

Ken Hurst Park



Strategic Management Plan
2021-2026



City of
Melville

Executive Summary

Strategic management plans are required to be developed for selected reserves and periodically updated according to the guidance provided in the City of Melville's (the City) Natural Areas Asset Management Plan (NAAMP). The assets and threats identified within the reserve outlined assist in determining the success and projection of the reserve, allowing the prioritisation of management techniques within the reserves. Strategic Management Plans have previously been developed for Ken Hurst Park in 2003, 2014 and 2021.

Assets present within Ken Hurst Park were identified and determine how the City is performing in relation to measurable indices outlined in the NAAMP. Assets identified at Ken Hurst Park include:

- Bush Forever Site, Ken Hurst Park (ID 228).
- High value ecological linkage, part of Greenway 92 a local linkage between Ken Hurst Park and Bull Creek and Bateman reserves.
- A total of 5 different vegetation types:
 - *Banksia attenuata*, *Allocasuarina fraseriana* woodland over *Xanthorrhoea preissii* shrubland
 - *Banksia attenuata*, *Banksia menziesii* and *Nuytsia floribunda* woodland
 - *Banksia attenuata* and *Banksia menziesii* woodland
 - *Hypocalymma angustifolium* and *Regelia inops* shrubland
 - *Melaleuca preissiana* woodland.
- Vegetation condition ranges from completely degraded to excellent.
- A component of Banksia Woodland of the Swan Coastal Plain threatened ecological community listed for protection under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act).
- Contains conservation category wetlands (UFI 16112, 16113, 16114, 16115, and 16116).
- Provides a medium value community site.
- Contains four reference sites recorded by Gibson *et al.* (1994), three additional quadrats were established in vegetation that meets the characteristics to be a component of the Banksia Woodland of the Swan Coastal Plain.
- A total of 131 native flora species from 39 families.
- One conservation significant flora species was identified during the surveys, *Caladenia huegelii* (Grand Spider Orchid) listed as Critically Endangered under the *Biodiversity Conservation Act 2016* (WA) (BC Act) and Endangered under the EPBC Act.
- A total of 31 native vertebrate fauna species, comprised of:
 - 18 birds
 - 5 mammals
 - 8 reptiles
- Two conservation significant fauna species: Quenda (*Isoodon fusciventer*), listed as Priority 4 under the BC Act and Carnaby's Cockatoo (*Zanda latirostris*) listed as Endangered under the BC Act and EPBC Act.
- A total of three fauna habitats were identified.
- A total of eight potential habitat trees were recorded; one tree was observed to contain two hollows.

Threats present within Ken Hurst Park were identified and measured against performance indices outlined in the NAAMP. Threats identified include:

- Physical disturbances in the form of informal tracks from inappropriate use.
- Illegal dumping of construction materials, household rubbish and garden waste.
- 78 weed species from 28 families, an increase of 26 weed species compared to the 2021 Management Plan.
- A total of six declared pests and Weeds of National Significance (WoNS), including:
 - Bridal Creeper (**Asparagus asparagoides*)
 - Paterson's curse (**Echium plantagineum*)
 - One-leaf Cape Tulip (**Moraea flaccida*)
 - Two-leaf Cape Tulip (**Moraea miniata*)
 - Arum lily (**Zantedeschia aethiopica*).
- Weed coverage across the reserve has decreased by 13 % in the 5-25 % category and increased by 2 % in the >25 % category.
- Bare ground coverage has decreased across the reserve.
- Vegetation condition has decreased.
- A total of five introduced vertebrate fauna species were identified, three are declared pests, including:
 - Rainbow Lorikeet (**Trichoglossus moluccanus*)
 - Red Fox (**Vulpes vulpes*)
 - Rabbit (**Oryctolagus cuniculus*).
- The south-east portion is infested with Phytophthora dieback.
- There is a moderate to low risk of the site having Acid Sulfate Soils.
- A change in climate, with an increase in the recorded mean minimum and maximum temperatures and a decrease in annual rainfall.

Management strategies include:

- Continue undertaking weed control, focusing on very high and high impact weeds.
- Continue undertaking revegetation activities.
- Continue to support community involvement.
- Revegetate informal tracks.
- Continue rubbish removal.
- Continue graffiti removal.
- Undertake fire fuel load reduction.
- Continue to prevent the introduction and spread of plant diseases and pathogens.
- Monitor and manage reticulation to ensure that there is no overspray.
- Continue monitoring climate change impacts.

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1 Introduction

1.1 Background

Strategic management plans are required to be developed for selected reserves and periodically updated according to the guidance provided in the City of Melville's Natural Areas Asset Management Plan (NAAMP). Content discussed in detail in the NAAMP is not repeated in this management plan; it is recommended that this document is applied in conjunction with the guidance provided in the NAAMP (Woodgis, 2019).

Three previous management plans have been developed for Ken Hurst Park:

- Ken Hurst Park Management Plan 2003 - 2007 (ATA Environmental, 2003) referred as the 2003 Management Plan.
- Ken Hurst Park Strategic Management Plan 2014 - 2019 (Woodgis, 2014), referred as the 2014 Management Plan.
- Ken Hurst Park Strategic Management Plan 2021 - 2026 (Natural Area Consulting Management Services (Natural Area), 2021), referred as the 2021 Management Plan.

1.2 Objectives

The objective of this management plan is to update and expand on content provided in the previous management plans. The outcomes and effectiveness of management strategies, objectives and guidelines set in the previous management plans are reviewed to develop appropriate recommendations in future management plans. The finalised strategic management reserve is intended to guide management activities in the reserve for the proceeding five-year period.

1.3 Scope

Ken Hurst Park is located in the suburb of Leeming within the City of Melville. The reserve is 52 ha and is approximately 14 km south of the Perth's Central Business District (CBD) (Map 1).

Under the framework described in the NAAMP (summarised in Table 1), this strategic management plan is required to:

- Describe any environmental assets present (flora, fauna or vegetation communities, community usage and heritage).
- Assess any change evident in the assets present, comparing against previous surveys and plans.
- Identify current potential threats to environmental assets.
- Identify management priorities.
- Identify reserve specific management strategies.
- Provide recommendations for implementation of reserve specific management strategies.
- Provide assessment of the success of previously identified objectives and management strategies with consideration of the use of these as leading or lagging indicators.

Table 1: Interactions between assets, threats and management guidelines

Priorities for Protection from Threats										Threats impacting on assets and therefore subject to Management		Techniques for Management of Threats										
BIODIVERSITY ASSETS										THREATS		MANAGEMENT GUIDELINES										
Bush Forever Reserves	Ecological Linkage Reserves	Ecological Community Sites	Fauna Habitat Sites	Wetland Sites	Heritage Sites	Community Interest Sites	Reference Sites	Native Flora Species	Native Fauna Species			Sign, Path and Barrier Guidelines	Bushfire Strategy	Weed Control Strategy & Guidelines	Revegetation Strategy & Guidelines	Feral Animal Strategy and Guidelines	Diseases and Pathogen Guidelines	Stormwater Management Strategy	Reticulation Guidelines	Acid Sulfate Soils Guidelines	Community Engagement	
X	X	X	X		X	X	X	X		Physical Disturbance	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X		X	X		X	X	Fire		X	X	X						X		X
X	X	X	X	X	X	X		X	X	Weeds		X	X	X						X		X
X	X	X	X					X	X	Habitat Loss				X	X							X
X	X	X	X					X	X	Feral Animals				X	X							X
X	X	X	X	X	X	X	X	X	X	Diseases & Pathogens	X						X					X
X	X	X	X	X	X		X	X	X	Stormwater								X				X
								X		Reticulation										X		
X	X	X	X	X	X			X	X	Acid Sulfate Soils											X	
X	X	X	X	X	X			X		Climate Change			X	X								

Source: Woodgis, 2019.

2 Assets

2.1 Reserve Assets

2.1.1 Bush Forever

Bush Forever Sites are regionally significant bushland and wetland areas within the Swan Coastal Plain that were identified as needing protection in Perth's Bushland Project (Government of Western Australia, 2000a, 2000b).

Ken Hurst Park meets the key criteria listed in the City of Melville's NAAMP including representation of ecological communities, diversity, rarity, scientific or evolutionary importance, and general criteria for the protection of wetland and coastal vegetation (Table 2).

Table 2: Bush Forever Criteria, Ken Hurst Park (ID 228)

Bush Forever Criteria	Comments
Representation of ecological communities	<ul style="list-style-type: none"> ▪ Within the vegetation complex Bassendean-Central and South. ▪ Floristic community types comprise of Seasonal Wetlands and Uplands centred on Bassendean Dunes and Dandaragan Plateau.
Diversity	<ul style="list-style-type: none"> ▪ Contains Banksia Woodland; biologically is diverse and hosts a wide variety of flora and fauna species, with 214 native flora species known to occur and 57 fauna species.
Rarity	<ul style="list-style-type: none"> ▪ Conservation significant species are known to occur including: <ul style="list-style-type: none"> - <i>Caladenia huegelii</i> (Grand Spider Orchid) - Quenda (<i>Isoodon fusciventer</i>) - Western Brush Wallaby (<i>Macropus Irma</i>)
Scientific or evolutionary importance	<ul style="list-style-type: none"> ▪ Contains a Banksia woodland; biologically is diverse and hosts a wide variety of flora and fauna species. ▪ Contains regionally significant vegetation on the site.
General criteria for the protection of wetland and coastal vegetation	<ul style="list-style-type: none"> ▪ Contains conservation category wetlands (ID 16112, 16113, 16114, 16115, and 16112)

Source: Government of Western Australia (2000a, 2000b) and the NAAMP.

Table 3: Bush Forever Listing Indicator

Asset	Objective	Assessment of Success
Bush Forever Listing	Monitor - no change to Bush Forever system expected.	Successful

2.1.2 Ecological Linkages

Ecological linkages are broadly mapped patches of remnant isolated bushlands that represent link habitats to facilitate ecological movements and process across a landscape. Ecological linkage can maintain genetic diversity of flora and fauna species and provide refuge for fauna to move between natural bushlands.

City of Melville's NAAMP (2019) assessed Ken Hurst Park to be of a high value linkage. The reserve forms part of the local linkages between Ken Hurst Park and Bull Creek and Bateman reserves and is part of Greenway 92 (Alan Tingay and Associates, 1998). The ecological linkages and native vegetation extents are provided in Map 2.

Table 4: Ecological Linkages Indicator

Asset	Objective	Assessment of Success
Ecological Linkages	Monitor - no change to Ecological linkages expected.	Successful

2.2 Site Assets

2.2.1 Vegetation

2.2.1.1 Vegetation Types

The vegetation types across Ken Hurst Park were mapped by Natural Area in accordance with the *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment* (Environmental Protection Authority (EPA), 2016). The full methodology is provided in Appendix 1. A total of five vegetation types were present across the Ken Hurst Park, including:

- *Banksia attenuata*, *Allocasuarina fraseriana* woodland over *Xanthorrhoea preissii* shrubland
- *Banksia attenuata*, *Banksia menziesii* and *Nuytsia floribunda* woodland
- *Banksia attenuata* and *Banksia menziesii* woodland
- *Hypocalymma angustifolium* and *Regelia inops* shrubland
- *Melaleuca preissiana* woodland.

The vegetation within the north-west portion of Ken Hurst Park has been indicated to have a high potential of a groundwater dependent ecosystem (Bureau of Meteorology (BOM), 2019). A summary of the vegetation types across the strategic management plans are provided in Table 5. The vegetation types from the 2024 survey are described in detail in Table 6 and displayed in Map 3.

Table 5: Summary of vegetation types recorded within the reserve across the strategic management plans

Management Plan			Extent Summary	
2003	2021	2025	Area (ha)	%
<i>Regelia inops</i> , <i>Scholtzia involucreta</i> , <i>Hypocalymma angustifolium</i> , <i>Kunzea glabrescens</i> closed low heath with scattered <i>Melaleuca preissiana</i>	<i>Hypocalymma angustifolium</i> and <i>Regelia inops</i> shrubland (HaRiS)	<i>Hypocalymma angustifolium</i> and <i>Regelia inops</i> shrubland (HaRiS)	6.04	11.53
<i>Banksia ilicifolia</i> low woodland				
<i>Banksia attenuata</i> , <i>Banksia menziesii</i> and <i>Allocasuarina fraseriana</i> low woodland	<i>Banksia attenuata</i> and <i>Banksia menziesii</i> woodland	<i>Banksia attenuata</i> and <i>Banksia menziesii</i> woodland (BaBmW)	24.54	46.83
<i>Banksia attenuata</i> , <i>Banksia menziesii</i> and <i>Allocasuarina fraseriana</i> low open forest with scattered <i>Eucalyptus todtiana</i> and <i>Nuytsia floribunda</i>	<i>Banksia attenuata</i> , <i>Allocasuarina fraseriana</i> and <i>Xanthorrhoea preissii</i> woodland (BaAfXpW)	<i>Banksia attenuata</i> , <i>Allocasuarina fraseriana</i> woodland over <i>Xanthorrhoea preissii</i> shrubland (BaAfWXpS)	1.82	3.47
<i>Banksia attenuata</i> , <i>Banksia menziesii</i> and <i>Allocasuarina fraseriana</i> low woodland	Mixed <i>Banksia</i> and <i>Nuytsia floribunda</i> woodland (MixedBanksiaNfW)	<i>Banksia attenuata</i> , <i>Banksia menziesii</i> and <i>Nuytsia floribunda</i> woodland (BaBmNfW)	5.43	10.36
<i>Melaleuca preissiana</i> tall open scrub				
<i>Melaleuca preissiana</i> and <i>Banksia littoralis</i> low open woodland over <i>Xanthorrhoea preissii</i> shrubland	<i>Melaleuca preissiana</i> woodland (MpW)	<i>Melaleuca preissiana</i> woodland (MpW)	14.56	27.79
<i>Banksia littoralis</i> , <i>Melaleuca preissiana</i> , <i>Nuytsia floribunda</i> and <i>Eucalyptus marginata</i> open woodland				

Table 6: Vegetation types recorded across the reserve

Code	Vegetation Type	Vegetation Description	Photo
BaAfWXpS	<i>Banksia attenuata</i> , <i>Allocasuarina fraseriana</i> woodland over <i>Xanthorrhoea preissii</i> shrubland	A woodland of <i>Banksia attenuata</i> and <i>Allocasuarina fraseriana</i> over <i>Xanthorrhoea preissii</i> shrubland.	
BaBmNfW	<i>Banksia attenuata</i> , <i>Banksia menziesii</i> and <i>Nuytsia floribunda</i> woodland	A woodland of <i>Banksia attenuata</i> and <i>Banksia menziesii</i> with emergent <i>Nuytsia floribunda</i> over mixed heathland.	

Code	Vegetation Type	Vegetation Description	Photo
BaBmW	<i>Banksia attenuata</i> and <i>Banksia menziesii</i> woodland	A woodland of <i>Banksia attenuata</i> and <i>Banksia menziesii</i> with emergent <i>Eucalyptus tottiana</i> over mixed native shrubland and heathland.	
HaRiS	<i>Hypocalymma angustifolium</i> and <i>Regelia inops</i> shrubland	A shrubland of <i>Hypocalymma angustifolium</i> and <i>Regelia inops</i> with scattered <i>Kunzea glabrescens</i> and <i>Melaleuca preissiana</i> .	

Code	Vegetation Type	Vegetation Description	Photo
MpW	<i>Melaleuca preissiana</i> woodland	A woodland of <i>Melaleuca preissiana</i> and <i>Banksia littoralis</i> over <i>Xanthorrhoea preissii</i> shrubland	

2.2.1.2 Vegetation Condition

Vegetation condition on site ranged from completely degraded to excellent (Table 7, Map 4) Vegetation in excellent condition contained a low weed load and high structural diversity. Vegetation in very good condition contained higher weed load but still maintained a high structural diversity. Vegetation in degraded condition contained high levels of disturbance to the vegetation structure and high weed loads and completely degraded condition contained little no weeds present.

Vegetation in a good and completely degraded condition was located in the south-west corner of the reserve primarily within the *Melaleuca preissiana* woodland. Vegetation in degraded condition was recorded along the western boundary of the reserve adjacent to the train line in the *Hypocalymma angustifolium* and *Regelia inops* shrubland. There has been a decrease in the vegetation condition recorded at Ken Hurst Park in the 2024 field survey compared to the 2021 Management Plan (Table 8). This change in vegetation condition may be attributed to the broader scale vegetation condition mapping undertaken for the 2021 Management Plan and the increase of threats on assets. This change in vegetation condition may be attributed to the broader scale vegetation condition mapping undertaken for the 2021 Management Plan and the increase of threats on assets. The 2021 Management Plan did not map tracks, paths, revegetation or edge effects as separate vegetation conditions and instead were classified as the vegetation condition of the remnant vegetation adjacent to the disturbed areas. The tracks, paths and revegetation were mapped as individual conditions and outlined vegetation subjected to edge effects to provide a finer scale mapping to assist in the prioritisation of rehabilitation works.

Table 7: Vegetation condition extents recorded across the natural areas

Area	Vegetation Condition						Total
	Pristine	Excellent	Very Good	Good	Degraded	Completely Degraded	
ha	0.00	12.88	20.76	13.20	2.11	3.29	52.24
%	0	25	40	25	4	6	100

Table 8: Vegetation condition percentage recorded across the natural areas in the 2021 Management Plan and the 2025 Management Plan

Management Plan	Vegetation Condition (%)					
	Pristine	Excellent	Very Good	Good	Degraded	Completely Degraded
2021	0	75	11	12	2	0
2025	0	25	40	25	4	6

2.2.1.3 Ecological Communities

Characteristics of the Banksia Woodland of the Swan Coastal Plain Threatened Ecological Community are represented within the Banksia Woodland vegetation types. The site is representative of a threatened ecological community listed for protection under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) and is listed in the NAAMP as

being of high value. The Banksia Woodland patch on site meets the minimum patch size criteria of 0.5 ha at excellent condition. The locations of the vegetation condition within the Banksia Woodland patch are displayed in Map 5.

Table 9: Vegetation Asset Indicator

Asset	Objective	Assessment of Success
Vegetation type diversity	Maintain or Enhance - Five vegetation types are currently described.	Successful
Extent of native vegetation	Maintain or Enhance - Expand area of native vegetation.	Successful
Condition of native vegetation	Maintain or Enhance - improve condition of native vegetation.	Unsuccessful
Significant communities	Maintain or Enhance - this vegetation type satisfies the criteria in terms of species composition and structural description to qualify as Banksia Woodland TEC.	Successful

2.2.2 Wetlands

The wetland features (UFI 16112, 16113, 16114, 16115, and 16116) present within Ken Hurst Park are classed as Conservation Category Wetlands (DBCA, 2023a). These wetland features are predominantly in a good or higher condition and supports the surrounding environment, therefore, still meets the criteria to be classified as a Conservation Category Wetland. However, a portion of UFI 16112 and 16113 are in a degraded condition and should be a focus for revegetation activities. According to the Groundwater Dependent Ecosystem Atlas, the wetlands within Ken Hurst Park are classified as having a moderate potential to be a groundwater dependent ecosystem (BOM, 2019).

Table 10: Wetland Asset Indicator

Asset	Objective	Assessment of Success
Conservation Category Wetland listing	Maintain or Enhance - Environmental criteria leading to listing as Conservation Category.	Successful

2.2.3 Heritage

The reserve is within the Whadjuk People Indigenous Land Use Agreement area. The heritage sites are specifically protected under the EPBC Act, *Aboriginal Heritage Act 1972 (WA)* and/or *Heritage Act 2018 (WA)*. Currently no heritage sites are listed as occurring within Ken Hurst Park.

Table 11: Heritage Asset Indicator

Asset	Objective	Assessment of Success
Registered Heritage Site	Monitor - Remain aware of new heritage discoveries or conditions.	Successful

2.2.4 Community Interest

Ken Hurst Park is identified as being a medium value community site in the NAAMP. Access to the public is restricted at Ken Hurst Park and contains no recreational areas. A community and natural resource management organisation, Friends of Ken Hurst Park, are active in the reserve. Friends of Ken Hurst Park have undertaken project works within the reserve including weed control works in revegetation and bushland areas, revegetation planting, removal of rubbish, and guided walks.

Table 12: Community Interest Asset Indicator

Asset	Objective	Assessment of Success
Community Interest	Maintain or Enhance - improve number or size of active community groups and area being actively managed.	Successful

2.2.5 Reference Sites

A total of three reference sites for long term monitoring or research have been established in Ken Hurst Park during the 2024 field survey within the Banksia Woodlands of the Swan Coastal Plain. Four reference sites have previously been established by Gibson *et al.* (1994) (hurst01, hurst02, hurst03 and hurst04), two of these sites were established in the Banksia Woodlands of the Swan Coastal Plain. The data recorded from the three reference sites established in 2024 are provided in Appendix 3.

Table 13: Reference Site Asset Indicator

Asset	Objective	Assessment of Success
Reference Sites	Monitor - no change expected.	Successful

2.3 Species

The survey of Ken Hurst Park assessed the flora and fauna species present within the reserve boundaries. Native flora and fauna are described in Section 2.3.1 and 2.3.2 with introduced species described within the threats Sections 3.3 and 3.5.

2.3.1 Native Flora

A compile of all previous surveys undertaken within Ken Hurst Park since 1992 identified a total of 280 native flora species recorded from 47 families. The compiled data makes up approximately 59 % of the native flora species indicated in the NAAMP recorded within the City. Examples of native flora species present across the reserve are displayed in Figure 1.

A flora and vegetation survey of Ken Hurst Park was undertaken by the Wildflower Society of WA in 1992, this survey identified a total of 201 species from 43 families. The number of native flora species recorded in Ken Hurst Park has decreased from the 1992 flora survey to the 2021 Management Plan by 70 flora species. However, there was an increase of 2 flora species recorded in the 2025 management plan compared to the 2021 Management Plan. A summary of the number of species and families recorded across Ken Hurst Park are provided in Table 14 and a compile of the native flora species identified across each survey period are provided in Appendix 4

One conservation significant flora species was identified during the surveys, *Caladenia huegelii* (Grand Spider Orchid). This species is listed as listed as Critically Endangered under the *Biodiversity Conservation Act 2016 (WA)* (BC Act) and Endangered under the EPBC Act and is recorded as a very high value plant species in the NAAMP this species was recorded in the 2004 Management Plan and the 2014 Management Plan. *Caladenia huegelii* (Grand Spider Orchid) has an ecological relationship with thynnine wasp for pollination and mycorrhizal fungus, these relationships are critical for its survival (Department of Environment and Conservation (DEC), 2009).

Table 14: Summary of number of species and families recorded across Ken Hurst Park

	1992 Flora Survey	Management Plan			
		2003	2014	2021	2025
Species No.	201	190	153	129	131
Family No.	43	41	42	37	39



Sowerbaea laxiflora (Purple Tassels)



Elythranthera brunonis (Purple Enamel Orchid)

Figure 1: Examples of native flora species recorded across the reserve.

Table 15: Native Flora Asset Indicator

Asset	Objective	Assessment of Success
Species diversity	Maintain or Enhance - increase native species diversity.	Successful - an increase of 2 native flora species compared to the previous management plan. A decrease compared to the 1992 flora surveys.
Very high value plant species	Maintain or Enhance - <i>Caladenia huegelii</i> (Grand Spider Orchid) populations	Successful - <i>Caladenia huegelii</i> population present on site

2.3.2 Native Fauna

A compile of all previous surveys undertaken within Ken Hurst Park since 1992 identified a total of 94 native vertebrate fauna species recorded from 70 families. The compiled data makes up approximately 36 % of the native vertebrate fauna species indicated in the NAAMP recorded within the City. Examples of native fauna species recorded across the reserve are provided in Figure 2.

A fauna survey of Ken Hurst Park was undertaken by Dell and Cooper in 1992, this survey identified a total of 76 species from 40 families. The number of native vertebrate fauna species recorded in Ken Hurst Park has decreased from the 1992 fauna survey to the 2025 Management Plan by 45 native vertebrate fauna species. The 2014 and 2021 Management Plans included invertebrate records and invertebrate records of just native bees were recorded in the 2025 Management Plans. Invertebrate records were not included in the 1992 fauna survey or in the 2003 Management Plans. The number of native fauna species recorded across the reserve grouped by class is provided in Table 16. The native fauna recorded in the 2025 Management Plan and a table comparing occurrences listed in the previous management plans from 2003 to 2021 and the 1992 fauna survey are provided in Appendix 5.

Two conservation significant fauna species were recorded within Ken Hurst Park: Quenda (*Isoodon fusciventer*) and Carnaby's Cockatoo (*Zanda latirostris*). The Quenda is a Priority 4 under the BC Act and the Carnaby's Cockatoo is listed as Endangered under the EPBC Act. The Western Brush Wallaby (*Notamacropus irma*) is listed as Priority 4 under the BC Act and was recorded in the 2021 Management Plan. A targeted survey for the Western Brush Wallaby is recommended to be conducted to determine whether it is locally extinct.

City of Melville Black Cockatoo Conservation Action Plan (Murdoch University Black Cockatoo Conservation Management Project, 2023), highlights management practices that can be undertaken by the City to mitigate key threatening processes. These management practices should be followed across the Ken Hurst Park, including retaining and enhancing existing habitat, vegetation, roosting, and food resources that support black cockatoos.

Invertebrates from the Thynnidae family (thynnine wasp) are critical in the pollination of orchids. *Caladenia huegelii* (Grand Spider Orchid) listed as Critically Endangered under the BC Act and Endangered under the EPBC Act.

The 2021 Management Plan mentioned that the current Western Grey Kangaroo population exceeds the carrying capacity of Ken Hurst Park to maintain a sustainable population. The carry capacity of a vegetation to support a kangaroo population is estimated to be 0.1-1 kangaroo per hectare (Environment, Planning and Sustainable Development Directorate, 2024).

Additional foraging resources to Ken Hurst Park are present in close proximity in adjacent land parcels including Canning Landfill and Jandakot Airport. The fences between these lands contained breaks allowing movement of kangaroos. Kangaroo management should be undertaken alongside stakeholders from adjoining lands.



Western Grey Kangaroo (*Macropus fuliginosus melanops*)



Lialis burtonis



Rufous Whistler (*Pachycephala rufiventris*)



Western Spinebill (*Acanthorhynchus superciliosus*)

Figure 2: Examples of native fauna species recorded across the reserve.

Table 16: Number of native fauna species recorded grouped by class

Class	1992 Fauna Survey	Management Plan			
		2003	2014	2021	2025
Amphibian	4	0	1	1	0
Birds	53	30	28	11	18
Mammals	3	0	3	3	5
Reptiles	16	0	4	10	8
Invertebrate	-	-	14	26	12 [^]
Total	76	30	50	51	43

^native bees recorded by Dr Kit Prendergast (2025).

A total of three fauna habitat types were recorded across Ken Hurst Park and eight potential black cockatoo habitat trees (Table 17, Map 6). Across the reserve there is suitable habitat for refuge with areas of dense understory, leaf litter and fallen logs. The on-ground survey assessed potential habitat trees (with a DBH >500 mm) across the reserve. Of the eight potential habitat trees recorded, one tree was observed to contain two hollows, none contain suitable characteristics for black cockatoo breeding which are a near vertical orientation and an entrance dimension of at least 100 mm (Cherriman, 2022).

Table 17: Fauna habitat types present across the survey area.

Fauna Habitat Type	Description	Photograph
Woodland	A woodland of <i>Banksia</i> spp. and <i>Eucalyptus</i> spp. over dense shrubland over mixed forbland.	
Sparse Woodland	An open woodland of <i>Melaleuca preissiana</i> over mixed sedgeland and grassland.	
Shrubland	A shrubland of <i>Hypocalymma angustifolium</i> , <i>Regelia inops</i> and <i>Xanthorrhoea preissi</i> .	

Table 18: Native Fauna Asset Indicator

Asset	Objective	Assessment of Success
Mammal species	Maintain - continue to protect species diversity and manage habitat to allow ongoing use of reserve by species.	Successful
Amphibian species		Unsuccessful
Reptile species		Unsuccessful

Asset	Objective	Assessment of Success
Bird species		Successful
Western Grey Kangaroo	Monitor - ensure population numbers are less than the carrying capacity that the area can contain.	Indeterminate

3 Threats

Significant threats to natural areas in the City were identified in the NAAMP. The 10 most significant threats include physical disturbance, fire, weeds, habitat loss, feral animals, disease and pathogens, stormwater, reticulation, acid sulfate soils, and climate change. The success of each of the threats as outlined against the objectives provided in the 2021 Management Plan are described at the bottom of each threat discussed.

3.1 Physical Disturbance

Inappropriate access and the presence of rubbish was evident at Ken Hurst Park. Physical disturbances such as rubbish was observed at low levels with higher occurrences of rubbish noted towards the northern boundary adjacent to Roe Highway and to the eastern boundary adjacent to Canning Landfill. Occurrences of dumping of construction materials, household rubbish and garden waste were present across Ken Hurst Park. The physical disturbances recorded across Ken Hurst Park over the survey years are indicated in Table 19 and locations are displayed in Map 7.

Rubbish and vandalism removal across the reserve is undertaken on a regular basis by community groups and the City. Maintenance activities, including rubbish and vandalism removal is undertaken by the City every six weeks when required. It is recommended to undertake revegetation across the informal tracks and to fix fencing that has been cut.

Table 19: Physical Disturbances recorded across Ken Hurst Park over the survey years

Physical Disturbance	Management Plan			
	2003	2014	2021	2025
Informal track development	3500 m ² of informal paths	-	410 m of informal paths and 1 cubby	3,720 m ² of informal paths and 1 occurrence of fence cutting.
Disturbance for likely propagation of prohibited substances	-	-	-	-
Rubbish dumping	-	6 occurrences	-	Present: 10 occurrences of rubbish dumping, and 1 occurrence

Physical Disturbance	Management Plan			
	2003	2014	2021	2025
				of garden waste dumping.
Tree poisoning	-	-	-	-
Illegal clearing	-	-	-	-
Firewood collection	-	-	-	Present: 1 occurrence of Banksia tree being cut
Vandalism	-	6 occurrences	-	-

Table 20: Physical Disturbance Threat Indicator

Threat	Objective	Assessment of Success
Informal Tracks	Eliminate - reduce number and extent of informal tracks in bushland.	Unsuccessful - increase in number of informal tracks within the bushland
Rubbish Dumping	Manage - continue ongoing rubbish removal program. Maintain rubbish occurrence at low levels currently recorded, target no large occurrences of garden waste or household rubbish dumping.	Unsuccessful - occurrences of construction rubbish dumping, household rubbish dumping and garden waste dumping.
Tree poisoning Illegal Clearing Firewood Collection	Prevent - no occurrences.	Unsuccessful - One occurrence of Firewood Collection recorded.
Vandalism	Manage - maintain current low levels of graffiti on signage only.	Successful

3.2 Fire

The NAAMP identified that small urban bushland remnants are more susceptible to the negative impacts of fire. Frequent fire events and large fire extent that impact more than 50 % of the reserve are more likely to experience local extinction of fire vulnerable species.

Across the reserve since 2003 there has been one fire recorded. In 2020 a fire small campfire was recorded within the southern component of Ken Hurst Park. Across the survey area there was a high accumulation of leaf litter including dead branches, it is recommended that fire fuel load reduction activities are undertaken across the reserve. Bushfire control and management should be undertaken in line with the City of Melville's Bushfire Management Guideline (2019).

Table 21: Fire Threat Indicator

Threat	Objective	Assessment of Success
Fire	Prevent - manage the reserve so as to prevent any large (>50 % of reserve burnt) or overly frequent (frequency <8 years) fires occurring.	Successful

3.3 Weeds

A compile of all previous surveys undertaken within Ken Hurst Park since 1992 identified a total of 123 weed species recorded from 38 families.

A flora and vegetation survey of Ken Hurst Park was undertaken by the Wildflower Society of WA in 1992, this survey identified a total of 69 species from 26 families. The 2003 Management Plan identified a total of 44 weed species from 15 families. The 2014 Management Plan identified a total of 54 weed species from 21 families. The 2021 Management Plan identified a total of 52 weed species from 21 families. The 2024 field survey identified a total of 78 weed species from 28 families, an increase of 26 species from the previous management plan and an increase of 9 species compared to the 1992 field survey.

The NAAMP classifies weed species into impact classes of very high, high, medium and low. The number of species present across each impact class across the survey periods are provided in Table 22 and further categorised into type in Table 23. The location and density of weeds present across the survey area are provided in Maps 8 to 13.

A total of six declared pests and Weeds of National Significance (WoNS) were identified within Ken Hurst Park during the 2024 field surveys, including:

- Bridal Creeper (*Asparagus asparagoides*) - Declared Pest - s22(2) (Exempt) and WoNS
- Paterson's curse (*Echium plantagineum*) - Declared Pest - s22(2) (Exempt)
- One-leaf Cape Tulip (*Moraea flaccida*) - Declared Pest - s22(2) (Exempt)
- Two-leaf Cape Tulip (*Moraea miniata*) - Declared Pest - s22(2) (Exempt)
- Arum lily (*Zantedeschia aethiopica*) - Declared Pest - s22(2) (Exempt).

It is recommended that weed control is undertaken across the reserve prioritising the species listed under the very high impact class and declared pests and WoNS. Weed management across the reserve is undertaken in accordance with the City of Melville's Environmental Weed Management Guidelines (2018a).

Table 22: Number of weed species within each impact class recorded over the survey years

Impact Class	1992 Flora Survey	Management Plan			
		2003	2014	2021	2025
Very High	4	4	6	7	7
High	19	13	15	18	15
Medium	4	2	2	0	1
Low	42	25	31	27	55

Table 23: Weeds recorded within each rating and category over the survey years

Impact Class	Weed	1992 Flora Survey	Management Plan			
			2003	2014	2021	2025
Very High	Bridal Creeper			X	X	X
	Paterson's Curse	X	X	X	X	X
	Arum Lily			X	X	X
	One Leaf Cape Tulip				X	X
	African Love Grass	X	X	X		
	Perennial Veldt Grass	X	X	X	X	X
	Other Perennial Clumping Grass	1 species	1 species	1 species	1 species	0 species
	Brazilian Pepper					X
	Soldiers				X	X
High	Annual Clumping Grasses	4 species	3 species	3 species	3 species	2 species
	Perennial Running Grasses	2 species	1 species	0 species	0 species	1 species
	Clumping Geophytes	6 species	4 species	5 species	7 species	7 species
	Giant Grasses	1 species	1 species	0 species	0 species	0 species
	Trees and Shrubs	6 species	4 species	7 species	8 species	5 species
Medium	All Other Perennial Weeds	4 species	2 species	2 species	0 species	1 species
Low	All Other Annual Weeds	42 species	25 species	31 species	27 species	55 species

Table 24: Weeds Threat Indicator

Threat	Objective	Assessment of Success
Very High Impact weed specie	Prevent - Very High impact weeds not recorded	Unsuccessful - Brazilian pepper recorded
	Eliminate - Arum Lily, Bridal Creeper, Paterson's Curse, One-Leaf Cape Tulip, and Soldiers	Unsuccessful
	Contain - Perennial Veldt Grass	Successful - distribution of perennial clumping grass has decreased since 2021.
High Impact weed species	Contain - Annual Clumping Grasses, Perennial Running Grasses, Clumping Geophyte, Giant Grasses, Trees and Shrubs.	Unsuccessful
Medium and Low Impact weed species	Manage - reduce impact on bushland or revegetation projects when possible.	Unsuccessful

3.4 Habitat Loss

Habitat loss is a significant threat to the long-term viability of some species in urban areas. The NAAMP identified that fragmentation can reduce species diversity and immediate loss of species diversity.

The vegetation complex of Ken Hurst Park is Bassendean Complex-Central and South. The pre-European extent of this vegetation complex remaining is:

- 26.87 % within the Swan Coastal Plain
- 2.56 % within the City of Melville (Government of Western Australia, 2019).

The NAAMP identified that habitat loss can be assessed by determining the native species cover, bare ground and weed cover. Bare ground cover, weed cover and vegetation condition was assessed across the survey area to determine potential habitat loss.

3.4.1 Weed Coverage

Weed coverage was higher along the edges of the reserve and in the south-east portion of the reserve where there was higher evidence of informal tracks (Map 8). Weed coverage that is greater than 25 % has increased with weed coverage between 5-25 % decreasing (Table 25).

Table 25: Weed Coverage across Ken Hurst Park

Management Plan	Weed Coverage			Total
	<5 %	5-25 %	>25 %	
2021	51	43	6	100
2025	62	30	8	100

3.4.2 Bare Ground

Bare ground was greater than 25 % in the south-east portion of the reserve where there were higher occurrences of physical disturbances (Map 14). Bare ground coverage has decreased since the 2021 Management Plan with a decrease in portion of the reserve recording greater than 25 % and from 5 to 25 % (Table 26). Bare ground has a higher risk of erosion, it is important to revegetate areas of bare ground to mitigate the impact of erosion on the environment.

Table 26: Bare Ground Coverage across Ken Hurst Park

Management Plan	Bare Ground Coverage			Total
	<5 %	5-25 %	>25 %	
2021	58	32	10	100
2025	64	30	6	100

3.4.3 Vegetation Condition

Vegetation condition of the site was compared to the vegetation condition recorded in the 2021 Management Plan (Table 26 27 and Figure 3). Overall, the reserve has decreased in condition with the portion of the reserve recorded in excellent condition has decreased. The decline in vegetation condition is primarily attributed to the finer scale mapping undertaken in the 2025 Management Plan. The decrease in condition in the *Melaleuca preissiana* woodland in the south-east portion of Ken Hurst Park may be due to the increased disturbances from inappropriate use and presence of dieback (see Section 3.6 Diseases and Pathogens for further information on dieback). The vegetation in the north-west portion of Ken Hurst Park is recorded as a terrestrial groundwater dependent ecosystem reliant on the availability of shallow groundwater. Decline in vegetation in this area may be due to the biophysical impacts caused by water deficits and prolonged heat events between 2023 and 2024 (Moore *et al.*, 2025).

Table 27: Vegetation condition comparison between the survey years

Vegetation Condition	2021 Management Plan (%)	2025 Management Plan (%)
Pristine	0	0
Excellent	75	25
Very Good	11	40
Good	12	25
Degraded	2	4
Completely Degraded	0	6

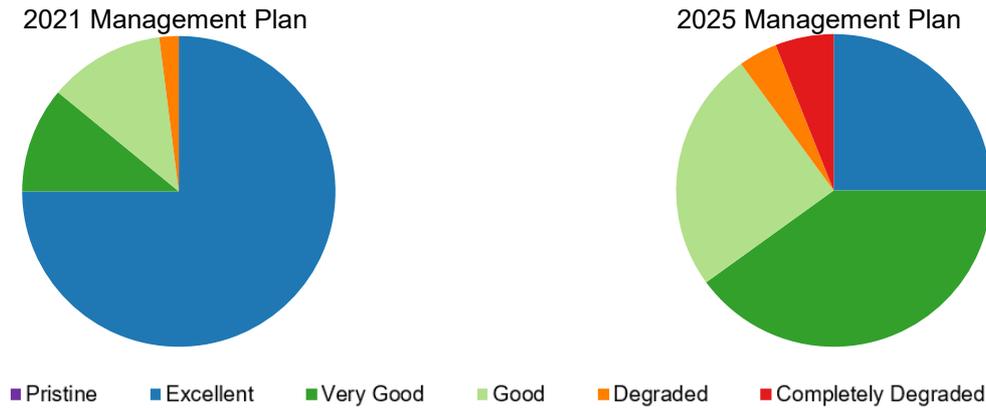


Figure 3: Vegetation condition recorded across Ken Hurst Park in the 2020 field surveys (2021 Management Plan) and in the 2024 field surveys (2025 Management Plan).

3.4.4 Revegetation

It is recommended that weed management is undertaken alongside revegetation works to improve the vegetation condition. Areas suitable for revegetation incorporate the areas previously identified for revegetation and areas identified in Map 15. It is recommended that further revegetation works, including infill planting are undertaken across Ken Hurst Park.

Table 28: Habitat Loss Threat Indicator

Threat	Objective	Assessment of Success
Reserve wide habitat loss	Contain - No reduction in vegetation type diversity or extent, no reduction in fauna habitat type diversity or extent, no reduction in vegetation condition.	Unsuccessful - Vegetation condition has decreased overall, weed density that is greater than 25 % has increased whilst bare ground coverage has decreased.
Loss of habitat for significant species (Banksia Woodland)	Contain - No further reduction in Banksia Woodland vegetation type.	Successful

3.5 Feral Animals

A total of five introduced vertebrate fauna species were identified during the 2024 field survey (Table 29):

- Red Fox (**Vulpes vulpes*)
- Laughing Turtle Dove (**Spilopelia senegalensis*)
- Rabbit (**Oryctolagus cuniculus*)
- House Mouse (**Mus musculus*)
- Rainbow Lorikeet (**Trichoglossus moluccanus*)

Three of these species are declared pests Rainbow Lorikeet (*Trichoglossus moluccanus*), Red Fox (*Vulpes vulpes*), and Rabbit (*Oryctolagus cuniculus*). Rainbow Lorikeet (*Trichoglossus moluccanus*) is identified in the NAAMP as competing with native birds for resources, including tree hollows. Red Fox (*Vulpes vulpes*) are identified in NAAMP as a threat to native birds, mammals, reptiles and amphibians, with Rabbit (*Oryctolagus cuniculus*) identified to cause land degradation and competition with native fauna species.

Table 29: Very High and High Impact introduced fauna species recorded across Ken Hurst Park

Impact Rating	Feral Animal Species	1992 Fauna Survey	Management Plan			
			2003	2014	2021	2025
Very High	Feral Cat					
	Fox	X		X	X	X
	Rabbit	X		X	X	X
High	European Bee					
	One-spot Livebearer					

Table 30: Feral Animal Threat Indicator

Threat	Objective	Assessment of Success
Feral Cats	Prevent - No observation to occur.	Successful
Fox and Rabbits	Prevent - No observations to occur.	Unsuccessful
European Bee	Contain - Continue control and removal program.	Successful

3.6 Diseases and Pathogens

A *Phytophthora* dieback occurrence assessment was undertaken by Glevan Consulting (2023). The assessment determined the south-east section of the reserve is infested (Map 16). It is recommended that the City prevents the spread of infestation and prevent infestation within the area regarded as uninfested. The management of diseases and pathogens for the reserve are outlined in the City of Melville Disease and Pathogen Management Guidelines (City of Melville, 2018b).

Site assets within the *Melaleuca preissiana* woodland, and the *Hypocalymma angustifolium* and *Regelia inops* shrubland were in a higher degradation than the assets recorded within the Banksia woodlands. These areas were recorded to be infested by dieback which impairs the plants physiological and biochemical functions, and could contribute to a lower condition in vegetation, increased weed loads, and higher records of physical disturbances.

No evidence of other diseases or plant pathogens were recorded.

Table 31: Disease and Pathogens Threat Indicator

Threat	Objective	Assessment of Success
Diseases and Pathogens	Contain - Keep dieback infestation at current size (2016 mapped extent).	Successful

3.7 Stormwater

No stormwater discharge points are present across Ken Hurst Park and as such the indices to assess this threat do not apply.

Table 32: Stormwater Threat Indicator

Threat	Objective	Assessment of Success
Stormwater	Manage - No change expected.	Not Assessable

3.8 Reticulation

No reticulation is present across Ken Hurst Park and as such the indices to assess this threat do not apply.

Table 33: Reticulation Threat Indicator

Threat	Objective	Assessment of Success
Reticulation	Manage - No change expected.	Not Assessable

3.9 Acid Sulfate Soils

Assessment of the Acid Sulfate Soils Risk Map, Swan Coastal Plain (DWER-055) (DWER, 2017) shows Ken Hurst Park Lake has a moderate to low risk of having Acid Sulfate Soils.

The listing of the area as moderate to low risk requires that potential soil disturbance is considered for all proposed works in the mapped area. The NAAMP identifies that disturbance of or exposure to oxygen of the acid sulfate soils has potential to cause significant environmental impacts and could lead to listing of the area as a contaminated site. Any soil disturbing works or excavations planned for the area requires a specific Acid Sulfate Soil investigation and management plan to mitigate risks.

Table 34: Acid Sulfate Soils Threat Indicator

Threat	Objective	Assessment of Success
Acid Sulfate Soils	Prevent - Prevent physical disturbance of soils that may have a risk of acid sulfate soils. Any soil disturbing activities should undertake a risk assessment prior to commencement.	Successful

3.10 Climate Change

Climate change within the south-west of Western Australia is expected to increase occurrences and intensity of weather events, decrease annual rainfall, and increase temperatures. These changes are likely to increase likelihood of erosion during storm events and increased water stress on plants. Decreases in water levels lead to a shift in vegetation types and complexes which has the potential to alter the ecosystem structure and function, including the fauna species that the environment supports.

Caladenia huegelii (Grand Spider Orchid) listed as Critically Endangered under the BC Act and Endangered under the EPBC Act is reliant on thynnine wasp pollination and mycorrhizal fungus (DEC, 2009). Thynnine wasps have been indicated to be susceptible to environmental change due to the complexity of the wasp life cycle and the plant-pollinator relationship (Phillips et al., 2010). Wasps are active when air temperature is above 20°C and the sky is clear (Stoutamire, 1983; Phillip et al., 2010). The air temperature during the *Caladenia huegelii* flowering period for September and October 2024 was 23.1°C and 25.5°C respectively. Both months recorded temperatures above 20°C indicating that the weather provided suitable requirements for wasp activity. Currently, no upper limit of wasp activities is known, further research should be undertaken to determine the upper limit and determine whether increasing temperatures may have an impact on the continuation of *Caladenia huegelii*.

Climate data was collected from the Bureau of Meteorology (BOM, 2025). According to the weather station, Perth Airport, ID 009021, the average rainfall and temperatures between 2021 and 2024 are compared to the long-term average of the weather station (1994 - 2024) in Figure 4.

The average annual rainfall recorded across each management plan period has decreased compared to the previous management plan period and below the long-term average (Figures 5 and 6). Between 2021 and 2024 there was 659.2 mm of annual rainfall recorded, a decrease of 6.8 mm from the average annual rainfall from the 2021 Management Plan period. Climate data from the 2021 Management Plan period indicates that all years were below the long-term average rainfall of 752.9 mm, with one year (2015) recording the lowest annual rainfall of 578.2 mm. This 2025 Management Plan notes that all years expect for 2021 recorded annual rainfall below the long-term average rainfall data, with the lowest rainfall recorded in 2023 with 554.0 mm.

The average maximum annual temperature recorded in the 2021 Management Plan was 24.5 °C, this 2025 Management Plan recorded an increase in the maximum annual temperature by 1.4 °C to 25.8 °C. The average maximum temperature for each month between 2021 and 2024 recorded higher than the long-term statistics (Figure 7). The average annual maximum temperature recorded across each management plan period has increased compared to the previous management plan period and are above the long-term average (Figure 8).

The average annual minimum temperature recorded across each management plan period has increased compared to the previous management plan period expect for the 2014 Management Plan which saw a decrease compared to the 2003 Management Plan. All management plans have recorded an annual minimum temperature above the long-term average (Figure 9). The average minimum temperature for each month between 2021 and 2024 recorded higher than the long-term statistics expect for in the month of June (Figure 7).

Site assets within the *Melaleuca preissiana* woodland, and the *Hypocalymma angustifolium* and *Regelia inops* shrubland were in a higher degradation than the assets recorded within the Banksia woodlands. The two vegetation types contained a lower condition in vegetation, increased weed loads, and higher records of physical disturbances. These sites contain species that are dependent on groundwater levels and rainfall, less tolerant of drier site conditions than the species recorded within the Banksia woodlands.

The vegetation within the *Melaleuca preissiana* woodland and the *Hypocalymma angustifolium* and *Regelia inops* shrubland were recorded as infested with dieback. Dieback typically impairs the plants' physiological and biochemical functions, with water uptake being the first function affected (Commonwealth of Australia, 2018) further impacting species reliant on wetter site conditions.

The vegetation in the north-west portion of Ken Hurst Park is recorded as a terrestrial groundwater dependent ecosystem reliant on the availability of shallow groundwater. Decline in vegetation due to the biophysical impacts caused by water deficits and prolonged heat events between 2023 and 2024 has been evident across the Perth Metropolitan Region (Moore *et al.*, 2025). The decline in vegetation following changing climates is a concern for the viability of natural areas and the continuation of ecosystems and should be monitored along with updated research to ensure that mitigation techniques are undertaken where possible.

Table 35: Climate Change Threat Indicator

Threat	Objective	Assessment of Success
Climate Change	Manage - continue to manage climate change impacts.	Indeterminate

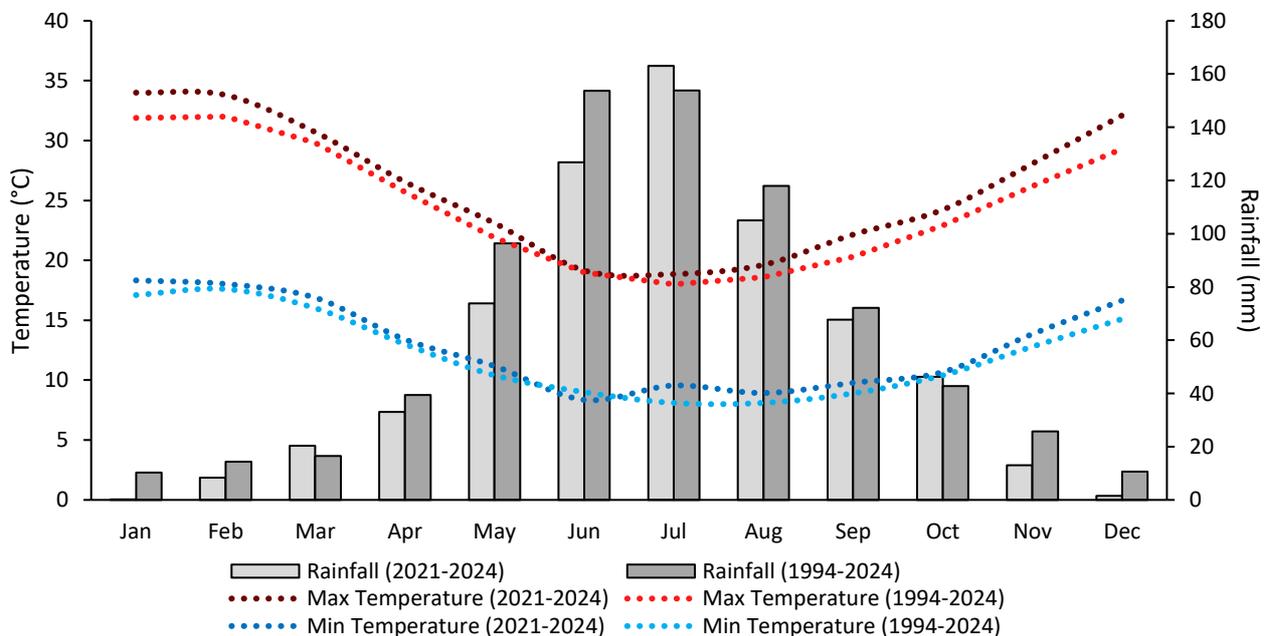


Figure 4: Climate data average for 2021 - 2024 compared to long term average (1994 - 2024).

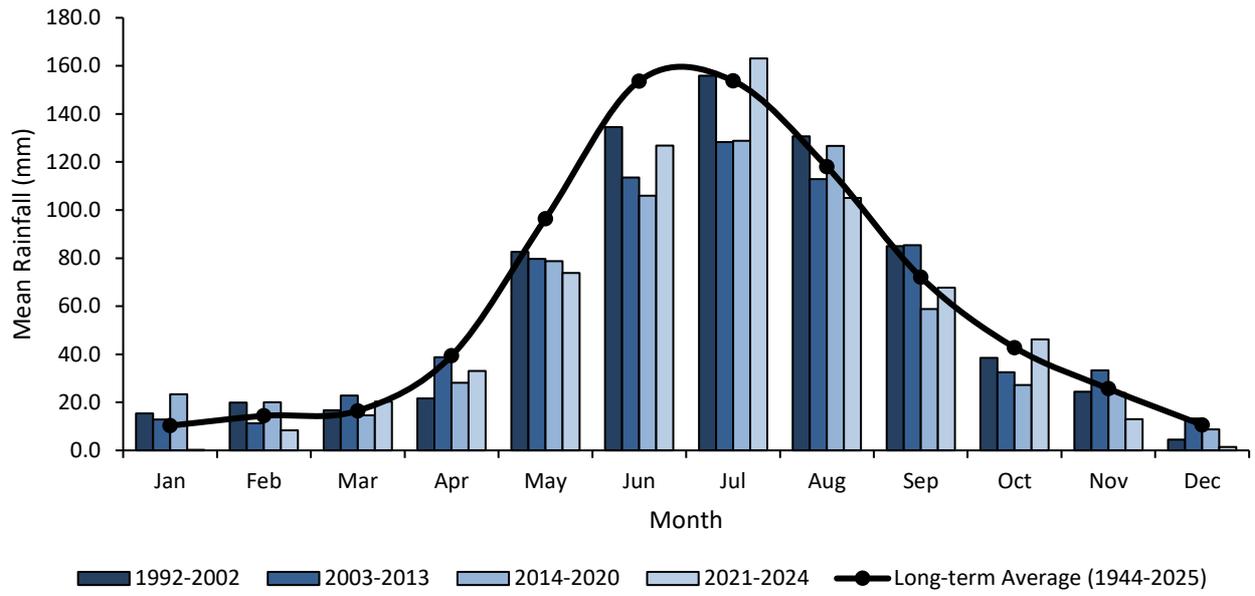


Figure 5: Average rainfall over each management period compared to the long-term average.

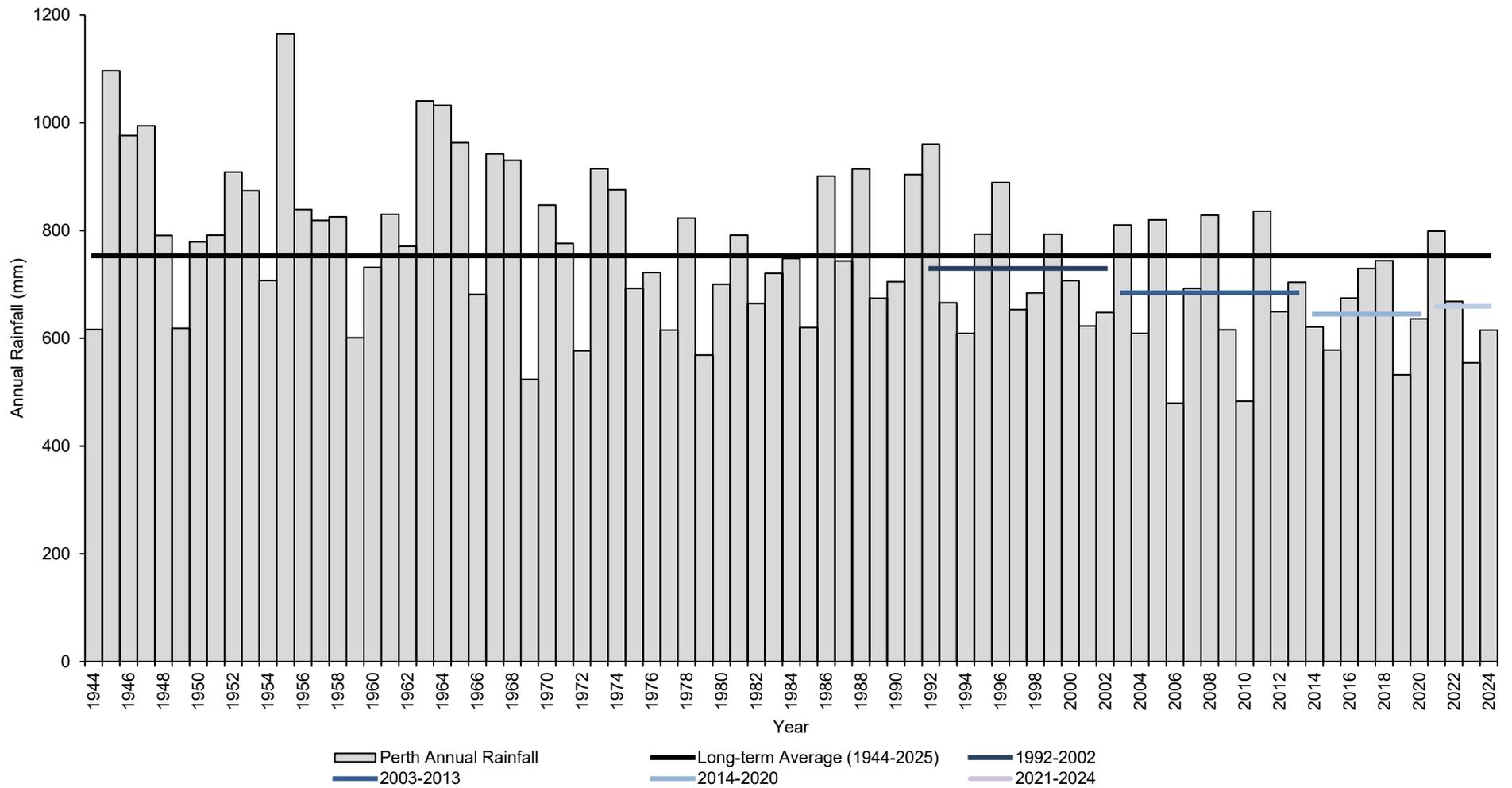


Figure 6: Average annual rainfall and the average annual rainfall for each management period.

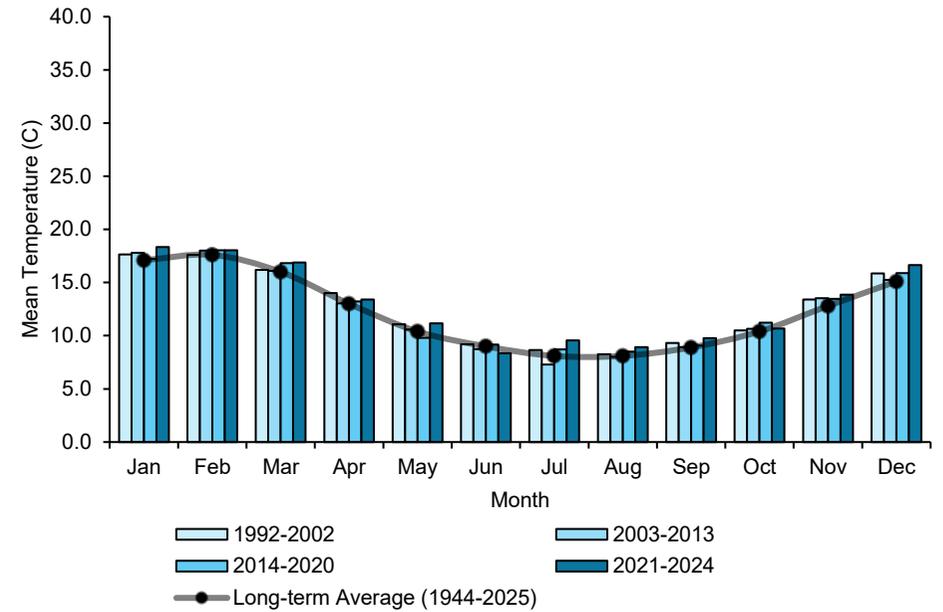
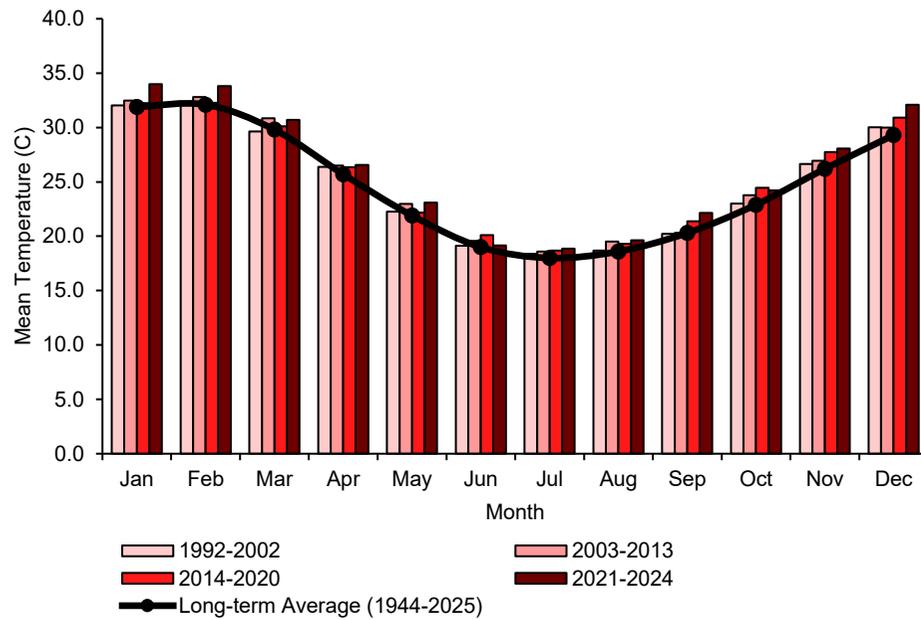


Figure 7: Average maximum temperature over each management period compared to the long-term average (left) and average minimum temperature over each management period compared to the long-term average (*right*).

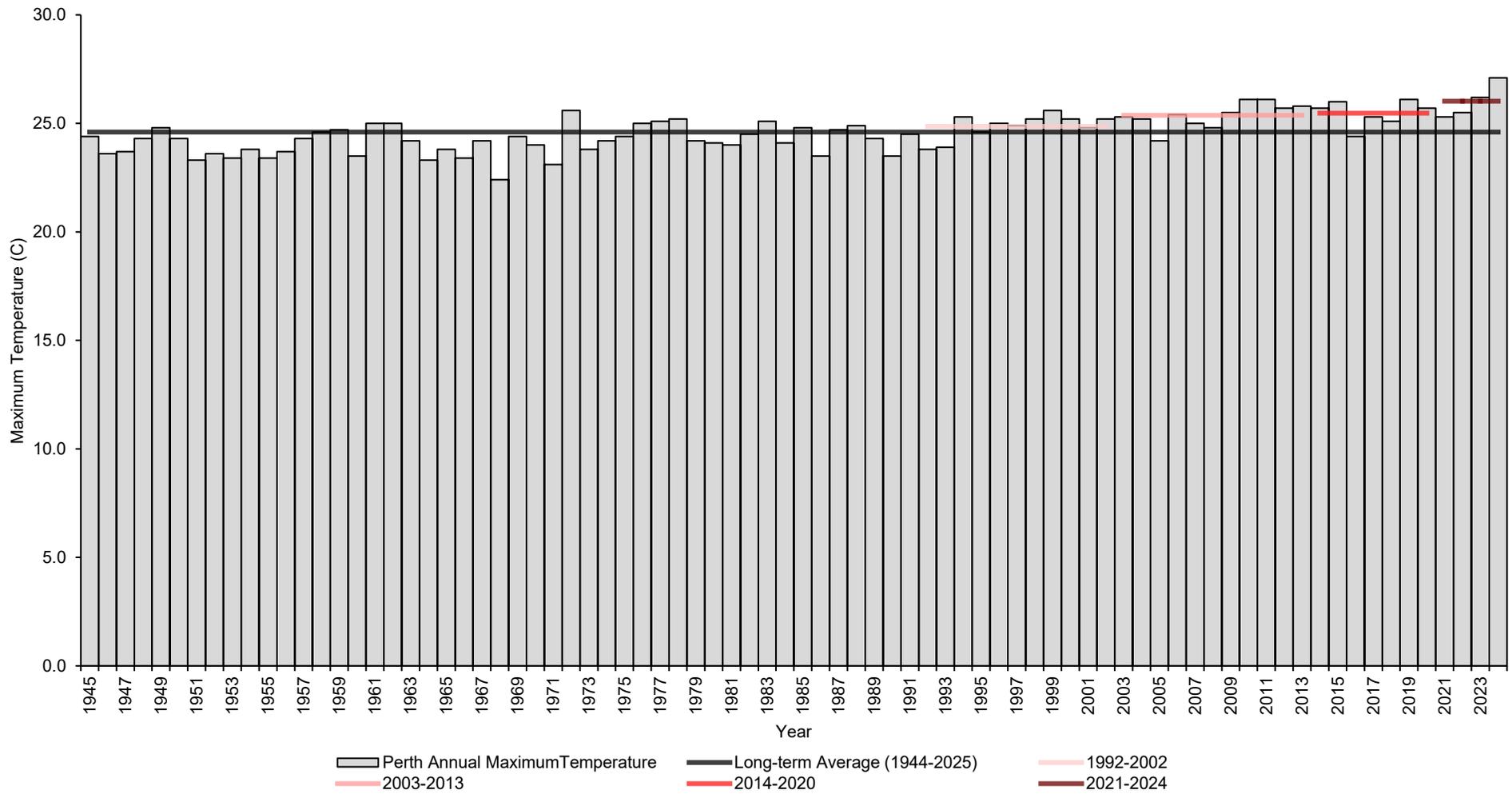


Figure 8: Average annual maximum temperature and the average maximum temperature for each management period.

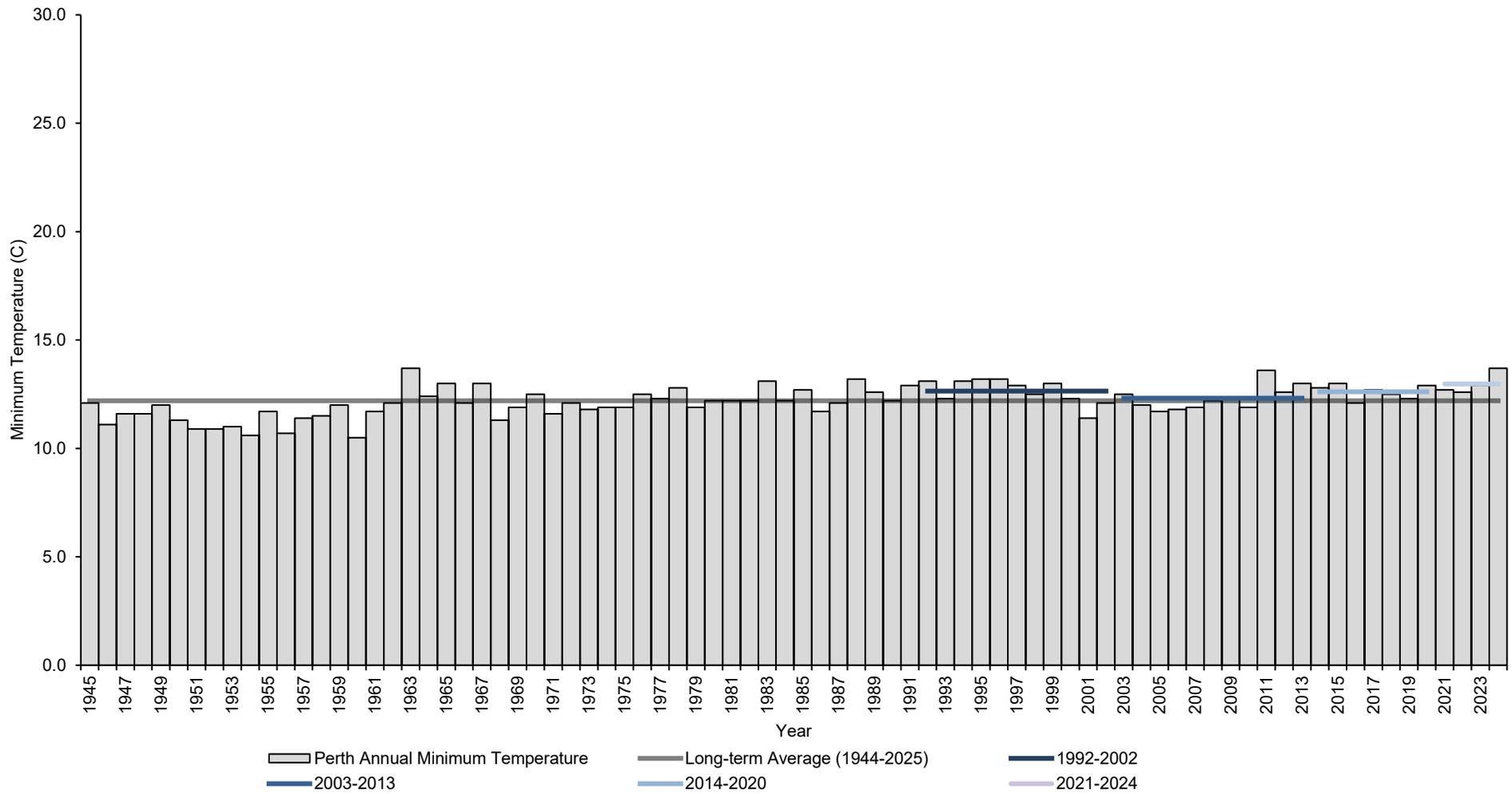


Figure 9: Average annual minimum temperature and the average minimum temperature for each management period.

4 Implementation

The management objective and implementation strategies will be measured in relation to the Key Performance Indicators (KPI).

4.1 Key Performance Indicators (KPI)

Review of previous management objectives and an assessment of success was undertaken. Some objectives could not be assessed due to an unavailability of data to undertake an accurate assessment. A summary of the assessment of success of measurable indices for management objectives is provided in Table 36.

Table 36: Summary of Key Performance Indicators

Asset or Threat		Successful Indices	Unsuccessful Indices	Indeterminate or Un-assessable
Assets	Bush Forever Listing	1	0	0
	Ecological Linkages	1	0	0
	Ecological Communities	3	1	0
	Wetlands	1	0	0
	Heritage	1	0	0
	Community Interest	1	0	0
	Reference	1	0	0
	Native Flora	2	0	0
	Native Fauna	2	2	1
Threats	Physical Disturbance	1	3	0
	Fire	1	0	0
	Weeds	1	2	0
	Habitat Loss	1	1	0
	Feral Animals	3	1	0
	Diseases and Pathogens	1	0	0
	Stormwater	1	5	0
	Reticulation	1	0	0
	Acid Sulfate Soils	1	0	0
Climate Change	0	0	1	

4.1.1 Lagging Indicators

Lagging indicators are associated with changes and trends of assets. The tiered objects for assets and associated lagging indicators are indicated in Table 37. The implementation recommendations for each asset are described in Table 38.

Table 37: Tiered Objects for Assets and Associated Lagging Indicators

Objective	Lagging Indicator	Applicable When
Enhance	Increase in either: <ul style="list-style-type: none"> ▪ extent ▪ density ▪ abundance 	Assets can be enhanced for reasonable cost or where enhancement may reduce operational costs
Maintain	No decrease in: <ul style="list-style-type: none"> ▪ extent ▪ density ▪ abundance 	Asset can be maintained or when there is insufficient knowledge or resources currently available to enhance
Confirm	Decrease number of assets for which information is limited or none available	Potential to be present but currently unknown
Monitor	No measurable indicator	Assets that cannot be managed by action within the City or where asset is not considered critical

Table 38: Asset Management Objectives and Recommendations for 2025-2030, according to the guidance provided in the City’s NAAMP

Section Reference	Asset	Sub-heading	Objective (Lagging Indicator)	Implementation Recommendation
2.1.1	Bush Forever Listing		Monitor - no change to Bush Forever Listing expected.	<ul style="list-style-type: none"> No action required.
2.1.2	Ecological Linkages		Monitor - no change to Ecological linkages expected.	<ul style="list-style-type: none"> No action required.
2.2.1	Ecological Communities	Vegetation Type Diversity	Maintain or Enhance - six vegetation types are currently described.	<ul style="list-style-type: none"> Prevent the spread of dieback by ensuring all vehicles and equipment are clean on entry and exit. Prevent the introduction of other diseases / pathogens by ensuring all vehicles and equipment are clean on entry and exit. Continue weed management as outlined in the City’s Environmental Weed Management Guideline. Prevent high intensity fires through fire fuel load reduction.
		Extent of Native Vegetation	Maintain or Enhance - expand area of native vegetation.	<ul style="list-style-type: none"> Continue rehabilitation works including, weed control, planting of site-specific species, and erosion control. Prioritise areas of physical disturbances, particularly the informal tracks created in the south portion of Ken Hurst Park for rehabilitation. Consider closing and rehabilitating tracks within Ken Hurst which are not utilised.
		Condition of Native Vegetation	Maintain or Enhance - improve condition of native vegetation.	<ul style="list-style-type: none"> Continue rehabilitation works including, weed control, planting of site-specific species, and erosion control.

Section Reference	Asset	Sub-heading	Objective (Lagging Indicator)	Implementation Recommendation
		Significant Communities	Maintain or Enhance - improve condition of and expand extent of native vegetation type Banksia Woodlands. This vegetation type satisfies the criteria in terms of species composition and structural description to qualify as Banksia Woodland TEC.	<ul style="list-style-type: none"> Continue revegetation works and weed management across the reserve focusing on areas in good or worse vegetation condition areas within the Banksia Woodland.
2.2.2	Wetlands	Conservation Category Wetland Listing	Maintain or Enhance - environmental criteria leading to listing as Conservation Category.	<ul style="list-style-type: none"> No action required.
2.2.3	Heritage	Registered Aboriginal Site	Monitor - remain aware to new heritage discoveries or changes to conditions. Any works causing significant disturbance in mapped area should be discussed with Department of Lands Planning and Heritage.	<ul style="list-style-type: none"> Ensure that liaison is undertaken with Department of Lands, Planning and Heritage for any works that will create significant disturbance.
2.2.4	Community Interest		Maintain or Enhance - improve number or size of active community groups and area being actively managed.	<ul style="list-style-type: none"> Support and maintain community partner relationships. City has the opportunity to provide equipment, resources and relevant training to active community groups.
2.2.5	Reference Sites		Monitor - no change expected.	<ul style="list-style-type: none"> Monitor the established reference sites in the future management plans to assess changes to vegetation structure and diversity.
2.3.1	Native Flora	Species Diversity	Maintain or Enhance - increase native species diversity.	<ul style="list-style-type: none"> Continue rehabilitation works including, weed control, planting of site-specific species, and erosion control. Consider increasing species diversity by adding in species recorded in 1992 flora

Section Reference	Asset	Sub-heading	Objective (Lagging Indicator)	Implementation Recommendation
				surveys undertaken by the Wildflower Society of WA.
		Very High Value Plant Species	Monitor - none of these species are currently known from the reserve.	<ul style="list-style-type: none"> Undertake yearly surveys to confirm presence of <i>Caladenia huegelii</i> (Grand Spider Orchid).
		Mammal Species	Maintain - continue to protect species diversity and manage habitat to allow ongoing use of reserve by species	<ul style="list-style-type: none"> Continue rehabilitation works including, weed control, planting of site-specific species, and erosion control. Undertake feral animal control. Inform local residents regarding cat laws.
		Amphibian Species		
		Reptile Species		
		Bird Species		
		Western Brush Wallaby	Confirm - determine the presence of the conservation significant Western Brush Wallaby	<ul style="list-style-type: none"> Undertake a targeted Western Brush Wallaby survey to confirm the presence of this conservation significant species.
2.3.2	Native Fauna	Western Grey Kangaroo	Monitor - ensure population numbers are less than the carrying capacity that the area can contain.	<ul style="list-style-type: none"> Undertake a targeted Western Grey Kangaroo population estimate.
		Fauna Habitat	Maintain or Enhance - increase the number of bird and bat boxes and number of suitable habitat trees.	<ul style="list-style-type: none"> Increase number of bird and bat boxes to provide suitable habitat. Ensure that hollows and bird and bat boxes are maintained and are free from European Bees. Consider planting species with the potential to develop into black cockatoo habitat trees. Undertake management actions outlined in the <i>City of Melville Black Cockatoo Conservation Action Plan</i> (Murdoch

Section Reference	Asset	Sub-heading	Objective (Lagging Indicator)	Implementation Recommendation
				University Black Cockatoo Conservation Management Project, 2023)

4.1.2 Leading Indicators

Leading indicators are associated with changes in the density / abundance / extent / occurrences of threats. The tiered objects for threats and associated leading indicators are indicated in Table 39. The implementation recommendation for each threat is described in Table 40.

Table 39: Tiered Objects for Threats and Associated Leading Indicators

Objective	Leading Indicator	Applicable When
Prevent	Prevent introduction or occurrence of	Threat not currently present in an area or the reserve
Eliminate	Reduce extent, density or abundance working towards eventual complete removal	Elimination is feasible Impact has potential to be high
Contain	Stop, restrict or reduce rate of spread or frequency of occurrence	Elimination is not feasible Impact has potential to be high
Manage	Limit negative impacts on assets	Threat is believed to be already at or near maximum impact
None	No measurable indicator	Threat is absent from reserve and will not be accidentally introduced or naturally develop

Table 40: Threat Management Objectives and Recommendations for 2025-2030, according to the guidance provided in the City’s NAAMP

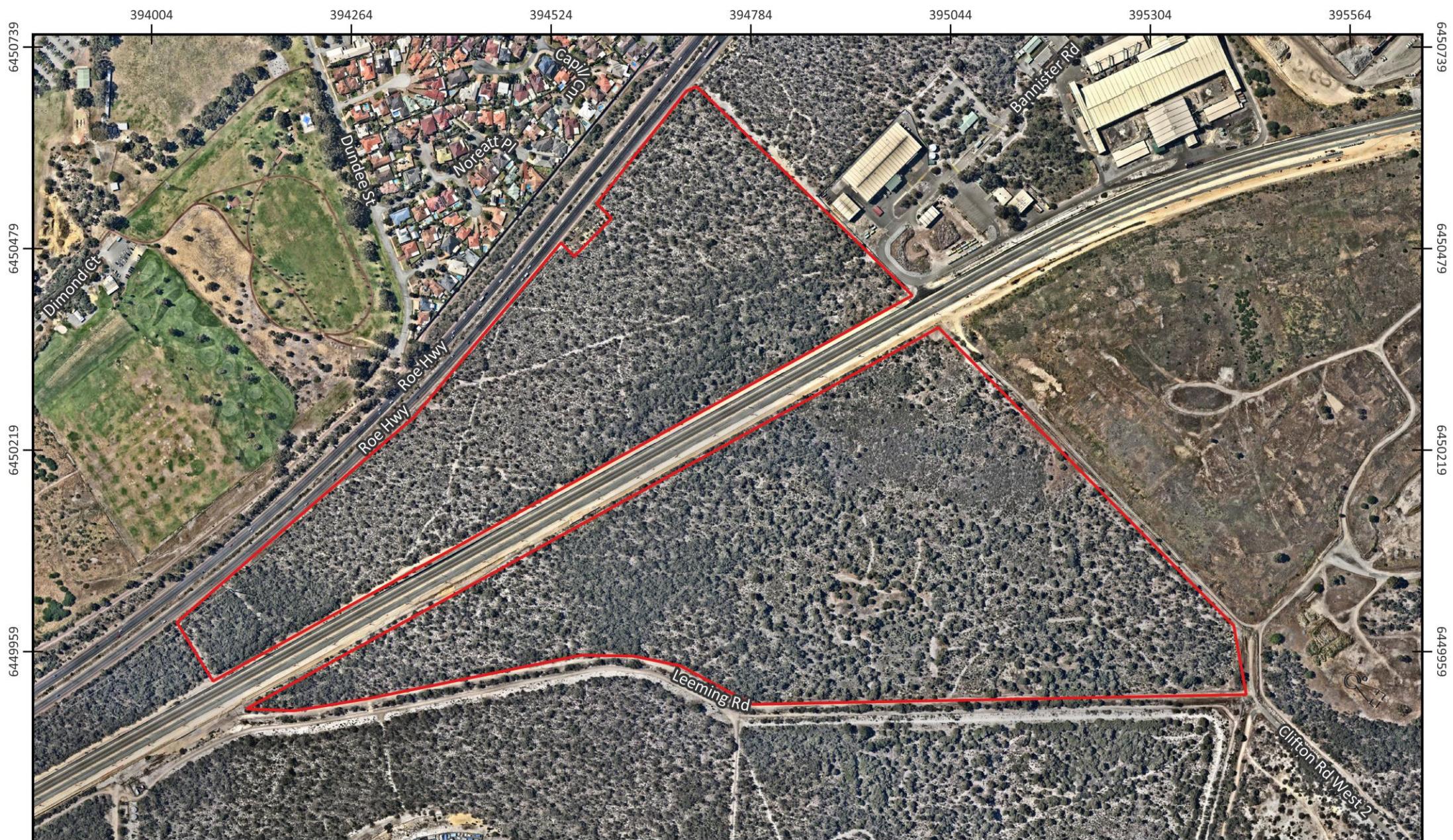
Section Reference	Threats	Sub-heading	Objective (Leading Indicator)	Implementation Recommendation
3.1	Physical Disturbance	Informal Tracks	Eliminate - reduce number and extent of informal tracks in bushland.	<ul style="list-style-type: none"> Revegetate along informal tracks. Consider using natural materials (fallen logs) to deter use. Fix fences where broken to deter inappropriate access.
		Rubbish Dumping	Manage - continue ongoing rubbish removal program. Maintain rubbish occurrence at low levels currently recorded, target no large occurrences of garden waste or household rubbish dumping.	<ul style="list-style-type: none"> Revegetate along informal tracks. Consider using natural materials (fallen logs) to deter use. Fix fences where broken to deter inappropriate access. Upgrade fencing to the east of Ken Hurst Park adjacent to Canning Landfill to continue mesh trapping prevent rubbish traveling into Ken Hurst Park. Continue rubbish removal.
		Tree Poisoning Illegal Clearing Firewood Collection	Prevent - no occurrences.	<ul style="list-style-type: none"> Consider using natural materials (fallen logs) to deter use. Fix fences where broken to deter inappropriate access. Continue to promote values of natural areas in the community.
		Vandalism	Manage - maintain current low levels of graffiti on signage only.	<ul style="list-style-type: none"> Continue removal of graffiti across the reserve.
3.2	Fire		Prevent - manage the reserve so as to prevent any large (>50 % of reserve burnt) or overly frequent (frequency <8 years) fires occurring.	<ul style="list-style-type: none"> Undertake fire fuel load reduction. Undertake track pruning along firebreaks to ensure that firebreaks maintain clear.

Section Reference	Threats	Sub-heading	Objective (Leading Indicator)	Implementation Recommendation
				<ul style="list-style-type: none"> ▪ Bushfire control and management undertaken in line with the City of Melville's Bushfire Management Guideline (City of Melville, 2019) and Bushfire Risk Management Plan (City of Melville, 2022).
3.3	Weeds	Very High Impact Weed Species	Prevent - introduction of new very high impact weed species.	<ul style="list-style-type: none"> ▪ Undertake targeted weed removal for very high impact weeds. ▪ Continue weed management following the City's Environmental Weed Management Guideline.
			Eliminate - Bridal Creeper, Paterson's Curse, Arum Lily, One Leaf Cape Tulip, Brazilian Pepper, and Soldiers.	
			Contain - Perennial Clumping Grasses (<i>Ehrharta calycina</i>).	
		High Impact Weed Species	Prevent - Introduction of new high impact weed species.	
			Contain - mitigate increased population extents.	
		Medium and Low Impact Weed Species	Prevent - introduction of new medium and low impact weed species.	
Contain - reduce impact on bushland or revegetation projects when possible.				
3.4	Habitat Loss	Reserve Wide Habitat Loss	Contain - no reduction in vegetation type diversity or extent, no reduction in fauna habitat type diversity or extent, no reduction in vegetation condition.	<ul style="list-style-type: none"> ▪ Continue rehabilitation works including, weed control, planting of site-specific species, and erosion control.
		Loss of Habitat for Significant Species (Banksia Woodland)	Contain - no further reduction in Banksia Woodland vegetation type.	<ul style="list-style-type: none"> ▪ Continue rehabilitation works including, weed control, planting of site-specific species, and erosion control.

Section Reference	Threats	Sub-heading	Objective (Leading Indicator)	Implementation Recommendation
3.5	Feral Animals	Feral Cats	Prevent - exclude feral cats from the area	<ul style="list-style-type: none"> Monitor populations and control if necessary, following the City's Feral Animals Management Guidelines (City of Melville, 2025).
		Fox and Rabbits	Manage - reduce presence (within guidelines)	<ul style="list-style-type: none"> Undertake feral animal control to reduce presence following the City's Feral Animals Management Guidelines.
		European Bee	Manage - reduce presence (within guidelines).	<ul style="list-style-type: none"> Continue control and removal of European Bees following the City's Feral Animals Management Guidelines.
		Feral Waterfowl	Prevent - exclude from the area if more than four individuals observed.	<ul style="list-style-type: none"> Monitor and undertake feral animal control if necessary, following the City's Feral Animals Management Guidelines.
3.6	Diseases and Pathogens		Contain - keep dieback infestation at current extent. Prevent introduction into uninfected vegetation.	<ul style="list-style-type: none"> Undertake dieback treatment across the site. Monitor the vegetation, if there is the likelihood of an increase extent in plant disease and pathogens undertake an assessment by an approved contractor. Planting native species within the infected areas that are resistant to dieback to increase diversity and vegetation condition.
3.7	Stormwater	Stormwater	Manage - no change expected	<ul style="list-style-type: none"> No action required.
3.8	Reticulation		None	<ul style="list-style-type: none"> If reticulation is established within or adjacent to Ken Hurst Park, this must be monitored and rectify overspray/leakage as required.

Section Reference	Threats	Sub-heading	Objective (Leading Indicator)	Implementation Recommendation
3.9	Acid Sulfate Soils		Prevent - prevent physical disturbance of acid sulfate soils.	<ul style="list-style-type: none"> ▪ Investigate presence of acid sulfate soils. ▪ Works within mapped area must be managed in line with <i>Treatment and Management of Soil and Water in Acid Sulfate Soil Landscape</i> guidelines (DWER, 2015).
3.10	Climate Change		Manage - continue to manage climate change impacts.	<ul style="list-style-type: none"> ▪ Continue to monitor and manage climate change impact.

Maps



394004

394264

394524

394784

395044

395304

395564

6450739

6450479

6450219

6449959

6450739

6450479

6450219

6449959



Map 1:
Site Location

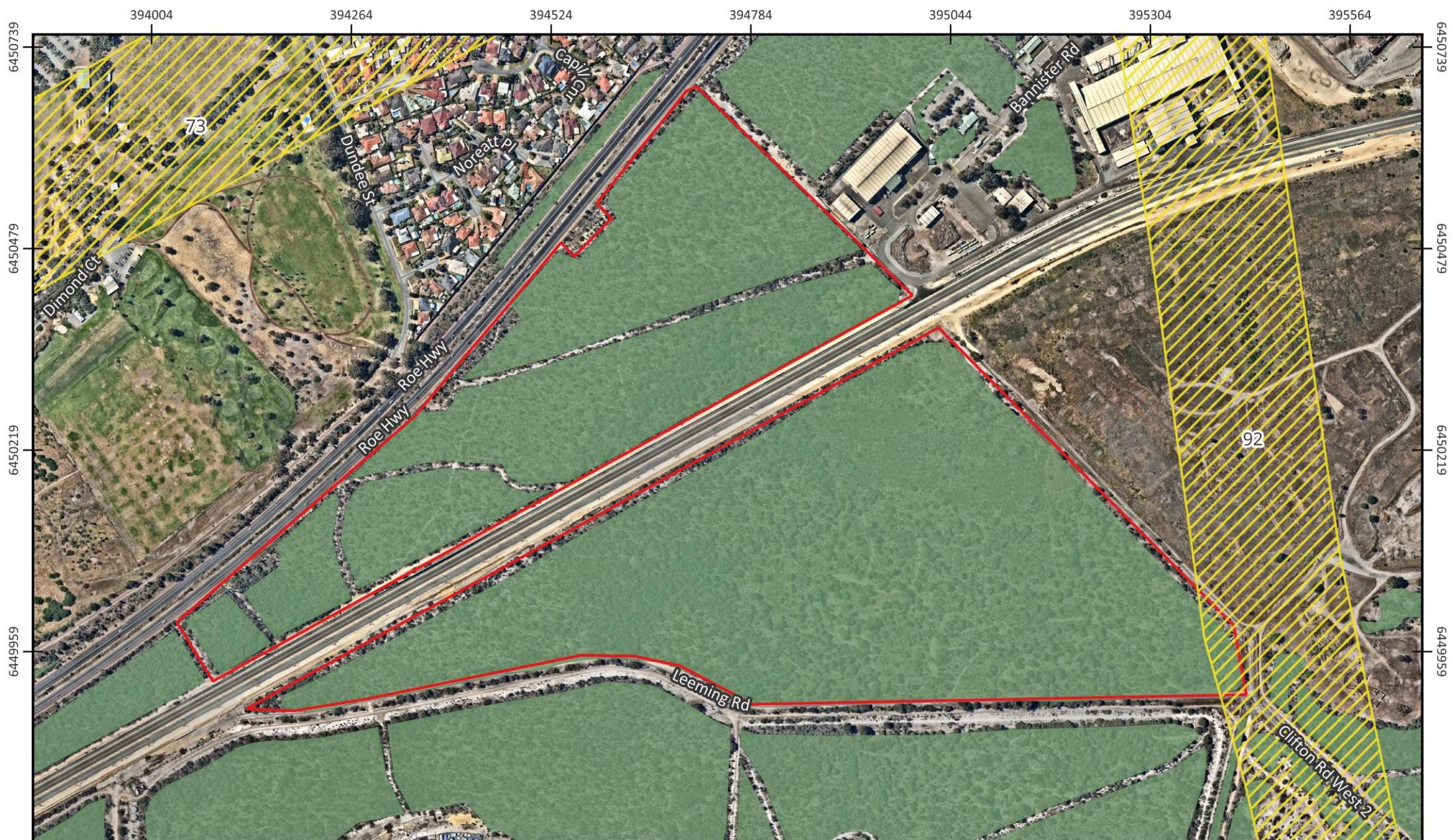
Ken Hurst Park, Leeming

Legend

 Reserve Boundary

Client: City of Melville
Date: 22/11/2024
Created by: Z. Stoney
Image Source: Nearmap, 2024
Datum: GDA2020 / MGA zone 50
Scale: 1: 6500





Map 2:
Ecological Linkages



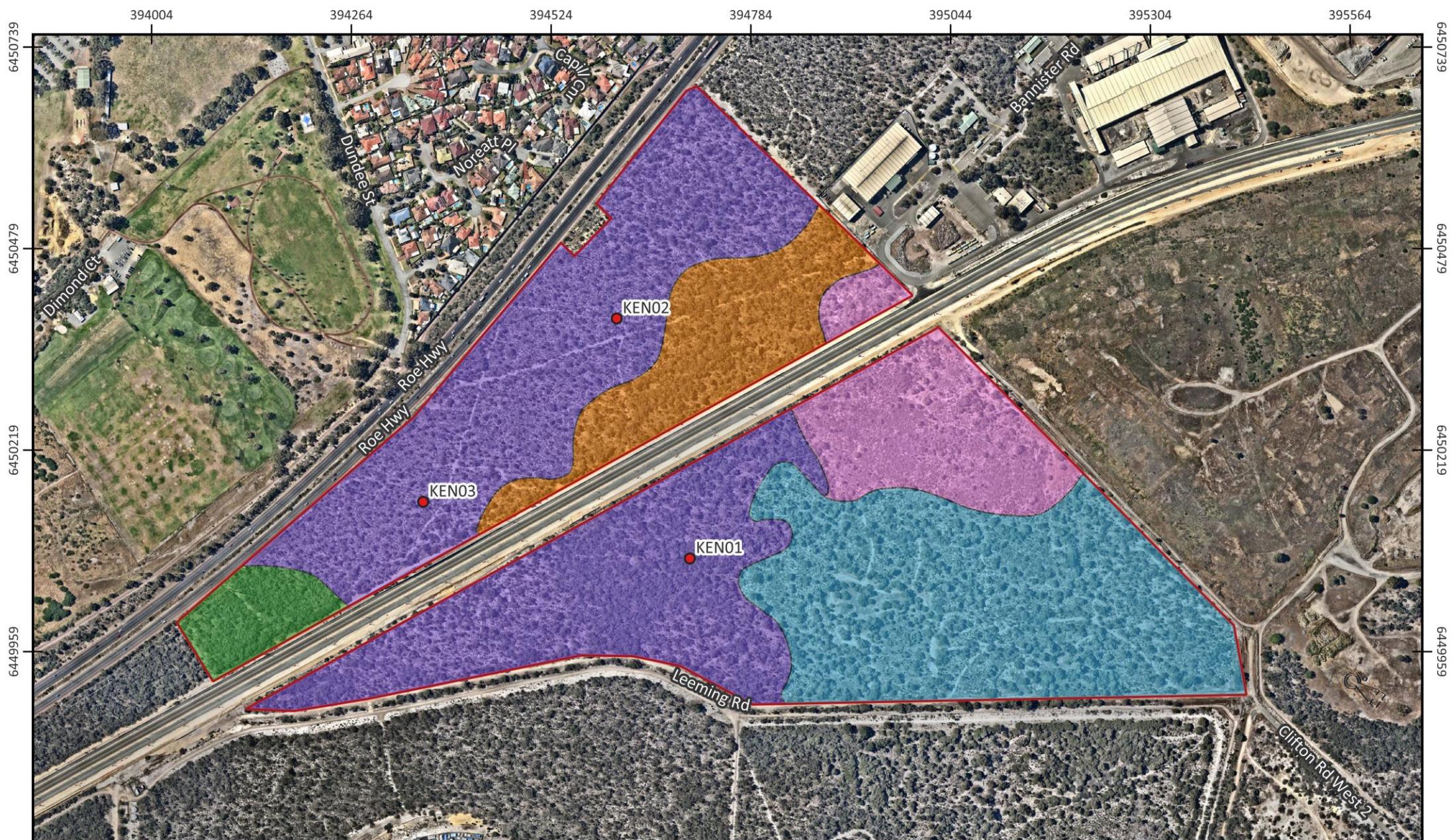
Ken Hurst Park, Leeming

Legend

-  Greenways (Alan Tingay and Associates, 1998)
-  Native Vegetation Extent
-  Reserve Boundary

Client: City of Melville
 Date: 05/06/2025
 Created by: Z. Stoney
 Image Source: Nearmap, 2025
 Datum: GDA2020 / MGA zone 50
 Scale: 1: 6500





Map 3:
Vegetation Type

Ken Hurst Park, Leeming

Legend

- Quadrat
- BaAfXpW
- BaBmNfW
- BaBmW
- HaRiS
- MpW
- Reserve Boundary

Client: City of Melville
 Date: 05/06/2025
 Created by: Z. Stoney
 Image Source: Nearmap, 2025
 Datum: GDA2020 / MGA zone 50
 Scale: 1: 6500





Map 4:
Vegetation Condition



Ken Hurst Park, Leeming

Legend

- Excellent
- Very Good
- Good
- Degraded
- Completely Degraded
- Reserve Boundary

Client: City of Melville
 Date: 05/06/2025
 Created by: Z. Stoney
 Image Source: Nearmap, 2025
 Datum: GDA2020 / MGA zone 50
 Scale: 1: 6500





Map 5:
Vegetation Condition within the Banksia Woodland

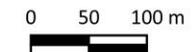


Ken Hurst Park, Leeming

Legend

- Excellent
- Very Good
- Good
- Degraded
- Completely Degraded
- Reserve Boundary

Client: City of Melville
 Date: 05/06/2025
 Created by: Z. Stoney
 Image Source: Nearmap, 2025
 Datum: GDA2020 / MGA zone 50
 Scale: 1: 6500





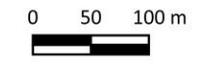
Map 6:
Fauna Habitat

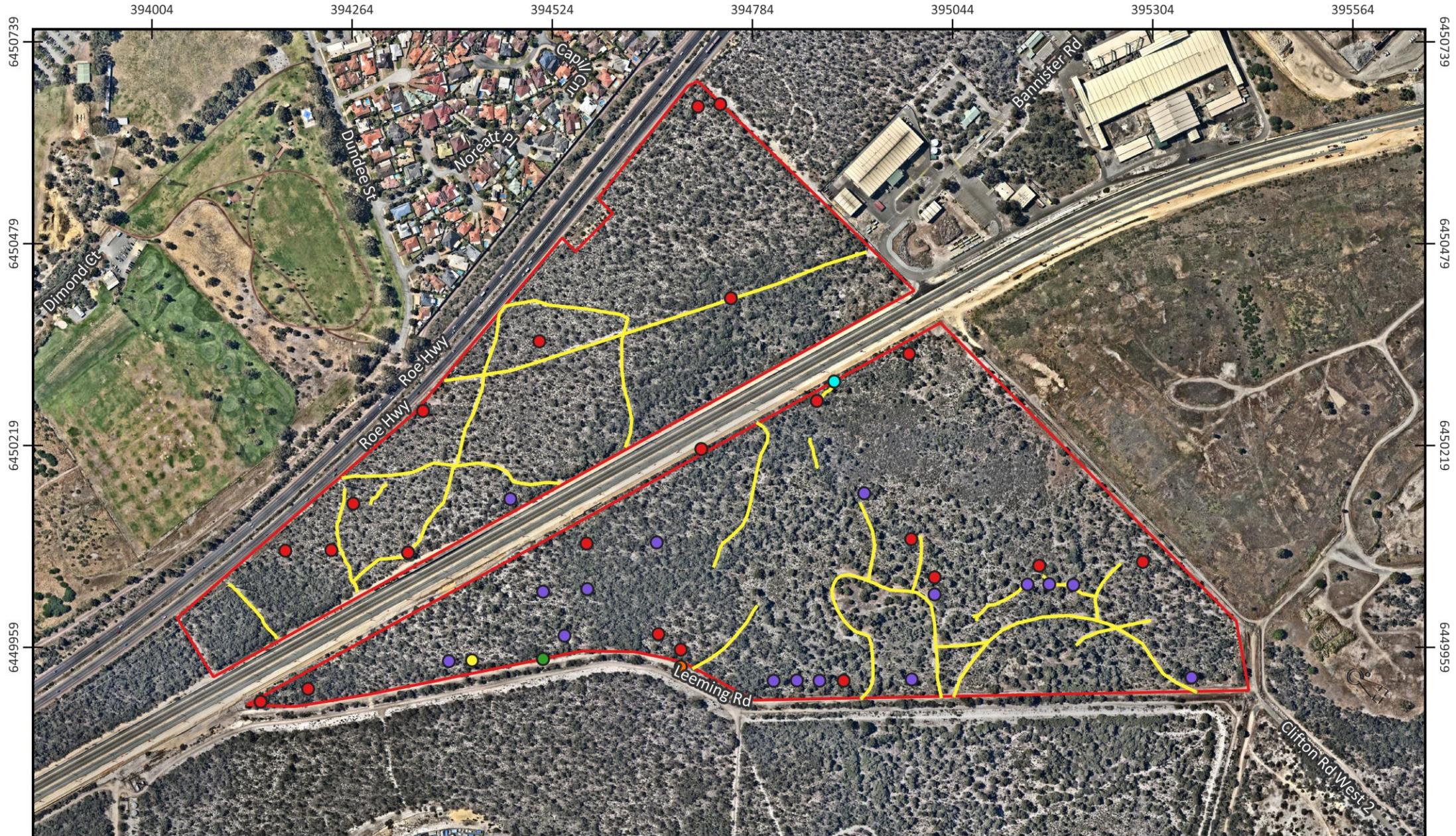
Ken Hurst Park, Leeming

Legend

- Bat Box
- Potential Habitat Trees
- Potential Habitat Trees with Hollows
- Shrubland
- Sparse Woodland
- Woodland
- Reserve Boundary

Client: City of Melville
 Date: 05/06/2025
 Created by: Z. Stoney
 Image Source: Nearmap, 2025
 Datum: GDA2020 / MGA zone 50
 Scale: 1: 6500





Map 7:
Physical Disturbances

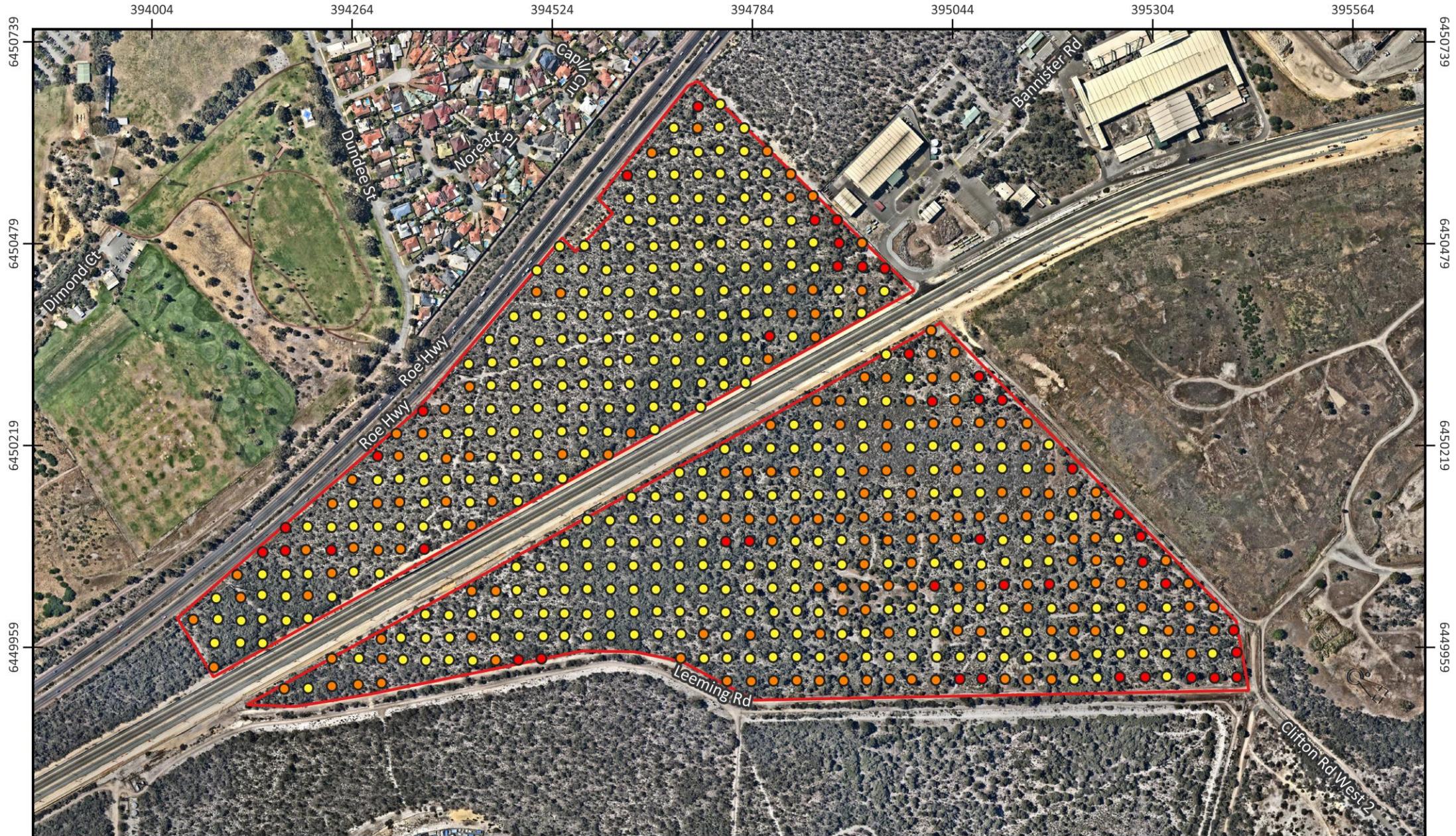
Ken Hurst Park, Leeming

Legend

- Tracks / Paths
- Canine Feces
- Garden Waste
- Illegal Logging
- Rabbit Diggings
- Rubbish
- Fence Cut
- Reserve Boundary

Client: City of Melville
 Date: 05/06/2025
 Created by: Z. Stoney
 Image Source: Nearmap, 2025
 Datum: GDA2020 / MGA zone 50
 Scale: 1: 6500





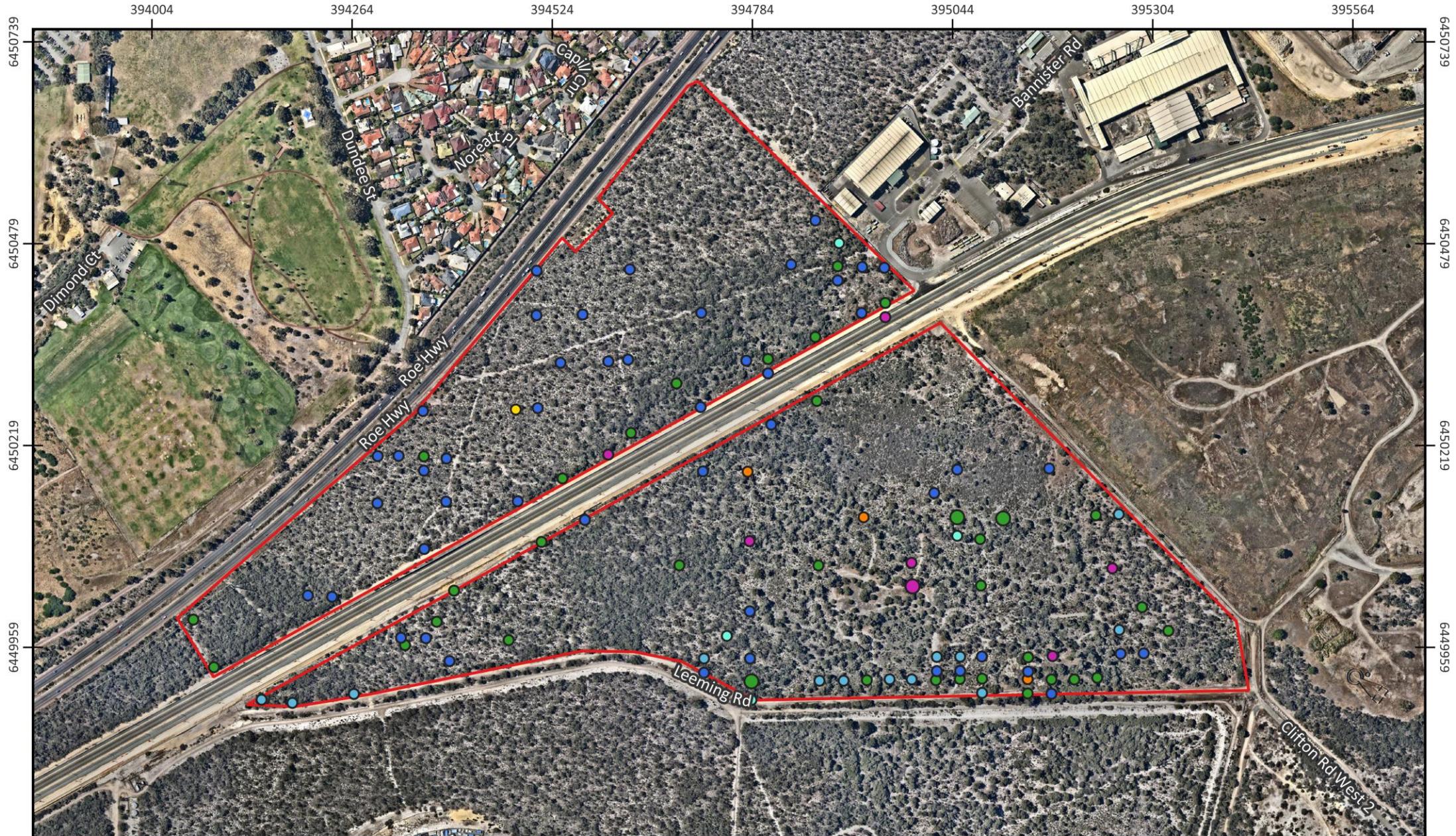
Map 8:
Combined Weed Densities

Ken Hurst Park, Leeming

- Legend**
- < 5 %
 - 5-25 %
 - > 25 %
 - Reserve Boundary

Client: City of Melville
Date: 05/06/2025
Created by: Z. Stoney
Image Source: Nearmap, 2025
Datum: GDA2020 / MGA zone 50
Scale: 1: 6500





Map 9:
Very High Weeds

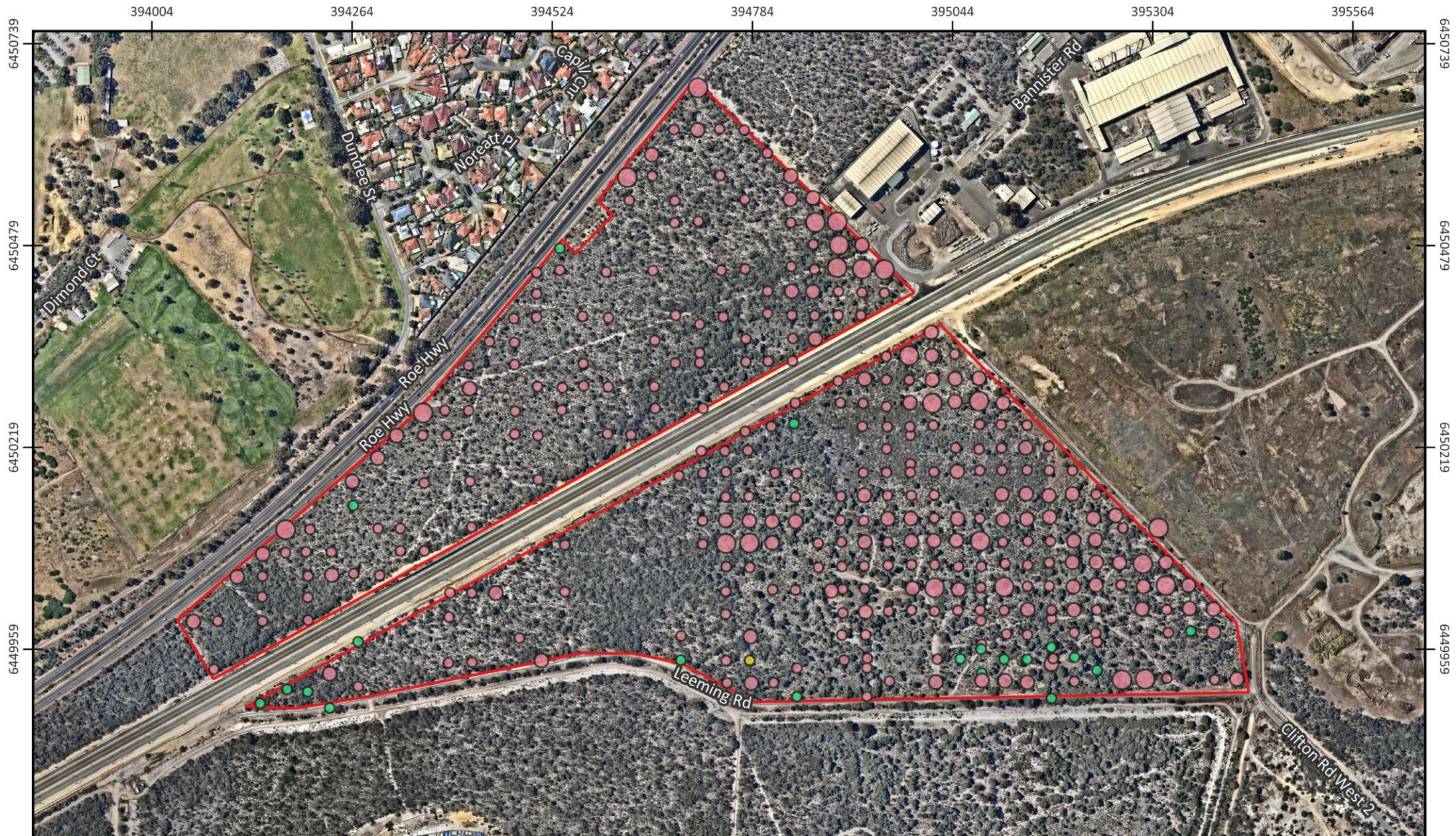
Ken Hurst Park, Leeming

Legend

- Asparagus asparagoides <5%
- Asparagus asparagoides 5-25%
- Echium plantagineum <5%
- Ehrharta calycina <5%
- Lachenalia reflexa <5%
- Moraea flaccida <5%
- Moraea flaccida 5-25%
- Moraea miniata <5%
- Zantedeschia aethiopica <5%
- Reserve Boundary

Client: City of Melville
Date: 05/06/2025
Created by: Z. Stoney
Image Source: Nearmap, 2025
Datum: GDA2020 / MGA zone 50
Scale: 1: 6500

0 50 100 m



Map 10:
High Weeds

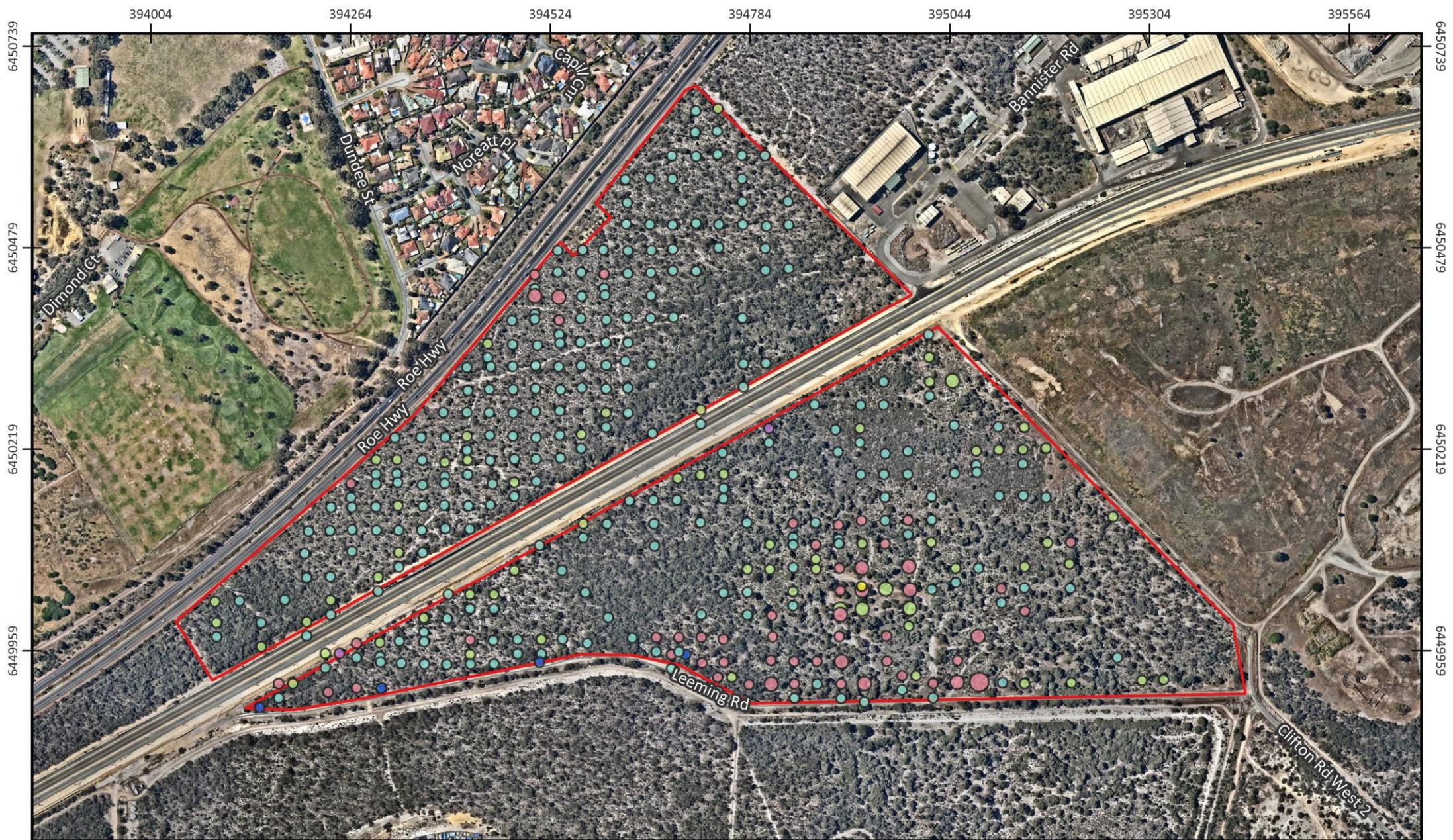
Ken Hurst Park, Leeming

Legend

- Avena barbata <5%
- Cynodon dactylon <5%
- Ehrharta longiflora <5%
- Ehrharta longiflora 5-25%
- Ehrharta longiflora >25%
- Reserve Boundary

Client: City of Melville
 Date: 05/06/2025
 Created by: Z. Stoney
 Image Source: Nearmap, 2025
 Datum: GDA2020 / MGA zone 50
 Scale: 1: 6500





Map 11:
High Weeds

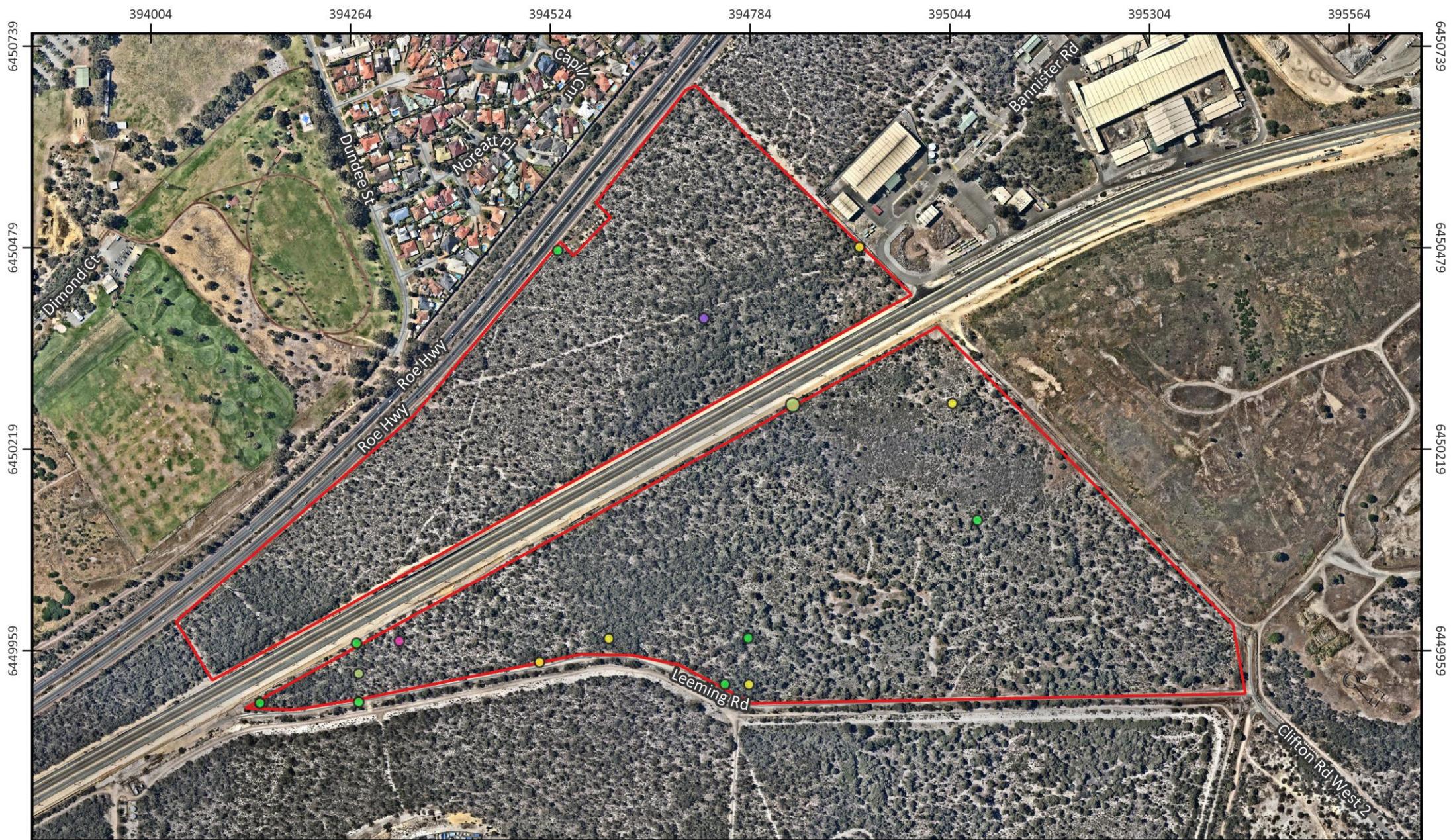
Ken Hurst Park, Leeming

Legend

- Asphodelus fistulosus <5%
- Freesia leichtlinii subsp. alba x leichtlinii subsp leichtinii <5%
- Freesia leichtlinii subsp. alba x leichtlinii subsp leichtinii 5-25%
- Freesia leichtlinii subsp. alba x leichtlinii subsp leichtinii >25%
- Gladiolus caryophyllaceus <5%
- Romulea rosea <5%
- Romulea rosea 5-25%
- Trachyandra divaricata <5%
- Watsonia meriana <5%
- Reserve Boundary

Client: City of Melville
Date: 05/06/2025
Created by: Z. Stoney
Image Source: Nearmap, 2025
Datum: GDA2020 / MGA zone 50
Scale: 1: 6500





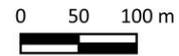
Map 12:
High Weeds

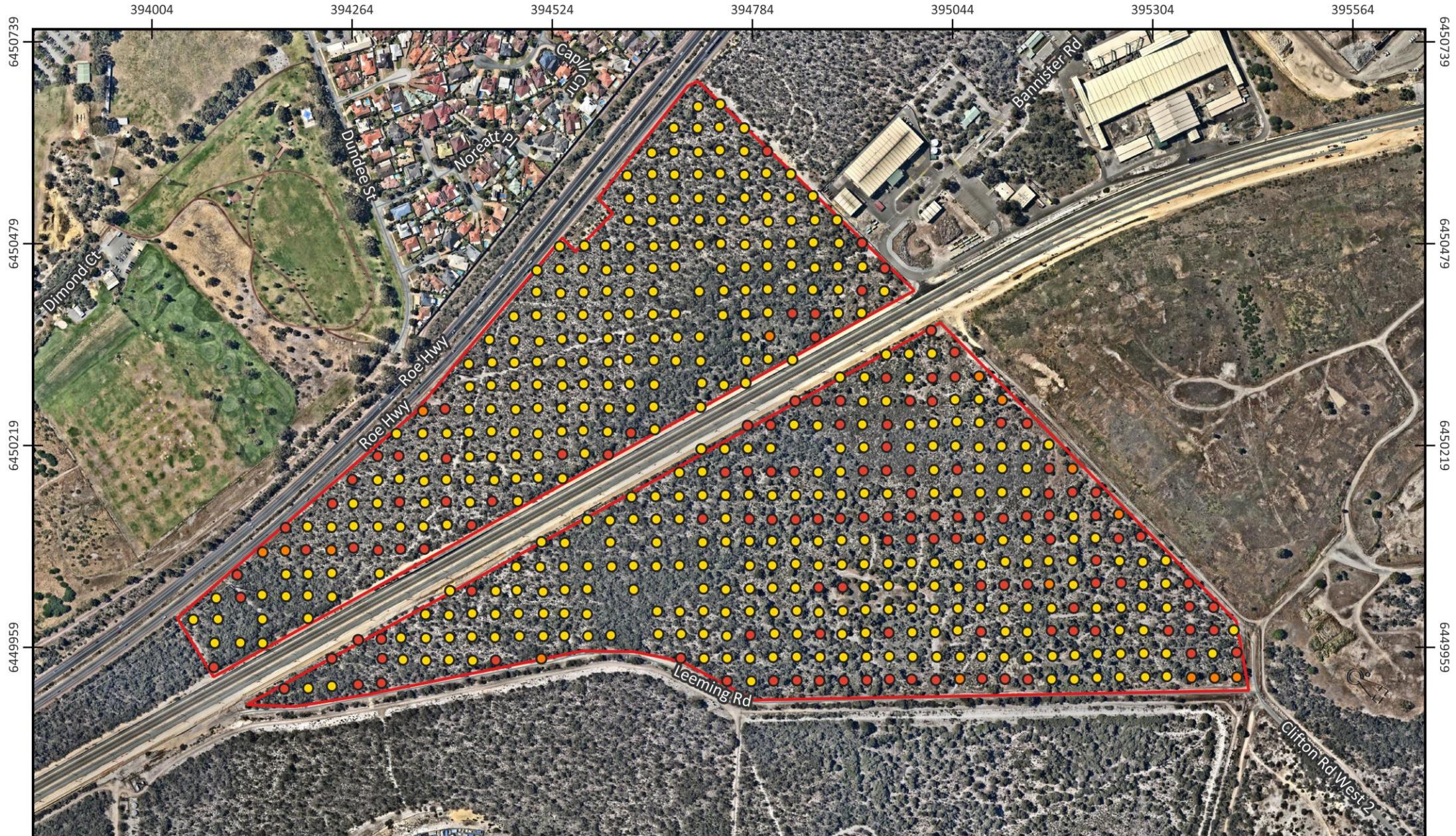
Ken Hurst Park, Leeming

Legend

- Acacia iteaphylla <5%
- Ficus catica <5%
- Gaudium laevigatum <5%
- Gaudium laevigatum 5-25%
- Pelargonium capitatum <5%
- Solanum nigrum <5%
- Reserve Boundary

Client: City of Melville
Date: 05/06/2025
Created by: Z. Stoney
Image Source: Nearmap, 2025
Datum: GDA2020 / MGA zone 50
Scale: 1: 6500





Map 13:
 Combined Weed Densities of Medium and Low
 Priority Weeds

Ken Hurst Park, Leeming

- Legend**
- <5%
 - >25%
 - 5-25%
 - Reserve Boundary

Client: City of Melville
Date: 11/12/2024
Created by: Z. Stoney
Image Source: Nearmap, 2024
Datum: GDA2020 / MGA zone 50
Scale: 1: 6500





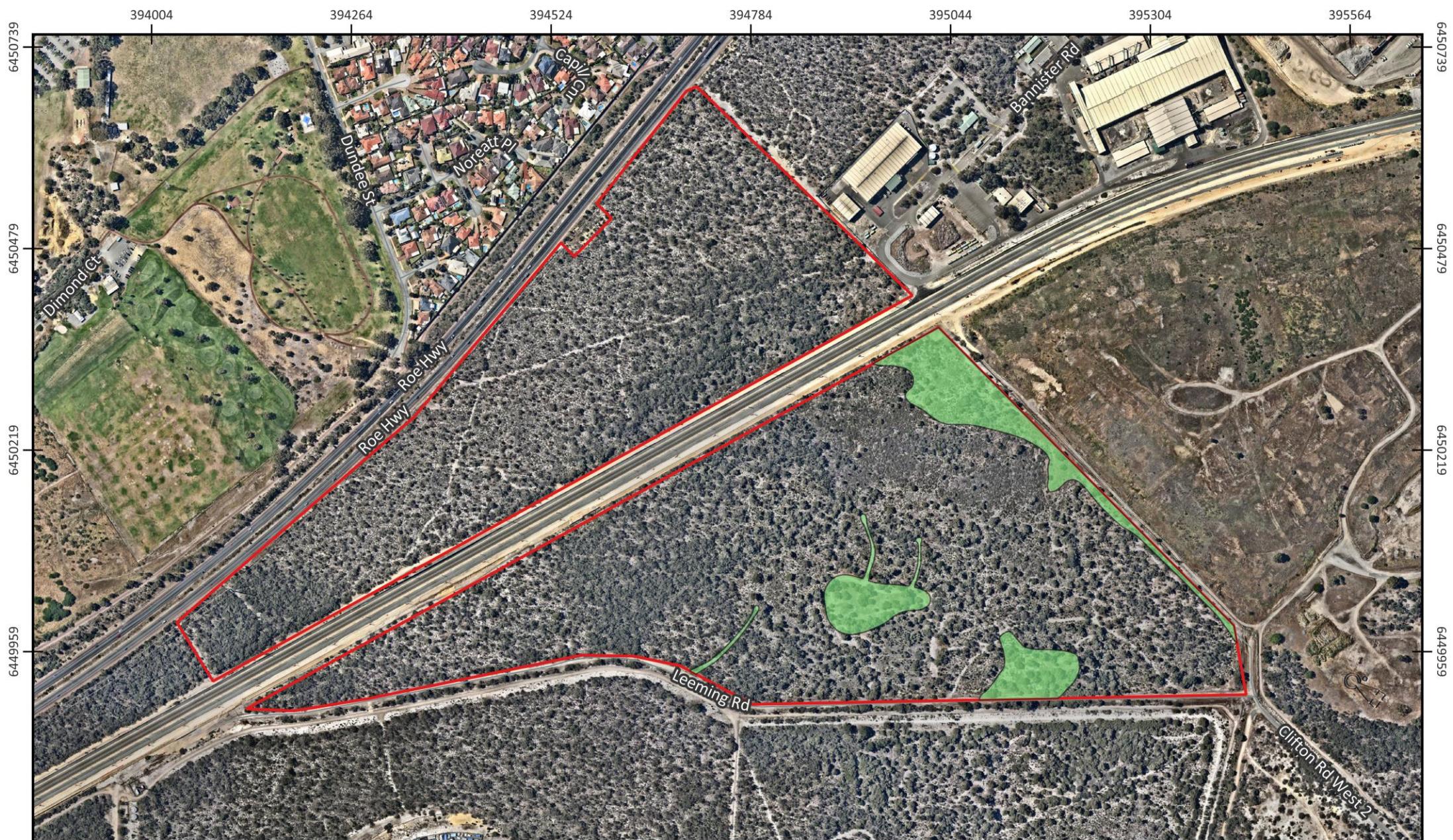
Map 14:
Bare Ground

Ken Hurst Park, Leeming

- Legend**
- <5%
 - 5-25%
 - >25%
 - Reserve Boundary

Client: City of Melville
 Date: 11/12/2024
 Created by: Z. Stoney
 Image Source: Nearmap, 2024
 Datum: GDA2020 / MGA zone 50
 Scale: 1: 6500





Map 15:
Priority Areas for Revegetation

Ken Hurst Park, Leeming

Legend

- Proposed Revegetation Areas
- Reserve Boundary

Client: City of Melville
 Date: 11/12/2024
 Created by: Z. Stoney
 Image Source: Nearmap, 2024
 Datum: GDA2020 / MGA zone 50
 Scale: 1: 6500





Map 16:
Dieback Assessment

Ken Hurst Park, Leeming

Legend

- Dieback Occurance (Glevan, 2023)
- Excluded
 - Infested
 - Uninfested
 - Reserve Boundary

Client: City of Melville
 Date: 01/04/2025
 Created by: Z. Stoney
 Image Source: Nearmap, 2025
 Datum: GDA2020 / MGA zone 50
 Scale: 1: 6500



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Appendix 1: Survey Methodology

Natural Area Consulting Management Services (Natural Area) was contracted by City of Melville to undertake a reconnaissance flora survey, a detailed fauna survey and weed mapping across Ken Hurst Park.

A1.1 On-ground Flora Survey

The flora and vegetation survey was conducted in accordance with *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment* (Environmental Protection Authority (EPA), 2016). Samples were collected, or photographs taken of unfamiliar species to enable later identification.

Natural Area environmental scientists undertook the survey between September 10 and 24, 2024, with key data recorded using Qfield software on a handheld tablet. Survey activities included:

- Traversing the entirety of the site in grid format.
- Recording all species present, including native and invasive species.
- Recording the weed species and cover present at each grid point.
- Recording the percentage of bare ground.
- Marking locations of any conservation significant flora, declared pests (DP) and/or Weeds of National Significance (WoNS) identified.
- Establishment of three permanent 10 x 10 m quadrats within the Banksia woodland.
- Recording vegetation type including dominant over, middle and understorey species using the structural classes described in NVIS Level V (Executive Steering Committee for Australian Vegetation Information (ESCAVI), 2003).
- Recording vegetation condition using the scale attributed to Keighery (Table 41).
- The use of GPS to map significant species and boundaries of differing vegetation type and condition
- Recording evidence of disturbance, such as fire.

Table 41: Vegetation condition ratings

Category	Description
1 Pristine	Pristine or nearly so, no obvious signs of disturbance or damage caused by human activities since European settlement.
2 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.
3 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.
4 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 some very aggressive weeds, partial clearing, dieback and grazing.

Category	Description
5 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.
6 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 or shrubs.

Source: EPA, 2016

A1.2 On-ground Fauna Survey

The fauna survey was conducted in accordance with a detailed fauna survey as outlined in the *Technical Guidance - Terrestrial vertebrate fauna surveys for environmental impact assessment* (EPA, 2020). Natural Area environmental scientists undertook the survey between September 16 and 20, 2024, with survey activities including:

- Trapping over five consecutive days (four nights) with trap-line, Elliott traps and camera traps (Table 42).
- Setting up six trap-lines which included pitfalls and funnel traps along a drift fence with vegetation used to cover funnel traps and placed in pitfall buckets to provide protection from the elements.
- Setting up 12 Elliott traps with universal bait (oats and peanut butter), newspaper being placed inside for bedding and then traps were covered with a hessian bag or foliage to provide protection from the elements (Figure 10).
- Setting up six motion activated camera trap.
- All trap and trap line coordinates were recorded using a hand-help GPS and marked with flagging tape (GPS coordinates are provided in Table 43 and displayed in Map 17).
- Checking traps daily within three hours of sunrise as per Department of Biodiversity, Conservation and Attractions (DBCA) licence conditions, along with recording and releasing captured species back into the site.
- Active searching included searching under logs, rocks and hand raking through leaf litter.
- Static bird census was undertaken during trapping events with five-minute census undertaken at each trap line location recording visual observations of birds and calls heard.
- Walking the site to record opportunistic sightings or signs of birds and larger mammals, including calls, tracks, diggings, and scats.
- Undertaking two nocturnal surveys recording fauna using a combination of thermal imaging, spotlighting and an acoustic recorder.
- Recording the outcomes of the trapping and observation activities.

Table 42: Total trap nights

Number of Traps	Number of Nights	Number of Trap nights
6 Traplines		24
14 Pitfalls (Trapline)		56
12 Funnels (Trapline)	Four	48
12 Elliots		48
6 Trail Cameras		24
		Total: 200

Weather Conditions

Local weather conditions can affect fauna activity, with low temperatures and rain likely to reduce mammals and reptile activity. The trapping period experienced cool and cloudy mornings and warmer days, temperatures during the trapping period ranged between 6.6 °C and 27.8 °C. Rainfall during the trapping period was recorded at 0 mm according to the Perth Airport Weather Station ID:009022 (BoM, 2025).

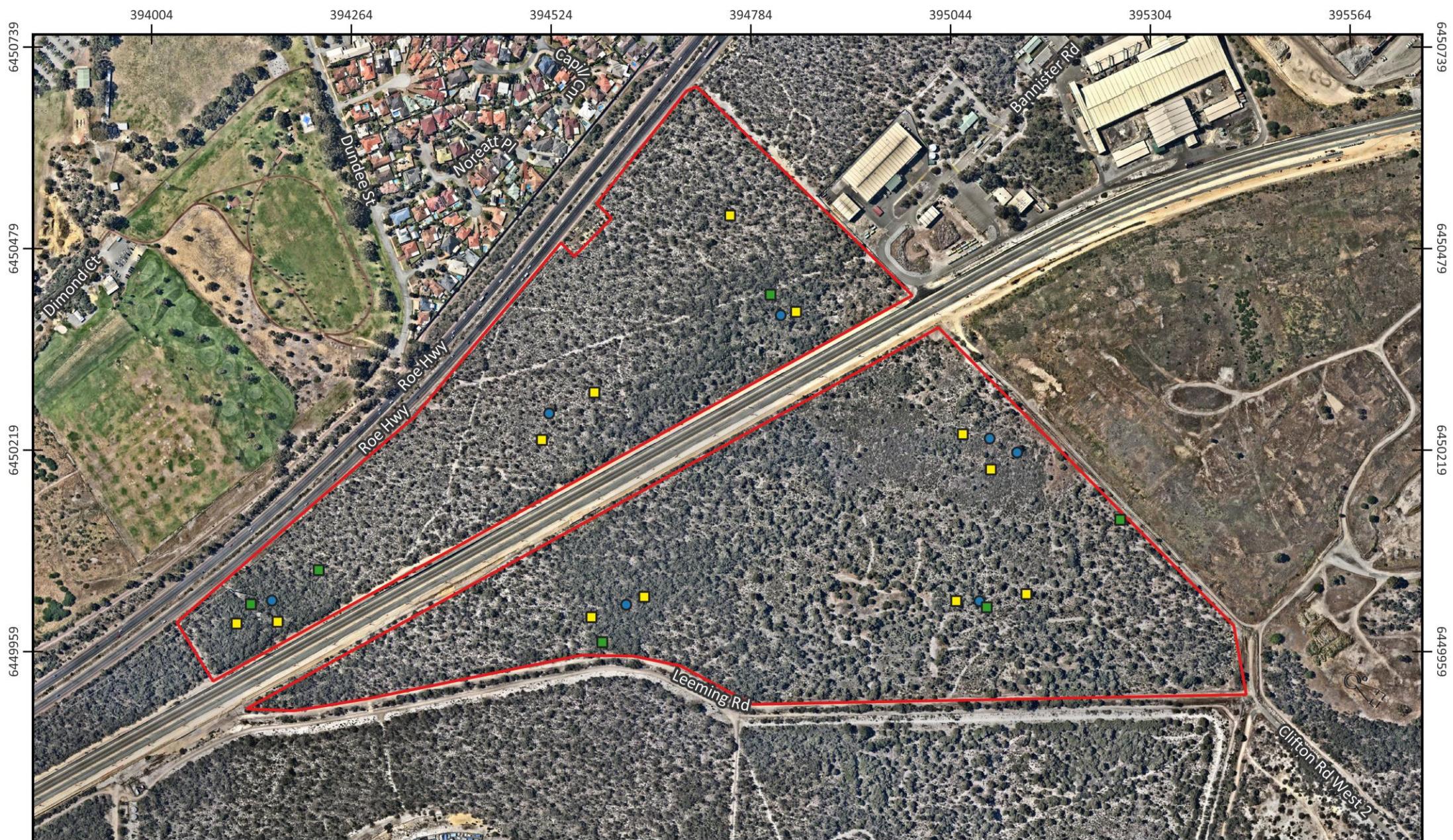


Figure 10: Elliot trap.

Table 43: Fauna trapping locations provided as GPS Coordinates

ID	Type	Northing	Easting
KH-C2	Trail Camera	394133	6450020
KH-C3	Trail Camera	394810	6450420

ID	Type	Northing	Easting
KH-C4	Trail Camera	395091	6450016
KH-C5	Trail Camera	394591	6449971
KH-C6	Trail Camera	395265	6450129
KH-C7	Trail Camera	394221	6450064
KH-E10	Elliot	394168	6449997
KH-E11	Elliot	394114	6449995
KH-E12	Elliot	394580	6450293
KH-E13	Elliot	394512	6450232
KH-E14	Elliot	394757	6450522
KH-E15	Elliot	394843	6450397
KH-E16	Elliot	395143	6450033
KH-E17	Elliot	395051	6450024
KH-E18	Elliot	394576	6450003
KH-E19	Elliot	394645	6450030
KH-E20	Elliot	395060	6450239
KH-E21	Elliot	395097	6450194
KH-TL3	Trap Line	394160	6450025
KH-TL4	Trap Line	394521	6450266
KH-TL5	Trap Line	394823	6450393
KH-TL6	Trap Line	395082	6450024
KH-TL7	Trap Line	394622	6450019
KH-TL8	Trap Line	395095	6450234



Map 17:
Trap Locations

Ken Hurst Park, Leeming

Legend

- Elliot
- Trap Line
- Trail Camera
- Reserve Boundary

Client: City of Melville
 Date: 01/04/2025
 Created by: Z. Stoney
 Image Source: Nearmap, 2025
 Datum: GDA2020 / MGA zone 50
 Scale: 1: 6500



Appendix 2: Conservation Codes

Western Australia

Conservation Code	Name	Description
T	Threatened	Flora or fauna that is rare or likely to become extinct, ranked according to their level of threat using IUCN Red List criteria (Schedules 1-3 of the Wildlife Conservation (Specially Protected Fauna) Notice or the Wildlife Conservation (Rare Flora) Notice)
CR	Critically endangered	Species considered to be facing an extremely high risk of extinction within the wild in the immediate future
EN	Endangered	Species considered to be facing a very high risk of extinction in the wild in the near future
VU	Vulnerable	Species considered to be facing a high risk of extinction in the wild in the medium-term future
EX	Extinct Species	Species where 'there is no reasonable doubt that the last member of the species has died (Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice or the Wildlife Conservation (Rare Flora) Notice)
EW	Extinct in the Wild	Species that are known to only survive in cultivation, in captivity, or as a naturalised population well outside its past range; and it has not been recorded in its known or expected habitat at appropriate seasons anywhere in its past range, despite surveys over a timeframe appropriate to its life cycle and form
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 (Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice)
CD	Conservation Dependent	Species of special conservation interest (conservation dependent fauna), being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened (Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice)
OS	Specially Protected	Fauna otherwise in need of special protection to ensure their conservation (Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice)
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

Conservation Code	Name	Description
		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.
P1	Priority One	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, such as road verges, urban areas, farmland, active mineral lease and under threat of habitat destruction or degradation.
2	Priority Two	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, such as national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves and similar.
3	Priority Three	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
4	Priority Four	Rare or near threatened and other species in need of monitoring.

Source: DBCA, 2023b.

Commonwealth

Category	Description
Critically Endangered	Species facing an extremely high risk of extinction in the wild in the immediate future
Endangered	Species facing a very high risk of extinction in the wild in the near future
Vulnerable	Species facing a high risk of extinction in the wild in the medium term

Appendix 3: Reference Sites

Quadrat No.:	KEN01
Survey Date:	12/09/2024
Personnel:	BD TC
Northing:	6450079
Easting:	394704
Topography:	Plain
Aspect:	N/A
Slope:	< 1 %
Soil:	Grey sand
Gravel:	0 %
Rock:	0 %
Leaf Litter:	80 %
Bare Ground:	0 %
Drainage:	Well
Condition:	Excellent



Notes: A woodland of *Banksia attenuata* and *Banksia menziesii* over mixed native shrubland and heathland.

Species	Cover (%)	Height (m)
* <i>Briza maxima</i>	0.1	0.1
* <i>Ehrharta longiflora</i>	0.1	0.2
* <i>Medicago polymorpha</i>	0.1	0.1
* <i>Sonchus oleraceus</i>	0.1	0.2
* <i>Urospermum picroides</i>	0.1	0.1
<i>Allocasuarina fraseriana</i>	5	6
<i>Banksia attenuata</i>	60	8
<i>Banksia menziesii</i>	45	7
<i>Bossiaea eriocarpa</i>	0.2	0.1
<i>Caladenia flava</i>	0.2	0.2
<i>Caladenia longicauda</i>	0.1	0.1
<i>Centrolepis glabra</i>	0.1	0.1
<i>Chaetospora curvifolia</i>	0.1	0.3
<i>Chamaescilla corymbosa</i>	0.2	0.1

Species	Cover (%)	Height (m)
<i>Conostylis juncea</i>	0.2	0.3
<i>Dasypogon bromeliifolius</i>	15	0.2
<i>Drosera menziesii</i>	0.1	0.4
<i>Eriochilus dilatatus</i>	0.1	0.2
<i>Eryngium pinnatifidum</i>	0.2	0.2
<i>Hibbertia subvaginata</i>	1	0.3
<i>Hovea trisperma</i>	0.2	0.1
<i>Lagenophora huegelii</i>	0.1	0.2
<i>Lepidosperma squamatum</i>	0.5	0.3
<i>Lomandra caespitosa</i>	0.1	0.15
<i>Lomandra hermaphrodita</i>	0.2	0.1
<i>Lomandra micrantha</i>	1	0.3
<i>Lyginia imberbis</i>	2	0.3
<i>Patersonia occidentalis</i>	5	3
<i>Petrophile linearis</i>	0.2	0.2
<i>Phlebocarya ciliata</i>	1	0.1
<i>Platysace filiformis</i>	1	0.2
<i>Poranthera microphylla</i>	0.1	0.1
<i>Schoenus caespititius</i>	2	0.2
<i>Scholtzia involucrata</i>	2	0.4
<i>Senecio multicaulis</i>	0.1	0.3
<i>Thysanotus sparteus</i>	0.5	0.2
<i>Trachymene pilosa</i>	0.1	0.1
<i>Trachymene pilosa</i>	0.1	0.1
<i>Tricoryne elatior</i>	0.5	0.2
<i>Wahlenbergia preissii</i>	0.1	0.1
<i>Xanthorrhoea brunonis</i>	6	1
<i>Xanthorrhoea preissii</i>	10	2

Note: *denotes introduced species.

Quadrat No.:	KEN02
Survey Date:	12/09/2024
Personnel:	KE BD
Northing:	6450389
Easting:	394609
Topography:	Plain
Aspect:	N/A
Slope:	< 1 %
Soil:	Grey sand
Gravel:	0 %
Rock:	0 %
Leaf Litter:	15 %
Bare Ground:	20 %
Drainage:	Well
Condition:	Very Good



Notes: A woodland of *Banksia attenuata* and *Banksia menziesii* with emergent *Eucalyptus tottiana* over mixed native shrubland and heathland.

Species	Cover (%)	Height (m)
* <i>Briza maxima</i>	2	0.4
* <i>Gladiolus caryophyllaceus</i>	0.5	0.4
* <i>Hypochaeris glabra</i>	0.5	0.5
* <i>Ursinia anthemoides</i>	2	0.5
<i>Acacia willdenowiana</i>	0.1	0.5
<i>Allocasuarina fraseriana</i>	1	2
<i>Allocasuarina humilis</i>	6	1.5
<i>Austrostipa compressa</i>	0.1	0.2
<i>Banksia attenuata</i>	3	4
<i>Banksia dallanneyi</i>	1	0.2
<i>Banksia menziesii</i>	40	6
<i>Bossiaea eriocarpa</i>	1	0.4
<i>Burchardia congesta</i>	0.1	0.5
<i>Caladenia flava</i>	1	0.2
<i>Chamaescilla corymbosa</i>	2	0.1
<i>Conostephium pendulum</i>	1	0.4

Species	Cover (%)	Height (m)
<i>Daviesia triflora</i>	1	0.4
<i>Desmocladius asper</i>	0.1	0.1
<i>Desmocladius flexuosus</i>	1	0.2
<i>Drosera drummondii</i>	0.1	0.3
<i>Ehrharta calycina</i>	0.5	0.5
<i>Eremaea pauciflora</i>	2	1
<i>Eriochilus dilatatus</i>	0.1	0.2
<i>Eucalyptus todtiana</i>	2	2
<i>Gompholobium tomentosum</i>	1	0.4
<i>Hibbertia huegelii</i>	0.1	0.2
<i>Hibbertia racemosa</i>	3	0.4
<i>Hypocalymma robustum</i>	1	0.5
<i>Jacksonia furcellata</i>	2	1.5
<i>Lyginia imberbis</i>	0.1	0.4
<i>Melaleuca thymoides</i>	2	2
<i>Myriocephalus occidentalis</i>	0.5	0.1
<i>Patersonia occidentalis</i>	1	0.4
<i>Podotheca angustifolia</i>	0.5	0.1
<i>Scholtzia involucrata</i>	10	0.3
<i>Senecio multicaulis</i>	0.1	0.2
<i>Stylidium piliferum</i>	0.1	0.3
<i>Stylidium schoenoides</i>	0.1	0.5
<i>Styphelia conostephioides</i>	0.5	0.3
<i>Thysanotus manglesianus</i>	0.5	0.3
<i>Trachymene pilosa</i>	2	0.4
<i>Waitzia suaveolens</i>	2	0.1
<i>Xanthorrhoea brunonis</i>	3	1.2
<i>Xanthorrhoea preissii</i>	5	2.5

Note: *denotes introduced species.

Quadrat No.:	KEN03
Survey Date:	12/09/2024
Personnel:	KE BD
Northing:	6450152
Easting:	394357
Topography:	Midslope
Aspect:	North-west
Slope:	< 1 %
Soil:	Brown sandy loam
Gravel:	0 %
Rock:	0 %
Leaf Litter:	60 %
Bare Ground:	15 %
Drainage:	Well
Condition:	Very Good



Notes: A woodland of *Banksia attenuata* and *Banksia menziesii* with emergent *Allocasuarina fraseriana* over mixed native shrubland and heathland.

Species	Cover (%)	Height (m)
* <i>Aira caryophyllea</i>	0.1	0.1
* <i>Briza maxima</i>	0.5	0.2
* <i>Gladiolus caryophyllaceus</i>	0.1	0.4
* <i>Hypochaeris glabra</i>	0.5	0.1
* <i>Sonchus oleraceus</i>	0.1	0.2
* <i>Urospermum picroides</i>	1	0.15
* <i>Ursinia anthemoides</i>	2	0.3
<i>Allocasuarina fraseriana</i>	10	5
<i>Allocasuarina humilis</i>	4	1.2
<i>Banksia attenuata</i>	30	8
<i>Banksia menziesii</i>	20	7
<i>Bossiaea eriocarpa</i>	2	0.4
<i>Burchardia congesta</i>	0.1	0.3
<i>Caladenia flava</i>	0.2	0.2
<i>Caladenia longicauda</i>	0.1	0.3

Species	Cover (%)	Height (m)
<i>Calytrix fraseri</i>	2	1
<i>Chamaescilla corymbosa</i>	0.5	0.1
<i>Conostephium pendulum</i>	0.5	0.2
<i>Conostephium pendulum</i>	0.5	0.2
<i>Conostylis aculeata</i>	1	0.2
<i>Conostylis juncea</i>	0.3	0.1
<i>Dasypogon bromeliifolius</i>	3	0.4
<i>Daviesia triflora</i>	1	0.5
<i>Desmocladius flexuosus</i>	1	0.1
<i>Desmocladius flexuosus</i>	1.5	0.1
<i>Drosera drummondii</i>	0.1	0.2
<i>Drosera erythrorhiza</i>	1	0.1
<i>Ehrharta calycina</i>	0.5	0.2
<i>Eriochilus dilatatus</i>	0.1	0.2
<i>Eucalyptus todtiana</i>	10	6
<i>Haemodorum paniculatum</i>	0.1	0.2
<i>Hibbertia huegelii</i>	0.2	0.2
<i>Hibbertia hypericoides</i>	4	0.5
<i>Hibbertia subvaginata</i>	0.2	0.3
<i>Hibbertia subvaginata</i>	0.2	0.3
<i>Hypocalymma angustifolium</i>	1	0.2
<i>Jacksonia furcellata</i>	2	2.5
<i>Lomandra hermaphrodita</i>	0.1	0.1
<i>Lyginia barbata</i>	2	0.5
<i>Microlaena stipoides</i>	0.1	0.1
<i>Microtis media</i>	0.1	0.2
<i>Patersonia occidentalis</i>	8	0.4
<i>Petrophile linearis</i>	1	0.3
<i>Philothea spicata</i>	0.1	0.3
<i>Pimelea sulphurea</i>	0.5	0.3
<i>Quinetia urvillei</i>	0.1	0.05

Species	Cover (%)	Height (m)
<i>Scaevola thesioides</i>	1	0.15
<i>Scholtzia involucrata</i>	2	0.2
<i>Stirlingia latifolia</i>	2	0.6
<i>Stylidium neurophyllum</i>	0.1	0.15
<i>Stylidium piliferum</i>	0.1	0.2
<i>Thysanotus manglesianus</i>	0.1	0.3
<i>Trachymene pilosa</i>	0.5	0.3
<i>Waitzia suaveolens</i>	1	0.15

Note: *denotes introduced species.

Appendix 4: Species List (Native Flora)

Native flora species identified within the reserve are listed below by family. Species denoted with ^ are where known occurrences are outside of the potential distribution for the species within the site.

Family	Species	Common Name	1992 Flora Survey	Management Plan			
				2003	2014	2021	2025
Anarthriaceae	<i>Lyginia barbata</i>		X	X	X	X	X
Anarthriaceae	<i>Lyginia imberbis</i>						X
Apiaceae	<i>Actinotus glomeratus</i>		X				
Apiaceae	<i>Eryngium pinnatifidum</i>	Blue Devils					X
Apiaceae	<i>Homalosciadium homalocarpum</i>		X				
Apiaceae	<i>Platysace compressa</i>	Tapeworm Plant	X	X	X		
Apiaceae	<i>Platysace filiformis</i>					X	X
Apiaceae	<i>Xanthosia huegelii</i>		X	X	X	X	X
Araliaceae	<i>Trachymene pilosa</i>	Native Parsnip	X		X	X	X
Asparagaceae	<i>Acanthocarpus preissii</i>			X	X		
Asparagaceae	<i>Laxmannia ramosa</i> subsp. <i>ramosa</i>	Branching Lily	X	X	X		
Asparagaceae	<i>Laxmannia squarrosa</i>	Paper Lily	X	X	X	X	
Asparagaceae	<i>Lomandra odora</i>	Tiered Matrush	X				
Asparagaceae	<i>Lomandra preissii</i>	Preiss' Mat Rush	X	X	X		
Asparagaceae	<i>Lomandra caespitosa</i>	Tufted Mat Rush	X	X		X	X
Asparagaceae	<i>Lomandra hermaphrodita</i>		X			X	X

Family	Species	Common Name	1992 Flora Survey	Management Plan			
				2003	2014	2021	2025
Asparagaceae	<i>Lomandra micrantha</i>	Small-flower Mat-rush					X
Asparagaceae	<i>Lomandra nigricans</i>		X	X	X		X
Asparagaceae	<i>Sowerbaea laxiflora</i>	Purple Tassels		X	X		
Asparagaceae	<i>Thysanotus multiflorus</i>	Many-flowered Fringe Lily	X	X	X		
Asparagaceae	<i>Thysanotus patersonii</i>	Paterson's Fringed Lily	X	X			
Asparagaceae	<i>Thysanotus thyrsoides</i>		X	X	X	X	
Asparagaceae	<i>Thysanotus triandrus</i>	Three-stamened Fringe Lily	X	X			
Asparagaceae	<i>Thysanotus manglesianus</i>	Mangles' Fringed Lily	X	X	X	X	X
Asparagaceae	<i>Thysanotus sparteus</i>	Leafless Fringed Lily				X	X
Asteraceae	<i>Asteridea pulverulenta</i>	Common Bristle Daisy	X		X	X	
Asteraceae	<i>Cotula bipinnata</i>	Ferny Cotula					X
Asteraceae	<i>Euchiton sphaericus</i>		X	X			
Asteraceae	<i>Helipterum cotula</i>			X	X		
Asteraceae	<i>Lagenophora huegelii</i>		X		X	X	X
Asteraceae	<i>Millotia myosotidifolia</i>		X		X		
Asteraceae	<i>Millotia tenuifolia</i> var. <i>tenuifolia</i>	Soft Millotia	X		X		
Asteraceae	<i>Myriocephalus occidentalis</i>						X
Asteraceae	<i>Pithocarpa pulchella</i>	Beautiful Pithocarpa	X		X		
Asteraceae	<i>Podotrochea gnaphalioides</i>	Golden Long-heads	X			X	
Asteraceae	<i>Podotrochea angustifolia</i>	Sticky Longheads	X	X	X	X	X

Family	Species	Common Name	1992 Flora Survey	Management Plan			
				2003	2014	2021	2025
Asteraceae	<i>Quinetia urvillei</i>		X		X	X	X
Asteraceae	<i>Rhodanthe citrina</i>		X				
Asteraceae	<i>Senecio quadridentatus</i>		X				
Asteraceae	<i>Senecio multicaulis</i>						X
Asteraceae	<i>Siloxerus filifolius</i>					X	
Asteraceae	<i>Siloxerus humifusus</i>	Procumbent Siloxerus	X		X	X	
Asteraceae	<i>Waitzia nitida</i>						X
Asteraceae	<i>Waitzia suaveolens</i>	Fragrant Waitzia	X	X	X	X	X
Campanulaceae	<i>Wahlenbergia gracilentia</i>	Annual Bluebell	X	X			
Campanulaceae	<i>Wahlenbergia preissii</i>		X			X	X
Casuarinaceae	<i>Allocasuarina fraseriana</i>	Sheoak	X	X	X	X	X
Casuarinaceae	<i>Allocasuarina humilis</i>	Dwarf Sheoak	X	X	X	X	X
Celastraceae	<i>Stackhousia huegelii</i>		X		X	X	
Celastraceae	<i>Tripterococcus brunonis</i>	Winged Stackhousia	X	X	X		
Centrolepidaceae	<i>Centrolepis drummondiana</i>	Drummond's Centrolepis	X				
Centrolepidaceae	<i>Centrolepis aristata</i>	Pointed Centrolepis	X	X	X	X	X
Centrolepidaceae	<i>Centrolepis glabra</i>	Smooth Centrolepis					X
Chenopodiaceae	<i>Rhagodia baccata</i>	Berry Saltbush					X
Colchicaceae	<i>Burchardia congesta</i>	Milkmaids	X	X	X	X	X
Crassulaceae	<i>Crassula colorata</i>	Dense Stonecrop	X	X	X		X

Family	Species	Common Name	1992 Flora Survey	Management Plan			
				2003	2014	2021	2025
Crassulaceae	<i>Crassula decumbens</i>	Rufous Stonecrop					X
Cyperaceae	<i>Lepidosperma apricola</i>						X
Cyperaceae	<i>Lepidosperma pubisquameum</i>						X
Cyperaceae	<i>Lepidosperma squamatum</i>			X	X		X
Cyperaceae	<i>Chaetospora curvifolia</i>		X	X	X	X	X
Cyperaceae	<i>Cyathochaeta avenacea</i>		X		X		
Cyperaceae	<i>Isolepis cernua</i>	Nodding Club-rush				X	
Cyperaceae	<i>Lepidosperma angustatum</i>		X	X	X		
Cyperaceae	<i>Lepidosperma longitudinale</i>	Pithy Sword-sedge	X	X	X	X	
Cyperaceae	<i>Mesomelaena pseudostygia</i>	Semaphore Sedge	X	X	X		
Cyperaceae	<i>Mesomelaena tetragona</i>	Semaphore Sedge		X			
Cyperaceae	<i>Schoenus brevisetis</i>		X	X			
Cyperaceae	<i>Schoenus pedicellatus</i>					X	
Cyperaceae	<i>Schoenus caespititius</i>						X
Dasypogonaceae	<i>Dasypogon bromeliifolius</i>	Pineapple Bush	X	X	X	X	X
Dilleniaceae	<i>Hibbertia stellaris</i>	Orange Stars		X			
Dilleniaceae	<i>Hibbertia huegelii</i>		X	X	X	X	X
Dilleniaceae	<i>Hibbertia hypericoides</i>	Yellow Buttercups	X	X	X	X	X
Dilleniaceae	<i>Hibbertia racemosa</i>	Stalked Guinea Flower	X	X		X	X
Dilleniaceae	<i>Hibbertia subvaginata</i>		X	X	X	X	X

Family	Species	Common Name	1992 Flora Survey	Management Plan			
				2003	2014	2021	2025
Droseraceae	<i>Drosera drummondii</i>						X
Droseraceae	<i>Drosera nitidula</i>	Shining Sundew				X	
Droseraceae	<i>Drosera paleacea</i> [^]	Dwarf Sundew	X	X			
Droseraceae	<i>Drosera pallida</i>	Pale Rainbow	X	X			
Droseraceae	<i>Drosera zonaria</i>	Painted Sundew	X				
Droseraceae	<i>Drosera erythrorhiza</i>	Red Ink Sundew	X	X	X	X	X
Droseraceae	<i>Drosera glanduligera</i>	Pimpernel	X	X			X
Droseraceae	<i>Drosera macrantha</i>	Bridal Rainbow	X	X	X	X	X
Droseraceae	<i>Drosera menziesii</i>	Pink Rainbow	X	X			X
Droseraceae	<i>Drosera porrecta</i>	Leafy Sundew					X
Elaeocarpaceae	<i>Platytheca galioides</i>		X	X	X		
Ericaceae	<i>Conostephium preissii</i>		X	X			
Ericaceae	<i>Conostephium pendulum</i>	Pearl Flower	X	X	X	X	X
Ericaceae	<i>Leucopogon polymorphus</i>		X	X			
Ericaceae	<i>Leucopogon pulchellus</i>	Beard-heath		X			
Ericaceae	<i>Leucopogon squarrosus</i>		X	X	X		
Ericaceae	<i>Lysinema elegans</i>		X	X			
Ericaceae	<i>Lysinema pentapetalum</i>	Curry Flower	X	X	X		
Ericaceae	<i>Styphelia conostephioides</i>		X	X			
Ericaceae	<i>Styphelia erubescens</i>		X	X			

Family	Species	Common Name	1992 Flora Survey	Management Plan			
				2003	2014	2021	2025
Ericaceae	<i>Styphelia propinqua</i>		X	X	X		
Ericaceae	<i>Styphelia xerophylla</i>		X	X	X		
Ericaceae	<i>Styphelia conostephioides</i>					X	X
Ericaceae	<i>Styphelia racemulosa</i>		X	X			X
Euphorbiaceae	<i>Monotaxis occidentalis</i>		X				
Fabaceae	<i>Acacia applanata</i>					X	
Fabaceae	<i>Acacia huegelii</i>	Huegel's Wattle	X	X	X		
Fabaceae	<i>Acacia pulchella</i>	Prickly Moses	X	X	X	X	X
Fabaceae	<i>Acacia saligna</i>	Orange Wattle	X	X	X		
Fabaceae	<i>Acacia stenoptera</i>	Narrow Winged Wattle	X	X	X	X	
Fabaceae	<i>Acacia willdenowiana</i>	Grass Wattle					X
Fabaceae	<i>Aotus procumbens</i>		X	X	X		
Fabaceae	<i>Bossiaea eriocarpa</i>	Common Brown Pea	X	X	X	X	X
Fabaceae	<i>Daviesia decurrens</i>	Prickly Bitter-pea		X	X	X	
Fabaceae	<i>Daviesia nudiflora</i>			X	X		
Fabaceae	<i>Daviesia physodes</i>		X	X	X		
Fabaceae	<i>Daviesia divaricata</i>	Marno				X	X
Fabaceae	<i>Daviesia triflora</i>		X	X	X	X	X
Fabaceae	<i>Euchilopsis linearis</i>	Swamp Pea	X		X	X	
Fabaceae	<i>Eutaxia virgata</i>		X	X	X		

Family	Species	Common Name	1992 Flora Survey	Management Plan			
				2003	2014	2021	2025
Fabaceae	<i>Gastrolobium nervosum</i>		X	X	X		
Fabaceae	<i>Gastrolobium capitatum</i>	Bacon and Eggs	X	X	X	X	X
Fabaceae	<i>Gompholobium confertum</i>		X	X	X	X	
Fabaceae	<i>Gompholobium scabrum</i>		X	X	X		
Fabaceae	<i>Gompholobium tomentosum</i>	Hairy Yellow Pea	X	X	X	X	X
Fabaceae	<i>Hardenbergia comptoniana</i>	Native Wisteria		X	X		
Fabaceae	<i>Hovea trisperma</i>	Common Hovea	X	X	X	X	X
Fabaceae	<i>Isotropis cuneifolia</i>	Granny Bonnets	X				
Fabaceae	<i>Jacksonia sternbergiana</i>	Stinkwood	X	X	X	X	
Fabaceae	<i>Jacksonia furcellata</i>	Grey Stinkwood	X	X	X	X	X
Fabaceae	<i>Kennedia prostrata</i>	Scarlet Runner	X	X	X		
Fabaceae	<i>Loricobbia reticulata</i>		X	X	X	X	
Fabaceae	<i>Sphaerolobium vimineum</i>	Leafless Globe Pea	X				
Goodeniaceae	<i>Dampiera linearis</i>	Common Dampiera	X	X	X	X	X
Goodeniaceae	<i>Lechenaultia expansa</i>		X				
Goodeniaceae	<i>Lechenaultia floribunda</i>	Free-flowering Leschenaultia	X	X	X	X	
Goodeniaceae	<i>Scaevola canescens</i>	Grey Scaevola		X	X		
Goodeniaceae	<i>Scaevola repens</i>		X	X	X	X	
Goodeniaceae	<i>Scaevola thesioides</i>						X

Family	Species	Common Name	1992 Flora Survey	Management Plan			
				2003	2014	2021	2025
Haemodoraceae	<i>Anigozanthos manglesii x humilis</i>		X	X			
Haemodoraceae	<i>Anigozanthos humilis</i>	Catspaw	X	X	X	X	X
Haemodoraceae	<i>Anigozanthos manglesii</i>	Mangles Kangaroo Paw	X	X	X	X	X
Haemodoraceae	<i>Conostylis aurea</i>	Golden Conostylis	X	X			
Haemodoraceae	<i>Conostylis setigera</i>		X	X	X	X	X
Haemodoraceae	<i>Conostylis aculeata</i>	Prickly Conostylis	X	X	X	X	X
Haemodoraceae	<i>Conostylis aculeata</i> subsp. <i>cygnorum</i>						X
Haemodoraceae	<i>Conostylis juncea</i>		X	X	X	X	X
Haemodoraceae	<i>Haemodorum spicatum</i>		X	X	X		
Haemodoraceae	<i>Haemodorum paniculatum</i>	Mardja					X
Haemodoraceae	<i>Phlebocarya filifolia</i>		X			X	
Haemodoraceae	<i>Phlebocarya ciliata</i>		X	X	X	X	X
Haloragaceae	<i>Gonocarpus pithyoides</i>		X	X	X		
Hemerocallidaceae	<i>Arnocrinum preissii</i>		X			X	
Hemerocallidaceae	<i>Chamaescilla corymbosa</i>	Blue Squill	X		X	X	X
Hemerocallidaceae	<i>Dianella revoluta</i>	Blueberry Lily	X	X	X	X	
Hemerocallidaceae	<i>Hensmania turbinata</i>		X				
Hemerocallidaceae	<i>Johnsonia acaulis</i>		X	X	X		
Hemerocallidaceae	<i>Tricoryne tenella</i>		X	X			

Family	Species	Common Name	1992 Flora Survey	Management Plan			
				2003	2014	2021	2025
Hemerocallidaceae	<i>Tricoryne elatior</i>	Yellow Autumn Lily	X	X	X	X	X
Iridaceae	<i>Patersonia occidentalis</i>	Purple Flag	X	X	X	X	X
Lamiaceae	<i>Hemiandra pungens</i>	Snakebush	X	X	X	X	X
Loganiaceae	<i>Phyllangium paradoxum</i>		X				
Loganiaceae	<i>Phyllangium paradoxum</i>					X	X
Loranthaceae	<i>Nuytsia floribunda</i>	Christmas Tree	X	X	X	X	X
Montiaceae	<i>Calandrinia corrigioloides</i>	Strap Purslane	X	X	X	X	X
Montiaceae	<i>Calandrinia granulifera</i>	Pygmy Purslane					X
Myrtaceae	<i>Astartea scoparia</i>	Common Astartea	X	X	X	X	X
Myrtaceae	<i>Babingtonia camphorosmae</i>	Camphor Myrtle		X	X		
Myrtaceae	<i>Beaufortia elegans</i>	Elegant Beaufortia	X	X	X		
Myrtaceae	<i>Calectasia narragara</i>	Star of Bethlehem	X	X	X	X	X
Myrtaceae	<i>Calothamnus lateralis</i>		X	X			
Myrtaceae	<i>Calytrix angulata</i>	Yellow Starflower	X	X	X	X	
Myrtaceae	<i>Calytrix flavescens</i>	Summer Starflower	X	X	X	X	X
Myrtaceae	<i>Calytrix fraseri</i>	Pink Summer Calytrix	X	X	X	X	X
Myrtaceae	<i>Corymbia calophylla</i>	Marri	X	X	X		
Myrtaceae	<i>Eremaea asterocarpa</i>					X	
Myrtaceae	<i>Eremaea pauciflora</i>		X	X	X	X	X
Myrtaceae	<i>Eucalyptus marginata</i>	Jarrah	X	X	X	X	X

Family	Species	Common Name	1992 Flora Survey	Management Plan			
				2003	2014	2021	2025
Myrtaceae	<i>Eucalyptus tottiana</i>	Pricklybark	X	X	X	X	X
Myrtaceae	<i>Hypocalymma angustifolium</i>	White Myrtle	X	X	X	X	X
Myrtaceae	<i>Hypocalymma robustum</i>	Swan River Myrtle	X	X	X		X
Myrtaceae	<i>Kunzea glabrescens</i>	Spearwood	X	X	X	X	X
Myrtaceae	<i>Melaleuca lateritia</i>	Robin Redbreast Bush	X	X	X		
Myrtaceae	<i>Melaleuca scabra</i>	Rough Honey myrtle	X	X	X		
Myrtaceae	<i>Melaleuca preissiana</i>	Modong	X	X	X	X	X
Myrtaceae	<i>Melaleuca seriata</i>		X		X	X	X
Myrtaceae	<i>Melaleuca thymoides</i>		X	X	X	X	X
Myrtaceae	<i>Pericalymma ellipticum</i>	Swamp Teatree	X	X	X	X	X
Myrtaceae	<i>Regelia inops</i>		X	X	X	X	
Myrtaceae	<i>Regelia ciliata</i>		X	X	X		X
Myrtaceae	<i>Scholtzia involucreta</i>	Spiked Scholtzia	X	X	X	X	X
Myrtaceae	<i>Verticordia drummondii</i>	Drummond's Featherflower	X				
Orchidaceae	<i>Caladenia discoidea</i>	Dancing Orchid	X	X			
Orchidaceae	<i>Caladenia falcata</i>	Fringed Mantis Orchid		X			
Orchidaceae	<i>Caladenia huegelii</i>	Grand Spider Orchid	X	X	X		X
Orchidaceae	<i>Caladenia latifolia</i>	Pink Fairies		X			
Orchidaceae	<i>Caladenia longicauda subsp. calcigena</i>	Coastal White Spider Orchid		X			

Family	Species	Common Name	1992 Flora Survey	Management Plan			
				2003	2014	2021	2025
Orchidaceae	<i>Caladenia macrostylis</i>	Leaping Spider Orchid		X			
Orchidaceae	<i>Caladenia paludosa</i>	Swamp Spider Orchid	X	X			
Orchidaceae	<i>Caladenia arenicola</i>	Carousel Spider Orchid	X	X			X
Orchidaceae	<i>Caladenia flava</i>	Cowslip Orchid	X	X	X	X	X
Orchidaceae	<i>Caladenia longicauda</i>	Common White Spider Orchid	X	X		X	X
Orchidaceae	<i>Cyanicula gemmata</i>	Blue China Orchid	X	X			X
Orchidaceae	<i>Diuris</i> sp.					X	
Orchidaceae	<i>Diuris corymbosa</i>	Common Donkey Orchid	X	X			X
Orchidaceae	<i>Diuris magnifica</i>	Large Pansy Orchid		X			X
Orchidaceae	<i>Elythranthera brunonis</i>	Purple Enamel Orchid	X	X			
Orchidaceae	<i>Eriochilus dilatatus</i>	White Bunny Orchid		X		X	X
Orchidaceae	<i>Leporella fimbriata</i>	Hare Orchid				X	
Orchidaceae	<i>Microtis media</i>	Tall Mignonette Orchid	X	X	X	X	X
Orchidaceae	<i>Prasophyllum ovale</i>	Little Leek Orchid		X			
Orchidaceae	<i>Prasophyllum parvifolium</i>	Autumn Leek Orchid		X			
Orchidaceae	<i>Pterostylis pyramidalis</i>	Tall Snail Orchid				X	
Orchidaceae	<i>Pterostylis sanguinea</i>	Dark Banded Greenhood		X			
Orchidaceae	<i>Pterostylis recurva</i>	Jug Orchid		X		X	X
Orchidaceae	<i>Pterostylis vittata</i>	Banded Greenhood	X	X	X	X	X

Family	Species	Common Name	1992 Flora Survey	Management Plan			
				2003	2014	2021	2025
Orchidaceae	<i>Pyrorchis nigricans</i>	Red Beaks	X			X	X
Orchidaceae	<i>Thelymitra antennifera</i>	Lemon-scented Sun Orchid			X		
Orchidaceae	<i>Thelymitra benthamiana</i>	Leopard Orchid				X	
Orchidaceae	<i>Thelymitra campanulata</i>	Shirt Orchid		X			
Orchidaceae	<i>Thelymitra crinita</i>	Blue Lady Orchid	X	X	X		
Orchidaceae	<i>Thelymitra</i> sp.					X	X
Phyllanthaceae	<i>Lysiandra calycina</i>	False Boronia		X	X		
Phyllanthaceae	<i>Poranthera microphylla</i>	Small Poranthera	X				X
Poaceae	<i>Amphipogon turbinatus</i>		X	X		X	
Poaceae	<i>Austrostipa campylachne</i>		X				
Poaceae	<i>Austrostipa compressa</i>		X	X		X	X
Poaceae	<i>Deyeuxia quadriseta</i>	Reed Bentgrass	X				
Poaceae	<i>Lachnagrostis filiformis</i>		X	X			
Poaceae	<i>Microlaena stipoides</i>	Weeping Grass					X
Poaceae	<i>Neurachne alopecuroidea</i>	Foxtail Mulga Grass		X	X		
Poaceae	<i>Rytidosperma occidentale</i>		X				
Polygalaceae	<i>Comesperma calymega</i>	Blue-spike Milkwort	X	X	X	X	
Proteaceae	<i>Adenanthos cygnorum</i>	Common Woollybush	X	X	X	X	X
Proteaceae	<i>Adenanthos obovatus</i>	Basket Flower	X	X	X	X	X
Proteaceae	<i>Banksia lindleyana</i> [^]	Porcupine Banksia	X	X	X		

Family	Species	Common Name	1992 Flora Survey	Management Plan			
				2003	2014	2021	2025
Proteaceae	<i>Banksia littoralis</i>	Swamp Banksia	X	X	X	X	
Proteaceae	<i>Banksia attenuata</i>	Slender Banksia	X	X	X	X	X
Proteaceae	<i>Banksia dallanneyi</i>	Couch Honeypot					X
Proteaceae	<i>Banksia ilicifolia</i>	Holly-leaved Banksia	X	X	X	X	X
Proteaceae	<i>Banksia menziesii</i>	Firewood Banksia	X	X	X	X	X
Proteaceae	<i>Grevillea obtusifolia</i>	Obtuse Leaved Grevillea		X			
Proteaceae	<i>Hakea trifurcata</i>	Two-leaf Hakea		X			
Proteaceae	<i>Hakea prostrata</i>	Harsh Hakea					X
Proteaceae	<i>Persoonia saccata</i>	Snottygobble	X			X	X
Proteaceae	<i>Petrophile striata</i>			X			
Proteaceae	<i>Petrophile linearis</i>	Pixie Mops	X	X	X	X	X
Proteaceae	<i>Stirlingia latifolia</i>	Blueboy	X	X	X	X	X
Proteaceae	<i>Synaphea spinulosa</i>			X	X	X	
Ranunculaceae	<i>Clematis linearifolia</i>	Slender Clematis					X
Restionaceae	<i>Desmocladus asper</i>						X
Restionaceae	<i>Desmocladus fasciculatus</i>						X
Restionaceae	<i>Desmocladus flexuosus</i>		X	X	X	X	X
Restionaceae	<i>Hypolaena exsulca</i>		X	X	X	X	X
Restionaceae	<i>Lepyrodia</i> sp.		X				
Restionaceae	<i>Loxocarya cinerea</i>		X	X	X		

Family	Species	Common Name	1992 Flora Survey	Management Plan			
				2003	2014	2021	2025
Rubiaceae	<i>Opercularia hispidula</i>	Hispid Stinkweed		X	X		
Rubiaceae	<i>Opercularia vaginata</i>	Dog Weed	X	X	X	X	X
Rutaceae	<i>Boronia crenulata</i>	Aniseed Boronia	X	X	X	X	
Rutaceae	<i>Boronia dichotoma</i>		X	X		X	
Rutaceae	<i>Cyanothamnus ramosus</i> subsp. <i>ramosus</i>		X	X			
Rutaceae	<i>Philotheca spicata</i>	Pepper and Salt	X	X	X	X	X
Santalaceae	<i>Leptomeria empetriformis</i>		X				
Santalaceae	<i>Leptomeria pauciflora</i>	Sparse-flowered Currant Bush	X	X	X		
Stylidiaceae	<i>Levenhookia stipitata</i>	Common Stylewort	X	X	X		
Stylidiaceae	<i>Levenhookia pusilla</i>	Midget Stylewort					X
Stylidiaceae	<i>Stylidium brunonianum</i>	Pink Fountain Triggerplant	X	X	X	X	
Stylidiaceae	<i>Stylidium carnosum</i>	Fleshy-leaved Triggerplant	X		X		
Stylidiaceae	<i>Stylidium divaricatum</i>	Daddy-long-legs	X	X			
Stylidiaceae	<i>Stylidium junceum</i>	Little Reed Triggerplant	X	X			
Stylidiaceae	<i>Stylidium preissii</i>	Lizard Triggerplant	X	X			
Stylidiaceae	<i>Stylidium repens</i>	Matted Triggerplant	X	X	X	X	
Stylidiaceae	<i>Stylidium rigidulum</i>	Flagon Triggerplant					X
Stylidiaceae	<i>Stylidium neurophyllum</i>	Coastal Plain Triggerplant					X

Family	Species	Common Name	1992 Flora Survey	Management Plan			
				2003	2014	2021	2025
Stylidiaceae	<i>Stylidium piliferum</i>	Common Butterfly Triggerplant	X		X	X	X
Stylidiaceae	<i>Stylidium schoenoides</i>	Cow Kicks	X	X	X		X
Thymelaeaceae	<i>Pimelea imbricata</i> var. <i>imbricata</i>		X	X	X		
Thymelaeaceae	<i>Pimelea rosea</i>	Rose Banjine	X	X	X		
Thymelaeaceae	<i>Pimelea sulphurea</i>	Yellow Banjine	X		X	X	X
Violaceae	<i>Pigea calycina</i>	Wild Violet		X	X		
Xanthorrhoeaceae	<i>Xanthorrhoea gracilis</i>	Graceful Grass Tree		X			
Xanthorrhoeaceae	<i>Xanthorrhoea brunonis</i>					X	X
Xanthorrhoeaceae	<i>Xanthorrhoea preissii</i>	Grass tree	X	X	X	X	X
Zamiaceae	<i>Macrozamia fraseri</i>	Sandplain Zamia	X	X	X	X	X

Appendix 5: Species List (Fauna)

Fauna species recorded across the reserve are listed below by family. Species highlighted in red are declared pests and those that are highlighted in green are conservation significant species.

Family	Species	Common Name	1992 Fauna survey	Management Plan			
				2003	2014	2021	2025
Amphibian							
Limnodynastidae	<i>Heleioporus eyrei</i>	Moaning Frog	X		X		
Limnodynastidae	<i>Limnodynastes dorsalis</i>	Western Banjo Frog	X			X	
Myobatrachidae	<i>Myobatrachus gouldii</i>	Turtle Frog	X				
Myobatrachidae	<i>Pseudophryne guentheri</i>	Crawling Toadlet	X				
Bird							
Acanthizidae	<i>Acanthiza apicalis</i>	Inland Thornbill (Broad-tailed Thornbill)	X				
Acanthizidae	<i>Acanthiza chrysorrhoa</i>	Yellow-rumped Thornbill	X		X		
Acanthizidae	<i>Acanthiza inornata</i>	Western Thornbill	X				
Acanthizidae	<i>Gerygone fusca</i>	Western Gerygone	X	X	X		
Acanthizidae	<i>Smicronis brevirostris</i>	Weebill	X				
Accipitridae	<i>Aquila audax</i>	Wedge-tailed Eagle	X				
Accipitridae	<i>Elanus axillaris</i>	Black-shouldered Kite			X		X
Accipitridae	<i>Haliastur sphenurus</i>	Whistling Kite	X				
Accipitridae	<i>Hieraaetus morphnoides</i>	Little Eagle	X				
Accipitridae	<i>Tachyspiza fasciata</i>	Brown Goshawk	X	X	X		X

Family	Species	Common Name	1992 Fauna survey	Management Plan			
				2003	2014	2021	2025
Aegothelidae	<i>Aegotheles cristatus</i>	Australian Owlet-nightjar	X				
Alcedinidae	<i>Todiramphus sanctus</i>	Sacred Kingfisher	X				
Anatidae	<i>Anas superciliosa</i>	Pacific Black Duck	X				
Artamidae	<i>Artamus cinereus</i>	Black-faced Woodswallow	X		X		
Artamidae	<i>Cracticus torquatus</i>	Grey Butcherbird	X	X	X		
Artamidae	<i>Gymnorhina tibicen</i>	Australian Magpie	X	X	X		
Cacatuidae	<i>Cacatua sanguinea</i>	Little Corella			X		
Cacatuidae	<i>Eolophus roseicapilla</i>	Galah	X	X	X		X
Cacatuidae	<i>Zanda latirostris</i>	Carnaby's Cockatoo	X	X	X	X	X
Campephagidae	<i>Coracina novaehollandiae</i>	Black-faced Cuckooshrike	X	X	X	X	
Columbidae	* <i>Columba livia</i>	Domestic Pigeon (Rock Dove)	X	X		X	
Columbidae	<i>Ocyphaps lophotes</i>	Crested Pigeon				X	X
Columbidae	<i>Phaps chalcoptera</i>	Common Bronzewing	X	X	X	X	X
Columbidae	* <i>Spilopelia chinensis</i>	Spotted Turtle Dove	X	X	X		
Columbidae	* <i>Spilopelia senegalensis</i>	Laughing Turtle Dove	X	X	X		X
Corvidae	<i>Corvus coronoides</i>	Australian Raven	X	X	X	X	X
Cuculidae	<i>Cacomantis flabelliformis</i>	Fan-tailed Cuckoo	X				
Cuculidae	<i>Chalcites basalis</i>	Horsfield's Bronze Cuckoo	X				
Cuculidae	<i>Chalcites lucidus</i>	Shining Bronze Cuckoo	X				X
Cuculidae	<i>Heteroscenes pallidus</i>	Pallid Cuckoo	X				

Family	Species	Common Name	1992 Fauna survey	Management Plan			
				2003	2014	2021	2025
Falconidae	<i>Falco cenchroides</i>	Australian Kestrel (Nankeen Kestrel)	X				
Falconidae	<i>Falco longipennis</i>	Australian Hobby	X	X			
Falconidae	<i>Falco peregrinus</i>	Peregrine Falcon	X				
Hirundinidae	<i>Hirundo neoxena</i>	Welcome Swallow	X	X	X		
Hirundinidae	<i>Petrochelidon nigricans</i>	Tree Martin					
Laridae	<i>Chroicocephalus novaehollandiae</i>	Silver Gull	X				
Maluridae	<i>Malurus splendens</i>	Splendid Fairywren	X	X	X	X	X
Meliphagidae	<i>Acanthorhynchus superciliosus</i>	Western Spinebill	X	X			X
Meliphagidae	<i>Anthochaera carunculata</i>	Red Wattlebird	X	X	X	X	
Meliphagidae	<i>Anthochaera lunulata</i>	Western Little Wattlebird (Western Wattlebird)	X	X			
Meliphagidae	<i>Gavicalis virescens</i>	Singing Honeyeater	X	X	X		X
Meliphagidae	<i>Lichmera indistincta</i>	Brown Honeyeater	X	X	X	X	X
Meliphagidae	<i>Phylidonyris niger</i>	White-cheeked Honeyeater	X	X	X		X
Meliphagidae	<i>Phylidonyris novaehollandiae</i>	New Holland Honeyeater	X	X	X	X	X
Meropidae	<i>Merops ornatus</i>	Rainbow Bee-eater	X	X	X	X	
Monarchidae	<i>Grallina cyanoleuca</i>	Magpie-lark	X	X	X		
Motacillidae	<i>Anthus australis</i>	Australian Pipit	X				
Neosittidae	<i>Daphoenositta chrysoptera</i>	Varied Sittella	X	X			
Pachycephalidae	<i>Colluricincla harmonica</i>	Grey Shrikethrush	X	X			X

Family	Species	Common Name	1992 Fauna survey	Management Plan			
				2003	2014	2021	2025
Pachycephalidae	<i>Pachycephala rufiventris</i>	Rufous Whistler	X	X	X		X
Pandionidae	<i>Pandion haliaetus</i>	Osprey		X			
Pardalotidae	<i>Pardalotus striatus</i>	Striated Pardalote	X	X	X		
Petroicidae	<i>Microeca fascinans</i>	Jacky Winter					X
Petroicidae	<i>Petroica boodang</i>	Scarlet Robin	X	X			
Podargidae	<i>Podargus strigoides</i>	Tawny Frogmouth	X		X		
Podicipedidae	<i>Tachybaptus novaehollandiae</i>	Australasian Grebe (Black-throated Grebe)	X				
Psittaculidae	<i>Barnardius zonarius</i>	Australian Ringneck	X	X	X		
Psittaculidae	<i>Purpureicephalus spurius</i>	Red-capped Parrot	X	X	X	X	
Psittaculidae	* <i>Trichoglossus moluccanus</i>	Rainbow Lorikeet	X	X	X	X	X
Rhipiduridae	<i>Rhipidura albiscapa</i>	Grey Fantail	X	X	X		
Rhipiduridae	<i>Rhipidura leucophrys</i>	Willie Wagtail	X	X	X	X	X
Strigidae	<i>Ninox boobook</i>	Boobook Owl	X				
Threskiornithidae	<i>Threskiornis molucca</i>	Australian White Ibis	X				
Turnicidae	<i>Turnix varius</i>	Painted Buttonquail	X				
Tytonidae	<i>Tyto javanica</i>	Eastern Barn Owl	X				
Zosteropidae	<i>Zosterops lateralis</i>	Grey-breasted White-eye (Silvereye)	X	X	X	X	X
Invertebrate							
Acrididae	<i>Coryphistes ruricola</i>	Bark-mimicking Grasshopper				X	

Family	Species	Common Name	1992 Fauna survey	Management Plan			
				2003	2014	2021	2025
Acrididae	<i>Pycnostictus seriatus</i>	Common Bandwing Grasshopper				X	
Apidae	* <i>Apis mellifera</i>	Western Honeybee			X	X	
Apidae	<i>Amegilla chlorocyanea</i>						X
Amorphoscelidae	<i>Paraoxypilus</i> sp.	Praying Mantis 2			X		
Araneidae	<i>Argiope protensa</i>	Tailed Forest Spider				X	
Araneidae	<i>Austracantha minax</i>	Christmas Jewel Spider			X	X	
Araneidae	<i>Eriophora biapicata</i>	Garden Orb Weaving Spider			X		
Araneidae	<i>Plebs cyphoxis</i>	Western Bush Orbweaver				X	
Araneidae	<i>Trichonephila edulis</i>	Australian Golden Orbweaver				X	
Blattidae	<i>Drymaplaneta semivitta</i>	Gisborne Cockroach				X	
Blattidae	<i>Euzosteria subverrucosa</i>	Bush cockroach			X		
Blattidae	<i>Platyzosteria armata</i>					X	
Blattidae		Cockroach				X	
Carabidae	<i>Scaraphites</i> sp.	Beetle sp.			X		
Cicadidae	<i>Arenopsaltria fullo</i>	Western Sandgrinder				X	
Colletidae	<i>Euryglossula perpusilla</i>						X
Colletidae	<i>Euryglossula narifera</i>						X
Colletidae	<i>Euryglossula mellea</i>						X
Colletidae	<i>Euryglossula "banksia"</i>						X

Family	Species	Common Name	1992 Fauna survey	Management Plan			
				2003	2014	2021	2025
Colletidae	<i>Euryglossula "metallicap"</i>						X
Colletidae	<i>Hylaeus "bicurvatus"</i>						X
Colletidae	<i>Hylaeus "heart" cf. proximus</i>						X
Colletidae	<i>Hylaeus violaceus</i>						X
Corduliidae	<i>Hemicordulia tau</i>	Tau Emerald				X	
Curculionidae	<i>Catasarcus pallidiventris</i>	Weevil				X	
Ectobiidae	<i>Ellipsidion humerale</i>	Bush Cockroach				X	
Formicidae	<i>Myrmecia</i> sp.	Bull Ant				X	
Formicidae	<i>Myrmecia vindex</i>	Bull Ant		X			
Formicidae		Ant				X	
Halictidae	<i>Lasioglossum hemichalceum</i>						X
Julidae	* <i>Ommatoiulus moreletii</i>	Portuguese Millipede		X		X	
Lumbricidae		Earthworm				X	
Lycosidae	<i>Lycosa godeffroyi</i>	Wolf spider		X			
Lycosidae	<i>Venatrix</i> sp.	Wolf Spider				X	
Mantidae	<i>Archimantis sobrina</i>	Praying Mantis 1		X			
Megachilidae	<i>Megachile "houstoni"</i>						X
Megachilidae	<i>Megachile "KSPsp19"</i>						X
Nanomantidae	<i>Gyromantis occidentalis</i>	Eastern Bark Mantis				X	
Nephilidae	<i>Nephila edulis</i>	Golden Orb Weaving Spiders		X			

Family	Species	Common Name	1992 Fauna survey	Management Plan			
				2003	2014	2021	2025
Nymphalidae	<i>Geitoneura klugii</i>	Kulg's Xenica				X	
Pholcidae	<i>Smeringopus natalensis</i>	Natal's Daddy Long-legs Spider				X	
Pieridae	* <i>Pieris rapae</i>	Cabbage White Butterfly				X	
Pisauridae	<i>Dolomedes</i> sp.	Fishing Spider				X	
Rhinotermitidae	<i>Coptotermes</i> sp.	Termite Species			X		
Rhipiceridae		Feather Horned Beetle				X	
Scolopendridae	<i>Scolopendra</i> sp. 1	Centipede 1			X		
Scolopendridae	<i>Scolopendra</i> sp. 2	Centipede 2			X		
Sparassidae	<i>Neosparassus</i> sp.	Badge Huntsman Spiders				X	
Tenebrionidae	<i>Adelium</i> sp.					X	
Tettigoniidae	<i>Metaballus frontalis</i>	Common Marauding Katydid				X	
Tettigoniidae	<i>Torbia viridissima</i>	Gum-leaf Katydid				X	
Tiphiidae	<i>Phymatothynnus</i> sp.	Thynnid Wasp			X		
	<i>Katydid</i> sp.	Bush Cricket			X		
Mammal							
Canidae	* <i>Canis familiaris</i>	Dingo, Dog	X				
Canidae	* <i>Vulpes vulpes</i>	Red Fox	X	X	X	X	X
Felidae	* <i>Felis catus</i>	Cat					
Leporidae	* <i>Oryctolagus cuniculus</i>	Rabbit	X	X	X	X	X

Family	Species	Common Name	1992 Fauna survey	Management Plan			
				2003	2014	2021	2025
Macropodidae	<i>Macropus fuliginosus melanops</i>	Western Grey Kangaroo	X		X	X	X
Macropodidae	<i>Notamacropus irma</i>	Western Brush Wallaby	X			X	
Molossidae	<i>Austronomus australis</i>	White-striped Freetail-bat					X
Muridae	* <i>Mus musculus</i>	House Mouse	X				X
Peramelidae	<i>Isodon fusciventer</i>	Quenda	X		X	X	X
Phalangeridae	<i>Trichosurus vulpecula hypoleucus</i>	Common Brushtail Possum, Koomal					X
Vespertilionidae	<i>Nyctophilus geoffroyi geoffroyi</i>	Lesser Long-eared Bat					X
Vespertilionidae	<i>Nyctophilus gouldii</i>	Goulds Long eared bat			?		
Reptile							
Agamidae	<i>Ctenophorus adelaidensis</i>	Western Heath Dragon	X			X	
Agamidae	<i>Pogona minor minor</i>	Western Bearded Dragon	X			X	X
Elapidae	<i>Narophis bimaculatus</i>	Black-naped Burrowing Snake	X				
Elapidae	<i>Pseudonaja affinis affinis</i>		X			X	X
Elapidae	<i>Suta gouldii</i>	Gould's Hooded Snake	X				
Pygopodidae	<i>Aprasia repens</i>		X				
Pygopodidae	<i>Delma fraseri</i>		X			X	
Pygopodidae	<i>Delma grayii</i>		X				
Pygopodidae	<i>Lialis burtonis</i>		X			X	X
Pygopodidae	<i>Pygopus lepidopodus</i>	Common Scaly Foot			X	X	

Family	Species	Common Name	1992 Fauna survey	Management Plan			
				2003	2014	2021	2025
Scincidae	<i>Acritoscincus trilineatus</i>		X		X		
Scincidae	<i>Cryptoblepharus buchananii</i>						X
Scincidae	<i>Cryptoblepharus plagiocephalus</i>		X				
Scincidae	<i>Ctenotus australis</i>		X				
Scincidae	<i>Hemiergis quadrilineatus</i>					X	X
Scincidae	<i>Lerista elegans</i>		X				X
Scincidae	<i>Lerista lineata</i>		X		X		
Scincidae	<i>Menetia greyii</i>		X		X	X	X
Scincidae	<i>Tiliqua occipitalis</i>	Western Bluetongue	X				
Scincidae	<i>Tiliqua rugosa rugosa</i>	Bobtail	X		X	X	X
Varanidae	<i>Varanus gouldii</i>	Bungarra or Sand Goanna				X	

Appendix 6: Species List (Weeds)

Weed species recorded across the reserve are listed below by species. Species highlighted in red are declared pests and / or WoNS.

Category	Family	Species	Common Name	1992 Flora Survey	Management Plan			
					2003	2014	2021	2024
Very High								
Arum Lily	Araceae	* <i>Zantedeschia aethiopica</i>	Arum Lily			X	X	X
Brazilian Pepper	Anacardiaceae	* <i>Schinus terebinthifolia</i>						X
Bridal Creeper	Asparagaceae	* <i>Asparagus asparagoides</i>	Bridal Creeper			X	X	X
One-leaf Cape Tulip	Iridaceae	* <i>Moraea flaccida</i>	One-leaf Cape Tulip				X	X
Paterson's Curse	Boraginaceae	* <i>Echium plantagineum</i>	Paterson's Curse	X	X	X	X	X
Perennial clumping grasses	Poaceae	* <i>Cenchrus macrourus</i>	African Feather Grass			X		
	Poaceae	* <i>Cenchrus setaceus</i>	Fountain Grass				X	
	Poaceae	* <i>Cortaderia selloana</i>	Pampas Grass	X	X			
Perennial Veldt Grass	Poaceae	* <i>Ehrharta calycina</i>	Perennial Veldt Grass	X	X	X	X	X
African Lovegrass	Poaceae	* <i>Eragrostis curvula</i>	African Lovegrass	X	X	X		
Soldiers	Asparagaceae	* <i>Lachenalia reflexa</i>					X	X
High								
Annual Clumping Grass	Poaceae	* <i>Avena barbata</i>	Bearded Oat	X	X	X	X	X
	Poaceae	* <i>Avena fatua</i>	Wild Oat		X			
	Poaceae	* <i>Ehrharta longiflora</i>	Annual Veldt Grass	X	X		X	X

Category	Family	Species	Common Name	1992 Flora Survey	Management Plan			
					2003	2014	2021	2024
	Poaceae	* <i>Hordeum leporinum</i>	Barley Grass	X		X		
	Poaceae	* <i>Hordeum vulgare</i>	Barley					X
	Poaceae	* <i>Pentameris airoides</i>	False Hairgrass	X		X		
	Asphodelaceae	* <i>Asphodelus fistulosus</i>	Onion Weed	X				X
	Iridaceae	* <i>Chasmanthe floribunda</i>	African Cornflag					X
	Orchidaceae	* <i>Disa bracteata</i>	South African Orchid	X		X	X	
	Iridaceae	* <i>Freesia leichtlinii</i> subsp. <i>alba</i> x <i>leichtlinii</i> subsp. <i>leichtlinii</i>		X	X	X	X	X
Clumping Geophyte	Iridaceae	* <i>Gladiolus angustus</i>	Long Tubed Painted Lady	X				
	Iridaceae	* <i>Gladiolus caryophyllaceus</i>	Wild Gladiolus	X	X	X	X	X
	Iridaceae	* <i>Gladiolus undulatus</i>	Wild Gladiolus				X	
	Iridaceae	* <i>Moraea miniata</i>	Two-leaf Cape Tulip					X
	Iridaceae	* <i>Romulea rosea</i>	Guildford Grass	X	X	X	X	X
	Asphodelaceae	* <i>Trachyandra divaricata</i>					X	X
	Iridaceae	* <i>Watsonia meriana</i>	Bulbil Watsonia		X	X		X
Giant Grasses	Poaceae	* <i>Arundo donax</i>	Giant Reed	X	X			
Trees and Shrubs	Fabaceae	* <i>Acacia iteaphylla</i>				X	X	X
	Fabaceae	* <i>Acacia longifolia</i>					X	
	Fabaceae	* <i>Acacia podalyriifolia</i>		X	X			

Category	Family	Species	Common Name	1992 Flora Survey	Management Plan			
					2003	2014	2021	2024
	Solanaceae	* <i>Cestrum parqui</i>	Green Poisonberry			X		
	Fabaceae	* <i>Chamaecytisus palmensis</i>	Tagasaste				X	
	Cyperaceae	* <i>Cyperus</i> sp.			X	X		
	Moraceae	* <i>Ficus carica</i>	Common Fig					X
	Myrtaceae	* <i>Gaudium laevigatum</i>	Coast Teatree	X	X	X		X
	Apocynaceae	* <i>Nerium oleander</i>		X				
	Cactaceae	* <i>Opuntia stricta</i>	Common Prickly Pear				X	
	Asteraceae	* <i>Osteospermum ecklonis</i>		X		X		
	Geraniaceae	* <i>Pelargonium capitatum</i>	Rose Pelargonium	X	X	X	X	X
	Fabaceae	* <i>Retama raetam</i>					X	
	Euphorbiaceae	* <i>Ricinus communis</i>	Castor Oil Plant				X	
	Solanaceae	* <i>Solanum nigrum</i>	Black Berry Nightshade	X		X	X	X
Perennial running grasses	Poaceae	* <i>Stenotaphrum secundatum</i>	Buffalo Grass	X				
	Poaceae	* <i>Cynodon dactylon</i>	Couch	X	X			X
Medium								
All Other Perennial Weeds	Aizoaceae	* <i>Carpobrotus edulis</i>	Hottentot Fig	X	X	X		
	Apiaceae	* <i>Foeniculum vulgare</i>	Fennel	X	X			
	Asteraceae	* <i>Gazania linearis</i>		X		X		
	Brassicaceae	* <i>Lobularia maritima</i>	Sweet Alyssum	X				

Category	Family	Species	Common Name	1992 Flora Survey	Management Plan			
					2003	2014	2021	2024
	Malvaceae	* <i>Malva parviflora</i>	Marshmallow					X
Low								
	Poaceae	* <i>Aira caryophyllea</i>	Silvery Hairgrass	X	X			X
	Poaceae	* <i>Aira cupaniana</i>	Silvery Hairgrass				X	
	Poaceae	* <i>Aira praecox</i>	Early Hairgrass	X				
	Asteraceae	* <i>Arctotheca calendula</i>	Cape Weed	X	X	X	X	X
	Poaceae	* <i>Brachypodium distachyon</i>	False Brome	X				
	Brassicaceae	* <i>Brassica</i> sp.		X	X	X		
	Brassicaceae	* <i>Brassica tournefortii</i>	Mediterranean Turnip				X	X
	Poaceae	* <i>Briza maxima</i>	Blowfly Grass	X		X	X	X
All other Annual Weeds	Poaceae	* <i>Briza minor</i>	Shivery Grass	X	X		X	X
	Poaceae	* <i>Bromus diandrus</i>	Great Brome	X	X	X	X	X
	Gentianaceae	* <i>Centaureum erythraea</i>	Common Centaury	X		X		
	Caprifoliaceae	* <i>Centranthus macrosiphon</i>					X	X
	Caryophyllaceae	* <i>Cerastium glomeratum</i>	Mouse Ear Chickweed	X		X		X
	Asteraceae	* <i>Cotula bipinnata</i>	Ferny Cotula					X
	Asteraceae	* <i>Cotula turbinata</i>	Funnel Weed					X
	Crassulaceae	* <i>Crassula alata</i>					X	X
	Crassulaceae	* <i>Crassula glomerata</i>						X
	Scrophulariaceae	* <i>Dischisma capitatum</i>	Woolly-headed Dischisma					X

Category	Family	Species	Common Name	1992 Flora Survey	Management Plan			
					2003	2014	2021	2024
	Asteraceae	* <i>Erigeron bonariensis</i>		X	X	X		X
	Geraniaceae	* <i>Erodium botrys</i>	Long Storksbill					X
	Geraniaceae	* <i>Erodium</i> sp.		X	X	X		
	Euphorbiaceae	* <i>Euphorbia peplus</i>	Petty Spurge	X		X		X
	Euphorbiaceae	* <i>Euphorbia terracina</i>	Geraldton Carnation Weed	X	X	X	X	X
	Cyperaceae	* <i>Ficinia marginata</i>	Coarse Club Rush	X	X	X		X
	Papaveraceae	* <i>Fumaria capreolata</i>	Whiteflower Fumitory				X	X
	Papaveraceae	* <i>Fumaria muralis</i>	Wall Fumitory					X
	Rubiaceae	* <i>Galium murale</i>	Small Goosegrass					X
	Geraniaceae	* <i>Geranium molle</i>	Dove's Foot Cranesbill					X
	Asteraceae	* <i>Hypochaeris glabra</i>	Smooth Cats-ear	X	X	X	X	X
	Asteraceae	* <i>Hypochaeris radicata</i>	Flat Weed				X	X
	Asteraceae	* <i>Lactuca serriola</i>	Prickly Lettuce					X
	Poaceae	* <i>Lagurus ovatus</i>	Hare's Tail Grass	X	X	X	X	
	Asteraceae	* <i>Leontodon rhagadioloides</i>	Cretan Weed	X			X	X
	Poaceae	* <i>Lolium rigidum</i>	Wimmera Ryegrass	X	X	X	X	X
	Fabaceae	* <i>Lotus subbiflorus</i>		X				X
	Fabaceae	* <i>Lupinus angustifolius</i>	Narrowleaf Lupin					X
	Fabaceae	* <i>Lupinus cosentinii</i>		X	X	X		X

Category	Family	Species	Common Name	1992 Flora Survey	Management Plan			
					2003	2014	2021	2024
	Primulaceae	* <i>Lysimachia arvensis</i>	Pimpernel	X	X	X	X	X
	Fabaceae	* <i>Medicago polymorpha</i>	Burr Medic	X	X	X		X
	Fabaceae	* <i>Melilotus indicus</i>		X		X		
	Lamiaceae	* <i>Mentha pulegium</i>	Pennyroyal					X
	Asteraceae	* <i>Monoculus monstrosus</i>						X
	Orobanchaceae	* <i>Orobanche minor</i>	Lesser Broomrape	X	X	X	X	X
	Oxalidaceae	* <i>Oxalis corniculata</i>	Yellow Wood Sorrel					X
	Oxalidaceae	* <i>Oxalis pes-caprae</i>	Soursob	X	X	X		X
	Oxalidaceae	* <i>Oxalis purpurea</i>	Largeflower Wood Sorrel	X		X		
	Caryophyllaceae	* <i>Petrorhagia dubia</i>		X		X	X	X
	Poaceae	* <i>Poa annua</i>	Winter Grass		X			X
	Caryophyllaceae	* <i>Polycarpon tetraphyllum</i>	Fourleaf Allseed	X		X		
	Asteraceae	* <i>Pseudognaphalium luteoalbum</i>	Jersey Cudweed				X	X
	Brassicaceae	* <i>Raphanus raphanistrum</i>	Wild Radish					X
	Asteraceae	* <i>Senecio condylus</i>	Perth Groundsel					X
	Asteraceae	* <i>Senecio vulgaris</i>	Common Groundsel					X
	Caryophyllaceae	* <i>Silene gallica</i>	French Catchfly	X		X	X	X
	Asteraceae	* <i>Sonchus asper</i>	Rough Sowthistle		X		X	X
	Asteraceae	* <i>Sonchus oleraceus</i>	Common Sowthistle	X	X	X	X	X

Category	Family	Species	Common Name	1992 Flora Survey	Management Plan			
					2003	2014	2021	2024
	Caryophyllaceae	* <i>Stellaria media</i>	Chickweed					X
	Fabaceae	* <i>Trifolium angustifolium</i>	Narrowleaf Clover	X	X			
	Fabaceae	* <i>Trifolium arvense</i>	Hare's Foot Clover					X
	Fabaceae	* <i>Trifolium campestre</i>	Hop Clover	X	X	X	X	X
	Fabaceae	* <i>Trifolium dubium</i>	Suckling Clover	X	X	X		
	Fabaceae	* <i>Trifolium tomentosum</i>	Woolly Clover	X	X	X		
	Tropaeolaceae	* <i>Tropaeolum majus</i>	Garden Nasturtium	X				
	Asteraceae	* <i>Urospermum picroides</i>	False Hawkbit				X	X
	Asteraceae	* <i>Ursinia anthemoides</i>	Ursinia	X	X	X	X	X
	Scrophulariaceae	* <i>Verbascum virgatum</i>	Twiggy Mullein	X				
	Plantaginaceae	* <i>Veronica arvensis</i>	Wall Speedwell	X				
	Fabaceae	* <i>Vicia sativa</i>	Common Vetch					X
	Poaceae	* <i>Vulpia bromoides</i>	Squirrel Tail Fescue	X		X		
	Poaceae	* <i>Vulpia myuros</i>	Rat's Tail Fescue	X			X	X
	Campanulaceae	* <i>Wahlenbergia capensis</i>	Cape Bluebell	X		X	X	X
	Scrophulariaceae	* <i>Zaluzianskya divaricata</i>	Spreading Night Phlox					X