



Items 1 to 4 (in red) are the minor extension suggested by the administration.

DEG is also seeking in-principal approval for use of the wider space of the site for the items indicated in black:

#5: The area immediately to the north of the Library building giving space for

- the 7 wicking beds for which we have obtained funding and
- additional beds for which construction materials and labour would be provided by DEG as the community expands during the next 3 years.
- This area is currently grassed.

#6: Bush tucker trail, signposting edible plants in the excellent remnant bushland between Warwick Road and area 5. This trail would be developed in partnership with Local Aboriginal people. DEG began this consultation process when we engaged an indigenous representative identifying edible native plants in the bushland, in a Noongar culture and tucker workshop during October of 2015. We think that education about edible plants native to this place is an integral part of continuing to care for the land. It is an exciting opportunity for cross cultural communication, which we think is important.

7: Seating arrangement in shade under trees to accommodate workshops or groups (such as school excursions, daycare centres, Scouts, etc.) coming to visit the garden. We have had preliminary discussions with the Men's Shed regarding the feasibility of building and installing park benches as well as picnic table and bench structures similar to what we have seen in other places in CoJ parks.

- The completion of items 6, and 7 would involve separate, more detailed discussions with the other parties before implementation
- Detailed plans to be approved by the City of Joondalup on a case by case basis.
- Funding secured by DEG

City of Joondalup Duncraig Library Bushland Action Plan 2015 to 2020



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1.0 Introduction

1.1 Background

In 2014 the City of Joondalup developed a natural areas management plan for high and medium priority bushlands. One of the aims and objectives is to develop individual action plans which will provide specific recommendations to protect and enhance biodiversity values of the natural areas, whilst maintaining appropriate community access and awareness.

1.2 Location

Duncraig Library bushland is located within the City of Joondalup, approximately 16 kilometres north-west from the Perth Central Business District in the suburb of Duncraig (see figure 1). covering an area of 0.3 hectares and is bordered by Warwick Road to the north, Duncraig Library and car park to the south and east, and Marmion Avenue to the west (see figure 2).

The park is managed by the City of Joondalup. It is zoned for Civic and Cultural use and is considered a medium priority natural area for management purposes.

The main function is for the protection of native plant species, as well as acting as an environmental and visual buffer between Duncraig Library and Warwick Road.

This Action Plan describes the potential environmental impacts and risks of activities in bushland and details management strategies that are recommended to minimise potential impacts.

The plan provides direction and is to be used as a reference document for City of Joondalup employees and contractors who are involved in the environmental management activities.

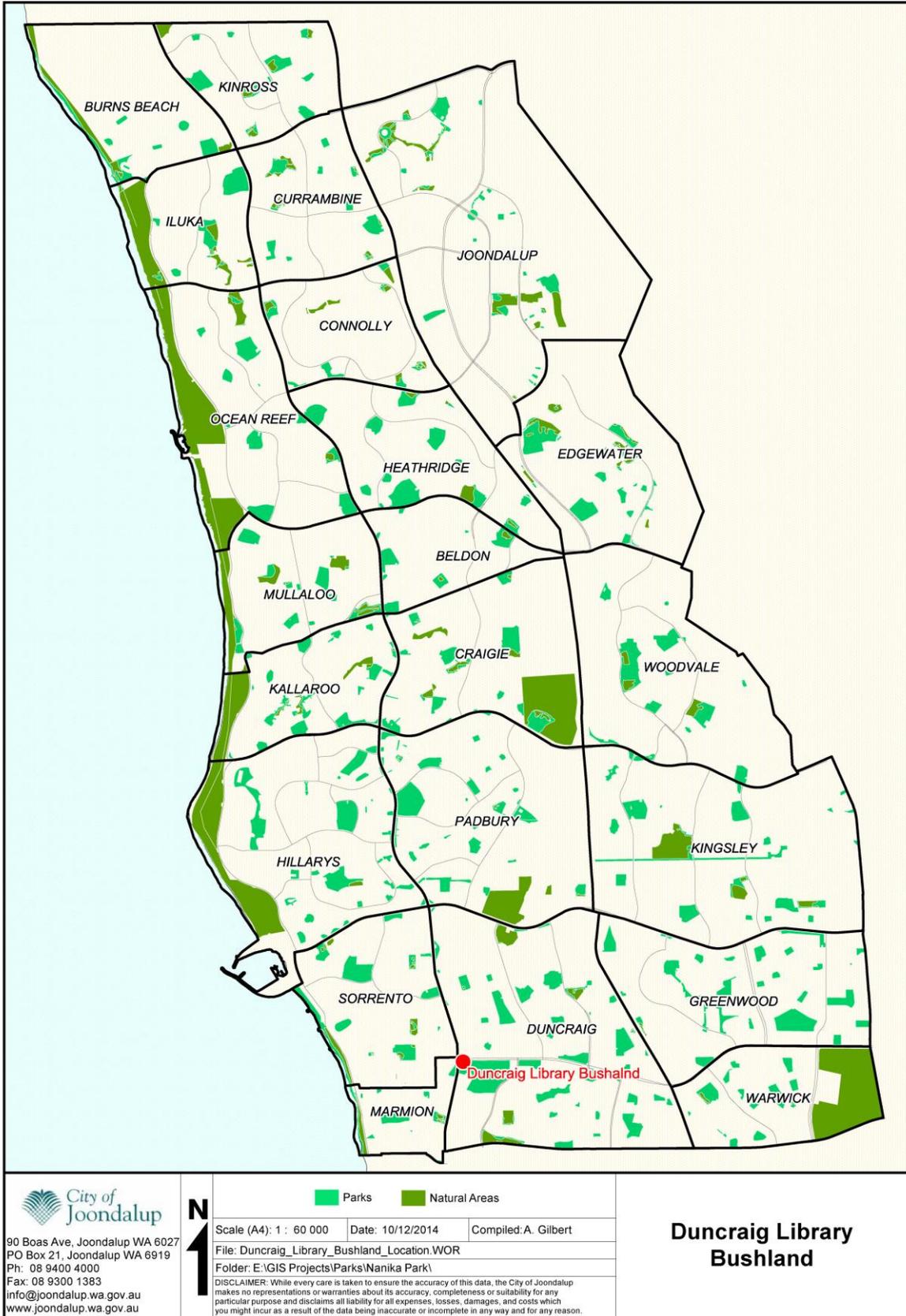


Figure 1: Location of Duncraig Library bushland in the City of Joondalup



| | | | | | |
|---|---|--|----------------|---------------------|------------------------------------|
|  90 Boas Ave, Joondalup WA 6027 PO Box 21, Joondalup WA 6919 Ph: 08 9400 4000 Fax: 08 9300 1383 info@joondalup.wa.gov.au www.joondalup.wa.gov.au |  | Scale (A4): 1 : 500 | Date: 7/4/2015 | Compiled: A Gilbert | <h2>Duncraig Library Bushland</h2> |
| | | File: Duncraig_Library_Bushland_Site_Map.wor | | | |
| | | Folder: E:\GIS Projects\Parks\Nanika Park | | | |
| | | <small>DISCLAIMER: While every care is taken to ensure the accuracy of this data, the City of Joondalup makes no representations or warranties about its accuracy, completeness or suitability for any particular purpose and disclaims all liability for all expenses, losses, damages, and costs which you might incur as a result of the data being inaccurate or incomplete in any way and for any reason.</small> | | | |

Figure 2: Map of study area

2.0 Description of the Environment

2.1 Native Flora

Native flora is an important part of the bushland ecosystem. 64 native flora species occur (Appendix 1).

Jacksonia sericea has been identified on site and is listed as a Priority Four species. *Lechenaultia linarioides* has also been identified on site and is listed as significant flora of the Perth Metropolitan Region.

For a small bushland, it has a high native species count.

2.2 Weeds

A total of 16 weed species have been recorded, as shown in Appendix 2.

2.3 Fauna

Incidental sightings of fauna have been recorded (Appendix 3 and 4).

Two native species (both birds) have been sighted at the bushland, as well as two non-native species.

2.4 Vegetation Communities

The most recent Natural Area Assessment was conducted in 2014. Two vegetation communities have been identified, as shown in Table 1.

Table 1: Vegetation communities at Duncraig Library Bushland

| Vegetation Community No. | Description | Vegetation Condition |
|--------------------------|---|-----------------------|
| 1 | <i>Allocasuarina fraseriana</i> over Closed Heath with <i>Calothamnus quadrifidus</i> / <i>Melaleuca systema</i> / <i>Hakea lissocarpa</i> over <i>Hibbertia hypercoides</i> Low Open Shrubland and <i>Desmocladius flexuosus</i> / <i>Dianella revoluta</i> Very Open Sedgeland. | Excellent to Pristine |
| 2 | <i>Banksia attenuata</i> over <i>Xanthorrhoea preissii</i> / <i>Melaleuca systema</i> Shrubland and <i>Hibbertia hypercoides</i> / <i>Calothamnus quadrifidus</i> Low Shrubland with <i>Lepidosperma angustatum</i> Very Open Sedgeland | Excellent to Pristine |

2.5 Fire

Ten years ago there were reports of several small spot fires at Duncraig Library bushland.

Due to the small size of the reserve emergency vehicles have good access to all areas of the bushland in the case of a fire event.

There are lightly scattered weedy grasses present that do not pose a fire hazard.

3.0 Actions

AR = As Required

| Conservation Area | Action | Management Actions | | | | |
|------------------------|---|--------------------|---------|---------|---------|---------|
| | | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 |
| Weeds | Conduct seasonal-based monitoring to establish the extent of weeds and to identify priority weed species. | ✓ | ✓ | ✓ | ✓ | ✓ |
| | In accordance with the City's Annual and Weekly Natural Areas Maintenance Schedules, on ground weed management is to occur through weed spraying and hand weeding methods with approximately 2 hours every 2 months allocated to weed management. | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Conduct seasonal weed control. | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Remove <i>Chamelaucium uncinatum</i> (Geraldton Wax) and <i>Grevillea oliveacea</i> (Olive Grevillea) progressively. | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Carry out edge spray of reserve. | AR | AR | AR | AR | AR |
| | Control of <i>Oxalis pes-caprae</i> (Sour sob). | ✓ | ✓ | AR | AR | AR |
| Fire Mitigation | Spray weedy grasses and <i>Euphorbia terracina</i> with herbicide annually during the wetter months to help reduce fuel load in summer. | AR | AR | AR | AR | AR |
| Human Impact | Inspect park during scheduled site visits and remove BMX tracks and cubby houses as required. | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Install conservation fencing around bushland to reduce human traffic and disturbance of vegetation. | | | ✓ | | |
| Rubbish | Collect rubbish during scheduled site visits. | AR | AR | AR | AR | AR |

Appendices

Appendix 1 - Total Native plants within Duncraig Library bushland

*Priority Four

^Significant flora of the Perth Metropolitan Area

| Family | Genus and Species |
|--------------------------|-----------------------------------|
| <i>Fabaceae</i> | <i>Acacia cyclops</i> |
| <i>Fabaceae</i> | <i>Acacia pulchella</i> |
| <i>Fabaceae</i> | <i>Acacia saligna</i> |
| <i>Fabaceae</i> | <i>Acacia willdenowiana</i> |
| <i>Restionaceae</i> | <i>Alexgeorgia arenicola</i> |
| <i>Casuarinaceae</i> | <i>Allocasuarina fraseriana</i> |
| <i>Casuarinaceae</i> | <i>Allocasuarina humilis</i> |
| <i>Poaceae</i> | <i>Austrostipa flavescens</i> |
| <i>Proteaceae</i> | <i>Banksia attenuata</i> |
| <i>Proteaceae</i> | <i>Banksia lindleyana</i> |
| <i>Proteaceae</i> | <i>Banksia sessilis</i> |
| <i>Fabaceae</i> | <i>Bossiaea eriocarpa</i> |
| <i>Colchicaceae</i> | <i>Burchardia congesta</i> |
| <i>Myrtaceae</i> | <i>Calothamnus quadrifidus</i> |
| <i>Haemodoraceae</i> | <i>Conostylis aculeata</i> |
| <i>Hemerocallidaceae</i> | <i>Corynotheca micrantha</i> |
| <i>Fabaceae</i> | <i>Daviesia nudiflora</i> |
| <i>Fabaceae</i> | <i>Daviesia triflora</i> |
| <i>Restionaceae</i> | <i>Desmocladius flexuosus</i> |
| <i>Hemerocallidaceae</i> | <i>Dianella revoluta</i> |
| <i>Droseraceae</i> | <i>Drosera sp.</i> |
| <i>Myrtaceae</i> | <i>Eucalyptus gomphocephala</i> |
| <i>Myrtaceae</i> | <i>Eucalyptus marginata</i> |
| <i>Fabaceae</i> | <i>Gompholobium tomentosum</i> |
| <i>Proteaceae</i> | <i>Grevillea preissii</i> |
| <i>Proteaceae</i> | <i>Grevillea thelmanniana</i> |
| <i>Haemodoraceae</i> | <i>Haemodorum laxum</i> |
| <i>Proteaceae</i> | <i>Hakea lissocarpha</i> |
| <i>Fabaceae</i> | <i>Hardenbergia comptoniana</i> |
| <i>Lamiaceae</i> | <i>Hemiandra pungens</i> |
| <i>Dilleniaceae</i> | <i>Hibbertia hypericoides</i> |
| <i>Dilleniaceae</i> | <i>Hibbertia racemosa</i> |
| <i>Fabaceae</i> | <i>Hovea pungens</i> |
| <i>Fabaceae</i> | <i>Hovea trisperma</i> |
| <i>Fabaceae</i> | <i>Jacksonia furcellata</i> |
| <i>Fabaceae</i> | <i>Jacksonia sericea</i> * |
| <i>Fabaceae</i> | <i>Jacksonia sternbergiana</i> |
| <i>Goodeniaceae</i> | <i>Lechenaultia linarioides</i> ^ |

| Family | Genus and Species |
|--------------------------|-----------------------------------|
| <i>Cyperaceae</i> | <i>Lepidosperma angustatum</i> |
| <i>Cyperaceae</i> | <i>Lepidosperma leptostachyum</i> |
| <i>Ericaceae</i> | <i>Leucopogon propinquus</i> |
| <i>Ericaceae</i> | <i>Leucopogon sp.</i> |
| <i>Laxmanniaceae</i> | <i>Lomandra hermaphrodita</i> |
| <i>Zamiaceae</i> | <i>Macrozamia riedlei</i> |
| <i>Myrtaceae</i> | <i>Melaleuca systema</i> |
| <i>Cyperaceae</i> | <i>Mesomelaena pseudostygia</i> |
| <i>Asteraceae</i> | <i>Olearia axillaris</i> |
| <i>Rubiaceae</i> | <i>Opercularia vaginata</i> |
| <i>Iridaceae</i> | <i>Orthrosanthus laxus</i> |
| <i>Proteaceae</i> | <i>Petrophile macrostachya</i> |
| <i>Proteaceae</i> | <i>Petrophile media</i> |
| <i>Phyllanthaceae</i> | <i>Phyllanthus calycinus</i> |
| <i>Thymelaeaceae</i> | <i>Pimelea sp.</i> |
| <i>Pittosporaceae</i> | <i>Pronaya fraseri</i> |
| <i>Chenopodiaceae</i> | <i>Rhagodia baccata</i> |
| <i>Goodeniaceae</i> | <i>Scaevola canescens</i> |
| <i>Goodeniaceae</i> | <i>Scaevola repens</i> |
| <i>Rhamnaceae</i> | <i>Spyridium tridentatum</i> |
| <i>Proteaceae</i> | <i>Synaphea spinulosa</i> |
| <i>Gyrostemonaceae</i> | <i>Tersonia cyathiflora</i> |
| <i>Asparagaceae</i> | <i>Thysanotus manglesianus</i> |
| <i>Asparagaceae</i> | <i>Thysanotus sparteus</i> |
| <i>Hemerocallidaceae</i> | <i>Tricoryne elatior</i> |
| <i>Xanthorrhoeaceae</i> | <i>Xanthorrhoea preissii</i> |

Appendix 2 - Weeds within Duncraig Library bushland

| Family | Genus and Species | Common Name |
|----------------------|----------------------------------|--------------------------|
| <i>Poaceae</i> | <i>Avena barbata</i> | Wild Oats |
| <i>Myrtaceae</i> | <i>Chamelaucium uncinatum</i> | Geraldton Wax |
| <i>Myrtaceae</i> | <i>Eucalyptus platypus</i> | Moort |
| <i>Poaceae</i> | <i>Ehrharta calycina</i> | Perennial Veldt Grass |
| <i>Euphorbiaceae</i> | <i>Euphorbia terracina</i> | Geraldton Carnation Weed |
| <i>Asteraceae</i> | <i>Gazania linearis</i> | Gazania |
| <i>Iridaceae</i> | <i>Gladiolus caryophyllaceus</i> | Pink Gladiolus |
| <i>Proteaceae</i> | <i>Grevillea oliveacea</i> | Olive Grevillea |
| <i>Iridaceae</i> | <i>Homeria flaccida</i> | One leaf Cape Tulip |
| <i>Poaceae</i> | <i>Lagurus ovatus</i> | Hare's Tail Grass |
| <i>Myrtaceae</i> | <i>Leptospermum laevigatum</i> | Victorian Tea Tree |
| <i>Oxalidaceae</i> | <i>Oxalis pes-caprae</i> | Soursob |
| <i>Geraniaceae</i> | <i>Pelargonium capitatum</i> | Rose Pelargonium |
| <i>Asteraceae</i> | <i>Urospermum picroides</i> | False Hawkbit |
| <i>Asteraceae</i> | <i>Ursinia anthemoides</i> | Ursinia |
| <i>Asphodelaceae</i> | <i>Trachyandra divaricata</i> | Dune Onion Weed |

Appendix 3 - Native Fauna observed in Duncraig Library Bushland 2014

| Family | Genus and Species | Common Name |
|---------------------|--------------------------------|--------------------|
| <i>Meliphagidae</i> | <i>Anthochaera carunculata</i> | Red Wattlebird |
| <i>Meliphagidae</i> | <i>Lichenostomus virescens</i> | Singing Honeyeater |



Figure 3: A Singing Honeyeater sitting on *Banksia attenuata* at Duncraig Library Bushland

Appendix 4 - Non-native Fauna observed in Duncraig Library Bushland 2014

| Family | Genus and Species | Common Name |
|-------------------|--------------------------------|-------------------------|
| <i>Pieridae</i> | <i>Pieris rapae</i> | Cabbage White Butterfly |
| <i>Columbidae</i> | <i>Spilopelia senegalensis</i> | Laughing Turtle Dove |