City of Nedlands

Point Resolution Bushland Management Plan

2019–2024

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ACRONYMS AND ABBREVIATIONS

ACRONYM/ ABBREVIATION	DESCRIPTION
DBCA	Department of Biodiversity Conservation and Attractions
DCA	Development Control Area
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
the City	City of Nedlands
WALGA	Western Australian Local Government Association
WESROC	Western Suburbs Regional Organisation of Councils

Cover Photo: View across the Swan River to Attadale Foreshore

Internal photo courtesy of Sally Wallace

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Technology One Limited

3. SUMMARY

This Management Plan is dedicated specifically to the management of the bushland at Point Resolution. Detailed information and actions relating to all natural areas within the City such as surveying methods, rehabilitation, environmental weed control, climate, 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 Point Resolution Bushland Management Plan 2019-2024 has drawn heavily from the following documents:

- The Point Resolution Management Plan (City of Nedlands, 2014)
- The Point Resolution Reserve Management Plan (Ecoscape, 1991)
- The Nedlands Foreshore Bushland Reserves Management Plan 2003-2009 (Ecoscape, 2003)
- Weed Mapping Point Resolution and Birdwood Parade (Ecoscape, 2007)
- Natural Area Initial Assessment - Point Resolution (Orsini, 2008).

A five year Management Plan has been developed that provides management actions and strategies for the conservation and restoration of the bushland and greenway/ecozones at Point Resolution. A summary of key actions are listed below.

Table 1: Summary of Point Resolution Management Actions 2019-2024

Management Actions 2019-2024	
BUSHLAND BOUNDARIES	
1.	Manage Point Resolution on the basis three Zones.
REHABILITATION	
2.	Continue to work closely with the Department of Biodiversity Conservation and Attractions (DBCA) to rehabilitate degraded sites.
3.	Use DBCA Management Practices as a guide for restoration when undertaking rehabilitation of degraded foreshore and embankment areas.
4.	Focus rehabilitation on *Good* to *Very Good* bushland condition areas as a priority.
5.	Use jute matting or geofabric on steep embankment and foreshore areas.
6.	Undertake annual maintenance of past DBCA rehabilitation sites.
7.	Maintain and monitor plants found in low abundance in Zone 2 and only revegetate this Zone with species found naturally in this plant community.
8.	Maintain current views when rehabilitating the bushland edges and parkland areas.
9.	Retain the three heritage Olive trees.
10.	Install conservation fencing to protect bushland/greenway areas.
11.	Implement 'Plant Pathogen' and 'Rehabilitation' actions detailed in the Natural Areas Management Plan 2019-2024.
REVEGETATION	
12.	Work with local nurseries to grow species found in low abundance.
13.	Use only plant species for rehabilitation if they would have naturally occurred on site such as those found on the Mount Eliza Escarpment at Kings Park.

14.	Consider specific conditions (such as the need to restrict access and slope stability) in developing plant lists for rehabilitation sites.
15.	Undertake ongoing reestablishment and management of native Marine Couch in Zone 1.
16.	Only use seed and cutting material collected in the greenway/ecozones areas for revegetation works within the greenway/ecozones.
17.	Implement 'Revegetation' actions detailed in the Natural Areas Management Plan 2019-2024.
WEED CONTROL	
18.	Continue to control the following weeds as a high priority: Geraldton Carnation Weed, Bridal Creeper, *Oxalis*, Fumitory, Perennial Veldt Grass, Black Flag, *Freesia, Brassica* and Radis, *Lupinus*, woody weeds and Rose Pelargonium.
19.	Control and document the distribution of new invasive weeds as they arise.
20.	Remove juvenile Olive seedlings as they emerge.
21.	Undertake ongoing maintenance of weeds in restoration sites.
22.	Control priority weeds in accordance with management notes detailed in Appendix 4.
23.	Schedule Couch Grass control along fringing foreshore areas during January – March when native Marine Couch is in flower.
24.	Implement 'Weed Control' actions in the Natural Areas Management Plan 2019-2024.
MONITORING	
25.	Monitor the distribution of new invasive weeds as they arise.
26.	Annually monitor weeds with the potential to expand rapidly and map changes in their distribution if required.
27.	Undertake annual monitoring and control of *Acacia longifolia*, Coast Teatree, African Boxthorn, Brazilian Pepper, Geraldton Wax, *Lantana camera*, Giant Reed, Sweet Pea, *Gladiolus* and Olive trees to ensure they do not spread or reestablish.
FIRE MANAGEMENT	
28.	Implement 'Fire Management' actions detailed in the Natural Areas Management Plan 2019-2024.
ACCESS	
29.	Implement 'Access' actions in the Natural Areas Management Plan 2019-2024.
NATIVE ANIMALS	
30.	Undertake ongoing surveying of native fauna if resources allow.
31.	Minimise fires that may destroy tree hollows.
32.	Retain hollows for refuges in large old and dead trees.
33.	Undertake ongoing control of feral European Bees.
34.	Protect Rainbow Bee-eater nests.
35.	Continue implementing feral cat and fox control programs.
36.	Contribute to regional feral bird control programs coordinated by WALGA.
37.	Develop a map to monitor Native Pellitory distribution and facilitate its natural establishment.
COMMUNITY INVOLVEMENT	
38.	Continue to support community events in the Reserve such as Clean Up Australia Day.

4. BACKGROUND

4.1 Study Site

Point Resolution is located on the northern shores of the Swan River at the junction of Victoria Avenue and Jutland Parade, in Dalkeith. The entire Reserve includes bushland, greenway/ecozone and parkland areas which cover an area of 9ha. The focus of this Management Plan is on the management of the bushland which covers 4 hectares (ha) and the management of the greenway/ecozones which cover approximately 0.7 ha. The bushland at Point Resolution is bordered by the Swan River to the south and west, residential houses to the north and southeast and greenway/ecozones and parkland to the east. It is located within the City of Nedlands approximately 9 km west south west of the Perth Central Business District as shown in Figure 1.

Figure 1: Point Resolution Bushland and Greenway/Ecozones

Point Resolution is vested in the City of Nedlands as A Class Reserve 17391 for "Parks and Recreation". The City of Nedlands has the power to lease on Reserve 17391. Point Resolution falls within the Department of Biodiversity Conservation and

Attractions (DBCA) Development Control Area (DCA) as shown in Figure 2. The DBCA act as an advisory body on proposals that occur within the DCA.

Figure 2: DBCA Development Control Area at Point Resolution

The DBCA, the City of Nedlands and the Friends of Point Resolution have cooperatively managed Point Resolution since the late 1990s. In recent years Point Resolution has received significant funding through the DBCA Riverbank Program for restoration of eroded fringing and upper foreshore areas along the entire foreshore of Point Resolution.

The Swan and Canning River Foreshore Assessment Management Strategy (2008) identifies the riverbank and shorelines of Point Resolution as Priority 2 and Priority 3 areas for management and a Priority 2 area for vegetation management. Management strategies recommended for these areas include renourishment (where appropriate), foreshore stabilisation including bioengineering works to protect infrastructure or recreational amenity; and improving linkages between regionally significant and good quality vegetation areas through planning and action.

4.2 Disturbance Factors

Point Resolution is ecologically significant despite its long history of disturbance through activities such as quarrying. Some *Very Good* patches of bushland exist that are characterised by herbaceous species not found elsewhere in the Reserve and there are also some dense patches of Coastal Sword Sedge in places. The northern portion of the Reserve contains degraded areas which have dense infestations of various weeds that lack locally occurring native understorey vegetation. The river foreshore encounters ongoing disturbance through erosion as a result of natural tidal movements and storm surges.

4.3 Implementation of Previous Management Plans

Previous management plans developed for Point Resolution include the Point Resolution Reserve Management Plan (Ecoscape, 1991), the Nedlands Foreshore Bushland Reserves Management Plan 2003-2009 (Ecoscape, 2003) which also included the management of Birdwood Parade Bushland and the Point Resolution Reserve Management Plan (City of Nedlands, 2013).

Following the development of the 1991, 2003 and 2013 Management Plans the bushland has been actively managed by the City of Nedlands, the Friends of Point Resolution and the DBCA. The 2013-2018 Management Plan consolidated information regarding activities that had been undertaken since the development of the 2003 and the 1991 Management Plans along with providing management actions over a five year period.

In total, thirty four actions were developed in the 2013-2018 Management Plan of which thirty were implemented, three were partially implemented and one was not implemented. The one action that was not implemented was in relation to delineating parkland areas with low garden curbing. This action is no longer required as the new asphalt pathway through the parkland area removes the need for this. The three partially implemented actions included one in relation to maintaining and monitoring plants found in low abundance. This action was only partially implemented because some of these species have since died and cannot be propagated. For example, the last specimen of *Petrophile macrostachya* died in 2014 and this cannot be propagated. The other two partially implemented actions included one in relation to surveying native fauna if resources allowed and one to contributing to regional programs being undertaken for feral bird control. Both these actions have only been partially implemented because only informal surveys of native fauna have been undertaken and funding for regional feral bird control programs is currently being managed at a WESROC Council level. A summary of the implementation of the 2013-2018 actions are shown in Appendix 5.

4.4 Management Challenges and Success

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

- Sydney Wattle (Acacia longifolia)
- African Cornflag (*Chasmanthe floribunda)*
- Geraldton Carnation Weed (*Euphorbia terracina*)
- Marguerite Daisy (*Argyranthemum frutescens*)
- Sweet Pea (*Lathyrus*)
- Lupinus (Lupins)
- Perennial Veldt Grass (*Ehrharta calycina*)
- African Boxthorn (*Lycium ferocissimum*)
- Brazilian Pepper Trees (*Schinus terebinthifolia)*
- Coast Teatree (*Leptospermum laevigatum*)
- Couch Grass (*Cynodon dactylon*)
- Bridal Creeper *(Asparagus asparagoides*).

Large dense infestations of Bridal Creeper previously existed in Zones 2 and 3 with some smaller infestations in Zone 1. These populations have been significantly reduced over the years and the release of the Rust (a biological control) has been successful in stabilising its spread. The current distribution is less than 5 percent (%) cover in most areas with some populations completely removed from sections where it was previously recorded.

Woody weeds primarily including Brazilian Pepper Trees, African Boxthorn and Sydney Wattles have largely been removed from the Reserve. Occasionally some isolated plants reseed or re-sprout from previously removed infestations and these require ongoing monitoring and control. The mapping of Brazilian Pepper trees in 2003 and again in 2018 shows a massive reduction in its density and distribution and African Boxthorn and Sydney Wattle having been completely removed from the Reserve.

On comparison of the 2013 and the 2018 weed mapping Perennial Veldt Grass has reduced its density in Zone 1 whilst some small areas in the southern section have increased. It should be noted that for the 2013 maps Perennial Veldt Grass and Annual Veldt Grass where mapped together as one species as they could not be differentiated at the time of surveying. Therefore an additional map combining both annual and perennial veldt grass was used to review the distribution of perennial and annual veldt grass in 2018. The small areas in the southern section that were mapped as less than 5% in 2013 and have been mapped as 6-75% in 2018 are likely the result of herbicide resistance. These areas are on an annual weed control program and the grass weeds in these areas are not responding to herbicide spraying. This issue is not isolated to Point Resolution. Herbicide resistance is being encountered in other reserves and in order to address this issue follow up hand weeding is now being undertaken after the spraying to ensure no viable seeds from the resistant population persist. For further information about herbicide resistance refer to the Environmental Weed Control section on pages 43-51 in the Natural Areas Management Plan 2019-2024.

Significant restoration work has been undertaken in Zones 2 and 3 along the foreshore and embankment areas. These areas were restored through joint funded projects between the City, the Friends of Point Resolution and the DBCA between 2009 and 2014. Foreshore and embankment areas in these Zones were stabilised with brush walling, woody debris, rock rip rap, palisades and revegetation. The bioengineering treatments were installed with consideration for extreme storm surge events so that the foreshore and embankment was more likely to withstand these events which are increasing in frequency and severity.

The restoration work in these Zones has been successful. Some areas in Zone 2 took many years to establish and ongoing revegetation and bioengineering works were required over a number of years. This is because some areas in Zone 2 were subject to intense storm surge events in 2012 not long after they were stabilised and the foreshore in Zone 2 suffers greater tide surges due to the large area of open water adjacent to the prevailing wind as well as experiencing full afternoon. This made it difficult to establish native vegetation and revegetation programs took several years to establish compared to areas in Zone 3.

Restoration work has also commenced in Zone 1. This has consisted of invasive weed management, installation of brush walling and native fringing wetland and dryland vegetation. Zone 1 is characterised by white beach sand and a large expanse of open water on the western side. Therefore, the site conditions are similar to what would be expected on primary coastal dune areas. Therefore, reestablishing native vegetation in Zone 1 has also been a challenge and it is taking many years for the vegetation to establish in this Zone. The City is continuing to work with the DBCA on joint Riverbank funded programs to restore Zone 1.

Local provenance stands of native Marine Couch (*Sporobolus virginicus*) occur naturally 100 m south of the north western boundary in Zone 1. Prior to the brush walling installation seed was collected from Marine Couch for use in future revegetation programs. The existing native sedge community in this area was suffering from invasive grass weed invasion (primarily Couch and Kikuyu). These grass weeds were co-occurring with small populations of native Marine Couch. As it was too difficult to remove the Couch and Kikuyu without damaging the native Marine Couch all the grasses in this area were removed with the objective to reestablish the native Marine Couch as the dominant grass.

Managing grass weeds (especially Couch) in this Zone is going to be an ongoing management challenge as Couch Grass can be difficult to remove and it will have ongoing opportunities to reestablish. The most appropriate program to manage this is to target annual herbicide spraying in the early part of the year when native Marine Couch is in flower and can be identified and to undertake an ongoing seed collection and revegetation program with native Marine Couch.

Spinifex longifolius is naturally colonising the beach areas on the western side of Point Resolution. This is occurring from seed that has washed ashore. Spinifex is a beneficial foreshore species especially in sandy environments and its colonisation should be encouraged.

Management Actions 2019-2024	
1.	Undertake ongoing reestablishment and management of native Marine Couch in Zone 1

5. BIOLOGICAL ENVIRONMENT

5.1 Landscape Elements

The bushland at Point Resolution occupies an elongated embankment with varying degrees of steepness extending down to the Swan River Foreshore from the parkland areas along Victoria Avenue and Jutland Parade. The highest point of the bushland is 17 Australian Height Datum (AHD), the elevated position of Point Resolution offers expansive views of the Swan River and adjacent shorelines. The south eastern embankment is characterised by a steep cliff face with limestone rock formations at various locations, the north western foreshore contains a gently undulating embankment area that extends down to a sandy beach on the Swan River and the south western corner is characterised by limestone rock cliff faces directly adjacent to the beach foreshore.

5.2 Soils and Geomorphology

Point Resolution is located on the Spearwood Dune System, composed of Tamala Limestone and pale yellow sand. The limestone is exposed as cliffs along the shoreline and occasionally as isolated towers. Soils over the limestone are generally thin and sandy however, loamy material has accumulated in a depression behind the point itself. There are recent alluvial deposits of white, shelly sand in sheltered bays on the Claremont side of the point.

Like many natural areas within the City, the underlying limestone is sometimes reflected in the presence of limestone indicator species such as Tuart (*Eucalyptus gomphocephala*) and Parrot Bush (*Banksia sessilis*).

5.3 Vegetation

Vegetation Complex Heddle et al (1980)

On a regional scale Point Resolution is mapped as occurring on the Karrakatta Complex – Central and South. This Complex is also represented in 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. Point Resolution forms part of Super Group 4 - Uplands Centred on Spearwood and Quindalup Dunes. It was not sampled or inferred as containing a specific FCT through Bush Forever which is likely a result of it being considered highly degraded in the Bush Forever Site description.

System 6 Report and Bush Forever Vegetation Descriptions

The System 6 Report (DCE, 1983) listed the dominant shrub at Point Resolution Reserve as Parrot Bush (*Banksia sessilis*), with *Jacksonia furcellata, Scaevola nitida* and *Grevillea crithmifolia* also listed. The native sedge *Scirpus nodosus* and the native grass Marine Couch (*Sporobolus virginicus*) were found to occur along the shoreline while a grove of Peppermints was also recorded at the northern end of the Reserve. Exotic species listed included Fig, Brazilian Pepper Tree, European Olive and Veldt, Couch and Buffalo Grass.

Bush Forever (Government of Western Australia, 2000) listed the dominant species to be Tuart, Peppermint (*Agonis flexuosa*) and *Banksia* species, with an Open Heath of Parrot Bush (*Banksia sessilis*) and Sedgelands of *Juncus kraussii* and Club Rush (*Ficinia nodosa*). Scattered native plants were also identified, including Tall Open Woodland of Tuart, Jarrah (*Eucalyptus marginata*) and Marri (*Corymbia calophylla*) with an understorey of Grass trees (*Xanthorrhoea preissii*) and Zamia Palms (*Macrozamia riedlei*).

Prior to stabilisation works in Zone 1 only small remnants of the former rush communities along the western shoreline persisted. With ongoing erosion control and revegetation programs sedge communities are now increasing in size.

1991 Management Plan – Plant Community types identified

The 1991 Management Plan prepared by Ecoscape identified two community types:

- Peppermint-Banksia - Zone 1
- *Banksia sessilis* community – Zones 2 and 3.

The Peppermint-Banksia community was described as containing a mixture of Peppermint, Banksia, Rottnest Island Pines and Sheoaks; with Tuarts as the dominant Eucalypt; and the understorey consisting of Zamia Palms, Balga Trees, *Acacia cyclops*, *Banksia* trees and a mixture of shrubs, herbs and ground covers.

The *Banksia sessilis* community was described as containing a more heath like structure with *Banksia sessilis* as the most dominant plant species along with *Acacia cyclops, Jacksonia furcellata, Guichenotia ledifolia, Allocasuarina humilis* and a diverse range of shrubs, herbs and grasses.

Structural Plant Communities - Natural Area Initial Assessments 2008

More recently through the Natural Area Initial Assessments undertaken in 2008 two structural plant communities were identified as occurring across the bushland. These included:

- Peppermin*t (Agonis flexuosa)/Sheoak (Allocasuarina fraseriana)* woodland
- Tuart (*Eucalyptus gomphocephala)*/*Sheoak (Allocasuarina fraseriana)* woodland.

This information is detailed on the Local Biodiversity Program Natural Area Assessments database for Point Resolution.

The Peppermin*t (Agonis flexuosa)/Sheoak (Allocasuarina fraseriana)* woodland is dominated by Peppermint trees with some interspersed Sheoak trees. Other native species noted as occurring in this community were *Acacia cyclops* and *rostellifera*, *Jacksonia furcellata*, *Spyridium globulosum*, *Grevillea crithmifolia, Guichenotia ledifolia, Macrozamia riedlei, Hakea prostrata, Acanthocarpus preissii, Rhagodia baccata and Banksia menziesii*.

The Tuart (*Eucalyptus gomphocephala*)/Sheoak (*Allocasuarina fraseriana*) woodland is dominated by trees of *Eucalyptus gomphocephala, Allocasuarina fraseriana*; shrubs of *Grevillea crithmifolia* and patches of *the sedge Lepidosperma gladiatum*. Other common native species included a diverse range of shrubs, herbs.

Changes in the structure of the community types described over the years at Point Resolution could be attributed to ecological succession which can be influenced by the environment, biotic interactions, and dispersal. This may be reflected in the dominance of pioneer plant species such as *Banksia sessilis* and *Jacksonia* species at certain locations likely a result of disturbance factors. Also many years of restoration work has been undertaken at Point Resolution which may also lead to changes in the structure of the plant community onsite as many Tuarts have been planted in the southern section over the years.

5.4 Bush Forever Site 315 and Corridor Value

Point Resolution forms important ecological linkages with nearby river foreshore areas such as Birdwood Parade, Bishop Road and Waratah Place. It is identified as part of Greenway 24 in "A Strategic Plan for Perth's Greenways" by Tingay and Associates and it forms part of the regional river foreshore greenway identified in the Western Suburbs Greening Plan (2002) stretching approximately 15 km from Kings Park to Fremantle.

Point Resolution was identified as Site M59 in the Department of Conservation and Environment Conservation Reserves for Western Australia – System 6 (DCE, 1983). In this report the DCE stated that Point Resolution Foreshore (Site M59):

> '…*contributes to open space of regional significance extending along the Swan River, because of its conservation and recreation value. Important management considerations for the area include: encouraging the growth and regeneration of local indigenous flora; and minimising disturbance from fire and trampling of vegetation*'.

Four recommendations made for Point Resolution in this report included:

1. Recommendations on planning and management of Regional Parks be applied to the site
2. The purpose of Reserve A1624 be amended to Parkland and Recreation
3. The portion of Reserve A1668 to the west of Victoria Avenue be excised and added to Reserve A1624
4. The Nedlands City Council prepares a management plan for the area.

Point Resolution is registered as Bush Forever Site Number 221. The Bush Forever Site Implementation Recommendation for Point Resolution is:

> '*The existing care, control and management intent of the reserve is endorsed. The purpose of the reserve should be amended to include conservation and appropriate mechanisms applied in consultation with the management body*'.

The Bush Forever Site description also noted the following:

- Significant bird species Category 1 (1), Category 2 (3), Category 3 (2) and Category 4 (1)
- Directory of important Wetlands (Swan – Canning Estuaries)
- Naturally vegetated area on the Swan Estuary which has particular conservation value providing habitat for fauna and linkage between larger more intact areas of bushland.

5.5 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 overtime 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

The Bush Forever Site Description (2000) used the Keighery Vegetation Scale and assessed the bushland condition as >20% *Very Good* <80% *Degraded*, with areas of severe localised disturbance.

Over the years bushland condition has been mapped using different methods and scales. Bushland condition was not mapped in the 1991 Management Plan. It was mapped in the 2003 Management Plan where it assessed the bushland condition across the Reserve using the Kaesehagen Scale. These maps were digitised however they did not use 20 x 20 m polygons and condition ratings were allocated strictly on the basis of local native species present.

The bushland condition mapping undertaken in 2003 using the Kaesehagen Scale assessed approximately half the bushland as *Poor* condition and half as *Poor – Very Poor* condition along with two rehabilitation sites. The very poor condition bushland was primarily recorded in the northern section where the Peppermint Woodland community is present.

The bushland condition mapping undertaken in 2008 using the Keighery Scale through the Natural Area Initial Assessments assessed approximately half the bushland as *Degraded*, a quarter as *Completely Degraded* and the remainder as *Good* to *Very Good*. 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, selective removal of species (from plant pathogens, frequent fires, grazing and logging for example) and clearing. The existence on non-indigenous plants such as *Eucalyptus utilis* did not reduce the condition rating (except in the *Very Good* rated areas) unless they were considered invasive to the site and/or if they were found in isolation with no other local native species present.

In 2018 the bushland was assessed as approximately 20% *Very Good*, 66% *Good* and 13% *Degraded* with less than 1% Completely Degraded as shown in Table 2 on the next page.

Table 2: Extent of Bushland Condition by Class 2018

Very Good	Good	Degraded	Completely Degraded	Total Area
0.83 ha	2.66 ha	0.52 ha	0.02 ha	4 ha

The areas assessed as *Very Good* condition included parts of Zone 2 and 3. In order to attain the *Very Good* condition rating these area could be impacted by some disturbance such as frequents fires, clearing and aggressive weeds (in low abundance). However they needed to contain good vegetation strata expected for the location, show signs of natural recruitment and contain established local provenance species with a similar abundance and diversity that would be expected naturally.

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 Western Australian plants may also have formed part of the vegetation structure (such as *Eucalyptus utilis*) however they needed to be found cohabiting with local provenance native species and to be considered to provide good habitat value.

Areas rated as *Degraded* were located in Zone 1. These areas had a combination of the following criteria that resulted in their *Degraded* rating:

- Sparse native vegetation cover
- High density of invasive weeds
- Comprised of newly revegetated areas.

Some small areas were classed as *Completely Degraded,* these were located on the northern boundary and consisted completely of the fire break.

When comparing the 2013 and the 2018 bushland condition surveys the improvement in areas in Zone 1 that were assessed as Degraded in 2013 and *Good* in *2018* were areas that have been restored through Riverbank grant projects.

5.6 Flora

There are 193 flora species recorded at Point Resolution, of these 94 are identified as native species and 99 as introduced weed species. This includes *Jacksonia sericea* which is listed as priority 4 by the DBCA. The flora list (Appendix 1) for Point Resolution has been based on a number of surveys undertaken over the years. These include:

- A. Gardiner between 1953 and 1973
- Ecoscape 1991
- Ecoscape 2003
- Ian Fordyce 2013 and 2018
- Ongoing observations by the City of Nedlands.

The suite of species originally present at Point Resolution cannot be directly observed due to the long history of degradation at the site such as quarrying. Since the 2003 Management Plan a continuing decline in the number of native species recorded at Point Resolution is being encountered.

This was observed in the number of species recorded between 1953 and 1973 by A. Gardiner which were also recorded by Ecoscape in 1991, however they were not recorded in the 2003, 2013 or 2018 flora surveys. The 2003 Management Plan noted that *Guichenotia ledifolia* was listed in 1991 as a common species of the Parrot Bush (*Banksia sessilis*) community however it was no longer common in 2003 despite being present in reasonable numbers in the Peppermint (*Agonis flexuosa*) community. This is still evident in 2018.

In the 2003 Management Plan Ecoscape stated that some cohorts of short-lived species may have senesced but left viable seed which awaits a suitable germination trigger such as fire, while long-lived species that reproduce vegetatively may be lost from the system. With the last specimen of *Petrophile macrostachya* dying in 2015 this confirms that the decline in the number of native species is still occurring, especially with those species that are unable to be propagated.

In 2013 and 2018 some of the steep and densely vegetated areas in Zone 2 were not surveyed. Therefore it is quite possible some previously recorded species may still exist at Point Resolution that were not recorded in 2013 or 2018. The 94 native flora species recorded at Point Resolution was calculated by removing those species that had not been recorded since 2003 from the total number of plants previously recorded.

Species previously recorded at Point Resolution that were not observed in 2003, 2013 and 2018 include:

- *Caladenia longicauda*
- *Calectasia narragara*
- *Diuris longifolia*
- *Banksia dallanneyi*
- *Hovea trisperma*
- *Isotropis cuneifolia*
- *Philotheca spicata*
- *Sowerbaea laxiflora*
- *Stirlingia latifolia*
- *Petrophile macrostachya.*

Since 2003, the below listed native plants have been surveyed which were not previously recorded and were not planted at Point Resolution:

- *Caladenia latifolia* (Pink Fairy Orchids)
- *Crassula colorata* (Dense Stonecrop)
- *Senecio pinnatifolius*
- *Trachymene pilosa*
- *Acacia lasiocarpa* (Dune Moses) – possibly planted?
- *Austrostipa flavescens*
- Cowslip Orchid *(Caladenia flava*)

- *Hybanthus calycinus*
- *Pterostylis*
- *Santalum acuminatum*
- *Parietaria cardiostegia*
- *Homalosciadium homalocarpum.*

Since 2003 the following species were reintroduced through revegetation of the foreshore and embankment areas in Zone 3:

- *Anigozanthos manglesii*
- *Hypocalymma angustifolium*
- *Melaleuca systena*
- *Melaleuca huegelii*
- *Enchylaena tomentosa*
- *Baumea juncea (*planted in Zone 2 along the foreshore*)*
- *Casuarina obesa*
- *Pimelea rosea*
- *Scaevola crassifolia*
- *Casuarina obesa*
- *Melaleuca cuticularis.*

Prior to reintroducing these species an audit was made against those that were naturally found on the Mount Eliza escarpment (excluding the foreshore species) to ensure only native plants that would have most likely occurred on the site were reintroduced.

5.7 Plant Pathogens

A survey of plant pathogens undertaken across the City's natural areas in 2010 isolated the following plant pathogens from 9 trees in the parkland area at Point Resolution (4 Tuarts, 4 Jarrahs and 1 Eucalypt):

- *Phytophthora aff. arenaria* (2 Jarrahs)
- *Phytophthora multivora* (2 Jarrahs)
- *Armillaria luteobubalina* (1 Tuarts).

The 2010 survey also observed that the majority of Tuarts displayed symptoms of branch girdling as a result of stem-boring insects. Sometime later in 2016 the plant pathogen *Maskiella globosa* (Armoured Scale) was discovered impacting number of Tuarts in the parkland area near along Victoria Avenue. This insect causes damage to branches and foliage and decline in the tree.

Management of *Maskiella globosa* consists of mechanical removal, reducing disturbance and applying systemic and/or soil treatments 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 on pages 55-60. The City has been treating trees by implementing systemic treatments that can last for several years. These treatments improve the strength of the trees so they are not as susceptible to plant pathogens. The City implemented systemic treatments in 2011, 2012, 2013, 2014, 2016 and 2017. The Friends of Point

Resolution also kindly contributed funding towards the implementation of systemic treatments of a further 15 Jarrah and Tuart trees in 2012. These trees are being monitored and follow up treatments may be required in the future.

5.8 Weeds

Of the 99 weeds recorded in Point Resolution the distribution of 12 of these and woody weeds were mapped in 2018. They are shown in the map section in Appendix 6.

Some weeds listed in the weed inventory include those that were intentionally planted. Non-local Australian plants that have been introduced to Point Resolution include: *Banksia baxteri, Callistemon species, Chamelaucium uncinatum, Eucalyptus caesia, Eucalyptus camaldulensis, Eucalyptus citriodora, Eucalyptus lehmannii, Eucalyptus leucoxolyn var rosea, Eucalyptus maculata, Eucalyptus platypus, Eucalyptus sepulcralis, Grevillea banksii, Grevillea leucopteris, Westringia species* (Powell, cited in Ecoscape 2003).

Non-indigenous native plants provide habitat and should only be removed if they are invasive. There are also some trees that have been intentionally planted which provide historical value of the early European settlement of Nedlands. These include three 100 year Olive trees that should be retained for their heritage value.

Weed mapping

The methodology applied for weed mapping 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 Perennial Veldt Grass which was primarily mapped as less than 5% in 2013. However, in reality the cover of Perennial Veldt grass is now less than 1% in some reserves 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 five 'Actual Cover' maps have been provided. These maps are 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 2012/13
In 2018 the weeds listed in Table 3 on the next page were mapped:

Table 3: Weed Species Mapped in 2018

No	SPECIES	Actual Cover Map
1.	Black Flag *(Ferraria crispa)*	Yes
2.	Bridal Creeper *(Asparagus asparagoides*)	
3.	Dune Onion Weed (*Trachyandra divaricata*)	
4.	*Freesia (Freesia alba x leichtlinii*)	
5.	Fumitory	Yes
6.	Geraldton Carnation Weed *(Euphorbia terracina)*	
7.	*Gladiolus undulatus* and *angustus* mapped together as they could not be differentiated at the time of surveying	
8.	Marguerite Daisy *(Argyranthemum frutescens*)	Yes
9.	Perennial Veldt Grass *(Ehrharta calycina)*	Yes
10.	Rose Pelargonium *(Pelargonium capitatum*)	
11.	Soursob - *Oxalis Pes-Caprae*	Yes
12.	Sweet Pea *(Lathyrus)*	
13.	Woody weeds	

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.

5.9 Fungi

No Fungi Forays have been held at Point Resolution to date and prior to the development of the 2013 Management Plan no previous inventories were compiled. Only 5 fungi have been noted as occurring at Point Resolution (Appendix 2). These have been opportunistically noted by City staff. It is therefore likely that there are a significantly higher number of fungi on site than has been recorded to date. The fungi list for Point Resolution should be continually updated as new species are recorded.

5.10 Native Fauna

A total of 57 birds, 3 mammals and 8 reptiles have been recorded at Point Resolution.

Birds
Of the 57 bird species identified in Appendix 3 six species are listed under the Environmental Biodiversity Conservation Act 1999 (EPBC Act) the Carnaby's Black-Cockatoo *(Calyptorhynchus latirostris)* which is listed as *Endangered,* the Rainbow Bee-eater *(Merops ornatus)* which is listed as a *Marine* species; and the Grey Plover (*Pluvialis squatorola*), Common Sandpiper (*Actitis hypoleucos*), Common Greenshank (*Tringa nebalaria*) and Caspian Tern (*Hydropogne caspia*) which are listed as *Migratory* and *Marine* species.

Mammals
Three mammals have been recorded in Allen Park these include Brushtail Possums (*Trichosurus vulpecula*), *the* White-striped Freetail Bat (*Tadarida australis*) and Gould's Wattled Bats (*Chalinolobus gouldii)*.

Herpetofauna (Reptiles & Amphibians)
A total of 8 herpetofauna species have been confirmed at Point Resolution. These include the Marbled Gecko (*Christinus marmoratus*), the Sands Gould's Monitor (*Varanus gouldii*), the Fence Skink (*Cyptoblepharus buchananii*), the West Coast Ctenotus (*Ctenotus fallens),* the Two-toed Mulch Skink (*Hemiergis quadrilineata)* and the Western Bobtail (*Tiliqua rugosa*). Two other skinks were referred to as the Burrowing Skink and the Grey skink in the 2003 Management Plan however as no scientific names were provided for these species it is difficult to determine what species they are.

The 8 species listed above would only form part of the herpetofaunal species at Point Resolution and further informal surveys should be undertaken to update the current species list.

Invertebrates

Two native invertebrates have been confirmed onsite. These include the Blue-banded Bee (*Amegilla*) and the Trapdoor Spider (species unconfirmed). A further unconfirmed invertebrate that may be present is the Yellow Admiral Butterfly as its habitat consisting of Native Pellitory has recently been discovered on site. Like herpetofauna, invertebrates should also be informally surveyed and species lists updated as new species are recorded.

5.11 Introduced Fauna

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

Mammals

Point Resolution has the following confirmed introduced mammals: rabbits (*Oryctolagus cuniculus)*, foxes *(Vulpes vulpes*), Cat (*Felis catus*) and the Black Rat (*Rattus rattus)*. Other possible (unconfirmed) introduced fauna include the the House Mouse (*Mus musculus*).

Invertebrates

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

Introduced Birds

There are seven known introduced or feral birds within Allen Park these include the Rock Dove (*Columba livia*), Spotted Dove (*Streptopelia chinensis*), Laughing Dove (*Streptopelia senegalensis*), Rainbow Lorikeet (*Trichoglossus haematodus*), Laughing Kookaburra (*Dacelo novaeguineae*) and Little and Long-billed Corellas' (Cacatua sanguinea and *tenuirostris*).

6. 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.

6.1 Management Zones

External Boundaries

For management purposes it is important to distinguish between parkland and bushland/ecozones. At Point Resolution, the boundaries between bushland/ecozones and parkland areas will be well defined by conservation fencing that will be installed on the western side of red asphalt pathway as the greenway/ecozones are developed.

Internal Boundaries

The internal boundaries have been divided into 3 Zones. These 3 Zones form the basis of general management and are intended to facilitate the establishment of guidelines for managing areas of similar terrain and degradation. Specific sites are targeted areas for rehabilitation within Zones. They demarcate the extent of areas where specific works should occur. All three Zones are currently considered high priority areas for management.

Figure 3: Management Zones at Point Resolution

Management Actions 2019-2024	
1.	Manage Point Resolution on the basis three Zones.

6.2 Rehabilitation

The improvement of bushland condition at Point Resolution will be achieved by assisting natural regeneration in *Good* to *Very Good* bushland condition areas and through reconstruction at selected *Degraded* sites.

Sites

Sites are areas within Zones where resources for rehabilitation and monitoring are focused. Areas where rehabilitation has previously occurred are also considered Sites. A rehabilitation plan should be developed for each area requiring reconstruction to minimise any possible detrimental impacts such as trampling, erosion, spraying native species in low abundance or the introduction of weed species.

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 these Zones. Restoration of the more *Degraded* bushland areas should be a focus if resources allow, in areas affected by erosion; and in areas directly adjacent to *Good* bushland. If internal funding is not available then these Sites could be the focus of grant funded projects.

Past Rehabilitation Sites

The following DBCA funded rehabilitation sites require ongoing annual maintenance:

- South-eastern foreshore and embankment stabilised between 2009 and 2011
- South-western foreshore and embankment stabilised in between 2012 and 2014
- North-western foreshore stabilised between 2014 and 2018.

The above listed Sites require ongoing annual infill planting, weed control and maintenance of stabilisation works such as jute, geofabric brush walling ,rock rip rap and woody debris undertaken. This will ensure stabilisation works will endure future storm surge events and erosion. When undertaking rehabilitation at these sites the DBCA Best Management Practices for Foreshore Restoration should be used to guide rehabilitation work.

The following past rehabilitation sites also require ongoing annual maintenance:

- Greenway/ecozones between the boundary of the asphalt pathway and the bushland
- Zone 3 including the Embankment adjacent to 68 Jutland Parade
- Zone 2 (excluding the *Very Good* bushland condition areas)
- Zone 1 Riverbank funded sites.

Zones 2 and 3 have been previously rehabilitated (except the *Very Good* bushland condition area in Zone 2). The *Very Good* condition bushland in Zone 2 has many plants that cannot be propagated that and which are found in low abundance. and These plants form a distinct community not found elsewhere in the Reserve. Many of these species cannot be propagated and any weed control carried out in this area

needs to be undertaken very carefully so that these plants are not damaged. This area should also only be revegetated with similar species to maintain the community of plants found in this area.

Future Reconstruction Sites
The following sites are future reconstruction sites:

- Embankment (Zone 1)
- Greenway/ecozones between the asphalt pathway and the bushland.

The embankment in Zone 1 is proposed to be restored through the DBCA Riverbank Grants program and the greenway/ecozones through the City's capital works program in accordance with the Point Resolution Reserve Enviro-scape Plan.

The remaining sedge community In Zone 1 was being eroded through storm surges and weed invasion. However this area is currently being stabilised using brush walling and ongoing reestablishment of native sedges and Marine Couch. The bushland and embankment areas however are degraded. They lack understorey vegetation and suffer from high weed cover. Currently the City is managing weeds in this area however there are no resources available to undertake revegetation of this area. This is because current funding needs to focus on finalising stabilisation of the sedge community in Zone 1, to undertake ongoing restoration of previously revegetated site and to manage the restoration of the remainder of the bushland areas. Once previously funded Riverbank sites are well established then the bushland and embankment areas in Zone 1 should be restored. The City should continue to work with the DBCA to rehabilitate degraded foreshore sites such as these and try to source external funding if it becomes available.

Greenway/Ecozone sites
Through the City's capital works program the parkland areas to the west of the new asphalt pathway are being mulched and revegetated. This work is being undertaken in accordance with the Point Resolution Enviro-scape Master Plan and it will increase the bushland buffer and greenway corridor value of Point Resolution and reduce water consumption by reducing the area of reticulated parkland area.

The following criteria should be followed when developing the greenway/ecozones:

- Installation of conservation fencing along the path edge to protect the bushland and ecozones
- Maintaining the visual amenity of the area by not reducing current views of the Swan River from the parkland area.

Management Actions 2019-2024	
1.	Continue to work closely with the Department of Biodiversity Conservation and Attractions (DBCA) to rehabilitate degraded sites.
2.	Use DBCA Management Practices as a guide for restoration when undertaking rehabilitation of degraded foreshore and embankment areas.
3.	Focus rehabilitation on *Good* to *Very Good* bushland condition areas as a priority.
4.	Use jute matting or geofabric on steep embankment and foreshore areas.
5.	Undertake annual maintenance of past DBCA rehabilitation sites.

6.	Maintain and monitor plants found in low abundance in Zone 2 and only revegetate this Zone with species found naturally in this plant community.
7.	Maintain current views when rehabilitating the bushland edges and parkland areas.
8.	Install conservation fencing to protect the bushland/greenway areas.
9.	Retain the three heritage Olive trees.
10.	Implement 'Plant Pathogen' and 'Rehabilitation' actions detailed in the Natural Areas Management Plan 2019-2024.

6.3 Revegetation

Species Selection

Ideally species used for revegetation in reconstruction sites would consist of the entire collection of plants that naturally occur at Point Resolution. This is not always possible as not all species can be propagated and there are also situations where certain species provide specific management functions such as *Acacia pulchella* and *Banksia sessilis* which help to restrict access as they have spiny leaves.

The suite of native species that would have once occurred at Point Resolution can be inferred from the Mount Eliza Escarpment in Kings Park which occupies a similar position in the landscape and is less than 3 km away. When developing species lists they should be cross referenced to those that have been found on the Mount Eliza Escarpment.

Currently approximately 3000 to 5000 plants are being installed a year in the greenway/ecozones. The Point Resolution seed bank was not large enough to accommodate the propagation of these plants. Also some of the low growing species were not available from seed. Therefore the City had to use seed and plant material sourced from nurseries rather than our seed bank for Point Resolution. This is not so much of an issue as historical revegetation programs at Point Resolution have used plants in revegetation activities propagated from seed collected from the wider Swan Coastal Plain or other reserves within Nedlands and the seed bank is utilising seed from these species. However due to land clearance on the Swan Coastal Plain local seed is increasingly becoming harder to source and local nurseries have to source their seed from reserves further north and south of the Perth metropolitan area. Therefore, best practice is to maintain the Point Resolution seed bank as it is and not contaminate it with any seed collected from the greenway/ecozones.

The species that are being used for revegetation in the greenway/ecozone areas are all species that would naturally have occurred at Point Resolution or on the Mount Eliza Escarpment. Only low growing species are being used in areas where there are current views of the river. Table 4 below details the species that are to be used for revegetation programs in the greenway/ecozone areas.

Table 4 Species for use in greenway/ecozone areas

SPECIES	NOTES
Austrostipa flavescens	Use where views need to be maintained
Rhagodia baccata	Use where views need to be maintained
Olearia axillaris	

Banskia nivea	Use where views need to be maintained
Banksia sessillis	
Acacia lasiocarpa	Use where views need to be maintained
Grevillea crithmifolia	
Grevillea vestita	
Templetonia retusa	
Jacksonia sericea	Use where views need to be maintained
Daviesia divaricata	Use where views need to be maintained
Conostylis candicans	Use where views need to be maintained
Melaleuca systena	
Ficinia nodosa	Use where views need to be maintained
Enchylaena tomentosum	Use where views need to be maintained
Scaevola crassifolia	Use where views need to be maintained
Scaevola nitida	
Myoporum insulare	
Hemiandra pungens	Use where views need to be maintained
Acacia pulchella	
Guichenotia ledifolia	
Kennedia prostrata	Use where views need to be maintained
Eremphilia glabra (green erect form)	Use where views need to be maintained
Dianella revoluta	Use where views need to be maintained

Species of Significance or Low Abundance

There are a number of species of significance or found in very low numbers within Point Resolution, special consideration should be given to ensure their survival onsite. They should be mapped, monitored and if possible propagated for revegetation at reconstruction sites. Eleven species have been identified at Point Resolution which fit into this category include:

- *Acacia stenoptera*
- *Microtis*
- *Thysanotus*
- *Burchardia congesta*
- *Conostephium pendulum*
- *Conostephium preissii*
- *Daviesia divaricata*
- *Lepidosperma*
- *Leucopogon parviflorus*
- Caladenia latifolia
- *Caladenia flava*
- *Scaevola anchusifolia*
- *Tetraria octandra.*

It should be noted that a number of these species would have always been in low numbers on the scarp at Point Resolution. They would have been more typical of the area now occupied by the grassed parkland on the plateau of the site, and existed on the escarpment as outlying individuals of more substantial plateau populations.

Management Actions 2019-2024	
1.	Work with local nurseries to grow species found in low abundance.
2.	Use only plant species for rehabilitation if they would have naturally occurred on site such as those found on the Mount Eliza Escarpment at Kings Park.
3.	Consider specific conditions (such as the need to restrict access and slope stability) in developing plant lists for rehabilitation sites.
4.	Only use seed and cutting material collected in the greenway/ecozones areas for the greenway/ecozones.
5.	Implement 'Revegetation' actions detailed in the Natural Areas Management Plan 2019-2024.

6.4 Environmental Weed Control

A total of 28 priority weeds have been listed for management at Point Resolution (Table 5). 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 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)
- Local knowledge from 'Friends of' groups and City staff that assisted with the development of the priority weed list
- Their ability to contribute to fuel loads
- State and federal weed lists
- Their ability to be controlled without causing disturbance.

Table 5: Priority Weeds for Control – (Ratings taken from DBCA 2016 (Swan Rating))

SPECIES NAME		COMMON NAME	NOTES	RATING
1.	*Avena fatua*	Wild Oat	Ongoing control required in conjunction with grass spraying program.	High/Medium
2.	*Agave americana*	Century Plant	Requires ongoing monitoring for re-infestation.	Medium/Medium
3.	*Argyranthemum frutescens*	Marguerite Daisy	Ongoing control required.	Unknown/Slow
4.	*Arundo donax*	Giant Reed	Requires ongoing monitoring and control.	High/Slow
5.	*Asparagus asparagoides*	Bridal Creeper	Ongoing biological control required, removal of berries and/or hand removal of small populations.	High/Rapid
6.	*Brachychiton populneus*	Kurrajong	Requires ongoing monitoring and control.	High/Medium
7.	*Brassica tournefortii*	Mediterranean Turnip	Ongoing hand weeding required.	High/Rapid
8.	*Cenchrus clandestinus*	Kikuyu Grass	Focus control in restoration sites.	High/Slow
9.	*Carpobrotus edulis*	Hottentot Fig	Monitor for re-infestation. Control only to take place when in flower so that it is not confused with native Pigface.	High/Rapid
10.	*Chamelaucium uncinatum*	Geraldton Wax	Ongoing removal of juvenile seedlings.	Medium/Slow
11.	*Chasmanthe floribunda*	African Cornflag	Ongoing monitoring and control.	High/Medium
12.	*Cynodon dactylon*	Couch	Focus control in restoration sites.	High/Rapid
13.	*Ehrharta calycina*	Perennial Veldt Grass	Ongoing control required.	High/Rapid
14.	*Ehrharta longiflora*	Annual Veldt Grass	Ongoing control required in conjunction with grass spraying program.	Medium/Rapid
15.	*Euphorbia terracina*	Geraldton Carnation Weed	Ongoing hand weeding required.	High/Rapid
16.	*Ferraria crispa*	Black Flag	Ongoing control required.	High/Rapid
17.	*Freesia alba x leichtlinii*	Freesia	Ongoing control required.	High/Rapid
18.	*Fumaria capreolata*	Climbing Fumitory	Hand weeding required if resources allow.	High/Rapid

SPECIES NAME		COMMON NAME	NOTES	RATING
19.	*Lagurus ovatus*	Hare's Tail Grass	Ongoing control required.	High/Rapid
20.	*Leptospermum laevigatum*	Coast Teatree	Requires ongoing monitoring and control.	High/Rapid
21.	*Lupinus angustifolius*	Narrowleaf Lupin	Ongoing hand weeding required.	High/Medium
22.	*Lupinus cosentinii*	Sandplain Lupin	Ongoing hand weeding required.	High/Medium
23.	*Moraea flaccida*	One-leaf Cape Tulip	Ongoing control required.	Very High
24.	*Olea europaea*	Olive	Ongoing control of seedlings and resprouting plants. Retain 3 Heritage Trees.	High/Rapid
24.	*Oxalis pes-caprae*	Soursob	Ongoing control required. Undertake control in conjunction with *Oxalis*.	High/Slow
25.	*Pelargonium capitatum*	Rose Pelargonium	Ongoing control required. Only remove large infestations where native vegetation has established.	High/Rapid
26.	*Raphanus raphanistrum*	Wild Radish	Ongoing hand weeding required.	Unknown/Medium
27.	*Schinus terebinthifolia*	Brazilian Pepper	Requires ongoing monitoring for re-infestation/ resprouting.	High/Medium
28.	*Trachyandra divaricata*	Dune Onion Weed	Only control when native vegetation has established.	Medium/Rapid

Table 6: Alert Weeds for Point Resolution

Species name	Common name	Notes
Acacia longifolia	Sydney Golden Wattle	Previously removed from Point Resolution
Lycium ferocissimum	African Boxthorn	Previously removed from Point Resolution
Lantana camara	Common Lantana	Previously removed from Point Resolution
Gladiolus angustus	Long Tubed Painted Lady	Small infestation discovered in Zone 1 in 2018

Strategy

Priority weeds should be controlled in all Zones in accordance with management notes in Appendix 4.

Of the priority weeds listed in Table 6 the following weeds are considered the highest priority for management:

- Geraldton Carnation Weed
- Bridal Creeper
- Couch Grass
- *Oxalis*
- Fumitory
- African Cornflag
- Perennial Veldt Grass
- Black Flag
- One-leaf Cape Tulip
- *Brassica and Radish*
- *Lupinus*
- *Freesia*
- Woody weeds
- Rose Pelargonium.

Perennial Veldt Grass

In 2018 herbicide resistance in Perennial Veldt Grass, whilst not scientifically tested, has been assumed to be occurring at certain isolated within the Reserve. In order to address herbicide resistance the grass spraying program has been modified to ensure that all reserves are hand weeded following completion of the annual grass control program .

Fumitory and *Oxalis*

With the removal of many annual and perennial grass weeds Whiteflower Fumitory (*Fumaria capreolata*) and *Oxalis* (*Oxalis compressa*) appear to be increasing. This is also being noted in a number of other reserves. They are currently being targeted for control in maintenance sites and therefore their management is only an issue in the remaining bushland areas. Fumitory can be targeted manually and should be incorporated into the existing hand weeding program. In regards to *Oxalis* the precautionary principal should be applied to its control and it should only be targeted

at the same time and using the same program as the *Freesia* control which has been successful in the Reserve over a number of years.

Sweet Pea
Whilst not normally considered a major environmental weed the garden escapee Sweet Pea previously established at the south eastern end of Point Resolution Reserve. It is short lived and scrambles over plants during spring causing a fire hazard when it dies off in summer. Ongoing removal has been undertaken and its density has significantly reduced. It should continue to be monitored and hand weeded as required to reduce fuel load in the Reserve.

Steep Embankment Adjacent to 68 Jutland Parade
The steep embankment area in the south eastern part of the Reserve contains some priority weeds. This embankment is largely inaccessible and dangerous for contractors or staff to access. Unfortunately some priority weeds in this location cannot therefore be controlled.

Geraldton Wax
Geraldton Wax has previously been removed from Point Resolution. A few mature specimens exist in Zone 1 adjacent to a degraded area which provide habitat for birds. The mature specimens should remain until revegetation works are undertaken Zone 1. This area should however be monitored and juvenile seedlings removed as required.

Couch Grass
Foreshore restoration sites require ongoing management of Couch Grass as it impacts the native sedge community. Marine Couch is also present in these areas. As Marine Couch is easily identified when in flower during January to March the control of the Couch grass should be scheduled during this time.

Maintenance Areas
Numerous weeds are present in restoration sites including DBCA funded sites, greenway/ecozones areas and the area behind the park reserve sign in Zone 3. These areas have weeds such as *Conyza bonariensis (*Tall Fleabane), Shoncus, *Lactuca serriola (*Prickly Lettuce), *Oxalis glabra* and *pes-caprae (*Soursob), *Raphanus*and Brassica, *Lupinus* and *Solanum nigrum* (Blackberry nightshade). These areas require ongoing maintenance of weeds so that they do not threaten nearby bushland areas.

Olive Trees
Olives are a high priority weed species. In the 2003-2009 Management Plan the retention of three 100 year old Olive trees was recommended due to their heritage value. The retention of these trees causes an ongoing management issue as a result of the germination of many seedlings each year. Regardless of this, these three Olive trees should be retained with ongoing monitoring and removal of seedlings as required. The location of the three 100 year old Olive trees are shown in Figure 4 below.

Figure 4: Three 100 Year Old Heritage Olive Trees

Indigenous Species Which Should Not Be Mistaken For Weeds

Care should be taken to ensure native species are not confused with weeds. Indigenous species with potential for confusion include:

- The native grass Marine Couch (*Sporobolus virginicus*)
- Tetragonia tetragonioides
- *Conostylis candicans*
- *Austrostipa flavescens*
- *Lomandra*
- *Scaevola anchusifolia*
- *Schoenus grandiflorus*
- *Ptilotus polystachyus*.

6.5 Monitoring

Weed Mapping

Of the 99 weeds identified as occurring at Point Resolution, the distribution and density of 13 weeds were mapped including 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 distribution 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, 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 include:

- *Acacia longifolia*
- Coast Teatree
- African Boxthorn
- Brazilian Pepper Tree
- Geraldton Wax
- Giant Reed
- *Gladiolus undulatus*
- *Lantana camara*
- Sweet Pea
- Olive trees (excluding the heritage trees).

Fire Site Monitoring

In late summer 2018, an unplanned, uncontrolled wildfire (presumably deliberately lit), burned a small part of the embankment as shown in the fire history map in Appendix 6. The fire was sufficiently intense to entirely remove the vegetation over an area of approximately 300 m^2. This has left a roughly tear-shaped scar on the landscape – bare, powdery, ash-covered sand, with a charcoal mound mid-slope, marking the site of peak fire intensity (or of the longest-sustained burning). The site has been monitored for natural regrowth since with the following observations noted:

- Resprouting from lignotubers or from scorched stems was confined to the fire-scar margins.
- The scar area itself supported only a sparse seedling emergence (apparently from the surviving soil seed bank).
- The central charcoal mound remains almost completely bare in early 2019, more than a year after the fire.

It is apparent that natural regrowth is taking place, but it is patchy and slow. There is no sign of the overstorey or taller shrub species that once dominated the vegetation at this location. On the contrary, early-successional shrubs, such as *Acanthocarpus preissii, Rhagodia baccata* and *Macozamia fraser*i, appear to be over-represented in the population.

Management Actions 2019-2024	
WEED CONTROL	
1.	Continue to control the following weeds as a high priority: Geraldton Carnation Weed, Bridal Creeper, *Oxalis*, Fumitory, Perennial Veldt Grass, Black Flag, *Freesia, Brassica* and Radish, *Lupinus*, woody weeds and Rose Pelargonium.
2.	Control and document the distribution of new invasive weeds as they arise.
3.	Remove juvenile Olive seedlings as they emerge.
4.	Undertake ongoing maintenance of weeds in restoration sites.
5.	Control priority weeds in accordance with management notes detailed in Appendix 4.
6.	Schedule Couch Grass control along fringing foreshore areas during January – March when native Marine Couch is in flower.
7.	Implement 'Weed Control' actions in the Natural Areas Management Plan 2019-2024.
MONITORING	
8.	Monitor the distribution of new invasive weeds as they arise.
9.	Annually monitor weeds with the potential to expand rapidly and map changes in their distribution if required.
10.	Undertake annual monitoring and control of *Acacia longifolia*, Coast Teatree, African Boxthorn, Brazilian Pepper, Geraldton Wax, *Lantana camera*, Giant Reed, Sweet Pea, *Gladiolus* and Olive trees to ensure they do not spread or reestablish.

7. 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 shown in the map section in Appendix 6.

Summary of Current Practices
The City undertakes the following fire management practices at Point Resolution:

- Annual review of the Point Resolution 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 Point Resolution 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 Point Resolution 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 Point Resolution. 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.

8. 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 in the bushland areas at Point Resolution are considered appropriate and rehabilitation has been completed on most informal tracks over recent years. Additional conservation fencing consisting of pine bollards and ring lock is being installed on the western edge of the new asphalt pathway in the parkland area. All grassed areas to the west of this new pathway are going to be converted to greenway/ecozones in accordance with the Point Resolution Enviro-scape Plan. As these areas are converted to greenway/ecozones, conservation fencing will be installed the entire length and will remain in place to delineate the greenway/ecozones from the parkland zones.

Due to the steepness of the site the path network within the bushland area does not allow for disability access. The path network and fire access is shown in the map section in Appendix 6. All pathways except one were upgraded in 2015/16. These works included formalising and stabilising the sand track adjacent to 68 Jutland Parade, undertaking repairs and maintenance to the boardwalk, upgrading one limestone pathway to asphalt, upgrading one highly eroded vehicle sand track to an asphalt vehicle track and upgrading one narrow bitumen pathway to red asphalt. There is one narrow asphalt track that requires upgrading in the northern section of the Reserve. This pathway is being put forward for upgrade in the 2019/20 capital works program.

Two tracks in the south western part of the Reserve are used by fisherman, for access at high tide when access is not possible from the end of the path on the southern beach foreshore. One of the access points (adjacent to the boardwalk) was put forward as a funding request in the 2016/17 Council budget process. This request included design and construction costs to extend the boardwalk onto the beach at this location, however it was not approved by Council. Currently The rehabilitation of these two areas is not achievable and these two tracks should be left as informal access tracks.

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

9. CULTURAL HERITAGE, INTERPRETATION & EDUCATION

The objectives and strategies for Community Involvement for the City's Community 'Friends of' Groups are detailed on pages 74-82 Natural Areas Management Plan 2019-2024.

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 Point Resolution is the Karda Bidi Trail and it extends from Jetty Road in Claremont to Rosalie Park in Subiaco. It connects to the Yange Kep Bidi, the Karak Bidi and the Bush to Beach trails within the Whadjuk Trail Network. Directional signage on pathways and bollards directs walkers through Point Resolution on the Karda Bidi Trail. Interpretive signage is also located along the trail detailing the environmental, Aboriginal and European significance of Point Resolution.

10. NATIVE ANIMALS

10.1 Background

There are 67 confirmed native animal species in Point Resolution (57 birds, 3 mammals, 8 reptiles and 2 invertebrates). Formal surveying of native fauna at Point Resolution should be undertaken if resources are available.

At present all these species are managed indirectly through improving bushland condition and controlling feral animals which have the potential to predate, compete with or displace native animals. This is discussed under the section on feral animal management 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 roost in tree hollows and buildings and occur in many towns and cities, (Menkhorst & Knight, cited in Ecoscape 2005[2]).

White-striped Freetail Bat (*Tadarida australis*)

The White-striped Freetail Bat occurs across the southern half of mainland 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).

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.

Birds

Of the 57 bird species identified in Appendix 3 six species are listed under the EPBC Act the Carnaby's Black-Cockatoo *(Calyptorhynchus latirostris)* which is listed as *Endangered;* the Rainbow Bee-eater *(Merops ornatus)* which is listed as a *Marine* species; and the Grey Plover (*Pluvialis squatorola*), Common Sandpiper (*Actitis hypoleucos*), Common Greenshank (*Tringa nebalaria*) and Caspian Tern (*Hydropogne caspia*) which are listed as *Migratory* and *Marine* species.

Large flocks of Carnaby's Black-Cockatoos are regularly seen feeding on *Banksia sessilis* thickets in the bushland. Carnaby's have the following confirmed roost sites within close proximity to Point Resolution:

- Adelma Rd Dalkeith (NEDDALR003)
- Birdwood Parade, Dalkeith (NEDDALR002)**.**

Ospreys are regularly seen hunting in the river adjacent to Point Resolution and also perching on large tree branches to consume their prey in the Reserve. Other migratory birds are often seen feeding in the water and shoreline areas.

The sandy embankment areas are used for nesting by Rainbow Bee-eaters who migrate annually in summer and nest in Perth's sandy soils. They have also been seen nesting and foraging at Point Resolution. If nests are encountered in the bushland or parkland area they should be protected so that any restoration work undertaken or mowing activities do not disturb their nests. Feral fox control should also be implemented as they can predate on their nests.

Yellow Admiral Butterfly

Since the late 1990s Yellow Admiral Butterflies have been encouraged into local reserves through the provision of specific habitat (Native Pellitory). An ongoing seeding program has been undertaken by the Friends of Allen Park and other "Friends of' groups in the wider Perth area. Whilst the City did not directly seed Native Pellitory at Point Resolution is was discovered in 2017 in an area on the western side of the Reserve under some Peppermint trees and it was also discovered at Bishop Road Reserve in 2018.

Native Pellitory is therefore naturally regenerating and increasing its distribution and this should be facilitated and encouraged through the City's natural area program by mapping it and ensuring it is not mistakenly removed as a weed. Provided it is protected it will keep naturally expanding its distribution and displace annual weeds in the process. Figure 5 below show the current distribution of Native Pellitory.

Figure 5 Native Pellitory Point Resolution 2018

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 Rainbow Lorikeets that carry Beak and Feather Disease. The Western

Australian Local Government Association (WALGA) are coordinating a regional feral bird control program focussing on Rainbow Lorikeets and Long-billed Corellas. They are currently seeking funding from local governments to continue this program.

The protection of native animals at Point Resolution 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 hollows for refuges in large old and dead trees.
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.	Develop a map to monitor Native Pellitory distribution and facilitate its natural establishment.

11. COMMUNITY INVOLVEMENT

The objectives and strategies for community involvement for all the City's community '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.

The Friends of Point Resolution formed in 1999 to protect the bushland from proposals to install facilities to increase the use of the Reserve. The mission statement of the Friends of Point Resolution is:

> *"To promote conservation of Point Resolution and other areas of natural bushland and reserves in the peninsula."*

The development proposals for the Reserve did not proceed and from 1999 the Friends of Point Resolution and the City of Nedlands have co-managed restoration and conservation efforts within Point Resolution. This relationship has helped the City source significant funding through grant programs for the restoration of the Reserve.

The Friends of Point Resolution assist the City with the development of management actions for the Reserve and assistance with grant funding. The Friends of Point Resolution have worked with the City to undertake numerous Clean Up Australia Day events at Point Resolution. The City aims to continue supporting community events at Point Resolution such as Clean Up Australia Day in the future.

Should a member of the public wish to contact the Friends of Point Resolution Reserve please contact the City on 9273 3500.

Management Actions 2019-2024	
1.	Continue to support community events in the Reserve such as Clean Up Australia Day.

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Appendix 1: Flora Inventory
Native Plant Inventory

Species	Common Name	Comments
Acacia cyclops	Coastal Wattle	
Acacia lasiocarpa	Dune Moses	
Acacia pulchella	Prickly Moses	
Acacia rostellifera	Summer-scented Wattle	
Acacia saligna	Golden Wreath Wattle	
Acacia stenoptera	Narrow Winged Wattle	Not recorded since 2013
Acacia xanthina	White-stemmed Wattle	
Acanthocarpus preissii	Prickle Lily	
Agonis flexuosa	Peppermint	
Alexgeorgea nitens		
Allocasuarina fraseriana	Sheoak	
Allocasuarina humilis	Dwarf Sheoak	
Anigozanthos humilis	Catspaw	
Anigozanthos manglesii		Replanted
Austrostipa flavescens		
Banksia attenuata	Slender Banksia	
Banksia dallanneyi	Couch Honeypot	AG. Not recorded since 1991
Banksia menziesii	Firewood Banksia	
Banksia sessilis	Parrot Bush	
Baumea juncea		Introduced in Zone 2 and 3
Burchardia congesta	Milkmaids	Not recorded since 2013
Caladenia flava	Cowslip Orchid	
Caladenia latifolia	Pink Fairy Orchid	
Caladenia longicauda	Common White Spider Orchid	AG. Not recorded since 1991
Calectasia narragara		AG. Not recorded since 1991
Callitris preissii	Rottnest Island Pine	
One Sided Bottle Brush		
Casuarina obesa		Introduced in Zone 2 and 3
Conostylis candicans	Grey Cottonhead	
Conostephium pendulum	Pearl Flower	Not recorded since 2003
Conostephium preissii		Not recorded since 2003
Corymbia calophylla	Marri	
Crassula colorata	Dense Stonecrop	
Cyperus gymnocaulos	Spiny Flat-sedge	
Daviesia decurrens	Prickly Bitter-pea	Not recorded since 1991
Daviesia divaricata	Marno	
Daviesia triflora		Not recorded since 1991
Desmocladus flexuosus		
Dianella revoluta var. divaricata		

Species	Common Name	Comments
Diuris sp	Common Donkey Orchid	AG. Not recorded since 1991
Drosera macrantha	Bridal Rainbow	Not recorded since 2003
Enchylaena tomentosum	Barrier Saltbush	
Eremophila glabra	Tar Bush	
Eucalyptus gomphocephala	Tuart	
Eucalyptus marginata	Jarrah	
Eucalyptus rudis	Flooded Gum	
Ficinia nodosa	Knotted Club Rush	
Gastrolobium capitatum	Bacon and Eggs	AG. Not recorded since 1991
Gompholobium tomentosum	Hairy Yellow Pea	
Grevillea crithmifolia		
Grevillea vestita		
Guichenotia ledifolia		
Hakea prostrata	Harsh Hakea	
Hardenbergia comptoniana	Native Wisteria	
Hemiandra pungens	Snakebush	
Hibbertia hypericoides	Yellow Buttercups	
Hovea trisperma	Common Hovea	AG. Not recorded since 1991
Hypocalymma angustifolium	White Myrtle	Reintroduced in Zone 3
Hypocalymma robustum	Swan River Myrtle	AG. Not recorded since 2003
Isotropis cuneifolia	Granny Bonnets	AG. Not recorded since 1991
Jacksonia furcellata	Grey Stinkwood	
Jacksonia sericea	Waldjumi	
Jacksonia sternbergiana	Stinkwood	
Juncus kraussii		
Kennedia prostrata	Scarlet Runner	
Lepidosperma? costale		Not recorded since 2003
Lepidosperma gladiatum	Coast Sword-sedge	
Leucopogon parviflorus	Coast Beard-heath	Not recorded since 1991
Lomandra hermaphrodita		Not recorded since 1991
Lomandra maritima	Tufted Mat Rush	Not recorded since 1991
Macrozamia fraseri	Zamia	
Melaleuca cuticularis	Saltwater Paperbark	Introduced into Zone 3
Melaleuca huegelii	Chenille Honeymyrtle	Reintroduced into Zone 3
Melaleuca lanceolata	Rottnest Teatree	Possibly planted
Melaleuca systena		
Mesomelaena pseudostygia	Semaphore Sedge	
Microtis media	Common Mignonette Orchid	

Species	Common Name	Comments
Myoporum insulare	Blueberry Tree	
Olearia axillaris	Coastal Daisybush	
Petrophile linearis	Pixie Mops	Not recorded since 1991
Petrophile macrostachya	Slender Myoporum	Last specimen died 2015
Philotheca spicata	Pepper and Salt	AG. Not recorded since 1991
Pterostylis sp. short sepals	Short-eared Snail Orchid	
Ptilotus polystachyus	Prince Of Wales Feathers	Not recorded since 1991
Pimelea rosea	Rose Banjine	Introduced into Zone 3?
Rhagodia baccata	Berry Saltbush	
Santalum acuminatum	Quandong	?
Scaevola anchusifolia	Silky Scaevola	
Scaevola crassifolia	Thick-leaved Fan-flower	Replanted into Zone 3?
Scaevola nitida		
Senecio pinnatifolius	Groundsel	
Schoenoplectus validus	Lake Club-rush	Not recorded since 2003
Schoenus grandiflorus	Large Flowered Bog Rush	Not recorded since 1991
Sporobolus virginicus	Marine Couch	
Sowerbaea laxiflora	Purple Tassels	AG. Not recorded since 1991
Spyridium globulosum	Basket Bush	
Stirlingia latifolia	Blueboy	AG. Not recorded since 2003
Templetonia retusa	Cockies Tongues	
Tetragonia tetragonoides	New Zealand Spinach	
Thysanotus arenarius		*Thysanotus* sp recorded in 2013
Trachymene pilosa	Native Parsnip	
Tricoryne elatior	Yellow Autumn Lily	Not recorded since 2003
Xanthorrhoea preissii	Grass Tree	

AG – observed by A. Gardiner

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

Weed Inventory

Species	Common Name	Comments
**Agave americana*	Century Plant	
**Aira caryophyllea*	Silvery Hairgrass	
Araucaria heterophylla	Norfolk Island Pine	Likely Planted
**Arctotheca calendula*	Cape Daisy	
**Argyranthemum frutescens*	Marguerite Daisy	
**Arundo donax*	Giant Reed	
**Asparagus asparagoides*	Bridal Creeper	
**Avena barbata/ A. fatua*	Bearded Oat/ Wild Oat	
Brachychiton populneus	Kurrajong	
**Briza maxima*	Blowfly Grass	
**Briza minor*	Shivery Grass	
**Bromus diandrus*	Great Brome	
**Cakile maritima*	Sea Rocket	
Callistemon sp.	Bottlebrush	
**Carpobrotus edulis*	Pigface	
Casuarina glauca	Swamp Oak	Likely Planted
Chamelaucium uncinatum	Geraldton Wax	
**Chasmanthe floribunda*	African Cornflag	
**Conyza bonariensis*	Flaxleaf Fleabane	
**Cotula turbinata*	Funnel Weed	
**Cynodon dactylon*	Couch	
**Ehrharta calycina*	Perennial Veldt Grass	
**Ehrharta longiflora*	Annual Veldt Grass	
**Eragrostis curvula*	African Lovegrass	
Erythrina × sykesii	Coral Tree	Likely Planted
Eucalyptus caesia	Caesia, Silver Princess	Likely Planted
Eucalyptus camaldulensis	River Red Gum	Likely Planted
Eucalyptus conferruminata	Bald Island Marlock	Likely Planted
Eucalyptus erythrocorys	Illyarrie	Likely Planted
Eucalyptus leucoxylon	Blue Gum	Likely Planted
Eucalyptus macrocarpa	Mottlecah	Likely Planted
Eucalyptus utilis	Coastal Moort	Likely Planted
**Euphorbia peplus*	Petty Spurge	
**Euphorbia terracina*	Geraldton Carnation Weed	
**Ferraria crispa*	Black Flag	
**Freesia alba x leichtlinii*	Freesia	
Ficus carica	(Common) Fig	
Ficus macrophylla	Moreton Bay Fig	Likely Planted
**Foeniculum vulgare*	Fennel	

Species	Common Name	Comments
**Fumaria capreolata*	Whiteflower Fumitory	
**Geranium molle*	Dove's Foot Cranesbill	
**Hordeum leporinum*	Barley Grass	
**Hypochaeris glabra/*H. radicata*	Smooth Catsear/ Flatweed	
**Lactuca saligna/*L. serriola*	Wild Lettuce	
**Lagurus ovatus*	Hares Tail Grass	
**Lantana camara*	Common Lantana	
**Lathyrus sp.*	Sweet Pea	
Leptospermum laevigatum	Coast Teatree	
**Limonium sp. (possily *L. compayonis)*	Sea Lavender	
**Lolium perenne*	Perennial Ryegrass	
**Lupinus angustifolium*	Narrowleaf Lupin	
**Lupinus cosentinii*	Sandplain Lupin	
**Lycium ferocissimum*	African Boxthorn	
**Lysimachia arvensis*	Pimpernel	
**Medicago polymorha*	Burr Medic	
**Melilotus indica*	Common Melilot	
**Monoculus monstrosus*	Stinking Roger	
**Moraea flaccida*	One-leaf Cape Tulip	
**Olea europaea*	Olive	
**Orobanche minor*	Lesser Broomrape	
**Osteospermum ecklonis*	Veldt Daisy	
**Oxalis pes-caprae*	Soursob	
**Paspalum vaginatum*	Saltwater Couch	
**Pelargonium capitatum*	Rose Pelargonium	
**Petrorhagia dubia*	Velvet Pink	
**Phoenix dactylifera*	Date Palm	Likely Planted
**Pinus pinaster*	Pinaster Pine	Likely Planted
**Raphanus raphanistrum*	Wild Radish	
**Ricinus communis*	Castor Oil Plant	
**Romulea rosea*	Guildford Grass	
**Schinus terebinthifolia*	Brazilian Pepper	
**Senecio vulgaris*	Common Groundsel	
**Silene gallica*	French Catchfly	
**Solanum nigrum*	Black Nightshade	
**Sonchus asper/*S. oleraceus*	Rough Sowthistle	
**Stachys arvensis*	Staggerweed	
**Stenotaphrum secundatum*	Buffalo Grass	
**Tetragonia decumbens*	Sea Spinach	

Species	Common Name	Comments
**Trachyandra divaricata*	Dune Onion Weed	
**Trifolium arvense*	Hare's Foot Clover	
Trifolium campestre	Hop Clover	
**Trifolium dubium*	Suckling Clover	
**Trifolium glomeratum*	Cluster Clover	
**Urospermum picroides*	False Hawkbit	
**Ursinia anthemoides*	Ursinia	
**Vinca major*	Blue Periwinkle	
**Vulpia myuros*	Rat's Tail Fescue	
**Wahlenbergia capensis*	Cape Bluebell	

Weed inventory reviewed and updated by Ian Fordyce and Associates.

Appendix 2: Fungi Inventory

Scientific Name	Common Name
[1]*Battarrea stevenii*	*Tall Stiltball*
Crepidotus sp.	
Laetiporus portentosus	White Punk
Pycnoporus coccineus	Scarlet Bracket Fungus
Scleroderma sp.	Earthball

[1] Ken Okamistu 2018

Appendix 3: Fauna Inventory
Bird Inventory

Common Name	Scientific Name	Marine and/or Migratory Species	Recorded by David Free 2011	Listed in the 2003 Management Plan
Black Swan	*Cygnus atratus*		x	
Grey Teal	*Anas gracilis*			x
Pacific Black Duck	*Anas superciliosa*		x	x
Hoary-headed Grebe	*Poliocephalus poliocephalus*		x	
*Rock Dove (Feral Pigeon)	*Columba livia*		x	x
* Laughing Dove	*Streptopelia senegalensis*			x
* Spotted Dove	*Stretopelia chinesis*			x
Tawny Frogmouth	*Podargus strigoides*			x
Australasian Darter	*Anhinga novaehollandiae*		x	
Little Pied Cormorant	*Microcarbo melanoleucos*			x
Great Cormorant	*Phalacrocorax carbo*			x
Little Black Cormorant	*Phalacrocorax sulcirostris*			x
Pied Cormorant	*Phalacrocorax varius*			x
Australian Pelican	*Pelecanus conspicullatus*		x	x
Eastern Great Egret	Ardea alba		x	
White Faced-heron	*Egretta novaehollandiae*		x	x
Australian White Ibis	*Threskiornis moluccus*		x	
Eastern Osprey	*Pandion haliaetus*		x	
Black-shouldered Kite	*Elanus axillaris*			x
Collared Sparrowhawk	Accipiter cirrocephalus		x	
Nankeen Kestral	*Falco cenchroides*			x
Australian Hobby	Falco longipennis		x	
Australian Pied Oystercatcher	Haematopus longirostris		x	
Black-winged Stilt	*Himantopus himantopas*			x
Grey Plover	*Pluvialis squatorola*	x		x

Common Name	Scientific Name	Marine and/or Migratory Species	Recorded by David Free 2011	Listed in the 2003 Management Plan
Black-fronted Plover	*Charadius melanops*			x
Common Sandpiper	*Actitis hypoleucos*	x		x
Common Greenshank?	*Tringa nebalaria*	x	x	x
Marsh Sandpiper	Tringa stagnatilis		x	
Fairy Tern	Sternula nereis		x	
Caspian Tern	*Hydropogne caspia*	x	x	x
Crested Tern	*Thalasseus bergii*		x	x
Silver Gull	*Chroicocephalus novaehollandiae*		x	x
Carnaby's Black-Cockatoo	*Calyptorhynchus latirostris*			x
Galah	*Eolophus roseicapilla*		x	x
* [1] Long-billed Corella	*Cacatua tenuirostris*			
* Little Corella	Cacatua sanguinea		x	
* Rainbow Lorikeet	*Trichoglossus haematodus*			x
Australian Ringneck	*Barnardius zonarius*		x	x
* Laughing Kookaburra	*Dacelo novaegaineae*			x
Sacred Kingfisher	Todiramphus sanctus		x	
Rainbow Bee-eater	*Merops ornatus*	x		x
Chestnut Fairy-wren	*Malarus lambertii*		x	x
Western Gerygone	*Gerygone fusca*		x	x
Striated Pardalote	*Pardalotus striatus*		x	x
Singing Honeyeater	*Lichenostomus virescens*		x	x
Western Wattlebird	*Anthochaera lunulata*		x	
Red Wattlebird	*Anthochacra caranculata*		x	x
Brown Honeyeater	*Lichmera indistincta*		x	x
New Holland Honeyeater	*Phylidonyris novaehollandiae*		x	
White Cheeked	*Phylidonyris nigra*		x	x

Common Name	Scientific Name	Marine and/or Migratory Species	Recorded by David Free 2011	Listed in the 2003 Management Plan
Honeyeater				
Varied Sitella	*Daphoenositta chrysoptera*			x
Black-faced Cuckoo Strike	*Coracina novaehollandiae*			x
Grey Butcherbird	Cracticus torquatus		x	
Australian Magpie	*Cracticus tibicen*		x	x
Willie Wagtail	Rhipidura leucophrys		x	
Australian Raven	*Corvus coronoides*		x	x
Magpie-lark	Grallina cyanoleuca		x	
Red-capped Robin	*Petrica goodenovii*			x
Silvereye	*Zosterops lateralis*		x	x
Welcome Swallow	*Hirundo neoxena*	x	x	x
Tree Martin	*Cecropis nigricans*	x	x	x
Australasian Pipit	*Anthus novaeseelandiae*		x	

* Feral birds [1] Recorded by Vicki Shannon

Mammals and Reptile Inventory

Mammals		Introduced
Brushtail Possum	*Trichosurus vulpecula*	
Fox	*Vulpes vulpes*	*
Gould's Wattled Bat	*Chalinolobus gouldii*	
White-striped Freetail Bat	*Tadarida australis*	
Rabbit	*Oryctolagus cuniculus*	*
Reptiles		
Marbled Gecko	*Christinus marmoratus*	
Sands Gould's Monitor	*Varanus gouldii*	
Fence Skink	*Cyptoblepharus buchananii*	
West Coast Ctenotus	*Ctenotus fallens*	
Two-toed Mulch Skink	*Hemiergis quadrilineata*	
Western Bobtail	*Tiliqua rugosa*	
Burrowing Skink	?	
Grey skink	?	
Invertebrates		
?	[1]Trapdoor Spider	
Amegilla sp	[1]Blue Banded Bee	

[1] Recorded by Ken Okamitsu

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

Species Name		Common Name	Management Strategy	Timing (optimal)
1.	*Avena fatua*	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
2.	*Agave americana*	Century Plant	Dig out and/or hand remove small infestations. Stem inject into base of leaves 1 part Tordon/5 parts diesel.	Nov - Jan
3.	*Argyranthemum frutescens*	Marguerite Daisy	Manually remove populations.	June - Oct
4.	*Arundo donax*	Giant Reed	Root and rhizome mass needs to be killed Small infestations can be physically controlled ensuring all rhizomes are removed. For larger infestations, use aquatic approved herbicides.	Feb - March
5.	*Asparagus asparagoides*	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
6.	*Brachychiton populneus*	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.	*Brassica barrelieri subsp. oxyrrhina*	Smooth Stem Turnip	Manually remove populations.	June - Oct
8.	*Carpobrotus edulis*	Hottentot Fig	Manual methods appear to be the most effective means of control. Roll up large mats removing all roots and stem fragments and remove from site. Follow up with removal of any germinating plants. Only remove when flowering.	Sept - Nov
9.	*Chamelaucium uncinatum*	Geraldton Wax	Cut to base and paint with 50% glyphosate. Control seedlings following fire.	All Year
10.	*Chasmanthe floribunda*	African Cornflag	Dig out isolated plants.	June - Sept

	Species Name	Common Name	Management Strategy	Timing (optimal)
11.	*Cynodon dactylon*	Couch	Spray Fusilade Forte at 8 ml/L + wetting agent when plants are small and beginning new growth, or 1% glyphosate (at degraded sites) in late spring/summer and autumn when rhizomes are actively growing.	Nov– Feb
12.	*Ehrharta calycina*	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)
13.	*Ehrharta longiflora*	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
14.	*Euphorbia terracina*	Geraldton Carnation Weed	Manually remove populations. Undertake control after any fire event.	June – Nov
15.	*Ferraria crispa*	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
16.	*Freesia alba x leichtlinii*	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
17.	*Fumaria capreolata*	Climbing Fumitory	Hand remove seedlings in good bushland areas.	July – Aug
18.	Leptospermum laevigatum	Coast Teatree	Hand pull seedlings. Fell mature plants. Resprouting has been recorded in some areas. Where resprouting has been observed, apply 250 ml Access in 15 L of diesel to bottom 50 cm of trunk (basal bark).	July - Oct
19.	*Lagurus ovatus*	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)
20.	*Lupinus angustifolius*	Narrowleaf Lupin	Manually remove populations.	June - Oct
21.	*Lupinus cosentinii*	Sandplain Lupin	Manually remove populations.	June - Oct
22.	Moraea flaccida	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.	*Olea europaea*	Olive	Hand pull or dig out seedlings and small plants ensuring removal of all roots. For mature plants cut to base and paint 50% glyphosate or apply 250 ml Access in 15 L of diesel to base 50 cm of trunk (basal bark). Monitor sites for seedling recruitment.	March – May and Oct - Dec
24.	*Pelargonium capitatum*	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
25.	*Pennisetum clandestinum*	Kikuyu Grass	Difficult to manually control as all rhizomes must be removed. Spray with 1% glyphosate or Fusilade Forte at 16mL/L + wetting agent. 2-3 sprays over a single growing season are often required. Use unplanned fire events to effectively control regrowth.	Nov - Jan
26.	*Raphanus raphanistrum*	Wild Radish	Manually remove populations.	June - Oct
27.	*Schinus terebinthifolia*	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
28.	Trachyandra divaricata	Dune Onion Weed	Only control when native vegetation has established. Manually remove isolated or small infestations prior to flowering. Wipe with 50% glyphosate solution before flowering. For dense infestations in degraded areas spot spray 0.4 g chlorosulfuron plus 25 ml wetting agent in 10 L of water when plants actively growing.	June - August

Appendix 5: Implementation of the 2013-2018 Management Plan

Actions		Implemented Yes/No/Partially
BUSHLAND BOUNDARIES		
1.	Manage Point Resolution on the basis three zones.	Yes
2.	Focus management on Zones 2 and 3 as a priority.	Yes
REHABILITATION		
3.	Continue to work closely with the Swan River Trust to rehabilitate degraded sites.	Yes
4.	Use the Swan River Trusts Best Management Practices as a guide for restoration when undertaking rehabilitation of degraded foreshore and embankment areas.	Yes
5.	Focus rehabilitation on *Good* to *Very Good* bushland condition areas as a priority.	Yes
6.	Use Jute matting or geofabric on steep embankment and foreshore areas.	Yes
7.	Undertake annual maintenance of past Swan River Trust funded rehabilitation sites.	Yes
8.	Undertake annual maintenance of the bushland edges adjacent to parkland areas and Zones 2 and 3.	Yes
9.	Maintain and monitor plants found in low abundance in Zone 2 and only revegetate this Zone with similar species.	Partially
10.	Maintain current views when rehabilitating the bushland edges and parkland areas.	Yes
11.	Consider delineating parkland areas with low garden curbing if parts of the parkland area are revegetated.	No
12.	Do not revegetate the parkland area on the western side of the carpark.	Yes
13.	Retain 3 Olive trees that have heritage value within Point Resolution.	Yes
REVEGETATION		
14.	Work with local nurseries to grow species found in low abundance.	Yes
15.	Use only plant species for rehabilitation if they would have naturally occurred on site such as those found on the Mount Eliza Escarpment at Kings Park.	Yes
16.	Consider specific conditions (such as the need to restrict access and slope stability) in developing plant lists for rehabilitation sites.	Yes
WEED CONTROL		
17.	Continue to control the following weeds as a high priority: Geraldton Carnation Weed, Bridal Creeper, Perennial Veldt Grass, One-leaf Cape Tulip, African Cornflag, Black Flag, Freesia, *Raphanus raphanistrum*, *Lupinus* and *Pelargonium capitatum.*	Yes

	Actions	Implemented Yes/No/Partially
18.	Annually monitor weeds with the potential to expand rapidly and map changes in their distribution if required.	Yes
19.	Control and document the distribution of new invasive weeds as they arise.	Yes
20.	Remove juvenile Olive seedlings as they emerge.	Yes
21.	Undertake ongoing maintenance of weeds in restoration sites.	Yes
22.	Control priority weeds in accordance with management notes detailed in Appendix 4.	Yes
MONITORING		
23.	Monitor the distribution of new invasive weeds as they arise.	Yes
24.	Annually monitor weeds with the potential to expand rapidly and map changes in their distribution if required.	Yes
25.	Undertake annual monitoring and control of *Acacia longifolia*, Coast Teatree, African Boxthorn, Brazilian Pepper, Geraldton Wax, *Lantana camera*, Giant Reed, Sweet Pea and Olive trees to ensure they do not spread or reestablish.	Yes
FIRE MANAGEMENT		
26.	Undertake annual management of Sweet Pea and Perennial Veldt Grass to reduce fuel loads.	Yes
NATIVE ANIMALS		
27.	Undertake ongoing surveying of native fauna if resources allow.	Partially
28.	Minimise fires that may destroy tree hollows.	Yes
29.	Retain hollows for refuges in large old and dead trees.	Yes
30.	Control feral European Bees as they can displace native animals.	Yes
31.	Protect nests of Rainbow Bee-eaters if they are encountered.	Yes
32.	Continue the fox control program.	Yes
33.	Contribute to regional programs being undertaken for feral bird control by DPaW.	Partially
COMMUNITY INVOLVEMENT		
34.	Continue to support community events in the Reserve such as Clean Up Australia Day.	Yes

Appendix 6
Maps

Map 1: Management Zones

Point Resolution Management Plan 2019-2024

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Map 2: Point Resolution Vegetation Types

Point Resolution Management Plan 2019-2024

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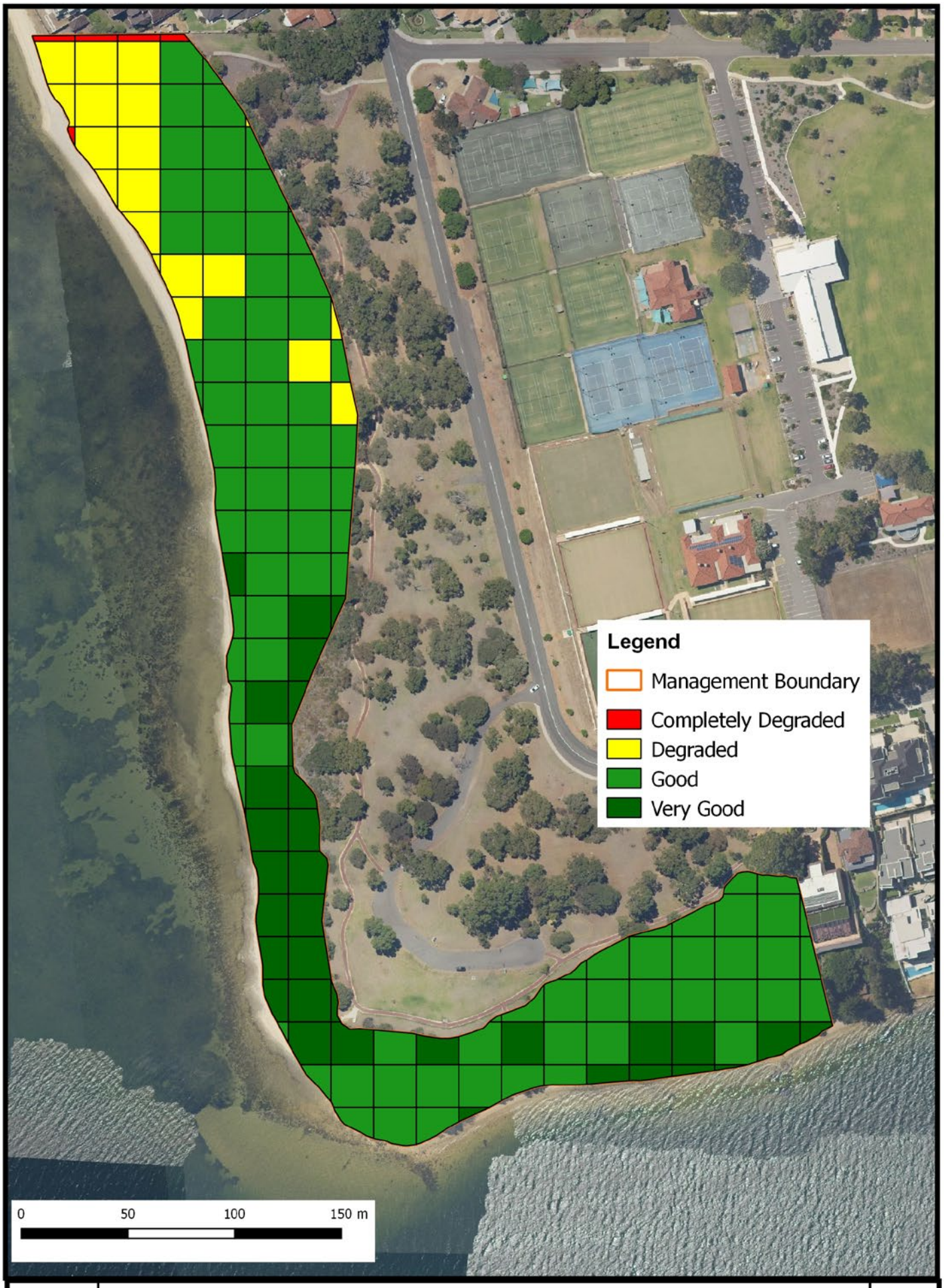

Map 3: Bushland Condition

Point Resolution Management Plan 2019-2024

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Map 4: Fire History

Point Resolution Bushland Management Plan 2019-2024

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Map 5: *Parietaria cardiostegia* - Native Pellitory

Point Resolution Bushland Management Plan 2019-2024

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Map 6: Fire Access and Pathways

Point Resolution Management Plan 2019-2024

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Map 7: *Argyranthemum frutescens* - Marguerite Daisy

Point Resolution Management Plan 2019-2024

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Map 8: A*sparagus asparagoides* - Bridal Creeper

Point Resolution Management Plan 2019-2024

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Map 9: *Ehrharta calycina* - Perennial Veldt Grass

Point Resolution Management Plan 2019-2024

\\admgisserv01\Management Plan Maps\QGIS\New Base Projects\Point Resolution\Point Resolution Raphanus and Brassica sp - Wild Radish and Brassicas.qgs

Map 10: *Euphorbia terracina* - Geraldton Carnation Weed

Point Resolution Management Plan 2019-2024

\\admgisserv01\Management Plan Maps\QGIS\New Base Projects\Point Resolution\Point Resolution Ehrharta calycina - Perennial Veldt Grass.qgs

Map 11: F*erraria crispa* - Black Flag

Point Resolution Management Plan 2019-2024

\\admgisserv01\Management Plan Maps\QGIS\New Base Projects\Point Resolution\Point Resolution Euphorbia terracina - Geraldton Carnation Weed.qgs

Map 12: *Freesia alba × leichtlinii - Freesia*

Point Resolution Management Plan 2019-2024

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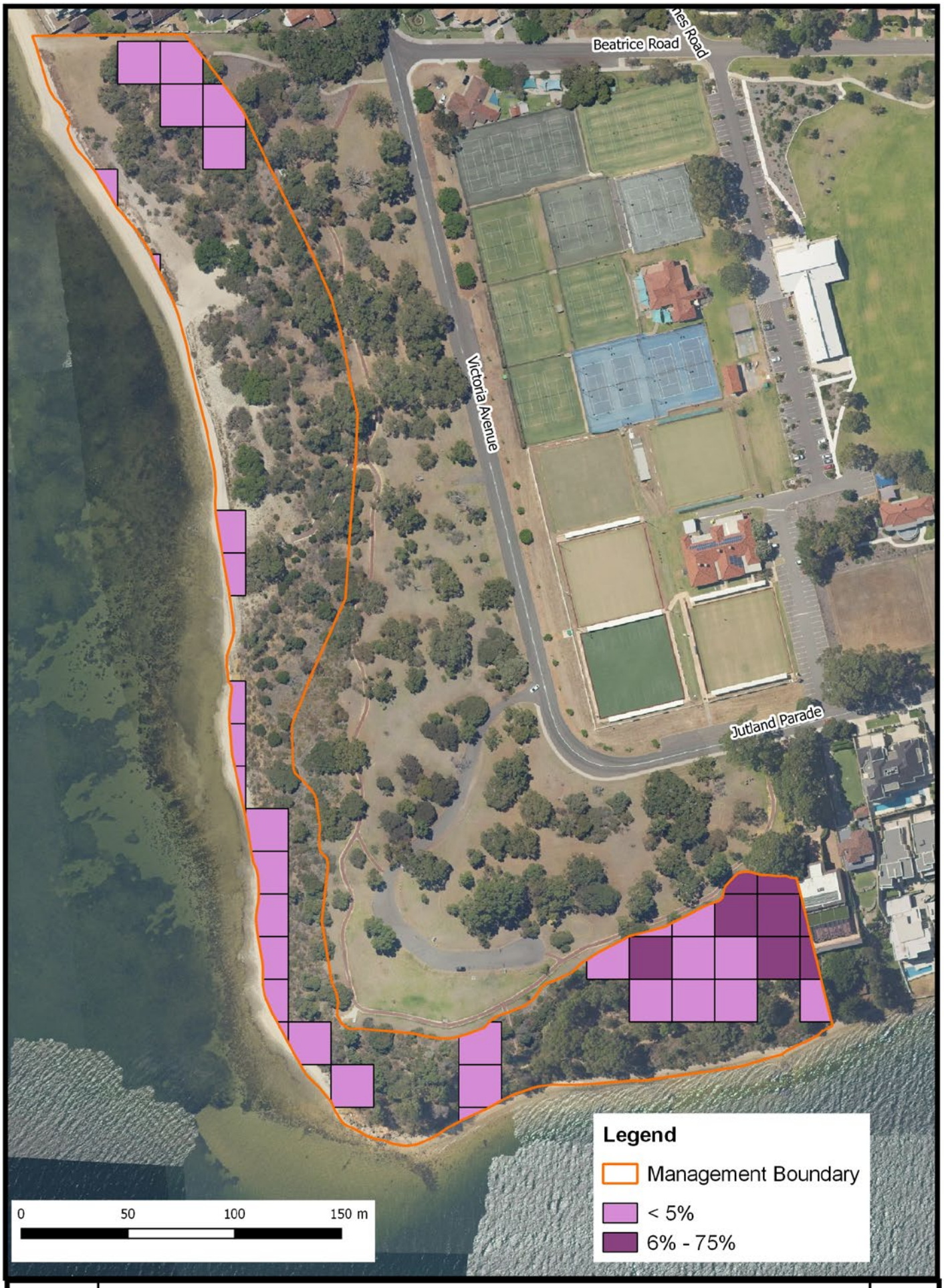

Map 13: *Fumaria* – Fumitory

Point Resolution Management Plan 2019-2024

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Map 14: G*ladiolus undulatus* and *angustus* – *Gladiolus*

Point Resolution Management Plan 2019-2024

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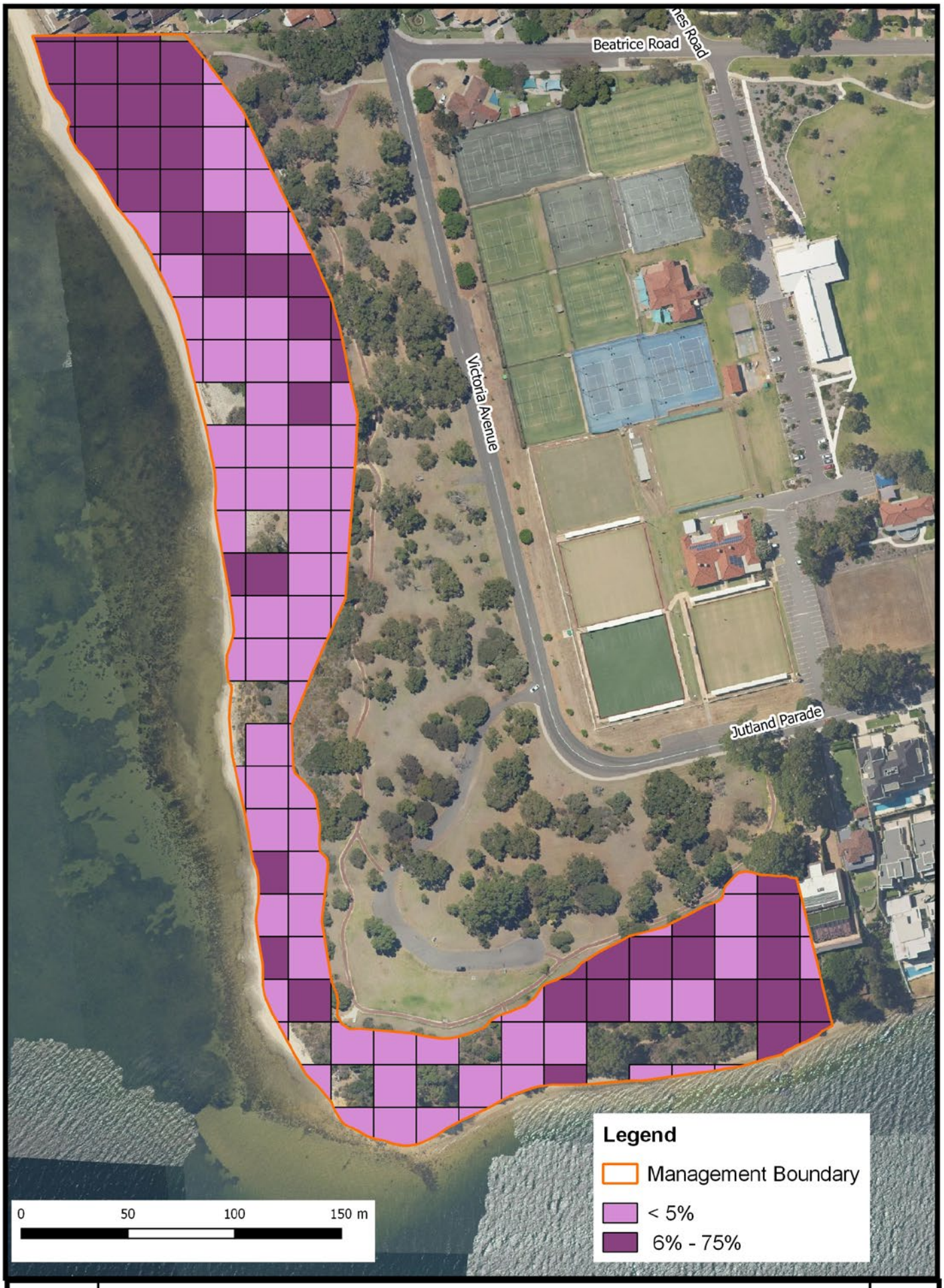

Map 15: *Oxalis* - Soursob

Point Resolution Management Plan 2019-2024

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Map 16: *Pelargonium capitatum* - Rose Pelargonium

Point Resolution Management Plan 2019-2024

\\admgisserv01\Management Plan Maps\QGIS\New Base Projects\Point Resolution\Point Resolution Oxalis sp - Soursob.qgs

Map 17: *Lathyrus* – Sweet Pea

Point Resolution Management Plan 2019-2024

\\admgisserv01\Management Plan Maps\QGIS\New Base Projects\Point Resolution\Point Resolution Gladiolus undulatus and angustus – Gladiolus sp.qgs

Map 18: *Trachyandra divaricata* – Dune Onion Weed

Point Resolution Management Plan 2019-2024

\\admgisserv01\Management Plan Maps\QGIS\New Base Projects\Point Resolution\Point Resolution Pelargonium capitatum - Rose Pelargonium.qgs

Map 19: Woody Weeds

Point Resolution Bushland Management Plan 2019-2024

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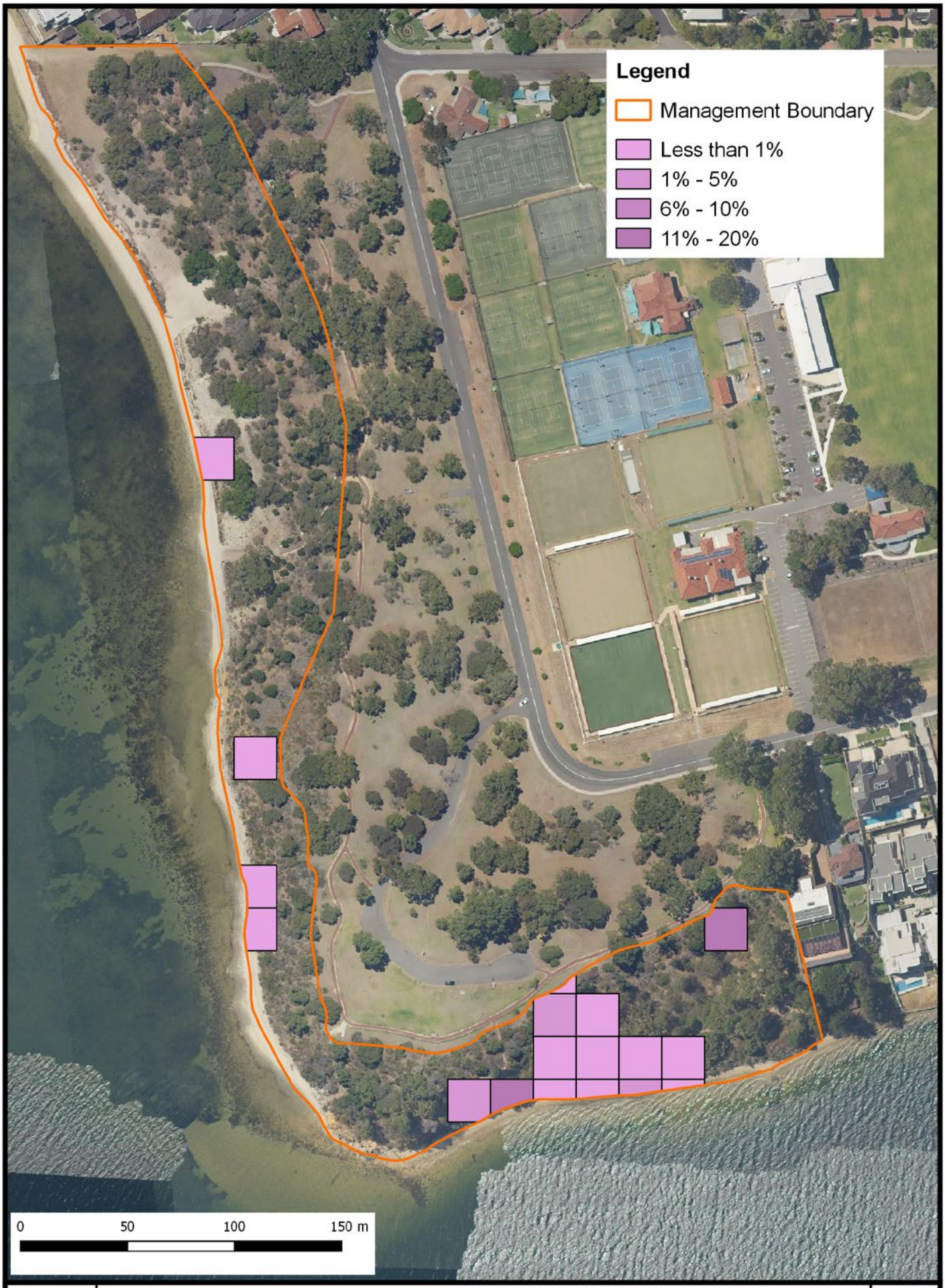

Map 20: Actual Cover *Argyranthemum frutescens* - Marguerite Daisy

Point Resolution Bushland Management Plan 2019-2024

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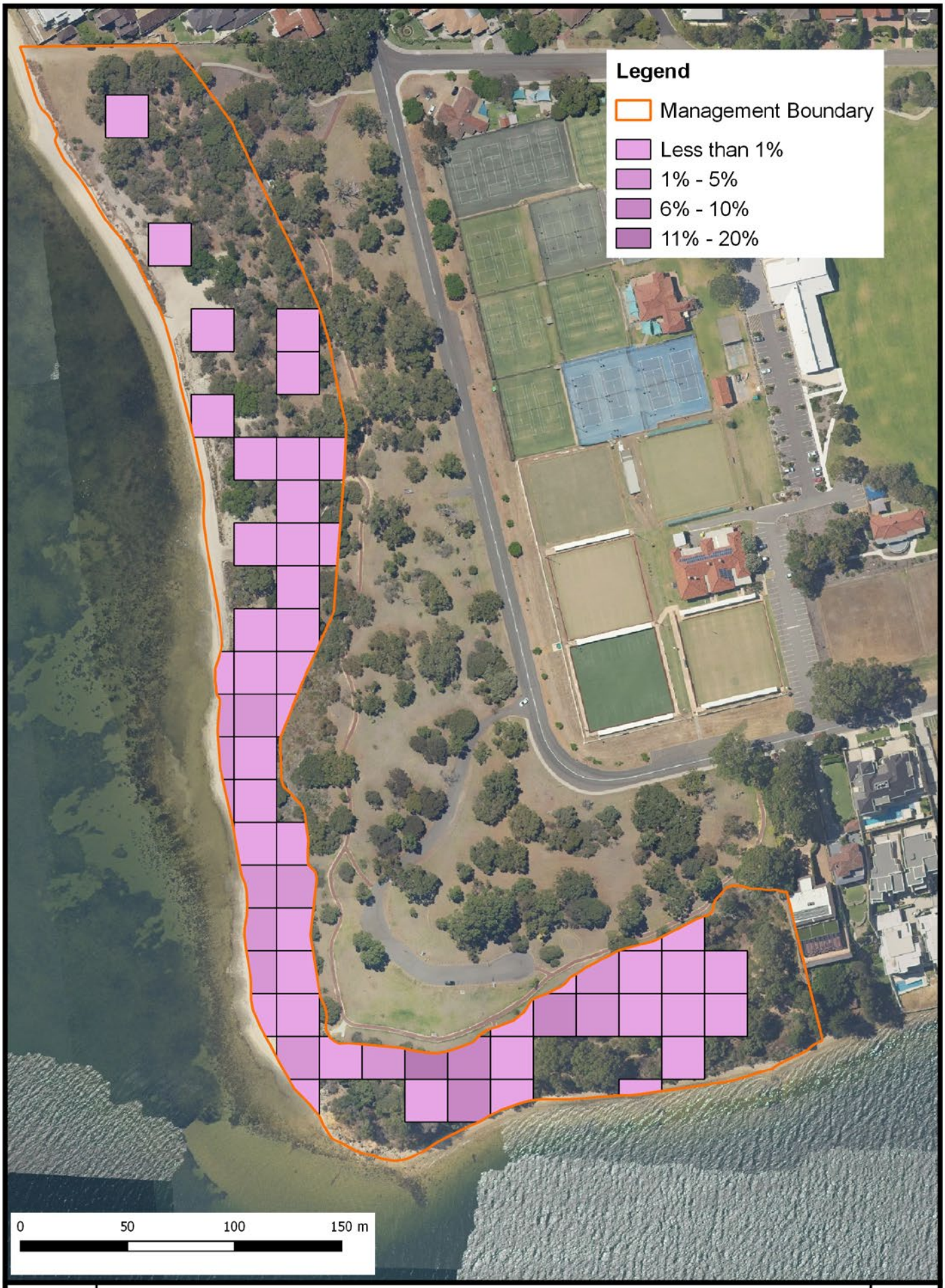

Map 21: Actual Cover *Ehrharta calycina* - Perennial Veldt Grass

Point Resolution Bushland Management Plan 2019-2024

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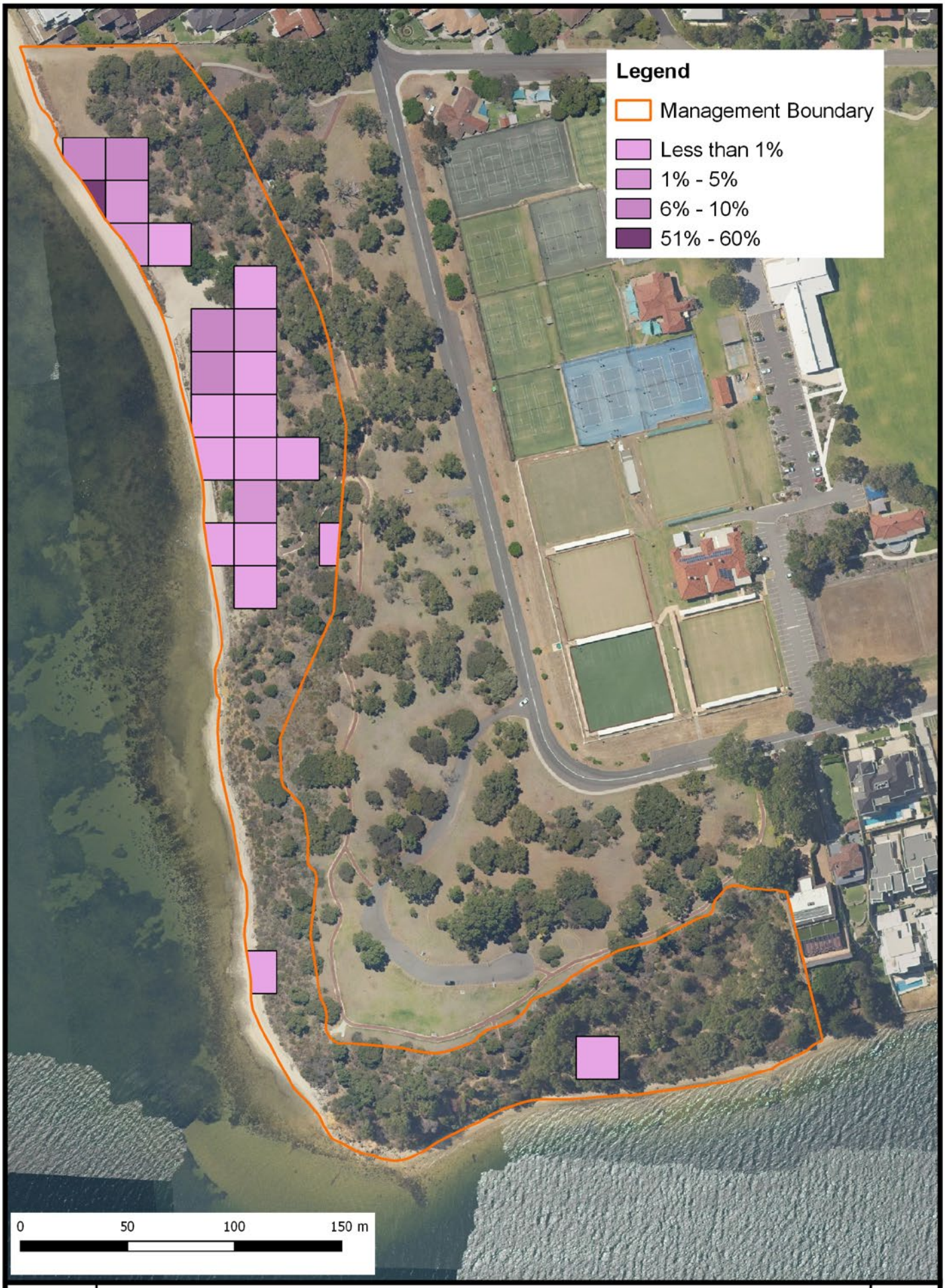

Map 22: Actual Cover *Ferraria crispa* - Black Flag

Point Resolution Bushland Management Plan 2019-2024

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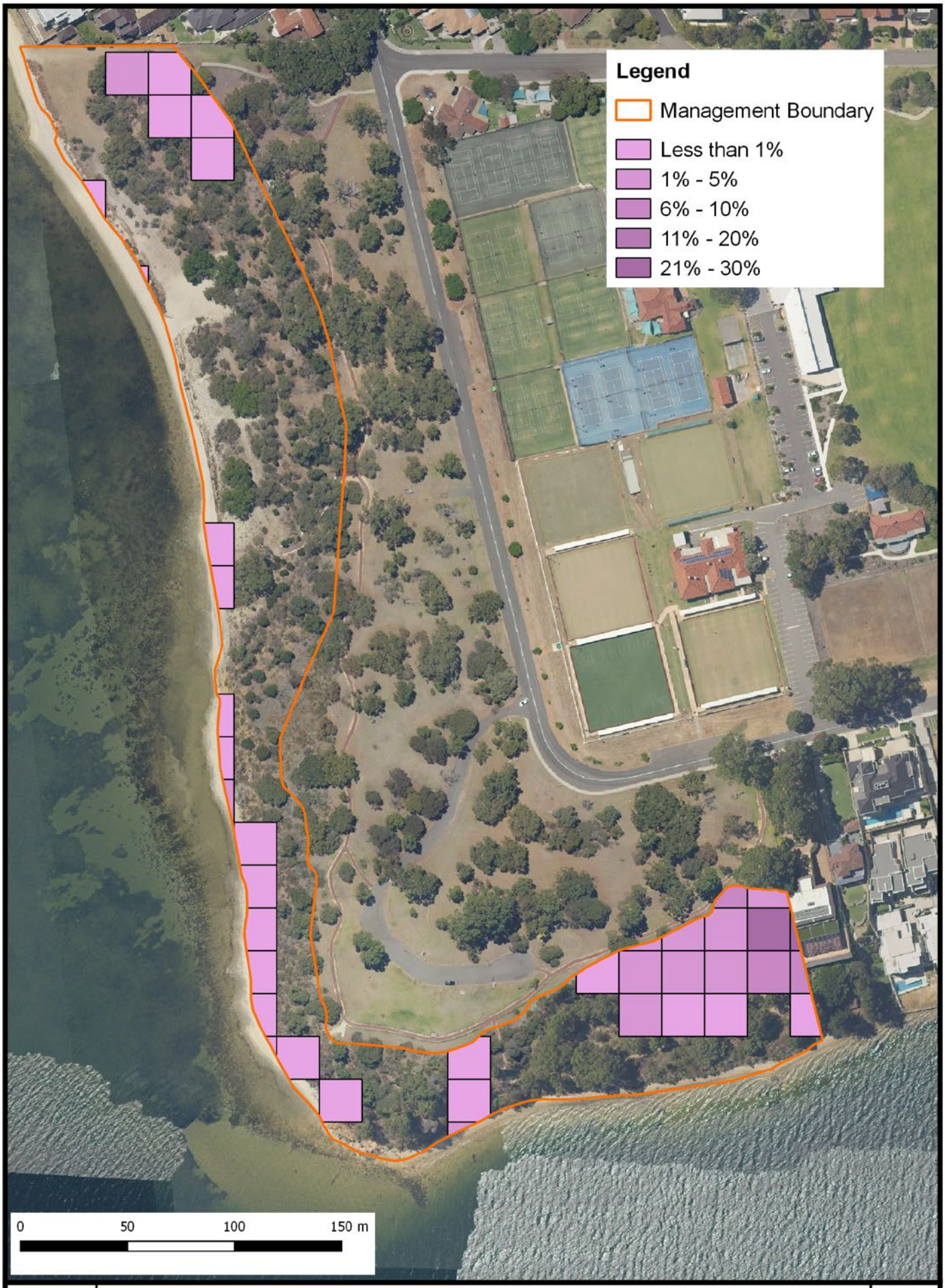

Map 23: Actual Cover *Fumaria* – Fumitory

Point Resolution Bushland Management Plan 2019-2024

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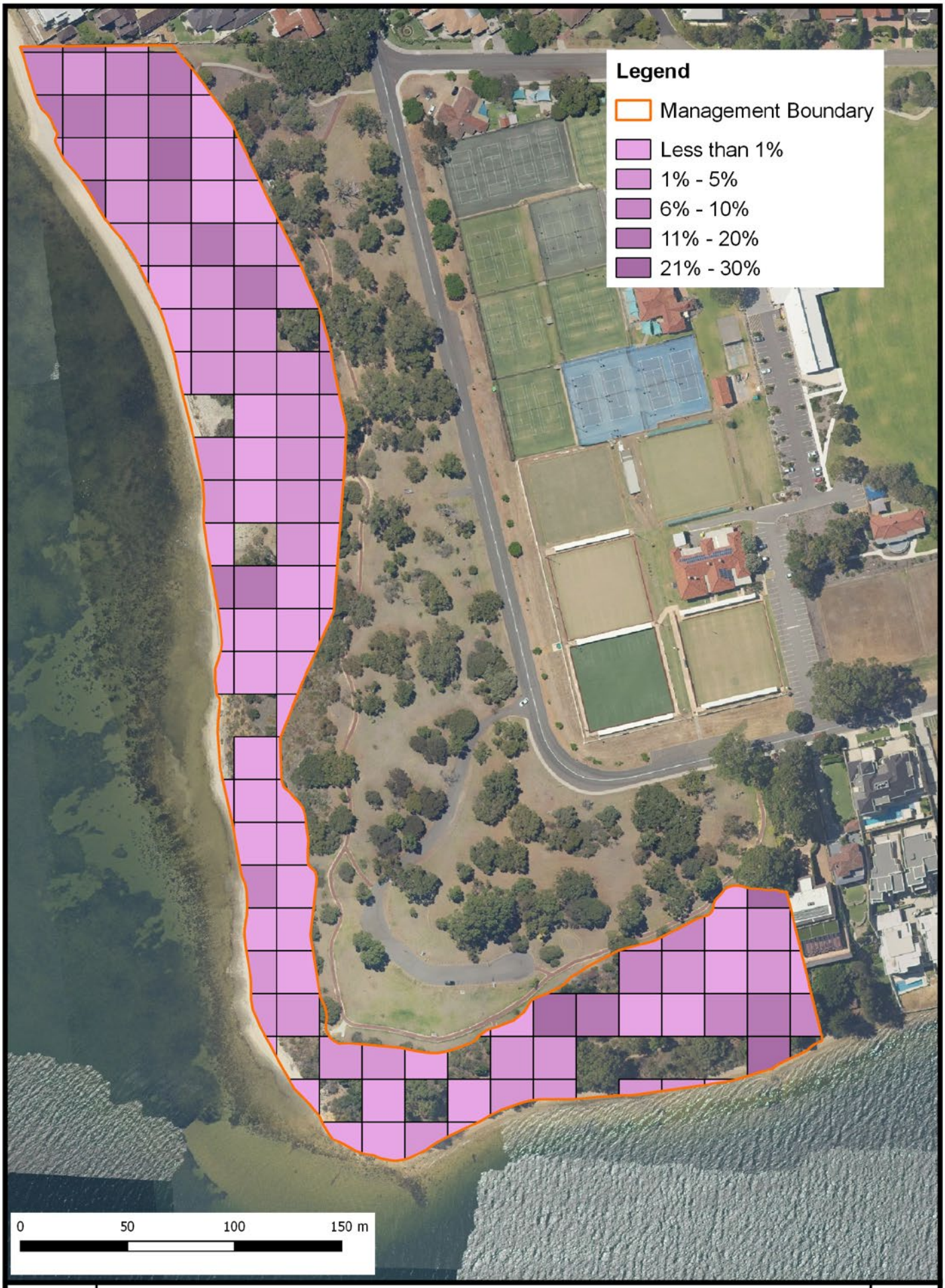

Map 24: Actual Cover *Oxalis* - Soursob

Point Resolution Bushland Management Plan 2019-2024

\\admgisserv01\Management Plan Maps\QGIS\New Base Projects\Point Resolution\Point Resolution Actual Cover Ferraria crispa - Black Flag.qgs

Appendix 7
Natural Areas Management Plan 2019-2024

City of Nedlands

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