

# Hollywood Reserve Management Plan

2019-2024



## ACRONYMS AND ABBREVIATIONS

ACRONYM/ ABBREVIATION	DESCRIPTION
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DBCA	Department of Biodiversity Conservation and Attractions
DEC	Department of Environment and Conservation
DFES	Department of Fire and Emergency Services
DPaW	Department of Parks and Wildlife
EPBC Act	Environmental Protection and Biodiversity Conservation Act
GPS	Global Positioning System
ha	Hectare
IUCN	International Union for Conservation of Nature
the City	City of Nedlands
WALGA	Western Australian Local Government Association
WESROC	Western Suburbs Regional Organisation of Councils

# Contents

<b>1.</b>	<b>ACRONYMS AND ABBREVIATIONS</b>	<b>2</b>
<b>2.</b>	<b>ACKNOWLEDGMENTS</b>	<b>4</b>
<b>3.</b>	<b>SUMMARY</b>	<b>5</b>
<b>4.</b>	<b>BACKGROUND</b>	<b>7</b>
4.1	Study Site	7
4.2	Implementation of Previous Management Plans	8
4.3	Management Challenges and Success	9
<b>5.</b>	<b>SOCIAL CONTEXT</b>	<b>10</b>
<b>6.</b>	<b>BIOLOGICAL ENVIRONMENT</b>	<b>11</b>
6.1	Landscape Elements	11
6.2	Soils and Geomorphology	11
6.3	Vegetation	11
6.4	Corridor Value	12
6.5	Bushland Condition	12
6.6	Native Flora	13
6.7	Plant Pathogens	15
6.8	Weeds	15
6.9	Fungi	17
6.10	Native Fauna	18
6.11	Introduced Fauna	19
<b>7.</b>	<b>PLAN FOR MANAGEMENT</b>	<b>20</b>
7.1	Management Zones	20
7.2	Rehabilitation	21
7.3	Revegetation	21
7.4	Environmental Weed Control	22
7.5	Monitoring	26
<b>8.</b>	<b>FIRE MANAGEMENT</b>	<b>27</b>
<b>9.</b>	<b>ACCESS</b>	<b>28</b>
<b>10.</b>	<b>CULTURAL HERITAGE, INTERPRETATION &amp; EDUCATION</b>	<b>29</b>
<b>11.</b>	<b>NATIVE ANIMALS</b>	<b>30</b>
<b>12.</b>	<b>COMMUNITY INVOLVEMENT</b>	<b>32</b>
<b>13.</b>	<b>REFERENCES</b>	<b>34</b>
	Appendix 1: Flora Inventory (Ian Fordyce 2018)	36
	Appendix 2: Fungi Inventory	50
	Appendix 3: Fauna Inventory	52
	Appendix 4: Priority Weed Management Notes	54
	Appendix 5: Implementation of the 2013-2018 Management Plan	57
	Appendix 6: Maps	59
	Appendix 7: Natural Areas Management Plan 2019-2024	79

## 2. ACKNOWLEDGEMENTS

The City of Nedlands would like to acknowledge and thank the following organisations that assisted in the development of this Management Plan.

City of Nedlands Health and Compliance Department  
Friends of Hollywood Reserve  
Ian Fordyce and Associates  
Syrinx Environmental PI  
Technology One Limited



### 3. SUMMARY

This Management Plan is dedicated specifically to the management of Hollywood Reserve. Detailed information and actions relating to all natural areas within the City of Nedlands such as surveying methods, rehabilitation, environmental weed control, climate change, geomorphology and soils, planning context, interpretation, priority flora and fauna, fire management, community involvement, access and feral animal management has been detailed on pages 1-102 of the Natural Areas Management Plan 2019-2024.

The Hollywood Reserve Management Plan 2019-2024 has drawn heavily from the following documents:

- Hollywood Reserve Management Plan 2013-2018 (City of Nedlands, 2014)
- Natural Area Initial Assessment - Hollywood Reserve (Orsini, 2008)
- Hollywood Reserve Management Plan Review and Update (Tranen, 2007)
- Hollywood Reserve Management Plan (APACE, 2001).

A five year Management Plan has been developed that provides management actions and strategies for the conservation and restoration of Hollywood Reserve. A summary of key actions for Hollywood Reserve are listed below.

Table 1: Summary of Hollywood Reserve Management Actions 2019-2024

ACTIONS	
<b>BUSHLAND BOUNDARIES</b>	
1.	Manage Hollywood Reserve on the basis three Zones.
<b>REHABILITATION</b>	
2.	Focus revegetation at selected degraded sites within Zones.
3.	Focus management on better condition bushland areas within Zones.
4.	The Friends of Hollywood Reserve continue to focus management on Zones 2 and 3.
5.	Implement 'Asbestos', 'Plant Pathogen' and 'Rehabilitation' actions detailed in the Natural Areas Management Plan 2019-2024.
<b>REVEGETATION</b>	
6.	Careful consideration should be provided to the types of revegetation species used in areas where Black Flag is present.
7.	Work with local nurseries to grow naturally occurring local provenance species.
8.	Only revegetate Zone 1 with similar existing local provenance species.
<b>WEED CONTROL</b>	
9.	Continue to collaborate with the Metropolitan Cemeteries Board for weed management on adjacent land.
10.	Only remove historically planted non-indigenous trees if they are invasive.
11.	Control priority weeds in accordance with management notes detailed in Appendix 4.
12.	Continue to control the following weeds as a high priority: <i>Albuca flaccida</i> , Geraldton Carnation Weed, Bridal Creeper, Perennial Veldt Grass, Black Flag, One-leaf Cape Tulip, <i>Babiana angustifolia</i> , Wild Radish, <i>Lupinus</i> , <i>Freesia</i> , <i>Gladiolus angustus</i> , <i>Ixia maculata</i> , <i>Oxalis</i> , Fumitory, <i>Vicia sativa</i> and woody weeds.

13.	Where native vegetation exists, mature Black Flag plants that have the potential to set seed should be hand wiped with herbicides or hand weeded to stop them from seeding.
<b>MONITORING</b>	
14.	Monitor, control and document the distribution of new invasive weeds as they arise.
15.	Annually monitor weeds with the potential to expand rapidly and map changes in their distribution if required.
16.	Undertake annual monitoring and control of <i>African Cornflag</i> , <i>Rose Pelargonium</i> , <i>Lachenalia bulbifera</i> , Bridal Creeper, <i>Sparaxis bulbifera</i> and <i>Watsonia meriana</i> to ensure they do not spread or reestablish.
<b>FIRE MANAGEMENT</b>	
17.	Implement 'Fire Management' actions in the Natural Areas Management Plan 2019-2024.
<b>ACCESS</b>	
18.	Implement 'Access' actions in the Natural Areas Management Plan 2019-2024.
<b>CULTURAL HERITAGE, INTERPRETATION AND EDUCATION</b>	
19.	Undertake removal of plaques as required.
20.	Undertake maintenance of the information shelter, picnic table and benches as required.
21.	Undertake ongoing management of the Bush Food Garden including weed control, revegetation and installation of signage.
<b>NATIVE ANIMALS</b>	
22.	Undertake ongoing surveying of native fauna if resources allow.
23.	Minimise fires that may destroy tree hollows.
24.	Retain tree hollows for their habitat value.
25.	Undertake ongoing control of feral European Bees.
26.	Protect Rainbow Bee-eater nests.
27.	Continue implementing feral cat and fox control programs.
28.	Contribute to regional feral bird control programs coordinated by WALGA.
29.	Apply for funding for the installation of additional bat boxes within the Reserve.

## 4. BACKGROUND

### 4.1 Study Site

Hollywood Reserve is located within the City of Nedlands approximately 5 km west of the Perth Central Business District. It is bordered by Karella Street to the south, the Office of Australian War Graves and Smyth Road to the east and Karrakatta Cemetery to the west. Hollywood Reserve is vested in the City of Nedlands as A Class Reserve 32545 for “Gardens and Parks” and covers an area of 6.41 hectares, as shown in Figure 1.

Figure 1: Location of Hollywood Reserve



## 4.2 Implementation of Previous Management Plans

Previous management plans developed for Hollywood Reserve include the Hollywood Reserve Management Plan (City of Nedlands (2014) and APACE (2001)) and the Hollywood Reserve Management Plan Review and Update (Tranen 2007).

In 1985 Robert Powell also prepared a management plan for the Reserve where it was recommended that part of Zone 1 and Zone 3 be managed for the conservation of locally occurring flora. The aims of the plan included:

- *"To protect indigenous vegetation, to encourage its growth and regeneration and allow it to revert as closely as possible to its natural state.*
- *To encourage the use of the area by school children and others in such a way as to help them develop familiarity with local vegetation and an understanding of its ecology."*

Hollywood Reserve has been actively managed by the City of Nedlands and the Friends of Hollywood Reserve since 1996. The 2019-2024 Management Plan consolidates information regarding conservation activities undertaken since the development of the 2013 Management Plan along with reviewing and updating the 2013 Plan. Of the twenty nine actions developed for the 2013 Management Plan, twenty four were implemented, four were partially implemented and one was not implemented as shown in Table 2 below.

Table 2: Implementation of the 2013-2018 Actions

ACTION		IMPLEMENTED YES/NO/PARTIALLY	NOTES
<b>REVEGETATION</b>			
1.	Consider only planting overstorey species in areas where Black Flag is present.	Partially	Areas with Black Flag were revegetated with shrubs as well as overstorey otherwise large areas would be left devoid of vegetation.
2.	Work with local nurseries to grow naturally occurring native herbaceous species.	Partially	Many species at Hollywood Reserve cannot be propagated.
<b>NATIVE ANIMALS</b>			
3.	Undertake ongoing surveying of native fauna if resources allow.	Partially	Only informal surveys undertaken.
4.	Contribute to regional programs being undertaken for feral bird control by DPaW.	Partially	This is being undertaken at a WESROC Council level.



5.	Apply for funding for the installation of additional bat boxes within the Reserve.	No	No funding was received.
----	--	----	--------------------------

### 4.3 Management Challenges and Success

Over the years significant reduction in the density and/or distribution of the following environmental weeds has occurred:

- Black Flag (*Ferraria crispa*) – density only
- Freesias (*Freesia alba x leichtlinii*)
- Flinders Range Wattle (*Acacia iteaphylla*)
- Geraldton Carnation Weed (*Euphorbia terracina*)
- Lupins (*Lupinus*)
- One-leaf Cape Tulip (*Moraea flaccida*)
- Perennial Veldt Grass (*Ehrharta calycina*)
- Rose pelargonium (*Pelargonium capitatum*)
- WA Peppermint (*Agonis flexuosa*)
- Wild Radish (*Raphanus raphanistrum*).

Black Flag (*Ferraria crispa*) was widely distributed across the bushland prior to 2007, especially in the southern section, where it formed dense mats. It has reduced its density significantly through herbicide spraying and the use of the herbicide Dalapon is assisting in controlling Black Flag where it grows amongst native plants. As Black Flag is difficult to control and hand removal is not appropriate, careful consideration should be given to revegetating areas with dense ground covers or spreading shrubs where Black Flag occurs. These species will prove challenging where they are establishing if Black Flag is present. Black Flag also seeds prolifically and where native vegetation exists mature plants that have the potential to set seed should be hand wiped with herbicides or hand weeded to stop them from seeding.

In 2014 herbicide resistance was discovered in the Annual Veldt Grass population at Hollywood Reserve following scientific testing of both Annual and Perennial Veldt Grass. In order to address herbicide resistance the City has modified its grass spraying program ensuring that hand weeding of Perennial Veldt Grass occurs following completion of the annual grass control program.

Unfortunately there is no alternative control option available to address herbicide resistance in the Annual Veldt Grass population at Hollywood Reserve as it occurs in high density across an area greater than 3 ha. Furthermore, changing to an alternative herbicide is not appropriate without causing significant damage to native understory vegetation.

Historically, Peppermints were planted along the edge of Hollywood Reserve adjacent to Karella Street and Dalkeith Road. They are not considered local provenance species at Hollywood Reserve and they have become an invasive weed in the southern section where they form dense infestations. Many Peppermints have been removed over the years to stop them from forming dense thickets and displacing native vegetation. Ongoing removal of juvenile Peppermints should continue. However, the mature specimens along Karella Street and Dalkeith Road should be retained as they provide habitat and their removal will cause disturbance.



A similar situation exists with Flinders Range Wattles and Geraldton Wax that have been a target for environmental weed control in the Reserve. A few mature specimens of these species need to remain as complete removal would leave large open patches devoid of vegetation. However, any juvenile trees should continue to be removed as required.

A number of non-indigenous species were historically planted at Hollywood Reserve including Sugar Gums and *Pinus*. These species have established populations in some areas within the bushland. As they are not considered invasive and they provide habitat and cover stopping other invasive weeds from spreading these species are not currently recommended for removal. However as these species naturally die they should be replaced with local provenance species.

Management Actions 2019-2024	
REVEGETATION	
1.	Careful consideration should be provided to the types of revegetation species used in areas where Black Flag is present.
WEED CONTROL	
2.	Where native vegetation exists, mature Black Flag plants that have the potential to set seed should be hand wiped with herbicides or hand weeded to stop them from seeding.
3.	Only remove historically planted non-indigenous trees if they are invasive

## 5. SOCIAL CONTEXT

Hollywood Reserve is used daily for its passive recreational value. It is adjacent to Hollywood Primary School, Hollywood Private Hospital, a retirement home and residential areas. Cyclists pass through the park for access between Karella Street and Smyth Road and the park adjacent to the war cemetery is used by local residents who play Petanque.

## 6. BIOLOGICAL ENVIRONMENT

### 6.1 Landscape Elements

Hollywood Reserve is gently undulating and reaches a maximum elevation of twenty-eight metres above sea level. It consists of remnant natural bushland, a mixture of non-indigenous species, a grassed parkland area, a bush food garden and a network of pathways. The Reserve has two sections divided by a narrow walkway referred to as the northern and southern sections. A group of large *Pinus pinea* (Stone Pine) dominate the entrance at Boronia Avenue and some stands are also found along the pathway in the northern section adjacent to Smyth Road.

### 6.2 Soils and Geomorphology

Hollywood Reserve is located on the Spearwood Dune System, comprising Tamala Limestone under a blanket of pale and olive yellow sand. The overlying sand is derived from Tamala Limestone. Soils associated with this unit are typically yellow or grey over deep yellow sand and limestone, and belong to the Karrakatta Soil Association. Karrakatta soils are highly leached and the nutrient is held only in the organic matter associated with them.

### 6.3 Vegetation

#### Vegetation Complex Heddle et al (1980)

On a regional scale Hollywood Reserve is mapped as occurring on the Karrakatta Complex – Central and South. This Complex is also represented at Kings Park and consists predominantly of an Open Forest of Tuart-Jarrah-Marri. In the deeper sands Tuart is replaced by Jarrah, while Marri (*Corymbia calophylla*) is more dominant around moister sites.

#### Floristic Community Type Gibson (1994)

Floristic Community Types (FCTs) classify vegetation into groups of plant species that tend to co-occur in small to medium areas. Hollywood Reserve forms part of Super Group 4 - Uplands Centred on Spearwood and Quindalup Dunes. It has not been sampled or inferred as containing a specific FCT and provided the large number of non-indigenous native plants introduced to the Reserve the FCT may be difficult to identify.

#### 2001 Management Plan – Plant Community Type Identified

In the 2001 Management Plan the plant community was described as a mixture of historical non-indigenous plantings within a local plant community structure. The dominant and sub dominant structural native plant species were described as consisting of tall components of Tuart and Jarrah trees, mid storey tree species of Banksia and Sheoak; a lower shrub storey of Grass Trees and Zamia Palms with an understorey of species such as *Conostephium pendulum*, *Acacia willdenowiana* and *Mesomelaena pseudostygia*.

## Structural Plant Communities - Natural Area Initial Assessments 2008

Like the 2001 Management Plan the structural plant community identified through the Natural Area Initial Assessments undertaken in 2008 included Tuart (*Eucalyptus gomphocephala*)/Jarrah (*Eucalyptus marginata*)/Sheoak (*Allocasuarina fraseriana*) Open Forest with mixed shrub and herb/grass layer.

This information is detailed on the WALGA Local Biodiversity Program Natural Area Initial Assessment database for Hollywood Reserve.

### 6.4 Corridor Value

Hollywood Reserve forms ecological linkages with Shenton Bushland and Kings Park. The Bush Forever Report of the Western Australian Planning Commission (2000) identified the Reserve as a regional linkage area. Hollywood Reserve is also listed in the Western Suburbs Greening Plan (Ecoscape 2002) as one of a number of areas of remnant bushland in the Western Suburbs which require protection and careful management, as they provide most of the biodiversity in the region and form important regional linkages.

### 6.5 Bushland Condition

The methodology followed for bushland condition assessments undertaken in 2018 is detailed on pages 34-36 of the Natural Areas Management Plan 2019-2024. Bushland condition is useful in tracking large changes over time and should continue to be measured each time this Management Plan is reviewed. This allows changes to be regularly monitored and recorded.

#### Historical Bushland Condition Assessment Data

Over the years bushland condition has been mapped using different methods and scales. Bushland condition was not mapped in the 2001 Management Plan. It was mapped for the 2007 Management Plan where it used the Keighery Scale and divided the bushland into 20 x 20 m polygons.

This assessment of bushland condition rated 14 percent (%) of the bushland as *Good*, 43% as *Degraded* and 43% as *Very Degraded*. The condition of the bushland was generally found to deteriorate towards the edges, which were more susceptible to weed invasion. This survey was undertaken in December and the condition ratings were allocated strictly on the basis of local native species present. Therefore areas which had been planted with non-provenance species were rated as *Degraded*, even though the vegetation structure and quality was in *Good* condition.

Bushland condition mapping undertaken in 2008 using the Keighery Scale through the Natural Area Initial Assessments assessed 10% of the bushland as *Good* and 90% as *Degraded*. This survey was undertaken in spring 2008 and like the 2006 mapping the condition ratings were allocated on the basis of local native species present. These maps were not digitised and did not use 20 x 20 m polygons.

#### 2013 and 2018 Bushland Condition Assessment

Bushland condition mapping in 2013 and 2018 was undertaken in spring by adapting the Keighery Scale and divided the bushland into 20 x 20 m polygons.

The Keighery Scale was adapted to assess the impact of disturbance on vegetation structure. Each 20 x 20 m polygon was provided a rating from *Very Good*, *Good*, *Degraded* to *Completely Degraded*. The main disturbance factors that influenced the condition rating included fire, environmental weeds, clearing and the selective removal of species (for example from plant pathogens, frequent fires, grazing and logging). The existence on non-indigenous native plants such as *Sugar Gums* did not reduce the condition rating (except if areas were to be assessed as *Very Good*). The existence on non-indigenous native plants only reduced the condition rating if they were considered invasive and/or if they were found in isolation with no other local provenance species present.

In 2018 approximately 80% of the bushland was assessed as *Good* with approximately 20% *Degraded* and less than 1% rated as *Completely Degraded* areas as shown in Table 3 below.

Table 3: Extent of Bushland Condition 2018

Very Good	Good	Degraded	Completely Degraded	Total Area
0 ha	5.08 ha	1.27 ha	0.06 ha	6.41 ha

The *Good* condition rated areas consisted of a band of differing levels of condition (some of these were considered more on the *Degraded* or the *Very Good* side of *Good* condition). In the *Good* condition bushland areas, weed cover consisted of mostly annual species or invasive weeds in low abundance. Some introduced native Australian plants may also have formed part of the vegetation structure (such as *Sugar Gums*), however they needed to be found cohabiting with local provenance native species and considered to provide good habitat value.

Areas assessed as *Degraded* had a combination of the following criteria that resulted in their *Degraded* rating:

- Sparse native vegetation cover
- High density of invasive weeds.

There were also small areas that were assessed as *Completely Degraded*. These areas had a combination of the following criteria that resulted their *Completely Degraded* rating:

- Lawn or infrastructure that covered entire quadrant
- No local provenance or Western Australian native flora
- Only a small proportion of native shrubs or seedlings and the remainder weed species.

## 6.6 Native Flora

The current flora of Hollywood Reserve is a mixture of indigenous and non-indigenous native flora and weeds. Many native plants originated from further afield such as the wheatbelt and eastern states.

#### Historical Flora Inventory Data)

In the 2007 Management Plan 289 native flora species were recorded as occurring in the Reserve. Of the 289 flora species recorded 91 were identified as local native species and 198 as non-indigenous native species which included 9 Orchids (that were listed as being planted). This flora inventory was compiled from many different flora lists along with additional species added that were noted in the 2007 Management Plan.

Following the development of the 2013 and 2018 Management Plans the historical native flora inventory data has been reviewed. The original lists have been reorganised so that 'native' has a restrictive definition that means native to the Perth region of the Swan Coastal Plain. This flora list which is detailed in Appendix 1 was based on several surveys undertaken between 2013-2018 by Ian Fordyce and is considered comprehensive.

Currently there are 333 plant species recorded at Hollywood Reserve this includes 148 native species and 186 weed species. Some of the native flora species are likely to be non-provenance species native to the wider Swan Coastal Plain and of the 186 species listed as weeds these are likely to include some species intentionally planted in the Reserve that occur in Eastern and Western Australia (outside of the Swan Coastal Plain).

The 2018 Flora Inventory includes twelve conservation listed flora as outlined in Table 4 and 5 below.

Table 4: Local Provenance Priority Flora

Species	Common Name	State Conservation Status	Federal & International Conservation Status
<i>Isopogon drummondii</i>		Priority 3	
<i>Dodonaea hackettiana</i>	Hackett's Hopbush	Priority 4	
<i>Jacksonia sericea</i>	Waldjumi	Priority 4	Endangered (IUCN Red List)

Table 5: Non-Provenance Priority Flora

Species	Common Name	State Listing Biodiversity Conservation Act	Federal Listing EPBC Act
<i>Acacia denticulosa</i>	Sandpaper Wattle	Vulnerable	Vulnerable
<i>Chamelaucium</i> sp. Gingin		Vulnerable	Endangered
<i>Eucalyptus crucis</i> subsp. <i>Crucis</i>	(Southern Cross) Silver Mallee	Endangered	Vulnerable
<i>Grevillea curviloba</i>		Endangered	
<i>Banksia lullfitzii</i>		Priority 3	
<i>Melaleuca coccinea</i>	Goldfields Bottlebrush	Priority 3	



<i>Calothamnus rupestris</i>	Mouse Ears	Priority 4	
<i>Eucalyptus kruseana</i> subsp. <i>kruseana</i>	Bookleaf Mallee	Priority 4	
<i>Grevillea olivacea</i>	Olive Grevillea	Priority 4	

## 6.7 Plant Pathogens

A survey of plant pathogens in 2010 on 26 trees (4 Tuarts, 20 Jarrahs and 2 Marris) at Hollywood Reserve isolated the following plant pathogens:

- *Phytophthora multivora* (2 Marris)
- Possible *Armillaria luteobubalina* (2 Tuarts)
- Stem cankers – caused by fungal pathogens (4 Jarrahs).

All trees displayed symptoms of stress such as crown thinning and epicormic growth, three trees were being attacked by stem boring insects and three were also being attacked by leaf minors. Beneficial mycorrhizal fungi were observed as being more abundant at Hollywood Reserve connecting to the root system of many trees than other irrigated parkland areas that were surveyed.

Since 2010 *Maskiella globosa* (Armoured Scale) another plant pathogen has been confirmed at Hollywood Reserve. Management of *Maskiella globosa* is detailed in the Natural Areas Management Plan 2019-2024 and consists of reducing disturbance, applying systemic and/or soil treatments and mechanical removal provided funding is available.

The identification and management of plant pathogens and other causes of tree decline has been detailed further in the Natural Areas Management Plan 2019-2024.

## 6.8 Weeds

Of the 186 weeds recorded in Hollywood Reserve (Appendix 1) the distribution of 13 of these and woody weeds were mapped in 2018. They are shown in the map section in Appendix 6.

Many non-indigenous native plants listed in the weed inventory were intentionally planted. The majority of these are not considered weeds as they are not invasive, and they provide habitat and cover. Non-indigenous native plants should only be removed if they are invasive. However, as these species come to the end of their natural life they should be replaced with local provenance species.

### Weed mapping

There was no previous weed mapping undertaken at Hollywood Reserve prior to the development of the 2013 Management Plan. The methodology applied for weed mapping in 2013 and 2018 is detailed on pages 34-36 of the Natural Areas Management Plan 2019-2024.

Weed mapping was undertaken in spring 2018 using 20 x 20 m polygons and the Department of Environment and Conservation (DEC) Standard Operating Procedure SOP 22.1. *Techniques for Mapping Weed Distribution and Cover in Bushland and Wetlands*. These procedures were developed to address the subjectivity that can be encountered when different people undertake mapping. In order to address this

subjectivity the below listed broad cover classes were developed and were used to undertake the 2013 and 2018 weed mapping:

- Individual plants (mapped as GPS points – this was limited to woody weeds)
- Less than 5%
- 6-75%
- 76-100%.

Using SOP 22.1 for the weed mapping undertaken in spring 2013 and 2018 addressed the subjectivity involved in mapping weed cover. However, in order to refine weed management for the 2014-2019 Management Plan actual cover was also mapped. These cover classes included:

- Less than 1%
- 2-5%
- 6-10%
- 11-20%
- Then 9% increments until 100%.

The purpose of additionally mapping actual cover in 2018 was to allow for more refined and focussed reporting of weed cover and density. Whilst the broad cover classes assisted with standardising the mapping process, addressing issues with subjectivity; and identifying focus areas and actions. The cover classes did not accurately reflect weed management programs success or failures. For example, if a weed species was mapped as 6-75% in the 2013-2018 Management Plan it may have undergone a significant reduction after five years of management however it had the potential to still be mapped in the same cover class for the 2019-2024 Management Plan.

Furthermore, the City has undertaken long term management of some species such as Rose Pelargonium which was primarily mapped as less than 5% in 2013. However, in reality the cover of Rose Pelargonium is now less than 1% and it would have still been mapped as less than 5% in 2018 if the broad cover classes were used in isolation.

In the map section in Appendix 6 only two 'Actual Cover' maps have been provided. These maps are included for the species that had high weed cover above 5%. Generally, the majority of the weed species mapped had broad cover classes of less than 5% and an actual cover of less than 1%.

#### Target Species for Weed Mapping 2018

In 2018 weeds listed in Table 6 on the next page were mapped:

Table 6: Weed Species Mapped in 2018

No	SPECIES	Actual Cover Map Provided
1.	Black Flag ( <i>Ferraria crispa</i> )	No
2.	Bridal Creeper ( <i>Asparagus asparagoides</i> )	No
3.	Baboon Flower ( <i>Babiana angustifolia</i> )	No
4.	<i>Freesia</i> ( <i>Freesia alba x leichtlinii</i> )	No
5.	Fumitory	Yes
6.	Geraldton Carnation Weed ( <i>Euphorbia terracina</i> )	No
7.	Giant Reed ( <i>Arundo donax</i> )	No
8.	<i>Gladiolus undulatus</i> and <i>angustus</i> – <i>Gladiolus</i>	No
9.	<i>Oxalis Pes-Caprae</i> (Soursob)	Yes
10.	Perennial Veldt Grass <i>Ehrharta calycina</i>	No
11.	Pretty Betsy ( <i>Centranthus macrosiphon</i> )	No
12.	Rose Pelargonium ( <i>Pelargonium capitatum</i> )	No
13.	Woody weeds	No
14.	Yellow Ixia <i>Ixia maculata</i>	No

#### Limitations of weed mapping

Only the above listed priority weeds were mapped due to the time and the cost involved with mapping. Unfortunately, there are always going to be limitations encountered with weed mapping including timing of the survey and weather variations. These are detailed further below.

#### Timing of Survey

Surveying should always be undertaken in spring when weeds are active. There are six natural areas in the City that require mapping and they all cannot all be surveyed simultaneously. Therefore, at the time of surveying some weeds may have germinated, may not be flowering, may be covered over by taller weeds (and therefore not visible) or they may have been removed through weeding activities. Also some weeds do not flower every year and therefore they may be difficult to identify at the time of the survey.

#### Weather variations from year to year

Some years can have early rain which will provide an early flowering and germination period. Other years have late rain that extends into spring which provides successive germination events by which time the survey could have concluded.

## **6.9 Fungi**

25 species of fungi have been recorded in Hollywood Reserve these are listed in Appendix 2. Dr. Neale Bougher from the CSIRO undertook a brief fungi survey in Hollywood Reserve in June 1999 the species recorded in this survey are detailed in Appendix 2 along with any additional species that have been recorded since 1999.

Dr. Neale Bougher noted the following in regards to the beneficial aspects of fungi:

*"Fungi form a crucial part of the natural processes of any bushland. They contribute to the health of the park bushland ecosystem by capturing, storing, releasing and recycling essential nutrients. Some of the major roles of fungi include: (a) mutually beneficial relationships (mycorrhizas) with trees and other plants (b) decomposition of organic matter and releasing mineral nutrients (c) attacking living plants or producing wood rots. Healthy ecosystems have soil with abundant living organisms including fungi involved in nutrient recycling processes and making nutrients available. Native Australian plants have coevolved with microbes and fungi to capture and keep scarce nutrients in the ecosystem.*

*Mycorrhizal fungi have a symbiotic relationship with plants via two way exchange that occurs in modified roots known as mycorrhiza. Photosynthates (sugars) from the plant are transferred to the fungi in one direction, while soil nutrients such as phosphorus are transported from the fungus to the plant in the other direction. Mycorrhizal networks act like extra root systems for plants, and the mycorrhizal systems are much more effective than roots alone. Decomposer (saprophytic) fungi also increase soil nutrient availability, decompose logs, twigs and leaves and contribute to soil organic matter and soil structure." Logs, twigs and leaves therefore should not be removed."*

The fungi list for Hollywood Reserve should be continually updated as new species are recorded.

#### **6.10 Native Fauna**

A total of 35 native birds, 2 mammals and 4 reptiles have been recorded at Hollywood Reserve.

Of the 35 bird species recorded as occurring in Hollywood Reserve that are listed in Appendix 3 three species are protected under the Environmental Protection Biodiversity Conservation Act 1999 (EPBC Act). These include the Carnaby's Black-Cockatoo (*Calyptorhynchus latirostris*) which is listed as *Endangered*, the Forest Red-tailed Black-Cockatoo (*Calyptorhynchus banksii*) which is listed as *Vulnerable* and the Rainbow Bee-eater (*Merops ornatus*) which is listed as a *Marine* species.

The bird list was compiled from past surveys and was updated for the 2001 Management Plan by Mr Aubrey Moore and again for the 2013-2018 Management Plan by members of the Friends of Hollywood Reserve and City staff. A total of 35 bird species have been recorded in the Reserve, 5 of these are considered feral birds and 9 species have not been seen for many years however they have still been listed to provide a record of historical sightings.

### Mammals

There are four mammals recorded in Hollywood Reserve. These include the Brushtail Possum (*Trichosurus vulpecula*), the White-striped Freetail Bat (*Tadarida australis*), the Gould's Wattled Bat (*Chalinolobus gouldii*) and the Southern Forest Bat (*Vespadelus regulus*).

### Herpetofauna (Reptiles & Amphibians)

A total of 4 herpetofauna species have been confirmed at Hollywood Reserve. These include: The Marbled Gecko (*Christinus marmoratus*), the Sands Gould's Monitor (*Varanus gouldii*), the Fence Skink *Cryptoblepharus buchananii* and the Western Bobtail (*Tiliqua rugosa*).

The 4 species listed above would only form part of the herpetofauna species at Hollywood Reserve and further informal surveys should be undertaken to update the current species list.

### Invertebrates

No native invertebrates have been confirmed onsite. Like herpetofauna, invertebrates should also be informally surveyed and species lists compiled if resources allow.

## **6.11 Introduced Fauna**

Feral animal management strategies have been detailed on pages 85-90 of the Natural Areas Management Plan 2019-2024.

### Mammals

The only confirmed introduced mammals of concern in Hollywood Reserve include Foxes (*Vulpes vulpes*) and cats (*Felis catus*). Other possible (unconfirmed) introduced fauna include the House Mouse (*Mus musculus*) and the Black Rat (*Rattus rattus*).

### Invertebrates

One introduced invertebrate of concern at Hollywood Reserve includes the European Honey Bee (*Apis mellifera*).

### Introduced Birds

There are five known introduced or feral birds within Hollywood Reserve these include the Rock Dove (*Columba livia*), Spotted Dove (*Streptopelia chinensis*), Laughing Dove (*Streptopelia senegalensis*), Rainbow Lorikeet (*Trichoglossus haematodus*) and Laughing Kookaburra (*Dacelo novaeguineae*).



## 7. PLAN FOR MANAGEMENT

General management principles and weed control strategies that relate to all natural areas has been detailed in the 'Plan For Management' section on pages 39-51 of the Natural Areas Management Plan 2019-2024.

### 7.1 Management Zones

#### External Boundaries

For management purposes it is important to distinguish between parkland and bushland zones. At Hollywood Reserve, the boundaries between bushland, parkland areas and adjacent agency land is well defined by lawn areas, pathways and fencing.

#### Internal Boundaries

The bushland is generally divided into 3 Zones. These include the northern and southern sections and the walkway which links the two sections. Over the years the Friends of Hollywood Reserve have focussed their management in the southern section (Zone 3) and the walkway (Zone 2) the Zones have also been focus sites for planting events with Hollywood Primary School.

Figure 2: Management Zones at Hollywood Reserve.



### Management Actions 2019-2024

1. Manage Hollywood Reserve on the basis three Zones.

## 7.2 Rehabilitation

The improvement of bushland condition at Hollywood Reserve will be achieved by assisting natural regeneration through weed control and reconstruction at selected degraded sites.

The priority for rehabilitation is the consolidation and expansion of better condition bushland in all Zones. The Bradley Method should be followed which focuses on targeting better condition bushland areas within Zones.

All Zones require annual weed control of priority weeds and Zone 2 and 3 require ongoing annual maintenance in the form of revegetation activities and weed control. These Zones should continue to be a focus of the Friends of Hollywood Reserve. Zone 1 has a higher proportion of local provenance plants and is more representative of the natural plant community that originally existed in the Reserve. The degraded edges of Zone 1 should therefore only be reconstructed with similar species that already exist in Zone 1 to maintain this community of plants.

Management Actions 2019-2024	
1.	Focus revegetation at selected degraded sites within Zones.
2.	Focus management on better condition bushland areas within Zones.
3.	The Friends of Hollywood Reserve continue to focus management on Zones 2 and 3.
4.	Only revegetate Zone 1 with similar existing local native species.
5.	Implement 'Asbestos', 'Plant Pathogen' and 'Rehabilitation' actions detailed in the Natural Areas Management Plan 2019-2024.

## 7.3 Revegetation

### Species Selection

Ideally species used for revegetation in reconstruction sites would consist of the entire collection of plants that naturally occur at Hollywood Reserve such as those that occur on the Karrakatta soil association. However this is not always possible as not all species can be propagated. Also there are many non-native species that have been planted over the years.

Hollywood Reserve has many naturally occurring local provenance species. Some of these are found in low abundance and therefore consideration should be given to ensure their survival onsite. If possible they should also be propagated for revegetation at reconstruction sites. Some species that fit into this category include:

- *Hovea pungens*
- *Acacia willdenowiana*
- *Conostylis setigera*
- *Mesomelaena pseudostygia*
- *Thysanotus*
- *Burchardia umbellata*
- *Conostephium pendulum*
- *Conostephium preissii*.

Management Actions 2019-2024	
1.	Work with local nurseries to grow naturally occurring native herbaceous species.
2.	Implement 'Revegetation' actions detailed in the Natural Areas Management Plan 2019-2024.

#### 7.4 Environmental Weed Control

A total of 28 priority weeds have been listed for management in Hollywood Reserve (Table 7). Each priority weed has been provided management notes and the Weed Prioritisation Process rating (DBCA 2016). Priority weeds will be managed according to management notes provided on the DBCA Florabase website at <https://florabase.dpaw.wa.gov.au> and are detailed in Appendix 4.

Priority weeds have been selected from:

- Swan Region Weed Prioritisation Process (DPaW 2013)
- Swan Impact and Invasiveness Ratings (DBCA 2016)
- State and Federal weed lists
- Local knowledge from 'Friends of' groups that assisted with the development of a priority list for weeds to be mapped
- Their ability to contribute to fuel loads
- Their ability to be controlled without causing disturbance to natural areas.

Table 7 Priority Weeds for Control – (Ratings taken from DBCA 2016 (Swan Impact and Invasiveness Rating)).

Species Name		Common Name	Notes	Rating
1.	<i>Acacia</i> <i>iteaphylla</i>	Flinders Range Wattle	Requires ongoing monitoring and control.	High/Rapid
2.	<i>Agonis flexuosa</i>	Peppermint	Requires ongoing monitoring and control. Retain mature specimens along Karella Street.	High/Medium
3.	<i>Avena fatua</i>	Wild Oat	Ongoing control required in conjunction with grass spraying program.	High/Medium
4.	<i>Asparagus</i> <i>asparagoides</i>	Bridal Creeper	Requires ongoing monitoring and control. Only two small populations found.	High/Rapid
	<i>Babiana</i> <i>angustifolia</i>	Baboon Flower	Control in conjunction with bulb spraying.	Medium/Rapid
5.	<i>Brachychiton</i> <i>populneus</i>	Kurrajong	Requires ongoing monitoring and control.	High/Medium
6.	<i>Brassica</i> <i>tournefortii</i>	Smooth Stem Turnip	Ongoing hand weeding required.	High/Rapid
7.				
8.	<i>Chamelaucium</i> <i>uncinatum</i>	Geraldton Wax	Ongoing removal of juvenile seedlings.	Medium/Slow
9.	<i>Chasmanthe</i> <i>floribunda</i>	African Cornflag	Ongoing monitoring and control for reinfestation.	High/Medium
10.	<i>Ehrharta</i> <i>calycina</i>	Perennial Veldt Grass	Ongoing control required.	High/Rapid
11.	<i>Ehrharta</i> <i>longiflora</i>	Annual Veldt Grass	Ongoing control required in conjunction with grass spraying program.	Medium/Rapid
12.	<i>Euphorbia</i> <i>terraccina</i>	Geraldton Carnation Weed	Ongoing hand weeding required.	High/Rapid
13.	<i>Ferraria crispa</i>	Black Flag	Ongoing control required.	High/Rapid
14.	<i>Freesia alba</i> x <i>leichtlinii</i>	Freesia	Ongoing control required.	High/Rapid

	Species Name	Common Name	Notes	Rating
15.	<i>Fumaria capreolata</i>	Climbing Fumitory	Hand weeding required if resources allow.	High/Rapid
16.	<i>Gladiolus angustus</i>	Long Tubed Painted Lady	Ongoing control required.	High/Unrated
17.	<i>Ixia maculata</i>	Yellow Ixia	Ongoing control required.	High/Rapid
18.	<i>Lagurus ovatus</i>	Hare's Tail Grass	Control required.	High/Rapid
19.	<i>Lachenalia bulbifera</i>	Soldiers	Ongoing monitoring and control required. Hand remove populations in degraded sites.	High/Unrated
20.	<i>Lupinus angustifolius</i>	Narrowleaf Lupin	Ongoing hand weeding required.	High/Medium
21.	<i>Lupinus cosentinii</i>	Sandplain Lupin	Ongoing hand weeding required.	High/Medium
22.	<i>Moraea flaccida</i>	One-leaf Cape Tulip	Ongoing control required.	High/Rapid
23.	<i>Pelargonium capitatum</i>	Rose Pelargonium	Ongoing monitoring and control required.	High/Rapid
24.	<i>Raphanus raphanistrum</i>	Wild Radish	Ongoing hand weeding required.	Unrated/Medium
25.	<i>Schinus terebinthifolia</i>	Brazilian Pepper	Requires ongoing monitoring for re-infestation/ resprouting.	High/Medium
26.	<i>Sparaxis bulbifera</i>	Sparaxis	Ongoing control required.	Unrated/Medium
27.	<i>Vicia sativa</i>	Common Vetch	Control required.	Unrated/Unrated
28.	<i>Watsonia meriana</i>	Watsonia	Requires ongoing monitoring for reinfestation.	Unrated/Medium



### Strategy

Priority weeds should be controlled in all Zones and in accordance with management notes in Appendix 4. Of the priority weeds listed in Table 4 the following weeds are considered the highest priority for management:

- Geraldton Carnation Weed
- Bridal Creeper
- Perennial Veldt Grass
- Black Flag
- One-leaf Cape Tulip
- *Babiana angustifolia*
- Wild Radish
- *Lupinus*
- *Freesia*
- *Gladiolus angustus*
- *Ixia maculata*
- *Vicia sativa*
- Woody weeds.

### Sugar Gums

Sugar Gums have been historically planted at Hollywood Reserve and are considered a highly invasive weed. However, they are not posing any immediate management issue through the germination of juvenile seedlings and therefore they are not currently recommended for management.

### Geraldton Carnation Weed

Geraldton Carnation Weed is a highly invasive weed found across the bushland. Its impact has had a significant decrease over the years due to persistent hand removal. Ongoing removal is required to stop it from increasing in distribution and density.

### Fumitory and *Oxalis*

With the removal of many annual and perennial grass weeds Fumitory (*Fumaria*) and *Oxalis* (*Oxalis*) are continuing to increase across the bushland. *Oxalis* and Fumitory can be targeted at the same time, using the same method that is already being used to control Freesias and they need to be incorporated into the environmental weed control program before their distribution increases to levels where they cannot be controlled. Fumitory can also be successfully removed by hand provided a sufficient amount of labour and funding is available.

### Collaboration with adjacent landowners

Some weeds on the adjacent Karrakatta Cemetery have the potential to invade Hollywood Reserve such as Geraldton Carnation weed and Lupins. Through collaboration with the Metropolitan Cemeteries Board, these weed infestations have been effectively managed in the past. The City and the Friends of Hollywood Reserve should continue to collaborate with the Metropolitan Cemeteries Board for weed management on adjacent land.

## 7.5 Monitoring

Of the 186 weeds identified as occurring within Hollywood Reserve, the distribution and density of 13 weeds were mapped along with woody weeds. These should continue to be mapped every five years as part of management plan reviews.

Highly invasive weeds with the potential to expand their distributions should be monitored and mapped annually (if they have increased their distribution) so that their current distribution can be monitored and controlled as required. These species include Black Flag, One-leaf Cape Tulip, Bridal Creeper and Freesias. New invasive weeds should also be mapped as they arise and controlled as necessary.

Species that either have small populations or have previously been removed from the bushland require annual monitoring and control. These include:

- African Cornflag
- Rose Pelargonium
- *Lachenalia bulbifera*
- Bridal Creeper
- *Sparaxis bulbifera*
- *Watsonia meriana*.

Management Actions 2019-2024	
WEED CONTROL	
1.	Continue to control the following weeds as a high priority: Geraldton Carnation Weed, Bridal Creeper, Perennial Veldt Grass, Black Flag, One-leaf Cape Tulip, <i>Babiana angustifolia</i> , Wild Radish, <i>Lupinus</i> , <i>Freesia</i> , <i>Gladiolus angustus</i> , <i>Ixia maculata</i> , <i>Vicia sativa</i> and woody weeds.
2.	Continue to collaborate with the Metropolitan Cemeteries Board for weed management on adjacent land.
3.	Only remove historically planted non-indigenous trees if they are invasive.
4.	Control priority weeds in accordance with management notes detailed in Appendix 4.
MONITORING	
5.	Monitor, control and document the distribution of new invasive weeds as they arise.
6.	Annually monitor weeds with the potential to expand rapidly and map changes in their distribution if required.
7.	Undertake annual monitoring and control of <i>African Cornflag</i> , <i>Rose Pelargonium</i> , <i>Lachenalia bulbifera</i> , <i>Bridal Creeper</i> , <i>Sparaxis bulbifera</i> and <i>Watsonia meriana</i> to ensure they do not spread or reestablish.

## 8. FIRE MANAGEMENT

Fire management actions for all natural areas has been detailed on pages 61-67 of the Natural Areas Management Plan 2019-2024 and the fire history map is detailed in the map section in Appendix 6.

### Summary of Current Practices

The City undertakes the following fire management practices at Hollywood Reserve:

- Annual review of the Hollywood Reserve Fire Pre-Plan with Department of Fire and Emergency Services (DFES)
- Maintenance of firebreaks prior to the 30th November annually
- Annual program to manually reduce fuel loads by removing fine fuels especially within asset protection zones
- Ongoing management of grass weeds
- Fuel load assessments (as required) to monitor fuel loads and respond accordingly
- Follow up maintenance of bush fire risk assessment actions.

DFES has a Fire Pre-Plan for Hollywood Reserve which was developed in conjunction with relevant stakeholders and is reviewed annually. This plan details site information, ecological requirements, vulnerable property, risk management strategies and responsibilities; a communications plan, hazards and fire suppression strategies and tactics.

In 2013 the City undertook bushfire risk assessments in all of City's natural areas using Australian Standard AS 3959 (Buildings in Bush Fire Prone Areas) and ISO AS/NZ 31000-2009 (Risk Management - Principles and Guidelines). Whilst this was not a requirement for the City and is only a legislative requirement for developments occurring in bush fire prone areas. It was undertaken as a proactive measure by the City to assist in managing fire risk. As a result of these assessments several actions were identified and implemented for Hollywood Reserve and follow up maintenance has been scheduled (as required) in order to maintain these actions.

Fuel load assessments were undertaken for all natural areas in 2015 using methodology described within the DFES Visual Fuel Load Guide for the Swan Coastal Plain and Darling Scarp (DFES, 2015). Following these assessments, a number of actions were undertaken to reduce fuel loads at Hollywood Reserve. In addition to this the City also has an annual grass weed management program that reduces fuels loads and a manual fuel load reduction program.

### Management Actions 2019-2024

- |    |   |
|----|---|
| 1. | Implement 'Fire Management' actions in the Natural Areas Management Plan 2019-2024. |
|----|---|

## 9. ACCESS

The “*Objectives for Access*” has been detailed for all natural areas on pages 68-73 of the Natural Areas Management Plan 2019-2024. The fences and path network at Hollywood Reserve are considered appropriate and rehabilitation has been completed on most informal tracks over recent years. The majority of the path network provides for disability access from both the Karalla Street and Smyth Road entrances.

The path network in Zone 3 was upgraded in accordance with the City’s Natural Area Path Network Policy in 2011 and the remaining pathways in Zones 1 and 2 are due to be upgraded by the 30 June 2019.

### Management Actions 2019-2024

- |    |  |
|----|--|
| 1. | Implement ‘Access’ actions in the Natural Areas Management Plan 2019-2024. |
|----|--|

## 10. CULTURAL HERITAGE, INTERPRETATION & EDUCATION

Cultural Heritage, Interpretation and Education has been detailed for all natural areas on pages 74-82 of the Natural Areas Management Plan 2019-2024.

There are several signs, plaques, memorials and benches within Hollywood Reserve and one information shelter. A Bush Food Garden was recently installed in Zone 3 to promote the environmental awareness of Noongar bush food and culture.

The plaques displaying plant names along the pathways in the Reserve were originally installed to educate people of the types of plants found within the Reserve. However, as many of the plants had died and the plaques were out of date the majority of the plaques have been removed.

There are many benches throughout the Reserve and recently several of these have been upgraded. The information shelter is located at the Boronia Street entrance to the Reserve. The information shelter allows information to be displayed including work undertaken by the Friends of Hollywood Reserve, a map of the Reserve and other information to inform and educate the general public about the Reserve. There is also a stock of informative brochures supplied by The Friends of Hollywood Reserve available at the Boronia Street and Monash Avenue entrances to the Reserve. Ongoing maintenance of the information shelter and benches should be undertaken as required as well as ongoing weed control, planting and maintenance of signage in the Bush Food Garden.

There is also Whadjuk Trail signage located through the Reserve. The Whadjuk Trail Network is a project that is being undertaken by the Western Suburbs Regional Organisation of Councils (WESROC) and natural area 'Friends of' groups in the Western Suburbs. The Whadjuk Trail Network consists of a series of walking trails that link all natural areas in the Western Suburbs, including the Cities of Stirling, Fremantle and Perth.

Currently six out of seven trails have been installed. The trail that traverses Hollywood Reserve is the Karak Bidi Trail and it extends from Rosalie Park in Subiaco to the Dalkeith Foreshore at Paul Hasluck Reserve. It connects to the Yange Kep Bidi, the Karda Bidi and the Bush to Beach Trail within the Whadjuk Trail Network. Directional signage on pathways and bollards directs walkers through Hollywood Reserve on the Karak Bidi Trail. Interpretive signage is also located along the trail detailing the environmental, Aboriginal and European significance of Allen Park.

Management Actions 2019-2024	
1.	Undertake removal of plaques as required.
2.	Undertake maintenance of the information shelter, picnic table and benches as required.
3.	Undertake ongoing management of the Bush Food Garden including weed control, revegetation and installation of signage.

## 11. NATIVE ANIMALS

### Background

There are 44 confirmed native animal species in Hollywood Reserve (35 birds, 4 mammals and 4 reptiles) these are detailed in Appendix 3. Ongoing surveying of native fauna within Hollywood Reserve should be undertaken if resources are available.

At present all these species are managed indirectly through improving bushland condition and control of feral animals which have the potential to predate, compete with or displace native animals. This is discussed in the feral animal management section on pages 85-90 of the Natural Areas Management Plan 2019-2024.

### Strategy for Protection of Native Animals

#### Gould's Wattled Bat (*Chalinolobus gouldii*)

Gould's Wattled Bat is common throughout mainland Australia, except for Cape York Peninsula. They generally roost in colonies in a variety of habitats including buildings and tree hollows.

#### Southern Forest Bat (*Vespadelus regulus*)

Southern Forest Bats occur across southern Australia. They hibernate in winter and females give birth to one baby in early summer (Australian Museum, 2019).

#### White-striped Freetail Bats

White-striped Freetail Bats roost in singular or in small groups in tree hollows and are common and widespread across parts of southern Australia. It is the largest of all the free-tail bats and is one of the few microbats with echolocation calls that can be heard by humans (Australian Museum, 2019).

Bat boxes are installed throughout Hollywood Reserve. Bats have been recorded using the bat boxes and the City should continue the supply and installation of bat boxes when funding allows to provide more habitat for bats.

#### Brushtail Possum

Brushtail Possums are among the most adaptable of the native mammals they live in a variety of habitats often favouring open forest and woodland areas with older trees that provide hollows.

Due to the adaptability of the Brushtail Possum, no specific measures are proposed to manage them onsite. However, hollows in larger old and dead trees should be retained as refuges and the ongoing control of feral European Honey Bees should be undertaken as they can displace native animals from hollows.

### Birds

Of the 35 native bird species identified in Appendix 3 three species are protected under the EPBC Act. These include the Carnaby's Black-Cockatoo (*Calyptrorhynchus latirostris*) which is listed as *Endangered*, the Forest Red-tailed Black-Cockatoo (*Calyptrorhynchus banksii*) listed as *Vulnerable* and the Rainbow Bee-eater (*Merops ornatus*) which is listed as a *Marine* species.



Carnaby's have roost sites at Perry Lakes and Hollywood Hospital and they often stop via Karrakatta Cemetery in the late afternoon to drink from the water fountains near the corner of Smyth and Aberdare Roads. Forest Red-tailed Black-Cockatoos have a roost site near McGillivray Oval in Mount Claremont. Both species are regularly seen foraging at Hollywood Reserve.

Rainbow Bee-eaters migrate annually in summer and nest in Perth's sandy soils. They are observed at Hollywood Reserve and Karrakatta Cemetery during the summer months. However, it has been noted that over the years the number of Rainbow Bee-eaters observed at Hollywood Reserve has significantly declined. If nests are encountered in the bushland they should be protected so that any restoration work undertaken does not disturb their activities. Feral fox control should also be implemented as they can predate on their nests.

#### Feral birds

Feral birds compete with native birds for foraging material and nesting hollows. Some also carry diseases which have the potential to infect native bird populations such as the Rainbow Lorikeet that carry Beak and Feather disease. The Department of Biodiversity Conservation and Attractions (DBCA) undertook a five year regional feral bird control program focussing on Rainbow Lorikeets and Long-billed Corellas. This program has now been taken over by the Western Australian Local Government Association who are currently seeking funding from local governments to continue this program.

The protection of the mammals and birds in Hollywood Reserve can be achieved through:

- Fire risk management to minimise fires that may destroy tree hollows
- Retaining hollows for refuges in large old and dead trees
- Controlling feral European Bees
- Protecting nests of Rainbow Bee-eaters
- Ongoing feral cat and fox control programs
- Contributing to regional feral bird programs coordinated by WALGA.

Management Actions 2019-2024	
1.	Undertake ongoing surveying of native fauna if resources allow.
2.	Minimise fires that may destroy tree hollows.
3.	Retain tree hollows for their habitat value.
4.	Undertake ongoing control of feral European Bees.
5.	Protect Rainbow Bee-eater nests.
6.	Continue implementing feral cat and fox control programs.
7.	Contribute to regional feral bird control programs coordinated by WALGA.
8.	Apply for funding for the installation of additional bat boxes within the Reserve.

## 12. COMMUNITY INVOLVEMENT

The objectives and strategies for community involvement for the City's 'Friends of' groups are detailed on pages 83-84 of the Natural Areas Management Plan 2019-2024. In summary, the activities of bushland community groups should continue to be supported by the City through the Community Friends Group Policy, and assistance should be provided to help 'Friends of' groups remain sustainable through advertising and the volunteer referral centre.

### History of the Formation of the Friends of Hollywood Reserve

During the period from 1963 to 1972 the City of Nedlands conducted various negotiations with a view to obtaining an area of land on the Smyth Road side of Karrakatta Cemetery for parks and gardens purposes. Various proposals were put to the City, including one from Mr Bartlett-Day, an early resident of Boronia Avenue, for a natural bushland park. Mr Bartlett-Day campaigned consistently for a period of time to have the bushland declared an "A" Class Reserve. He was assisted by strong support from the local community.

He had spent a lot of time with his daughter studying wildflowers in the park. When she died, in, honouring the time that he had spent with her there began to plant trees and shrubs in the Reserve. The Hollywood High School Parents and Citizens Association proposed the establishment of cycle tracks. A suggestion was also made that a playground be established.

In 1972 the City of Nedlands was verbally advised of the vesting of eighteen acres for parks and gardens and subsequently the Reserve was named Hollywood Reserve. In 1974, the official vesting took place. A plan was produced in April 1975 and adopted by the City of Nedlands, with the exception of the playground, allowing for development of the Reserve as a native wildflower park. Veldt Grass was cleared, the Reserve fenced, trees planted around the perimeter and a bore was sunk.

One acre of land was set aside for the W.A. Native Orchid Study and Conservation Group for the transplantation and propagation of native orchids. They requested for their use a damp area of approximately 20 feet by 30 feet, a small area of granite boulders to be supplied by the City of Nedlands and a small gravel area 30 feet by 30 feet by 3 inches deep. The W.A. Native Orchid Study and Conservation Group were authorised by the City of Nedlands to commence development on the 3rd of June 1976. In that same month a petition was received from fifty-four residents of the Hollywood Ward objecting to the proposal.

In 1976, an attempt was made to hand the land over to the Karrakatta Cemetery Board. Local residents expressed vehement opposition to the proposal and it was subsequently dropped. In 1988 there was a further attempt by the State Government to transfer the Reserve to the Metropolitan Cemeteries Board. The outcome was the same as it had been previously.

The Friends of Hollywood Reserve formed in 1996 to protect the bushland from being developed and preserve it for conservation and recreation purposes. The development of the Reserve did not proceed, and from 1997 the Friends of

Hollywood Reserve and the City of Nedlands have co-managed restoration and conservation efforts within Hollywood Reserve.

#### Friends of Hollywood Reserve Activities

The Friends of Hollywood Reserve are very active in the management of Hollywood Reserve and meet every second Sunday of the month from 9–12 noon. Projects the Friends of Hollywood Reserve are involved in include:

- Revegetation
- Environmental weed management
- Guided walks
- Community education
- Development of management actions for Hollywood Reserve
- Flora surveys.

The Friends of Hollywood Reserve are keen to involve anyone interested in caring for Hollywood Reserve. The contact details for the Friends of Hollywood Reserve are:

Secretary Trish Hewson  
12 Boronia Avenue Nedlands 6009 WA  
9386 4476

Urban Bushland Council

<http://www.bushlandperth.org.au/member-groups/3-north-of-the-river/51-friends-of-hollywood-reserve>

### 13. REFERENCES

APACE 2001, *Hollywood Reserve Management Plan*. Unpublished report for the City of Nedlands, Perth.

Arbor Carbon 2011, *Disease Assessment Bush and Green Reserves City of Nedlands*. Unpublished report for the City of Nedlands, Perth.

Australian Museum <https://australianmuseum.net.au/learn/animals/bats/southern-forest-bat/> (Accessed 26/03/2019)

Australian Museum <https://australianmuseum.net.au/learn/animals/bats/white-striped-freetail-bat/> (Accessed 22/02/2019).

Bettink, K., Keighery, G., Swan Catchment Council (SCC) and Department of Environment and Conservation (DEC) 2008, *Environmental weed census and prioritisation, Swan NRM Region*. Department of Environment and Conservation, Perth.

Bettink, K., Keighery, G., Swan Catchment Council (SCC) and Department of Environment and Conservation (DEC) 2008, *Environmental Weed Assessment*. Department of Environment and Conservation, Perth.

Brown, K., Bettink, K., Grazyna, P., Culity, J. and French, S., Geographic Information Systems and Department of Environment and Conservation (DEC) 2011, *Standard Operating Procedure - SOP 22.1 Techniques for Mapping Weed Distribution and Cover in Bushland and Wetlands*. Department of Environment and Conservation, Perth.

Department of Biodiversity, Conservation and Attractions (Parks and Wildlife Service) 2016, *Species-led Ecological Impact and Invasiveness Ranking – Swan Region* <https://www.dpaw.wa.gov.au/plants-and-animals/plants/weeds/156-how-does-dpaw-manage-weeds> Accessed various dates December 2018 - April 2019.

Department of Fire and Emergency Services [DFES] (2015) *Visual Fuel Load Guide for the Swan Coastal Plain and Darling Scarp 3rd Edition*. Environmental Protection Branch, August 2015

Department of Parks and Wildlife 2013, *Weed Prioritisation Process for DPaW (formerly DEC) – “An integrated approach to Weed Management of DPaW managed lands in WA”*. Department of Parks and Wildlife, Perth.

Ecoscape 2002, *Western Suburbs Greening Plan*. Unpublished report for the Western Suburbs Regional Organisations of Councils, Perth.

Ecoscape 2005, *Allen Park Management Plan 2005-2010*. Unpublished report for the City of Nedlands, Perth.

Ecoscape 2005, *Shenton Bushland Management Plan 2005-2010*. Unpublished report for the City of Nedlands, Perth.

Ecoscope 2006, *Weed Mapping of Bushland at Mount Claremont Oval*. Unpublished report for the City of Nedlands, Perth.

Fordyce, I. 2014, City of Nedlands Volunteer Botanist. Information provided for Soils and Geomorphology section.

Hedde, E.M., Loneragan, O.W. and Havel, J.J. 1980, *Vegetation Complexes of the Darling System Western Australia*, In: *Atlas of Natural Resources Darling System Western Australia*. Department of Conservation and Environment, Perth.

Gibson, N., Keighery, B.J., Keighery G.J., Burbidge, A.H. and Lyons, M.N. 1994, *A Floristic Survey of the Swan Southern Coastal Plain*. Unpublished Report for the Australian Heritage Commission prepared by Department of Conservation and Land Management and the Conservation Council of Western Australia Inc., Perth.

Government of Western Australia 2000, *Bush Forever, Volume 2: Directory of Bush Forever Sites*. Department of Environmental Protection, Perth.

Jean-Paul Orsini and Associates 2008, Perth Biodiversity Project *Natural Area Initial Assessment Templates for Hollywood Reserve*. Unpublished assessment template for the City of Nedlands, Perth.

Keighery, B and Wildflower Society of Western Australia 1994, *Bushland Plant Survey: A guide to plant community survey for the community*. Wildflower Society of WA (Inc.), Nedlands, W.A.

Lipple, S.L. and Shaw, L.D. 2002, *City of Nedlands – Natural Landscape Inventory – A report on the Natural Resources Particularly Native Vegetation Remnants within the Urban Environment of the City of Nedlands (Volume 1)*. Unpublished report for the City of Nedlands.

Parks and Wildlife Service *Department of Biodiversity Conservation and Attractions* <https://www.dpaw.wa.gov.au/>. Various dates between November 2018 – April 2019.

Perth Biodiversity Project, South West Biodiversity Project and WALGA 2009, *Local Government Guidelines for Bushland Management in the Perth and Coastal South-West Natural Resource Management Regions*. Perth Biodiversity Project and Western Australian Local Government Association, Perth.

Perth Biodiversity Project and WALGA, 2010, *Remnant Vegetation by Vegetation Complex Dataset for Perth and Peel*. WALGA, Perth.

Western Australian Herbarium (1998–2019). FloraBase—the Western Australian Flora. Department of Biodiversity, Conservation and Attractions. <https://florabase.dpaw.wa.gov.au/> (Accessed various dates between November 2018 – April 2019).

**Appendix 1: Flora Inventory**  
**Native Flora**

Scientific Name	Common Name(s)	Notes
<i>Acacia cochlearis</i>	Rigid Wattle	Planted?
<i>Acacia cyclops</i>	Coastal Wattle	Planted?
<i>Acacia lasiocarpa</i>	Dune Moses	
<i>Acacia pulchella</i>	Prickly Moses	
<i>Acacia rostellifera</i>	Summer-scented Wattle	Planted?
<i>Acacia saligna</i>	Orange Wattle, Golden Wreath Wattle	
<i>Acacia willdenowiana</i>	Grass Wattle	
<i>Adenanthos cygnorum</i>	Woolly Bush	Planted?
<i>Alexgeorgea nitens</i>		
<i>Allocasuarina fraseriana</i>	Sheoak	
<i>Allocasuarina humilis</i>	Dwarf Sheoak, Scrub Sheoak	
<i>Anigozanthos humilis</i>	Cat's Paw	
<i>Anigozanthos manglesii</i>	Mangles' Kangaroo Paw	
<i>Astroloma pallidum</i>	Kick Bush	
<i>Austrostipa elegantissima</i>	Feather Speargrass, Elegant Speargrass	Formerly <i>Stipa elegantissima</i>
<i>Austrostipa flavescens</i>	Yellow Stipa	Formerly <i>Stipa flavescens</i>
<i>Banksia attenuata</i>	Candle Banksia	
<i>Banksia dallanneyi</i> var. <i>dallanneyi</i>	Couch Honeypot	Previously confused with <i>Banksia nivea</i> (formerly <i>Dryandra nivea</i> )
<i>Banksia grandis</i>	Bull Banksia	
<i>Banksia menziesii</i>	Firewood Banksia	
<i>Banksia prionotes</i>	Acorn Banksia, Sawtooth Banksia	
<i>Banksia sessilis</i> var. <i>cynmorum</i>	Parrot Bush	Formerly <i>Dryandra sessilis</i>
<i>Banksia squarrosa</i> subsp. <i>squarrosa</i>	Pingle	Some populations Previously misnamed <i>B. carduacea</i> (formerly <i>Dryandra squarrosa</i> / <i>carduacea</i> )



Scientific Name	Common Name(s)	Notes
<i>Beaufortia elegans</i>	Elegant Beaufortia	
<i>Billardiera fusiformis</i>	Australian Bluebell	Previously confused with <i>B. heterophylla</i> (previously <i>Sollya heterophylla</i> )
<i>Burchardia congesta</i>	Milkmaids	Previously confused with <i>B. umbellata</i>
<i>Caesia micrantha</i>	Pale Grass-lily	Previously confused with <i>C. parviflora</i>
<i>Caladenia arenicola</i>	Carousel Spider Orchid	Previously confused with the rare species <i>C. huegelii</i>
<i>Caladenia falcata</i>	Fringed Mantis Orchid	
<i>Caladenia flava</i>	Cowslip Orchid	
<i>Caladenia latifolia</i>	Pink Fairy Orchid	
<i>Callistemon phoeniceus</i>	Lesser Bottlebrush	Planted?
<i>Callitris preissii</i>	Rottneist Island Pine	
<i>Calothamnus quadrifidus</i>	One-sided Bottlebrush	There is at least one yellow-flowering plant at Hollywood
<i>Calothamnus rupestris</i>	Mouse Ears	
<i>Calothamnus sanguineus</i>	Silky-leaved Blood Flower	
<i>Conospermum canaliculatum</i>		
Common Smokebush	Proteaceae	
<i>Conospermum triplinervium</i>	Tree Smokebush	
<i>Conostephium pendulum</i>	Pearl Flower	
<i>Conostylis aculeata</i>	Prickly Cottonhead	
<i>Conostylis candicans</i>	Grey Cottonhead, White Cottonhead	
<i>Conostylis setigera</i>	Bristly Cottonhead	
<i>Corymbia calophylla</i>	Marri	
<i>Corynotheca micrantha</i>	Sand Lily	
<i>Cryptostylis ovata</i>	Slipper Orchid	
<i>Dampiera linearis</i>	Common Dampiera	
<i>Darwinia citriodora</i>	Lemon -scented Darwinia	

Scientific Name	Common Name(s)	Notes
<i>Daviesia divaricata</i>	Marno	
<i>Daviesia nudiflora</i>		
<i>Desmocladus flexuosus</i>		
<i>Dianella revoluta</i> var. <i>divaricata</i>	Blue Flax Lily	Formerly <i>Dianella divaricata</i>
<i>Diuris corymbosa</i>	Common Donkey Orchid	Previously confused with <i>D. longifolia</i>
<i>Diuris longifolia</i>	Purple Pansy Orchid	
<i>Dodonaea hackettiana</i>	Hackett's Hop Bush	
<i>Drosera erythrorhiza</i>	Red Ink Sundew	
<i>Drosera</i> sp.	a pigmy sundew	
<i>Enchylaena tomentosa</i>	Ruby Saltbush, Barrier Saltbush	
<i>Eremophila glabra</i>	Tar Bush	Formerly assigned to Myoporaceae
<i>Eucalyptus gomphocephala</i>	Tuart	
<i>Eucalyptus marginata</i>	Jarrah	
<i>Eucalyptus todtiana</i> ?	Coastal Blackbutt, Prickle-bark Tree	Planted?
<i>Gastrolobium capitatum</i>	Bacon And Eggs	Formerly <i>Nemcia capitata</i> and <i>Oxylobium capitatum</i>
<i>Gompholobium tomentosum</i>	Hairy Yellow Pea	
<i>Grevillea bipinnatifida</i>	Fuchsia Grevillea	
<i>Grevillea crithmifolia</i>		
<i>Grevillea preissii</i>	Coastal Spider Net Grevillea	Formerly <i>G. thelemanniana</i> subsp. <i>preissii</i>
<i>Grevillea the le manniana</i> ?	Spider Net Grevillea	
<i>Grevillea vestita</i>		
<i>Guichenotia ledifolia</i>	Guichenotia	
<i>Haemodorum paniculatum</i>	Mardja, Bloodroot	
<i>Haemodorum spicatum</i>	Mardja, Bloodroot	
<i>Hakea lissocarpha</i>	Honeybush	
<i>Hakea prostrata</i>	Harsh Hakea	

Scientific Name	Common Name(s)	Notes
<i>Hardenbergia comptoniana</i>	Native Wisteria	
<i>Hemiandra pungens</i>	Snakebush	Planted?
<i>Hibbertia cuneiformis</i>	Cutleaf Hibbertia	Planted?
<i>Hibbertia huegelii</i>		
<i>Hibbertia hypericoides</i>	Yellow Buttercups	
<i>Hibbertia racemosa</i>	Stalked Guinea Flower	
<i>Hovea pungens</i>	Devil's Pins	
<i>Hovea trisperma</i>	Common Hovea	
<i>Hybanthus calycinus</i>	Wild Violet	
<i>Hypocalymma angustifolium</i>	White Myrtle	
<i>Hypocalymma robustum</i>	Swan River Myrtle	
<i>Isolepis marginata</i>	Coarse Club Rush	Previously misidentified as <i>Isolepis cernua</i>
<i>Isopogon drummondii</i>		
<i>Isotropis cuneifolia</i>	Granny Bonnets	
<i>Jacksonia furcellata</i>	Grey Stinkwood	
<i>Jacksonia sericea</i>		
<i>Jacksonia sternbergiana</i>	Stinkwood	
<i>Kennedia prostrata</i>	Running Postman	
<i>Kunzea glabrescens</i>	Spearwood	Previously confused with <i>K. ericifolia</i>
<i>Lechenaultia linarioides</i>	Yellow Leschenaultia	
<i>Lepidosperma apricola</i>		Previously confused with <i>L. leptostachyum</i>
<i>Leucopogon propinquus</i>		
<i>Lomandra caespitosa</i>	Tufted Mat Rush	
<i>Lomandra hermaphrodita</i>		
<i>Lomandra maritima</i>		
<i>Lomandra preissii</i>	Large Mat Rush	
<i>Lyginia barbata</i>		Some Hollywood individuals may in fact be <i>L. imberbis</i>
<i>Macropidia fuliginosa</i>	Black Kangaroo Paw	

Scientific Name	Common Name(s)	Notes
<i>Macrozamia fraseri</i>	Zamia	Previously confused with <i>M. riedlii</i>
<i>Marianthus erubescens</i>		Formerly <i>Billardiera erubescens</i>
<i>Melaleuca cardiophylla</i>	Tangling Melsleuca	Planted?
<i>Melaleuca huegelii</i>	Chenille Honey myrtle	Planted?
<i>Melaleuca lanceolata</i>	Rottneist Island Tea-tree	Planted?
<i>Melaleuca systema</i>	Coastal Honey myrtle	Formerly <i>M. acerosa</i>
<i>Mesomelaena pseudostygia</i>	Semaphore Sedge	
<i>Mesomelaena tetragona</i>	Semaphore Sedge	
<i>Microtis media</i>	Common Mignonette Orchid	Previously confused with <i>M. uniflorai</i>
<i>Myoporum insulare</i>	Blueberry Tree	Planted?
<i>Olearia axillaris</i>	Coastal Daisybush	
<i>Orthrosanthus laxus</i>	Morning Iris	
<i>Patersonia occidentalis</i>	Purple Flag	
<i>Persoonia saccata</i>	Snottygobble	
<i>Petrophile linearis</i>	Pixie Mops	
<i>Petrophile macrostachya</i>		
<i>Philotheca spicata</i>	Pepper and Salt	Formerly <i>Eriostemon spicatum</i>
<i>Phyllanthus calycinus</i>	False Boronia	
<i>Pimelea rosea</i>	Rose Banjine	
<i>Pithocarpa cordata</i>	Tangle Daisy	Formerly <i>Ozothamnus cordata</i> and <i>Helichrysum codatum</i>
<i>Pittosporum ligustrifolium</i>	Native Willow	Previously included with <i>P. angustifolium</i> & <i>P. phylliaroides</i> as <i>P. phylliaroides</i>
<i>Poranthera microphylla</i>	Small Poranthera	
<i>Ptilotus drummondii</i>	Narrowleaf Mulla Mulla	
<i>Ptilotus polystachyus</i>	Prince of Wales Feather, Green Mulla Mulla	

Scientific Name	Common Name(s)	Notes
<i>Pyrorchis nigricans</i>	Red Beak Orchid, Elephant Ear	
<i>Rhagodia baccata</i>	Berry Saltbush	
<i>Ricinocarpos undulatus</i>	Wedding Bush	Previously confused with <i>R. glaucus</i>
<i>Scaevola anchusifolia</i>	Silky Fan Flower	Formerly <i>S. holosericea</i>
<i>Scaevola canescens</i>	Grey Scaevola	
<i>Scaevola repens</i>		Previously confused with <i>S. paludosa</i>
<i>Schoenus clandestinus</i>		
<i>Schoenus grandiflorus</i>	Large Flowered Bog Rush	
<i>Scholtzia involucata</i>	Spiked Schotzia	
<i>Sowerbaea laxiflora</i>	Purple Tassels, Vanilla Lily	
<i>Spyridium globulosum</i>	Basket Bush	
<i>Stirlingia latifolia</i>	Blueboy	
<i>Synaphea spinulosa</i>		
<i>Templetonia retusa</i>	Cockies Tongues	
<i>Thelymitra macrophylla</i>	Scented Sun Orchid	
<i>Thysanotus arenarius</i>	Sand-dune Fringed Lily	
<i>Thysanotus manglesianus</i>	Mangles' Fringed Lily	
<i>Thysanotus sparteus</i>	Leafless Fringed Lily	
<i>Tricoryne elatior</i>	Yellow Autumn Lily	
<i>Verticordia plumosa</i>	Plumed Feather Flower	
<i>Xanthorrhoea brunonis</i>		Misidentified in some earlier reports as <i>X. gracilis</i>

Native plant inventory reviewed and updated by Ian Fordyce and Associates.

### Weed Inventory (includes native plants from outside the Perth area)

Scientific Name	Common Name(s)	Notes
<i>Xantorrhoea preissii</i>	Grass Tree, Balga	
<i>Acacia acuminata</i>	Jam, Raspberry Jam	
<i>Acacia baileyana</i>	Cootamundra Wattle	
<i>Acacia denticulosa</i>	Sandpaper Wattle	
<i>Acacia dictyoneura</i>		
<i>Acacia drummondii</i> subsp. <i>elegans</i>	Drummond's Wattle	
<i>Acacia guineti</i>	Guinet's Wattle	
<i>Acacia iteaphylla</i>	Flinders Range Wattle	
<i>Acacia jennerae?</i>	Coonavittra Wattle	
<i>Acacia lasiocalyx</i>	Silver Wattle	
<i>Acacia longifolia</i>	Sydney Golden Wattle	
<i>Acacia meisneri</i>		
<i>Acacia merinthophora</i>	Zig-zag Wattle	
<i>Acacia microbotrya</i>	Manna Wattle	
<i>Acacia myrtifolia</i>	Myrtle Wattle	
<i>Acacia podalyriifolia</i>	Queensland Silver Wattle, Mt Morgan Wattle	
<i>Acacia spathulifolia</i>		
* <i>Agave americana</i>	Century Plant	
<i>Agonis flexuosa</i>	Peppermint	
* <i>Albuccaria flaccida</i>		Previously confused with <i>A. canadensis</i>
<i>Allocasuarina pinaster</i>	Compass Bush	
<i>Anigozanthos rufus</i>	Red Kangaroo Paw	
<i>Araucaria heterophylla</i>	Norfolk Island Pine	
* <i>Arctostaphylos</i> sp. (possibly <i>A. densiflora</i> ?)	Manzanita	
* <i>Arctotheca calendula</i>	Cape Weed	
* <i>Asphodelus fistulosus</i>	Wild Onion, Onion Weed	
* <i>Avena barbata</i>	Bearded Oats	



Scientific Name	Common Name(s)	Notes
<i>*Avena fatua</i>	Wild Oats	
<i>Atriplex nummularia</i>	Old Man Saltbush	
<i>*Babiana angustifolia</i>	Baboon Flower	
<i>Banksia ashbyi?</i>	Ashby's Banksia	
<i>Banksia laricina</i>	Rose Banksia	
<i>Banksia leptophylla</i> var. <i>metallica</i>	Slender-leaved Banksia	
<i>Banksia lullfitzii</i>		
<i>Banksia sceptrum</i>	Sceptre Banksia	
<i>Banksia speciosa</i>	Showy Banksia	
<i>Brachychiton gregorii</i>	Desert Kurrajong	
<i>Brachychiton populneus</i>	Kurrajong	
<i>*Briza maxima</i>	Blowfly Grass	
<i>*Briza minor</i>	Shivery Grass	
<i>Callistemon glaucus</i>	Albany Bottlebrush	
<i>Callistemon viminalis</i>	Weeping Bottlebrush	
<i>Callitris arenaria</i>	Sandplain Cypress	Formerly <i>Actinostrobus arenarius</i>
<i>Calothamnus graniticus</i> subsp. <i>leptophyllus</i>		
<i>Calothamnus planifolius</i>		
<i>Calothamnus pachystachyus</i>		
<i>Calothamnus quadrifidus</i> subsp. <i>homalophyllus</i>	Murchison Clawflower	Formerly <i>Calothamnus homalophyllus</i>
<i>Calytrix acutifolia</i>		Formerly <i>Lhotskya acutifolia</i> ; some plants previously confused with <i>L. ericoides</i>
<i>Calytrix hirta</i>		Formerly <i>Chamelaucium</i> sp. Esperance
<i>*Centaurea melitensis</i>	Maltese Cockspur	
<i>*Ceratonia siliqua</i>	Carob	
<i>Chamelaucium micranthum</i>		A complex of unnamed species – likely to be revised soon

Scientific Name	Common Name(s)	Notes
<i>Chamelaucium</i> sp. Gingin		Formerly known informally as <i>C. lullfitzii</i>
<i>Chamelaucium uncinatum</i>	Geraldton Wax	
* <i>Chasmanthe floribunda</i>	African Cornflag	
* <i>Conyza bonariensis</i>	Flaxleaf Fleabane	
<i>Corymbia citriodora</i>	Lemon-scented Gum	
<i>Corymbia ficifolia</i>	Red-flowered Gum	
<i>Corymbia maculata</i>	Spotted Gum	
* <i>Cotula turbinata</i>	Funnel Weed	
* <i>Cynodon dactylon</i>	Couch (Grass)	
<i>Darwinia oldfieldii</i>	Red Darwinia	
* <i>Dischisma capitatum</i>	Woolly-headed Dischisma	
* <i>Disa bracteata</i>	South African Orchid	Formerly <i>Monadenia bracteata</i>
* <i>Ehrharta calycina</i>	Perennial Veldt Grass	
* <i>Ehrharta longiflora</i>	Annual Veldt Grass	
* <i>Eragrostis curvula</i>	African Love Grass	
<i>Eremaea beaufortioides</i>		
* <i>Erodium moschatum</i>	Musky Crowsfoot	
<i>Eucalyptus angulosa</i>	Ridge-fruited Mallee	
<i>Eucalyptus caesia</i>	Caesia, Silver Princess	
<i>Eucalyptus camaldulensis</i>	River Red Gum	
Myrtaceae <i>Eucalyptus clelandii</i>	Cleland's Blackbutt	
<i>Eucalyptus cornuta</i>	Yate	
<i>Eucalyptus crucis</i> subsp. <i>crucis</i>	(Southern Cross) Silver Mallee	Possibly subsp. <i>lanceolata</i>
<i>Eucalyptus erythrocorys</i>	Illyarrie	
<i>Eucalyptus flindersii</i> ?	(South Australian) Grey Mallee	A Red Gum species
<i>Eucalyptus formanii</i>	Die Hardy Mallee	
<i>Eucalyptus forrestiana</i>	Fuchsia Gum	

Scientific Name	Common Name(s)	Notes
<i>Eucalyptus kingmillii</i>	Kingsmill's Mallee	
<i>Eucalyptus</i> × <i>kirtonia</i>	Red Mahogany	Reputed hybrid between <i>E. robusta</i> (Swamp Mahogany) & <i>E. tereticornis</i> (Forest Red Gum)
<i>Eucalyptus kruseana</i>	Bookleaf Mallee	
<i>Eucalyptus lane-poolei</i>	Salmon White Gum, Red-freckled Gum	
<i>Eucalyptus lehmannii</i>	Bushy Yate	
<i>Eucalyptus leucoxylon</i>	(South Australian) Blue Gum, Yellow Gum, White Ironbark	
<i>Eucalyptus macrocarpa</i>	Mottlecah	
<i>Eucalyptus melliodora</i>	Honey Box, Yellow Box	
<i>Eucalyptus petiolaris</i>	Pink-flowered Yellow Gum	Formerly <i>E. leucoxylon</i> subsp. <i>petiolaris</i> ; often sold as <i>E. leucoxylon</i> 'rosea'
<i>Eucalyptus pleurocarpa</i>	Tallerack	Previously misnamed <i>E. tetragona</i>
<i>Eucalyptus preissiana</i>	Bell-fruited Mallee	
<i>Eucalyptus pyriformis</i>	Dowerin Rose	
<i>Eucalyptus sideroxylon</i>	Mugga Ironbark, Red Ironbark	
<i>Eucalyptus spathulata</i>	Swamp Mallet	
<i>Eucalyptus stricklandii</i>	Strickland's Gum	
<i>Eucalyptus tetraptera</i>	Square-fruited Mallee, Four-winged Mallee	
<i>Eucalyptus torquata</i>	Coral Gum	
<i>Eucalyptus tricarpa</i>	Red Ironbark	Formerly <i>E. sideroxylon</i> subsp. <i>tricarpa</i>
<i>Eucalyptus utilis</i>	Coastal Moort	Previously misidentified as a variety of <i>E. platypus</i>
<i>Eucalyptus vergrandis</i>	Ongerup Mallee	
<i>Eucalyptus woodwardii</i>		
<i>Eucalyptus youngiana</i>	Large-fruited Mallee, Ooldea Mallee	

Scientific Name	Common Name(s)	Notes
<i>*Euphorbia peplus</i>	Petty Spurge	
<i>*Euphorbia terracina</i>	Geraldton Carnation Weed	
<i>*Ferraria crispa</i>	Black Flag	
<i>*Freesia alba x leichtlinii</i>	Freesia	A hybrid of two South African species
<i>*Fumaria capreolata</i>	Whiteflower Fumitory	
<i>*Gazania linearis</i>	Gazania	
<i>*Geranium molle</i>	Dove's Foot Cranesbill	
<i>*Gladiolus angustus</i>	Long-tubed Painted Lady	
<i>*Gladiolus caryophyllaceus</i>	Pink Gladiolus	
<i>Crevillea curviloba</i>		
<i>Grevillea leucopteris</i>	White-plumeed Grevillea, Old Socks	
<i>Grevillea nudiflora</i>		
<i>Grevillea olivacea</i>	Olive Grevillea	
<i>Grevillea pinaster</i>		
<i>Guichenotia macrantha</i>	Large-flowered Guichenotia, Yanchep Bells	
<i>Hakea bucculenta</i>	Red Pokers , Bottlebrush Hakea	
<i>Hakea costata</i>	Ribbed Hakea	
<i>Hakea 'crassinervia'</i>	'Burendong Beauty'	putative nursery hybrid between <i>H. petiolaris</i> & <i>H. myrtoidea</i>
<i>Hakea francisiana</i>	Bottlebrush Hakea, Emu Tree	Includes the broader-leaved northern Wheatbelt variant formerly known as <i>H. coriacea</i>
<i>Hakea laurina</i>	Pincushion Hakea	
<i>Hakea multilineata</i>	Grass-leaved Hakea	
<i>Hakea obtusa</i>		

Scientific Name	Common Name(s)	Notes
<i>Hakea orthorrhyncha</i> var. <i>filiformis</i>	Bird Hakea	
<i>Hakea petiolaris</i>	Sea Urchin Hakea	
<i>Hakea pritzelii</i>		
* <i>Hordeum leporinum</i>	Barley Grass	
* <i>Hypochaeris glabra</i> / <i>H. radicata</i>	Smooth Catsear/ Flatweed	
<i>Isopogon dubius</i>	Pincushion Coneflower, Rose Coneflower	
* <i>Ixia maculata</i>	Yellow Ixia	
<i>Kunzea baxteri</i>	Scarlet Kunzea	
<i>Kunzea pulchella</i>	Granite Kunzea	
<i>Labichea lanceolata</i>	Tall Labichea	
* <i>Lachenalia aloides</i>	Cape Cowslip	
* <i>Lachenalia bulbifera</i>	Red Lachenalia	
* <i>Lactuca serriola</i>	Prickly Lettuce	
* <i>Lagurus ovatus</i>	Hare's Tail Grass	
<i>Lechenaultia biloba</i>	Blue Leschenaultia	
<i>Leptosema aphyllum</i>	Ribbon Pea	
* <i>Lupinus cosentinii</i>	Sandplain Lupin	
* <i>Lycium ferocissimum</i>	African Boxthorn	
* <i>Lysimachia arvensis</i>	Pimpernel	Blue-flowered variety; formerly <i>Anagallis arvensis</i> var. <i>caerula</i>
<i>Macropidia fuliginosa</i>	Black Kangaroo Paw	
<i>Melaleuca armillaris</i>	Bracelet Honey-myrtle	
<i>Melaleuca coccinea</i>	Goldfields Bottlebrush	
<i>Melaleuca fulgens</i>	Scarlet Honey-myrtle	
<i>Melaleuca lineariifolia</i>	Snow in Summer, Flaxleaf Paperbark	
<i>Melaleuca megacephala</i>		
<i>Melaleuca nematophylla</i>	Wiry Honey-myrtle	
<i>Melaleuca nesophila</i>	Mindiyed	
<i>Melaleuca pentagona</i>		

Scientific Name	Common Name(s)	Notes
<i>Melaleuca scabra?</i>	Rough Honeymyrtle	
* <i>Melinis repens</i>	Natal Red-top Grass	Formerly <i>Rhynchelytrum repens</i>
* <i>Moraea flaccida</i>	One-leaf Cape Tulip	Formerly <i>Homeria flaccida</i>
* <i>Nerium oleander</i>	Oleander	
* <i>Olea europea</i>	Olive	
* <i>Orobanche minor</i>	Lesser Broomrape	
* <i>Oxalis glabra</i>	Finger-leaf Oxalis	
* <i>Oxalis pes-caprae</i>	Soursob	
* <i>Oxalis purpurea</i>	Large-flowered Wood Sorrel	
* <i>Pelargonium capitatum</i>	Rose Pelargonium	
* <i>Petrorhagia dubia</i>	Velvet Pink	Formerly <i>Petrorhagia velutina</i>
* <i>Pinus pinea</i>	Stone Pine, Umbrella Pine	
* <i>Pinus radiata</i>	Radiata Pine, Monterey Pine	
* <i>Plantago lanceolata</i>	Ribwort Plantain	
* <i>Poa annua</i>	Winter Grass	
* <i>Polygala myrtifolia</i>	Myrtleleaf Milkwort	
* <i>Raphanus raphanistrum</i>	Wild Radish	
* <i>Romulea rosea</i>	Guildford Grass	
* <i>Schinus terebinthifolia</i>	Brazilian Pepper	
* <i>Senecio vulgaris</i>	Common Groundsel	
<i>Senna artemisioides</i>	Desert Cassia	Formerly <i>Cassia artemisioides</i> ; possibly <i>S. artemisioides</i> subsp. × <i>artemisioides</i>
* <i>Silene gallica</i>	French Catch-fly	
* <i>Solanum nigrum</i>	Black Berry Nightshade	
* <i>Sonchus oleraceus</i> /S. <i>asper</i>	Common Sow Thistle/ Rough Sowthistle	
* <i>Stellaria media</i>	Chickweed	



Scientific Name	Common Name(s)	Notes
<i>Thryptomene saxicola</i>	Rock Thryptomene	
* <i>Tachyandra divaricata</i>	Dune Onion Weed	
* <i>Trifolium angustifolium</i>	Narrow Leaf Clover	
* <i>Trifolium arvense</i>	Hare's Foot Clover	
* <i>Trifolium campestre</i>	Hop Clover	
* <i>Ursinia anthemoides</i>	Ursinia	
<i>Verticordia chrysantha</i>		
<i>Verticordia mitchelliana</i>	Rapier Featherflower	
* <i>Vicia sativa</i>	Common Vetch	
* <i>Vulpia myuros</i>	Rat's Tail Fescue	
* <i>Wahlenbergia capensis</i>	Cape Bluebell	

Weed inventory reviewed and updated by Ian Fordyce and Associates.

## Appendix 2: Fungi Inventory

Species	Other Identifiers	Habitat	Life Mode
<i>Amanita sp.</i>		Litter/ground	Mycorrhizal
<sup>†</sup> <i>Bolete sp</i>			
<i>Calocera sp.</i>		Dead wood	Saprotrophic
<i>Clitocybe sp.</i>		Litter/ground	Saprotrophic
<i>Crepidotus sp.</i>		Dead wood	Saprotrophic
<i>Exidia glandulosa</i>	Grey Jelly Fungus	Dead wood	Saprotrophic
<sup>†</sup> <i>Fomitporia robusta</i>	Woodylayered Bracket Fungus		
<i>Galerina sp.</i>		Litter/ground	Saprotrophic
<i>Galerina unicolor</i>		Litter/ground/moss	Saprotrophic
<i>Gymnopilus allantopus</i>	Golden Wood Fungus	Dead wood	Saprotrophic
<i>Gyroporus cynescens group</i>		Litter/ground	Mycorrhizal
<i>Lepiota sp.</i>		Litter/ground	Saprotrophic
<i>Limacella illinata</i>		Litter/ground	Saprotrophic
<i>Mycena sp.</i>	Dark grey cap, ammonia odour	Litter/ground	Saprotrophic
<i>Mycena sp.</i>	Yellowish gills, sweet odour	Dead wood	Saprotrophic
<i>Mycena subgalericulata</i>		Dead wood	Saprotrophic
<sup>†</sup> <i>Omphalotus nidiformis</i>	Ghost Fungus		
<sup>†</sup> <i>Panus fasciatus</i>	Hairy Panus		
<i>Pisolithus microcarpus</i>	Stinkhorn Fungus	Litter/ground	Mycorrhizal
<i>Pluteus astromarginatus</i>		Dead wood	Saprotrophic
<i>Psathyrella sp.</i>		Litter/ground	Saprotrophic
<sup>†</sup> <i>Pycnoporus coccineus</i>	Scarlet Bracket Fungus	Dead wood	Saprotrophic
<i>Ramaria sp.</i>	Coral Fungus	Litter/ground	Mycorrhizal
<i>Rhizopogon roseolus</i>	Truffle - like fungus in pines	Dead wood	Mycorrhizal
<i>Schizophyllum commune</i>	Split Gill Fungus	Dead wood	Saprotrophic
<i>Scleroderma cepa</i>	Earthball Fungus	Litter/ground	Mycorrhizal
<i>Sepedonium sp.</i>	Parasitising a Boletus sp.	Other fungi (mushrooms)	Parasitic
<i>Suillus granulatus</i>	Slippery Jack - in pines	Litter/ground	Mycorrhizal

Species	Other Identifiers	Habitat	Life Mode
<i>Tremella aurantia</i>	Orange Jelly Fungus	Dead wood	Saprotrophic
<sup>1</sup> <i>Tremella mesenteric</i> group	Yellow Brain Fungus		
<sup>1</sup> <i>Tubifera ferruginosa</i>	Strawberry Slime Mould		
?	<sup>1</sup> Stinkhorn fungi		
?	<sup>1</sup> Coral fungus sp		
?	<sup>1</sup> Bird's Nest Fungus		
?	<sup>1</sup> Bird's Nest Fungus		

Identified by Dr. Neale Bougher, CSIRO 24 June 1999 (for the 2001 Management Plan). <sup>1</sup> Recorded by Kay Rae Friends of Hollywood Reserve.

**Appendix 3: Fauna Inventory**  
**Bird Inventory (2013 Management Plan Inventory)**

Species	Common Name	Comments 1
* <i>Columba livia</i>	Rock Dove (Feral Pigeon)	
* <i>Streptopelia senegalensis</i>	Laughing Dove	
* <i>Streptopelia chinensis</i>	Spotted Dove	
<i>Podargus strigoides</i>	Tawny Frogmouth	
<i>Accipiter fasciatus</i>	Brown Goshawk 'Forest'	Not seen for about 12 years
<i>Calyptorhynchus banksii</i>	Red-tailed Black-Cockatoo	
<i>Calyptorhynchus latirostris</i>	Carnaby's Black-Cockatoo	
<i>Eolophus roseicapilla</i>	Galah	
* <i>Trichoglossus haematodus</i>	Rainbow Lorikeet	
<i>Glossopsitta porphyrocephala</i>	Purple Crowned Lorikeet	One pair seen about 16 years ago
<i>Bernardius zonarius</i>	Australian Ringneck	
<i>Ninox novaeseelandiae</i>	Southern Boobook	
* <i>Dracelo novaeguineae</i>	Laughing Kookaburra	
<i>Merops ornatus</i>	Rainbow Bee-eater	
<i>Climacteris rufa</i>	Rufous Treecreeper	Not seen for 14 years
<i>Gerygone fusca</i>	Western Gerygone	Not seen for 12 to 13 years
<i>Pardalotus punctatus</i>	Spotted Pardalote	Never seen
<i>Pardalotus striatus</i>	Striated Pardalote	
<i>Acanthorhynchus superciliosus</i>	Western Spinebill	Not seen for 4-5 years
<i>Lichenostomus virescens</i>	Singing Honeyeater	
<i>Anthochaera carunculata</i>	Red Wattlebird	
<i>Lishmera indistincta</i>	Brown Honeyeater	
<i>Phylidonyris nigra</i>	White-cheeked Honeyeater	
<i>Daphoenositta chrysoptera</i>	Varied Sittella	Seen occasionally, about 10 years ago
<i>Coracina novaehollandiae</i>	Black Faced Cuckoo Shrike	
<i>Pachycephala rufiventris</i>	Rufous Whistler	Not seen for 14 years
<i>Cracticus torquatus</i>	Grey Butcherbird	
<i>Cracticus tibicen</i>	Australian Magpie	
<i>Rhipidura albiscapa</i>	Grey Fantail	
<i>Rhipidura leucophrys</i>	Willy Wagtail	
<i>Corvus coronoides</i>	Australian Raven	
<i>Grallina cyanoleuca</i>	Magpie Lark	
<i>Zosterops lateralis</i>	Silvereye	
<i>Hirundo neoxena</i>	Welcome Swallow	
<i>Cecropis nigricans</i>	Tree Martin	One flock seen 12 years ago

Comments supplied by Mr Aubrey Moore, Friends of Hollywood Reserve, in September 1999. \* Feral or Introduced Birds

### Mammals and Reptiles Inventory

Mammals		Introduced
Brushtail Possum	<i>Trichosurus vulpecula</i>	
Fox	<i>Vulpes vulpes</i>	*
Gould's Wattled Bat	<i>Chalinolobus gouldii</i>	
Rabbit	<i>Oryctolagus cuniculus</i>	*
Southern Forest Bat	<i>Vespadelus regulus</i>	
White-striped Freetail Bat	<i>Tadarida australis</i>	
Reptiles		
Fence Skink	<i>Cyrtoblepharus buechananii</i>	
Marbled Gecko	<i>Christinus marmoratus</i>	
Sands Gould's Monitor	<i>Varanus gouldii</i>	
Western Bobtail	<i>Tiliqua rugosa</i>	

#### Appendix 4: Priority Weed Management Notes (Compiled from WA Herbarium DBCA Florabase Website)

Species Name		Common Name	Management Strategy	Timing (optimal)
1.	<i>Acacia iteaphylla</i>	Flinders Range Wattle	Hand pull seedlings. Fell mature plants.	Mar - July
2.	<i>Agonis flexuosa</i>	Peppermint	Hand pull seedlings.	All Year
3.	<i>Avena fatua</i>	Wild Oat	Spray at 3-5 leaf stage with Fusilade Forte at 16 ml/10 L and wetting agent. Repeat treatment over following 2 years. Prevent seed production and seedbank inputs each year. For small infestations hand removal may be feasible.	Aug - Nov
4.	<i>Asparagus asparagoides</i>	Bridal Creeper	Dig out juvenile seedlings in degraded areas. Spray 0.2 g metsulfuron methyl + Pulse in 15 L water (or 2.5 - 5g /ha + Pulse). Best results achieved when flowering. Biological control agents available such as the Leafhopper and the Rust.	July - Aug
5.	<i>Babiana angustifolia</i>	Baboon Flower	Spot spray metsulfuron methyl 0.2 g/15 L + Pulse or 2.5 - 5g/ha + Pulse. Apply just on flowering at corm exhaustion.	June - Sept
6.	<i>Brachychiton populneus</i>	Kurrajong	Hand pull seedlings. For mature plants try stem injection with 50-100% glyphosate or apply 250 ml Access in 15 L of diesel to basal 50 cm of trunk (basal bark) or cut and paint with 50% glyphosate.	Sept - April
7.	<i>Brassica barrelieri</i> subsp. <i>oxyrrhina</i>	Smooth Stem Turnip	Manually remove populations.	June - Oct
8.	<i>Chamelaucium uncinatum</i>	Geraldton Wax	Hand pull small seedlings or cut to base and paint with 50% glyphosate. Control seedlings following fire.	All Year
9.	<i>Chasmanthe floribunda</i>	African Cornflag	Dig out isolated plants.	June - Sept



	Species Name	Common Name	Management Strategy	Timing (optimal)
10.	<i>Ehrharta calycina</i>	Perennial Veldt Grass	For small infestations, cut out plants ensuring crown removal. Do not slash. Alternatively spray with Fusilade Forte 13 ml/L or 3.3-6.6 L/ha + wetting agent on actively growing and unstressed plants. Use higher rate in dense undergrowth or on older less vigorous plants. Follow-up in subsequent years. Use unplanned fires to spray regrowth and seedlings within 4-6 weeks of germination.	June – Sep (herbicide) and Nov – Feb (manual)
11.	<i>Ehrharta longiflora</i>	Annual Veldt Grass	Hand remove small infestations. Alternatively spray with Fusilade Forte 30 ml/10 L or 1.6 L/ha (based on 500 L water/ha) + wetting agent before flowering stem emerges, or at 3-5 leaf stage.	Aug - Oct
12.	<i>Euphorbia terracina</i>	Geraldton Carnation Weed	Manually remove populations. Undertake control after any fire event.	June – Nov
13.	<i>Ferraria crispa</i>	Black Flag	Hand remove very small populations in degraded sites. Sift soil to find all corms. Spray 2,2 DPA 10 g/L + Pulse when flowering. In degraded sites try glyphosate 1% + metsulfuron methyl 0.2 g/15 L + Pulse. Takes a number of years to control populations.	Aug - Sept
14.	<i>Freesia alba x leichtlinii</i>	Freesia	Spot spray metsulfuron methyl 0.2 g/15 L + Pulse or 2.5-5 g/ha + Pulse. Apply just on flowering at corm exhaustion.	July – Aug
15.	<i>Fumaria capreolata</i>	Climbing Fumitory	Hand remove seedlings in good bushland areas.	July – Aug
16.	<i>Gladiolus angustus</i>	Long Tubed Painted Lady	Spot spray metsulfuron methyl 0.2 g/15 L + glyphosate 1% + Pulse in degraded sites.	July/Aug
17.	<i>Ixia maculata</i>	Yellow Ixia	Spot spray metsulfuron methyl 0.2 g/15 L + Pulse or 2.5-5 g/ha + Pulse. Apply just on flowering at corm exhaustion. Read the manufacturers' labels and material safety data sheets before using herbicides.	July - Sept
18.	<i>Lagurus ovatus</i>	Hare's Tail Grass	Prevent seed set. Hand removal small isolated infestations. In selective situations spray with 16 ml/10 L (800 ml/ha) Fusilade Forte + spray oil any time before flowering. A lower rate of 13 ml/10 L Fusilade Forte can be used in winter at the 2-8 leaf stage before stem elongation.	June - Aug

	Species Name	Common Name	Management Strategy	Timing (optimal)
19.	<i>Lachenalia bulbifera</i>	Soldiers	Two small patches in degraded areas – dig out making sure to remove all bulbils.	July - Aug
20.	<i>Lupinus angustifolius</i>	Narrowleaf Lupin	Manually remove populations.	June - Oct
21.	<i>Lupinus cosentinii</i>	Sandplain Lupin	Manually remove populations.	June - Oct
22.	<i>Moraea flaccida</i>	One-leaf Cape Tulip	Spot spray metsulfuron methyl 0.2 g/15 L or chlorsulfuron 0.2 g/15 L + Pulse or 2.5-5 g/ha + Pulse or 2,2 DPA 55 g/10 L + Pulse. Apply just on flowering at corm exhaustion.	July - Aug
23.	<i>Pelargonium capitatum</i>	Rose Pelargonium	Only control when native vegetation has established. Hand pull isolated plants taking care to remove the entire stem as it can reshoot from below ground level. Spot spray metsulfuron methyl 5 g/ha + Pulse. Easily controlled after fire.	June - Oct
24.	<i>Raphanus raphanistrum</i>	Wild radish	Manually remove populations.	June - Oct
25.	<i>Schinus terebinthifolia</i>	Brazilian Pepper	Hand pull seedlings ensuring removal of all root material. Stem inject older plants using 50% glyphosate or basal bark with 250 ml Access in 15 L of diesel to bottom 50 cm of trunk during summer. Avoid root disturbance until trees are confirmed dead.	Dec - March
26.	<i>Sparaxis bulbifera</i>	Sparaxis	Spot spray metsulfuron methyl 0.2 g/15 L + Pulse or 2.5-5 g/ha + Pulse. Apply just on flowering at corm exhaustion.	September
27.	<i>Vicia sativa</i>	Common Vetch	Hand remove small/isolated populations. Lontrel 10 mL/10 L + wetting agent provides effective control in early growth stages, otherwise apply metsulfuron methyl 0.1 g/10 L + wetting agent.	July - Sept
28.	<i>Watsonia meriana</i>	Watsonia	Dig out isolated plants.	June - Sept

## Appendix 5: Implementation of the 2013-2018 Management Plan

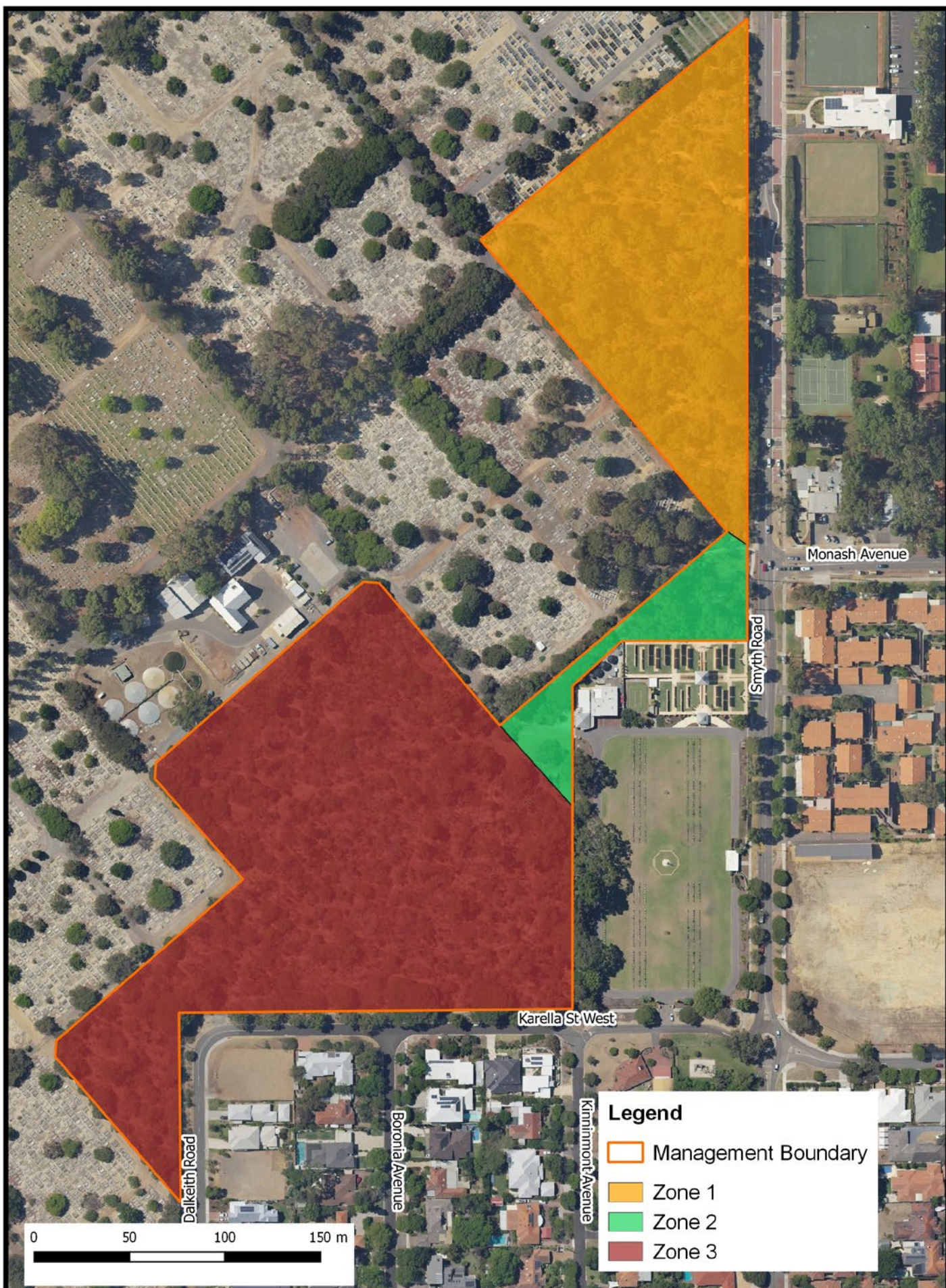
ACTIONS		IMPLEMENTED YES/NO/PARTIALLY
<b>BUSHLAND BOUNDARIES</b>		
1.	Manage Hollywood Reserve on the basis three Zones.	Yes
<b>REHABILITATION</b>		
2.	Focus revegetation at selected degraded sites within Zones.	Yes
3.	Focus management on better condition bushland areas within Zones.	Yes
4.	The Friends of Hollywood Reserve continue to focus management on Zones 2 and 3.	Yes
5.	Only revegetate Zone 1 with similar existing local native species.	Yes
<b>REVEGETATION</b>		
6.	Consider only planting overstorey species in areas where Black Flag is present.	Partially
7.	Seek advice from DPaW or BGPA in regards to rehabilitation of areas that have dense Black Flag infestations.	Yes
8.	Work with local nurseries to grow naturally occurring native herbaceous species.	Partially
9.	Use only plant species for rehabilitation if they would have naturally occurred on site especially in Zone 1.	Yes
<b>WEED CONTROL</b>		
10.	Continue to collaborate with the Metropolitan Cemeteries Board for weed management on adjacent land.	Yes
11.	Do not undertake removal of historically planted non-indigenous Australian native plants (such as Sugar Gums) unless they become invasive.	Yes
12.	Control priority weeds in accordance with management notes detailed in Appendix 4.	Yes
13.	Continue to control the following weeds as a high priority: Geraldton Carnation Weed, Bridal Creeper, Perennial Veldt Grass, Black Flag, One-leaf Cape Tulip, <i>Babiana angustifolia</i> , Wild Radish, <i>Lupinus</i> , <i>Freesia</i> , <i>Gladiolus angustus</i> , <i>Ixia maculata</i> , <i>Vicia sativa</i> and woody weeds.	Yes
14.	Where native vegetation exists, mature Black Flag plants that have the potential to set seed should be hand wiped with herbicides to stop them from seeding.	Yes
<b>MONITORING</b>		
15.	Monitor, control and document the distribution of new invasive weeds as they arise.	Yes
16.	Annually monitor weeds with the potential to expand rapidly and map changes in their distribution if required.	Yes

ACTIONS		IMPLEMENTED YES/NO/PARTIALLY
17.	Undertake annual monitoring and control of <i>African Cornflag</i> , <i>Rose Pelargonium</i> , <i>Lachenalia bulbifera</i> , Bridal Creeper, <i>Sparaxis bulbifera</i> and <i>Watsonia meriana</i> to ensure they do not spread or reestablish.	Yes
<b>FIRE MANAGEMENT</b>		
18.	Undertake annual management of grass weeds to reduce fuel loads.	Yes
<b>ACCESS</b>		
19.	Install a removable bollard at the southern entrance to Zone 2 to stop illegal access.	Yes
<b>CULTURAL HERITAGE, INTERPRETATION AND EDUCATION</b>		
20.	Undertake removal of plaques as required.	Yes
21.	Undertake maintenance of the information shelter, picnic table and benches as required.	Yes
<b>NATIVE ANIMALS</b>		
22.	Undertake ongoing surveying of native fauna if resources allow.	Partially
23.	Minimise fires that may destroy tree hollows.	Yes
24.	Retain hollows for refuges in large old and dead trees.	Yes
25.	Control feral European Bees as they can displace native animals.	Yes
26.	Protect nests of Rainbow Bee-eaters if they are encountered.	Yes
27.	Continue the fox control program.	Yes
28.	Contribute to regional programs being undertaken for feral bird control by DPaW.	Partially
29.	Apply for funding for the installation of additional bat boxes within the Reserve.	No

# Appendix 6

## Maps





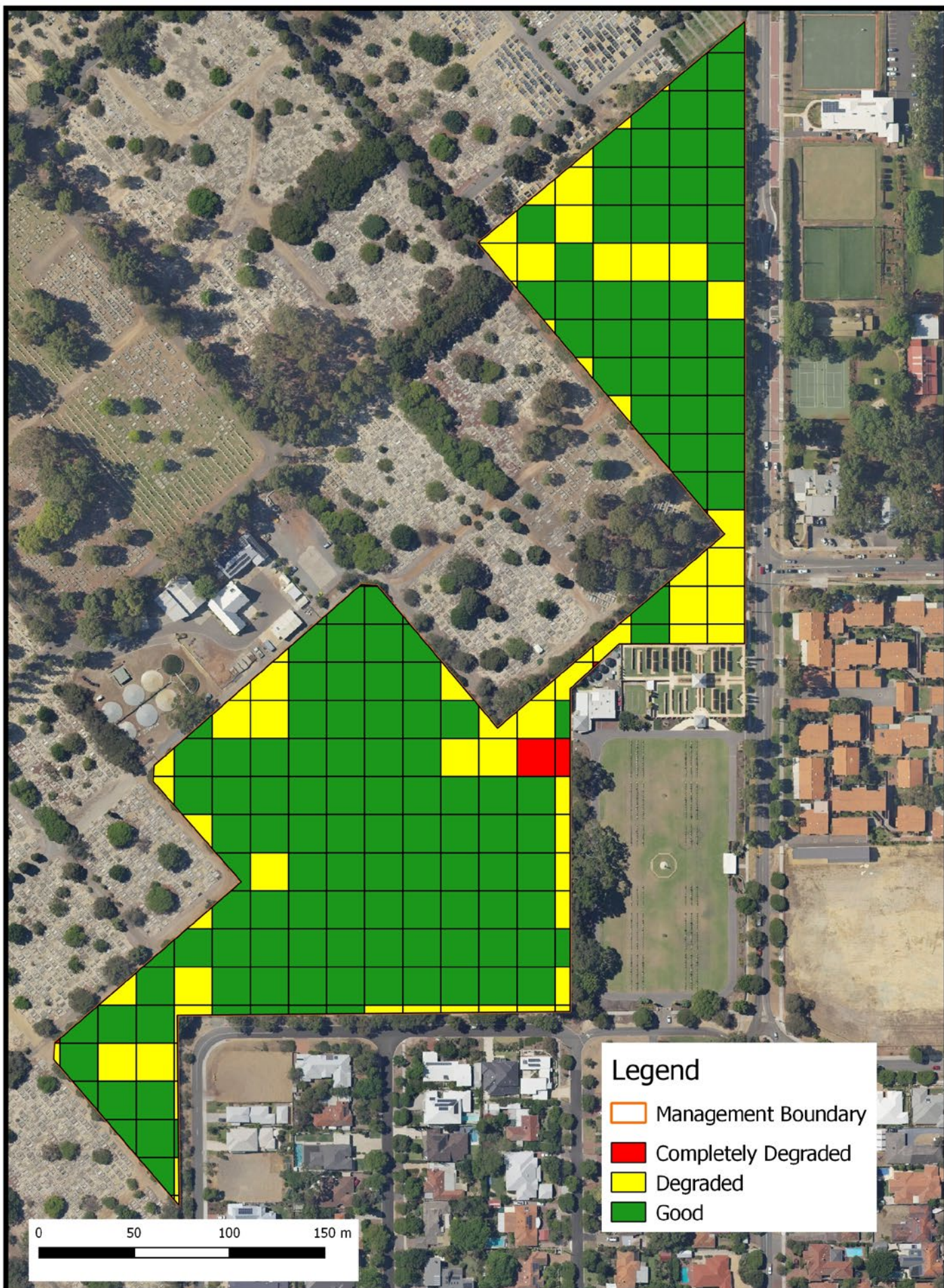
Map 1: Management Zones

Hollywood Reserve Management Plan 2019 - 2024



\\admngisserv01\Management Plan Maps\QGIS\New Base Projects\Hollywood Reserve\Hollywood Reserve Fire History.qgs





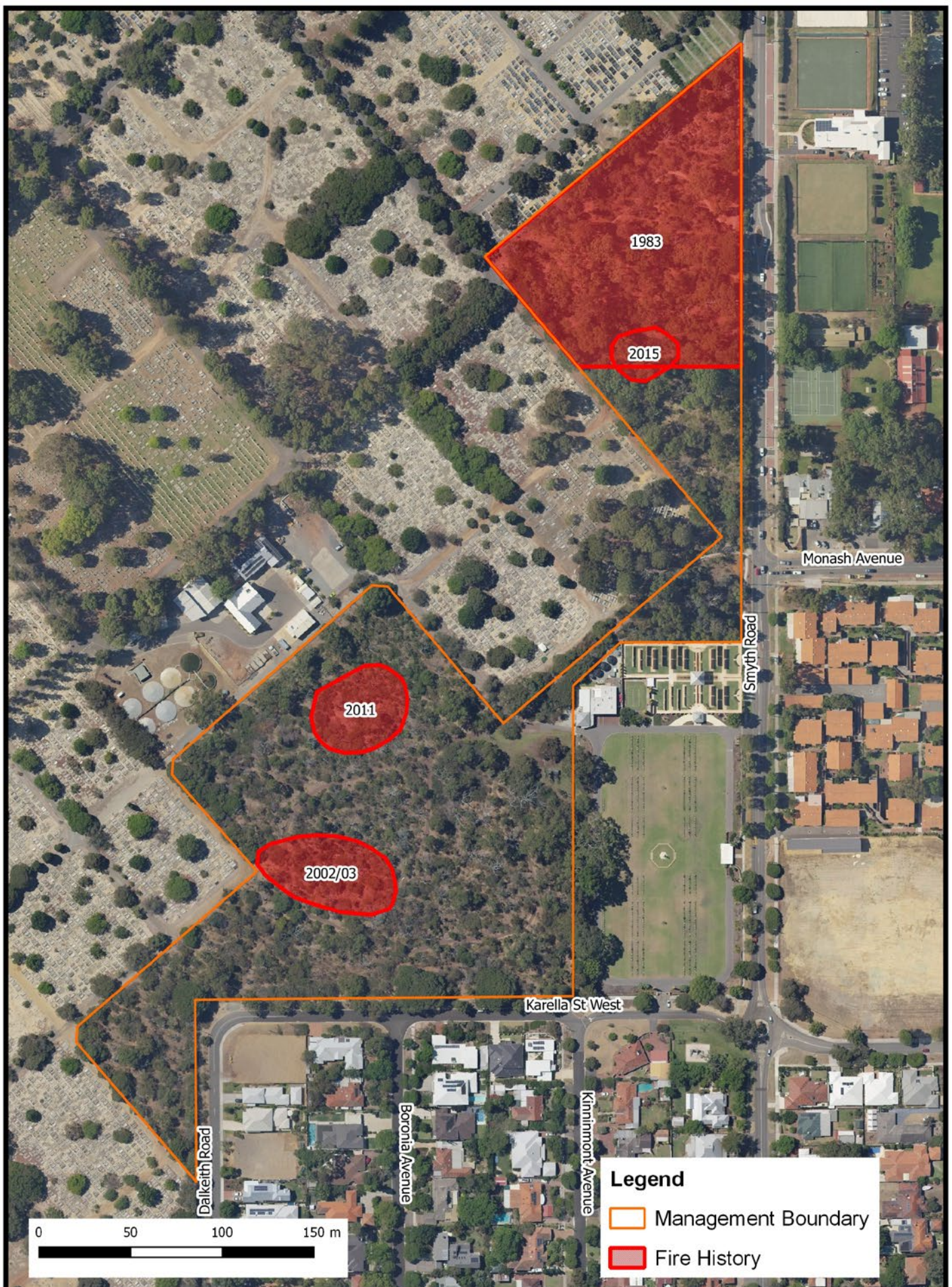
## Map 2: Bushland Condition

Hollywood Reserve Management Plan 2019-2024



\\admngisserv01\Management Plan Maps\QGIS\New Base Projects\Hollywood Reserve\Hollywood Reserve Bushland Condition.qgs





### Map 3: Fire History

Hollywood Reserve Management 2019-2024



\\admgisserv01\Management Plan Maps\QGIS\QGIS base project and shp files\QGIS\_Base\_Project.qgs





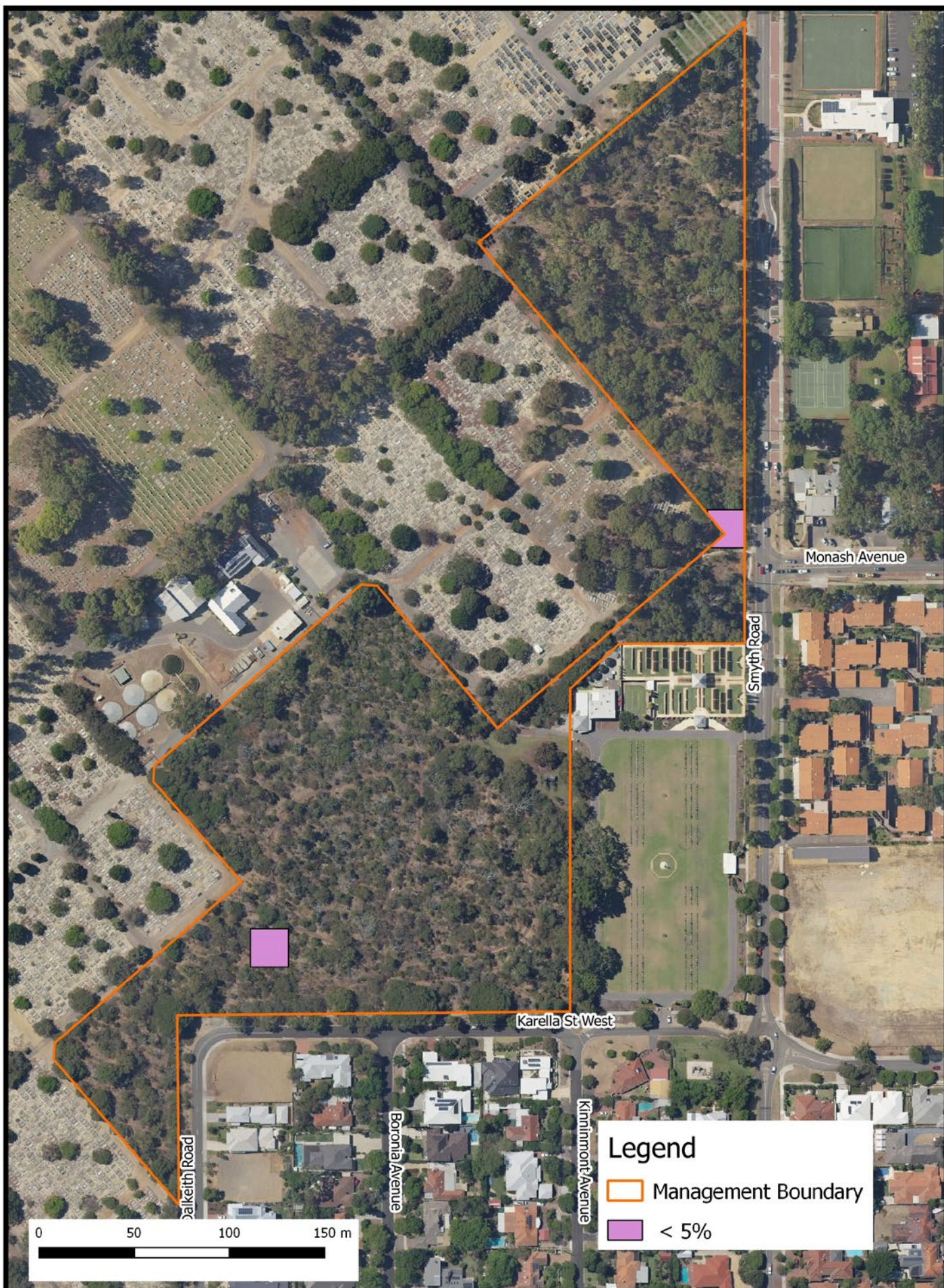
#### Map 4: Access and Pathways

Hollywood Reserve Management Plan 2019-2024



\\admngisserv01\Management Plan Maps\QGIS\QGIS base project and shp files\QGIS\_Base\_Project.qgs





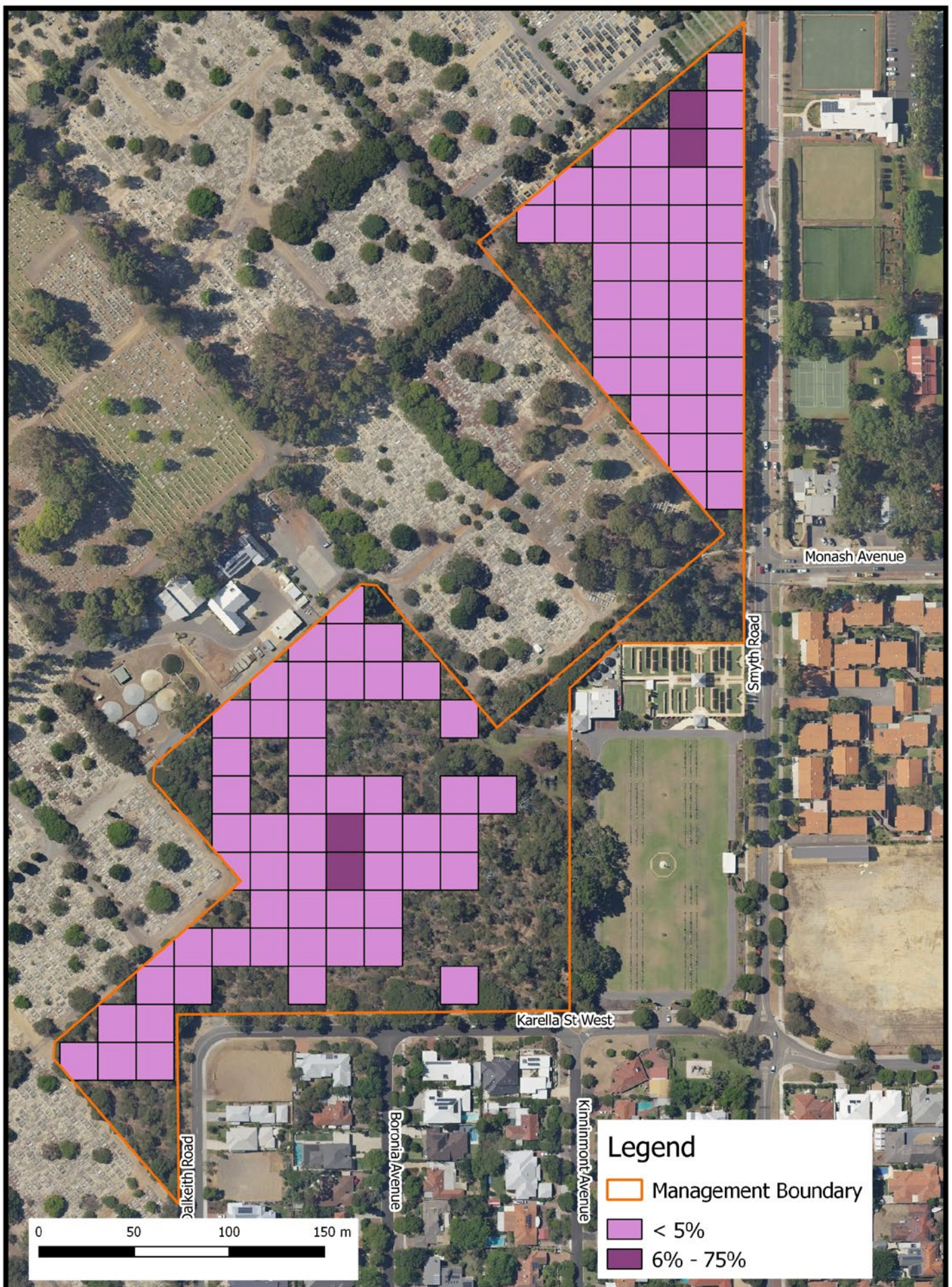
Map 5: *Asparagus asparagoides* - Bridal Creeper

Hollywood Reserve Management Plan 2019-2024



\\admngisserv01\Management Plan Maps\QGIS\New Base Projects\Hollywood Reserve\Hollywood Reserve Access and Pathways.qgs



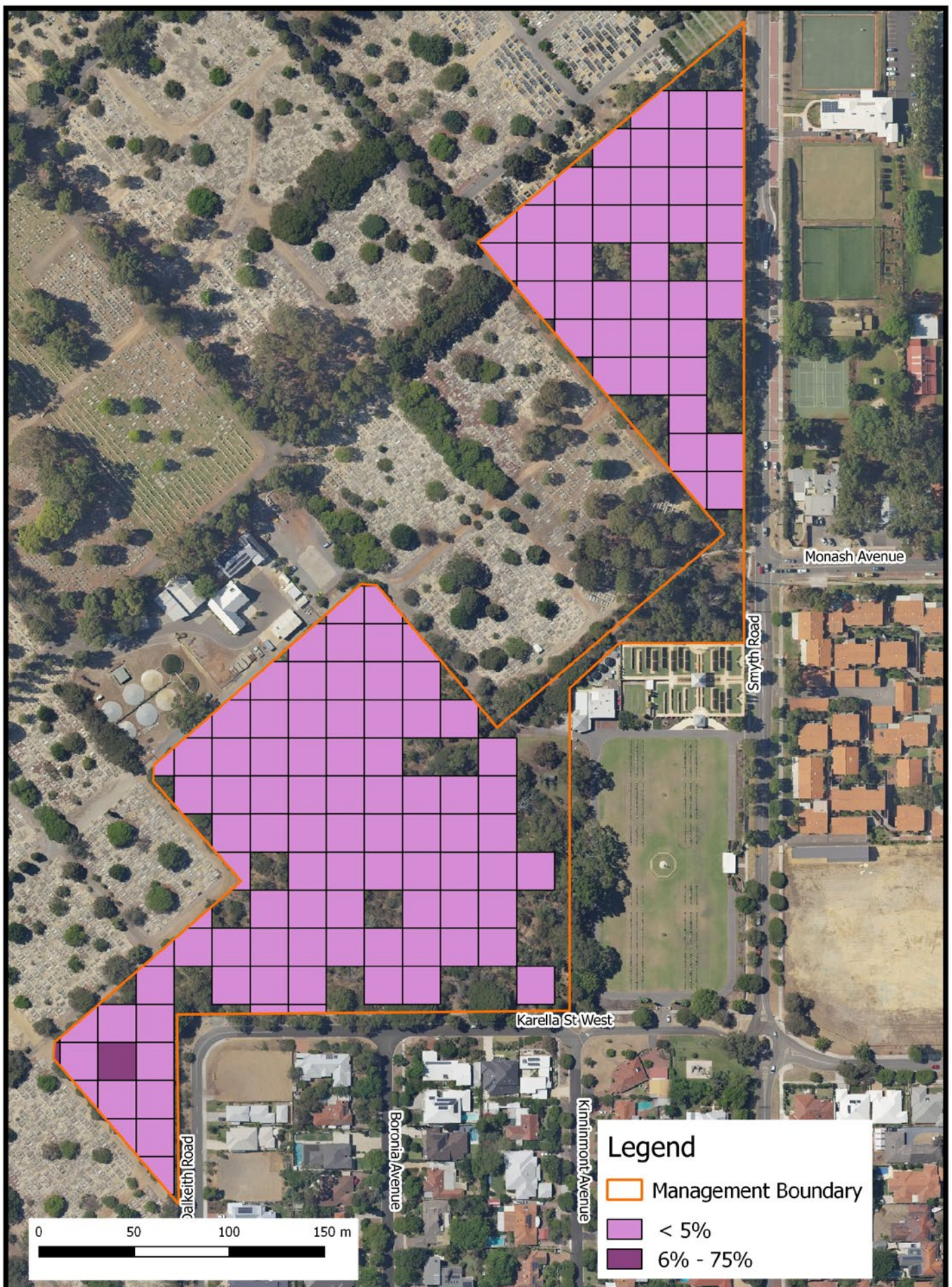


Map 6: *Babiana angustifolia* - Baboon Flower  
Hollywood Reserve Management Plan 2019-2024

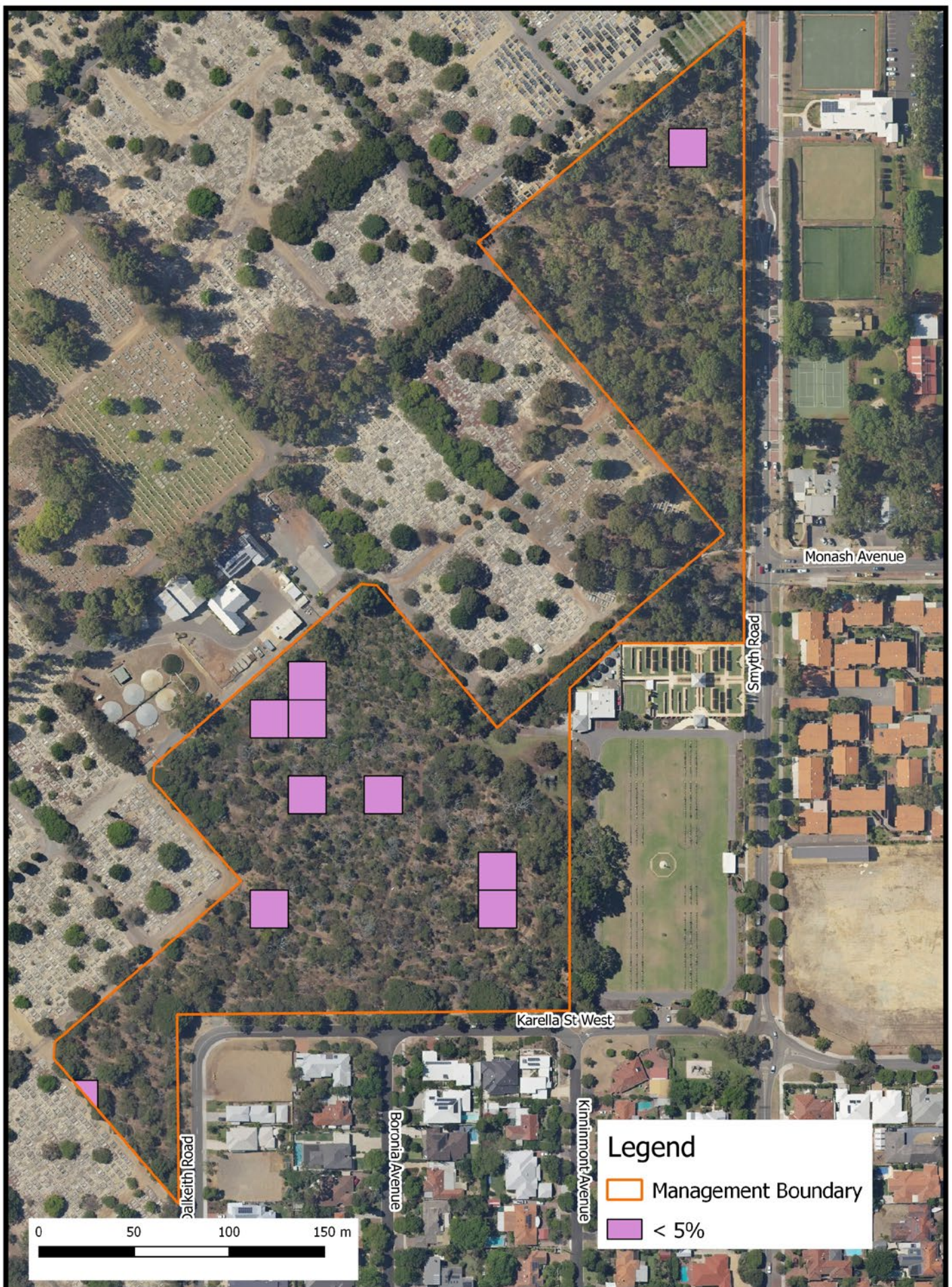


\\admngisserv01\Management Plan Maps\QGIS\New Base Projects\Hollywood Reserve\Hollywood Reserve Asparagus asparagoides - Bridal Creeper.qgs









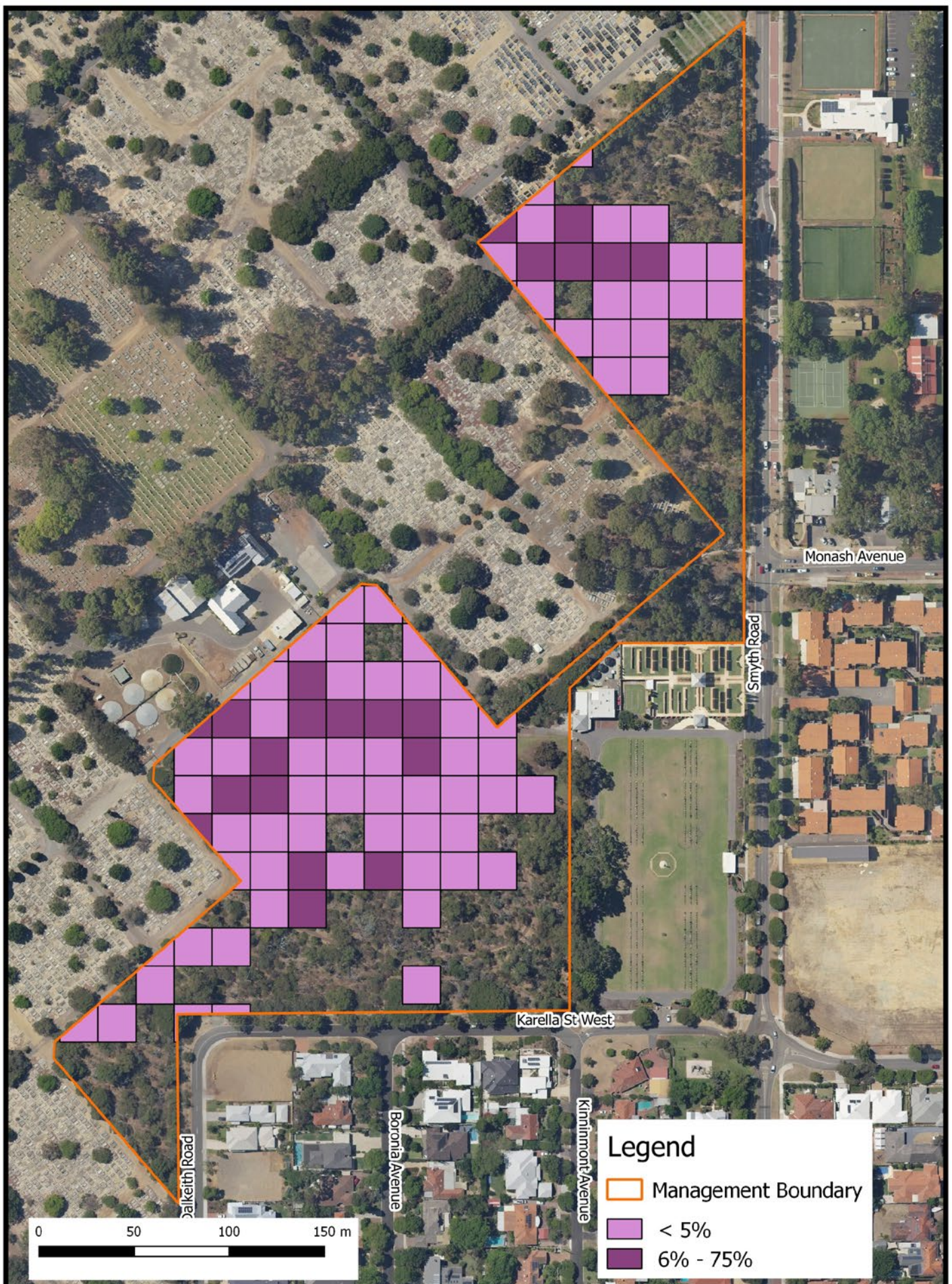
# Map 8: *Euphorbia terracina* - Geraldton Carnation Weed

## Hollywood Reserve Management Plan 2019-2024

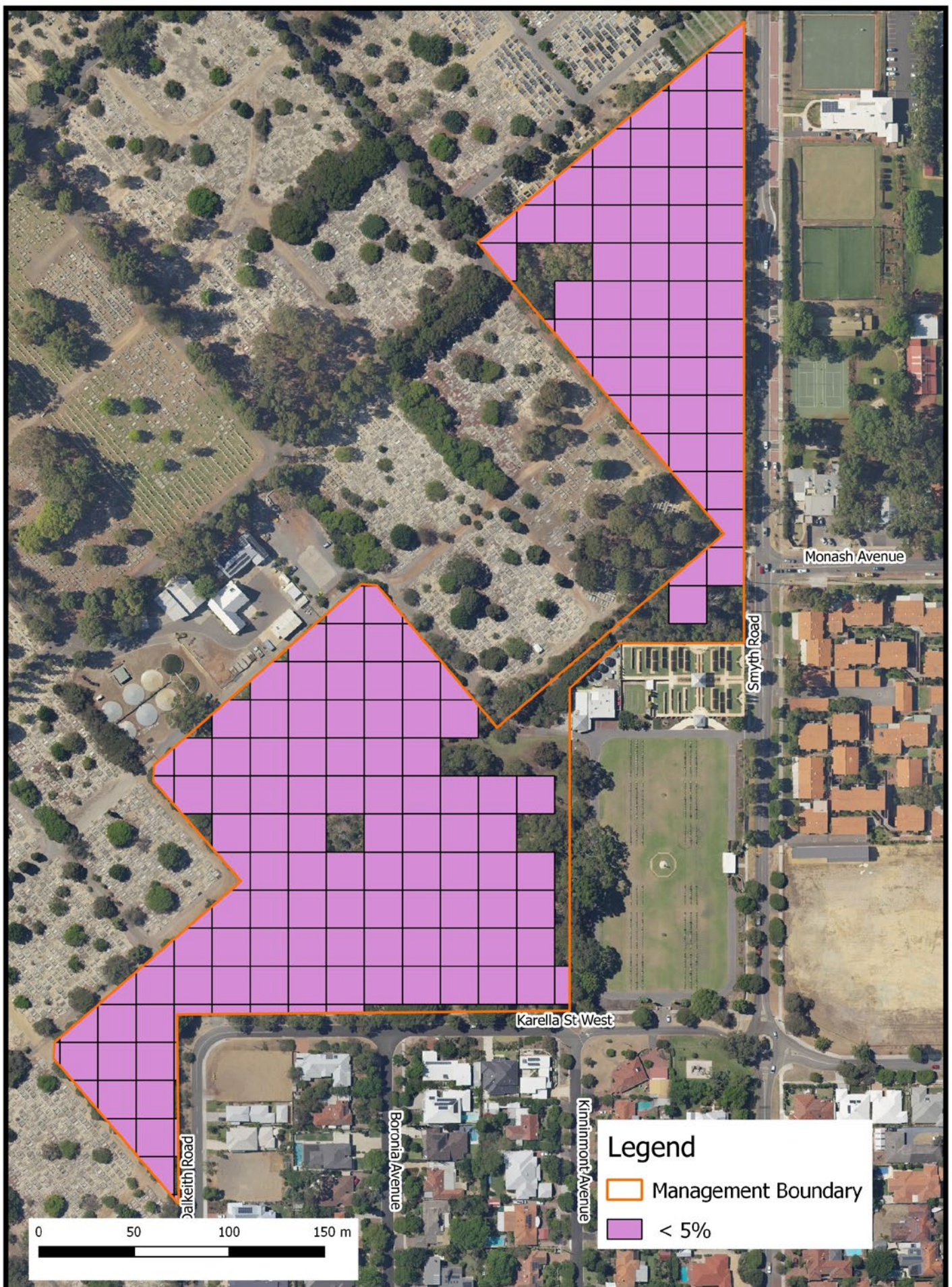


\\admgisserv01\Management Plan Maps\QGIS\New Base Projects\Hollywood Reserve\Hollywood Reserve Babiana angustifolia - Baboon Flower.qgs









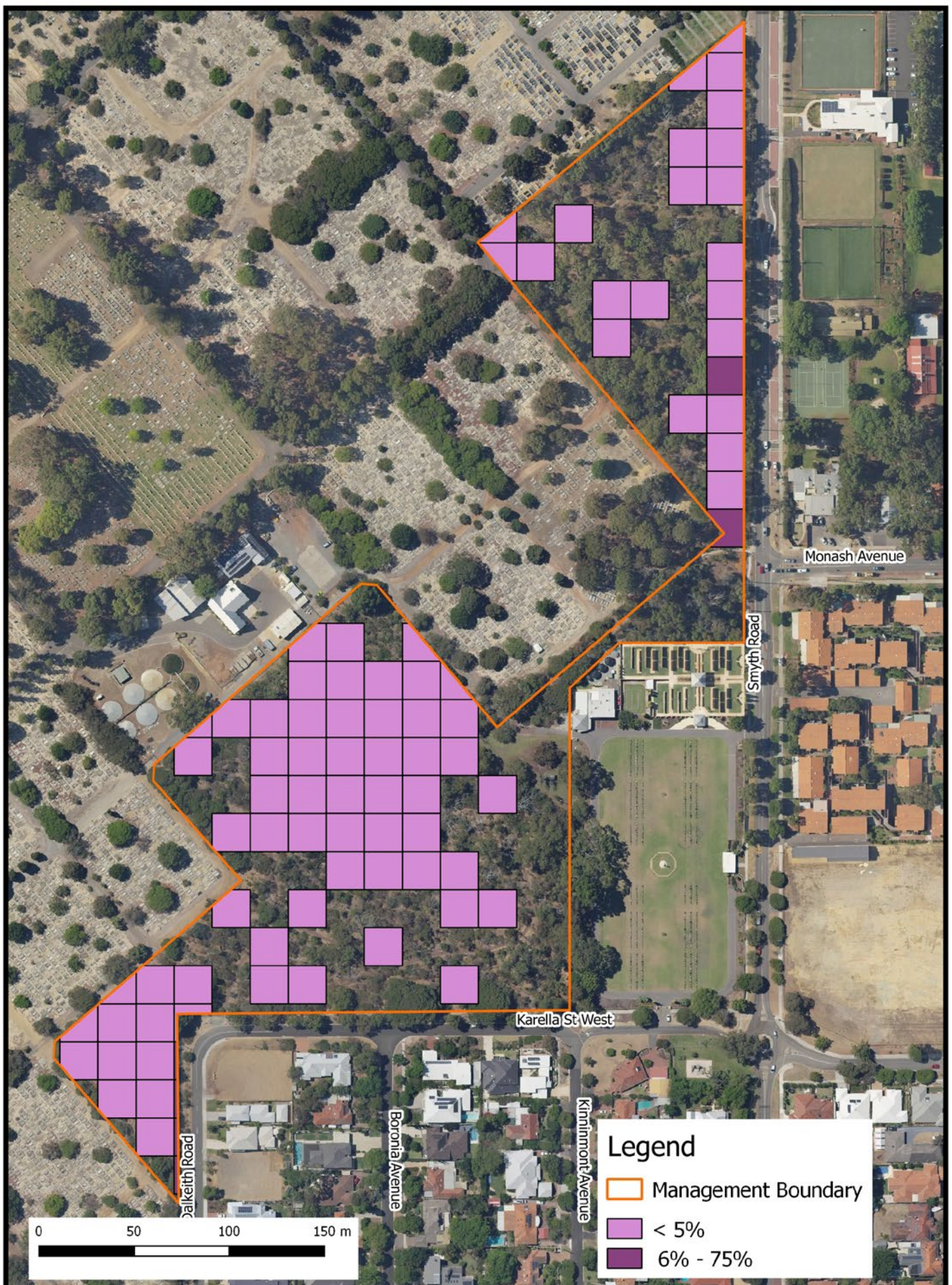
Map 10: *Freesia alba* × *leichtlinii* - *Freesia*

Hollywood Reserve Management Plan 2019-2024



\\admngisserv01\Management Plan Maps\QGIS\New Base Projects\Hollywood Reserve\Hollywood Reserve - *Ferraria crispa* - Black Flag.qgs





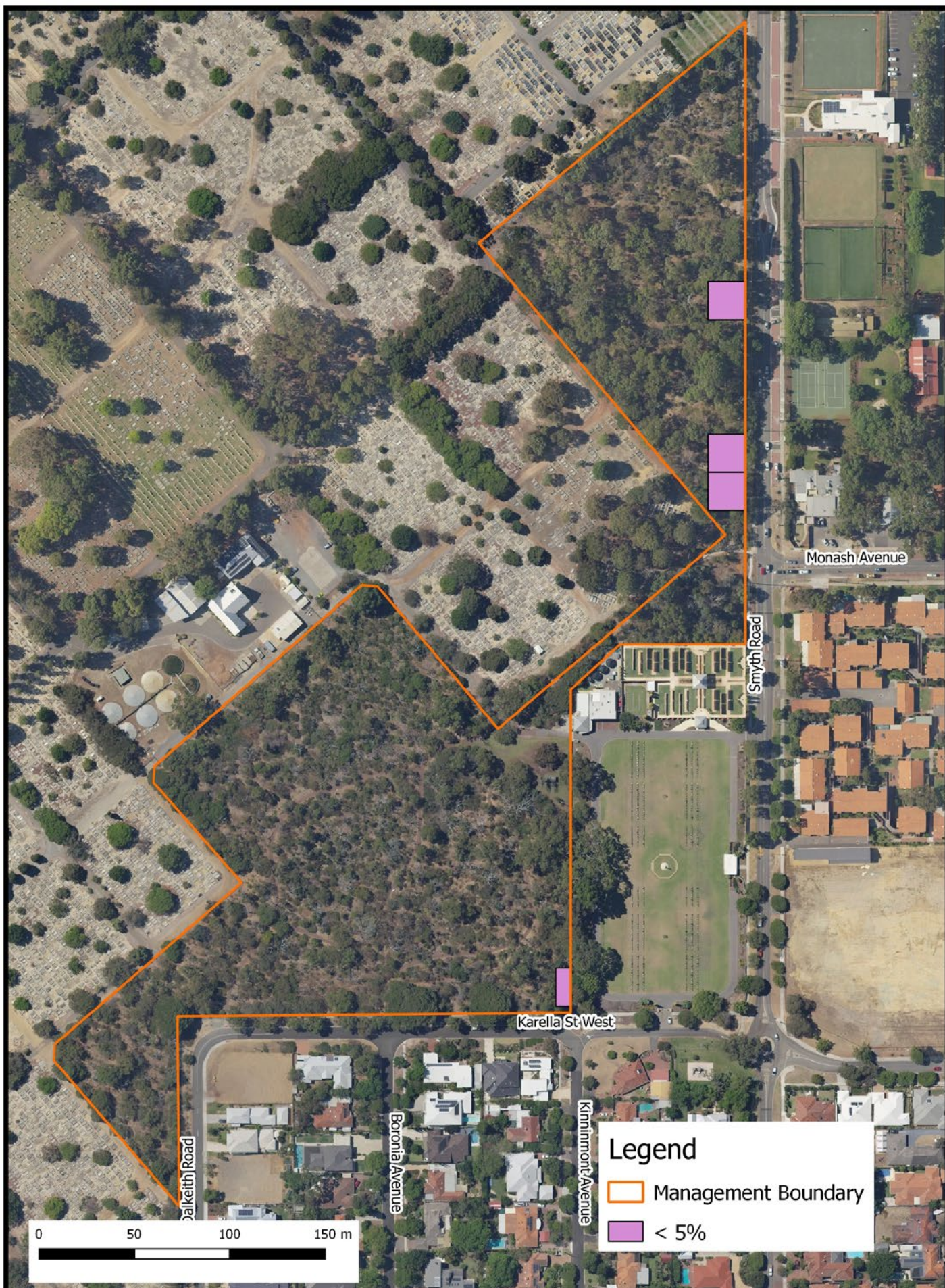
Map 11: *Fumaria* – Fumitory

Hollywood Reserve Management Plan 2019-2024



\\admngisserv01\Management Plan Maps\QGIS\New Base Projects\Hollywood Reserve\Hollywood Reserve Freesia alba x leichtlinii - Freesia.qgs





Map 12: *Gladiolus undulatus* and *angustus* - *Gladiolus*

Hollywood Reserve Management Plan 2019-2024



\\admngisserv01\Management Plan Maps\QGIS\New Base Projects\Hollywood Reserve\Hollywood Reserve Fumaria sp - Fumitory.qgs





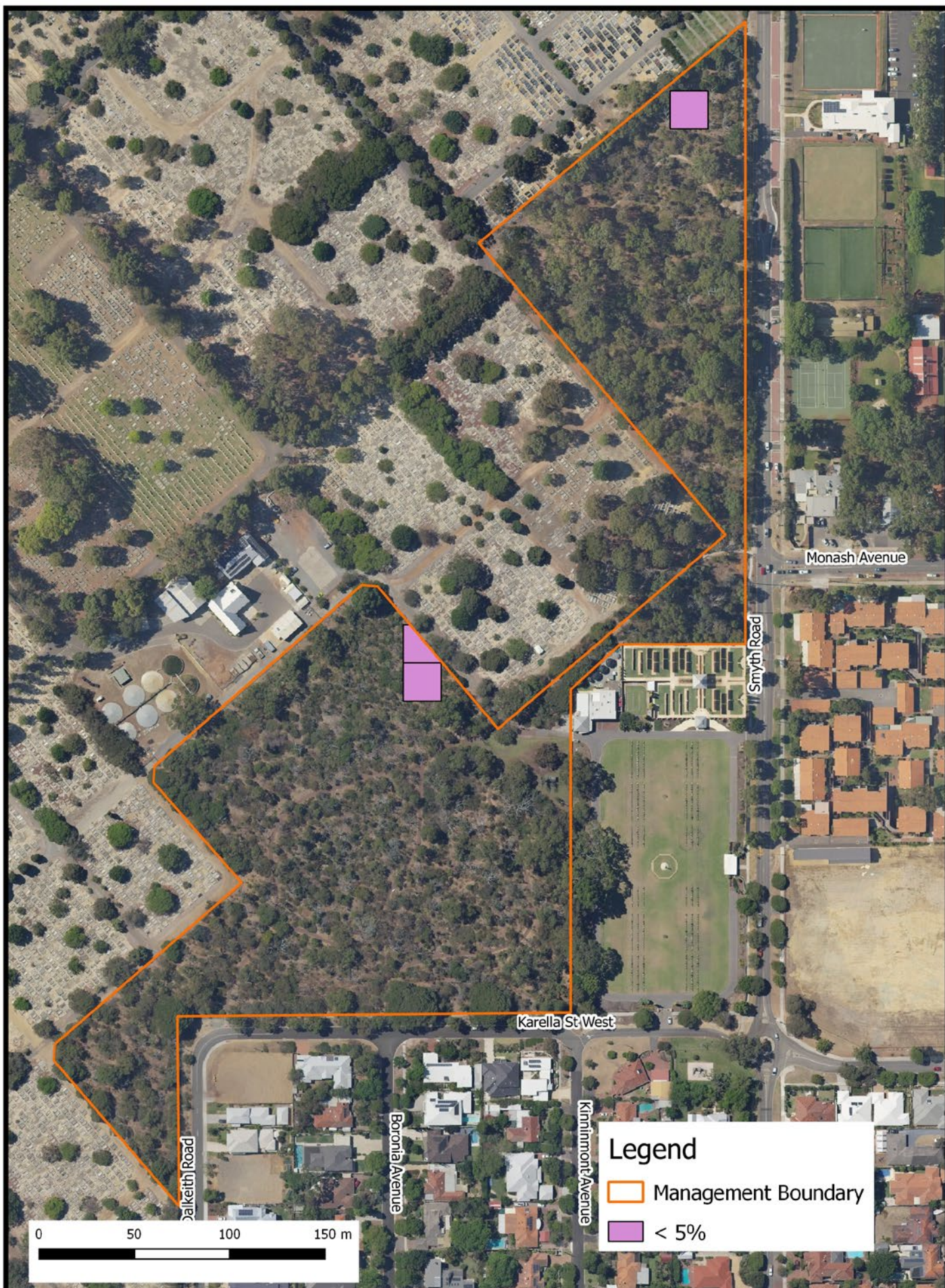
Map 13: *Ixia maculata* - Yellow Ixia

Hollywood Reserve Management Plan 2019-2024



\\admngisserv01\Management Plan Maps\QGIS\New Base Projects\Hollywood Reserve\Hollywood Reserve Gladiolus undulatus and angustus.qgs





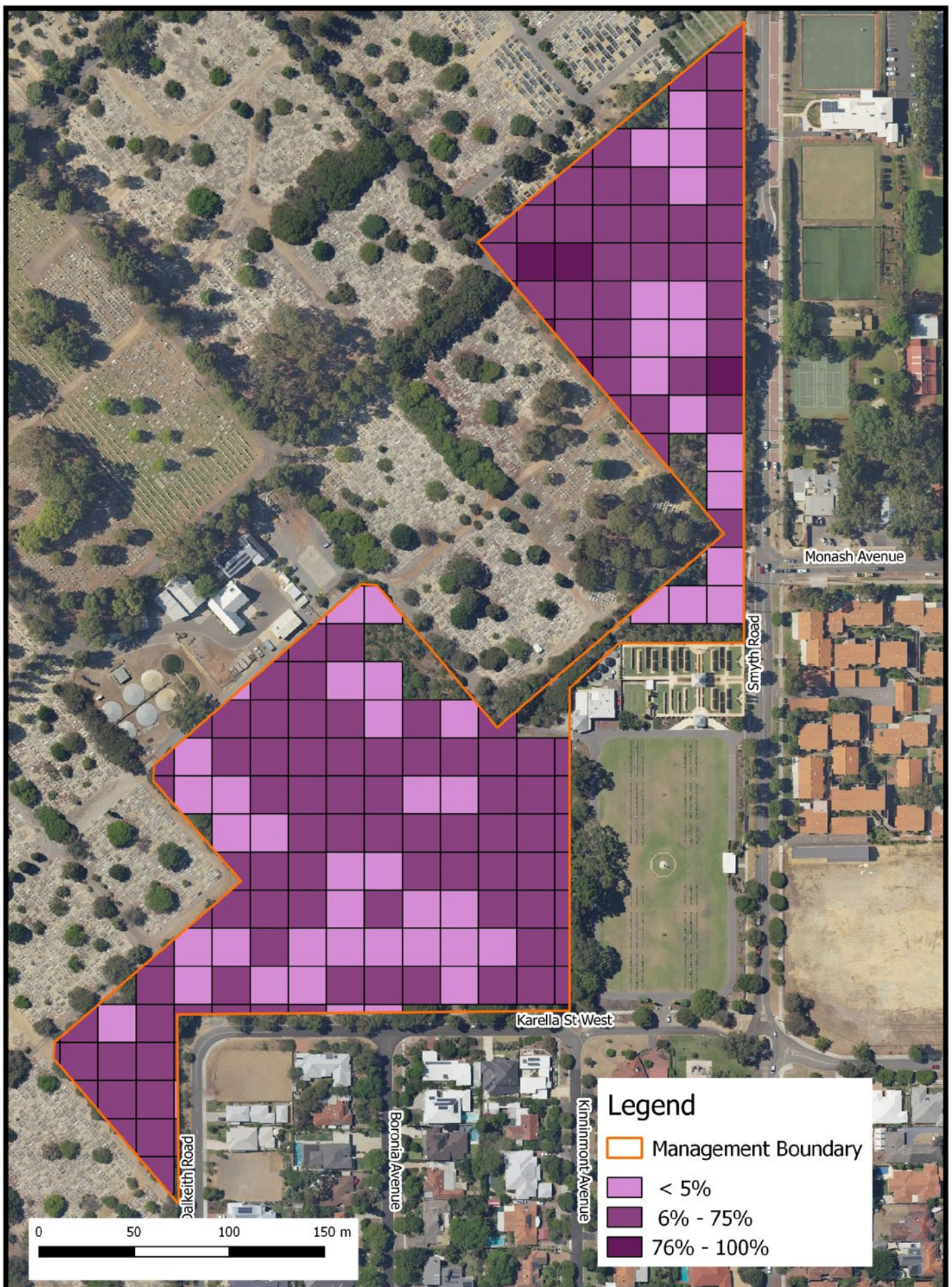
Map 14: *Lachenalia bulbifera*

Hollywood Reserve Management Plan 2019-2024



\\admngisserv01\Management Plan Maps\QGIS\New Base Projects\Hollywood Reserve\Hollywood Reserve Ixia maculata - Yellow Ixia .qgs





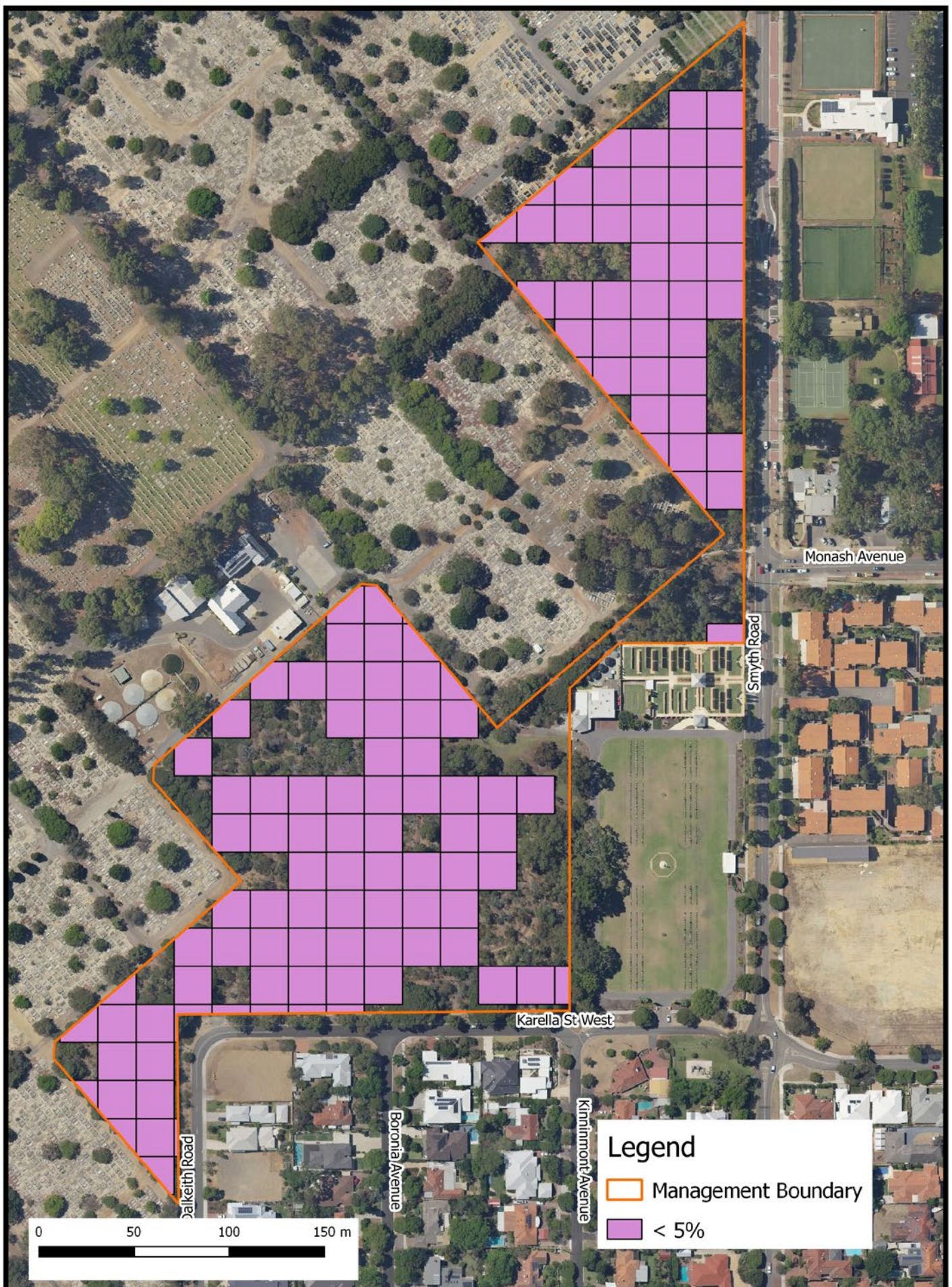
Map 15: *Oxalis* - Soursob

Hollywood Reserve Management Plan 2019-2024



\\admgisserv01\Management Plan Maps\QGIS\New Base Projects\Hollywood Reserve\Hollywood Reserve Moraea flaccida - One - leaf Cape Tulip.qgs





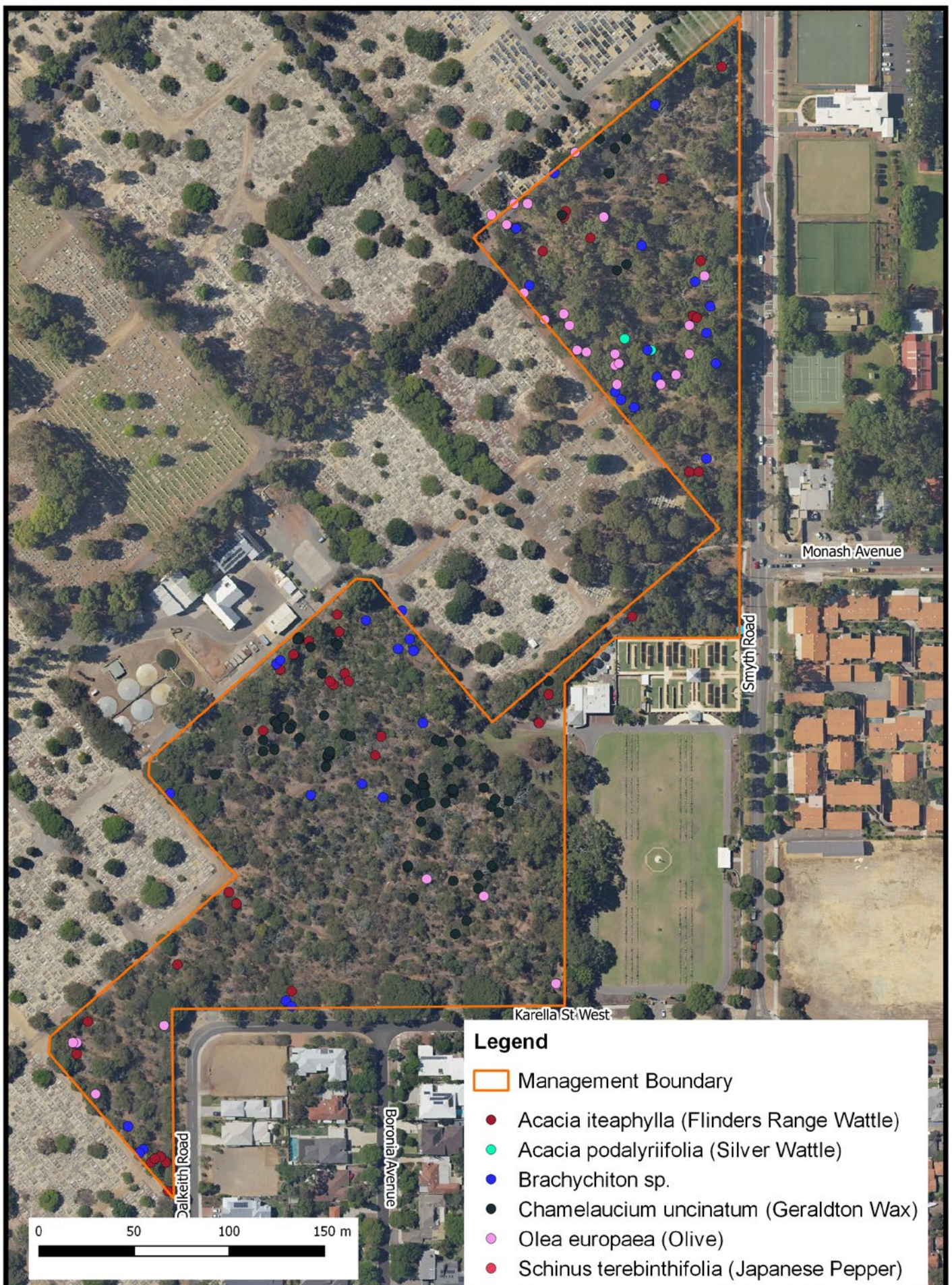
Map 16: *Moraea flaccida* - One-leaf Cape Tulip

Hollywood Reserve Management Plan 2019-2024



\\admngisserv01\Management Plan Maps\QGIS\New Base Projects\Hollywood Reserve\Hollywood Reserve Ixia maculata - Yellow Ixia .qgs





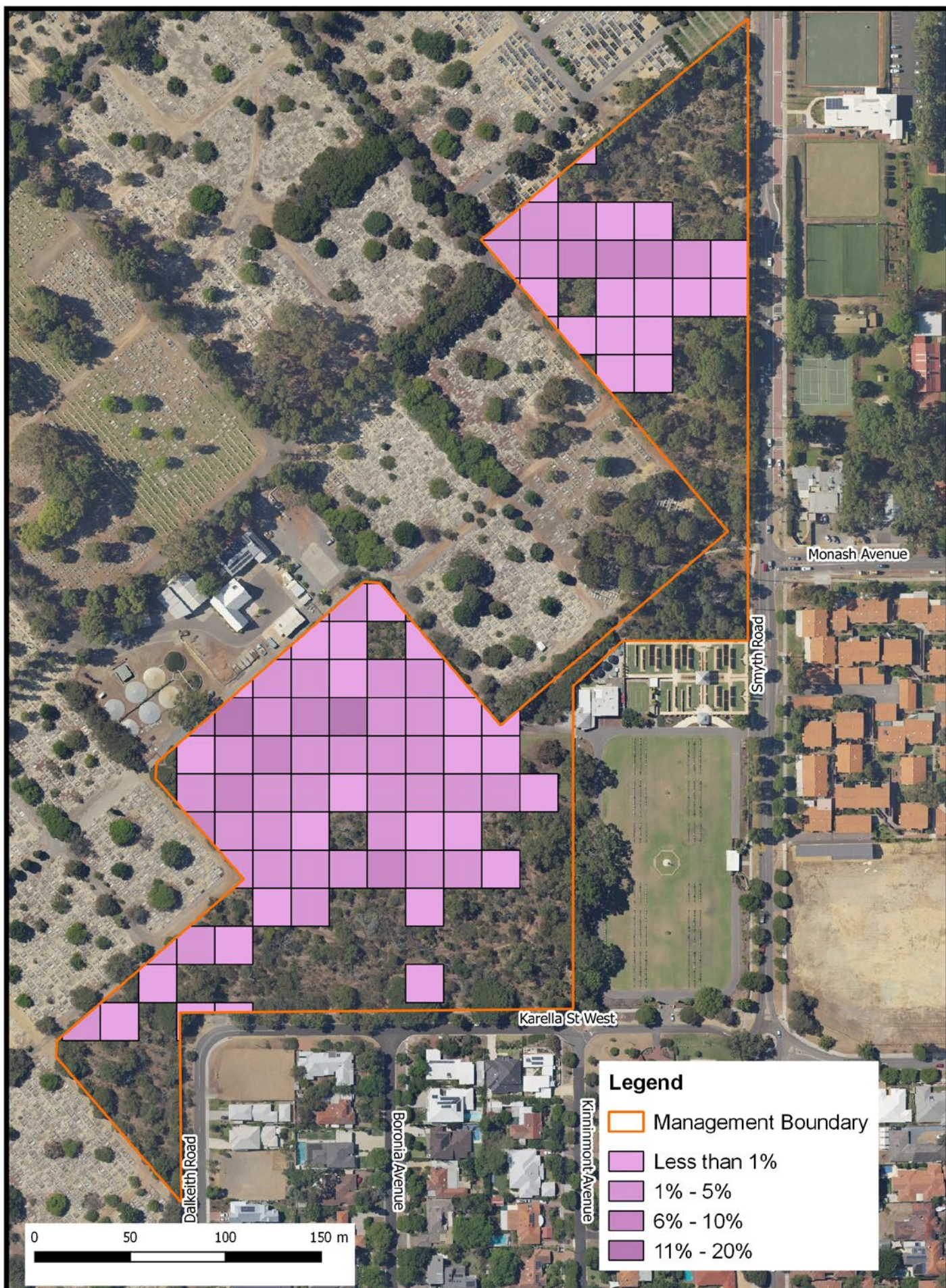
## Map 17: Woody Weeds

Hollywood Reserve Management Plan 2019-2024



\\admngisserv01\Management Plan Maps\QGIS\New Base Projects\Hollywood Reserve\Hollywood Reserve Woody Weeds.qgs



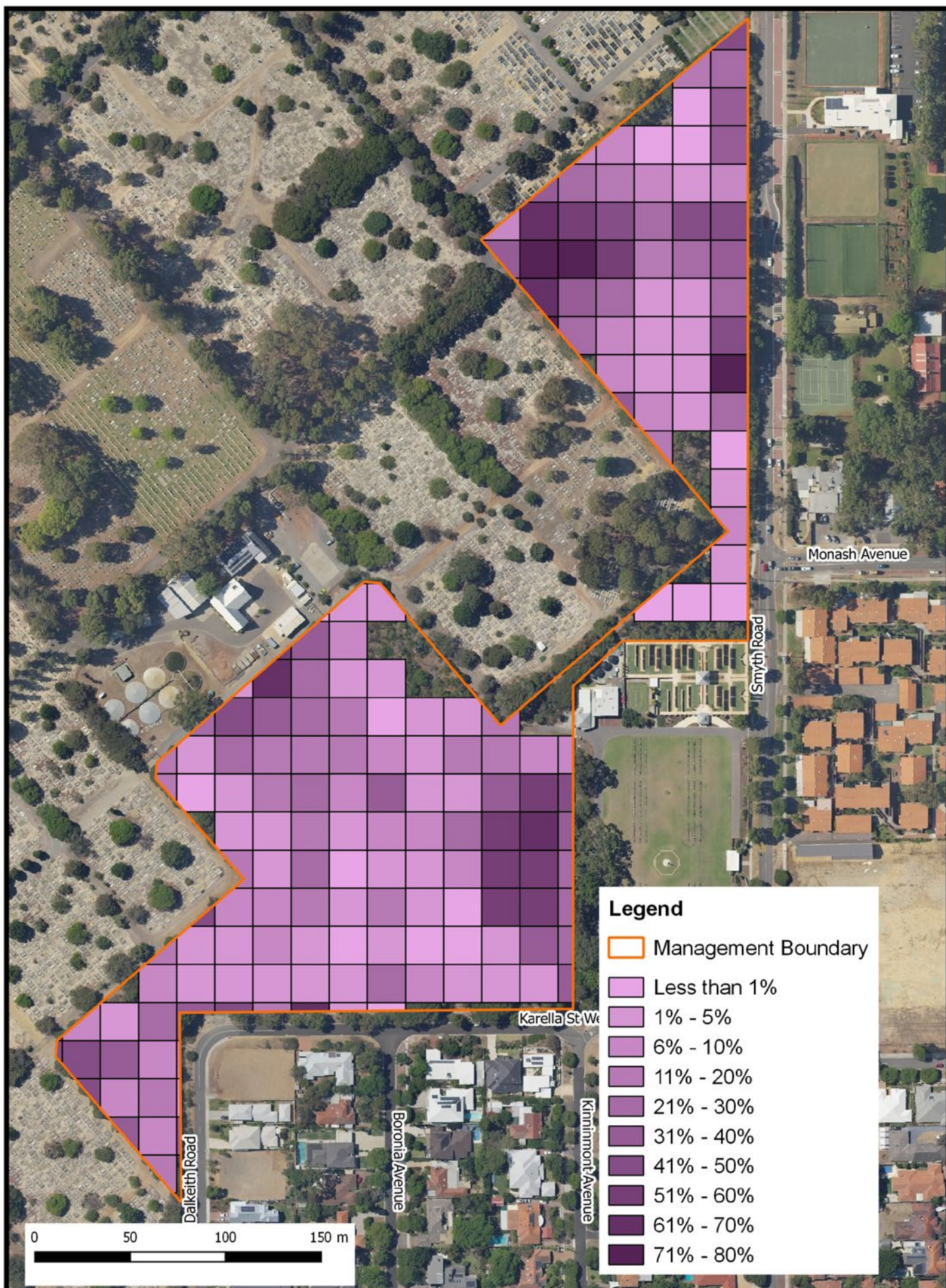


Map 18: Actual Cover *Ferraria crispa* - Black Flag

Hollywood Reserve Management Plan 2019 - 2024







Map 19: Actual Cover *Oxalis* - Soursob

Hollywood Reserve Management Plan 2019 - 2024



\\admgisserv01\Management Plan Maps\QGIS\New Base Projects\Hollywood Reserve\Hollywood Reserve Actual Cover *Ferraria crispa* - Black Flag.qgs

# **Appendix 7**

## **Natural Areas Management Plan 2019-2024**



City of Nedlands

71 Stirling Hwy, Nedlands WA 6009  
9273 3500  
[council@nedlands.wa.gov.au](mailto:council@nedlands.wa.gov.au)

**[nedlands.wa.wa.gov.au](http://nedlands.wa.wa.gov.au)**