucidentata</i> (Autumn Scrub Daisy)			
933.	8149 <i>Olearia rudis</i> (Rough Daisybush)			
934.	18255 <i>Opercularia vaginata</i> (Dog Weed)			

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935.	29276 <i>Opuntia monacantha</i> (Barbary Fig)	Y		
936.	4113 <i>Ornithopus compressus</i> (Yellow Serradella)	Y		
937.	4115 <i>Ornithopus sativus</i> (French Serradella)	Y		
938.	7122 <i>Orobanche minor</i> (Lesser Broomrape)	Y		
939.	4348 <i>Oxalis caprina</i>	Y		
940.	4349 <i>Oxalis corniculata</i> (Yellow Wood Sorrel)	Y		
941.	18331 <i>Oxalis debilis</i> var. <i>corymbosa</i> (Pink Shamrock)	Y		
942.	4352 <i>Oxalis glabra</i>	Y		
943.	4355 <i>Oxalis perennans</i>			
944.	4356 <i>Oxalis pes-caprae</i> (Soursob)	Y		
945.	4358 <i>Oxalis purpurea</i> (Largeflower Wood Sorrel)	Y		
946.	2966 <i>Papaver somniferum</i> (Opium Poppy)	Y		
947.	17114 <i>Paraserianthes lophantha</i> subsp. <i>lophantha</i>			
948.	7089 <i>Parentucellia latifolia</i> (Common Bartsia)	Y		
949.	1762 <i>Parietaria debilis</i> (Pellitory)			
950.	1763 <i>Parietaria judaica</i> (Pellitory)	Y		
951.	19270 <i>Parthenocissus tricuspidata</i>	Y		Y
952.	5225 <i>Passiflora filamentosa</i>	Y		
953.	10828 <i>Pavonia hastata</i>	Y		
954.	4343 <i>Pelargonium capitatum</i> (Rose Pelargonium)	Y		
955.	4346 <i>Pelargonium littorale</i>			
956.	18282 <i>Pelargonium x asperum</i>	Y		Y
957.	11139 <i>Pelargonium x domesticum</i>	Y		
958.	16477 <i>Pericalymma ellipticum</i> var. <i>ellipticum</i>			
959.	16478 <i>Pericalymma ellipticum</i> var. <i>floridum</i>			
960.	13911 <i>Persicaria decipiens</i>			
961.	16984 <i>Persicaria lapathifolia</i>	Y		
962.	2273 <i>Persoonia saccata</i> (Snottygobble)			
963.	20368 <i>Petrophile axillaris</i>			
964.	2286 <i>Petrophile brevifolia</i>			
965.	48781 <i>Petrophile brevifolia</i> subsp. <i>brevifolia</i>			
966.	2299 <i>Petrophile linearis</i> (Pixie Mops)			
967.	2301 <i>Petrophile macrostachya</i>			
968.	2308 <i>Petrophile seminuda</i>			
969.	20053 <i>Petrophile squamata</i> subsp. <i>northern</i> (J. Monks 40)			
970.	2312 <i>Petrophile striata</i>			
971.	19825 <i>Petrothragia dubia</i>	Y		
972.	18529 <i>Philothea spicata</i> (Pepper and Salt)			
973.	6734 <i>Phyla nodiflora</i> var. <i>nodiflora</i>	Y		
974.	4675 <i>Phyllanthus calycinus</i> (False Boronia)			
975.	17794 <i>Phyllanthus tenellus</i>	Y		
976.	13405 <i>Phyllopodium cordatum</i>	Y		
977.	20652 <i>Physalis angulata</i>	Y		
978.	2793 <i>Phytolacca octandra</i> (Red Ink Plant)	Y		
979.	14180 <i>Picris compacta</i>		X	Y
980.	5232 <i>Pimelea argentea</i> (Silvery Leaved Pimelea)			
981.	5254 <i>Pimelea leucantha</i>			
982.	5261 <i>Pimelea rosea</i> (Rose Banjine)			
983.	18117 <i>Pimelea rosea</i> subsp. <i>rosea</i>			
984.	5264 <i>Pimelea spectabilis</i> (Bunjong)			
985.	5268 <i>Pimelea sulphurea</i> (Yellow Banjine)			
986.	5269 <i>Pimelea sylvestris</i>			
987.	42281 <i>Pithocarpa cordata</i>			
988.	19745 <i>Pittosporum ligustrifolium</i>			
989.	16322 <i>Pittosporum undulatum</i>	Y		
990.	11785 <i>Plantago coronopus</i> subsp. <i>commutata</i>	Y		
991.	7303 <i>Plantago lanceolata</i> (Ribwort Plantain)	Y		
992.	7304 <i>Plantago major</i> (Greater Plantain)	Y		
993.	19512 <i>Platanus x hispanica</i>	Y		Y
994.	6253 <i>Platysace filiformis</i>			
995.	4524 <i>Platytheca galioides</i>			
996.	8175 <i>Podolepis gracilis</i> (Slender Podolepis)			
997.	8179 <i>Podolepis nutans</i> (Nodding Podolepis)			
998.	8182 <i>Podotheca angustifolia</i> (Sticky Longheads)			
999.	8183 <i>Podotheca chrysantha</i> (Yellow Podotheca)			
1000.	2905 <i>Polycarpon tetraphyllum</i> (Fourleaf Allseed)	Y		
1001.	8395 <i>Polygala myrtifolia</i> (Myrtleleaf Milkwort)	Y		
1002.	2416 <i>Polygonum arenastrum</i> (Sand Wireweed)	Y		
1003.	2419 <i>Polygonum aviculare</i> (Wireweed)	Y		
1004.	18323 <i>Populus alba</i>	Y		

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
1005.	31695 <i>Populus nigra</i> cv. <i>italica</i>	Y		
1006.	4688 <i>Poranthera drummondii</i>			
1007.	4691 <i>Poranthera microphylla</i> (Small <i>Poranthera</i>)			
1008.	42022 <i>Poranthera moorokatta</i>		P2	
1009.	8189 <i>Pseudognaphalium luteoalbum</i> (Jersey Cudweed)			
1010.	2718 <i>Ptilotus drummondii</i> (Narrowleaf Mulla Mulla)			
1011.	11260 <i>Ptilotus drummondii</i> var. <i>drummondii</i> (Pussytail)			
1012.	2751 <i>Ptilotus polystachyus</i> (Prince of Wales Feather)			
1013.	15856 <i>Ptilotus sericostachyus</i> subsp. <i>sericostachyus</i>			
1014.	4172 <i>Pultenaea ericifolia</i>			
1015.	4181 <i>Pultenaea reticulata</i>			
1016.	2932 <i>Ranunculus colonorum</i> (Common Buttercup)			
1017.	2933 <i>Ranunculus muricatus</i> (Sharp Buttercup)	Y		
1018.	11927 <i>Ranunculus sessiliflorus</i> var. <i>sessiliflorus</i>			
1019.	3061 <i>Raphanus raphanistrum</i> (Wild Radish)	Y		
1020.	6012 <i>Regezia ciliata</i>			
1021.	3084 <i>Reseda lutea</i> (Cutleaf Mingnonette)	Y		
1022.	19183 <i>Retama raetam</i>	Y		
1023.	11341 <i>Rhagodia baccata</i> subsp. <i>baccata</i>			
1024.	11930 <i>Rhagodia baccata</i> subsp. <i>dioica</i> (Sea Berry Saltbush)			
1025.	11254 <i>Rhagodia preissii</i> subsp. <i>preissii</i>			
1026.	4822 <i>Rhamnus alaternus</i> (Buckthorn)	Y		
1027.	13300 <i>Rhodanthe citrina</i>			
1028.	13234 <i>Rhodanthe manglesii</i>			
1029.	4695 <i>Ricinocarpos glaucus</i>			
1030.	31911 <i>Ricinocarpos megalocarpus</i>			
1031.	19942 <i>Ricinocarpos undulatus</i>			
1032.	4705 <i>Ricinus communis</i> (Castor Oil Plant)	Y		
1033.	17020 <i>Robinia pseudoacacia</i>	Y		
1034.	2967 <i>Romneya coulteri</i> (California Tree Poppy)	Y		
1035.	2429 <i>Rumex acetosella</i> (Sorrel)	Y		
1036.	2432 <i>Rumex conglomeratus</i> (Clustered Dock)	Y		
1037.	2433 <i>Rumex crispus</i> (Curled Dock)	Y		
1038.	46434 <i>Rumex hypogaeus</i>	Y		
1039.	17994 <i>Rumex obtusifolius</i> subsp. <i>obtusifolius</i>	Y		
1040.	2440 <i>Rumex pulcher</i> (Fiddle Dock)	Y		
1041.	20171 <i>Rumex pulcher</i> subsp. <i>woodsii</i>	Y		
1042.	2441 <i>Rumex sagittatus</i> (Rambling Dock)	Y		
1043.	2443 <i>Rumex vesicarius</i> (Ruby Dock)	Y		
1044.	2906 <i>Sagina apetala</i> (Annual Pearlwort)	Y		
1045.	2907 <i>Sagina procumbens</i> (Spreading Pearlwort)	Y		
1046.	48430 <i>Salicornia quinqueflora</i>			
1047.	6987 <i>Salpichroa organifolia</i> (Pampas Lily of the Valley)	Y		
1048.	6484 <i>Samolus repens</i> (Creeping Brookweed)			
1049.	14107 <i>Samolus repens</i> var. <i>paucifolius</i>			
1050.	2356 <i>Santalum acuminatum</i> (Quandong, Wamga)			
1051.	7595 <i>Scaevola anchusifolia</i>			
1052.	7603 <i>Scaevola canescens</i> (Grey Scaevola)			
1053.	7606 <i>Scaevola crassifolia</i> (Thick-leaved Fan-flower)			
1054.	7619 <i>Scaevola lanceolata</i> (Long-leaved Scaevola)			
1055.	7626 <i>Scaevola nitida</i> (Shining Fanflower)			
1056.	7634 <i>Scaevola phlebopetala</i> (Velvet Fanflower)			
1057.	13182 <i>Scaevola repens</i> var. <i>repens</i>			
1058.	13152 <i>Scaevola thesioides</i> subsp. <i>thesioides</i>			
1059.	41660 <i>Schenkia australis</i>			
1060.	48834 <i>Schinus terebinthifolia</i>	Y		
1061.	6029 <i>Scholtzia capitata</i> (Pom-pom Scholtzia)			
1062.	6033 <i>Scholtzia involucrata</i> (Spiked Scholtzia)			
1063.	20665 <i>Senecio angulatus</i>	Y		
1064.	25878 <i>Senecio condylus</i>			
1065.	8208 <i>Senecio hispidulus</i> (Hispid Fireweed)			
1066.	20161 <i>Senecio pinnatifolius</i>			
1067.	25884 <i>Senecio pinnatifolius</i> var. <i>latilobus</i>			
1068.	8218 <i>Senecio ramosissimus</i> (Auricled Groundsel)			
1069.	8220 <i>Senecio vulgaris</i> (Common Groundsel)	Y		
1070.	12279 <i>Senna artemisioides</i> subsp. <i>helmsii</i>			
1071.	46819 <i>Seringia integrifolia</i> (Common firebush)			
1072.	48992 <i>Sida fallax</i>	Y		Y
1073.	2909 <i>Silene gallica</i> (French Catchfly)	Y		
1074.	15972 <i>Silene gallica</i> var. <i>gallica</i>	Y		

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1075.	11803 <i>Silene gallica</i> var. <i>quinquevulnera</i>	Y		
1076.	2910 <i>Silene nocturna</i> (Mediterranean Catchfly)	Y		
1077.	8225 <i>Siloxerus humifusus</i> (Procumbent Siloxerus)			
1078.	3070 <i>Sisymbrium irio</i> (London Rocket)	Y		
1079.	3072 <i>Sisymbrium orientale</i> (Indian Hedge Mustard)	Y		
1080.	6988 <i>Solanum americanum</i> (Glossy Nightshade)	Y		
1081.	11114 <i>Solanum giganteum</i>	Y		
1082.	7017 <i>Solanum laciniatum</i> (Kangaroo Apple)	Y		
1083.	7020 <i>Solanum linnaeanum</i> (Apple of Sodom)	Y		
1084.	47173 <i>Solanum lycopersicum</i> (Tomato)	Y		
1085.	7022 <i>Solanum nigrum</i> (Black Berry Nightshade)	Y		
1086.	10920 <i>Soliva sessilis</i> (Jo-jo, Onehunga Weed)	Y		
1087.	9367 <i>Sonchus hydrophilus</i> (Native Sowthistle)			
1088.	8231 <i>Sonchus oleraceus</i> (Common Sowthistle)	Y		
1089.	2912 <i>Spergula arvensis</i> (Corn Spurry)	Y		
1090.	33636 <i>Spergularia brevifolia</i>			
1091.	4205 <i>Sphaerolobium linophyllum</i>			
1092.	4207 <i>Sphaerolobium medium</i>			
1093.	4828 <i>Spyridium globulosum</i> (Basket Bush)			
1094.	6930 <i>Stachys arvensis</i> (Staggerweed)	Y		
1095.	4716 <i>Stachystemon vermicularis</i>			
1096.	2918 <i>Stellaria media</i> (Chickweed)	Y		
1097.	20397 <i>Stellaria pallida</i>	Y		
1098.	15066 <i>Stenanthemum notiale</i> subsp. <i>chamelum</i>			
1099.	19403 <i>Stenopetalum gracile</i>			
1100.	2316 <i>Stirlingia latifolia</i> (Blueboy)			
1101.	2317 <i>Stirlingia simplex</i>			
1102.	30278 <i>Stylidium androsaceum</i>			
1103.	30276 <i>Stylidium bicolor</i>			
1104.	7693 <i>Stylidium brunonianum</i> (Pink Fountain Triggerplant)			
1105.	7699 <i>Stylidium carnosum</i> (Fleshy-leaved Triggerplant)			
1106.	7710 <i>Stylidium cygnorum</i>			
1107.	7712 <i>Stylidium despectum</i> (Dwarf Triggerplant)			
1108.	25801 <i>Stylidium hesperium</i>			
1109.	7736 <i>Stylidium hispidum</i> (White Butterfly Triggerplant)			
1110.	7742 <i>Stylidium inundatum</i> (Hundreds and Thousands)			
1111.	13127 <i>Stylidium maritimum</i>		P3	
1112.	25829 <i>Stylidium neurophyllum</i> (Coastal Plain Triggerplant)			
1113.	7774 <i>Stylidium piliferum</i> (Common Butterfly Triggerplant)			
1114.	7785 <i>Stylidium repens</i> (Matted Triggerplant)			
1115.	20521 <i>Stylidium rigidulum</i>			
1116.	7790 <i>Stylidium roseoalatum</i> (Pink-wing Triggerplant)			
1117.	7798 <i>Stylidium schoenoides</i> (Cow Kicks)			
1118.	7803 <i>Stylidium striatum</i> (Fan-leaved Triggerplant)		P4	
1119.	6476 <i>Styphelia tenuiflora</i> (Common Pinheath)			
1120.	2639 <i>Suaeda australis</i> (Seablite)			
1121.	15108 <i>Succowia balearica</i>	Y		Y
1122.	25902 <i>Symphotrichum squamatum</i> (Bushy Starwort)	Y		
1123.	2329 <i>Synaphea spinulosa</i>			
1124.	15532 <i>Synaphea spinulosa</i> subsp. <i>spinulosa</i>			
1125.	45613 <i>Taraxacum khatoonae</i>	Y		
1126.	20135 <i>Taxandria linearifolia</i>			
1127.	33237 <i>Tecticornia halocnemoides</i> subsp. <i>halocnemoides</i>			
1128.	31718 <i>Tecticornia lepidosperma</i>			
1129.	33296 <i>Tecticornia pergranulata</i>			
1130.	4256 <i>Templetonia retusa</i> (Cockies Tongues)			
1131.	2791 <i>Tersonia cyathiflora</i> (Button Creeper)			
1132.	48342 <i>Tetradthea hirsuta</i> subsp. <i>hirsuta</i>			
1133.	48341 <i>Tetradthea hirsuta</i> subsp. <i>viminea</i>			
1134.	4537 <i>Tetradthea nuda</i>			
1135.	5080 <i>Thomasia foliosa</i>			
1136.	5091 <i>Thomasia paniculata</i>			
1137.	5093 <i>Thomasia petalocalyx</i> (Paper Flower)			
1138.	5094 <i>Thomasia purpurea</i>			
1139.	17322 <i>Thomasia rulingioides</i>			
1140.	5105 <i>Thomasia triphylla</i>			
1141.	2644 <i>Threlkeldia diffusa</i> (Coast Bonefruit)			
1142.	6065 <i>Thryptomene saxicola</i> (Rock Thryptomene)			
1143.	6268 <i>Trachymene cyanopetala</i>			
1144.	6279 <i>Trachymene ornata</i> (Spongefruit)			

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1145.	6280 <i>Trachymene pilosa</i> (Native Parsnip)			
1146.	4383 <i>Tribulus terrestris</i> (Caltrop)	Y		
1147.	17145 <i>Trifolium angustifolium</i> var. <i>angustifolium</i>	Y		
1148.	17542 <i>Trifolium arvense</i> var. <i>arvense</i>	Y		
1149.	4292 <i>Trifolium campestre</i> (Hop Clover)	Y		
1150.	17763 <i>Trifolium campestre</i> var. <i>campestre</i> (Hop Clover)	Y		
1151.	4293 <i>Trifolium cernuum</i> (Drooping Flower Clover)	Y		
1152.	4294 <i>Trifolium cherleri</i> (Cupped Clover)	Y		
1153.	4295 <i>Trifolium dubium</i> (Suckling Clover)	Y		
1154.	17759 <i>Trifolium fragiferum</i> var. <i>fragiferum</i>	Y		
1155.	4297 <i>Trifolium glomeratum</i> (Cluster Clover)	Y		
1156.	4298 <i>Trifolium hirtum</i> (Rose Clover)	Y		
1157.	17758 <i>Trifolium hybridum</i> var. <i>hybridum</i>	Y		
1158.	17541 <i>Trifolium incarnatum</i> var. <i>incarnatum</i>	Y		
1159.	4304 <i>Trifolium ornithopodioides</i> (Birdsfoot Fenugreek)	Y		
1160.	17788 <i>Trifolium pratense</i> var. <i>sativum</i>	Y		
1161.	17115 <i>Trifolium repens</i> var. <i>repens</i>	Y		
1162.	14738 <i>Trifolium resupinatum</i> var. <i>resupinatum</i>	Y		
1163.	4309 <i>Trifolium scabrum</i> (Rough Clover)	Y		
1164.	4310 <i>Trifolium spumosum</i> (Bladder Clover)	Y		
1165.	4313 <i>Trifolium subterraneum</i> (Subterranean Clover)	Y		
1166.	4314 <i>Trifolium suffocatum</i> (Suffocated Clover)	Y		
1167.	15509 <i>Trifolium tomentosum</i> var. <i>tomentosum</i>	Y		
1168.	4737 <i>Tripterococcus brunonis</i> (Winged Stackhousia)			
1169.	4360 <i>Tropaeolum majus</i> (Garden Nasturtium)	Y		
1170.	4842 <i>Trymalium ledifolium</i>			
1171.	11665 <i>Trymalium ledifolium</i> var. <i>ledifolium</i>			
1172.	13479 <i>Trymalium ledifolium</i> var. <i>rosmarinifolium</i>			
1173.	33418 <i>Trymalium odoratissimum</i> subsp. <i>odoratissimum</i>			
1174.	4317 <i>Ulex europaeus</i> (Gorse)	Y		
1175.	43504 <i>Ulmus parvifolia</i>	Y		Y
1176.	8254 <i>Urospermum picroides</i> (False Hawkbit)	Y		
1177.	8255 <i>Ursinia anthemoides</i> (Ursinia)	Y		
1178.	38388 <i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	Y		
1179.	1767 <i>Urtica urens</i> (Small Nettle)	Y		
1180.	12493 <i>Utricularia gibba</i>			
1181.	7107 <i>Verbascum virgatum</i> (Twiggy Mullein)	Y		
1182.	20121 <i>Verbena rigida</i> var. <i>rigida</i>	Y		
1183.	46275 <i>Verbesina encelioides</i> var. <i>encelioides</i> (Crownbeard, Wild Sunflower, Goldweed, South African Daisy)	Y		
1184.	7108 <i>Veronica arvensis</i> (Wall Speedwell)	Y		
1185.	7110 <i>Veronica distans</i>			
1186.	7111 <i>Veronica persica</i> (Creeping Speedwell)	Y		
1187.	6076 <i>Verticordia densiflora</i> (Compacted Featherflower)			
1188.	15432 <i>Verticordia densiflora</i> var. <i>densiflora</i>			
1189.	6077 <i>Verticordia drummondii</i> (Drummond's Featherflower)			
1190.	12422 <i>Verticordia eriocephala</i> (Common Cauliflower)			
1191.	15433 <i>Verticordia huegellii</i> var. <i>huegellii</i>			
1192.	14714 <i>Verticordia lindleyi</i> subsp. <i>lindleyi</i>		P4	
1193.	6098 <i>Verticordia monadelpha</i> (Pink Woolly Featherflower)			
1194.	15435 <i>Verticordia monadelpha</i> var. <i>monadelpha</i>			
1195.	6101 <i>Verticordia nitens</i> (Morrison Featherflower, Kodjeningara)			
1196.	12468 <i>Verticordia venusta</i>		P3	
1197.	4319 <i>Vicia benghalensis</i> (Purple Vetch)	Y		
1198.	4320 <i>Vicia hirsuta</i> (Hairy Vetch)	Y		
1199.	4322 <i>Vicia sativa</i> (Common Vetch)	Y		
1200.	17285 <i>Vicia sativa</i> subsp. <i>cordata</i>	Y		
1201.	11474 <i>Vicia sativa</i> subsp. <i>nigra</i>	Y		
1202.	4325 <i>Viminaria juncea</i> (Swishbush, Koweda)			
1203.	7384 <i>Wahlenbergia capensis</i> (Cape Bluebell)	Y		
1204.	7389 <i>Wahlenbergia preissii</i>			
1205.	13328 <i>Waitzia nitida</i>			
1206.	8282 <i>Waitzia suaveolens</i> (Fragrant Waitzia)			
1207.	13333 <i>Waitzia suaveolens</i> var. <i>suaveolens</i>			
1208.	6939 <i>Westringia dampieri</i>			
1209.	11798 <i>Wigandia urens</i> var. <i>caracasana</i>	Y		
1210.	8286 <i>Xanthium occidentale</i> (Noogoora Burr)	Y		
1211.	6285 <i>Xanthosia ciliata</i>			
1212.	6289 <i>Xanthosia huegellii</i>			

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Fish				
1213.	<i>Acanthopagrus butcheri</i>			
1214.	<i>Achoerodus gouldii</i>			
1215.	<i>Aracana aurita</i>			
1216.	<i>Argyrosomus japonicus</i>			
1217.	<i>Arripis truttacea</i>			
1218.	<i>Atherinomorus vaigiensis</i>			
1219.	<i>Atherinosoma elongata</i>			
1220.	<i>Atherinosoma presbyteroides</i>			
1221.	<i>Carcharhinus leucas</i>			
1222.	<i>Cheilodactylus gibbosus</i>			
1223.	<i>Chelidonichthys kumu</i>			
1224.	<i>Cnidoglanis macrocephalus</i>			
1225.	<i>Contusus brevicaudus</i>			
1226.	<i>Craterocephalus mugiloides</i>			
1227.	<i>Cynoglossus maculipinnis</i>			
1228.	<i>Cyprinus carpio</i>			
1229.	<i>Echeneis naucrates</i>			
1230.	<i>Edelia vittata</i>			
1231.	<i>Elops hawaiiensis</i>			
1232.	<i>Engraulis australis</i>			
1233.	<i>Eubalichthys mosaicus</i>			
1234.	<i>Favonigobius lateralis</i>			
1235.	<i>Filicampus tigris</i>			
1236.	34028 <i>Galaxias occidentalis</i> (Western Minnow)			
1237.	<i>Gambusia affinis</i>			
1238.	<i>Gambusia</i> sp.			
1239.	<i>Gerres subfasciatus</i>			
1240.	<i>Gonorynchus greyi</i>			
1241.	<i>Gymnapistes marmoratus</i>			
1242.	<i>Gymnothorax richardsoni</i>			
1243.	<i>Hippocampus elongatus</i>			
1244.	<i>Histrio histrio</i>			
1245.	<i>Hyporhamphus regularis</i>			
1246.	<i>Lissocampus runa</i>			
1247.	<i>Mugil cephalus</i>			
1248.	<i>Muraenichthys</i> sp.			
1249.	<i>Muraenichthys tasmaniensis</i>			
1250.	<i>Nematalosa come</i>			
1251.	<i>Neosebastes pandus</i>			
1252.	<i>Ophisurus serpens</i>			
1253.	<i>Papillogobius punctatus</i>			
1254.	<i>Parablennius postocolomaculatus</i>			
1255.	<i>Pegasus volitans</i>			
1256.	<i>Phalloceros caudimaculatus</i>			
1257.	34039 <i>Phycodurus eques</i> (Leafy Sea Dragon)		P2	
1258.	<i>Phyllopteryx taeniolatus</i>			
1259.	<i>Platycephalus endrachtensis</i>			
1260.	<i>Pomatomus saltatrix</i>			
1261.	<i>Pseudorhombus jenynsii</i>			
1262.	<i>Rachycentron canadum</i>			
1263.	<i>Scomberoides lysan</i>			
1264.	<i>Seriola hippos</i>			
1265.	<i>Sillago burrus</i>			
1266.	<i>Sillago schomburgkii</i>			
1267.	<i>Sparidentex hasta</i>			Y
1268.	<i>Sphyrna zygaena</i>			
1269.	<i>Stigmatopora argus</i>			
1270.	<i>Sutorectus tentaculatus</i>			
1271.	<i>Tandanus bostocki</i>			
1272.	<i>Thysanophrys cirronasus</i>			
1273.	<i>Torquigener pleurogramma</i>			
1274.	<i>Trachurus novaezelandiae</i>			
1275.	<i>Tridentiger trigonocephalus</i>			
1276.	<i>Trygonorrhina fasciata</i>			
Fungus				
1277.	38750 <i>Abortiporus biennis</i>			
1278.	38752 <i>Agaricus campestris</i>			
1279.	<i>Agaricus</i> sp.			
1280.	38753 <i>Agaricus subrufescens</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
1281.	<i>Agrocybe pediades</i>			
1282.	<i>Aleuria aurantia</i>			
1283.	<i>Aleurina ferruginea</i>			
1284.	<i>Alternaria solani</i>			
1285.	<i>Amanita basiorubra</i>			
1286.	38754 <i>Amanita conicobulbosa</i>			
1287.	45013 <i>Amanita drummondii</i>		P3	
1288.	43543 <i>Amanita fibrillopes</i>		P3	
1289.	38755 <i>Amanita ochroterrea</i>			
1290.	48332 <i>Amanita preissii</i> (Cinnamon-ring <i>Lepidella</i>)		P3	
1291.	38756 <i>Amanita umbrinella</i>			
1292.	43542 <i>Amanita wadjukiorum</i>		P3	
1293.	38757 <i>Amanita xanthocephala</i>			
1294.	<i>Anthracoibia muelleri</i>			
1295.	38759 <i>Arachnopeziza aurata</i>			
1296.	<i>Armillaria luteobubalina</i>			
1297.	<i>Asterostroma persimile</i>			
1298.	38761 <i>Auricularia cornea</i>			
1299.	38762 <i>Auriscalpium barbatum</i>			
1300.	38764 <i>Austropaxillus muelleri</i>			
1301.	38766 <i>Bisporella citrina</i>			
1302.	<i>Bjerkandera adusta</i>			
1303.	38848 <i>Bolbitius titubans</i>			
1304.	38849 <i>Bolbitius titubans</i> var. <i>olivaceus</i>			Y
1305.	<i>Boletellus obscurecoccineus</i>			
1306.	<i>Boletus prolinius</i>			
1307.	<i>Boletus</i> sp.			
1308.	<i>Botrytis cinerea</i>			
1309.	<i>Byssomerulius corium</i>			
1310.	<i>Calocera guepiniooides</i>			
1311.	<i>Calvatia candida</i>			
1312.	<i>Calvatia fusca</i>			
1313.	38767 <i>Campanella gregaria</i>			
1314.	<i>Chlorophyllum brunneum</i>			
1315.	38768 <i>Chlorophyllum molybdites</i>			
1316.	<i>Clathrus ruber</i>			
1317.	<i>Clavulina coralloides</i>			Y
1318.	38769 <i>Clavulina vinaceocervina</i>			
1319.	<i>Clitopilus hobsonii</i>			
1320.	38771 <i>Coltriciella dependens</i>			
1321.	<i>Colus pusillus</i>			
1322.	<i>Coniophora olivacea</i>			
1323.	38772 <i>Conocybe apala</i>			
1324.	<i>Coprinellus angulatus</i>			
1325.	<i>Coprinellus disseminatus</i>			
1326.	<i>Coprinellus micaceus</i>			
1327.	38773 <i>Coprinellus pyrhranthes</i>			Y
1328.	<i>Coprinus comatus</i>			
1329.	38774 <i>Cortinarius archeri</i>			
1330.	<i>Cortinarius ardesiacus</i>			Y
1331.	<i>Cortinarius basirubescens</i>			
1332.	<i>Cortinarius clelandii</i>			
1333.	<i>Cortinarius erythraeus</i>			
1334.	<i>Cortinarius rotundisporus</i>			
1335.	<i>Crepidotus applanatus</i>			
1336.	38780 <i>Crepidotus eucalyptorum</i>			
1337.	<i>Crepidotus nephrodes</i>			
1338.	<i>Crepidotus variabilis</i>			
1339.	41686 <i>Descomyces albellus</i>			
1340.	38784 <i>Descomyces albus</i>			
1341.	<i>Diplocarpon rosae</i>			
1342.	<i>Drechslera poae</i>			Y
1343.	38786 <i>Entoloma viridomarginatum</i>			
1344.	45819 <i>Entorrhiza casparyana</i>			Y
1345.	<i>Erysiphe necator</i>			
1346.	<i>Fistulina hepatica</i>			
1347.	<i>Fomitopsis lilacinogilva</i>			
1348.	41900 <i>Ganoderma australe</i>			
1349.	<i>Geastrum</i> sp.			
1350.	38787 <i>Geastrum triplex</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
1351.	48605 <i>Gymnogaster boletoides</i>			Y
1352.	<i>Gymnopilus allantopus</i>			
1353.	<i>Gymnopilus crociphyllus</i>			
1354.	38789 <i>Gymnopilus junonius</i>			
1355.	<i>Gymnopilus purpuratus</i>			
1356.	38790 <i>Gyrodontium sacchari</i>			
1357.	<i>Gyroporus cyanescens</i>			
1358.	49124 <i>Gyroporus occidentalis</i>			
1359.	38791 <i>Hebeloma crustuliniforme</i>			
1360.	<i>Hexagonia vesparia</i>			
1361.	38793 <i>Hohenbuehelia bingarra</i>			
1362.	<i>Hohenbuehelia petaloides</i>			
1363.	<i>Hydnangium carneum</i>			
1364.	<i>Hydnoplicata convoluta</i>			
1365.	38795 <i>Hygrocybe conica</i>			
1366.	<i>Hygrocybe polychroma</i>			
1367.	44718 <i>Hypocrea gelatinosa</i>			
1368.	44926 <i>Ileodictyon gracile</i>			
1369.	48497 <i>Inocybe clypeata</i>			
1370.	40869 <i>Inocybe curvipes</i>	Y		
1371.	41480 <i>Inocybe emergens</i>			
1372.	48518 <i>Inocybe fissurata</i>			
1373.	48521 <i>Inocybe froudistingii</i>			
1374.	48529 <i>Inocybe isabellina</i>			
1375.	48532 <i>Inocybe leucotaenia</i>			Y
1376.	48535 <i>Inocybe memorialis</i>			
1377.	40870 <i>Inocybe rufuloides</i>	Y		
1378.	48545 <i>Inocybe sabulosa</i>			
1379.	48548 <i>Inocybe spadicea</i>			
1380.	48550 <i>Inocybe subflavospora</i>			
1381.	38799 <i>Inocybe violaceocaulis</i>			
1382.	<i>Laccaria lateritia</i>			
1383.	38803 <i>Lachnum virgineum</i>			
1384.	38805 <i>Lentinellus pulvinulus</i>			
1385.	38806 <i>Lepiota exocarpis</i>			
1386.	<i>Leucoagaricus barssii</i>			
1387.	46454 <i>Leucoagaricus leucothites</i>			
1388.	38808 <i>Limacella pitereka</i>			
1389.	48855 <i>Macrohyporia dictyopora</i>			
1390.	49003 <i>Macrolepiota turbinata</i>			
1391.	49004 <i>Macrolepiota vinaceofibrillosa</i>			
1392.	<i>Melanoleuca fusca</i>			
1393.	<i>Morchella elata</i>			
1394.	<i>Mycena carmeliana</i>			
1395.	38812 <i>Mycena kuurkacea</i>			
1396.	<i>Mycena nargan</i>			
1397.	38813 <i>Mycena subgalericulata</i>			
1398.	<i>Neolentinus dactyloides</i>			
1399.	38816 <i>Omphalotus nidiformis</i>			
1400.	38817 <i>Panaeolus papilionaceus</i>			
1401.	<i>Panus fasciatus</i>			
1402.	<i>Paxillus involutus</i>			
1403.	<i>Perenniporia oviformis</i>			
1404.	49073 <i>Peziza austrogeaster</i>			
1405.	<i>Peziza repanda</i>			
1406.	<i>Peziza sp.</i>			
1407.	38819 <i>Peziza vesiculosa</i>			
1408.	48853 <i>Phaeotrametes decipiens</i>			
1409.	<i>Phellinus gilvus</i>			
1410.	<i>Phlebia rufa</i>			
1411.	<i>Phlebia subceracea</i>			
1412.	<i>Pholiota communis</i>			
1413.	<i>Pholiota highlandensis</i>			
1414.	38821 <i>Phyllachora amplexicaulis</i>			
1415.	38822 <i>Phylloporus clelandii</i>			
1416.	49071 <i>Picipes badius</i>			
1417.	48973 <i>Pisolithus albus</i>			
1418.	48975 <i>Pisolithus microcarpus</i>			
1419.	<i>Pisolithus sp.</i>			
1420.	38824 <i>Pleurotus australis</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
1421.	38825 <i>Pluteus pauperculus</i>			
1422.	<i>Pluteus romellii</i>			
1423.	44729 <i>Porostereum crassum</i>			
1424.	<i>Postia pelliculosa</i>			
1425.	38828 <i>Psathyrella bipellis</i>			
1426.	<i>Psathyrella candolleana</i>			
1427.	<i>Pseudotomentella larsenii</i>			
1428.	38830 <i>Psilocybe coprophila</i>			
1429.	<i>Punctularia strigosozonata</i>			
1430.	48835 <i>Pycnoporus coccineus</i>			
1431.	45074 <i>Pyronema omphalodes</i>			
1432.	49072 <i>Ramaria gracilis</i>			
1433.	38832 <i>Resupinatus cinerascens</i>			
1434.	38833 <i>Resupinatus subapplicatus</i>			
1435.	38834 <i>Rhizopogon roseolus</i>			
1436.	<i>Rickenella fibula</i>			
1437.	48703 <i>Russula balpinea</i>			
1438.	48909 <i>Russula clelandii</i>			
1439.	38836 <i>Russula erumpens</i>			
1440.	<i>Russula marangania</i>			
1441.	<i>Schizophyllum commune</i>			
1442.	38839 <i>Schizopora paradoxa</i>			
1443.	<i>Scleroderma cepa</i>			
1444.	41834 <i>Setchelliogaster australiensis</i>			
1445.	38840 <i>Stereum hirsutum</i>			
1446.	<i>Stereum illudens</i>			
1447.	<i>Stropharia semiglobata</i>			
1448.	38841 <i>Suillus collinitus</i>	Y		Y
1449.	38843 <i>Tapinella panuoides</i>			
1450.	<i>Thelephora terrestris</i>			
1451.	45838 <i>Tilletia ehrhartae</i>			
1452.	45845 <i>Tilletia viennotii</i>			
1453.	<i>Tomentella pilosa</i>			
1454.	38844 <i>Trametes versicolor</i>			
1455.	38845 <i>Trechispora farinacea</i>			
1456.	<i>Tricholomopsis rutilans</i>			
1457.	49066 <i>Truncospora ochroleuca</i>			
1458.	38846 <i>Tubaria serrulata</i>			
1459.	<i>Tubulicrinis calothrix</i>			
1460.	<i>Uromycladium tepperianum</i>			
1461.	45895 <i>Ustilago avenae</i>			
1462.	45898 <i>Ustilago cynodontis</i>			
1463.	45899 <i>Ustilago hordei</i>			
1464.	<i>Volvoluteus gloiocephalus</i>			
1465.	38847 <i>Xerula mundroola</i>			

Gymnosperm

1466.	96 <i>Callitris preissii</i> (Rottnest Island Pine, Maro)			
1467.	97 <i>Callitris roei</i> (Roe's Cypress Pine)			
1468.	8637 <i>Callitris verrucosa</i>			
1469.	18119 <i>Macrozamia fraseri</i>			
1470.	85 <i>Macrozamia riedlei</i> (Zamia, Djiridji)			
1471.	17671 <i>Pinus halepensis</i>	Y		

Hepatic (Liverwort)

1472.	<i>Cephaloziella exiliflora</i>			
1473.	<i>Cephaloziella varians</i>			
1474.	<i>Marchantia berteroaana</i>			

Invertebrate

1475.	<i>Akamptogonus novarae</i>			
1476.	<i>Allothereua maculata</i>			
1477.	<i>Amblyomma albolimbatum</i>			
1478.	<i>Amblyomma triguttatum</i>			
1479.	<i>Aname mainae</i>			
1480.	<i>Aname tepperi</i>			
1481.	<i>Arachnura higginsi</i>			
1482.	<i>Araneus cyphoxis</i>			
1483.	<i>Araneus eburneiventris</i>			
1484.	<i>Araneus eburnus</i>			
1485.	<i>Araneus senicaudatus</i>			
1486.	<i>Argiope protensa</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
1487.	<i>Argiope trifasciata</i>			
1488.	<i>Arteria linnaei</i>			
1489.	<i>Arteria taeniifera</i>			
1490.	<i>Artonopsis expolita</i>			
1491.	<i>Austracantha minax</i>			
1492.	<i>Australomimetes aurioculatus</i>			
1493.	<i>Austrammo harveyi</i>			
1494.	<i>Backobourkia heroine</i>			
1495.	<i>Badumna insignis</i>			
1496.	<i>Ballarra longipalpus</i>			
1497.	<i>Billima attrita</i>			Y
1498.	<i>Celaenia excavata</i>			
1499.	<i>Cercophonius granulatus</i>			
1500.	<i>Cercophonius sulcatus</i>			
1501.	<i>Cormocephalus aurantiipes</i>			
1502.	<i>Cormocephalus hartmeyer</i>			
1503.	<i>Cormocephalus novaehollandiae</i>			
1504.	<i>Cormocephalus rubriceps</i>			
1505.	<i>Cormocephalus strigosus</i>			
1506.	<i>Cryptoerithus quobba</i>			
1507.	<i>Cyclosa trilobata</i>			
1508.	<i>Deinopis unicolor</i>			Y
1509.	<i>Delena cancerides</i>			
1510.	<i>Dingosa serrata</i>			
1511.	<i>Dinocambala ingens</i>			
1512.	<i>Eriophora biapicata</i>			
1513.	<i>Erythracarus decoris</i>			
1514.	<i>Ethmostigmus rubripes</i>			
1515.	48579 <i>Euoplos inornatus</i> (inornate trapdoor spider (northern Jarrah Forest))		P3	
1516.	<i>Eupograptus kottae</i>			
1517.	<i>Geogarypus taylori</i>			
1518.	<i>Hasarius adansoni</i>			
1519.	<i>Heurodes turritus</i>			
1520.	<i>Hogna crispipes</i>			
1521.	<i>Hogna immansueta</i>			
1522.	<i>Holconia westralia</i>			
1523.	<i>Holoplatys dejongi</i>			
1524.	<i>Idiommata blackwalli</i>			
1525.	<i>Idiosoma hirsutum</i>			
1526.	48935 <i>Idiosoma sigillatum</i> (Swan Coastal Plain shield-backed trapdoor spider)		P3	
1527.	<i>Isometroides vescus</i>			
1528.	<i>Isopeda leishmanni</i>			
1529.	<i>Isopedella cana</i>			
1530.	<i>Isopedella tindalei</i>			
1531.	<i>Ixodes tasmani</i>			Y
1532.	<i>Lampona brevipes</i>			
1533.	<i>Lampona cylindrata</i>			
1534.	<i>Lampona punctigera</i>			
1535.	<i>Lamponella kimba</i>			
1536.	<i>Lamprochernes savignyi</i>			
1537.	<i>Latrodectus hasseltii</i>			
1538.	<i>Linyphia cupidinea</i>			Y
1539.	<i>Longepi woodman</i>			
1540.	<i>Lycosa australicola</i>			
1541.	<i>Lycosa gilberta</i>			
1542.	<i>Lycosa godeffroyi</i>			
1543.	<i>Maratus pavonis</i>			
1544.	<i>Masasteron tuart</i>			
1545.	<i>Mecistocephalus tahitiensis</i>			Y
1546.	<i>Missulena granulosa</i>			
1547.	<i>Missulena occatoria</i>			
1548.	<i>Mituliodon tarantulinus</i>			
1549.	<i>Mitzoruga insularis</i>			
1550.	<i>Molycrion vokes</i>			
1551.	<i>Myandra bicincta</i>			
1552.	<i>Myandra cambridgei</i>			
1553.	<i>Nephila edulis</i>			
1554.	<i>Nicodamus mainae</i>			
1555.	<i>Notiasemus glauerti</i>			
1556.	<i>Nunciella aspera</i>			

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1557.	<i>Ocrisiona leucocomis</i>			
1558.	<i>Ocrisiona parmelliae</i>			
1559.	<i>Oecobius navus</i>			
1560.	<i>Ommatoiulus moreleti</i>			
1561.	<i>Ommatoiulus moreletii</i>			
1562.	<i>Oratemnus curtus</i>			
1563.	<i>Ostearius melanopygius</i>			
1564.	<i>Oxidus gracilis</i>			
1565.	<i>Pediana occidentalis</i>			
1566.	<i>Pholcus phalangioides</i>			
1567.	<i>Physocyclus globosus</i>			
1568.	<i>Pinkfloydia harveii</i>			
1569.	<i>Podykipus collinus</i>			
1570.	<i>Polygonarea imparata</i>			Y
1571.	<i>Prionosternum nitidiceps</i>			
1572.	<i>Prionosternum scutatatum</i>			
1573.	<i>Raveniella arenacea</i>			
1574.	<i>Raveniella cirrata</i>			
1575.	<i>Raveniella peckorum</i>			
1576.	<i>Raveniella subcirrata</i>			
1577.	<i>Scolopendra morsitans</i>			
1578.	<i>Scytodes thoracica</i>			
1579.	<i>Servaea melaina</i>			
1580.	<i>Simaetha tenuior</i>			
1581.	<i>Siphonotus flavomarginatus</i>			
1582.	<i>Solaenodolichopus pruvoti</i>			
1583.	<i>Steatoda capensis</i>			
1584.	<i>Steatoda grossa</i>			
1585.	<i>Storena formosa</i>			
1586.	<i>Supunna funerea</i>			
1587.	<i>Supunna picta</i>			
1588.	33992 <i>Synemon gratiosa</i> (Graceful Sunmoth)		P4	
1589.	<i>Synothele durokoppin</i>			
1590.	<i>Synothele michaelsoni</i>			
1591.	<i>Synothele rastelloides</i>			
1592.	<i>Synsphyronus magnus</i>			
1593.	<i>Tamopsis perthensis</i>			
1594.	<i>Tasmanicosa leuckartii</i>			
1595.	<i>Tetragnatha demissa</i>			
1596.	<i>Thereuopoda lesueurii</i>			
1597.	<i>Urodacus novaehollandiae</i>			
1598.	<i>Urodacus planimanus</i>			
1599.	<i>Venator immansueta</i>			
1600.	<i>Venatrix pullastra</i>			
1601.	34113 <i>Westralunio carteri</i> (Carter's Freshwater Mussel)		T	
1602.	<i>Westrarchaea sinuosa</i>			
1603.	<i>Xysticus periscelis</i>			Y

Lichen

1604.	27665	<i>Cladia ferdinandii</i>		
1605.	27727	<i>Dirinaria aegialita</i>		
1606.	27746	<i>Flavoparmelia marchantii</i>		
1607.	27859	<i>Mycocalicium subtile</i>		Y
1608.	28071	<i>Thysanothecium scutellatum</i>		

Mammal

1609.	24209	<i>Arctocephalus tropicalis</i> (Subantarctic fur-seal)		T
1610.	24086	<i>Cercartetus concinnus</i> (Western Pygmy-possum, Mundarda)		
1611.	24186	<i>Chalinolobus gouldii</i> (Gould's Wattled Bat)		
1612.	24187	<i>Chalinolobus morio</i> (Chocolate Wattled Bat)		
1613.	24092	<i>Dasyurus geoffroii</i> (Chuditch, Western Quoll)		T
1614.	24093	<i>Dasyurus hallucatus</i> (Northern Quoll)		T
1615.	24258	<i>Equus caballus</i> (Horse)	Y	
1616.	24041	<i>Felis catus</i> (Cat)	Y	
1617.	30916	<i>Funambulus pennanti</i> (Indian Palm Squirrel)	Y	
1618.	24215	<i>Hydromys chrysogaster</i> (Water-rat, Rakali)		P4
1619.	48588	<i>Isodon fusciventer</i> (Quenda, southwestern brown bandicoot)		P4
1620.	24132	<i>Macropus fuliginosus</i> (Western Grey Kangaroo)		
1621.	24168	<i>Macrotis lagotis</i> (Bilby, Dalgyte, Ninu)		T
1622.	24223	<i>Mus musculus</i> (House Mouse)	Y	
1623.	24146	<i>Myrmecobius fasciatus</i> (Numbat, Walpurti)		T

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1624.	24210 <i>Neophoca cinerea</i> (Australian Sea-lion)		T	
1625.	24194 <i>Nyctophilus geoffroyi</i> (Lesser Long-eared Bat)			
1626.	24195 <i>Nyctophilus gouldi</i> (Gould's Long-eared Bat)			
1627.	24085 <i>Oryctolagus cuniculus</i> (Rabbit)	Y		
1628.	34016 <i>Ovis aries</i> (Sheep)			
1629.	48070 <i>Phascogale tapoatafa</i> subsp. <i>wambenger</i> (South-western Brush-tailed Phascogale, Wambenger)		S	
1630.	24243 <i>Rattus fuscipes</i> (Western Bush Rat)			
1631.	24244 <i>Rattus norvegicus</i> (Brown Rat)	Y		
1632.	24245 <i>Rattus rattus</i> (Black Rat)	Y		
1633.	24145 <i>Setonix brachyurus</i> (Quokka)		T	
1634.	<i>Sminthopsis murina</i>			
1635.	24259 <i>Sus scrofa</i> (Pig)	Y		
1636.	24207 <i>Tachyglossus aculeatus</i> (Short-beaked Echidna)			
1637.	24167 <i>Tarsipes rostratus</i> (Honey Possum, Noolbenger)			
1638.	25521 <i>Trichosurus vulpecula</i> (Common Brushtail Possum)			
1639.	24158 <i>Trichosurus vulpecula</i> subsp. <i>vulpecula</i> (Common Brushtail Possum)			
1640.	30954 <i>Tursiops aduncus</i> (Indo-Pacific Bottlenose Dolphin)			
1641.	24069 <i>Tursiops truncatus</i> (Bottlenose Dolphin)			
1642.	24206 <i>Vespadelus regulus</i> (Southern Forest Bat)			
1643.	24040 <i>Vulpes vulpes</i> (Red Fox)	Y		

Monocotyledon

1644.	1208 <i>Acanthocarpus preissii</i>			
1645.	1505 <i>Agave americana</i> (Century Plant)	Y		
1646.	43242 <i>Agave angustifolia</i>	Y		
1647.	23474 <i>Agrostocrinum hirsutum</i>			
1648.	184 <i>Aira caryophyllea</i> (Silvery Hairgrass)	Y		
1649.	185 <i>Aira cupaniana</i> (Silvery Hairgrass)	Y		
1650.	43820 <i>Albuca flaccida</i>	Y		
1651.	1056 <i>Alexgeorgea nitens</i>			
1652.	1374 <i>Allium ampeloprasum</i>	Y		
1653.	1375 <i>Allium neapolitanum</i> (Naples Onion)	Y		
1654.	1378 <i>Allium triquetrum</i> (Three-cornered Garlic)	Y		
1655.	1489 <i>Amaryllis belladonna</i> (Belladonna Lily)	Y		
1656.	200 <i>Amphipogon turbinatus</i>			
1657.	1407 <i>Anigozanthos flavidus</i> (Tall Kangaroo Paw)			
1658.	1409 <i>Anigozanthos humilis</i> (Catspaw)			
1659.	11434 <i>Anigozanthos humilis</i> subsp. <i>humilis</i>			
1660.	1411 <i>Anigozanthos manglesii</i> (Mangles Kangaroo Paw, Kurulbrang)			
1661.	11261 <i>Anigozanthos manglesii</i> subsp. <i>manglesii</i>			
1662.	1117 <i>Aphelia cyperoides</i>			
1663.	1264 <i>Arnocrinum preissii</i>			
1664.	11542 <i>Arrhenatherum elatius</i> var. <i>bulbosum</i> (Onion Twitch)	Y		
1665.	226 <i>Arundo donax</i> (Giant Reed)	Y		
1666.	8779 <i>Asparagus asparagoides</i> (Bridal Creeper)	Y		
1667.	16943 <i>Asparagus declinatus</i>	Y		
1668.	16945 <i>Asparagus plumosus</i>	Y		
1669.	1364 <i>Asphodelus fistulosus</i> (Onion Weed)	Y		
1670.	17233 <i>Austrostipa campylachne</i>			
1671.	17234 <i>Austrostipa compressa</i>			
1672.	17237 <i>Austrostipa elegantissima</i>			
1673.	17240 <i>Austrostipa flavescens</i>			
1674.	17241 <i>Austrostipa hemipogon</i>			
1675.	17245 <i>Austrostipa mollis</i>			
1676.	17253 <i>Austrostipa semibarbata</i>			
1677.	17257 <i>Austrostipa variabilis</i>			
1678.	231 <i>Avellinia michelii</i>	Y		
1679.	233 <i>Avena barbata</i> (Bearded Oat)	Y		
1680.	20013 <i>Axonopus fissifolius</i>	Y		
1681.	18279 <i>Babiana angustifolia</i>	Y		
1682.	18280 <i>Babiana nana</i>	Y		
1683.	741 <i>Baumea articulata</i> (Jointed Rush)			
1684.	743 <i>Baumea juncea</i> (Bare Twigrush)			
1685.	744 <i>Baumea laxa</i>			
1686.	748 <i>Baumea vaginalis</i> (Sheath Twigrush)			
1687.	1417 <i>Blancoa canescens</i> (Winter Bell)			
1688.	749 <i>Bolboschoenus caldwellii</i> (Marsh Club-rush)			
1689.	1272 <i>Borya scirpoidea</i>			
1690.	1273 <i>Borya sphaerocephala</i> (Pincushions)			
1691.	244 <i>Briza maxima</i> (Blowfly Grass)			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
		Y		
1692.	245 <i>Briza minor</i> (Shivery Grass)	Y		
1693.	247 <i>Bromus arenarius</i> (Sand Brome)			
1694.	249 <i>Bromus diandrus</i> (Great Brome)	Y		
1695.	250 <i>Bromus hordeaceus</i> (Soft Brome)	Y		
1696.	252 <i>Bromus madritensis</i> (Madrid Brome)	Y		
1697.	253 <i>Bromus rubens</i> (Red Brome)	Y		
1698.	12770 <i>Burchardia congesta</i>			
1699.	1276 <i>Caesia micrantha</i> (Pale Grass Lily)			
1700.	15330 <i>Caladenia arenicola</i>			
1701.	11136 <i>Caladenia denticulata</i>			
1702.	1586 <i>Caladenia discoidea</i> (Dancing Orchid)			
1703.	1592 <i>Caladenia flava</i> (Cowslip Orchid)			
1704.	15348 <i>Caladenia flava</i> subsp. <i>flava</i>			
1705.	15352 <i>Caladenia georgei</i>			
1706.	1596 <i>Caladenia huegelii</i> (Grand Spider Orchid)		T	
1707.	1599 <i>Caladenia latifolia</i> (Pink Fairy Orchid)			
1708.	1602 <i>Caladenia longicauda</i> (Common White Spider Orchid)			
1709.	15361 <i>Caladenia longicauda</i> subsp. <i>calcigena</i>			
1710.	15365 <i>Caladenia longicauda</i> subsp. <i>longicauda</i>			
1711.	1603 <i>Caladenia longiclavata</i> (Clubbed Spider Orchid)			
1712.	17760 <i>Caladenia nobilis</i>			
1713.	19871 <i>Caladenia x spectabilis</i>			
1714.	1214 <i>Calectasia grandiflora</i> (Blue Tinsel Lily)			
1715.	19309 <i>Calectasia narragara</i>			
1716.	13488 <i>Canna x generalis</i>	Y		
1717.	753 <i>Carex appressa</i> (Tall Sedge)			
1718.	754 <i>Carex divisa</i> (Divided Sedge)	Y		
1719.	43241 <i>Carex thecata</i>			
1720.	13685 <i>Catapodium rigidum</i> (Rigid Fescue)	Y		
1721.	259 <i>Cenchrus echinatus</i> (Burrgrass)	Y		
1722.	41566 <i>Cenchrus longisetus</i> (Feathertop)	Y		
1723.	41567 <i>Cenchrus macrourus</i> (African Feather Grass)	Y		
1724.	41563 <i>Cenchrus purpureus</i> (Elephant Grass)	Y		
1725.	41568 <i>Cenchrus setaceus</i> (Fountain Grass)	Y		
1726.	41570 <i>Cenchrus spinifex</i> (Spiny Burrgrass)	Y		
1727.	1125 <i>Centrolepis drummondiana</i>			
1728.	11299 <i>Chamaescilla corymbosa</i> var. <i>corymbosa</i>			
1729.	1513 <i>Chasmanthe floribunda</i> (African Cornflag)	Y		
1730.	17706 <i>Chordifex sinuosus</i>			
1731.	1418 <i>Conostylis aculeata</i> (Prickly Conostylis)			
1732.	11826 <i>Conostylis aculeata</i> subsp. <i>aculeata</i>			
1733.	11513 <i>Conostylis aculeata</i> subsp. <i>cygnorum</i>			
1734.	12109 <i>Conostylis aculeata</i> subsp. <i>preissii</i>			
1735.	1423 <i>Conostylis aurea</i> (Golden Conostylis)			
1736.	1425 <i>Conostylis bracteata</i>		P3	
1737.	1427 <i>Conostylis candicans</i> (Grey Cottonhead)			
1738.	11438 <i>Conostylis candicans</i> subsp. <i>candicans</i>			
1739.	1436 <i>Conostylis juncea</i>			
1740.	1454 <i>Conostylis setigera</i> (Bristly Cottonhead)			
1741.	11597 <i>Conostylis setigera</i> subsp. <i>setigera</i>			
1742.	1455 <i>Conostylis setosa</i> (White Cottonhead)			
1743.	48259 <i>Cortaderia selloana</i> subsp. <i>selloana</i>	Y		
1744.	1285 <i>Corynotheca micrantha</i> (Sand Lily)			
1745.	11883 <i>Corynotheca micrantha</i> var. <i>elongata</i>			
1746.	11283 <i>Corynotheca micrantha</i> var. <i>micrantha</i>			
1747.	15114 <i>Cyanicula gemmata</i>			
1748.	40661 <i>Cycnogeton lineare</i>			
1749.	283 <i>Cynodon dactylon</i> (Couch)	Y		
1750.	776 <i>Cyperus brevifolius</i> (Kyllinga Weed)	Y		
1751.	783 <i>Cyperus congestus</i> (Dense Flat-sedge)	Y		
1752.	794 <i>Cyperus gymnocaulos</i> (Spiny Flat-sedge)			
1753.	801 <i>Cyperus laevigatus</i>	Y		
1754.	806 <i>Cyperus polystachyos</i> (Bunchy Sedge)			
1755.	816 <i>Cyperus tenuiflorus</i> (Scaly Sedge)	Y		
1756.	818 <i>Cyperus vaginatus</i> (Stiffleaf Sedge)			
1757.	10916 <i>Cyrtostylis huegelii</i>			
1758.	10964 <i>Cyrtostylis robusta</i>			
1759.	1218 <i>Dasyopogon bromeliifolius</i> (Pineapple Bush)			
1760.	17663 <i>Desmocladius asper</i>			

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1761.	17691 <i>Desmocladius fasciculatus</i>			
1762.	16595 <i>Desmocladius flexuosus</i>			
1763.	1259 <i>Dianella revoluta</i> (Blueberry Lily)			
1764.	11636 <i>Dianella revoluta</i> var. <i>divaricata</i>			
1765.	306 <i>Dichelachne crinita</i> (Longhair Plumegrass)			
1766.	1287 <i>Dichopogon capillipes</i>			
1767.	1289 <i>Dichopogon preissii</i>			
1768.	311 <i>Digitaria ciliaris</i> (Summer Grass)	Y		
1769.	18667 <i>Digitaria eriantha</i>	Y		
1770.	320 <i>Digitaria sanguinalis</i> (Crab Grass)	Y		
1771.	321 <i>Digitaria violascens</i>	Y		
1772.	1509 <i>Dioscorea hastifolia</i> (Warrine, Waram)			
1773.	19649 <i>Disa bracteata</i>	Y		
1774.	11049 <i>Diuris corymbosa</i>			
1775.	42231 <i>Diuris decremента</i>			
1776.	10796 <i>Diuris drummondii</i> (Tall Donkey Orchid)		T	
1777.	1634 <i>Diuris laxiflora</i> (Bee Orchid)			
1778.	1635 <i>Diuris longifolia</i> (Common Donkey Orchid)			
1779.	12939 <i>Diuris magnifica</i>			
1780.	328 <i>Echinochloa colona</i> (Awnless Barnyard Grass)	Y		
1781.	11105 <i>Echinochloa crus-galli</i>	Y		
1782.	338 <i>Echinochloa telmatophila</i> (Swamp Barnyard Grass)	Y		
1783.	11818 <i>Ehrharta brevifolia</i> var. <i>brevifolia</i>	Y		
1784.	11485 <i>Ehrharta brevifolia</i> var. <i>cuspidata</i>	Y		
1785.	347 <i>Ehrharta calycina</i> (Perennial Veldt Grass)	Y		
1786.	349 <i>Ehrharta longiflora</i> (Annual Veldt Grass)	Y		
1787.	1643 <i>Elythranthera brunonis</i> (Purple Enamel Orchid)			
1788.	374 <i>Eragrostis cilianensis</i> (Stinkgrass)	Y		
1789.	376 <i>Eragrostis curvula</i> (African Lovegrass)	Y		
1790.	415 <i>Eriachne ovata</i>			
1791.	15412 <i>Eriochilus dilatatus</i> subsp. <i>multiflorus</i>			
1792.	1515 <i>Ferraria crispa</i> (Black Flag)	Y		
1793.	11445 <i>Ferraria crispa</i> subsp. <i>crispa</i>	Y		
1794.	433 <i>Festuca rubra</i> (Red Fescue)	Y		
1795.	20216 <i>Ficinia nodosa</i> (Knotted Club Rush)			
1796.	894 <i>Fimbristylis velata</i>			
1797.	18392 <i>Freesia alba</i> x <i>leichtlinii</i>	Y		
1798.	18378 <i>Furcraea foetida</i>	Y		Y
1799.	902 <i>Gahnia decomposita</i>			
1800.	1518 <i>Gladiolus angustus</i> (Long Tubed Painted Lady)	Y		
1801.	1520 <i>Gladiolus caryophyllaceus</i> (Wild Gladiolus)	Y		
1802.	1524 <i>Gladiolus undulatus</i> (Wild Gladiolus)	Y		
1803.	1468 <i>Haemodorum laxum</i>			
1804.	1470 <i>Haemodorum paniculatum</i> (Mardja)			
1805.	1475 <i>Haemodorum spicatum</i> (Mardja)			
1806.	11451 <i>Hemarthria uncinata</i> var. <i>uncinata</i>			
1807.	1526 <i>Hesperantha falcata</i>	Y		
1808.	444 <i>Holcus lanatus</i> (Yorkshire Fog)	Y		
1809.	448 <i>Hordeum glaucum</i> (Northern Barley Grass)	Y		
1810.	449 <i>Hordeum leporinum</i> (Barley Grass)	Y		
1811.	451 <i>Hordeum vulgare</i> (Barley)	Y		
1812.	452 <i>Hyparrhenia hirta</i> (Tambookie Grass)	Y		
1813.	1070 <i>Hypolaena exsulca</i>			
1814.	1071 <i>Hypolaena fastigiata</i>			
1815.	17622 <i>Hypolaena robusta</i>		P4	
1816.	20200 <i>Isolepis cernua</i> var. <i>setiformis</i>			
1817.	912 <i>Isolepis cyperoides</i>			
1818.	917 <i>Isolepis marginata</i> (Coarse Club-rush)			
1819.	1532 <i>Ixia maculata</i> (Yellow Ixia)	Y		
1820.	1533 <i>Ixia paniculata</i>	Y		
1821.	1534 <i>Ixia polystachya</i> (Variable Ixia)	Y		
1822.	19632 <i>Johnsonia pubescens</i> subsp. <i>pubescens</i>			
1823.	1175 <i>Juncus acutus</i> (Spiny Rush)	Y		
1824.	1184 <i>Juncus holoschoenus</i> (Jointleaf Rush)			
1825.	11922 <i>Juncus kraussii</i> subsp. <i>australiensis</i>			
1826.	1187 <i>Juncus oxycarpus</i>	Y		
1827.	1188 <i>Juncus pallidus</i> (Pale Rush)			
1828.	13562 <i>Lachenalia aloides</i>	Y		
1829.	16091 <i>Lachenalia bulbifera</i>	Y		
1830.	19707 <i>Lachenalia mutabilis</i>	Y		

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1831.	1370 <i>Lachenalia reflexa</i>	Y		
1832.	20019 <i>Lachnagrostis filiformis</i>			
1833.	467 <i>Lagurus ovatus</i> (Hare's Tail Grass)	Y		
1834.	11815 <i>Laxmannia grandiflora</i> subsp. <i>grandiflora</i>			
1835.	11911 <i>Laxmannia ramosa</i> subsp. <i>ramosa</i>			
1836.	11464 <i>Laxmannia sessiliflora</i> subsp. <i>australis</i>			
1837.	1309 <i>Laxmannia squarrosa</i>			
1838.	1051 <i>Lemna disperma</i> (Duckweed)			
1839.	1075 <i>Lepidobolus preissianus</i>			
1840.	18074 <i>Lepidobolus preissianus</i> subsp. <i>preissianus</i>			
1841.	925 <i>Lepidosperma angustatum</i>			
1842.	41620 <i>Lepidosperma asperatum</i>			
1843.	42742 <i>Lepidosperma calcicola</i>			
1844.	933 <i>Lepidosperma gladiatum</i> (Coast Sword-sedge, Kerbin)			
1845.	936 <i>Lepidosperma leptostachyum</i>			
1846.	45753 <i>Lepidosperma oldhamii</i> (Oldham's Sword Sedge)			
1847.	940 <i>Lepidosperma pubisquameum</i>			
1848.	941 <i>Lepidosperma resinosum</i>			
1849.	944 <i>Lepidosperma scabrum</i>			
1850.	<i>Lepidosperma</i> sp.			
1851.	945 <i>Lepidosperma squamatum</i>			
1852.	946 <i>Lepidosperma striatum</i>			
1853.	1653 <i>Leporella fimbriata</i> (Hare Orchid)			
1854.	1082 <i>Leptocarpus tenax</i> (Slender Twine Rush)			
1855.	15418 <i>Leptoceras menziesii</i>			
1856.	1090 <i>Lepyrodia muirii</i>			
1857.	1493 <i>Leucojum aestivum</i> (Snowflake)	Y		
1858.	8682 <i>Lolium loliaceum</i> (Stiff Ryegrass)	Y		
1859.	475 <i>Lolium multiflorum</i> (Italian Ryegrass)	Y		
1860.	476 <i>Lolium perenne</i> (Perennial Ryegrass)	Y		
1861.	10957 <i>Lolium perenne</i> x <i>rigidum</i>	Y		
1862.	477 <i>Lolium remotum</i> (Hardy Ryegrass)	Y		
1863.	478 <i>Lolium rigidum</i> (Wimmera Ryegrass)	Y		
1864.	<i>Lolium</i> sp.			
1865.	11766 <i>Lolium temulentum</i> forma <i>arvense</i>	Y		
1866.	11384 <i>Lolium temulentum</i> forma <i>temulentum</i>	Y		
1867.	11073 <i>Lolium</i> x <i>hybridum</i>	Y		
1868.	1223 <i>Lomandra caespitosa</i> (Tufted Mat Rush)			
1869.	1228 <i>Lomandra hermaphrodita</i>			
1870.	1231 <i>Lomandra maritima</i>			
1871.	14542 <i>Lomandra micrantha</i> subsp. <i>micrantha</i>			
1872.	1234 <i>Lomandra nigricans</i>			
1873.	1236 <i>Lomandra odora</i> (Tiered Matrush)			
1874.	1239 <i>Lomandra preissii</i>			
1875.	1240 <i>Lomandra purpurea</i> (Purple Mat Rush)			
1876.	1244 <i>Lomandra sonderi</i>			
1877.	1245 <i>Lomandra spartea</i>			
1878.	1246 <i>Lomandra suaveolens</i>			
1879.	1097 <i>Lyginia barbata</i>			
1880.	18049 <i>Lyginia imberbis</i>			
1881.	14985 <i>Melinis repens</i>	Y		
1882.	955 <i>Mesomelaena pseudostygia</i>			
1883.	957 <i>Mesomelaena tetragona</i> (Semaphore Sedge)			
1884.	485 <i>Microlaena stipoides</i> (Weeping Grass)			
1885.	10954 <i>Microtis media</i> (Tall Mignonette Orchid)			
1886.	15419 <i>Microtis media</i> subsp. <i>media</i>			
1887.	486 <i>Miscanthus sinensis</i> (Eulalia)	Y		
1888.	19179 <i>Moraea flaccida</i> (One-leaf Cape Tulip)	Y		
1889.	19177 <i>Moraea setifolia</i>	Y		
1890.	1371 <i>Muscari comosum</i> (Tufted Grape Hyacinth)	Y		
1891.	138 <i>Najas marina</i> (Prickly Water Nymph)			
1892.	11019 <i>Narcissus papyraceus</i>	Y		
1893.	44494 <i>Narcissus tazetta</i> subsp. <i>aureus</i>	Y		
1894.	44496 <i>Narcissus tazetta</i> subsp. <i>italicus</i>	Y		
1895.	1381 <i>Nothoscordum gracile</i>	Y		
1896.	1372 <i>Ornithogalum arabicum</i> (Lesser Cape Lily)	Y		
1897.	1537 <i>Orthrosanthus laxus</i> (Morning Iris)			
1898.	11749 <i>Orthrosanthus laxus</i> var. <i>laxus</i> (Morning Iris)			
1899.	32757 <i>Panicum repens</i>	Y		
1900.	527 <i>Paspalum dilatatum</i>	Y		

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1901.	528 <i>Paspalum distichum</i> (Water Couch)	Y		
1902.	14534 <i>Paspalum notatum</i>	Y		
1903.	1550 <i>Patersonia occidentalis</i> (Purple Flag, Koma)			
1904.	30472 <i>Patersonia occidentalis</i> var. <i>occidentalis</i>			
1905.	43765 <i>Pauridia glabella</i> var. <i>glabella</i>			
1906.	43782 <i>Pauridia vaginata</i> var. <i>vaginata</i>			
1907.	40422 <i>Pentameris pallida</i>	Y		
1908.	548 <i>Phalaris aquatica</i> (Phalaris)	Y		
1909.	550 <i>Phalaris canariensis</i> (Canary Grass)	Y		
1910.	551 <i>Phalaris minor</i> (Lesser Canary Grass)	Y		
1911.	20460 <i>Pheladenia deformis</i>			
1912.	14306 <i>Philydrella pygmaea</i> subsp. <i>pygmaea</i>			
1913.	1478 <i>Phlebocarya ciliata</i>			
1914.	1479 <i>Phlebocarya filifolia</i>			
1915.	553 <i>Phleum arenarium</i>	Y		
1916.	44540 <i>Phoenix canariensis</i> (Canary Islands Date Palm)	Y		
1917.	557 <i>Piptatherum miliaceum</i> (Rice Millet)	Y		
1918.	571 <i>Poa annua</i> (Winter Grass)	Y		
1919.	573 <i>Poa drummondiana</i> (Knotted Poa)			
1920.	575 <i>Poa homomalla</i>			
1921.	577 <i>Poa poiformis</i> (Coastal Poa)			
1922.	578 <i>Poa porphyroclados</i>			
1923.	123 <i>Posidonia australis</i> (Fibreball Weed)			
1924.	109 <i>Potamogeton crispus</i> (Curly Pondweed)			
1925.	1669 <i>Prasophyllum cyphochilum</i> (Pouched Leek Orchid)			
1926.	1674 <i>Prasophyllum giganteum</i> (Bronze Leek Orchid)			
1927.	1676 <i>Prasophyllum hians</i> (Yawning Leek Orchid)			
1928.	10853 <i>Prasophyllum plumiforme</i>			
1929.	15426 <i>Pterostylis aspera</i>			
1930.	1686 <i>Pterostylis barbata</i> (Bird Orchid)			
1931.	17267 <i>Pterostylis brevisepala</i>			
1932.	44723 <i>Pterostylis glebosa</i>			
1933.	48674 <i>Pterostylis orbiculata</i>			
1934.	1693 <i>Pterostylis recurva</i> (Jug Orchid)			
1935.	12217 <i>Pterostylis sanguinea</i>			
1936.	<i>Pterostylis</i> sp.			
1937.	18655 <i>Pterostylis</i> sp. <i>crinkled leaf</i> (G.J. Keighery 13426)			
1938.	1698 <i>Pterostylis vittata</i> (Banded Greenhood)			
1939.	16367 <i>Pyrorchis nigricans</i> (Red beaks, Elephants ears)			
1940.	14485 <i>Romulea flava</i> var. <i>minor</i>	Y		
1941.	1556 <i>Romulea rosea</i> (Guildford Grass)	Y		
1942.	11544 <i>Romulea rosea</i> var. <i>australis</i> (Guildford Grass)	Y		
1943.	14924 <i>Romulea rosea</i> var. <i>communis</i>	Y		
1944.	10970 <i>Rostraria cristata</i>	Y		
1945.	115 <i>Ruppia megacarpa</i>			
1946.	40425 <i>Rytidosperma caespitosum</i>			
1947.	40426 <i>Rytidosperma occidentale</i>			
1948.	968 <i>Schoenoplectus pungens</i> (Sharpleaf Rush)			
1949.	48356 <i>Schoenoplectus tabernaemontani</i>			
1950.	979 <i>Schoenus caespititius</i>			
1951.	980 <i>Schoenus capillifolius</i>		P3	
1952.	982 <i>Schoenus clandestinus</i>			
1953.	984 <i>Schoenus curvifolius</i>			
1954.	991 <i>Schoenus grammatophyllus</i>			
1955.	992 <i>Schoenus grandiflorus</i> (Large Flowered Bogrush)			
1956.	997 <i>Schoenus lanatus</i> (Woolly Bog-rush)			
1957.	1007 <i>Schoenus pedicellatus</i>			
1958.	1018 <i>Schoenus subfascicularis</i>			
1959.	608 <i>Setaria italica</i> (Italian Millet)	Y		
1960.	609 <i>Setaria palmifolia</i> (Palm Grass)	Y		
1961.	48862 <i>Sisyrinchium rosulatum</i>	Y		
1962.	35236 <i>Sorghum x drummondii</i> (Sudan Grass)	Y		
1963.	1312 <i>Sowerbaea laxiflora</i> (Purple Tassels)			
1964.	1558 <i>Sparaxis bulbifera</i>	Y		
1965.	1560 <i>Sparaxis pillansii</i> (Harlequin Flower)	Y		
1966.	625 <i>Spinifex longifolius</i> (Beach Spinifex)			
1967.	8710 <i>Sporobolus africanus</i> (Parramatta Grass)	Y		
1968.	635 <i>Sporobolus virginicus</i> (Marine Couch)			
1969.	636 <i>Stenotaphrum secundatum</i> (Buffalo Grass)	Y		
1970.	44492 <i>Stuckenia pectinata</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
1971.	1260 <i>Stypandra glauca</i> (Blind Grass)			
1972.	1036 <i>Tetralia octandra</i>			
1973.	1701 <i>Thelymitra antennifera</i> (Vanilla Orchid)			
1974.	10856 <i>Thelymitra benthamiana</i> (Leopard Orchid)			
1975.	1702 <i>Thelymitra campanulata</i> (Shirt Orchid)			
1976.	1705 <i>Thelymitra crinita</i> (Blue Lady Orchid)			
1977.	11053 <i>Thelymitra macrophylla</i>			
1978.	1717 <i>Thelymitra variegata</i> (Queen of Sheba)		P2	
1979.	1319 <i>Thysanotus arenarius</i>			
1980.	1338 <i>Thysanotus manglesianus</i> (Fringed Lily)			
1981.	1339 <i>Thysanotus multiflorus</i> (Many-flowered Fringe Lily)			
1982.	1343 <i>Thysanotus patersonii</i>			
1983.	1351 <i>Thysanotus sparteus</i>			
1984.	1358 <i>Thysanotus triandrus</i>			
1985.	17684 <i>Tremulina tremula</i>			
1986.	1482 <i>Tribonanthes brachypetala</i> (Nodding Tiurdin)			
1987.	1483 <i>Tribonanthes longipetala</i> (Branching Tiurdin)			
1988.	1361 <i>Tricoryne elatior</i> (Yellow Autumn Lily)			
1989.	1363 <i>Tricoryne tenella</i>			
1990.	33276 <i>Triglochin isingiana</i>			
1991.	146 <i>Triglochin minutissima</i>			
1992.	147 <i>Triglochin mucronata</i>			
1993.	18587 <i>Triglochin nana</i>			
1994.	151 <i>Triglochin striata</i>			
1995.	152 <i>Triglochin trichophora</i>			
1996.	708 <i>Triticum aestivum</i> (Wheat)	Y		
1997.	38401 <i>Tritonia gladiolaris</i> (Lined Tritonia)	Y		
1998.	19209 <i>Typhonium peltandroides</i>		P1	
1999.	722 <i>Vulpia bromoides</i> (Squirrel Tail Fescue)	Y		
2000.	11137 <i>Vulpia fasciculata</i>	Y		
2001.	724 <i>Vulpia myuros</i> (Rat's Tail Fescue)	Y		
2002.	12052 <i>Vulpia myuros forma megalura</i>	Y		
2003.	33101 <i>Vulpia myuros forma myuros</i>	Y		
2004.	1563 <i>Watsonia aletroides</i>	Y		Y
2005.	1566 <i>Watsonia marginata</i>	Y		
2006.	18108 <i>Watsonia meriana</i> var. <i>bulbillifera</i>	Y		
2007.	18118 <i>Watsonia meriana</i> var. <i>meriana</i>	Y		
2008.	1398 <i>Wurmbea monantha</i>			
2009.	1251 <i>Xanthorrhoea brunonis</i>			
2010.	1256 <i>Xanthorrhoea preissii</i> (Grass tree, Palga)			
2011.	<i>Xanthorrhoea</i> sp.			
2012.	1049 <i>Zantedeschia aethiopica</i> (Arum Lily)	Y		

Pteridophyte (Fern)

2013.	29 <i>Anogramma leptophylla</i> (Annual Fern)			
2014.	42902 <i>Azolla rubra</i>			
2015.	12818 <i>Cheilanthes sieberi</i> subsp. <i>sieberi</i>			
2016.	65 <i>Pleurosorus rutifolius</i> (Blanket Fern)			

Reptile

2017.	42368 <i>Acritoscincus trilineatus</i> (Western Three-lined Skink)			
2018.	44629 <i>Anilius australis</i>			
2019.	25241 <i>Antaresia stimsoni</i> subsp. <i>stimsoni</i> (Stimson's Python)			
2020.	24991 <i>Aprasia repens</i> (Sand-plain Worm-lizard)			
2021.	42380 <i>Brachyuropis fasciolatus</i> subsp. <i>fasciolatus</i> (Narrow-banded Shovel-nosed Snake)			
2022.	42381 <i>Brachyuropis semifasciatus</i> (Southern Shovel-nosed Snake)			
2023.	43380 <i>Chelodina colliei</i> (South-western Snake-necked Turtle)			
2024.	25336 <i>Chelonia mydas</i> (Green Turtle)		T	
2025.	24980 <i>Christinus marmoratus</i> (Marbled Gecko)			
2026.	30893 <i>Cryptoblepharus buchananii</i>			
2027.	25020 <i>Cryptoblepharus plagiocephalus</i>			
2028.	30899 <i>Ctenophorus adelaidensis</i> (Southern Heath Dragon, Western Heath Dragon)			
2029.	25027 <i>Ctenotus australis</i>			
2030.	25039 <i>Ctenotus fallens</i>			
2031.	25040 <i>Ctenotus gemmula</i> (Jewelled South-west Ctenotus (Swan Coastal Plain subpop P3), skink)			
2032.	25087 <i>Cyclodomorphus celatus</i> (Western Slender Blue-tongue)			
2033.	25766 <i>Delma fraseri</i> (Fraser's Legless Lizard)			
2034.	25296 <i>Demansia psammophis</i> subsp. <i>reticulata</i> (Yellow-faced Whipsnake)			
2035.	24929 <i>Diplodactylus granariensis</i> subsp. <i>granariensis</i>			
2036.	44654 <i>Diplodactylus lateroides</i> (Speckled Stone Gecko)			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
2037.	24939 <i>Diplodactylus polyophthalmus</i>			
2038.	25251 <i>Echiopsis curta</i> (Bardick)			
2039.	25096 <i>Egernia kingii</i> (King's Skink)			
2040.	25100 <i>Egernia napoleonis</i>			
2041.	25250 <i>Elapognathus coronatus</i> (Crowned Snake)			
2042.	25342 <i>Eretmochelys imbricata</i> subsp. <i>bissa</i> (Hawksbill Turtle)		T	
2043.	24959 <i>Gehyra variegata</i>			
2044.	25119 <i>Hemiergis quadrilineata</i>			
2045.	25133 <i>Lerista elegans</i>			
2046.	25147 <i>Lerista lineata</i> (Perth Slider, Lined Skink)		P3	
2047.	25148 <i>Lerista lineopunctulata</i>			
2048.	25165 <i>Lerista praepedita</i>			
2049.	25005 <i>Lialis burtonis</i>			
2050.	42413 <i>Lissolepis luctuosa</i> (Western Swamp Skink)			
2051.	42414 <i>Lucasium alboguttatum</i>			
2052.	25184 <i>Menetia greyii</i>			
2053.	25240 <i>Morelia spilota</i> subsp. <i>imbricata</i> (Carpet Python)			
2054.	25192 <i>Morethia obscura</i>			
2055.	25248 <i>Neelaps bimaculatus</i> (Black-naped Snake)			
2056.	25249 <i>Neelaps calonotos</i> (Black-striped Snake, black-striped burrowing snake)		P3	
2057.	25252 <i>Notechis scutatus</i> (Tiger Snake)			
2058.	25253 <i>Parasuta gouldii</i>			
2059.	25007 <i>Pletholax gracilis</i> subsp. <i>gracilis</i> (Keeled Legless Lizard)			
2060.	25510 <i>Pogona minor</i> (Dwarf Bearded Dragon)			
2061.	24907 <i>Pogona minor</i> subsp. <i>minor</i> (Dwarf Bearded Dragon)			
2062.	25261 <i>Pseudechis australis</i> (Mulga Snake)			
2063.	25511 <i>Pseudonaja affinis</i> (Dugite)			
2064.	25259 <i>Pseudonaja affinis</i> subsp. <i>affinis</i> (Dugite)			
2065.	42416 <i>Pseudonaja mengdeni</i> (Western Brown Snake)			
2066.	25263 <i>Pseudonaja modesta</i> (Ringed Brown Snake)			
2067.	25008 <i>Pygopus lepidopodus</i> (Common Scaly Foot)			
2068.	25266 <i>Simoselaps bertholdi</i> (Jan's Banded Snake)			
2069.	24942 <i>Strophurus spinigerus</i> subsp. <i>spinigerus</i>			
2070.	<i>Testudo</i> sp.			Y
2071.	25203 <i>Tiliqua occipitalis</i> (Western Bluetongue)			
2072.	25519 <i>Tiliqua rugosa</i>			
2073.	25204 <i>Tiliqua rugosa</i> subsp. <i>aspera</i>			
2074.	25207 <i>Tiliqua rugosa</i> subsp. <i>rugosa</i>			
2075.	24983 <i>Underwoodisaurus milii</i> (Barking Gecko)			
2076.	25218 <i>Varanus gouldii</i> (Bungarra or Sand Monitor)			
2077.	25526 <i>Varanus tristis</i> (Racehorse Monitor)			

Slime Mould

2078.	38967 <i>Arcyria incarnata</i>			
2079.	38973 <i>Arcyria pomiformis</i>			
2080.	38976 <i>Badhamia foliicola</i>			
2081.	38979 <i>Badhamia utricularis</i>			
2082.	38982 <i>Ceratomyxa fruticulosa</i>			
2083.	38984 <i>Collaria arcyronema</i>			
2084.	38986 <i>Comatricha elegans</i>			
2085.	38987 <i>Comatricha ellae</i>			
2086.	38988 <i>Comatricha laxa</i>			
2087.	38989 <i>Comatricha longipila</i>			Y
2088.	38990 <i>Comatricha nigra</i>			
2089.	38993 <i>Comatricha rigidireta</i>			Y
2090.	38997 <i>Craterium leucocephalum</i>			
2091.	40880 <i>Cribraria confusa</i>			
2092.	39002 <i>Cribraria microcarpa</i>			
2093.	39003 <i>Cribraria minutissima</i>			
2094.	39008 <i>Diachea leucopodia</i>			
2095.	39028 <i>Echinostelium elachiston</i>			Y
2096.	39029 <i>Echinostelium minutum</i>			
2097.	39030 <i>Enerthenema papillatum</i>			
2098.	39033 <i>Fuligo septica</i>			
2099.	39034 <i>Hemitrichia calyculata</i>			
2100.	39041 <i>Licea kleistobolus</i>			
2101.	39042 <i>Licea minima</i>			
2102.	39048 <i>Lycogala epidendrum</i>			
2103.	39054 <i>Oligonema schweinitzii</i>			
2104.	<i>Paradiacheopsis cribrata</i>			Y
2105.	39056 <i>Paradiacheopsis fimbriata</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
2106.	39063 <i>Physarum cinereum</i>			
2107.	39065 <i>Physarum compressum</i>			
2108.	39073 <i>Physarum nudum</i>			Y
2109.	39074 <i>Physarum pusillum</i>			
2110.	39079 <i>Physarum viride</i>			
2111.	39081 <i>Reticularia lycoperdon</i>			
2112.	39083 <i>Stemonitis fusca</i>			
2113.	39087 <i>Stemonitis splendens</i>			
2114.	39089 <i>Stemonitopsis amoena</i>			
2115.	40882 <i>Stemonitopsis hyperopta</i>			
2116.	39094 <i>Trichia affinis</i>			
2117.	39097 <i>Trichia decipiens</i>			
2118.	39100 <i>Trichia persimilis</i>			
2119.	39102 <i>Trichia verrucosa</i>			
2120.	39103 <i>Tubifera ferruginosa</i>			

Conservation Codes

T - Rare or likely to become extinct
 X - Presumed extinct
 IA - Protected under international agreement
 S - Other specially protected fauna
 1 - Priority 1
 2 - Priority 2
 3 - Priority 3
 4 - Priority 4
 5 - Priority 5

¹ For NatureMap's purposes, species flagged as endemic are those whose records are wholly contained within the search area. Note that only those records complying with the search criterion are included in the calculation. For example, if you limit records to those from a specific datasource, only records from that datasource are used to determine if a species is restricted to the query area.

Appendix 3

List of Vertebrate Fauna Species Recorded from the Study Area



Family / Species	Common Name	Conservation Status		NatureMap	EPBC Act PMST	Kings Park records	How & Dell (2000)
		State	Federal				
Hylidae							
<i>Litoria adelaidensis</i>	Slender Tree Frog			•			
<i>Litoria moorei</i>	Motorbike Frog			•		•	
Limnodynastidae							
<i>Heleioporus eyrei</i>	Moaning Frog			•		•	
<i>Heleioporus psammophilus</i>	Sand Frog			•			
<i>Limnodynastes dorsalis</i>	Western Banjo Frog			•		•	
Myobatrachidae							
<i>Crinia georgiana</i>	Quacking Frog			•			
<i>Crinia glauerti</i>	Clicking Frog			•			
<i>Crinia insignifera</i>	Squelching Froglet			•			
<i>Myobatrachus gouldii</i>	Turtle Frog			•		•	•
<i>Pseudophryne guentheri</i>	Crawling Toadlet			•			

Family / Species	Common Name	Conservation Status		NatureMap	EPBC Act PMST	Kings Park records	How & Dell (2000)
		State	Federal				
Cheluidae							
<i>Chelodina colliei</i>	Oblong Turtle			•			
Carphodactylidae							
<i>Underwoodisaurus millii</i>	Southern Barking Gecko			•		•	
Diplodactylidae							
<i>Diplodactylus granariensis</i>				•			
<i>Diplodactylus polyophthalmus</i>	Spotted Sandplain Gecko			•		•	•
<i>Lucasium alboguttatum</i>				•			
<i>Strophurus spinigerus</i>				•			
Gekkonidae							
<i>Christinus marmoratus</i>	Marbled Gecko			•		•	•
<i>Gehyra variegata</i>				•			
Pygopodidae							
<i>Aprasia repens</i>				•		•	•
<i>Delma fraseri</i>				•			
<i>Lialis burtonis</i>				•		•	•
<i>Pletholax gracilis</i>	Keeled Legless Lizard			•			
<i>Pygopus lepidopodus</i>	Common Scaly Foot			•			
Agamidae							
<i>Ctenophorus adelaidensis</i>	Western Heath Dragon			•			
<i>Pogona minor</i>	Dwarf Bearded Dragon			•		•	•
Scincidae							
<i>Acritoscincus trilineatus</i>				•			
<i>Cryptoblepharus buchananii</i>				•		•	•
<i>Ctenotus australis</i>				•		•	•
<i>Ctenotus fallens</i>				•		•	•
<i>Ctenotus gemmula</i>		P3		•			
<i>Cyclodomorphus celatus</i>				•		•	•
<i>Egernia kingii</i>	King's Skink			•			
<i>Egernia napoleonis</i>				•			
<i>Hemiergis quadrilineata</i>				•		•	•
<i>Lerista elegans</i>				•		•	•
<i>Lerista lineata</i>		P3		•			
<i>Lerista lineopunctulata</i>				•		•	•
<i>Lerista praepedita</i>				•		•	•
<i>Lissolepis luctuosa</i>	Western Swamp Skink			•			
<i>Menetia greyii</i>				•		•	•
<i>Morethia lineoocellata</i>						•	•
<i>Morethia obscura</i>				•		•	•

Family / Species	Common Name	Conservation Status		NatureMap	EPBC Act PMST	Kings Park records	How & Dell (2000)
		State	Federal				
<i>Tiliqua occipitalis</i>	Western Bluetongue			•			
<i>Tiliqua rugosa</i>	Bobtail, Shingleback			•		•	•
Varanidae							
<i>Varanus gouldii</i>	Bungarra or Sand Goanna			•		•	•
<i>Varanus tristis</i>	Racehorse Goanna			•		•	•
Typhlopidae							
<i>Anilius australis</i>				•		•	•
Boidae							
<i>Antaresia stimsoni</i>	Stimson's Python			•			
<i>Morelia spilota imbricata</i>	South-western Carpet Python			•		•	
Elapidae							
<i>Brachyurophis fasciolatus</i>				•			
<i>Brachyurophis semifasciatus</i>				•			
<i>Demansia psammophis</i>	Yellow-faced Whipsnake			•		•	
<i>Echiopsis curta</i>	Bardick			•			
<i>Elapognathus coronatus</i>	Crowned Snake			•			
<i>Neelaps bimaculatus</i>	Black-naped Snake			•		•	•
<i>Neelaps calonotos</i>	Black-striped Snake	P3		•			
<i>Notechis scutatus</i>	Tiger Snake			•		•	
<i>Parasuta gouldii</i>				•			
<i>Pseudechis australis</i>	Mulga Snake			•			
<i>Pseudonaja affinis</i>	Dugite			•		•	•
<i>Pseudonaja mengdeni</i>	Western Brown Snake			•			
<i>Pseudonaja modesta</i>	Ringed Brown Snake			•			
<i>Simoselaps bertholdi</i>	Jan's Banded Snake			•		•	•

Family / Species	Common Name	Conservation Status		NatureMap	EPBC Act PMST	Kings Park records
		State	Federal			
Phasianidae						
<i>Coturnix pectoralis</i>	Stubble Quail			•		•
<i>Coturnix ypsilophora</i>	Brown Quail					•
Anatidae						
<i>Biziura lobata</i>	Musk Duck			•		
<i>Stictonetta naevosa</i>	Freckled Duck			•		
<i>Cygnus atratus</i>	Black Swan			•		
<i>Tadorna tadornoides</i>	Australian Shelduck			•		•
<i>Chenonetta jubata</i>	Australian Wood Duck			•		•
<i>Malacorhynchus membranaceus</i>	Pink-eared Duck			•		
<i>Anas rhynchos</i>	Australasian Shoveler			•		
<i>Anas gracilis</i>	Grey Teal			•		•
<i>Anas castanea</i>	Chestnut Teal			•		
<i>Anas superciliosa</i>	Pacific Black Duck			•		•
<i>Aythya australis</i>	Hardhead			•		•
<i>Oxyura australis</i>	Blue-billed Duck	P4		•		
Podicipedidae						
<i>Tachybaptus novaehollandiae</i>	Australasian Grebe			•		•
<i>Poliiocephalus poliocephalus</i>	Hoary-headed Grebe			•		
<i>Podiceps cristatus</i>	Great Crested Grebe			•		
Columbidae						
<i>Columba livia</i> *	Rock Dove			•		
<i>Streptopelia senegalensis</i> *	Laughing Dove			•		•
<i>Streptopelia chinensis</i> *	Spotted Dove			•		•
<i>Phaps chalcoptera</i>	Common Bronzewing			•		•
<i>Phaps elegans</i>	Brush Bronzewing					•
<i>Ocyphaps lophotes</i>	Crested Pigeon			•		
Podargidae						
<i>Podargus strigoides</i>	Tawny Frogmouth			•		•
Aegothelidae						
<i>Aegotheles cristatus</i>	Australian Owlet-nightjar			•		
Apodidae						
<i>Apus pacificus</i>	Fork-tailed Swift	Mi	Mi	•	•	•
Anhingidae						
<i>Anhinga novaehollandiae</i>	Australasian Darter			•		•
Phalacrocoracidae						
<i>Microcarbo melanoleucos</i>	Little Pied Cormorant			•		•
<i>Phalacrocorax carbo</i>	Great Cormorant			•		•
<i>Phalacrocorax sulcirostris</i>	Little Black Cormorant			•		•

Family / Species	Common Name	Conservation Status		NatureMap	EPBC Act PMST	Kings Park records
		State	Federal			
<i>Phalacrocorax varius</i>	Pied Cormorant			•		•
Pelecanidae						
<i>Pelecanus conspicillatus</i>	Australian Pelican			•		•
Ardeidae						
<i>Botaurus poiciloptilus</i>	Australasian Bittern	EN	EN	•	•	
<i>Ixobrychus dubius</i>	Australian Little Bittern	P4		•		
<i>Ixobrychus flavicollis</i>	Black Bittern	P2		•		
<i>Ardea pacifica</i>	White-necked Heron			•		
<i>Ardea modesta</i>	Eastern Great Egret			•		•
<i>Ardea ibis</i>	Cattle Egret			•		
<i>Egretta novaehollandiae</i>	White-faced Heron			•		
<i>Egretta garzetta</i>	Little Egret			•		•
<i>Nycticorax caledonicus</i>	Nankeen Night-Heron			•		•
Threskiornithidae						
<i>Plegadis falcinellus</i>	Glossy Ibis	Mi	Mi	•		
<i>Threskiornis molucca</i>	Australian White Ibis					•
<i>Threskiornis spinicollis</i>	Straw-necked Ibis			•		•
<i>Platalea regia</i>	Royal Spoonbill			•		
<i>Platalea flavipes</i>	Yellow-billed Spoonbill			•		
Accipitridae						
<i>Pandion cristatus</i>	Eastern Osprey	Mi	Mi	•		•
<i>Elanus axillaris</i>	Black-shouldered Kite			•		•
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle			•		
<i>Haliastur sphenurus</i>	Whistling Kite			•		•
<i>Accipiter fasciatus</i>	Brown Goshawk			•		•
<i>Accipiter cirrocephalus</i>	Collared Sparrowhawk			•		•
<i>Circus approximans</i>	Swamp Harrier			•		
<i>Aquila audax</i>	Wedge-tailed Eagle			•		
<i>Hieraaetus morphnoides</i>	Little Eagle			•		•
Falconidae						
<i>Falco cenchroides</i>	Nankeen Kestrel			•		•
<i>Falco berigora</i>	Brown Falcon			•		•
<i>Falco longipennis</i>	Australian Hobby			•		•
<i>Falco peregrinus</i>	Peregrine Falcon	OS		•		•
Rallidae						
<i>Porphyrio porphyrio</i>	Purple Swamphen			•		
<i>Gallirallus philippensis</i>	Buff-banded Rail			•		•
<i>Porzana pusilla</i>	Baillon's Crake			•		
<i>Porzana fluminea</i>	Australian Spotted Crake			•		

Family / Species	Common Name	Conservation Status		NatureMap	EPBC Act PMST	Kings Park records
		State	Federal			
<i>Porzana tabuensis</i>	Spotless Crake			•		
<i>Tribonyx ventralis</i>	Black-tailed Native-hen			•		
<i>Gallinula tenebrosa</i>	Dusky Moorhen			•		
<i>Fulica atra</i>	Eurasian Coot			•		
Otididae						
<i>Ardeotis australis</i>	Australian Bustard			•		
Burhinidae						
<i>Burhinus grallarius</i>	Bush Stone-curlew			•		
Charadriidae						
<i>Vanellus tricolor</i>	Banded Lapwing			•		•
<i>Vanellus miles</i>	Masked Lapwing			•		
Scolopacidae						
<i>Actitis hypoleucos</i>	Common Sandpiper	Mi	Mi			
Turnicidae						
<i>Turnix varius</i>	Painted Button-quail			•		•
Laridae						
<i>Chroicocephalus novaehollandiae</i>	Silver Gull			•		•
Cacatuidae						
<i>Calyptorhynchus banksii subsp. naso</i>	Forest Red-tailed Black Cockatoo	VU	VU	•	•	•
<i>Calyptorhynchus latirostris</i>	Carnaby's Black-Cockatoo	EN	EN	•	•	
<i>Calyptorhynchus baudinii</i>	Baudin's Black-Cockatoo	EN	EN	•		•
<i>Eolophus roseicapillus</i>	Galah			•		•
<i>Cacatua tenuirostris</i>	Long-billed Corella			•		
<i>Cacatua sanguinea</i>	Little Corella			•		•
<i>Nymphicus hollandicus</i>	Cockatiel			•		•
Psittacidae						
<i>Trichoglossus haematodus*</i>	Rainbow Lorikeet			•		•
<i>Glossopsitta porphyrocephala</i>	Purple-crowned Lorikeet					•
<i>Polytelis anthopeplus</i>	Regent Parrot					•
<i>Platycercus icterotis</i>	Western Rosella			•		•
<i>Barnardius zonarius</i>	Australian Ringneck			•		•
<i>Purpureicephalus spurius</i>	Red-capped Parrot			•		•
<i>Melopsittacus undulatus</i>	Budgerigar			•		
<i>Neophema elegans</i>	Elegant Parrot			•		
Cuculidae						
<i>Chalcites lucidus</i>	Shining Bronze-Cuckoo			•		•
<i>Cacomantis pallidus</i>	Pallid Cuckoo			•		•
<i>Cacomantis flabelliformis</i>	Fan-tailed Cuckoo			•		•
Strigidae						

Family / Species	Common Name	Conservation Status		NatureMap	EPBC Act PMST	Kings Park records
		State	Federal			
<i>Ninox novaeseelandiae</i>	Southern Boobook			•		•
Tytonidae						
<i>Tyto novaehollandiae</i>	Masked Owl	P3		•		
<i>Tyto javanica</i>	Eastern Barn Owl			•		•
Halcyonidae						
<i>Dacelo novaeguineae</i>	Laughing Kookaburra			•		•
<i>Todiramphus sanctus</i>	Sacred Kingfisher			•		
Meropidae						
<i>Merops ornatus</i>	Rainbow Bee-eater			•		•
Maluridae						
<i>Malurus splendens</i>	Splendid Fairy-wren			•		
<i>Malurus leucopterus</i>	White-winged Fairy-wren			•		
<i>Malurus lamberti</i>	Variegated Fairy-wren			•		•
Acanthizidae						
<i>Sericornis frontalis</i>	White-browed Scrubwren			•		•
<i>Calamanthus cautus</i>	Shy Heathwren			•		
<i>Smicronis brevirostris</i>	Weebill			•		•
<i>Gerygone fusca</i>	Western Gerygone			•		•
<i>Acanthiza chrysorrhoa</i>	Yellow-rumped Thornbill			•		•
<i>Acanthiza inornata</i>	Western Thornbill			•		•
<i>Acanthiza apicalis</i>	Inland Thornbill			•		•
Pardalotidae						
<i>Pardalotus punctatus</i>	Spotted Pardalote			•		•
<i>Pardalotus striatus</i>	Striated Pardalote			•		•
Meliphagidae						
<i>Acanthorhynchus superciliosus</i>	Western Spinebill			•		•
<i>Lichenostomus virescens</i>	Singing Honeyeater			•		•
<i>Lichenostomus leucotis</i>	White-eared Honeyeater			•		
<i>Lichenostomus ornatus</i>	Yellow-plumed Honeyeater					•
<i>Manorina flavigula</i>	Yellow-throated Miner			•		
<i>Anthochaera lunulata</i>	Western Wattlebird			•		•
<i>Anthochaera carunculata</i>	Red Wattlebird			•		•
<i>Epthianura albifrons</i>	White-fronted Chat			•		•
<i>Glyciphila melanops</i>	Tawny-crowned Honeyeater			•		•
<i>Lichmera indistincta</i>	Brown Honeyeater			•		•
<i>Phylidonyris novaehollandiae</i>	New Holland Honeyeater			•		•
<i>Phylidonyris niger</i>	White-cheeked Honeyeater			•		•
<i>Melithreptus brevirostris</i>	Brown-headed Honeyeater			•		
<i>Melithreptus lunatus</i>	White-naped Honeyeater			•		•

Family / Species	Common Name	Conservation Status		NatureMap	EPBC Act PMST	Kings Park records
		State	Federal			
Neosittidae						
<i>Daphoenositta chrysoptera</i>	Varied Sittella			•		•
Campephagidae						
<i>Coracina maxima</i>	Ground Cuckoo-shrike			•		
<i>Coracina novaehollandiae</i>	Black-faced Cuckoo-shrike			•		•
<i>Lalage sueurii</i>	White-winged Triller			•		
Pachycephalidae						
<i>Pachycephala pectoralis</i>	Golden Whistler					•
<i>Pachycephala rufiventris</i>	Rufous Whistler			•		•
<i>Colluricincla harmonica</i>	Grey Shrike-thrush			•		•
Artamidae						
<i>Artamus personatus</i>	Masked Woodswallow			•		
<i>Artamus cinereus</i>	Black-faced Woodswallow			•		
<i>Artamus cyanopterus</i>	Dusky Woodswallow					•
<i>Cracticus torquatus</i>	Grey Butcherbird			•		•
<i>Cracticus nigrogularis</i>	Pied Butcherbird			•		
<i>Cracticus tibicen</i>	Australian Magpie			•		•
<i>Strepera versicolor</i>	Grey Currawong			•		
Rhipiduridae						
<i>Rhipidura albiscapa</i>	Grey Fantail			•		•
<i>Rhipidura leucophrys</i>	Willie Wagtail			•		•
Corvidae						
<i>Corvus coronoides</i>	Australian Raven			•		•
<i>Corvus bennetti</i>	Little Crow			•		
Monarchidae						
<i>Myiagra inquieta</i>	Restless Flycatcher			•		
<i>Grallina cyanoleuca</i>	Magpie-lark			•		•
Petroicidae						
<i>Petroica boodang</i>	Scarlet Robin			•		•
<i>Petroica goodenovii</i>	Red-capped Robin			•		•
<i>Eopsaltria griseogularis</i>	Western Yellow Robin			•		•
Acrocephalidae						
<i>Acrocephalus australis</i>	Australian Reed-Warbler			•		
Megaluridae						
<i>Megalurus gramineus</i>	Little Grassbird			•		
<i>Cincloramphus mathewsi</i>	Rufous Songlark					•
Timaliidae						
<i>Zosterops lateralis</i>	Silvereye			•		•
Hirundinidae						

Family / Species	Common Name	Conservation Status		NatureMap	EPBC Act PMST	Kings Park records
		State	Federal			
<i>Cheramoeca leucosterna</i>	White-backed Swallow			•		
<i>Hirundo neoxena</i>	Welcome Swallow			•		•
<i>Petrochelidon ariel</i>	Fairy Martin			•		
<i>Petrochelidon nigricans</i>	Tree Martin			•		•
Nectariniidae						
<i>Dicaeum hirundinaceum</i>	Mistletoebird			•		•
Estrildidae						
<i>Taeniopygia guttata</i>	Zebra Finch			•		
<i>Lonchura castaneothorax*</i>	Chestnut-breasted Mannikin			•		
Motacillidae						
<i>Anthus novaeseelandiae</i>	Australasian Pipit			•		

Family / Species	Common Name	Conservation Status		NatureMap	EPBC Act PMST	Kings Park records
		State	Federal			
Tachyglossidae						
<i>Tachyglossus aculeatus</i>	Short-beaked Echidna			•		
Dasyuridae						
<i>Dasyurus geoffroii</i>	Western Quoll, Chuditch	VU	VU	•	•	
<i>Phascogale tapoatafa wambenger</i>	Brush-tailed Phascogale	CD		•		
Myrmecobiidae						
<i>Myrmecobius fasciatus</i>	Numbat, Walpurti	EN	EN	•		
Peramelidae						
<i>Isoodon fusciventer</i>	Quenda	P4		•		•
Burramyidae						
<i>Cercartetus concinnus</i>	Western Pygmy-possum, Mundarda			•		
Pseudocheiridae						
<i>Pseudocheirus occidentalis</i>	Western Ringtail Possum	CR	CR		•	•
Tarsipedidae						
<i>Tarsipes rostratus</i>	Honey Possum, Noolbenger			•		
Phalangeridae						
<i>Trichosurus vulpecula</i>	Common Brushtail Possum			•		•
Macropodidae						
<i>Macropus fuliginosus</i>	Western Grey Kangaroo			•		
Muridae						
<i>Hydromys chrysogaster</i>	Water-rat	P4		•		•
<i>Mus musculus*</i>	House Mouse			•	•	•
<i>Rattus fuscipes</i>	Western Bush Rat			•		
<i>Rattus norvegicus*</i>	Brown Rat			•	•	•
<i>Rattus rattus*</i>	Black Rat			•	•	•
Sciuridae						
<i>Funambulus pennanti*</i>	Indian Palm Squirrel			•	•	
Leporidae						
<i>Oryctolagus cuniculus*</i>	Rabbit			•	•	•
Emballonuridae						
<i>Austronomus australis</i>	White-striped Free-tailed Bat					•
Molossidae						
<i>Ozimops sp.</i>	-					•
Vespertilionidae						
<i>Chalinolobus gouldii</i>	Gould's Wattled Bat			•		•
<i>Chalinolobus morio</i>	Chocolate Wattled Bat			•		
<i>Nyctophilus geoffroyi</i>	Lesser Long-eared Bat			•		•
<i>Nyctophilus gouldi</i>	Gould's Long-eared Bat			•		
<i>Nyctophilus major major</i>	Greater Long-eared Bat					•

Family / Species	Common Name	Conservation Status		NatureMap	EPBC Act PMST	Kings Park records
		State	Federal			
<i>Vespertilio regulus</i>	Southern Forest-bat			•		•
Canidae						
<i>Canis lupus familiaris</i> *	Domestic Dog				•	
<i>Vulpes vulpes</i> *	Red Fox			•	•	•
Felidae						
<i>Felis catus</i> *	Cat			•	•	•
Equidae						
<i>Equus caballus</i> *	Horse			•		
Suidae						
<i>Sus scrofa</i> *	Pig			•		
Bovidae						
<i>Bos taurus</i> *	Cow				•	
<i>Ovis aries</i> *	Sheep			•		

Appendix 4

Flora of Conservation
Significance Known from the
Locality and their Likelihood of
Occurrence in the Survey Area



Status (WA)	Species	Habit (WA Herbarium 2019)	Habitat (WA Herbarium 2019)	Source					Likelihood of Occurrence in Survey Area
				Nature Map	TPFL	WA Herb	EPBC Act Protected Matters	BGPA	
Threatened (Critically Endangered)	<i>Caladenia huegelii</i>	Perennial herb.	Grey or brown sand, clay loam, in vegetation including <i>Banksia</i> woodland.	✓		✓	✓		Unlikely to occur: suitable habitat present but only two records from the study area, both from 1833 and with an imprecise location ("Swan River colony"): the next closest record is almost 10 km southeast.
Threatened (Critically Endangered)	<i>Drakaea elastica</i>	Perennial herb.	Winter-wet swamps.				✓		Would not occur: no suitable habitat.
Threatened (Critically Endangered)	<i>Thelymitra dedmaniarum</i>	Tuberous perennial herb.	Granite.				✓		Would not occur: no suitable habitat and the closest records are over 25 km east.
Threatened (Endangered)	<i>Diuris purdiei</i>	Perennial herb.	Winter-wet swamps.				✓		Would not occur: no suitable habitat.
Threatened (Endangered)	<i>Drakaea micrantha</i>	Perennial herb.	White-grey sand, often in Jarrah forest.				✓		Would not occur: no suitable habitat and most northern known occurrence is over 11 km south of the survey area.
Threatened (Endangered)	<i>Thelymitra stellata</i>	Tuberous perennial herb.	Sand, gravel, lateritic loam.				✓		Would not occur: no suitable habitat and the closest records are over 16 km east.
Threatened (Vulnerable)	<i>Andersonia gracilis</i>	Slender shrub.	Winter-wet areas, near swamps.				✓		Would not occur: no suitable habitat.
Threatened (Vulnerable)	<i>Anigozanthus viridis</i> subsp. <i>terraspectans</i>	Rhizomatous perennial herb.	Winter wet depressions				✓		Would not occur: no suitable habitat.
Threatened (Vulnerable)	<i>Diuris drummondii</i>	Tuberous perennial herb	Low-lying depressions, swamps.	✓		✓			Would not occur: no suitable habitat. Single record from study area is undated and has an imprecise location ("Swan River colony").
Threatened (Vulnerable)	<i>Diuris micrantha</i>	Perennial herb.	Winter-wet swamps, in shallow water.				✓		Would not occur: no suitable habitat.
Threatened (Vulnerable)	<i>Eleocharis keigheryi</i>	Sedge.	Emergent in freshwater: creeks, claypans.				✓		Would not occur: no suitable habitat.
Threatened (Presumed Extinct)	<i>Picris compacta</i>	Herb to 1.2 m tall.	River banks.	✓		✓			Would not occur: no suitable habitat, and presumed extinct: a single collection from 'Crawley' in 1941.
Priority 1	<i>Eucalyptus x mundijongensis</i>	Tree.	River banks.	✓	✓	✓			Would not occur: no suitable habitat.

Status (WA)	Species	Habit (WA Herbarium 2019)	Habitat (WA Herbarium 2019)	Source					Likelihood of Occurrence in Survey Area	
				Nature Map	TPFL	WA Herb	EPBC Act Protected Matters	BGPA		
Priority 2	<i>Acacia benthamii</i>	Shrub.	Typically on limestone breakaways.	✓		✓			✓	Would not occur: no particularly suitable habitat; infrequently recorded in area; closest record is over 500 m east of the survey area and has an imprecise locality ("near the Swan River"); not recorded in the survey area to date, despite intensive searches in the targeted flora survey area, and searches through the remainder of the survey area.
Priority 2	<i>Calothamnus macrocarpus</i>	Shrub.	Rocky quartzite soils, sand on slopes.	✓		✓				Would not occur naturally: no suitable habitat: natural distribution is at East Mt Barren on the south coast: population in Kings Park is cultivated.
Priority 2	<i>Eucalyptus educta</i>	Tree, mallee.	Shallow soil on granite rocks.	✓		✓				Would not occur naturally: natural distribution is Murchison/Goldfields region: cultivated in Kings Park.
Priority 2	<i>Fabronia hampeana</i>	Moss.	Usually on trunks of Zamia Palms.	✓	✓	✓				Unlikely to occur: few Macrozamia in survey area and this moss is very infrequently recorded from the locality.
Priority 2	<i>Grevillea manglesii</i> subsp. <i>ornithopoda</i>	Spreading, virgate shrub.	Usually on river banks.	✓		✓				Would not occur naturally: no suitable habitat: cultivated in Kings Park.
Priority 2	<i>Melaleuca viminalis</i>	Shrub.	Usually associated with wetlands.	✓		✓				Would not occur naturally: no suitable habitat: cultivated in Kings Park.
Priority 2	<i>Poranthera moorokatta</i>	Very small annual herb.	Slopes and damplands with white and brown sands.	✓		✓				May potentially occur: suitable habitat present in the survey area: this tiny species has been only infrequently recorded in the locality, including two specimens in sub-association DBm 800 m east of the southern end of the survey area; has not been recorded despite several surveys in the area; this species would be easily overlooked except under optimal conditions and with intensive searches.
Priority 2	<i>Thelymitra variegata</i>	Tuberous perennial herb.	Sandy clay, sand, laterite, often in Sheoak/Banksia woodland.	✓		✓				Unlikely to occur: suitable habitat present but no records from Kings Park to date, despite intensive searches: all records in close proximity are from pre-1950.

Status (WA)	Species	Habit (WA Herbarium 2019)	Habitat (WA Herbarium 2019)	Source					Likelihood of Occurrence in Survey Area
				Nature Map	TPFL	WA Herb	EPBC Act Protected Matters	BGPA	
Priority 3	<i>Acacia horridula</i>	Harsh, slender, single-stemmed shrub.	Gravelly soils over granite, sand on rocky hillsides; Darling Scarp.	✓		✓			Would not occur: no suitable habitat; apparent records from the Swan Coastal Plain are from historical records with imprecise location details ("near the Swan River" and "near the Canning River").
Priority 3	<i>Amanita drummondii</i>	Fungus.	In Jarrah/Marri/Banksia bushland.	✓		✓			Unlikely to occur: single record from Bibra Lake is plotting incorrectly in the study area: all other records are from south of the Swan River.
Priority 3	<i>Amanita fibrillopes</i>	Fungus.	In Sheoak/Jarrah/Banksia bushland.	✓		✓			Likely to occur: suitable habitat present in the survey area and this species has been recorded within 80 m of the northeast corner: has not been recorded despite several surveys in the area, but would only be recorded under optimal seasonal conditions.
Priority 3	<i>Amanita preissii</i>	Fungus.	In Jarrah/Marri/Banksia bushland.	✓		✓			May potentially occur: suitable habitat present but closest record is 1.2 km southeast of the survey area: would only be recorded under optimal seasonal conditions.
Priority 3	<i>Amanita wadjukiorum</i>	Fungus.	In Sheoak/Jarrah/Marri/Banksia bushland.	✓		✓			Likely to occur: suitable habitat present in the survey area and this species has been recorded within 40 m of the northeast corner: has not been recorded despite several surveys in the area, but would only be recorded under optimal seasonal conditions.
Priority 3	<i>Angianthus micropodioides</i>	Erect or decumbent annual herb.	Saline sandy soils. River edges, saline depressions, claypans.	✓		✓			Would not occur: no suitable habitat; the two records from the study area are historical records from 1898 on the banks of the Swan River.
Priority 3	<i>Beyeria cinerea</i> subsp. <i>cinerea</i>	Low shrub to 1 m tall.	In coastal heaths on grey sand over limestone.	✓	✓	✓			Would not occur: no suitable habitat.
Priority 3	<i>Byblis gigantea</i>	Small, branched perennial herb.	Sandy-peat swamps and seasonally wet areas.	✓		✓			Would not occur: no suitable habitat.
Priority 3	<i>Conostylis bracteata</i>	Rhizomatous, tufted or shortly proliferous perennial herb,	Sand over limestone; consolidated sand dunes.	✓		✓			Would not occur: no suitable habitat.
Priority 3	<i>Dicrastylis micrantha</i>	Spreading shrub.	Red sand on sandplains.	✓		✓			Would not occur naturally: no suitable habitat: cultivated in Kings Park.

Status (WA)	Species	Habit (WA Herbarium 2019)	Habitat (WA Herbarium 2019)	Source					Likelihood of Occurrence in Survey Area
				Nature Map	TPFL	WA Herb	EPBC Act Protected Matters	BGPA	
Priority 3	<i>Hibbertia spicata</i> subsp. <i>leptothea</i>	Erect or spreading shrub.	Near-coastal limestone ridges, outcrops and cliffs.	✓		✓			Would not occur: no suitable habitat.
Priority 3	<i>Lasiopetalum glutinosum</i> subsp. <i>glutinosum</i>	Shrub usually <1 m tall.	Lateritic clay, granites, slopes of Darling Scarp.	✓		✓			Would not occur: no suitable habitat: single record from the study area is from 1839 and has an imprecise locality ("Swan River").
Priority 3	<i>Lasiopetalum membranaceum</i>	Multi-stemmed shrub to 1 m tall.	Sand over limestone.	✓	✓	✓		✓	Unlikely to occur: no particularly suitable habitat, and closest records are over 1.2 km northeast and southeast: all other records are from further south. No records from the targeted flora survey area, despite intensive searches.
Priority 3	<i>Schoenus capillifolius</i>	Sedge.	Seasonally wet flats and claypans.	✓		✓			Would not occur: no suitable habitat: single record from the study area has an imprecise locality ("Upper Swan").
Priority 3	<i>Stylidium maritimum</i>	Caespitose perennial herb.	Sand over limestone on dune slopes and flats, in coastal heath and shrubland, and open Banksia woodland.	✓	✓	✓			Would not occur: no suitable habitat.
Priority 4	<i>Calothamnus graniticus</i> subsp. <i>leptophyllus</i>	Erect, multi-stemmed shrub.	Clay over granite, lateritic soils on hillsides.	✓		✓			Would not occur naturally: no suitable habitat: natural distribution is further south: population in Kings Park is cultivated.
Priority 4	<i>Dodonaea hackettiana</i> (Hackett's Hopbush)	Shrub or tree.	Sand; outcropping limestone.	✓	✓	✓		✓	Unlikely to occur: suitable habitat in the survey area and a record within 25 m of the northeastern corner, however this shrub species was not recorded during the field surveys; all other records are over 700 m northeast of the survey area.
Priority 4	<i>Hypolaena robusta</i>	Dioecious rhizomatous, perennial herb.	White sand on sandplains.	✓		✓			Would not occur: no suitable habitat: the single apparent record from the locality has inaccurate location coordinates and should be considerably further north.
Priority 4	<i>Jacksonia sericea</i> (Waldjumi)	Low spreading shrub.	Calcareous and sandy soils.	✓	✓	✓		✓	Known to occur: entire survey area represents suitable habitat and there are numerous records from the area, including within the targeted flora survey area.

Status (WA)	Species	Habit (WA Herbarium 2019)	Habitat (WA Herbarium 2019)	Source					Likelihood of Occurrence in Survey Area
				Nature Map	TPFL	WA Herb	EPBC Act Protected Matters	BGPA	
Priority 4	<i>Stylidium striatum</i> (Fan-leaved Triggerplant)	Rosetted perennial herb.	Brown clay loam over laterite on hillslopes, in Jarrah/Marri forest and Wandoo woodland.	✓					Would not occur: no suitable habitat: an apparent record from Kings Park is likely to represent <i>S. neurophyllum</i> : most records of <i>S. striatum</i> are from locations on the Darling Scarp.
Priority 4	<i>Verticordia lindleyi</i> subsp. <i>lindleyi</i>	Shrub.	Sand, sandy clay in winter-wet depressions.	✓		✓			Would not occur: no suitable habitat.

Appendix 5

Fauna of Conservation Significance Known from the Locality and their Likelihood of Occurrence in the Survey Area



Taxon	Common Name	Conservation Status [†]		Habitat	Regional Records	Likelihood of Occurrence in the Survey Area
		State	C'Vealth			
Mammals						
<i>Pseudocheirus occidentalis</i>	Western Ringtail Possum	CR	CR	On the Swan Coastal Plain, particularly Peppermint (<i>Agonis flexuosa</i>) forests and woodlands, Tuart (<i>Eucalyptus gomphocephala</i>) woodlands with Peppermint mid-storey, and Jarrah (<i>E. marginata</i>) and Marri (<i>Corymbia calophylla</i>) woodland.	Two individuals recorded at Tree Top Walk in Kings Park in 2018, but these are considered to have been released in the park rather than representing an existing population.	Would not occur: recent record from Kings Park considered to involve unauthorised release of animals. No other recent records, and nearest known natural population is over 100 km to the south at Yalgorup National Park.
<i>Myrmecobius fasciatus</i>	Numbat	EN	EN	Eucalypt woodland with hollow logs and branches for shelter and termites for food. Formerly occurred in a wider range of habitats.	Recorded just north of Kings Park in 1927, but no recent records from the region and generally accepted to be extinct on the coastal plain near Perth.	Would not occur: species is restricted to several remnant and re-introduced populations, and is not considered to be extant in the vicinity of the survey area.
<i>Dasyurus geoffroii</i>	Western Quoll, Chuditch	VU	VU	Now primarily restricted to Jarrah forest and woodland, with smaller numbers in other eucalypt woodland and mallee.	Several records from the vicinity of the survey area, however the most recent is from 1969; most date from the 1920s and 1930s.	Unlikely to occur: habitat within the survey area could be marginal, and there are no recent records from the vicinity; this species is generally considered to be very scarce in the Perth area.
<i>Phascogale tapoatafa wambenger</i>	Brush-tailed Phascogale, Common Wambenger	CD	–	Uses a range of habitats from mallee to rainforest, but prefers open forest with sparse groundcover.	One recent record (2017); a dead individual found on a road in the Perth CBD, ~3 km northeast of the survey area, however the origin of the carcass uncertain. One other record from 2016 from ~11 km southwest, however the location description does not match the coordinates, so this location is uncertain.	Unlikely to occur: habitat within the survey area may be suitable, however there are only two records from the coastal plain in the Perth suburbs; one of uncertain provenance, and the location of the second is uncertain.

Taxon	Common Name	Conservation Status [†]		Habitat	Regional Records	Likelihood of Occurrence in the Survey Area
		State	C'Vealth			
<i>Isoodon fusciventer</i>	Quenda	P4	–	Variety of forest, woodland, shrubland and heath communities, but prefer areas of denser vegetation, including wetland fringes and heathland.	Recently (re-)established in Kings Park, and several recent records within 1-2 km of the survey area.	May potentially occur: the species occurs within Kings Park and there are recent records nearby, but habitat within the survey area is not optimal (lacking sufficient ground cover). No sightings or secondary evidence recorded during the current survey, or from the sites monitored by KPBG in 2018.
<i>Hydromys chrysogaster</i>	Water-rat, Rakali	P4	–	Variety of permanent fresh water bodies, ranging from subalpine streams to lakes, creeks, and farm dams. Also on sheltered coastal beaches, mangroves and offshore islands.	Several records within 5 km of the survey area from the margins of the Swan River, but most are not recent records.	Would not occur: no suitable habitat within the survey area.
Birds						
<i>Calyptorhynchus latirostris</i>	Carnaby's Black-Cockatoo	EN	EN	Forages in proteaceous heath and shrubland, eucalypt woodlands, and introduced pine plantations. Nests in hollows in large eucalypts.	Numerous records (>2,000) from Kings Park and surrounding areas.	Known to occur: suitable foraging habitat within the survey area and foraging evidence recorded; this species occurs regularly in Kings Park.
<i>Calyptorhynchus baudinii</i>	Baudin's Black-Cockatoo	EN	EN	Primarily eucalypt forests of Jarrah, Marri and Karri (<i>E. diversicolor</i>). Nests in hollows in large eucalypts.	A few scattered records on the coastal plain, including one from Kings Park, but caution advised due to identification difficulties cf. <i>C. latirostris</i> . Records listed by Kings Park from Recher, WA Museum and others appear to be referable to <i>C. latirostris</i> and are a result of taxonomic confusion. Generally restricted to the Darling Range in the Perth area.	Unlikely to occur: largely restricted to the Darling Scarp in the Perth area, and few records from the coastal plain, especially compared to <i>C. latirostris</i> . May visit the survey area on very rare occasions but overall is considered unlikely to occur.
<i>Botaurus poiciloptilus</i>	Australasian Bittern	EN	EN	Freshwater wetlands with dense reed beds of <i>Baumea</i> or <i>Typha</i> for breeding and roosting, and more open sedgeland and grassed areas for foraging.	Old records (early 1900s) from several wetlands within 10 km; most recent records from the mid 2000s at Herdsman Lake, ~5 km to the northwest.	Would not occur: is now a rare visitor to the Perth area, and no suitable habitat in the survey area.

Taxon	Common Name	Conservation Status†		Habitat	Regional Records	Likelihood of Occurrence in the Survey Area
		State	C'Vealth			
<i>Calyptorhynchus banksii naso</i>	Forest Red-tailed Black-Cockatoo	VU	VU	Eucalypt forests of Jarrah, Marri and Karri, with recent movement into Perth suburbs.	Numerous records from Kings Park and surrounding areas.	Known to occur: Red-tailed Black-Cockatoos were observed on three occasions during the field component of this assessment; twice overflying the survey area, and one observation of three birds perched in a <i>Eucalyptus megacarpa</i> just outside the survey area.
<i>Apus pacificus</i>	Fork-tailed Swift	Mi	Mi	Aerial over most habitat types.	Sparse records throughout the Perth metropolitan area; nearest is 3 km southwest of the survey area.	Unlikely to occur: this species is highly mobile and known to occur occasionally in the region, but is a scarce visitor and would only overfly the survey area.
<i>Plegadis falcinellus</i>	Glossy Ibis	Mi	Mi	Shallow margins of freshwater wetlands and adjacent flats, river pools, flooded samphire and sewage ponds.	Recorded from several nearby wetlands; most records from Herdsman Lake, ~5 km to the northwest.	Would not occur: no suitable habitat in the survey area.
<i>Pandion cristatus</i>	Eastern Osprey	Mi	Mi	Coasts, estuaries, larger near-coastal wetlands and rivers, offshore islands.	Numerous records from the Swan River, and a few records from Kings Park (probably mostly overflying birds).	Unlikely to occur: no suitable habitat within the survey area. The species occurs along the nearby Swan Estuary and may overfly the area on occasion, but would not use the habitat in the survey area.
<i>Actitis hypoleucos</i>	Common Sandpiper	Mi	Mi	Margins of sheltered coasts, estuaries and freshwater wetlands.	Several regional records, primarily from the Swan River, but also other nearby wetlands including Herdsman Lake and Lake Monger. Nearest records ~2 km south at Pelican Point.	Would not occur: no suitable habitat in the survey area.
<i>Falco peregrinus</i>	Peregrine Falcon	OS	–	A wide range of habitats, including forests, woodland, wetland and coastal areas, and open country.	Numerous records in the Perth area, including several from Kings Park within 2 km of the survey area.	Foraging: Likely to occur Breeding: Unlikely to occur The survey area contains suitable foraging habitat for this species, and there are numerous records from the vicinity.

Taxon	Common Name	Conservation Status [†]		Habitat	Regional Records	Likelihood of Occurrence in the Survey Area
		State	C'Vealth			
<i>Ixobrychus flavicollis</i>	Black Bittern (SW population)	P2	–	In the South-west region of WA, primarily vegetated rivers and streams.	Records from the study area are only "historical" (undated, prior to 1976); no recent records from the region.	Would not occur: no suitable habitat within the survey area and the species is now extremely scarce (or possibly extinct) in the Perth area.
<i>Tyto novaehollandiae</i>	Masked Owl (SW population)	P3	–	Tall eucalypt and woodland, usually with open areas nearby, perhaps for hunting.	Three relatively recent (2000 onwards) records from within 10 km of the survey area, but few records overall on the Swan Coastal Plain.	Unlikely to occur: there are few records from the Swan Coastal Plain and this species is thought to be a scarce visitor only; in addition, the survey area does not contain areas of tall forest or woodland.
<i>Oxyura australis</i>	Blue-billed Duck	P4	–	Primarily deeper freshwater wetlands and swamps, often with dense vegetation. Less commonly other wetlands such as salt lakes, sewage ponds and estuaries.	Nearest record ~1 km to the west at Shenton Park Lake; recorded from most wetlands in the region.	Would not occur: no suitable habitat in the survey area.
<i>Ixobrychus dubius</i>	Australian Little Bittern	P4	–	Dense reed beds in freshwater wetlands.	Nearest records from Lake Monger and Herdsman Lake, ~5 km northwest of the survey area.	Would not occur: no suitable habitat in the survey area.
Reptiles						
<i>Ctenotus gemmula</i>		P3	–	Banksia woodlands with low vegetation.	No recent records (later than 1970s) from the region.	Unlikely to occur: suitable habitat but no recent records from the region.
<i>Lerista lineata</i>		P3	–	Coastal dunes, banksia/eucalypt woodlands and suburban gardens.	Several records within 10 km, but none north of the Swan River.	Unlikely to occur: not known to occur north of the Swan River.
<i>Neelaps calonotus</i>	Black-striped Snake	P3	–	Coastal dunes and banksia/eucalypt woodlands.	Nearest record is a historical record from the northern edge of Kings Park, ~2 km from the survey area. This species still occurs at Bold Park, ~5 km west of the survey area.	May potentially occur: habitat within the survey area is potentially suitable. Records from just outside Kings Park.
Invertebrates						
<i>Idiosoma sigillatum</i>	Swan Coastal Plain Shield-backed Trapdoor Spider	P3	–	Banksia woodland and heathland on sandy soils.	Previous records from Kings Park.	May potentially occur: the survey area contains suitable habitat and four previous records place the species within 2 km.

Taxon	Common Name	Conservation Status [†]		Habitat	Regional Records	Likelihood of Occurrence in the Survey Area
		State	C'Vealth			
<i>Euoplos inornatus</i>	Inornate Trapdoor Spider (Northern Jarrah Forest)	P3	–	Poorly known; woodlands, including creek banks.	One sighting in 1998 from Kings Park; most other records are from east of the Darling Scarp (e.g. Jarrah woodlands).	Unlikely to occur: only one record from within Kings Park.
<i>Synemon gratiosa</i>	Graceful Sunmoth	P4	–	Breeding is specifically associated with <i>Lomandra maritima</i> and <i>L. hermaphrodita</i> .	Historical records (1930s) from Kings Park; recorded in Shenton Bushland in 2010. Survey within Kings Park as part of regional surveys 2010 – 2012 failed to record this species.	Unlikely to occur: no records from Kings Park since the 1930s. Very limited occurrence of <i>Lomandra hermaphrodita</i> within the survey area.

† CR = Critically Endangered; EN = Endangered; VU = Vulnerable; CD = Conservation Dependent; Mi = Migratory; OS = Other specially protected species; P = Priority species.

Appendix 6

Kings Park Vegetation Descriptions and Mapping from McChesney (2017)



3. A new hierarchy of plant communities

The following new hierarchy of plant communities in Kings Park Bushland was determined by considering the findings of Mattiske (1987), *Bush Forever* (GWA 2000), Syrinx (2001a), McChesney (2006), McChesney (2008; summarised in Appendix 1), McChesney (2017a), with some consideration given to Beard (1967), Baird (1977) and WEC (1999). At a regional scale, Kings Park Bushland can be regarded as being comprised of two major plant communities, which relate directly to Floristic Community Type 27 and Floristic Community Type 28 (GWA 2000), identified as 27 and 28 respectively, in the hierarchy below. For consistency, abbreviations have followed Vegetation Types A to E of Mattiske (1987) as much as possible (which adopted the Site-vegetation Types of Havel 1968 and 1975). An additional group of outlier sites (O), which did not conform to any of the main vegetation types, were identified from analysis of the 2008 dataset.

Note: Indicator species below are derived from Dufrene and Legendre's (1997) quantitative method of Indicator Species Analysis using cover data (McChesney 2008, 2017a). Indicator Species Analysis has not been applied directly to all plant communities on the scarp (due to the limited spatial coverage of the scarp plots) or to the *Banksia ilicifolia* area on the plateau (due to insufficient replication in such as small area).

27. Mixed Closed Heathland on Tamala Limestone, dominated by sclerophyllous shrubs (e.g. *Melaleuca systema*, *Melaleuca huegelii*, *Grevillea preissii*, *Templetonia retusa*, *Allocasuarina humilis*, *Acacia lasiocarpa*) and sedges/ perennial grass-like herbs (e.g. *Acanthocarpus preissii*, *Mesomelaena pseudostygia*, *Lepidosperma* spp. and *Conostylis candicans*) (Mt Eliza escarpment only)

A Mixed Closed Heathland on Tamala Limestone with shallow soils and limestone outcrops including *Melaleuca systema*, *Grevillea preissii*, *Melaleuca huegelii*, *Templetonia retusa*, *Ficinia nodosa* and *Hemiandra glabra*

AMh Mixed Tall Closed Heathland of *Melaleuca huegelii*, *Acacia lasiocarpa*, *Templetonia retusa*, *Grevillea preissii*, *Acacia lasiocarpa* and *Ficinia nodosa* on lower to midslopes on shallow soils with frequent Tamala Limestone outcrops

Dominant species: a tall shrub layer of *Melaleuca huegelii*, *Templetonia retusa* (and to a lesser extent *Olearia axillaris* and *Pithocarpa cordata*) over: the shrubs *Grevillea preissii*, *Acacia lasiocarpa* (and to a lesser extent *Hemiandra glabra*, *Scaevola crassifolia*, *Eremophila glabra* and *Gompholobium tomentosum*); the rushes/sedges *Ficinia nodosa* (and to a lesser extent *Lepidosperma gladiatum*); and the herb *Conostylis candicans*

Indicator species (bolded are strong indicators): ***Melaleuca huegelii*, *Acacia lasiocarpa*, *Templetonia retusa*, *Grevillea preissii*, *Ficinia nodosa***

AMs Mixed Closed Heathland of *Melaleuca systema*, *Scaevola canescens*, *Mesomelaena pseudostygia* and *Conostylis aculeata* with emergent *Spyridium globulosum* (and scattered *Banksia attenuata* and, rarely, *Eucalyptus gomphocephala*) on upper-to-midslopes on shallow soils over Tamala Limestone

Dominant species: a medium-low shrub layer of *Melaleuca systema*, *Scaevola canescens* (and to a lesser extent *Stenanthemum notiale*) with emergent *Spyridium globulosum* over: the rush/sedge *Mesomelaena pseudostygia*; and the herbs *Conostylis aculeata*, *Ptilotus polystachyus* (and to a lesser extent *Corynotheca micrantha* and *Tricoryne elatior*)

Indicator species (bolded are strong indicators): *Conostylis aculeata*, *Corynotheca micrantha*, ***Melaleuca systema***, ***Mesomelaena pseudostygia***, *Ptilotus polystachyus* ***Scaevola canescens***, *Stenanthemum notiale*

28. Mixed *Eucalyptus* - *Allocasuarina* – *Banksia* Woodland on Uplands – Karrakatta Sands derived from Tamala Limestone with *Allocasuarina fraseriana* dominant throughout and variously co-dominant with *Banksia attenuata*, *Eucalyptus marginata*, *Corymbia calophylla* and *Eucalyptus gomphocephala* and with scattered *Banksia menziesii*, grasstrees (*Xanthorrhoea brunonis* and *X. preissii*), *Macrozamia fraseri* and *Jacksonia sternbergiana* over a mostly closed understorey dominated by sclerophyllous shrubs (*Hibbertia hypericoides*, *Scaevola canescens*, *Jacksonia sericea*), sedges and perennial grass-like herbs (e.g. *Mesomelaena pseudostygia*, *Tetraria octandra*, *Desmocladius* spp. and *Conostylis aculeata*), and geophytes (e.g. *Burchardia congesta*, *Sowerbaea laxiflora* and *Caesia micrantha*) (Plateau and sections of Mt Eliza escarpment)

B Mixed *Banksia* - *Eucalyptus* - *Allocasuarina* Woodland on deeper sands over Tamala Limestone with scattered limestone pinnacles, with a mixed overstorey of *Banksia sessilis* (often forming a Tall Closed Shrubland), *Allocasuarina fraseriana*, *Corymbia calophylla* and *Eucalyptus gomphocephala*, over scattered *Xanthorrhoea preissii* and *Jacksonia furcellata* in the midstorey, and an understorey of *Acacia pulchella*, *Hibbertia hypericoides*, *Dianella revoluta* and *Caesia micrantha* (Mt Eliza escarpment only)

B_{Bs} *Banksia sessilis* Tall Closed Shrubland to Woodland on medium-depth soils over Tamala Limestone (with *Allocasuarina fraseriana* and *Corymbia calophylla* sometimes common, and *Banksia attenuata* and *Eucalyptus marginata* occasional), over an understorey of *Xanthorrhoea preissii*, *Hibbertia hypericoides*, *Burchardia congesta*, *Caesia micrantha*, *Tetraria octandra*, *Trachymene pilosa* and *Desmocladius flexuosus*, with *Grevillea crithmifolia* common in restoration areas and *Acacia pulchella* forming dense thickets after fire

Dominant species: a tall shrub/ small tree layer of *Banksia sessilis* with emergent *Eucalyptus marginata* over: the tall shrubs *Xanthorrhoea preissii*, *Jacksonia furcellata* (and in restoration areas *Grevillea crithmifolia*); the low shrubs *Hibbertia hypericoides* and *Allocasuarina humilis*; the rushes/sedges *Tetraria octandra*, *Desmocladius flexuosus* (and to a lesser extent *Lepidosperma calcicola*); the herbs *Trachymene pilosa*, *Burchardia congesta*, *Caesia micrantha*, *Xanthosia huegelii* (and to a lesser extent *Ptilotus drummondii*, *Thysanotus sparteus* and *Gonocarpus pithyoides*); and in restoration areas, the grass *Austrostipa elegantissima*

Indicator species (bolded are strong indicators): ***Banksia sessilis***, ***Burchardia congesta***, ***Caesia micrantha***, ***Hibbertia hypericoides***, *Tetraria octandra*, ***Trachymene pilosa***, ***Xanthorrhoea preissii***, *Xanthosia huegelii*; in restoration sites also ***Grevillea crithmifolia***; in areas of 4-years-since-fire: ***Acacia pulchella***, ***Scaevola anchusifolia***, ***Thysanotus arenarius***, ***Crassula colorata***

B_{Cc} *Corymbia calophylla* – *Allocasuarina fraseriana* - *Banksia attenuata* Tall Woodland on deep soils over Tamala limestone, with an understorey of *Xanthorrhoea brunonis*, *Hardenbergia comptoniana* and *Phyllanthus calycinus*

Dominant species: an overstorey dominated by *Corymbia calophylla* with subdominants *Allocasuarina fraseriana*, *Banksia attenuata* and *Acacia saligna*, over: the tall shrub *Dodonaea hackettiana*; the medium to low shrubs *Phyllanthus calycinus*, *Xanthorrhoea brunonis*, *Hardenbergia comptoniana*, *Hypocalymma robustum* (and to a lesser extent *Macrozamia fraseri*, *Acacia pulchella* and *Grevillea vestita*); and the herbs *Lomandra* sp. (and to a lesser extent *Acanthocarpus preissii*)

Indicator species (bolded are strong indicators): *Acacia saligna*, *Allocasuarina fraseriana*, *Banksia attenuata*, ***Corymbia calophylla***, *Dodonaea hackettiana*, ***Hardenbergia comptoniana***, *Lomandra sp.*, *Phyllanthus calycinus*, ***Xanthorrhoea brunonis***

B_{Eg} *Eucalyptus gomphocephala* Tall Open Woodland* on small pockets associated with gullies and depressions, mainly along the base of Mt Eliza escarpment

*This community has not been assessed for its indicator species; dominant species are obtained from the observation-based methods of Syrinx (2001)

Dominant species: an overstorey of *Eucalyptus gomphocephala* over: the tall shrub *Melaleuca huegelii* (and the occasional *Acacia cyclops*); and the rush/sedge *Lepidosperma gladiatum*

Indicator species: not assessed

C Mixed *Eucalyptus - Allocasuarina - Banksia* Woodland generally on yellow-phase medium-textured Karrakatta sands with higher abundance of *Eucalyptus gomphocephala*, *Corymbia calophylla*, *Banksia prionotes*, *Spyridium globulosum*, *Grevillea vestita*, *Hardenbergia comptoniana*, *Lepidosperma scabrum*, *Tricoryne elatior*, *Corynotheca micrantha*, *Phyllanthus calycinus*, *Alexgeorgea nitens*, *Desmocladius fasciculatus* and *Ptilotus polystachyus*, than other plateau woodlands

Dominant species: an overstorey of *Allocasuarina fraseriana*, *Eucalyptus marginata*, *E. gomphocephala*, *Corymbia calophylla* and *Banksia attenuata* over: the shrubs *Scaevola canescens*, *Hardenbergia comptoniana*, *Hibbertia hypericoides*, *Gompholobium tomentosum*, *Tricoryne elatior*, *Xanthorrhoea brunonis*, *Jacksonia sericea*, *Gastrolobium capitatum* and *Stirlingia latifolia*; the rushes/sedges *Mesomelaena pseudostygia*, *Desmocladius flexuosus*, *Tetraria octandra*, *Lepidosperma scabrum*; and the herbs *Burchardia congesta*, *Trachymene pilosa*, *Conostylis aculeata*, *Sowerbaea laxiflora*, *Caesia micrantha*, *Ptilotus polystachyus*, *Anigozanthos manglesii*, *Thysanotus manglesianus* and *Dianella revoluta*

Indicator species (bolded are strong indicators): *Acacia benthamii*, ***Alexgeorgea nitens***, ***Banksia prionotes***, *Conostylis aculeata*, ***Corymbia calophylla***, ***Corynotheca micrantha***, ***Desmocladius fasciculatus***, ***Eucalyptus gomphocephala***, *Grevillea vestita*, *Hakea prostrata*, ***Hardenbergia comptoniana***, ***Lepidosperma scabrum***, ***Phyllanthus calycinus***, ***Ptilotus polystachyus***, ***Spyridium globulosum***, *Thysanotus arenarius*, ***Tricoryne elatior***

C_{Bp} Mixed *Eucalyptus - Allocasuarina - Banksia* Woodland generally on yellow-phase medium-textured Karrakatta sands with higher relative abundance of *Eucalyptus gomphocephala*, *Banksia prionotes*, *Tricoryne elatior*, *Desmocladius fasciculatus* and *Ptilotus polystachyus* than other plateau woodlands

Dominant species: an overstorey of *Allocasuarina fraseriana*, *Eucalyptus gomphocephala*, *Eucalyptus marginata*, *Corymbia calophylla*, *Banksia prionotes*, *Banksia attenuata* over: the shrubs *Scaevola canescens*, *Hibbertia hypericoides*, *Gompholobium tomentosum*, *Hardenbergia comptoniana*, *Jacksonia sericea*, *Gastrolobium capitatum*, *Stirlingia latifolia*; the rushes/sedges *Mesomelaena pseudostygia*, *Tetraria octandra*, *Desmocladius flexuosus*, *Lepidosperma scabrum*; the herbs *Burchardia congesta*, *Conostylis aculeata*, *Sowerbaea laxiflora*, *Trachymene pilosa*, *Ptilotus polystachyus*, *Tricoryne elatior*, *Caesia micrantha*, *Thysanotus manglesianus*, *Dianella revoluta*, *Anigozanthos manglesii*

Indicator species (bolded are strong indicators): *Alexgeorgea nitens*, ***Banksia prionotes***, *Conostylis aculeata*, *Corynotheca micrantha*, ***Desmocladius fasciculatus***, ***Eucalyptus gomphocephala***, *Grevillea vestita*, *Lepidosperma scabrum*, ***Ptilotus polystachyus***, ***Tricoryne elatior***

C_{sg} Mixed *Eucalyptus* - *Allocasuarina* – *Banksia* Woodland on yellow-phase medium-to-fine textured Karrakatta sands with higher relative abundance of *Spyridium globulosum*, *Banksia sessilis*, *Acacia saligna*, *Xanthorrhoea brunonis*, *Hardenbergia comptoniana*, *Caesia micrantha*, *Clematis linearifolia* and *Drosera erythrorhiza* than other plateau woodlands

Dominant species: an overstorey of *Allocasuarina fraseriana*, *Eucalyptus marginata*, *Corymbia calophylla*, *Eucalyptus gomphocephala*, *Banksia attenuata*, *Banksia menziesii* over: the shrubs ***Spyridium globulosum***, *Xanthorrhoea brunonis*, *Hardenbergia comptoniana*, *Scaevola canescens*, *Gompholobium tomentosum*, *Hibbertia hypericoides*, ***Jacksonia sternbergiana***; the rushes/sedges *Tetraria octandra*, *Mesomelaena pseudostygia*; and the herbs *Caesia micrantha*, *Burchardia congesta*, *Conostylis aculeata*, *Trachymene pilosa*, *Sowerbaea laxiflora*, *Dianella revoluta*, *Pterostylis sanguinea*

Indicator species (bolded are strong indicators): ***Acacia saligna***, ***Banksia sessilis***, ***Caesia micrantha***, ***Clematis linearifolia***, *Corymbia calophylla*, ***Drosera erythrorhiza***, *Eucalyptus marginata*, ***Hardenbergia comptoniana***, *Macrozamia fraseri*, ***Spyridium globulosum***, ***Xanthorrhoea brunonis***

D Mixed *Eucalyptus* - *Allocasuarina* – *Banksia* Woodland generally on grey-phase coarse-textured Karrakatta sands with higher abundance of *Allocasuarina fraseriana*, *Banksia attenuata*, *Banksia menziesii*, *Xanthorrhoea preissii*, *Xanthorrhoea brunonis*, *Gastrolobium capitatum*, *Daviesia decurrens*, *Daviesia triflora*, *Conostephium pendulum*, *Hovea trisperma*, *Scaevola repens*, *Lomandra preissii*, *Conostylis setigera*, *Dampiera linearis*, *Monotaxis grandiflora*, *Opercularia vaginata*, *Xanthosia huegelii*, *Stylidium repens*, *Stylidium striatum*, *Caladenia flava* and *Pterostylis sanguinea* than other plateau woodlands

Dominant species: an overstorey of *Allocasuarina fraseriana*, *Eucalyptus marginata*, *Eucalyptus gomphocephala*, *Corymbia calophylla*, *Banksia attenuata* over: the shrubs *Scaevola canescens*, *Gastrolobium capitatum*, *Hibbertia hypericoides*, *Scaevola repens*, *Hovea trisperma*, *Xanthorrhoea brunonis*, *Monotaxis grandiflora*, *Gompholobium tomentosum*, *Daviesia triflora*, *Hypocalymma robustum*; the rushes/sedges *Mesomelaena pseudostygia*, *Tetraria octandra*, *Desmocladius flexuosus*; and the herbs *Burchardia congesta*, *Caladenia flava*, *Trachymene pilosa*, *Drosera porrecta*, *Caesia micrantha*, *Sowerbaea laxiflora*, *Dianella revoluta*, *Conostylis aculeata*, *Anigozanthos manglesianus*, *Lomandra preissii* and *Thysanotus manglesianus*

Indicator species (bolded are strong indicators): ***Allocasuarina fraseriana***, ***Banksia attenuata***, ***Banksia menziesii***, ***Caladenia flava***, ***Conostephium pendulum***, ***Conostylis setigera***, ***Dampiera linearis***, ***Daviesia decurrens***, ***Daviesia triflora***, *Dianella revoluta*, *Drosera porrecta*, ***Gastrolobium capitatum***, ***Hovea trisperma***, *Isotropis cuneifolia*, *Lepidosperma* sp. 'Darling Range Heath', ***Lomandra preissii***, *Microlaena stipoides*, ***Monotaxis grandiflora***, ***Opercularia vaginata***, ***Pterostylis sanguinea***, ***Scaevola repens***, ***Stylidium repens***, ***Stylidium striatum***, ***Xanthorrhoea brunonis***, ***Xanthorrhoea preissii***, ***Xanthosia huegelii***

D_{Bm} Mixed *Eucalyptus* - *Allocasuarina* – *Banksia* Woodland on grey-phase (often deeply bleached) coarse-textured Karrakatta sands with higher relative abundance of *Banksia attenuata*, *Banksia menziesii*, *Xanthorrhoea preissii*, *Daviesia triflora*, *Hovea trisperma*, *Monotaxis grandiflora*, *Stylidium striatum*, *Waitzia suaveolens* and *Caladenia flava* than other plateau woodlands

Dominant species: an overstorey of *Allocasuarina fraseriana*, *Banksia attenuata*, *Banksia menziesii*, *Eucalyptus marginata*, *Corymbia calophylla* over: the shrubs *Scaevola canescens*, *Hibbertia hypericoides*, *Gastrolobium capitatum*, *Hovea trisperma*, *Gompholobium tomentosum*, *Xanthorrhoea brunonis*, *Scaevola repens*, *Monotaxis grandiflora*, *Daviesia triflora*, *Hypocalymma robustum*; the rushes/sedges *Mesomelaena pseudostygia*, *Tetraria octandra*, *Desmocladius flexuosus*; and the herbs *Burchardia congesta*, *Sowerbaea laxiflora*,

Caesia micrantha, *Conostylis aculeata*, *Trachymene pilosa*, *Dianella revoluta*, *Drosera porrecta*, *Caladenia flava*, *Anigozanthos manglesii*, *Thysanotus manglesianus*

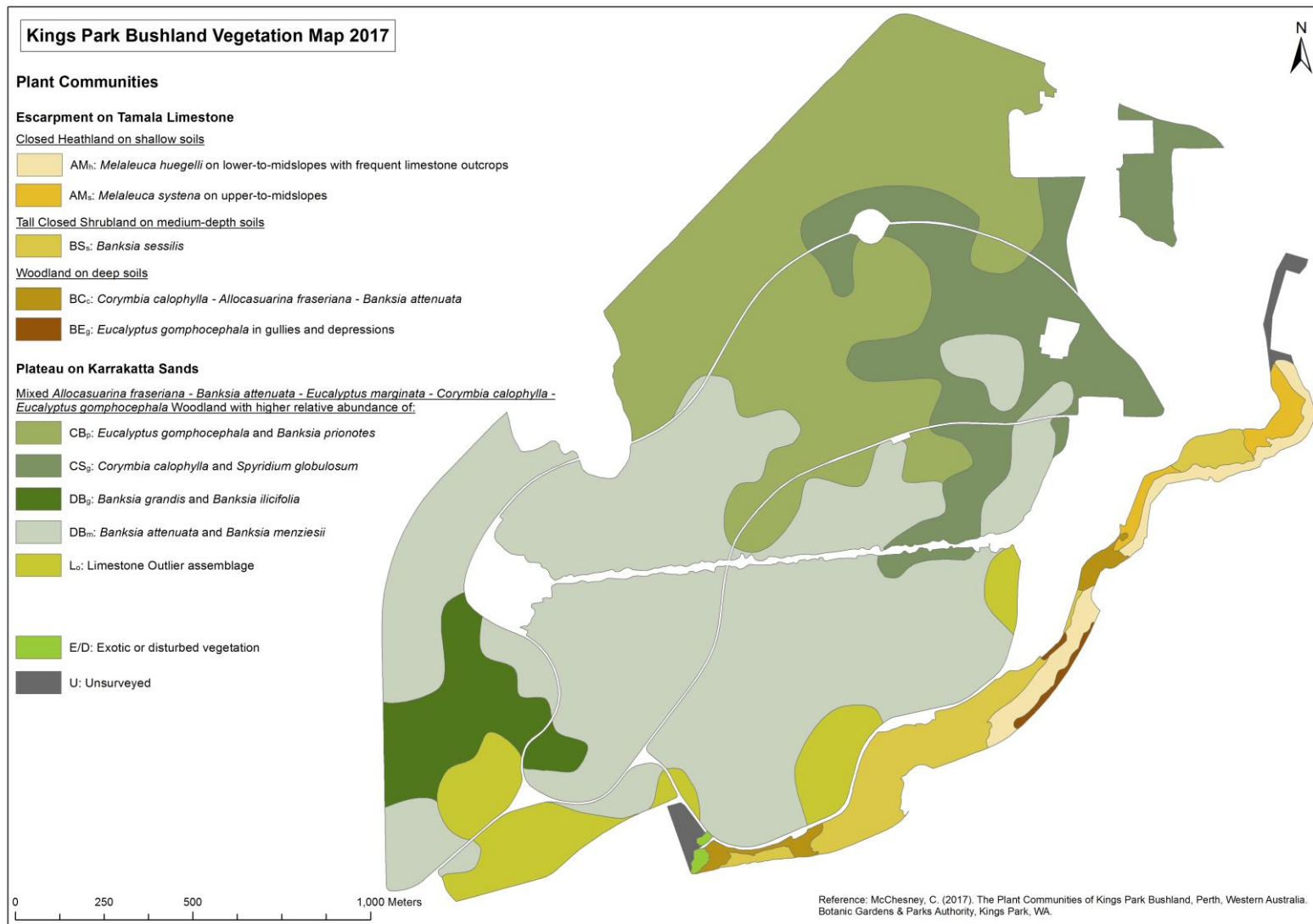
Indicator species (bolded are strong indicators): ***Banksia attenuata***, ***Banksia menziesii***, ***Caladenia flava***, *Conostylis setigera*, ***Daviesia triflora***, *Drosera porrecta*, *Gastrolobium capitatum*, ***Hovea trisperma***, ***Monotaxis grandiflora***, *Philothea spicata*, ***Stylidium striatum***, ***Waitzia suaveolens***, ***Xanthorrhoea preissii***

DBg Mixed *Eucalyptus* - *Allocasuarina* – *Banksia* Woodland on grey-phase medium-textured Karrakatta sands at relatively low elevation with higher relative abundance of *Banksia grandis*, *Allocasuarina fraseriana*, *Lomandra preissii* and *Scaevola repens* and distinguished by the presence of the locally rare *Banksia ilicifolia*

Dominant species: an overstorey of *Allocasuarina fraseriana*, *Banksia attenuata*, *Banksia menziesii*, *Corymbia calophylla*, *Eucalyptus gomphocephala*, *Eucalyptus marginata* over: the shrubs *Scaevola canescens*, *Scaevola repens*, *Gastrolobium capitatum*, *Hovea trisperma*, *Jacksonia sericea*, *Hibbertia hypericoides*, *Stirlingia latifolia*, *Hypocalymma robustum*, *Kennedia prostrata*, *Monotaxis grandiflora*, *Xanthorrhoea brunonis*; the rushes/sedges *Mesomelaena pseudostygia*, *Tetraria octandra*, *Lepidosperma scabrum*, *Desmodium flexuosus*; and the herbs *Burchardia congesta*, *Dianella revoluta*, *Tricoryne elatior*, *Trachymene pilosa*, *Lomandra preissii*, *Pterostylis sanguinea*, *Conostylis aculeata*, *Caesia micrantha*, *Caladenia flava*

Indicator species: ***Allocasuarina fraseriana***, ***Banksia grandis***, *Daviesia decurrens*, *Eremaea pauciflora*, *Jacksonia sericea*, ***Lomandra preissii***, ***Scaevola repens***

Lo A loose assemblage of Limestone Outlier sites at the Plateau - Escarpment interface with highly variable species composition that is likely to reflect the finer-textured Tamala Limestone soils and a range of historic disturbance events



Map 4. Kings Park Bushland Vegetation Map 2017: Plant Communities.

Appendix 7

Vegetation Structural Classification and Condition Scales



Extracts from the NVIS framework (see ESCAVI 2003) of relevance to the current study.

Table 1: The NVIS Information Hierarchy. The Levels below the dark line are the "complex" levels recommended for data compilation.

Hierarchical Level	Description	NVIS structural/floristic components required
I	Class*	Dominant growth form for the ecologically or structurally dominant stratum
II	Structural Formation*	Dominant growth form, cover and height for the ecologically or structurally dominant stratum.
III	Broad Floristic Formation**	Dominant growth form, cover, height and dominant land cover genus for the upper most or the ecologically or structurally dominant stratum.
IV	Sub-Formation**	Dominant growth form, cover, height and dominant genus for each of the three traditional strata. (i.e. Upper, Mid and Ground)
V	Association**	Dominant growth form, height, cover and species (3 species) for the three traditional strata. (i.e. Upper, Mid and Ground)
VI	Sub-Association**	Dominant growth form, height, cover and species (5 species) for all layers/sub-strata.

* Walker & Hopkins (1990)

** NVIS (defined for the NVIS Information Hierarchy)

Table 4: NVIS structural Formation Terminology.

Cover Characteristics								
	Foliage cover *	70-100	30-70	10-30		» 0	0-5	unknown
	Crown cover **	>80	50-80	20-50	0.25-20		0-5	unknown
	% Cover ***	>80	50-80	20-50	0.25-20		0-5	unknown
	Cover code	d	c	i	r	bi	bc	unknown
Growth Form	Height Ranges (m)	Structural Formation Classes						
tree, palm	30	closed forest	open forest	woodland	open woodland	isolated trees	isolated clumps of trees	trees
shrub, cycad, grass-tree, tree-fern	2	closed shrubland	shrubland	open shrubland	sparse shrubland	isolated shrubs	isolated clumps of shrubs	shrubs
heath shrub	2	closed heathland	heathland	open heathland	sparse heathland	isolated heath shrubs	isolated clumps of heath shrubs	heath shrubs
tussock grass	0.5	closed tussock grassland	tussock grassland	open tussock grassland	sparse tussock grassland	isolated tussock grasses	isolated clumps of tussock grasses	tussock grasses
other grass	0.5	closed grassland	grassland	open grassland	sparse grassland	isolated grasses	isolated clumps of grasses	other grasses
sedge	0.5	closed sedgeland	sedgeland	open sedgeland	sparse sedgeland	isolated sedges	isolated clumps of sedges	sedges
rush	0.5	closed rushland	rushland	open rushland	sparse rushland	isolated rushes	isolated clumps of rushes	rushes
forb	0.5	closed formland	formland	open formland	sparse formland	isolated forbs	isolated clumps of forbs	forbs
fern	2	closed fernland	fernland	open fernland	sparse fernland	isolated ferns	isolated clumps of ferns	ferns
vine	30	closed vineland	vineland	open vineland	sparse vineland	isolated vines	isolated clumps of vines	vines

* Foliage Cover is defined for each stratum as 'the proportion of the ground that would be shaded if sunshine came from directly overhead'. It includes branches and leaves and is similar to the Crown type of Walker & Hopkins (1990) but is applied to a stratum or plot rather than an individual crown. It is generally not directly measured in the field for the upper stratum, although it can be

measured by various line interception methods for ground layer vegetation. For the attribute COVER CODE in the Stratum table, the ground cover category refers to ground foliage cover not percentage cover.

** Crown Cover (canopy cover) as per Walker & Hopkins (1990). Although relationships between the two are dependent on season, species, species age etc (Walker & Hopkins (1990), the crown cover category classes have been adopted as the defining measure.

*** The percentage cover is defined as the percentage of a strictly defined plot area, covered by vegetation. This can be an estimate and is a less precise measure than using, for example, a point intercept transect methods on ground layer, or overstorey vegetative cover. That is for precisely measured values (e.g. crown densitometer or point intercept transects) the value measured would be 'foliage' cover. Where less precise or qualitative measures are used these will most probably be recorded as 'percentage' cover.

Table 6: Example usage of the NVIS Information Hierarchy (Note: For definitions of U, M, G, U1, U2, U3, M1, M2, M3, G1, and G2 refer to Table 1.)**

Level	Description	Species	Growth form	Cover	Height
I	CLASS	-	1 dominant growth form for the dominant stratum	-	-
	Example	<i>Tree</i>			
II	STRUCTURAL FORMATION	-	1 dominant growth form for the dominant stratum	1 cover class for the dominant stratum	1 height class for the dominant stratum
	Example	<i>Open woodland</i>			
III	BROAD FLORISTIC FORMATION	1 dominant genus name for the dominant stratum	1 dominant growth form for dominant stratum	1 cover class for dominant stratum	1 height class for dominant stratum
	Example	<i>Eucalyptus open woodland</i>			
IV	SUB-FORMATION	1 dominant genus name for each stratum ((max 3 strata; i.e. for U, M, G where substantially present)	1 dominant growth form for each stratum (max 3 strata)	1 cover class for each stratum (max 3 strata)	1 height class for each stratum (max 3 strata)
	Example	<i>+Eucalyptus open woodland\Acacia tall sparse shrubland\Aristida open tussock grassland</i>			
V	ASSOCIATION	Up to 3 dominant species for each stratum (max 3 strata; i.e. for U, M, G where present)	Up to 3 dominant growth forms for each stratum (max 3 strata; i.e. for U, M, G where present)	1 cover class code for each stratum (max 3 strata; i.e. for U, M, G where present)	1 height class code for each stratum (max 3 strata; i.e. for U, M, G where present)
	Example	<i>U+ ^Eucalyptus coolabah,Casuarina cristata,Flindersia maculosa\^tree\7\r;M ^Acacia salicina,Alectryon oleifolius,Acacia stenophylla\^shrub\4\r;G ^Aristida ramosa,Astrebla squarrosa,Bothriochloa decipiens\^tussock grass,forb,sedge\2\i</i>			
VI	SUB-ASSOCIATION	Up to 5 dominant species for each sub-stratum (i.e. for U1, U2, U3, M1, M2, M3, G1, G2 where present) <ul style="list-style-type: none"> Indicate characteristic genus in each sub-stratum with an up arrow or hat "^". Must match characteristic growth form. 	Up to 5 dominant growth forms for each sub-stratum. <ul style="list-style-type: none"> Indicate characteristic growth form with an up arrow or hat "^". Must match characteristic genus 	1 cover class code for each sub-stratum	1 height class code for each sub-stratum
	Example	<i>U1+ ^Eucalyptus coolabah,Casuarina cristata,Flindersia maculosa\Eucalyptus\^tree\7\r;M1 ^Acacia salicina,Alectryon oleifolius ,Acacia stenophylla,Acacia victoriae subsp. victoriae,Eremophila bignoniiflora\Acacia\^shrub\4\bi;M2 Eremophila longifolia,Muehlenbeckia florulenta\Eremophila\shrub\3\r;G1 ^Aristida ramosa,Astrebla squarrosa,Bothriochloa decipiens,Dichanthium sericeum,Enteropogon acicularis\Aristida\^tussock grass,forb,sedge\2\</i>			

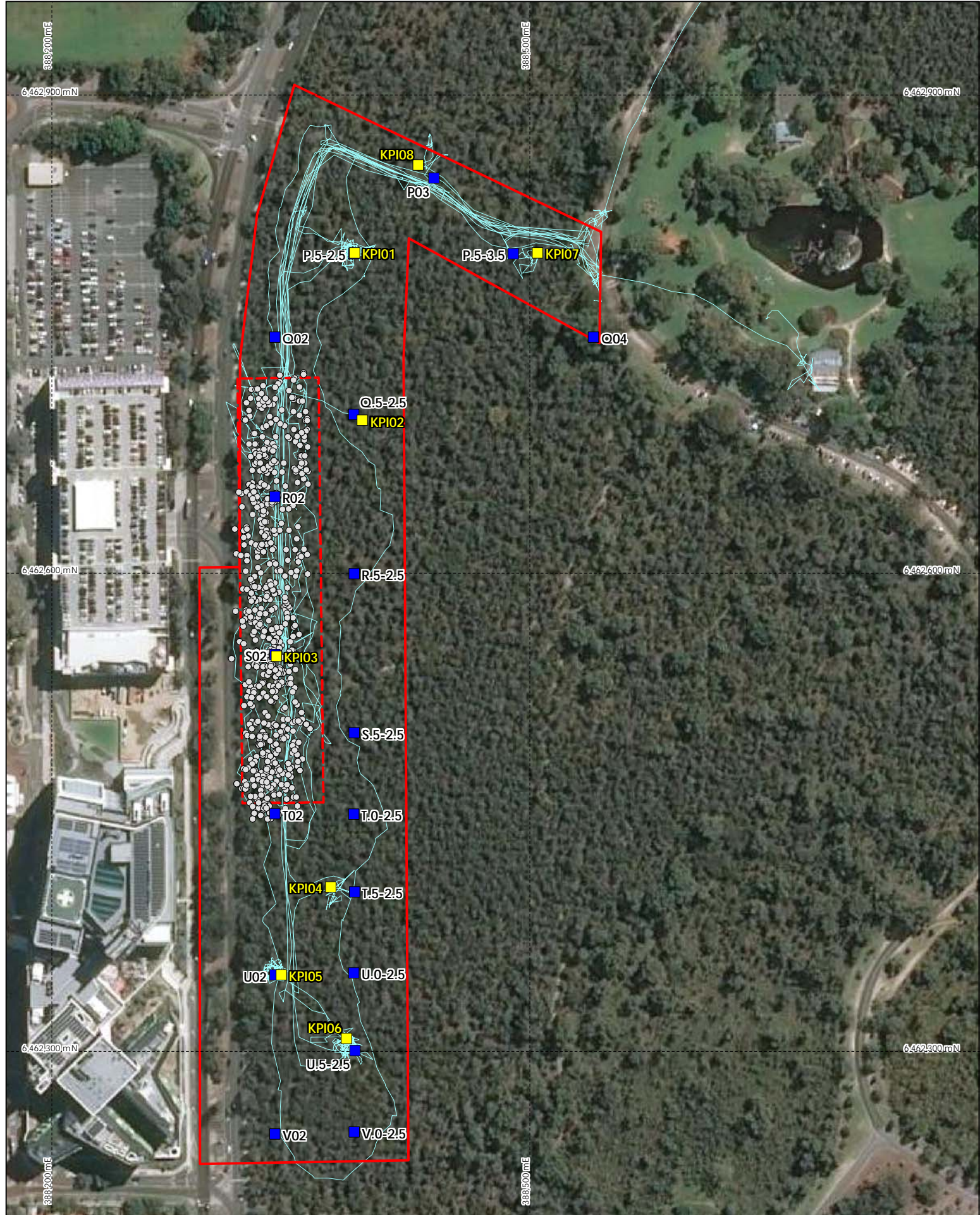
Vegetation condition scale taken from EPA (2016a), based on scales developed by Keighery (1994) and Trudgen (1988).

Vegetation Condition	South West and Interzone Botanical Provinces	Eremaean and Northern Botanical Provinces
Pristine	Pristine or nearly so, no obvious signs of disturbance or damage caused by human activities since European settlement.	
Excellent	Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species. Damage to trees caused by fire, the presence of non-aggressive weeds and occasional vehicle tracks.	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Very Good	Vegetation structure altered, obvious signs of disturbance. Disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing.	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing.	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.
Poor		Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds at high density, partial clearing, dieback and grazing.	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely Degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees and shrubs.	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.

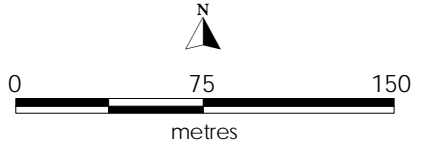
Appendix 8

Vegetation and Flora Survey Effort: Location of Sampling Sites and Foot Traverses





- Survey area
- Targeted flora survey area
- GPS tracklog (Biota survey)
- Flora quadrat location
- BGPA monitoring site 2018
- BGPA flora search record 2019



Kings Park Link Bridge Survey Effort



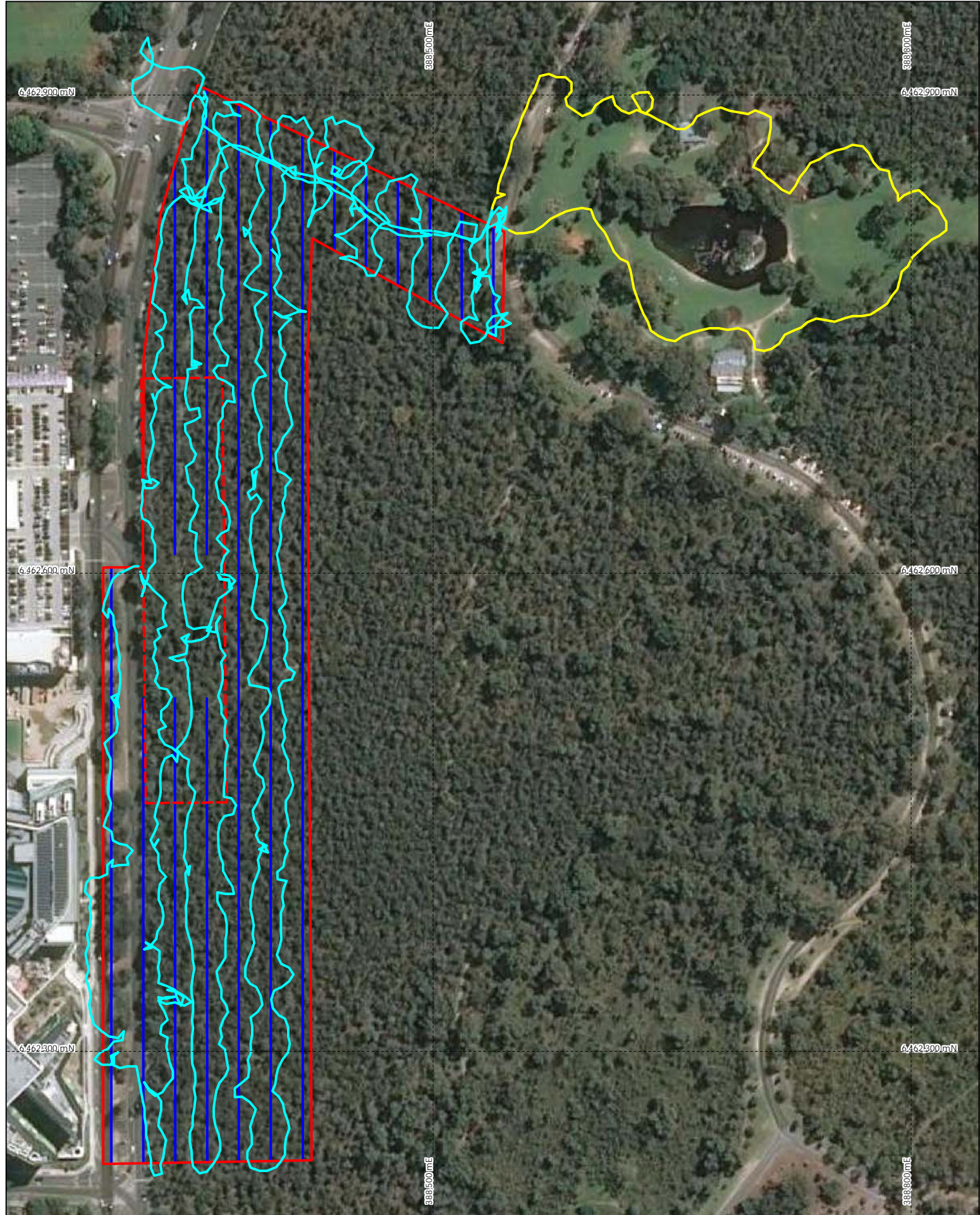
Table 1: Sites monitored in the survey area by BGPA staff in 2018.

BGPA Monitoring Site	Easting	Northing	Monitoring Date	Associated Biota Quadrat
U02	388340	6462348	5/10/18	KPI05
V02	388340	6462248	5/10/18	
Q02	388340	6462748	9/10/18	
Q04	388540	6462748	9/10/18	
R02	388340	6462648	9/10/18	
S02	388340	6462549	9/10/18	KPI01
T02	388340	6462449	9/10/18	
P03	388440	6462848	12/10/18	KPI08
Q.5-2.5	388390	6462700	22/10/18	KPI03
R.5-2.5	388390	6462600	22/10/18	
S.5-2.5	388390	6462500	24/10/18	
P.5-2.5	388390	6462800	29/10/18	KPI02
P.5-3.5	388490	6462800	29/10/18	KPI07
T.5-2.5	388390	6462400	29/10/18	KPI04
U.5-2.5	388390	6462300	29/10/18	KPI06
T.0-2.5	388390	6462449	31/10/18	
U.0-2.5	388390	6462349	1/11/18	
V.0-2.5	388390	6462249	1/11/18	

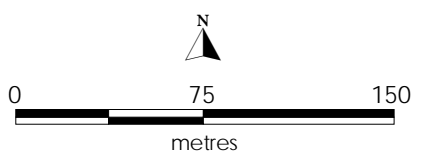
Appendix 9

Fauna Survey Effort: Location of Foot Traverses





- Survey area
- Targeted flora survey area
- Transect (20m apart)
- Habitat assessment
- Roost search



**Kings Park Link Bridge
Black-cockatoo Habitat
Mapping Effort**

Biota
Environmental
Sciences

Appendix 10

Summarised Raw Data from Quadrats Sampled in 2019



Kings Park Link Bridge **Site** KPI01
Described by SWCM **Date** 12-Sep-19 **Type** Quadrat 10 x 10 m
Central Coordinate 50 388390 mE 6462801 mN
Habitat Elevated sandplain.
Soil Dark grey (loamy) sand. Organic matter in top few cm. Dense leaf litter including *Allocasuarina* needles.
Vegetation U1+ ^*Eucalyptus marginata* subsp. *marginata*\Eucalyptus\^tree\6\r; U2 ^*Banksia attenuata*,*Banksia menziesii*,*Allocasuarina fraseriana*\Banksia\^tree\6\r; M1 ^*Xanthorrhoea preissii*\Xanthorrhoea\^grass-tree\2\r; M2 ^*Hibbertia hypericoides* subsp. *hypericoides*,*Stirlingia latifolia*,*Petrophile macrostachya*\Hibbertia\^shrub\2\r; M3 ^*Acacia pulchella* var. *glaberrima*,*Scaevola repens* var. *repens*,*Monotaxis grandiflora* var. *grandiflora*,*Hovea trisperma* var. *trisperma*,*Gompholobium tomentosum*\Acacia\^shrub\1\r; G1 ^*Tetraria octandra*,*Mesomelaena pseudostygia*,*Burchardia congesta*\Tetraria\^sedge,rush,forb\1\r.
Veg Condition Very Good: Rabbit diggings, some aggressive weeds (**Freesia*), but overall weeds less than 5%.
Fire Age Long unburnt.

Species	Cover (%)	Height (cm)	Specimen
<i>Acacia pulchella</i> var. <i>glaberrima</i>	2	25	
<i>Acacia saligna</i>	0.1	300	
<i>Allocasuarina fraseriana</i>	20	550	
<i>Banksia attenuata</i>	4	450	
<i>Banksia menziesii</i>	7	500	
* <i>Briza maxima</i>	0.1	10	
<i>Burchardia congesta</i>	1	50	
<i>Caesia micrantha</i>	0.1	45	
<i>Caladenia flava</i> subsp. <i>flava</i>	0.1	45	
<i>Conostephium pendulum</i>	0.1	30	
<i>Conostylis aculeata</i> subsp. <i>cygnorum</i>	0.1	40	
<i>Daviesia triflora</i>	0.1	60	
<i>Desmocladius flexuosus</i>	0.1	40	
<i>Dianella revoluta</i> var. <i>divaricata</i>	0.1	10	
* <i>Ehrharta calycina</i>	0.1	60	
<i>Eucalyptus marginata</i> subsp. <i>marginata</i>	6	600	
* <i>Freesia alba</i> x <i>leichtlinii</i>	0.5	40	
<i>Gastrolobium capitatum</i>	0.1	25	
* <i>Gladiolus caryophyllaceus</i>	0.1	60	
<i>Gompholobium tomentosum</i>	1	60	
<i>Haemodorum paniculatum</i>	0.1	45	KPI01-01
<i>Hardenbergia comptoniana</i>	0.1	60	
<i>Hibbertia hypericoides</i> subsp. <i>hypericoides</i>	7	50	
<i>Hovea trisperma</i> var. <i>trisperma</i>	1	40	
* <i>Hypochaeris glabra</i>	0.1	10	
<i>Kennedia prostrata</i>	0.1	5	
<i>Lepidosperma apicola</i>	0.1	60	
<i>Mesomelaena pseudostygia</i>	3	45	
<i>Monotaxis grandiflora</i> var. <i>grandiflora</i>	1	20	KPI01-02
<i>Petrophile macrostachya</i>	2	50	
<i>Pterostylis recurva</i>	0.1	40	
<i>Pterostylis sanguinea</i>	0.1	15	
<i>Scaevola canescens</i>	0.1	40	
<i>Scaevola repens</i> var. <i>repens</i>	1.5	20	
<i>Sowerbaea laxiflora</i>	0.1	50	
<i>Stirlingia latifolia</i>	3	60	
<i>Tetraria octandra</i>	8	50	
<i>Trachymene pilosa</i>	0.1	2	
* <i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	0.1	10	
<i>Xanthorrhoea preissii</i>	5	70	



KPI01 - Overstorey



KPI01 - Understorey

Kings Park Link Bridge **Site** KPI02
Described by SWCM **Date** 12-Sep-19 **Type** Quadrat 10 x 10 m
Central Coordinate 50 388395 mE 6462696 mN
Habitat Elevated sandplain.
Soil Dark grey (loamy) sand. Organic matter in top few cm. Dense leaf litter including *Allocasuarina* needles.
Vegetation U1+ ^*Allocasuarina fraseriana*, *Eucalyptus marginata* subsp. *marginata*\Allocasuarina\^tree\6\c; U2 ^*Banksia attenuata*, *Banksia menziesii*, *Banksia sessilis* var. *cygnorum*\Banksia\^tree\6\; M1 ^*Xanthorrhoea brunonis* subsp. *brunonis*, *Xanthorrhoea preissii*\Xanthorrhoea\^grass-tree\3\; M2 ^*Hovea trisperma* var. *trisperma*, *Gastrolobium capitatum*, *Daviesia nudiflora* subsp. *nudiflora*, *Hibbertia hypericoides* subsp. *hypericoides*\Hovea\^shrub\2\; G1 ^*Tetraria octandra*, *Mesomelaena pseudostygia*, *Lyginia imberbis*, *Lepidosperma oldhamii*, *Microlaena stipoides* var. *stipoides*\Tetraria\^sedge,rush,other grass\1\i.
Veg Condition Excellent; scattered weeds at low density.
Fire Age Long unburnt.

Species	Cover (%)	Height (cm)	Specimen
<i>Acacia saligna</i>	0.1	200	
<i>Alexgeorgea nitens</i>	0.1	10	KPI02-01
<i>Allocasuarina fraseriana</i>	30	700	
<i>Astroloma pallidum</i>	0.1	20	
<i>Banksia attenuata</i>	11	800	
<i>Banksia menziesii</i>	4	600	
<i>Banksia sessilis</i> var. <i>cygnorum</i>	3	650	
<i>Billardiera heterophylla</i>	0.5	80	
* <i>Briza maxima</i>	0.1	15	
<i>Burchardia congesta</i>	0.1	40	
<i>Caesia micrantha</i>	0.1	40	
<i>Conostephium pendulum</i>	0.1	40	
<i>Conostylis aculeata</i> subsp. <i>aculeata</i>	0.1	40	
<i>Daviesia nudiflora</i> subsp. <i>nudiflora</i>	0.5	60	
<i>Desmocladus flexuosus</i>	0.1	20	
<i>Dianella revoluta</i> var. <i>divaricata</i>	0.1	50	
* <i>Ehrharta calycina</i>	0.1	20	
<i>Eucalyptus marginata</i> subsp. <i>marginata</i>	20	550	
* <i>Freesia alba</i> x <i>leichtlinii</i>	0.1	20	
<i>Gastrolobium capitatum</i>	0.5	60	
* <i>Gladiolus caryophyllaceus</i>	0.1	50	
<i>Gompholobium tomentosum</i>	0.1	60	
<i>Haemodorum laxum</i>	0.1	50	
<i>Haemodorum spicatum</i>	0.1	40	
<i>Hibbertia hypericoides</i> subsp. <i>hypericoides</i>	0.5	50	
<i>Hovea trisperma</i> var. <i>trisperma</i>	1	50	
<i>Kennedia prostrata</i>	0.1	20	
<i>Lepidosperma apricola</i>	0.1	50	
<i>Lyginia imberbis</i>	1	60	
<i>Mesomelaena pseudostygia</i>	5	50	
<i>Microlaena stipoides</i> var. <i>stipoides</i>	1	20	KPI02-02
<i>Monotaxis grandiflora</i> var. <i>grandiflora</i>	0.1	10	
* <i>Phyllopodium cordatum</i>	0.1	20	
<i>Pterostylis sanguinea</i>	0.1	10	
<i>Scaevola canescens</i>	0.5	20	
<i>Scaevola repens</i> var. <i>repens</i>	0.5	40	
<i>Spyridium globulosum</i>	0.1	50	
<i>Tetraria octandra</i>	15	40	
<i>Thysanotus manglesianus</i>	0.1	20	
<i>Xanthorrhoea brunonis</i> subsp. <i>brunonis</i>	1	120	
<i>Xanthorrhoea preissii</i>	1.5	70	



KPI02 - Overstorey



KPI02 - Understorey

Kings Park Link Bridge **Site** KPI03
Described by MMAL, ALCM **Date** 12-Sep-19, 08-Oct-19 **Type** Quadrat 10 x 10 m
Central Coordinate 50 388341 **mE** 6462548 **mN**
Habitat Elevated sandplain.
Soil Grey loamy sand, organic matter throughout with 5 cm deep rich organic matter layer on top. Dense leaf litter throughout.
Vegetation U1+ ^*Eucalyptus marginata* subsp. *marginata*\Eucalyptus\^tree\7\; U2 ^*Banksia attenuata*,*Banksia sessilis* var. *cygnorum*\Banksia\^tree\7,6\; M1 ^*Allocasuarina fraseriana*\Allocasuarina\^tree\6\; M2 ^*Xanthorrhoea brunonis* subsp. *brunonis*,*Xanthorrhoea preissii*\Xanthorrhoea\^grass-tree\6,5\; M3 ^*Hypocalymma robustum*\Hypocalymma\^shrub\2\; G1 ^*Mesomelaena pseudostygia*,*Tetraria octandra*,*Hibbertia hypericoides* subsp. *hypericoides*,*Lepidosperma apricola*,*Lepidosperma oldhamii*,*Jacksonia sericea*\Mesomelaena\^sedge,shrub\2,1\.
Veg Condition Very Good to Excellent. Some cut trees; rubbish; less weeds than KPI01 but located between Winthrop Avenue and dual-use pathway.
Fire Age Long unburnt.

Species	Cover (%)	Height (cm)	Notes
<i>Acacia saligna</i>	0.1-3	800	Flowering
<i>Allocasuarina fraseriana</i>	20	550	Sterile
<i>Banksia attenuata</i>	20	1100	Fruiting
<i>Banksia sessilis</i> var. <i>cygnorum</i>	8	1100	Flowering
<i>Billardiera heterophylla</i>	0.1	5	
<i>Burchardia congesta</i>	0.1	40	Flowering
<i>Caladenia flava</i> subsp. <i>flava</i>	0.1	30	Flowering
<i>Conostylis aculeata</i> subsp. <i>cygnorum</i>	0.1	20	
<i>Daviesia nudiflora</i> subsp. <i>nudiflora</i>	0.1	60	Flowering
<i>Daviesia triflora</i>	0.1	40	
<i>Desmocladius flexuosus</i>	0.1	20	
<i>Dianella revoluta</i> var. <i>divaricata</i>	0.1	15	
<i>Drosera erythrorhiza</i>	0.1-2.5	1	Sterile
* <i>Ehrharta calycina</i>	0.1	35	
<i>Eucalyptus marginata</i> subsp. <i>marginata</i>	15-20	1400	Fruiting
* <i>Freesia alba</i> x <i>leichtlinii</i>	0.1	35	Flowering
<i>Gastrolobium capitatum</i>	0.1	40	
* <i>Gladiolus caryophyllaceus</i>	0.1	90	Bud
<i>Gompholobium tomentosum</i>	0.1	60	Bud
<i>Haemodorum laxum</i>	0.1	40	Sterile.
<i>Haemodorum paniculatum</i>	0.1	60	
<i>Haemodorum</i> sp.	0.1	50	<i>Haemodorum</i> ? <i>spicatum</i> ; sterile
<i>Hibbertia hypericoides</i> subsp. <i>hypericoides</i>	1.5-2	35	Flowering
<i>Hovea trisperma</i> var. <i>trisperma</i>	0.1	20	Sterile
<i>Hypocalymma robustum</i>	1	100	Sterile
* <i>Hypochaeris glabra</i>	0.1	1	
<i>Jacksonia sericea</i>	0.5-1	25	Fruiting
<i>Kennedia prostrata</i>	0.1	10	Flowering
<i>Lepidosperma apricola</i>	1	70	
<i>Lepidosperma oldhamii</i>	1	50	
<i>Mesomelaena pseudostygia</i>	18	45	Flowering
<i>Microlaena stipoides</i> var. <i>stipoides</i>	0.1	50	
<i>Microtis media</i> subsp. <i>media</i>	0.1	10	
<i>Phyllanthus calycinus</i>	0.1	20	
<i>Poranthera microphylla</i>	0.1	2	
<i>Pterostylis recurva</i>	0.1	15	
<i>Pyrorchis nigricans</i>	0.1	2	
* <i>Romulea rosea</i> var. <i>australis</i>	0.1	30	
<i>Scaevola canescens</i>	0.1	20	Flowering
<i>Scaevola repens</i> var. <i>repens</i>	0.1	15	
<i>Stirlingia latifolia</i>	0.1-1	45	Sterile
<i>Tetraria octandra</i>	12	35	
<i>Thysanotus arenarius</i>	0.1	25	Sterile
<i>Thysanotus</i> sp.	0.1	15	Sterile.
<i>Trachymene pilosa</i>	0.1	3	
<i>Tricoryne elatior</i>	0.1	20	

Species	Cover (%)	Height (cm)	Notes
<i>Xanthorrhoea brunonis</i> subsp. <i>brunonis</i>	2-3	130	
<i>Xanthorrhoea preissii</i>	1	90	Sterile



KPI03 - Overstorey



KPI03 - Understorey

Kings Park Link Bridge **Site** KPI04
Described by SWCM **Date** 12-Sep-19 **Type** Quadrat 10 x 10 m
Central Coordinate 50 388375 mE 6462403 mN
Habitat Elevated sandplain.
Soil Dark grey (loamy) sand. Organic matter top few cm. Dense leaf litter including Allocasuarina needles.
Vegetation U1+ ^*Allocasuarina fraseriana*\Allocasuarina\^tree\6\c; U2 ^*Banksia attenuata*,*Banksia menziesii*,*Banksia grandis*,*Spyridium globulosum*,*Acacia saligna*\Banksia\^tree\6\r; M1 ^*Xanthorrhoea preissii*\Xanthorrhoea\^grass-tree\2\r; M2 ^*Tetraria octandra*,*Stirlingia latifolia*,*Mesomelaena pseudostygia*,*Lepidosperma scabrum*,*Hypocalymma robustum*\Tetraria\^sedge,shrub\2\r; G1 ^*Monotaxis grandiflora* var. *grandiflora*,*Scaevola repens* var. *repens*,*Freesia alba* x *leichtlinii*\Monotaxis\^shrub,forb\1\r.
Veg Condition Very Good; **Freesia* is the only weed in abundance.
Fire Age Long unburnt.

Species	Cover (%)	Height (cm)
<i>Acacia pulchella</i> var. <i>glaberrima</i>	0.1	20
<i>Acacia saligna</i>	3	600
<i>Allocasuarina fraseriana</i>	60	850
<i>Banksia attenuata</i>	3	550
<i>Banksia grandis</i>	1	400
<i>Banksia menziesii</i>	1	600
<i>Banksia sessilis</i> var. <i>cygnorum</i>	0.1	10
* <i>Briza maxima</i>	0.1	10
<i>Burchardia congesta</i>	0.1	20
<i>Conostylis aculeata</i> subsp. <i>aculeata</i>	0.1	50
<i>Desmocladus flexuosus</i>	0.1	15
<i>Dianella revoluta</i> var. <i>divaricata</i>	0.1	40
* <i>Freesia alba</i> x <i>leichtlinii</i>	1.5	25
* <i>Gladiolus caryophyllaceus</i>	0.1	70
<i>Gompholobium tomentosum</i>	0.1	50
<i>Hardenbergia comptoniana</i>	0.1	10
<i>Hovea trisperma</i> var. <i>trisperma</i>	0.1	20
<i>Hybanthus calycinus</i>	0.5	40
<i>Hypocalymma robustum</i>	0.5	50
<i>Lepidosperma scabrum</i>	0.5	50
<i>Lobelia tenuior</i>	0.1	5
<i>Lomandra micrantha</i> subsp. <i>micrantha</i>	0.1	20
<i>Macrozamia fraseri</i>	0.1	20
<i>Mesomelaena pseudostygia</i>	2	50
<i>Microlaena stipoides</i> var. <i>stipoides</i>	0.1	20
<i>Monotaxis grandiflora</i>	1	15
<i>Pterostylis recurva</i>	0.1	10
<i>Scaevola canescens</i>	0.1	20
<i>Scaevola repens</i>	0.5	10
<i>Spyridium globulosum</i>	4	400
<i>Stirlingia latifolia</i>	1	55
<i>Tetraria octandra</i>	8	50
<i>Thysanotus manglesianus</i>	0.1	90
<i>Xanthorrhoea preissii</i>	3	85



KPI04 - Overstorey



KPI04 - Understorey

Kings Park Link Bridge **Site** KPI05
Described by MMAL **Date** 12-Sep-19 **Type** Quadrat 10 x 10 m
Central Coordinate 50 388344 mE 6462348 mN
Habitat Elevated sandplain.
Soil Grey loamy sand, with high organic matter throughout; 3-5 cm deep, dark brown organic matter layer on top; dense leaf litter throughout.
Vegetation U1+ ^*Corymbia calophylla*, *Allocasuarina fraseriana*, *Banksia attenuata* \ *Corymbia* \ ^tree \ 7 \ d; M1 ^*Acacia saligna* \ *Acacia* \ ^shrub \ 7,6 \ r; M2 ^*Banksia sessilis* var. *cygnorum*, *Eucalyptus marginata* subsp. *marginata* \ *Banksia* \ ^tree \ 6 \ r; M3 ^*Macrozamia fraseri*, *Xanthorrhoea preissii* \ *Macrozamia* \ ^cycad, grass-tree \ 3,2 \ r; G1 ^*Freesia alba* x *leichtlinii*, *Thysanotus manglesianus* \ *Freesia* \ ^forb \ 1 \ r.
Veg Condition Good to Very Good. Veg structure altered - understorey is quite sparse; fair amount of weeds; veg condition is between Good and Very Good.
Fire Age Long unburnt.

Species	Cover (%)	Height (cm)	Notes
<i>Acacia pulchella</i> var. <i>glaberrima</i>	0.1	250	Fruiting.
<i>Acacia saligna</i>	1	1000	Flowering.
<i>Allocasuarina fraseriana</i>	70	1600	Flowering.
<i>Banksia attenuata</i>	5	1200	Fruiting.
<i>Banksia sessilis</i> var. <i>cygnorum</i>	4	400	
* <i>Briza maxima</i>	0.1	20	.
<i>Burchardia congesta</i>	0.1	80	Flowering.
<i>Corymbia calophylla</i>	9	1600	
<i>Desmocladius flexuosus</i>	0.1	20	
<i>Dianella revoluta</i> var. <i>divaricata</i>	0.1	40	
<i>Eucalyptus marginata</i> subsp. <i>marginata</i>	2	600	Flowering.
* <i>Freesia alba</i> x <i>leichtlinii</i>	3	40	Flowering.
* <i>Gladiolus caryophyllaceus</i>	0.1	50	
<i>Gompholobium tomentosum</i>	0.1	70	
<i>Hibbertia hypericoides</i> subsp. <i>hypericoides</i>	0.1	40	Flowering.
<i>Hypocalymma robustum</i>	0.1	30	Flowering.
<i>Kennedia prostrata</i>	0.1	10	Flowering.
<i>Lepidosperma apicola</i>	0.1	40	Flowering.
<i>Lomandra</i> sp.	0.1	20	Narrow leaves, fibrous base. Sterile.
<i>Macrozamia fraseri</i>	1	105	
<i>Mesomelaena pseudostygia</i>	0.1	40	Flowering.
<i>Scaevola canescens</i>	0.1	8	
<i>Tetaria octandra</i>	0.1	35	
<i>Thysanotus</i> ? <i>manglesianus</i>	1	80	
<i>Xanthorrhoea preissii</i>	1	70	Fruiting.



KPI05 - Overstorey



KPI05 - Understorey

Kings Park Link Bridge **Site** KPI06
Described by SWMMAL **Date** 12-Sep-19 **Type** Quadrat 10 x 10 m
Central Coordinate 50 388385 mE 6462308 mN
Habitat Elevated sandplain.
Soil Dark grey (loamy) sand. Organic matter in top few cm. Dense leaf litter including *Allocasuarina* needles.
Vegetation U1+ ^*Allocasuarina fraseriana*\Allocasuarina\^tree\6\r; U2 ^*Banksia menziesii*,*Acacia saligna*\Banksia\^tree,shrub\6\i; M1 ^*Acacia pulchella* var. *glaberrima*\Acacia\^shrub\3\r; M2 ^*Jacksonia sericea*,*Hibbertia hypericoides* var. *hypericoides*,*Gastrolobium capitatum*\Jacksonia\^shrub\2\r; G1 ^*Mesomelaena pseudostygia*,*Tetraria octandra*,*Scaevola canescens*,*Scaevola repens* var. *repens*,*Desmocladius flexuosus*,*Alexgeorgea nitens*\Mesomelaena\^sedge,shrub,rush\1\r.
Veg Condition Very Good; scattered weeds, including occasional aggressive species (**Freesia*).
Fire Age Long unburnt.

Species	Cover (%)	Height (cm)	Notes
<i>Acacia pulchella</i> var. <i>glaberrima</i>	1	150	
<i>Acacia saligna</i>	2	500	
<i>Allocasuarina fraseriana</i>	15	800	
<i>Anigozanthos manglesii</i>	0.1	80	
<i>Banksia attenuata</i>	1	0	Overhanging quadrat.
<i>Banksia menziesii</i>	30	550	
* <i>Briza maxima</i>	0.1	10	
<i>Burchardia congesta</i>	0.1	80	
<i>Caladenia arenicola</i>	0.1	20	
<i>Caladenia flava</i> subsp. <i>flava</i>	0.1	20	
<i>Conostylis aculeata</i> subsp. <i>cygnorum</i>	0.1	40	
<i>Desmocladius flexuosus</i>	0.1	30	
<i>Dianella revoluta</i> var. <i>divaricata</i>	0.1	45	
* <i>Ehrharta calycina</i>	0.1	50	
* <i>Freesia alba</i> x <i>leichtlinii</i>	0.1	10	
* <i>Gladiolus caryophyllaceus</i>	0.1	100	
<i>Gompholobium tomentosum</i>	0.1	50	
<i>Hibbertia hypericoides</i>	1	50	
<i>Hovea trisperma</i> var. <i>trisperma</i>	0.1	80	
* <i>Hypochaeris glabra</i>	0.1	15	
<i>Jacksonia sericea</i>	2	40	
<i>Kennedia prostrata</i>	0.1	20	
<i>Lepidosperma apicola</i>	0.1	40	
<i>Lepidosperma scabrum</i>	0.1	50	
<i>Lomandra preissii</i>	0.1	40	
<i>Lyginia imberbis</i>	0.1	50	
<i>Mesomelaena pseudostygia</i>	6	20	
<i>Monotaxis grandiflora</i>	0.1	40	
* <i>Romulea rosea</i> var. <i>australis</i>	0.1	10	
<i>Scaevola canescens</i>	0.5	20	
<i>Scaevola repens</i> var. <i>repens</i>	0.5	50	
<i>Tetraria octandra</i>	5	50	
<i>Thysanotus arenarius</i>	0.1	10	
<i>Thysanotus manglesianus</i>	0.1	10	
<i>Trachymene pilosa</i>	0.1	10	
<i>Tricoryne elatior</i>	0.1	30	
* <i>Urospermum picroides</i>	0.1	10	
* <i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	0.1	20	



KPI06 - Overstorey



KPI06 - Understorey

Kings Park Link Bridge **Site** KPI07
Described by CFCM **Date** 08-Oct-19 **Type** Quadrat 10 x 10 m
Central Coordinate 50 388505 **mE** 6462801 **mN**
Habitat Elevated sandplain; flat to slightly undulating.
Soil Grey-brown loamy sand; Thick layer of leaf litter.
Vegetation U1+ ^*Eucalyptus marginata* subsp. *marginata*, *Allocasuarina fraseriana* \Eucalyptus\^tree\7\c.i; U2 ^*Banksia attenuata*, *Banksia menziesii* \Banksia\^tree\6\i; M1 ^*Grevillea crithmifolia* \Grevillea\^shrub\3\r; M2 ^*Xanthorrhoea brunonis* subsp. *brunonis* \Xanthorrhoea\^grass-tree\3\r; G1 ^*Mesomelaena pseudostygia*, *Tetraria octandra*, *Lepidosperma scabrum* \Mesomelaena\^sedge,rush\2\r; G2 ^*Jacksonia sericea*, *Hibbertia hypericoides* subsp. *hypericoides*, *Desmocladius flexuosus*, *Burchardia congesta*, *Caesia micrantha* \Jacksonia\^shrub,rush,forb\1\r.
Veg Condition Very Good to Excellent; occasional weeds, including some aggressive species (**Freesia*, **Ehrharta*).
Fire Age Long unburnt.
Notes One dead *Allocasuarina fraseriana* (5m) in quadrat.

Species	Cover (%)	Height (cm)	Specimen	Notes
<i>Acacia pulchella</i> var. <i>glaberrima</i>	0.1	170		some seedlings.
<i>Acacia saligna</i>	0.1	70		
<i>Allocasuarina fraseriana</i>	20	1200		
<i>Anigozanthos manglesii</i> subsp. <i>manglesii</i>	0.1	130		
<i>Banksia attenuata</i>	15	800		canopy half dead.
<i>Banksia menziesii</i>	20	600		
* <i>Briza maxima</i>	0.1	10		n=1.
<i>Burchardia congesta</i>	0.5	45		
<i>Caesia micrantha</i>	1	15		
<i>Caladenia</i> ? <i>flava</i>	0.1	15		sterile
<i>Conostephium pendulum</i>	0.1	45		
<i>Conostylis aculeata</i> subsp. <i>cygnorum</i>	0.1	20		
<i>Conostylis setigera</i> subsp. <i>setigera</i>	0.1	10		
<i>Daviesia decurrens</i> subsp. <i>decurrens</i>	0.1	60		
<i>Daviesia triflora</i>	0.1	50		
<i>Desmocladius flexuosus</i>	2	45		Flowering.
* <i>Ehrharta calycina</i>	0.1	70		
<i>Eucalyptus marginata</i> subsp. <i>marginata</i>	30	1600		On border of quadrat.
* <i>Freesia alba</i> x <i>leichtlinii</i>	0.1	25		n=20.
<i>Gastrolobium capitatum</i>	0.1	45		
* <i>Gladiolus caryophyllaceus</i>	0.1	150		n=5.
<i>Glischrocaryon aureum</i>	0.1	20		
<i>Gompholobium tomentosum</i>	0.1	40		
<i>Grevillea crithmifolia</i>	1	120		
<i>Hibbertia hypericoides</i> subsp. <i>hypericoides</i>	3	30		
<i>Hibbertia striata</i>	0.1	20		
<i>Hovea trisperma</i> var. <i>trisperma</i>	0.1	25		
<i>Hypocalymma robustum</i>	0.1	70		
* <i>Hypochaeris glabra</i>	0.1	10		n=15
<i>Jacksonia sericea</i>	4	35		Priority 4. n=2.
<i>Kennedia prostrata</i>	0.1	10		
<i>Lepidosperma apricola</i>	0.1	55		
<i>Lepidosperma oldhamii</i>	0.1	50		
<i>Lepidosperma scabrum</i>	2	70		
<i>Lomandra preissii</i>	0.1	40		
<i>Lomandra</i> sp.	0.1	40	KPI07-01	
<i>Macrozamia fraseri</i>	0.1	200		
<i>Mesomelaena pseudostygia</i>	9	70		
<i>Microlaena stipoides</i> var. <i>stipoides</i>	0.1	40		
<i>Pterostylis</i> sp.	0.1	20		
<i>Ptilotus polystachyus</i>	0.1	50		
<i>Pyrorchis nigricans</i>	0.1	5		
<i>Scaevola canescens</i>	0.1	10		
<i>Scaevola repens</i> var. <i>repens</i>	0.1	10		
<i>Sowerbaea laxiflora</i>	0.1	30		

Species	Cover (%)	Height (cm)	Specimen	Notes
<i>Synaphea spinulosa</i> subsp. <i>spinulosa</i>	0.1	25		
<i>Tetraria octandra</i>	4	30		
<i>Thysanotus manglesianus</i>	0.1	150		sterile
<i>Trachymene pilosa</i>	0.1	10		
<i>Tricoryne elatior</i>	0.1	20		
<i>Xanthorrhoea brunonis</i> subsp. <i>brunonis</i>	2	50	KPI07-02	No trunk.



KPI07 - Overstorey



KPI07 - Understorey

Kings Park Link Bridge **Site** KPI08
Described by SWAL **Date** 08-Oct-19 **Type** Quadrat 10 x 10 m
Central Coordinate 50 388430 **mE** 6462856 **mN**
Habitat Elevated sandplain.
Soil Dark grey-brown sand.
Vegetation U1+ ^*Allocasuarina fraseriana*,*Eucalyptus marginata* subsp. *marginata*\^*Allocasuarina*\^*tree*\6\i; U2 ^*Banksia attenuata*,*Banksia menziesii*\^*Banksia*\^*tree*\6\r; M1 ^*Xanthorrhoea preissii*\^*Xanthorrhoea*\^*grass-tree*\3\r; G1 ^*Stirlingia latifolia*,*Hypocalymma robustum*,*Petrophile macrostachya*,*Hibbertia hypericoides* subsp. *hypericoides*\^*Stirlingia*\^*shrub*\1\r; G2 ^*Tetraria octandra*,*Lepidosperma apricola*,*Mesomelaena pseudostygia*,*Scaevola repens* var. *repens*,*Monotaxis grandiflora* var. *grandiflora*\^*Tetraria*\^*sedge,shrub*\1\r.
Veg Condition Excellent; very occasional weeds.
Fire Age Long unburnt.
Notes A lot of *Allocasuarina* leaf litter on ground. Organic matter in top 20 cm.

Species	Cover (%)	Height (cm)	Specimen	Notes
<i>Allocasuarina fraseriana</i>	16	1100		
<i>Banksia attenuata</i>	15	450		
<i>Banksia menziesii</i>	3	400		
<i>Billardiera heterophylla</i>	0.1	10	KPI08-02	Juvenile.
* <i>Briza maxima</i>	0.1	10		
<i>Burchardia congesta</i>	0.1	25		
<i>Caladenia flava</i> subsp. <i>flava</i>	0.1	15	KPI08-12	
<i>Conostylis aculeata</i> subsp. <i>cygnorum</i>	0.1	40		
<i>Daviesia nudiflora</i> subsp. <i>nudiflora</i>	0.1	45		
<i>Daviesia triflora</i>	0.1	40		
<i>Desmocladius flexuosus</i>	0.1	15	KPI08-04, 08-15	
<i>Drosera porrecta</i>	0.1	20	KPI08-01	
* <i>Ehrharta calycina</i>	0.1	10	KPI08-03	
<i>Eucalyptus marginata</i> subsp. <i>marginata</i>	9	1000		
* <i>Gladiolus caryophyllaceus</i>	0.1	45		
<i>Gompholobium tomentosum</i>	0.1	65		
<i>Haemodorum spicatum</i>	0.1	60		
<i>Hardenbergia comptoniana</i>	0.1	80		
<i>Hibbertia hypericoides</i> subsp. <i>hypericoides</i>	0.5	40		
<i>Hibbertia striata</i>	0.1	10	KPI08-05	
<i>Hovea trisperma</i> var. <i>trisperma</i>	0.1	40		
<i>Hypocalymma robustum</i>	2	40		
<i>Lepidosperma apricola</i>	2	25		
<i>Lomandra preissii</i>	0.1	10		
<i>Mesomelaena pseudostygia</i>	1	40		
<i>Microlaena stipoides</i> var. <i>stipoides</i>	0.1	60	KPI08-09, 08-13, 08-14	
<i>Monotaxis grandiflora</i> var. <i>grandiflora</i>	1	10	KPI08-06	
<i>Petrophile macrostachya</i>	0.5	60		
<i>Scaevola canescens</i>	0.1	40		
<i>Scaevola repens</i> var. <i>repens</i>	1	15		
<i>Sowerbaea laxiflora</i>	0.1	25		
<i>Stirlingia latifolia</i>	7	60		
<i>Tetraria octandra</i>	14	40	KPI08-11	
<i>Thysanotus manglesianus</i>	0.1	20		
<i>Trachymene pilosa</i>	0.1	10	KPI08-08	
<i>Xanthorrhoea brunonis</i> subsp. <i>brunonis</i>	0.1	45		
<i>Xanthorrhoea preissii</i>	4	100		



KPI08 - Overstorey



KPI08 - Understorey

Appendix 11

List of Flora Species Recorded from the Survey Area Based on Sampling to Date



Family	Species	Status	Source (Survey Year)			
			Biota (2019)	BGPA (2019)	BGPA (2018)	Arbor Centre (2014)
Amaranthaceae	<i>Ptilotus drummondii</i>				✓	
Amaranthaceae	<i>Ptilotus polystachyus</i>		✓		✓	
Anarthriaceae	<i>Lyginia imberbis</i>		✓		✓	
Apiaceae	<i>Daucus glochidiatus</i>				✓	
Apiaceae	<i>Xanthosia huegelii</i>		✓		✓	
Araliaceae	<i>Hydrocotyle callicarpa</i>				✓	
Araliaceae	<i>Trachymene pilosa</i>		✓		✓	
Asparagaceae	* <i>Asparagus asparagoides</i>	Weed (WoNS species)	✓		✓	
Asparagaceae	<i>Lomandra caespitosa</i>		✓			
Asparagaceae	<i>Lomandra hermaphrodita</i>				✓	
Asparagaceae	<i>Lomandra micrantha</i> subsp. <i>micrantha</i>		✓			
Asparagaceae	<i>Lomandra preissii</i>		✓		✓	
Asparagaceae	<i>Lomandra</i> sp.		✓			
Asparagaceae	<i>Sowerbaea laxiflora</i>		✓		✓	
Asparagaceae	<i>Thysanotus arenarius</i>		✓		✓	
Asparagaceae	<i>Thysanotus manglesianus</i>		✓		✓	
Asparagaceae	<i>Thysanotus</i> ? <i>manglesianus</i>		✓		✓	
Asparagaceae	<i>Thysanotus sparteus</i>				✓	
Asparagaceae	<i>Thysanotus thyrsoides</i>			✓	✓	
Asparagaceae	<i>Thysanotus</i> sp. (inadequate material)		✓			
Asteraceae	* <i>Cotula turbinata</i>	Weed	✓			
Asteraceae	* <i>Hypochaeris glabra</i>	Weed	✓		✓	
Asteraceae	* <i>Hypochaeris radicata</i>	Weed			✓	
Asteraceae	<i>Pithocarpa cordata</i>				✓	
Asteraceae	* <i>Sonchus oleraceus</i>	Weed			✓	
Asteraceae	* <i>Taraxacum khatoonae</i>	Weed	✓		✓	
Asteraceae	* <i>Urospermum picroides</i>	Weed	✓		✓	
Asteraceae	* <i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	Weed	✓		✓	
Asteraceae	<i>Waitzia suaveolens</i> var. <i>suaveolens</i>				✓	
Campanulaceae	<i>Lobelia tenuior</i>		✓		✓	
Campanulaceae	<i>Wahlenbergia preissii</i>				✓	
Casuarinaceae	<i>Allocasuarina fraseriana</i>		✓		✓	✓
Colchicaceae	<i>Burchardia congesta</i>		✓		✓	

Family	Species	Status	Source (Survey Year)			
			Biota (2019)	BGPA (2019)	BGPA (2018)	Arbor Centre (2014)
Cyperaceae	<i>Lepidosperma apricola</i>		✓		✓	
Cyperaceae	<i>Lepidosperma oldhamii</i>		✓	✓	✓	
Cyperaceae	? <i>Lepidosperma oldhamii</i>				✓	
Cyperaceae	<i>Lepidosperma scabrum</i>		✓		✓	
Cyperaceae	<i>Lepidosperma</i> ? <i>scabrum</i>		✓			
Cyperaceae	<i>Mesomelaena pseudostygia</i>		✓		✓	
Cyperaceae	<i>Schoenus grandiflorus</i>				✓	
Cyperaceae	? <i>Schoenus</i> sp.				✓	
Cyperaceae	<i>Tetaria octandra</i>		✓		✓	
Dilleniaceae	<i>Hibbertia huegelii</i>				✓	
Dilleniaceae	<i>Hibbertia hypericoides</i> subsp. <i>hypericoides</i>		✓		✓	
Dilleniaceae	<i>Hibbertia striata</i>		✓			
Droseraceae	<i>Drosera erythrorhiza</i>		✓		✓	
Droseraceae	<i>Drosera porrecta</i>		✓			
Ericaceae	<i>Astroloma pallidum</i>		✓			
Ericaceae	<i>Conostephium pendulum</i>		✓		✓	
Ericaceae	<i>Leucopogon propinquus</i>				✓	
Ericaceae	<i>Leucopogon racemulosus</i>			✓		
Euphorbiaceae	* <i>Euphorbia peplus</i>	Weed			✓	
Euphorbiaceae	<i>Monotaxis grandiflora</i> var. <i>grandiflora</i>		✓		✓	
Fabaceae	<i>Acacia pulchella</i> var. <i>glaberrima</i>		✓		✓	
Fabaceae	<i>Acacia saligna</i>		✓		✓	
Fabaceae	<i>Daviesia decurrens</i> subsp. <i>decurrens</i>		✓		✓	
Fabaceae	<i>Daviesia nudiflora</i> subsp. <i>nudiflora</i>		✓		✓	
Fabaceae	<i>Daviesia triflora</i>		✓		✓	
Fabaceae	<i>Gastrolobium capitatum</i>		✓		✓	
Fabaceae	<i>Gompholobium tomentosum</i>		✓		✓	
Fabaceae	<i>Hardenbergia comptoniana</i>		✓		✓	
Fabaceae	<i>Hovea trisperma</i> var. <i>trisperma</i>		✓		✓	
Fabaceae	<i>Jacksonia furcellata</i>				✓	
Fabaceae	<i>Jacksonia sericea</i>	Priority 4	✓	✓	✓	
Fabaceae	<i>Jacksonia sternbergiana</i>				✓	
Fabaceae	<i>Kennedia prostrata</i>		✓		✓	

Family	Species	Status	Source (Survey Year)			
			Biota (2019)	BGPA (2019)	BGPA (2018)	Arbor Centre (2014)
Fabaceae	* <i>Trifolium campestre</i> var. <i>campestre</i>	Weed	✓		✓	
Goodeniaceae	<i>Scaevola canescens</i>		✓		✓	
Goodeniaceae	<i>Scaevola repens</i> var. <i>repens</i>		✓		✓	
Haemodoraceae	<i>Anigozanthos manglesii</i> subsp. <i>manglesii</i>		✓		✓	
Haemodoraceae	<i>Conostylis aculeata</i> subsp. <i>cygnorum</i>		✓		✓	
Haemodoraceae	<i>Conostylis setigera</i> subsp. <i>setigera</i>		✓		✓	
Haemodoraceae	<i>Haemodorum laxum</i>		✓		✓	
Haemodoraceae	<i>Haemodorum paniculatum</i>		✓		✓	
Haemodoraceae	<i>Haemodorum spicatum</i>		✓		✓	
Haemodoraceae	<i>Haemodorum</i> sp. (sterile)		✓			
Haloragaceae	<i>Glischrocaryon aureum</i>		✓			
Hemerocallidaceae	<i>Caesia micrantha</i>		✓		✓	
Hemerocallidaceae	<i>Dianella revoluta</i> var. <i>divaricata</i>		✓		✓	
Hemerocallidaceae	<i>Tricoryne elatior</i>		✓		✓	
Iridaceae	* <i>Freesia alba</i> x <i>leichtlinii</i>	Weed	✓		✓	
Iridaceae	* <i>Gladiolus caryophyllaceus</i>	Weed	✓		✓	
Iridaceae	* <i>Ixia maculata</i>	Weed			✓	
Iridaceae	* <i>Moraea setifolia</i>	Weed	✓			
Iridaceae	* <i>Romulea rosea</i> var. <i>australis</i>	Weed	✓		✓	
Lamiaceae	<i>Hemiandra glabra</i>				✓	
Loganiaceae	<i>Phyllangium paradoxum</i>				✓	
Malvaceae	* <i>Brachychiton populneus</i> subsp. <i>populneus</i>	Weed	✓		✓	
Myrtaceae	* <i>Agonis flexuosa</i> var. <i>flexuosa</i>	Weed (native to WA, but introduced to Kings Park)			✓	
Myrtaceae	<i>Corymbia calophylla</i>		✓		✓	✓
Myrtaceae	* <i>Eucalyptus botryoides</i>	Weed (native to Australia, but introduced to Kings Park)			✓	
Myrtaceae	<i>Eucalyptus gomphocephala</i>		✓		✓	
Myrtaceae	<i>Eucalyptus marginata</i> subsp. <i>marginata</i>		✓		✓	✓
Myrtaceae	* <i>Eucalyptus</i> sp.	Weed (indeterminate introduced eucalypt, likely from eastern states; collection from Biota tree survey, and CM077/19)	✓		✓	
Myrtaceae	<i>Hypocalymma robustum</i>		✓		✓	
Myrtaceae	* <i>Melaleuca armillaris</i>	Weed (native to Australia, but introduced to Kings Park)				✓
Orchidaceae	<i>Caladenia arenicola</i>		✓		✓	
Orchidaceae	<i>Caladenia</i> ? <i>arenicola</i>				✓	

Family	Species	Status	Source (Survey Year)			
			Biota (2019)	BGPA (2019)	BGPA (2018)	Arbor Centre (2014)
Orchidaceae	<i>Caladenia flava</i> subsp. <i>flava</i>		✓		✓	
Orchidaceae	<i>Caladenia</i> ? <i>flava</i>		✓			
Orchidaceae	<i>Caladenia</i> sp. (dead or sterile)			✓	✓	
Orchidaceae	<i>Corybas</i> sp. (sterile; may be <i>C. recurva</i>)			✓		
Orchidaceae	* <i>Disa bracteata</i>	Weed			✓	
Orchidaceae	<i>Diuris</i> sp. (sterile)			✓		
Orchidaceae	<i>Elythranthera</i> sp. (sterile)			✓		
Orchidaceae	<i>Microtis media</i> subsp. <i>media</i>		✓		✓	
Orchidaceae	<i>Pterostylis recurva</i>		✓			
Orchidaceae	<i>Pterostylis sanguinea</i>		✓		✓	
Orchidaceae	<i>Pterostylis</i> sp. (dead or sterile)		✓	✓	✓	
Orchidaceae	<i>Pyrorchis nigricans</i>		✓	✓	✓	
Orchidaceae	<i>Thelymitra benthamiana</i>			✓		
Orchidaceae	<i>Thelymitra campanulata</i>				✓	
Orchidaceae	<i>Thelymitra crinita</i>		✓	✓	✓	
Orchidaceae	<i>Thelymitra</i> ? <i>crinita</i>		✓		✓	
Orchidaceae	<i>Thelymitra macrophylla</i>			✓		
Orchidaceae	<i>Thelymitra</i> ? <i>macrophylla</i>				✓	
Oxalidaceae	* <i>Oxalis purpurea</i>	Weed	✓		✓	
Papaveraceae	* <i>Fumaria capreolata</i>	Weed	✓			
Phyllanthaceae	<i>Phyllanthus calycinus</i>		✓		✓	
Phyllanthaceae	<i>Poranthera microphylla</i>		✓		✓	
Pittosporaceae	<i>Billardiera heterophylla</i>		✓		✓	
Plantaginaceae	* <i>Plantago lanceolata</i>	Weed	✓			
Poaceae	<i>Austrostipa compressa</i>				✓	
Poaceae	<i>Austrostipa flavescens</i>				✓	
Poaceae	* <i>Avena barbata</i>	Weed	✓		✓	
Poaceae	* <i>Brachypodium distachyon</i>	Weed	✓			
Poaceae	* <i>Briza maxima</i>	Weed	✓		✓	
Poaceae	* <i>Ehrharta calycina</i>	Weed	✓		✓	
Poaceae	* <i>Ehrharta longiflora</i>	Weed			✓	
Poaceae	* <i>Eragrostis curvula</i>	Weed	✓			
Poaceae	<i>Microlaena stipoides</i> var. <i>stipoides</i>		✓		✓	

Family	Species	Status	Source (Survey Year)			
			Biota (2019)	BGPA (2019)	BGPA (2018)	Arbor Centre (2014)
Poaceae	* <i>Pentameris airoides</i> subsp. <i>airoides</i>	Weed			✓	
Primulaceae	* <i>Lysimachia arvensis</i>	Weed			✓	
Proteaceae	<i>Banksia attenuata</i>		✓		✓	✓
Proteaceae	<i>Banksia dallanneyi</i> var. <i>dallanneyi</i>				✓	
Proteaceae	<i>Banksia grandis</i>		✓		✓	
Proteaceae	<i>Banksia ilicifolia</i>				✓	
Proteaceae	<i>Banksia menziesii</i>		✓		✓	✓
Proteaceae	<i>Banksia sessilis</i> var. <i>cygnorum</i>		✓		✓	✓
Proteaceae	<i>Grevillea crithmifolia</i>		✓		✓	
Proteaceae	<i>Hakea prostrata</i>				✓	
Proteaceae	<i>Petrophile macrostachya</i>		✓		✓	
Proteaceae	<i>Stirlingia latifolia</i>		✓		✓	
Proteaceae	<i>Synaphea spinulosa</i> subsp. <i>spinulosa</i>		✓		✓	
Restionaceae	<i>Alexgeorgea nitens</i>		✓		✓	
Restionaceae	<i>Desmocladius flexuosus</i>		✓		✓	
Rhamnaceae	<i>Spyridium globulosum</i>		✓		✓	
Rhamnaceae	<i>Stenanthemum notiale</i> subsp. <i>chamelum</i>				✓	
Rutaceae	<i>Philotheca spicata</i>				✓	
Scrophulariaceae	* <i>Phyllopodium cordatum</i>	Weed	✓			
Stylidiaceae	<i>Stylidium neurophyllum</i>		✓		✓	
Stylidiaceae	<i>Stylidium schoenoides</i>		✓			
Thymelaeaceae	<i>Pimelea leucantha</i>			✓	✓	
Violaceae	<i>Hybanthus calycinus</i>		✓		✓	
Xanthorrhoeaceae	<i>Xanthorrhoea brunonis</i> subsp. <i>brunonis</i>		✓		✓	
Xanthorrhoeaceae	<i>Xanthorrhoea preissii</i>		✓		✓	✓
Zamiaceae	<i>Macrozamia fraseri</i>		✓		✓	✓

Appendix 12

Locations of Flora of Conservation Significance



Species	Status	Site/Opp	Easting (mE)	Northing (mN)	Number of Individuals	Source (Survey Year)	Location
<i>Jacksonia sericea</i>	Priority 4	Opp	388357	6462712	4	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM342	388360	6462697	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM346	388346	6462692	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM351	388360	6462690	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM355	388358	6462687	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM349	388359	6462687	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM359	388348	6462686	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM353	388359	6462684	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388323	6462683	6	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388344	6462681	2	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388343	6462677	3	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - RG038	388339	6462676	2	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - RG037	388335	6462673	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM373	388352	6462666	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM377	388361	6462664	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM385	388345	6462663	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388324	6462660	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - RG058	388326	6462657	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388343	6462657	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM055	388330	6462654	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388344	6462653	4	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - RG074	388340	6462650	2	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	R02	388340	6462648	1	BGPA (2018) - annual monitoring	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM068	388342	6462648	2	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM067	388341	6462647	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM401	388349	6462627	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM403	388354	6462621	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM125,133	388330	6462616	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM408	388357	6462610	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388343	6462608	2	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM412	388348	6462608	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM414	388355	6462607	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM141	388341	6462606	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388356	6462604	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM422	388343	6462602	1	BGPA (2019) - current survey	Targeted Flora Survey Area

Species	Status	Site/Opp	Easting (mE)	Northing (mN)	Number of Individuals	Source (Survey Year)	Location
<i>Jacksonia sericea</i>	Priority 4	Opp	388357	6462602	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM421	388342	6462601	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM415	388354	6462601	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM418	388353	6462598	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388358	6462598	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388348	6462597	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388347	6462596	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - RG094	388340	6462594	2	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388348	6462592	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388339	6462591	4	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - RG076	388339	6462589	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388344	6462589	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388345	6462589	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM161	388340	6462587	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388341	6462585	4	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM510	388347	6462585	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - RG082	388326	6462583	2	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388345	6462583	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM509	388347	6462583	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388348	6462583	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM508	388347	6462581	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM507	388347	6462580	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388333	6462579	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM506	388348	6462579	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388348	6462578	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM505	388349	6462578	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM504	388347	6462577	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM503	388348	6462575	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388347	6462574	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388349	6462574	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM187	388339	6462563	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388348	6462561	2	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388342	6462560	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM499	388350	6462557	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - RG122	388321	6462556	1	BGPA (2019) - current survey	Targeted Flora Survey Area

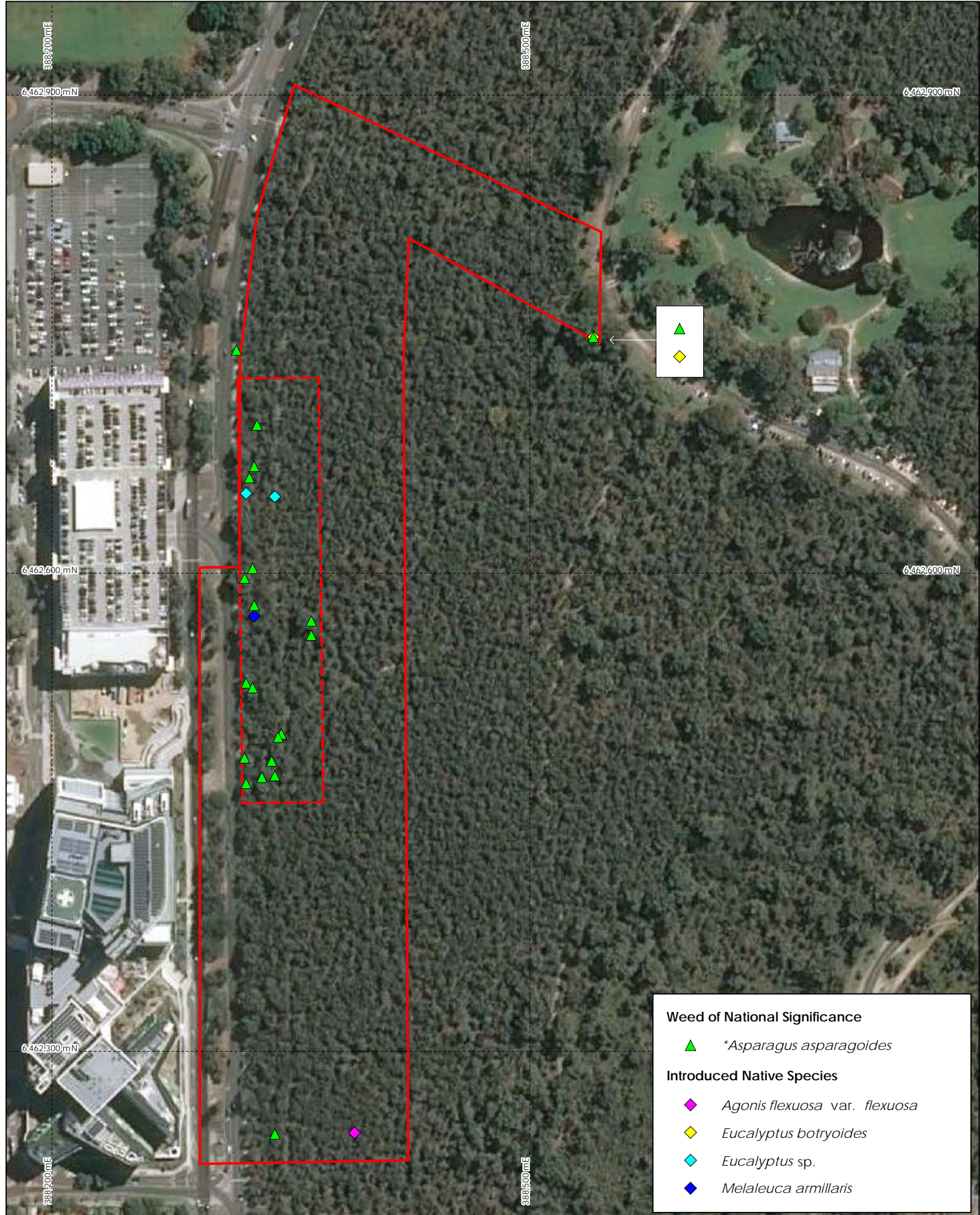
Species	Status	Site/Opp	Easting (mE)	Northing (mN)	Number of Individuals	Source (Survey Year)	Location
<i>Jacksonia sericea</i>	Priority 4	Opp - RG124	388341	6462553	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - RG123	388343	6462553	2	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM498	388351	6462552	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - RG117	388328	6462551	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	S02	388340	6462549	1	BGPA (2018) - annual monitoring	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	KPI03	388341	6462548	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388351	6462548	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM493	388348	6462546	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM492	388350	6462543	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388344	6462540	4	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM253	388347	6462538	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM254	388345	6462537	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388344	6462531	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - RG139	388342	6462528	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388366	6462518	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388369	6462516	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388345	6462483	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - RG180	388342	6462479	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - RG206	388335	6462476	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM424	388334	6462475	1	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - RG228	388320	6462465	2	BGPA (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388320	6462462	1	Biota (2019) - current survey	Targeted Flora Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388365	6462882	9	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388356	6462856	3	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388373	6462833	2	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388468	6462821	2	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388343	6462818	10	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388472	6462815	4	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388456	6462806	4	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388460	6462801	4	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	KPI07	388497	6462801	2	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388515	6462797	3	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388477	6462791	3	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388519	6462768	2	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388526	6462768	1	Biota (2019) - current survey	Survey Area

Species	Status	Site/Opp	Easting (mE)	Northing (mN)	Number of Individuals	Source (Survey Year)	Location
<i>Jacksonia sericea</i>	Priority 4	Opp	388338	6462767	4	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388510	6462766	3	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388347	6462732	1	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM324	388358	6462726	1	BGPA (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - CM325	388358	6462725	1	BGPA (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Q.5-2.5	388390	6462699	1	BGPA (2018) - annual monitoring	Survey Area
<i>Jacksonia sericea</i>	Priority 4	R.5-2.5	388390	6462600	1	BGPA (2018) - annual monitoring	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388316	6462551	2	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388317	6462551	2	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp - RG121	388313	6462546	3	BGPA (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	S.5-2.5	388390	6462500	1	BGPA (2018) - annual monitoring	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388315	6462462	1	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388344	6462444	1	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388344	6462412	6	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388350	6462374	6	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388352	6462340	2	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388348	6462321	2	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	KPI06	388385	6462308	2	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388326	6462288	1	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388348	6462277	3	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388337	6462265	1	Biota (2019) - current survey	Survey Area
<i>Jacksonia sericea</i>	Priority 4	Opp	388346	6462258	1	Biota (2019) - current survey	Survey Area

Appendix 13

Locations of Introduced Flora (Weeds)







Weed of National Significance

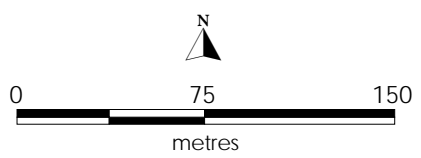
- ▲ **Asparagus asparagoides*

Introduced Native Species

- ◆ *Agonis flexuosa* var. *flexuosa*
- ◆ *Eucalyptus botryoides*
- ◆ *Eucalyptus* sp.
- ◆ *Melaleuca armillaris*

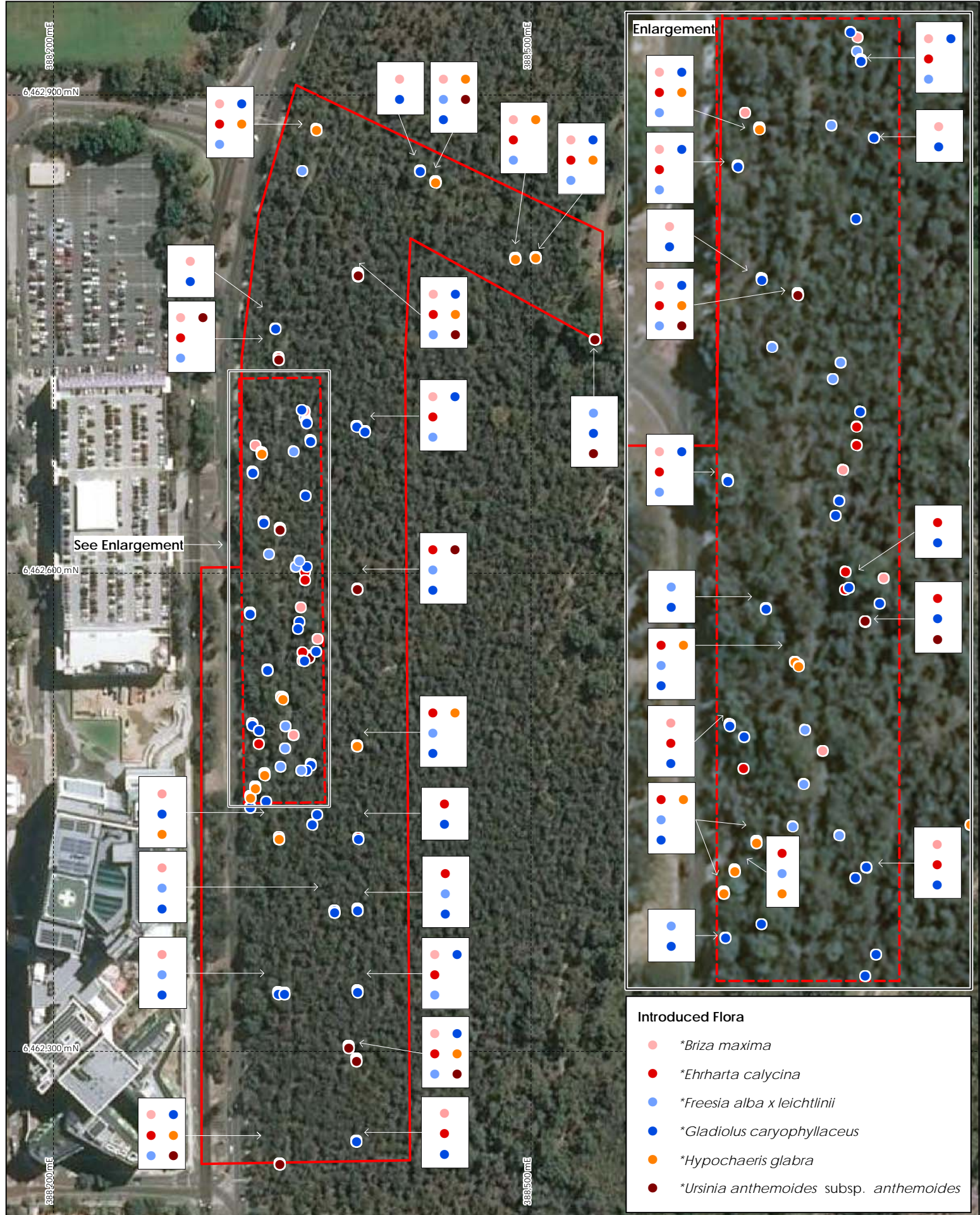


 Survey area
 Targeted flora survey area

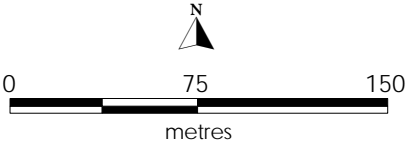


Kings Park Link Bridge Introduced Flora



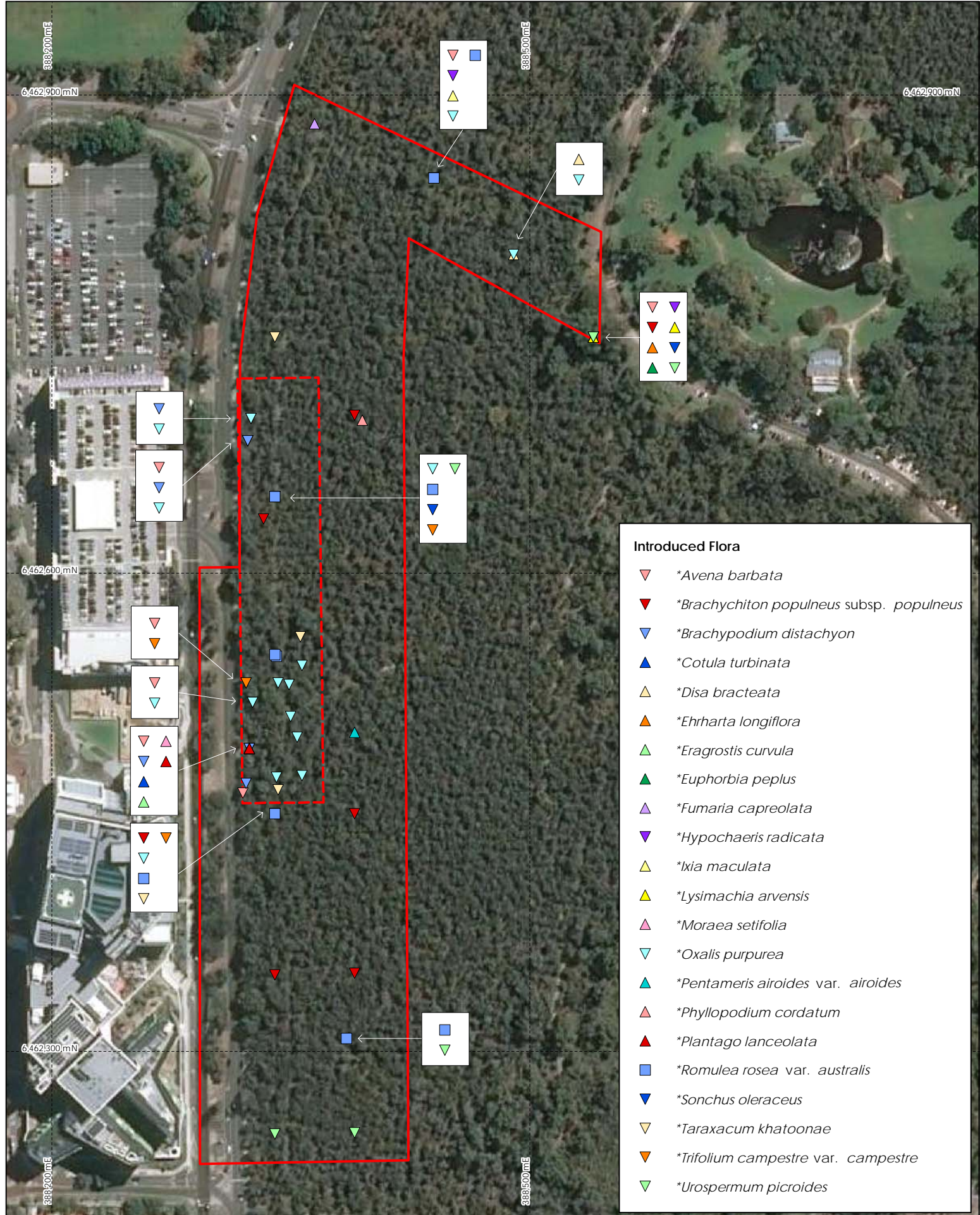


Survey area
 Targeted flora survey area





Kings Park Link Bridge Introduced Flora

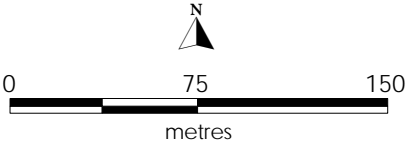




- Introduced Flora**
- ▽ *Avena barbata*
 - ▼ *Brachychiton populneus* subsp. *populneus*
 - ▽ *Brachypodium distachyon*
 - ▲ *Cotula turbinata*
 - △ *Disa bracteata*
 - ▲ *Ehrharta longiflora*
 - ▲ *Eragrostis curvula*
 - ▲ *Euphorbia peplus*
 - ▲ *Fumaria capreolata*
 - ▼ *Hypochaeris radicata*
 - ▲ *Ixia maculata*
 - ▲ *Lysimachia arvensis*
 - ▲ *Moraea setifolia*
 - ▽ *Oxalis purpurea*
 - ▲ *Pentameris airoides* var. *airoides*
 - ▲ *Phyllopodium cordatum*
 - ▲ *Plantago lanceolata*
 - *Romulea rosea* var. *australis*
 - ▼ *Sonchus oleraceus*
 - ▽ *Taraxacum khatoonae*
 - ▼ *Trifolium campestre* var. *campestre*
 - ▽ *Urospermum picroides*



 Survey area
 Targeted flora survey area



**Kings Park Link Bridge
Introduced Flora**



Table 1: Locations of introduced species in the survey area from the current survey by Biota (2019), the monitoring survey by BGPA (2018) and the tree mapping exercise by Arbor Centre (2014).

Source	Species	Site	Easting	Northing	Percent Cover (%) or Number of Individuals
BGPA (2018)	<i>Agonis flexuosa</i> var. <i>flexuosa</i>	V.0-2.5	388390	6462249	1
BGPA (2018)	<i>Asparagus asparagoides</i>	Q04	388540	6462748	0.1%
Biota (2019)	<i>Asparagus asparagoides</i>	Opp	388316	6462740	1
Biota (2019)	<i>Asparagus asparagoides</i>	Opp	388329	6462693	15
Biota (2019)	<i>Asparagus asparagoides</i>	Opp	388327	6462667	1
Biota (2019)	<i>Asparagus asparagoides</i>	Opp	388324	6462660	3
Biota (2019)	<i>Asparagus asparagoides</i>	Opp	388326	6462603	3
Biota (2019)	<i>Asparagus asparagoides</i>	Opp	388321	6462597	10
Biota (2019)	<i>Asparagus asparagoides</i>	Opp	388327	6462580	2
Biota (2019)	<i>Asparagus asparagoides</i>	Opp	388363	6462570	1
Biota (2019)	<i>Asparagus asparagoides</i>	Opp	388363	6462561	1
Biota (2019)	<i>Asparagus asparagoides</i>	Opp	388322	6462531	1
Biota (2019)	<i>Asparagus asparagoides</i>	Opp	388326	6462528	4
Biota (2019)	<i>Asparagus asparagoides</i>	Opp	388344	6462499	1
Biota (2019)	<i>Asparagus asparagoides</i>	Opp	388342	6462497	1
Biota (2019)	<i>Asparagus asparagoides</i>	Opp	388321	6462484	1
Biota (2019)	<i>Asparagus asparagoides</i>	Opp	388338	6462482	1
Biota (2019)	<i>Asparagus asparagoides</i>	Opp	388340	6462473	1
Biota (2019)	<i>Asparagus asparagoides</i>	Opp	388332	6462472	10
Biota (2019)	<i>Asparagus asparagoides</i>	Opp	388322	6462468	3
BGPA (2018)	<i>Asparagus asparagoides</i>	V02	388340	6462248	0.1%
BGPA (2018)	<i>Avena barbata</i>	P03	388440	6462848	0.1%
BGPA (2018)	<i>Avena barbata</i>	Q04	388540	6462748	<5%
Biota (2019)	<i>Avena barbata</i>	Opp	388323	6462683	0.1%
Biota (2019)	<i>Avena barbata</i>	Opp	388322	6462531	0.1%
Biota (2019)	<i>Avena barbata</i>	Opp	388326	6462519	0.1%
Biota (2019)	<i>Avena barbata</i>	Opp	388324	6462490	0.1%
Biota (2019)	<i>Avena barbata</i>	Opp	388320	6462462	0.1%
BGPA (2018)	<i>Brachychiton populneus</i> subsp. <i>populneus</i>	Q04	388540	6462748	1
BGPA (2018)	<i>Brachychiton populneus</i> subsp. <i>populneus</i>	Q.5-2.5	388390	6462699	1
Biota (2019)	<i>Brachychiton populneus</i> subsp. <i>populneus</i>	Opp	388333	6462634	2
BGPA (2018)	<i>Brachychiton populneus</i> subsp. <i>populneus</i>	T02	388340	6462449	1
BGPA (2018)	<i>Brachychiton populneus</i> subsp. <i>populneus</i>	T.0-2.5	388390	6462449	1

Source	Species	Site	Easting	Northing	Percent Cover (%) or Number of Individuals
BGPA (2018)	<i>Brachychiton populneus</i> subsp. <i>populneus</i>	U.0-2.5	388390	6462349	1
BGPA (2018)	<i>Brachychiton populneus</i> subsp. <i>populneus</i>	U02	388340	6462348	1
Biota (2019)	<i>Brachypodium distachyon</i>	Opp	388325	6462697	<5%
Biota (2019)	<i>Brachypodium distachyon</i>	Opp	388323	6462683	0.1%
Biota (2019)	<i>Brachypodium distachyon</i>	Opp	388324	6462490	0.1%
Biota (2019)	<i>Brachypodium distachyon</i>	Opp	388322	6462468	0.1%
Biota (2019)	<i>Briza maxima</i>	Opp	388365	6462882	0.1%
Biota (2019)	<i>Briza maxima</i>	KPI08	388430	6462856	0.1%
BGPA (2018)	<i>Briza maxima</i>	P03	388440	6462848	<5%
Biota (2019)	<i>Briza maxima</i>	KPI01	388390	6462801	0.1%
BGPA (2018)	<i>Briza maxima</i>	P.5-3.5	388490	6462800	0.1%
Biota (2019)	<i>Briza maxima</i>	KPI07	388503	6462799	1
BGPA (2018)	<i>Briza maxima</i>	Q02	388340	6462748	<5%
Biota (2019)	<i>Briza maxima</i>	Opp	388356	6462718	<5%
Biota (2019)	<i>Briza maxima</i>	Opp	388357	6462712	0.1%
BGPA (2018)	<i>Briza maxima</i>	Q.5-2.5	388390	6462699	0.1%
Biota (2019)	<i>Briza maxima</i>	Opp	388325	6462697	0.1%
Biota (2019)	<i>Briza maxima</i>	KPI02	388395	6462696	0.1%
Biota (2019)	<i>Briza maxima</i>	Opp	388329	6462693	0.1%
Biota (2019)	<i>Briza maxima</i>	Opp	388361	6462690	0.1%
Biota (2019)	<i>Briza maxima</i>	Opp	388323	6462683	0.1%
Biota (2019)	<i>Briza maxima</i>	Opp	388330	6462652	0.1%
BGPA (2018)	<i>Briza maxima</i>	R02	388340	6462648	0.1%
Biota (2019)	<i>Briza maxima</i>	Opp	388353	6462600	<5%
Biota (2019)	<i>Briza maxima</i>	Opp	388321	6462597	<5%
Biota (2019)	<i>Briza maxima</i>	Opp	388365	6462568	<5%
Biota (2019)	<i>Briza maxima</i>	Opp	388322	6462531	0.1%
Biota (2019)	<i>Briza maxima</i>	Opp	388348	6462524	<5%
Biota (2019)	<i>Briza maxima</i>	Opp	388361	6462488	0.1%
BGPA (2018)	<i>Briza maxima</i>	T02	388340	6462449	0.1%
Biota (2019)	<i>Briza maxima</i>	KPI04	388375	6462403	0.1%
BGPA (2018)	<i>Briza maxima</i>	U.0-2.5	388390	6462349	0.1%
BGPA (2018)	<i>Briza maxima</i>	U02	388340	6462348	<5%
Biota (2019)	<i>Briza maxima</i>	KPI05	388344	6462348	0.1%
Biota (2019)	<i>Briza maxima</i>	KPI06	388385	6462308	0.1%

Source	Species	Site	Easting	Northing	Percent Cover (%) or Number of Individuals
BGPA (2018)	<i>Briza maxima</i>	U.5-2.5	388390	6462300	<5%
BGPA (2018)	<i>Briza maxima</i>	V.0-2.5	388390	6462249	0.1%
BGPA (2018)	<i>Briza maxima</i>	V02	388340	6462248	<5%
Biota (2019)	<i>Cotula turbinata</i>	Opp	388324	6462490	30
BGPA (2018)	<i>Disa bracteata</i>	P.5-3.5	388490	6462800	0.1%
Biota (2019)	<i>Ehrharta calycina</i>	Opp	388365	6462882	0.1%
Biota (2019)	<i>Ehrharta calycina</i>	KPI01	388390	6462801	0.1%
BGPA (2018)	<i>Ehrharta calycina</i>	P.5-2.5	388390	6462800	0.1%
BGPA (2018)	<i>Ehrharta calycina</i>	P.5-3.5	388490	6462800	0.1%
Biota (2019)	<i>Ehrharta calycina</i>	KPI07	388503	6462799	0.1%
BGPA (2018)	<i>Ehrharta calycina</i>	Q02	388340	6462748	0.1%
Biota (2019)	<i>Ehrharta calycina</i>	Opp	388357	6462712	0.1%
BGPA (2018)	<i>Ehrharta calycina</i>	Q.5-2.5	388390	6462699	0.1%
Biota (2019)	<i>Ehrharta calycina</i>	KPI02	388395	6462696	0.1%
Biota (2019)	<i>Ehrharta calycina</i>	Opp	388329	6462693	0.1%
Biota (2019)	<i>Ehrharta calycina</i>	Opp	388323	6462683	0.1%
BGPA (2018)	<i>Ehrharta calycina</i>	R02	388340	6462648	0.1%
Biota (2019)	<i>Ehrharta calycina</i>	Opp	388357	6462610	<5%
Biota (2019)	<i>Ehrharta calycina</i>	Opp	388357	6462605	<5%
BGPA (2018)	<i>Ehrharta calycina</i>	R.5-2.5	388390	6462600	0.1%
Biota (2019)	<i>Ehrharta calycina</i>	Opp	388321	6462597	<5%
Biota (2019)	<i>Ehrharta calycina</i>	Opp	388354	6462572	<5%
Biota (2019)	<i>Ehrharta calycina</i>	Opp	388354	6462567	<5%
Biota (2019)	<i>Ehrharta calycina</i>	Opp	388360	6462556	0.1%
Biota (2019)	<i>Ehrharta calycina</i>	KPI03	388341	6462548	0.1%
Biota (2019)	<i>Ehrharta calycina</i>	Opp	388322	6462531	0.1%
Biota (2019)	<i>Ehrharta calycina</i>	Opp	388326	6462519	0.1%
BGPA (2018)	<i>Ehrharta calycina</i>	S.5-2.5	388390	6462500	0.1%
Biota (2019)	<i>Ehrharta calycina</i>	Opp	388330	6462498	0.1%
Biota (2019)	<i>Ehrharta calycina</i>	Opp	388324	6462490	0.1%
Biota (2019)	<i>Ehrharta calycina</i>	Opp	388361	6462488	0.1%
Biota (2019)	<i>Ehrharta calycina</i>	Opp	388321	6462484	0.1%
Biota (2019)	<i>Ehrharta calycina</i>	Opp	388322	6462468	0.1%
BGPA (2018)	<i>Ehrharta calycina</i>	T.0-2.5	388390	6462449	0.1%
BGPA (2018)	<i>Ehrharta calycina</i>	T.5-2.5	388390	6462400	0.1%

Source	Species	Site	Easting	Northing	Percent Cover (%) or Number of Individuals
BGPA (2018)	<i>Ehrharta calycina</i>	U.0-2.5	388390	6462349	0.1%
Biota (2019)	<i>Ehrharta calycina</i>	KPI06	388385	6462308	0.1%
BGPA (2018)	<i>Ehrharta calycina</i>	U.5-2.5	388390	6462300	0.1%
BGPA (2018)	<i>Ehrharta calycina</i>	V.0-2.5	388390	6462249	0.1%
BGPA (2018)	<i>Ehrharta calycina</i>	V02	388340	6462248	0.1%
BGPA (2018)	<i>Ehrharta longiflora</i>	Q04	388540	6462748	<5%
Biota (2019)	<i>Eragrostis curvula</i>	Opp	388324	6462490	0.1%
BGPA (2018)	<i>Eucalyptus botryoides</i>	Q04	388540	6462748	1
Biota (2019)	<i>Eucalyptus</i> sp. (sapling, inadequate material)	Opp	388322	6462650	1
BGPA (2018)	<i>Eucalyptus</i> sp. (CM077/19)	R02	388340	6462648	1
BGPA (2018)	<i>Euphorbia peplus</i>	Q04	388540	6462748	<5%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	Opp	388365	6462882	<5%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	Opp	388356	6462856	0.1%
BGPA (2018)	<i>Freesia alba x leichtlinii</i>	P03	388440	6462848	<5%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	KPI01	388390	6462801	0.5%
BGPA (2018)	<i>Freesia alba x leichtlinii</i>	P.5-2.5	388390	6462800	0.1%
BGPA (2018)	<i>Freesia alba x leichtlinii</i>	P.5-3.5	388490	6462800	<5%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	KPI07	388503	6462799	20
Biota (2019)	<i>Freesia alba x leichtlinii</i>	Opp	388338	6462767	0.1%
BGPA (2018)	<i>Freesia alba x leichtlinii</i>	Q02	388340	6462748	<5%
BGPA (2018)	<i>Freesia alba x leichtlinii</i>	Q04	388540	6462748	<5%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	Opp	388356	6462714	<5%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	Opp	388357	6462712	0.1%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	KPI02	388395	6462696	0.1%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	Opp	388349	6462694	<5%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	Opp	388329	6462693	0.1%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	Opp	388323	6462683	0.1%
BGPA (2018)	<i>Freesia alba x leichtlinii</i>	R02	388340	6462648	0.1%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	Opp	388333	6462634	500
Biota (2019)	<i>Freesia alba x leichtlinii</i>	Opp	388352	6462630	<5%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	Opp	388350	6462625	<5%
BGPA (2018)	<i>Freesia alba x leichtlinii</i>	R.5-2.5	388390	6462600	<5%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	Opp	388321	6462597	<5%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	Opp	388332	6462562	<5%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	KPI03	388341	6462548	0.1%

Source	Species	Site	Easting	Northing	Percent Cover (%) or Number of Individuals
Biota (2019)	<i>Freesia alba x leichtlinii</i>	Opp	388343	6462530	<5%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	Opp	388343	6462514	15
Biota (2019)	<i>Freesia alba x leichtlinii</i>	Opp	388340	6462502	15
BGPA (2018)	<i>Freesia alba x leichtlinii</i>	S.5-2.5	388390	6462500	0.1%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	Opp	388353	6462500	<5%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	Opp	388330	6462498	0.1%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	Opp	388324	6462490	0.1%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	Opp	388321	6462484	0.1%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	KPI04	388375	6462403	1.5%
BGPA (2018)	<i>Freesia alba x leichtlinii</i>	T.5-2.5	388390	6462400	0.1%
BGPA (2018)	<i>Freesia alba x leichtlinii</i>	U.0-2.5	388390	6462349	<5%
BGPA (2018)	<i>Freesia alba x leichtlinii</i>	U02	388340	6462348	<5%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	KPI05	388344	6462348	3%
Biota (2019)	<i>Freesia alba x leichtlinii</i>	KPI06	388385	6462308	0.1%
BGPA (2018)	<i>Freesia alba x leichtlinii</i>	V02	388340	6462248	<5%
Biota (2019)	<i>Fumaria capreolata</i>	Opp	388365	6462882	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388365	6462882	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	KPI08	388430	6462856	0.1%
BGPA (2018)	<i>Gladiolus caryophyllaceus</i>	P03	388440	6462848	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	KPI01	388390	6462801	0.1%
BGPA (2018)	<i>Gladiolus caryophyllaceus</i>	P.5-2.5	388390	6462800	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	KPI07	388503	6462799	5
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388338	6462767	0.1%
BGPA (2018)	<i>Gladiolus caryophyllaceus</i>	Q04	388540	6462748	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388354	6462720	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388357	6462712	<5%
BGPA (2018)	<i>Gladiolus caryophyllaceus</i>	Q.5-2.5	388390	6462699	<5%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	KPI02	388395	6462696	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388329	6462693	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388361	6462690	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388323	6462683	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388356	6462669	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388330	6462652	0.1%
BGPA (2018)	<i>Gladiolus caryophyllaceus</i>	R02	388340	6462648	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388358	6462614	0.1%

Source	Species	Site	Easting	Northing	Percent Cover (%) or Number of Individuals
BGPA (2018)	<i>Gladiolus caryophyllaceus</i>	R.5-2.5	388390	6462600	<5%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388321	6462597	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388352	6462592	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388351	6462588	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388355	6462568	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388332	6462562	1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388364	6462561	<5%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388360	6462556	0.1%
BGPA (2018)	<i>Gladiolus caryophyllaceus</i>	S02	388340	6462549	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	KPI03	388341	6462548	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388322	6462531	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388326	6462528	0.1%
BGPA (2018)	<i>Gladiolus caryophyllaceus</i>	S.5-2.5	388390	6462500	<5%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388330	6462498	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388361	6462488	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388358	6462485	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388321	6462484	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388332	6462472	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388322	6462468	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388364	6462464	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	Opp	388361	6462458	0.1%
BGPA (2018)	<i>Gladiolus caryophyllaceus</i>	T02	388340	6462449	0.1%
BGPA (2018)	<i>Gladiolus caryophyllaceus</i>	T.0-2.5	388390	6462449	<5%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	KPI04	388375	6462403	0.1%
BGPA (2018)	<i>Gladiolus caryophyllaceus</i>	T.5-2.5	388390	6462400	0.1%
BGPA (2018)	<i>Gladiolus caryophyllaceus</i>	U.0-2.5	388390	6462349	0.1%
BGPA (2018)	<i>Gladiolus caryophyllaceus</i>	U02	388340	6462348	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	KPI05	388344	6462348	0.1%
Biota (2019)	<i>Gladiolus caryophyllaceus</i>	KPI06	388385	6462308	0.1%
BGPA (2018)	<i>Gladiolus caryophyllaceus</i>	U.5-2.5	388390	6462300	0.1%
BGPA (2018)	<i>Gladiolus caryophyllaceus</i>	V.0-2.5	388390	6462249	<5%
BGPA (2018)	<i>Gladiolus caryophyllaceus</i>	V02	388340	6462248	0.1%
Biota (2019)	<i>Hypochaeris glabra</i>	Opp	388365	6462882	0.1%
BGPA (2018)	<i>Hypochaeris glabra</i>	P03	388440	6462848	<5%
Biota (2019)	<i>Hypochaeris glabra</i>	KPI01	388390	6462801	0.1%

Source	Species	Site	Easting	Northing	Percent Cover (%) or Number of Individuals
BGPA (2018)	<i>Hypochaeris glabra</i>	P.5-3.5	388490	6462800	0.1%
Biota (2019)	<i>Hypochaeris glabra</i>	KPI07	388503	6462799	15
Biota (2019)	<i>Hypochaeris glabra</i>	Opp	388329	6462693	0.1%
BGPA (2018)	<i>Hypochaeris glabra</i>	R02	388340	6462648	0.1%
BGPA (2018)	<i>Hypochaeris glabra</i>	S02	388340	6462549	0.1%
Biota (2019)	<i>Hypochaeris glabra</i>	KPI03R	388341	6462548	0.1%
BGPA (2018)	<i>Hypochaeris glabra</i>	S.5-2.5	388390	6462500	0.1%
Biota (2019)	<i>Hypochaeris glabra</i>	Opp	388330	6462498	15
Biota (2019)	<i>Hypochaeris glabra</i>	Opp	388324	6462490	5
Biota (2019)	<i>Hypochaeris glabra</i>	Opp	388321	6462484	0.1%
BGPA (2018)	<i>Hypochaeris glabra</i>	T02	388340	6462449	0.1%
Biota (2019)	<i>Hypochaeris glabra</i>	KPI06	388385	6462308	0.1%
BGPA (2018)	<i>Hypochaeris glabra</i>	U.5-2.5	388390	6462300	0.1%
BGPA (2018)	<i>Hypochaeris glabra</i>	V02	388340	6462248	0.1%
BGPA (2018)	<i>Hypochaeris radicata</i>	P03	388440	6462848	<5%
BGPA (2018)	<i>Hypochaeris radicata</i>	Q04	388540	6462748	<5%
BGPA (2018)	<i>Ixia maculata</i>	P03	388440	6462848	<5%
BGPA (2018)	<i>Lysimachia arvensis</i>	Q04	388540	6462748	<5%
Arbor Centre (2014)	<i>Melaleuca armillaris</i>	Opp	388327	6462573	1
Biota (2019)	<i>Moraea setifolia</i>	Opp	388324	6462490	10
Biota (2019)	<i>Oxalis purpurea</i>	Opp	388357	6462542	0.10%
BGPA (2018)	<i>Oxalis purpurea</i>	P03	388440	6462848	<5%
BGPA (2018)	<i>Oxalis purpurea</i>	P.5-3.5	388490	6462800	0.10%
Biota (2019)	<i>Oxalis purpurea</i>	Opp	388325	6462697	0.10%
Biota (2019)	<i>Oxalis purpurea</i>	Opp	388323	6462683	0.10%
BGPA (2018)	<i>Oxalis purpurea</i>	R02	388340	6462648	<5%
Biota (2019)	<i>Oxalis purpurea</i>	Opp	388342	6462531	0.10%
Biota (2019)	<i>Oxalis purpurea</i>	Opp	388349	6462530	0.10%
Biota (2019)	<i>Oxalis purpurea</i>	Opp	388326	6462519	0.10%
Biota (2019)	<i>Oxalis purpurea</i>	Opp	388350	6462510	0.10%
Biota (2019)	<i>Oxalis purpurea</i>	Opp	388354	6462497	0.10%
Biota (2019)	<i>Oxalis purpurea</i>	Opp	388357	6462473	0.10%
Biota (2019)	<i>Oxalis purpurea</i>	Opp	388341	6462472	0.10%
BGPA (2018)	<i>Oxalis purpurea</i>	T02	388340	6462449	<5%
BGPA (2018)	<i>Pentameris airoides</i> var. <i>airoides</i>	S.5-2.5	388390	6462500	0.1%

Source	Species	Site	Easting	Northing	Percent Cover (%) or Number of Individuals
Biota (2019)	<i>Phyllopodium cordatum</i>	KPI02	388395	6462696	0.1%
Biota (2019)	<i>Plantago lanceolata</i>	Opp	388324	6462490	5
BGPA (2018)	<i>Romulea rosea</i> var. <i>australis</i>	P03	388440	6462848	<5%
BGPA (2018)	<i>Romulea rosea</i> var. <i>australis</i>	R02	388340	6462648	<5%
BGPA (2018)	<i>Romulea rosea</i> var. <i>australis</i>	S02	388340	6462549	<5%
Biota (2019)	<i>Romulea rosea</i> var. <i>australis</i>	KPI03	388341	6462548	0.1%
BGPA (2018)	<i>Romulea rosea</i> var. <i>australis</i>	T02	388340	6462449	<5%
Biota (2019)	<i>Romulea rosea</i> var. <i>australis</i>	KPI06	388385	6462308	0.1%
BGPA (2018)	<i>Sonchus oleraceus</i>	Q04	388540	6462748	0.1%
BGPA (2018)	<i>Sonchus oleraceus</i>	R02	388340	6462648	0.1%
BGPA (2018)	<i>Taraxacum khatoonae</i>	Q02	388340	6462748	0.1%
Biota (2019)	<i>Taraxacum khatoonae</i>	Opp	388356	6462560	0.1%
Biota (2019)	<i>Taraxacum khatoonae</i>	Opp	388342	6462464	0.1%
BGPA (2018)	<i>Taraxacum khatoonae</i>	T02	388340	6462449	0.1%
BGPA (2018)	<i>Trifolium campestre</i> var. <i>campestre</i>	R02	388340	6462648	<5%
Biota (2019)	<i>Trifolium campestre</i> var. <i>campestre</i>	Opp	388322	6462531	0.1%
BGPA (2018)	<i>Trifolium campestre</i> var. <i>campestre</i>	T02	388340	6462449	0.1%
BGPA (2018)	<i>Urospermum picroides</i>	Q04	388540	6462748	<5%
BGPA (2018)	<i>Urospermum picroides</i>	R02	388340	6462648	0.1%
Biota (2019)	<i>Urospermum picroides</i>	KPI06	388385	6462308	0.1%
BGPA (2018)	<i>Urospermum picroides</i>	V.0-2.5	388390	6462249	0.1%
BGPA (2018)	<i>Urospermum picroides</i>	V02	388340	6462248	0.1%
BGPA (2018)	<i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	P03	388440	6462848	0.1%
Biota (2019)	<i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	KPI01	388390	6462801	0.1%
BGPA (2018)	<i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	Q02	388340	6462748	0.1%
BGPA (2018)	<i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	Q04	388540	6462748	0.1%
BGPA (2018)	<i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	R02	388340	6462648	0.1%
BGPA (2018)	<i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	R.5-2.5	388390	6462600	0.1%
Biota (2019)	<i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	Opp	388360	6462556	5
Biota (2019)	<i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	KPI06	388385	6462308	0.1%
BGPA (2018)	<i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	U.5-2.5	388390	6462300	<5%
BGPA (2018)	<i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	V02	388340	6462248	<5%

Appendix 14

Selected Inputs and Outputs of the Floristic Analyses



Table 1: Species that were omitted or combined for the PATN analysis.

Current Taxon Name	Taxon Referred to for PATN Analysis
Haemodorum sp.	Omitted; indeterminate
Lepidosperma ? scabrum	Omitted; indeterminate
Lomandra sp.	Omitted; indeterminate
Pterostylis sp.	Omitted; indeterminate
Thysanotus sp.	Omitted; indeterminate
Billardiera floribunda	Omitted; singleton
Glischrocaryon aureum	Omitted; singleton
Acacia pulchella var. glaberrima	Acacia pulchella
Anigozanthos manglesii subsp. manglesii	Anigozanthos manglesii
Banksia sessilis var. cygnorum	Dryandra sessilis
Burchardia congesta	Burchardia umbellata
Caladenia arenicola	Caladenia arenicola scps
Caladenia flava subsp. flava	Caladenia flava
Caladenia ? flava	Caladenia flava
Conostylis aculeata subsp. cygnorum	Conostylis aculeata
Conostylis setigera subsp. setigera	Conostylis setigera
Corymbia calophylla	Eucalyptus calophylla
Daviesia decurrens subsp. decurrens	Daviesia decurrens
Daviesia nudiflora subsp. nudiflora	Daviesia nudiflora
Desmocladus flexuosus	Loxocarya flexuosa
Dianella revoluta var. divaricata	Dianella revoluta
Drosera porrecta	Drosera stolonifera
Eucalyptus marginata subsp. marginata	Eucalyptus marginata
Freesia alba x leichtlinii	Freesia aff. leichtlinii FPR
Gastrolobium capitatum	Nemcia capitata
Hibbertia hypericoides subsp. hypericoides	Hibbertia hypericoides
Hibbertia striata	Hibbertia huegelii
Hovea trisperma var. trisperma	Hovea trisperma
Lepidosperma apicola	Lepidosperma angustatum
Lepidosperma oldhamii	Lepidosperma squamatum
Lomandra micrantha subsp. micrantha	Lomandra micrantha
Lyginia imberbis	Lyginia barbata
Macrozamia fraseri	Macrozamia riedlei
Microlaena stipoides var. stipoides	Microlaena stipoides
Microtis media subsp. media	Microtis media
Monotaxis grandiflora var. grandiflora	Monotaxis grandiflora
Pyrorchis nigricans	Lyperanthus nigricans
Romulea rosea var. australis	Romulea rosea
Synaphea spinulosa subsp. spinulosa	Synaphea spinulosa
Thysanotus manglesianus	Thysanotus sp. manglesianus/patersonii scps
Thysanotus ? manglesianus	Thysanotus sp. manglesianus/patersonii scps
Ursinia anthemoides subsp. anthemoides	Ursinia anthemoides
Xanthorrhoea brunonis subsp. brunonis	Xanthorrhoea brunonis

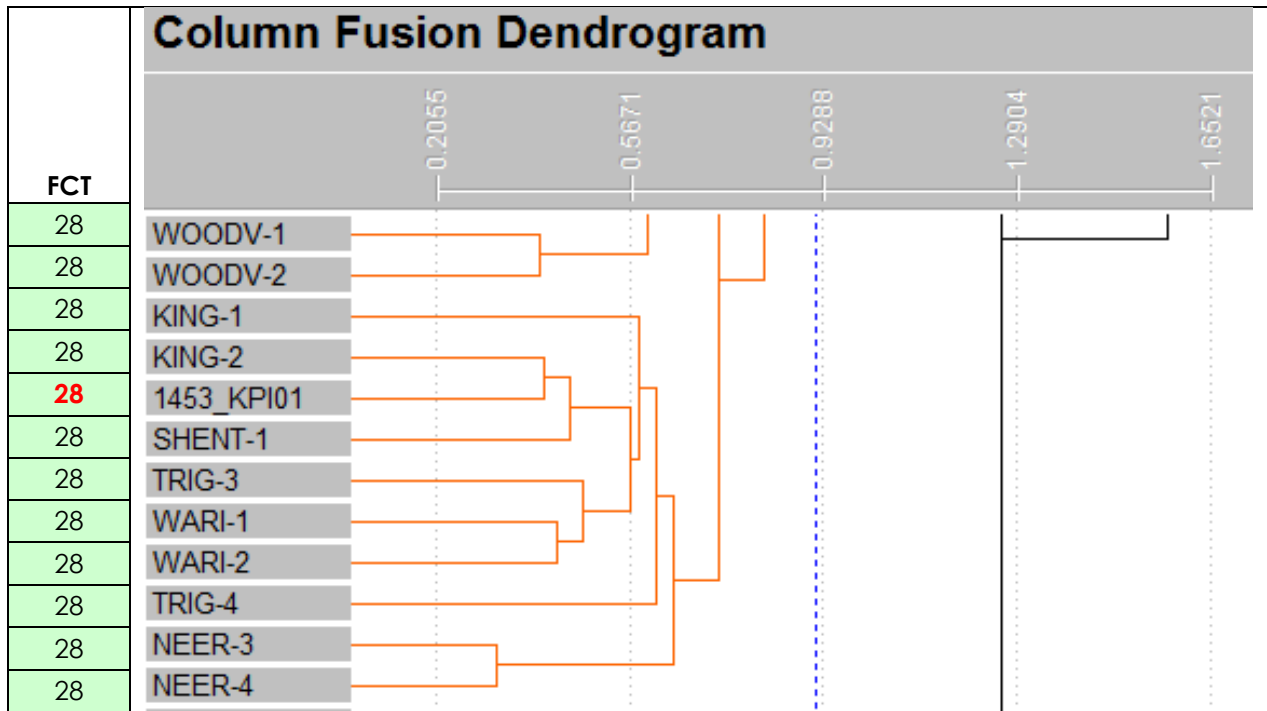


Figure 1: Section of dendrogram from floristic clustering analysis against the Gibson SCP data set – quadrat KPI01.

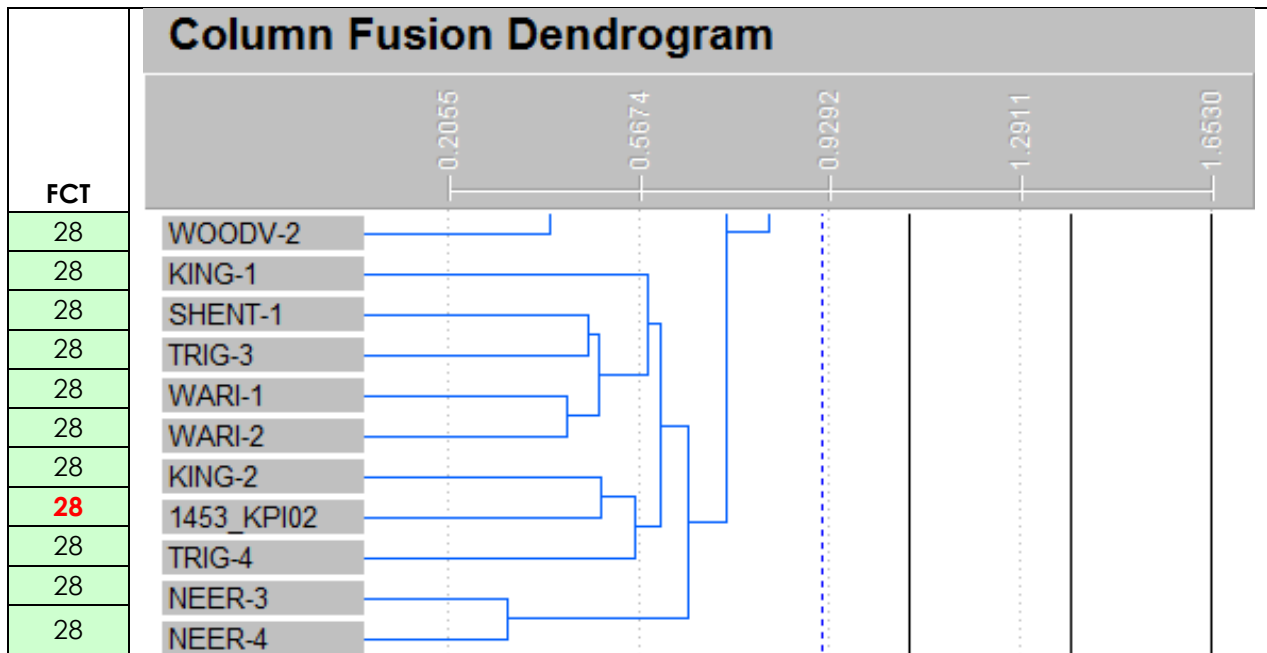


Figure 2: Section of dendrogram from floristic clustering analysis against the Gibson SCP data set – quadrat KPI02.

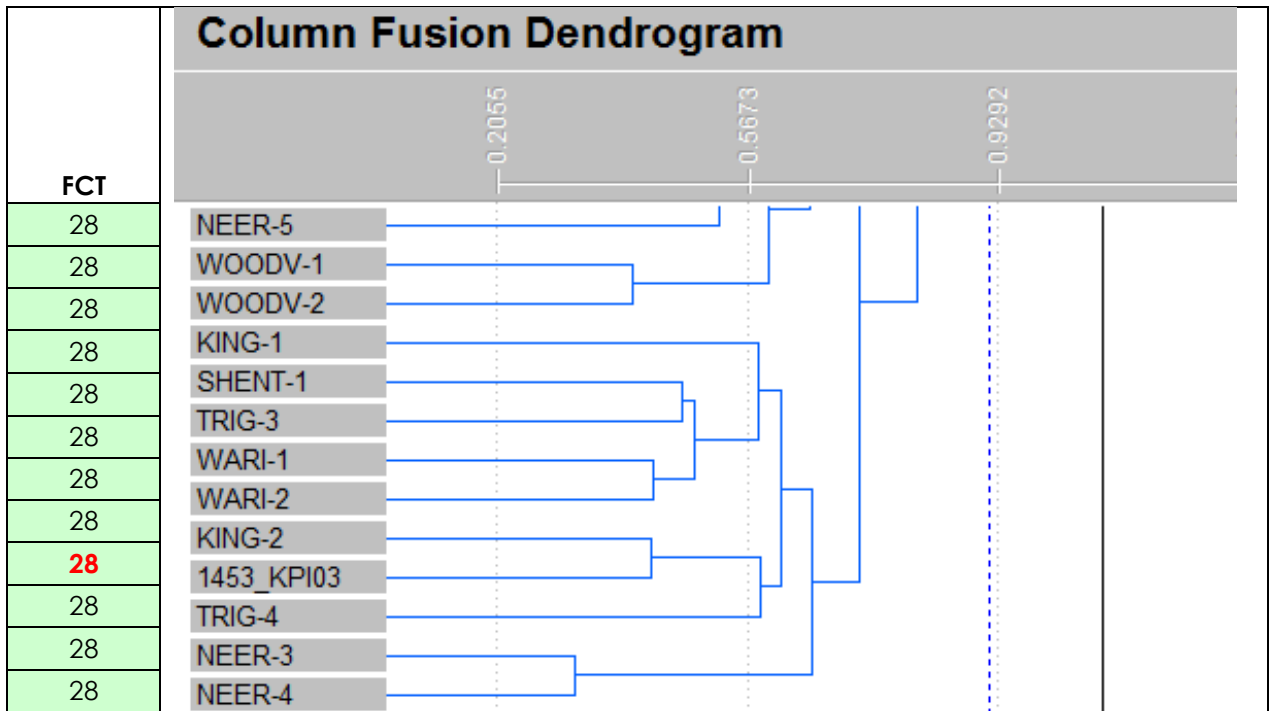


Figure 3: Section of dendrogram from floristic clustering analysis against the Gibson SCP data set – quadrat KPI03.

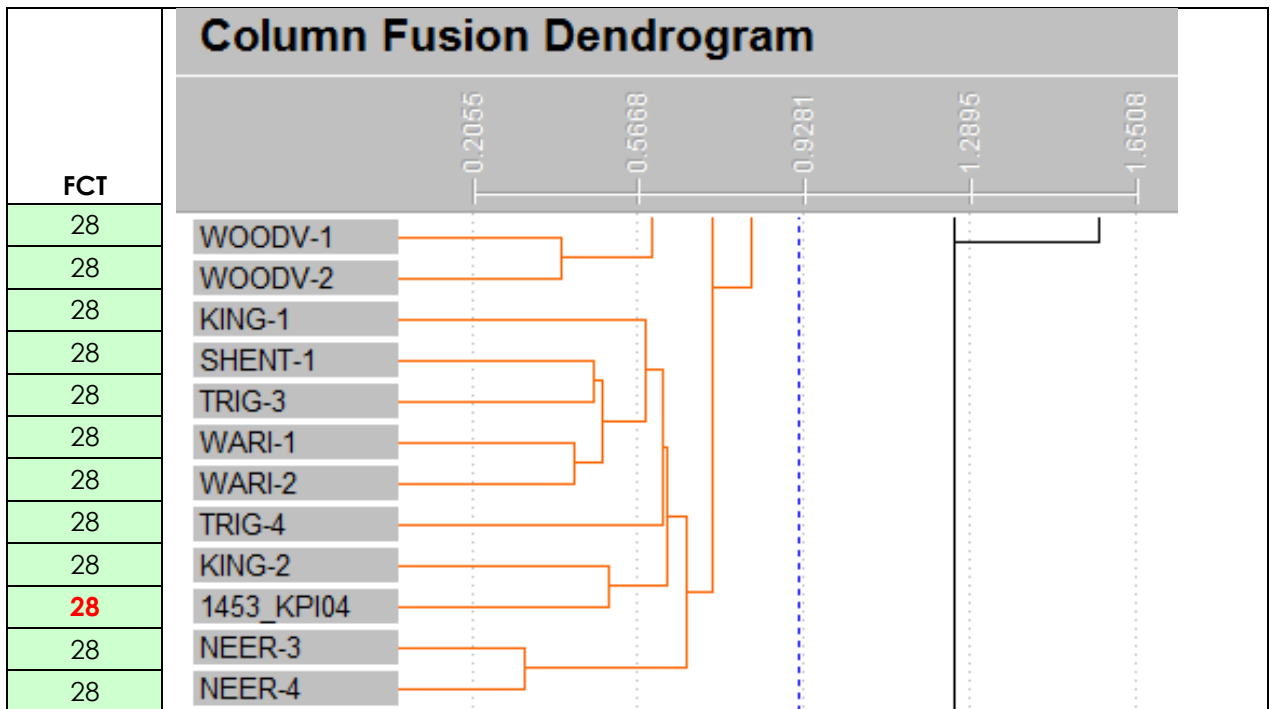


Figure 4: Section of dendrogram from floristic clustering analysis against the Gibson SCP data set – quadrat KPI04.

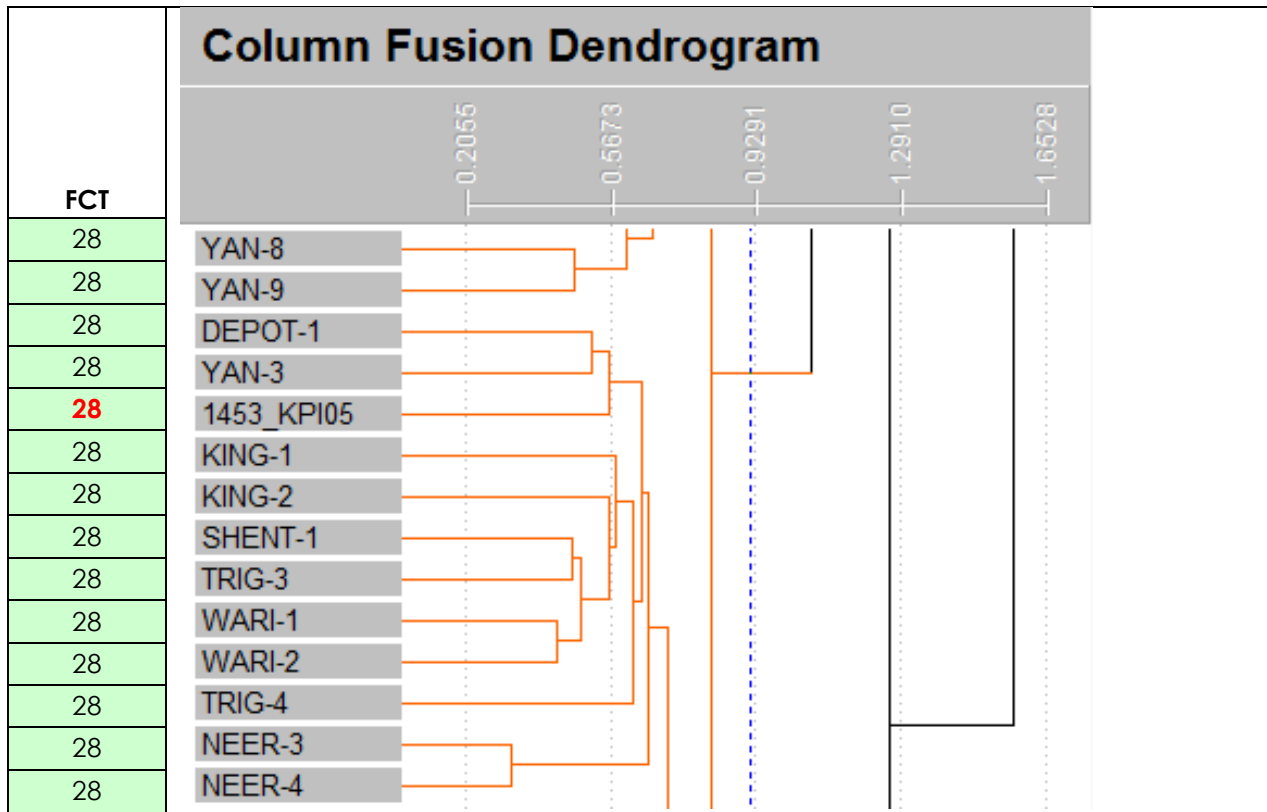


Figure 5: Section of dendrogram from floristic clustering analysis against the Gibson SCP data set – quadrat KPI05.

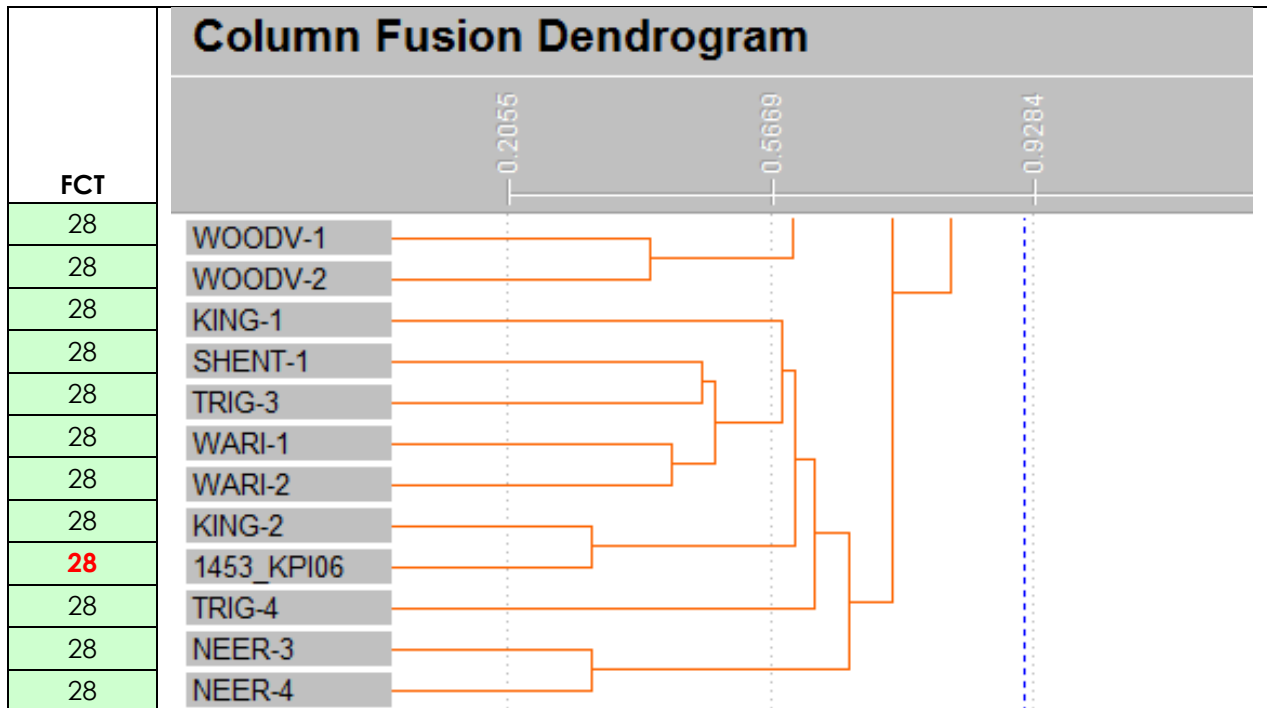


Figure 6: Section of dendrogram from floristic clustering analysis against the Gibson SCP data set – quadrat KPI06.

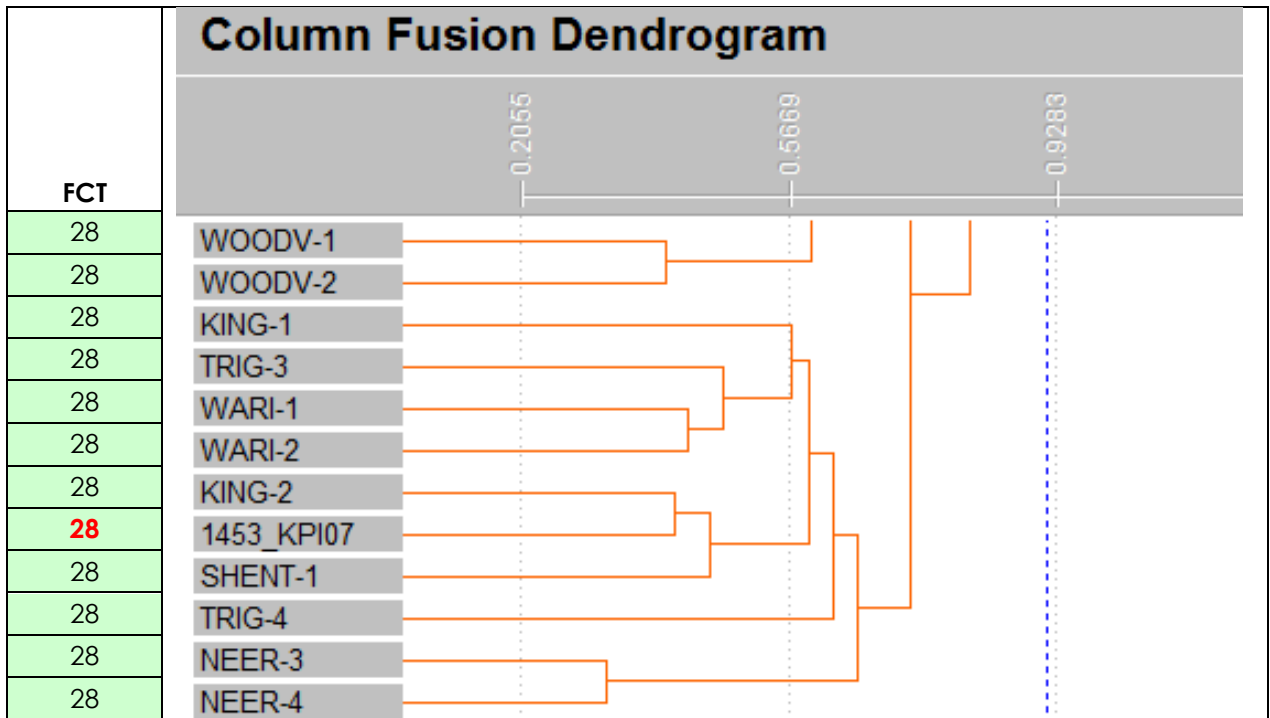


Figure 7: Section of dendrogram from floristic clustering analysis against the Gibson SCP data set – quadrat KPI07.

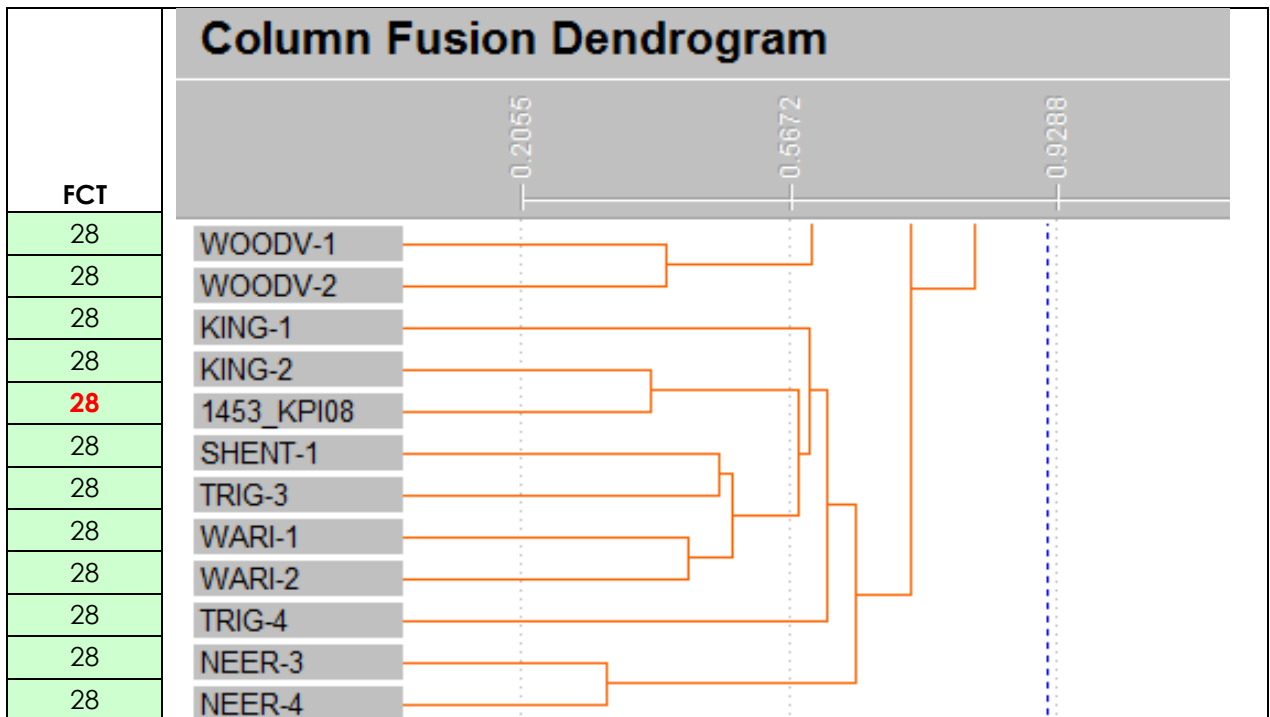


Figure 8: Section of dendrogram from floristic clustering analysis against the Gibson SCP data set – quadrat KPI08.

Table 2: The 10 most similar quadrats from the Nearest Neighbours analysis of the Swan Coastal Plain dataset of Gibson et al. (2004) for each quadrat sampled in 2019 in the survey area, with association level and FCT shown for each.

		NNB 1	NNB 2	NNB 3	NNB 4	NNB 5	NNB 6	NNB 7	NNB 8	NNB 9	NNB 10
KPI01	Site	KING-2	SHENT-1	NEER-3	YAN-3	WARI-2	BULL-1	TRIG-3	DEPOT-1	TRIG-4	NEER-2
	Assoc	0.4066	0.4186	0.4588	0.5227	0.5248	0.5385	0.5385	0.5476	0.55	0.5506
	FCT	28	28	28	28	28	28	28	28	28	28
KPI02	Site	SHENT-1	KING-2	WARI-2	TRIG-4	BULL-1	DEPOT-1	NEER-3	WOODV-2	TRIG-3	THOM-2
	Assoc	0.4884	0.4945	0.5248	0.525	0.5385	0.5714	0.5765	0.5814	0.5962	0.6047
	FCT	28	28	28	28	28	28	28	28	28	24
KPI03	Site	KING-2	SHENT-1	DEPOT-1	TRIG-4	NEER-3	WARI-2	YAN-3	NEER-2	WARI-1	HARRY-2
	Assoc	0.4286	0.5054	0.5604	0.5632	0.5652	0.5741	0.6	0.6042	0.6098	0.6182
	FCT	28	28	28	28	28	28	28	28	28	28
KPI04	Site	KING-2	YAN-3	DEPOT-1	SHENT-1	NEER-2	WARI-2	TRIG-3	KING-1	TAM-1	TRIG-4
	Assoc	0.5059	0.5854	0.5897	0.6	0.6145	0.6211	0.6327	0.6364	0.6456	0.6486
	FCT	28	28	28	28	28	28	28	28	21a	28
KPI05	Site	SHENT-1	NEER-3	WARI-2	YAN-3	BULL-1	KING-2	NEER-4	WELL-2	CRAMPT-1	CRAMPT-2
	Assoc	0.0517	0.0616	0.0663	0.068	0.0704	0.0711	0.0719	0.073	0.0738	0.0743
	FCT	28	28	28	28	28	28	28	21a	21a	21a
KPI06	Site	KING-2	SHENT-1	TAM-1	TRIG-5	WARI-2	WARI-1	FL-6	NEER-3	low13a	HARRY-2
	Assoc	0.3191	0.4382	0.5227	0.5455	0.5769	0.5798	0.5802	0.5909	0.6	0.6038
	FCT	28	28	21a	24	28	28	21c	28	21a	28
KPI07	Site	KING-2	SHENT-1	YAN-3	WARI-2	NEER-3	DEPOT-1	NEER-2	BULL-1	HARRY-2	TRIG-3
	Assoc	0.4141	0.4255	0.5208	0.5229	0.5269	0.5435	0.567	0.5758	0.5856	0.5893
	FCT	28	28	28	28	28	28	28	28	28	28
KPI08	Site	KING-2	SHENT-1	WARI-2	NEER-2	NEER-3	DEPOT-1	low04	YAN-3	NEER-4	TRIG-4
	Assoc	0.3793	0.4634	0.4639	0.5294	0.5309	0.55	0.561	0.5714	0.5765	0.5789
	FCT	28	28	28	28	28	28	21a	28	28	28

Appendix 15

Black-Cockatoo Foraging Habitat Scoring Tool from DotEE (2017)



Table 3: Foraging habitat scoring tool

Starting Score	Foraging habitat for Carnaby's Cockatoo	Foraging habitat for Baudin's Cockatoo	Foraging habitat for Forest Red-tailed Black cockatoo
10 (Very high quality)	Foraging habitat that is being managed for black cockatoos such as habitat that is the focus of successful rehabilitation , and/or has some level of protection from clearing, and/or is quality habitat described below with attributes contributing to meet a score of ≥ 10 .	Foraging habitat that is being managed for black cockatoos such as habitat that is the focus of, successful rehabilitation , and/or has some level of protection from clearing, and/or is quality habitat described below with attributes contributing to meet a score of ≥ 10 .	Foraging habitat that is being managed for black cockatoos such as habitat that is the focus of successful rehabilitation , and/or has some level of protection from clearing, and/or is quality habitat described below with attributes contributing to meet a score of ≥ 10 .
7 (High quality)	Native shrubland, kwongan heathland and woodland dominated by proteaceous plant species such as <i>Banksia</i> spp. (including <i>Dryandra</i> spp.), <i>Hakea</i> spp. and <i>Grevillea</i> spp., as well as native eucalypt woodland and forest that contains foraging species, including along roadsides. Does not include orchards, canola, or areas under a RFA.	Native eucalypt woodlands and forest, and proteaceous woodland and heath, particularly marri, including along roadsides. Does not include orchards or areas under a RFA.	Jarrah and marri woodlands and forest, and edges of karri forests, including wandoo and blackbutt, within the range of the subspecies, including along roadsides. Does not include areas under a RFA.
5 (Quality)	Pine plantation or introduced eucalypts.	Pine plantation or introduced eucalypts.	Introduced eucalypts as well as the introduced Cape lilac (<i>Melia azedarach</i>).
1 (Low quality)	Individual foraging plants or small stand of foraging plants.	Individual foraging plants or small stand of foraging plants.	Individual foraging plants or small stand of foraging plants.
Additions	Context adjustor - attributes improving functionality of foraging habitat	Context adjustor - attributes improving functionality of foraging habitat	Context adjustor - attributes improving functionality of foraging habitat
+3	Is within the Swan Coastal Plain (important foraging area).	Is within the known foraging area (see map).	Jarrah and/or marri show good recruitment (i.e. evidence of young trees).
+3	Contains trees with suitable nest hollows.	Contains trees with suitable nest hollows.	Contains trees with suitable nest hollows.
+2	Primarily comprises marri.	Primarily contains marri.	Primarily contains marri and/or jarrah.
+2	Contains trees with potential to be used for breeding (dbh ≥ 500 mm or ≥ 300 mm dbh for salmon gum and wandoo).	Contains trees with potential to be used for breeding (dbh ≥ 500 mm or ≥ 300 mm dbh for salmon gum and wandoo).	Contains trees with potential to be used for breeding (dbh ≥ 500 mm or ≥ 300 mm dbh for salmon gum and wandoo).
+1	Is known to be a roosting site.	Is known to be a roosting site.	Is known to be a roosting site.
Subtractions	Context adjustor - attributes reducing functionality of foraging habitat	Context adjustor - attributes reducing functionality of foraging habitat	Context adjustor - attributes reducing functionality of foraging habitat quality
-2	No clear evidence of feeding debris.	No clear evidence of feeding debris.	No clear evidence of feeding debris.
-2	No other foraging habitat within 6 km.	No other foraging habitat within 6 km.	No other foraging habitat within 6 km.
-1	Is > 12 km from a known breeding location.	Is > 12 km from a known breeding location.	Is > 12 km from a known breeding location.
-1	Is > 12 km from a known roosting site.	Is > 12 km from a known roosting site.	Is > 12 km from a known roosting site.
-1	Is > 2 km from a watering point.	Is > 2 km from a watering point.	Is > 2 km from a watering point.
-1	Disease present (e.g. <i>Phytophthora cinnamomi</i> or marri canker).	Disease present (e.g. <i>Phytophthora cinnamomi</i> or marri canker).	Disease present (e.g. <i>Phytophthora cinnamomi</i> or marri canker).

Appendix 16

Black-cockatoo Habitat Tree Data (Including Hollow Assessment)



Tree Species	Latitude	Longitude	DBH (cm)	Tree Height (m)	Tree Health	Tree Notes	No. Hollows
Introduced Eucalypt	-31.968741	115.8177695	50	0-10	Alive		
Jarrah	-31.9652178	115.8186111	53	0-10	Resprouting (fire)	Stressed. Burnt at base.	
Jarrah	-31.9645361	115.8186667	54	0-10	Alive		
Jarrah	-31.9651216	115.8197082	54	15-20	Alive		
Jarrah	-31.9695612	115.818344	55	10-15	Alive		
Dead Stag	-31.9655578	115.8200432	56	10-15	Dead	Burnt. Narrow branches and trunk quickly narrows. Unlikely to form a large hollow.	
Jarrah	-31.9650586	115.818828	57	0-10	Alive	Splits low.	
Jarrah	-31.965684	115.8190091	57	15-20	Alive		
Jarrah	-31.9648415	115.8192278	57	10-15	Alive		
Jarrah	-31.9653538	115.819003	59	10-15	Alive	Branches low. Measured 59 DBH, then splits again.	
Jarrah	-31.9665736	115.818818	59	10-15	Alive		
Marri	-31.9671654	115.8181237	60	10-15	Alive		
Jarrah	-31.9686481	115.8188389	61	10-15	Alive		
Jarrah	-31.9654148	115.8203173	62	0-10	Alive	Burnt. Pruned.	
Jarrah	-31.9652091	115.8193753	63	0-10	Alive	Splits at base. Second trunk 50 DBH.	
Jarrah	-31.9698399	115.8179031	63	0-10	Alive		
Jarrah	-31.9645095	115.8187022	64	0-10	Alive	Pruned.	
Dead stag	-31.9659209	115.8184659	65	0-10	Dead	Burnt.	
Jarrah	-31.9649793	115.8199031	65	0-10	Alive	Burnt at base.	
Jarrah	-31.9650362	115.8194626	65	10-15	Alive		
Jarrah	-31.9651652	115.8199341	65	10-15	Alive		
Jarrah	-31.9698498	115.8178621	66	0-10	Alive		
Marri	-31.9668585	115.8181204	66	10-15	Alive		
Marri	-31.9692284	115.8180794	67	10-15	Alive		
Jarrah	-31.9696205	115.8182161	68	10-15	Alive		
Jarrah	-31.9655432	115.8183691	68	10-15	Alive		
Jarrah	-31.9678245	115.8178553	69	0-10	Alive	Splits low.	
Introduced Eucalypt	-31.9680921	115.8178003	69	10-15	Alive		
Marri	-31.9695329	115.8181456	70	10-15	Alive		
Jarrah	-31.9647528	115.8183574	70	0-10	Alive		
Jarrah	-31.968839	115.8183175	75	10-15	Alive		

Tree Species	Latitude	Longitude	DBH (cm)	Tree Height (m)	Tree Health	Tree Notes	No. Hollows
Jarrah	-31.9700857	115.8181304	76	10-15	Alive		
Jarrah	-31.9648341	115.8191419	76	10-15	Alive		
Jarrah	-31.9661256	115.8182066	77	10-15	Alive	Potential hollow assessed.	1*
Jarrah	-31.9665506	115.8181227	79	0-10	Alive		
Jarrah	-31.9673503	115.8185394	83	10-15	Alive		
Jarrah	-31.9649707	115.8184497	95	15-20	Alive	Potential hollow assessed.	1*
Dead stag	-31.9648995	115.8194205	106	0-10	Dead	Four spout branches, all similar. Unlikely to be hollow. Very low to the ground.	
Jarrah	-31.9651154	115.8199441	121	10-15	Alive	Trunk splits at breast height.	
Tuart	-31.9657688	115.8203991	150	20-25	Alive	Splits at 130 cm. No hollows.	

***Hollow Descriptions**

Tree Species	DBH (cm)	No. Hollows	Hollow height above ground (m)	Hollow width (cm)	Hollow length (cm)	Hollow estimated depth (cm)	Hollow type	Suitable for nesting	Suitable for BC egress	Suitable orientation	Hollow connected to suitably large branch or trunk	Are there possible signs of use
Jarrah	77	1	6	15	15	Unknown	Spout branch	Unknown	Yes	Yes	Yes	No
Jarrah	95	1	7.7	35	?	Unknown	Spout branch	Unknown	Yes	Yes	Yes	No