

# DAREBIN NATURAL HERITAGE STRATEGY

2015-2025



## **Acknowledgements**

Darebin City Council acknowledges the Wurundjeri people and the Kulin Nations as the traditional landowners and historical and contemporary custodians of the land on which the City of Darebin and surrounding municipalities are located.

Prepared By: Environment and Natural Resources, Darebin City Council

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# Executive Summary

**The Darebin Natural Heritage Strategy 2015-2025 articulates Council’s vision and identifies a range of actions to protect and enhance Darebin’s natural heritage assets over the next ten years. In its dual roles as land owner and land manager, Darebin City Council is committed to working with our community to protect and enhance Darebin’s natural heritage assets for the enjoyment of current and future generations as well as for their own intrinsic value.**

This Strategy draws primarily on field survey data and other research conducted in support of the Darebin Natural Heritage Plan (NHP) 2011. The NHP, prepared by Context Pty Ltd, identified areas of significant natural heritage within Darebin and advanced a list of fifty-nine general recommendations in support of ongoing improvements to site identification, protection and management (see Appendix 1 for NHP Executive Summary). These recommendations have been reviewed (see Appendix 2) and the Natural Heritage Strategy advances over sixty recommended actions.

The Strategy begins with an introduction to the concept of natural heritage and notes those sites identified in the NHP as being of local, regional, state and national significance.

It reiterates Council’s vision and then examines the current status of land ownership and management across Darebin’s key natural heritage sites. Further context is provided via a summary of relevant town planning controls, legislation, strategies, policies and management plans affecting natural heritage in Darebin. The Strategy then details major issues and threats to natural heritage, before finally turning to the list of over sixty recommended actions.

Council will review and report on its achievements under the Strategy annually, review the entire Strategy in 2020 and produce an updated Strategy in 2025.



## Our Vision

Darebin is a place where natural heritage is valued and nurtured. Our Council will work together with land managers and the wider community to achieve this vision.

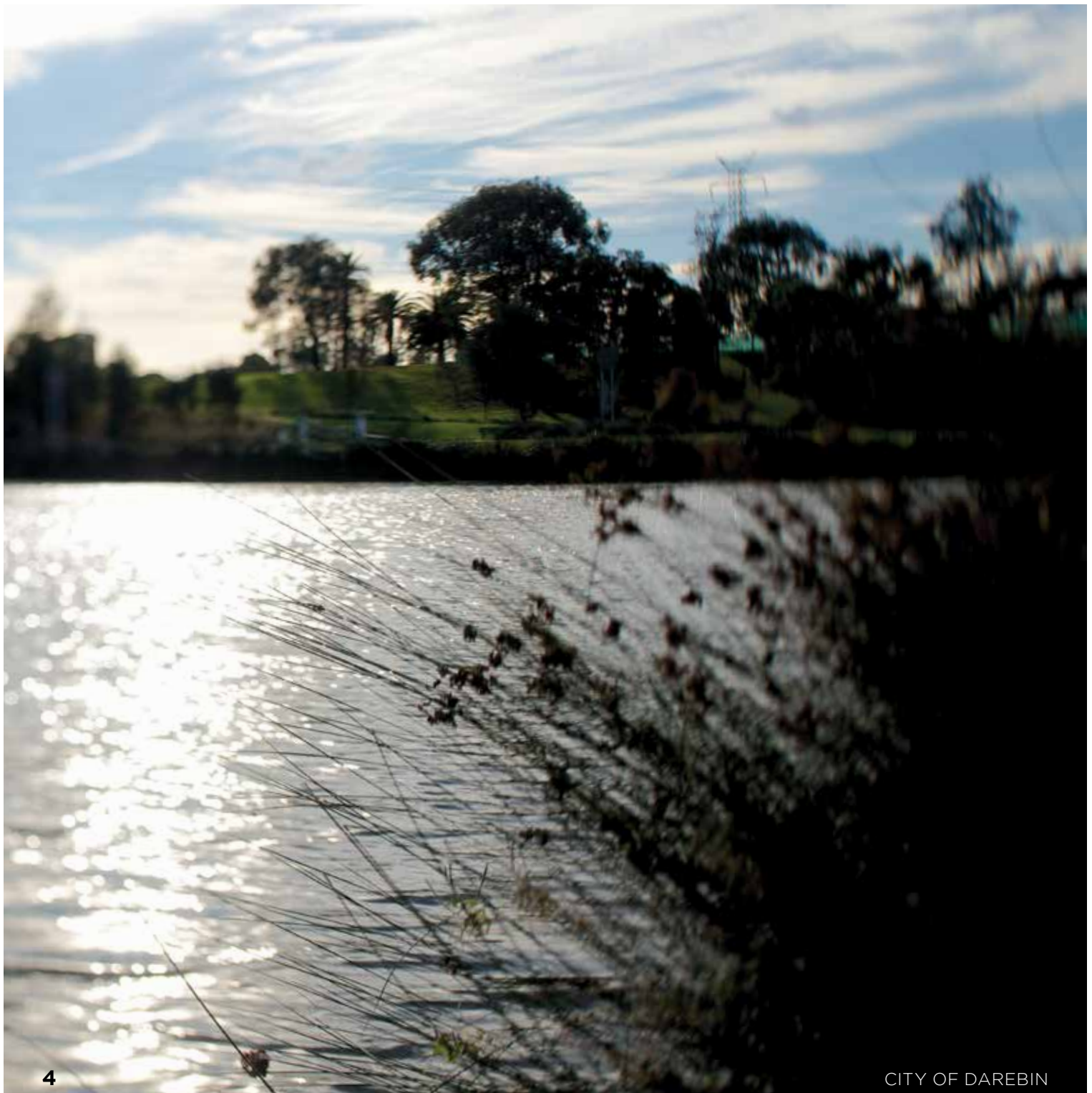
## Our Approach

Darebin's Natural Heritage Strategy 2015-2025 groups the recommended actions into four themes:

- Knowing about natural heritage
- Caring for natural heritage
- Working with land owners, managers and groups
- Community engagement and education

These actions are drawn primarily from the fifty-nine general recommendations contained within the NHP, with Council's review of these recommendations contained at Appendix 2 to the Strategy.

# 1. Introduction



## 1.1 What is 'natural heritage'?

There are places in Darebin where a glimpse of life before the 1830's is still possible. Water runs around a steep bend in the Merri Creek to the west and flows over rocky shallows in the Darebin Creek to the east. Wind blows through the grasslands at Ngarri-Djarrang (Central Creek) at sunset as kangaroos graze on new green shoots after a recent burn. Gang Gangs squawk in the tree tops at Gresswell Hill and echidnas fossick for ants in nests along Edgars Creek. It may come as a surprise to many that even these glimpses are still possible, given the transformation to the land and its people that has occurred since European settlers first arrived here in the 1830's.

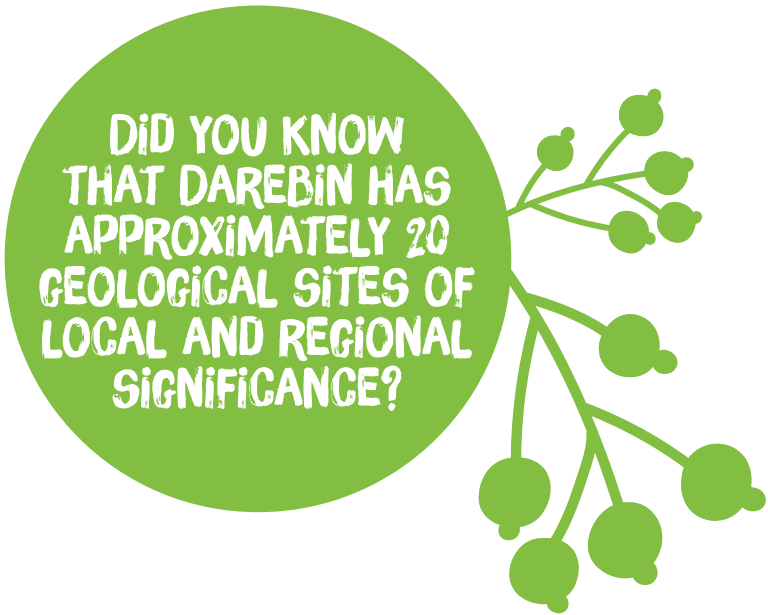
In Australia, the term 'natural heritage' refers to the complex interaction of geological, hydrological, ecological and anthropological forces that gave rise to the rich biodiversity, landscapes and cultures in existence prior to their profound interruption by the arrival of new colonisers from distant lands. Natural heritage significance is therefore determined by the degree to which these forces and interactions are able to continue today and into the future, relative to their ongoing success in other regions in Australia.

The Australian Natural Heritage Charter (ANHC) provides best-practice principles for the conservation of natural heritage, which it defines as:

- *natural features consisting of physical and biological formations or groups of such formations, which demonstrate 'natural significance'*
- *geological and physiographical formations and precisely delineated areas that constitute the habitat of indigenous species of animals and plants, which demonstrate natural significance, and/or*
- *natural sites or precisely delineated natural areas which demonstrate natural significance from the point of view of science, conservation or natural beauty.*

'Natural significance' is defined in the ANHC as *the importance of ecosystems, biodiversity and geodiversity for their existence value or for present or future generations, in terms of their scientific, social, aesthetic and life-support value.*

The delineation of boundaries between natural heritage sites can at times be somewhat arbitrary as a 'site' may constitute a small section of a creek or include a much larger adjoining bushland or grassland area. Site surveys of flora, fauna and geological features produce data on the presence and prevalence of indigenous species and/or geological formations. Flora surveys record the presence of individual plant species and their co-location with other species within a defined area, which determines which Ecological Vegetation Class (EVC) or Classes are represented within a site. EVCs are the standard unit for classifying different vegetation types within Victoria's bioregions. Fauna surveys record species that live within or visit these EVCs.



**DID YOU KNOW  
THAT DAREBIN HAS  
APPROXIMATELY 20  
GEOLOGICAL SITES OF  
LOCAL AND REGIONAL  
SIGNIFICANCE?**

The significance of a site is determined by up to thirty-four criteria, including whether a species is rare or threatened, whether the site provides habitat for rare or threatened species and the degree to which the site is ecologically intact (Appendix 5 of the NHP provides more on this). Sites identified as containing natural heritage are rated as being of local, regional, state or national significance, or a combination of these. Those species and formations of national significance are protected via the *Environment and Biodiversity Conservation Act 1999* and those of state significance are protected via the *Flora and Fauna Guarantee Act 1988*. It is worth noting that indigenous species within a site may have become established and then endured through natural processes or been deliberately re-introduced, or a combination of both. It is important to value and care for natural heritage sites because they contain and support species that have adapted, evolved and survived for thousands and even millions of years.

Darebin's natural heritage is comprised of flora, fauna and geological features that are of local, regional, state and even national significance (Appendix 10 of the NHP contains detailed statements of significance for each surveyed site). Natural heritage in Darebin forms a precious part of a wider web and its nurture and survival brings a range of benefits to both current and future generations as well as having its own intrinsic value. These benefits include recreational, landscape, property, educational, psychological, scientific and ecosystems values.

The protection and preservation of Darebin's natural heritage continues to be informed by dynamic interactions between a complex range of factors, with human behaviour continuing as one of the most influential. 'Country' in Darebin and surrounds was once managed through the long-established laws and cultural practices of its traditional owners, the Wurundjeri People. Today its management is governed by federal,

state and local laws, planning controls, management plans, policies and strategies. The health of Darebin's natural heritage and wider biodiversity is therefore influenced by the behaviour of many people whose connection to country varies widely. Those involved in caring for country include members of local Indigenous groups, Council staff, Management Committees, 'Friends' groups, land owners and politicians as well as visitors to Darebin, with some of these people belonging to more than one group.

The Darebin Natural Heritage Strategy 2015-2025 provides Council with a vision and direction in its role as land owner and land manager, to protect and enhance natural heritage values within the municipality over the next ten years. It maps significant natural heritage sites in Darebin as identified within the NHP. It also maps out the various land owners and managers responsible for these sites and lists key laws, policies, plans, schemes and strategies that influence how these sites are managed. It then identifies key threats to the health of these sites and provides Council and key stakeholders with recommended actions to address these threats. It is impossible for Council to recreate entire landscapes in Darebin as they were prior to the 1830's, however this Strategy will assist Council protect and enhance those precious remaining fragments into the future.







**DID YOU KNOW  
THAT THE MERRI  
AND DAREBIN CREEK  
MANAGEMENT COMMITTEES  
AND THEIR FORERUNNERS  
HAVE BEEN HELPING TO  
LOOK AFTER GREEK-SIDE  
AREAS, TRIBUTARIES AND  
SURROUNDS FOR NEARLY  
FORTY YEARS?**

## **1.2 Darebin's natural heritage assets**

Information gathered by a range of people over decades and even centuries contributes to our understanding of Darebin's natural heritage today. We can never produce a perfect picture, given the nature of what is being recorded, the manner in which this information is assembled and the resources required to routinely and accurately survey all potential sites. The amount and extent of species detected during flora and fauna surveys is subject to a range of factors which influence the accuracy of results, such as the time of year and even the time of day the survey is conducted. The number of people available to physically identify and count various species during each survey is also limited and access to sites may be restricted or prohibited by physical or legal boundaries. The quality and extent of natural heritage in a particular place can also vary over time. These limitations should not deter Council from making the effort to obtain and share data. Information gathered during both structured surveys and general observations helps us identify, locate and assess the significance of vital pieces of an ever-changing puzzle.

Drawing on historical flora and fauna survey data as well as detailed flora and geological surveys conducted in 2009-2010, the NHP identified:

- 51 sites of local significance
- 24 sites of regional significance
- 2 sites of regional-state significance
- 34 sites of state significance
- 2 sites of regional-national significance; and
- 26 sites of national significance.

The presence of species of state and national significance triggers a range of legislative requirements for Council and other land-owners in their approaches to land management (see Table 2). Council has duly developed a number of site management plans and work plans in collaboration with other land owners and managers for sites of natural heritage significance (see Tables 1 & 2). Map 1 'Overall Site Natural Heritage Significance' (see below) is an adapted version of a similar map contained in the Natural Heritage Plan 2011 (see Appendix 1). Map 2 'Sites of Geological Significance' (see below) is also adapted from the Natural Heritage Plan and indicates two sites as having been destroyed as well as numerous sites of local and regional significance.



**A Sacred Kingfisher perches at Growling Grass Frog Dam, Bundoora Park.**

### **1.3 The Darebin Natural Heritage Plan 2011**

Darebin's Natural Heritage Plan (NHP) was finalised in 2011 as part of the development of a wider Heritage Study for Darebin City Council. To produce the NHP, Context Pty Ltd and subcontractors conducted flora and geological surveys and drew on previous flora and fauna surveys to assess the significance of surveyed natural heritage sites within the municipality. Statements of significance were produced for approximately 260 sites using a range of criteria, with each site assigned a rating which varied from no apparent natural heritage significance to being of local, regional, state or national significance, or a combination of these (see Map 1). The NHP noted a number of constraints to the collection of survey data such as limited historical faunal survey data and difficulty in accessing private property, which prevented a comprehensive assessment of Darebin's natural

heritage. Accordingly, some natural heritage sites in Darebin may not have been identified in the NHP and the significance ratings for those sites that were identified may not accurately reflect the extent of natural heritage.

The NHP is a significant and valuable resource for understanding, preserving and enhancing natural heritage within Darebin. It details fifty-nine general recommendations for the protection and enhancement of natural heritage within the municipality. It also provides site-specific recommendations to preserve and enhance natural heritage within each site. A review of the fifty-nine general recommendations which inform the development of the Natural Heritage Strategy is provided at Appendix 2. Not all general recommendations have been incorporated into the Strategy, some have been amended and additional recommended actions have been proposed.



**DID YOU KNOW  
THAT ECHIDNAS  
HAVE BEEN SEEN  
ALONG STRETCHES  
OF EDGARS  
CREEK?**

Wild flowers in bloom, Cherry Street Reserve.

#### 1.4 Darebin's vision

Darebin is a place where natural heritage is valued and nurtured. Our Council will work together with land managers and the wider community to achieve this vision.

**Council's Bushland crew study grass species, Bundoora Park.**



**DID YOU KNOW  
THAT COUNCIL  
EMPLOYS TEN PEOPLE IN  
ITS BUSHLAND CREW TO  
TAKE CARE OF DAREBIN'S  
CREEKS, GRASSLAND  
AND BUSHLAND  
AREAS?**

#### 1.5 Monitoring and reporting

The implementation of the Darebin Natural Heritage Strategy will be reported annually. This will include actions undertaken and outstanding within relevant timeframes as well as any issues and challenges (see Section 4 below). The Strategy will be reviewed after a five year period, in 2020.

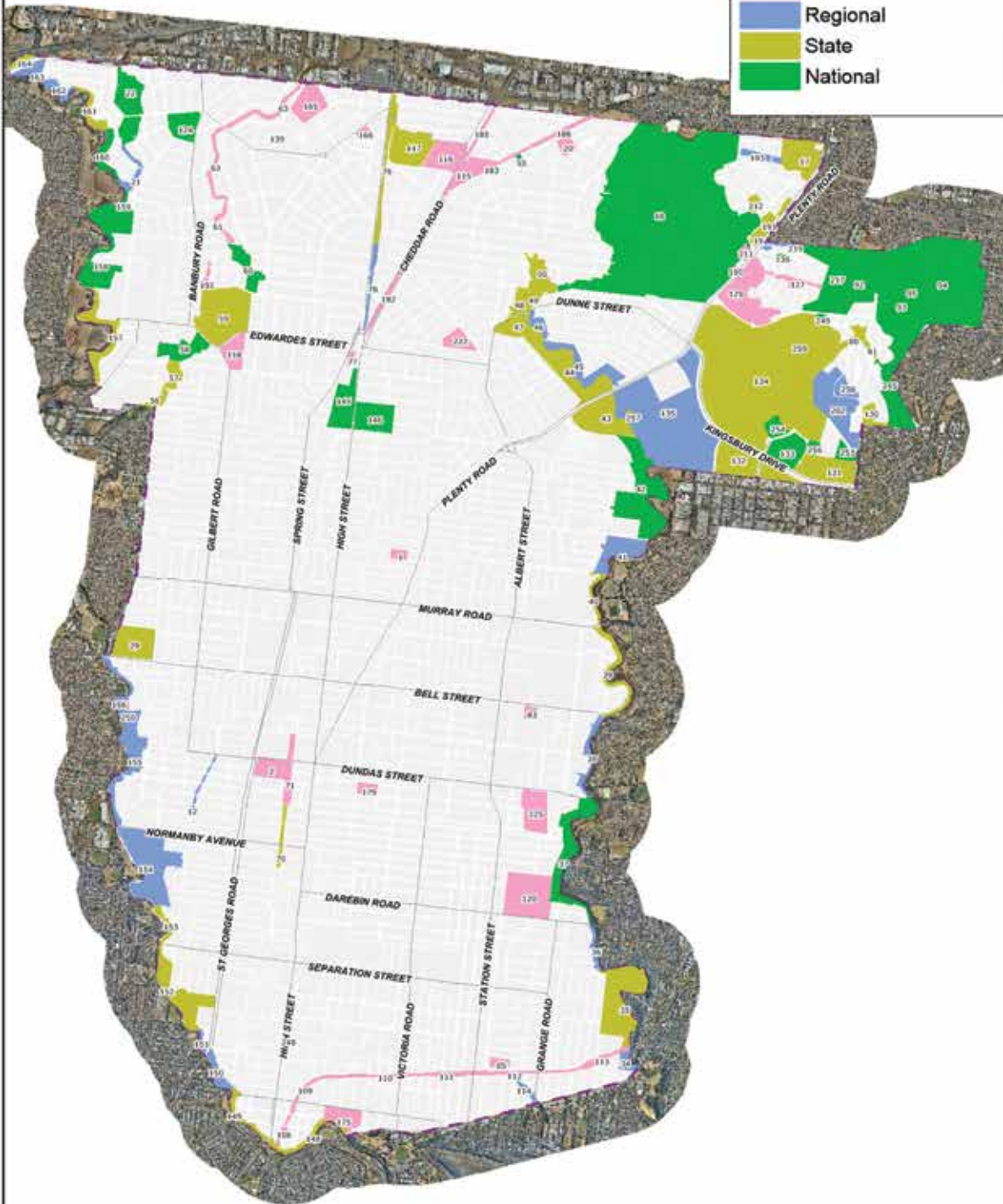
# Map 1

## Overall Site Natural Heritage Significance

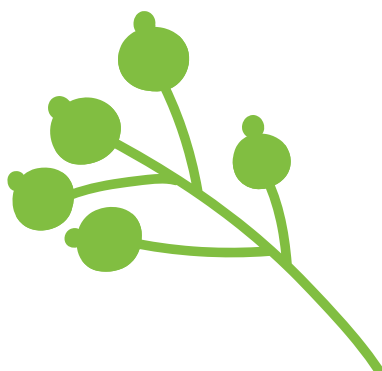


### Natural Heritage Significance

- Local
- Regional
- State
- National



Natural Heritage significance data obtained from Peabody Ecology Pty Ltd.  
Darebin Heritage Study - Natural Heritage Plan (2011)



# Map 2 Geological Sites



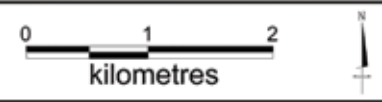
### Geological Significance

- Local
- Regional
- Destroyed



SITE ID	SITE NAME
ML354	Edgars Creek - Dolomite Nodules
ML348	Capp Reserve - Melbourne Formation
ML389	Lava Flows
ML387	Central Creek Stony Rise
ML359	Alluvial Terrace
ML386	Basalt Escarpments
ML388	Silurian Exposure
ML382	Basalt Escarpment
ML133	Elizabeth Street Cuttings
ML350	Melbourne Formation and Terrace
ML384	Northcote Golf Course Gorge
ML347	Silurian/Basalt Unconformity
ML383	Westbourne Give Rail Cutting
ML346	Basalt Structures
ML381	Basalt Escarpment
ML390	Basalt Quarry Face
ML391	Silurian Outcrop
ML392	Weathered Basalt
ML379	Mt Cooper Eruption Point
ML380	Mt Cooper - Sub Basaltic Silcrete
ML378	Greswell Hill
ML385	Basalt Columns
ML344	Regional

Geological significance data obtained from Context Pty Ltd, Darebin Heritage Study - Natural Heritage Plan 2011.



## 2. Context



## 2.1 Land ownership

Not all natural heritage areas in Darebin are owned or managed by Council (see Map 3 below). Land within the La Trobe University precinct, including the La Trobe Wildlife Sanctuary, contains natural heritage areas of state and national significance, with land management subject to legislation including the *La Trobe University Act 2009*. The Gresswell Nature Conservation Reserves, located in Darebin's north-east corner, are comprised of Gresswell Hill, Gresswell Forest and Gresswell Habitat Link. These reserves are owned by the Victorian government and also contain natural heritage sites of state and national significance. Parks Victoria has been responsible for managing these reserves since May 2012. Land adjacent to Merri, Darebin, Edgars and Central Creeks is owned by a range of Title holders including private citizens, businesses, organisations, Council, Melbourne Water and other Victorian government departments. Natural heritage values within these creek-side environments vary from local to national significance. Council plays a key role in collaborating with a broad range of land owners to protect and enhance natural heritage assets within the municipality.

## 2.2 Land management

Council's Bushland crew have developed site management plans and monthly, seasonal and annual work plans for natural heritage sites that are managed by the Bushland crew (see map 4 below). Specific site management plans are reviewed periodically by the Bushland crew in accordance with operational requirements and available resources. Numerous natural heritage sites are managed in collaboration with the Merri and Darebin Creek Management Committees as well as with local 'Friends' groups. Monthly, seasonal and annual work plans inform activities at all other sites. The main on-site tasks for natural heritage management involve maintaining existing remnant indigenous vegetation via a combination of burning (in grassland areas), weeding and replanting activities as well as monitoring, mapping and recording changes over time. For sites undergoing revegetation, activities include site preparation and replanting of indigenous vegetation, ongoing weeding and monitoring, mapping and recording changes over time.



Misty Autumn morning, Bundoora Park.



**Council's Bushland Crew and the Merri Creek Management Committee conduct an ecological burn, Ngarri-djarrang grasslands.**

## 2.3 Town planning controls

There are three specific planning controls applied by Council in the Darebin Planning Scheme to protect natural heritage within the municipality (for more detail, see Map 5). These are the:

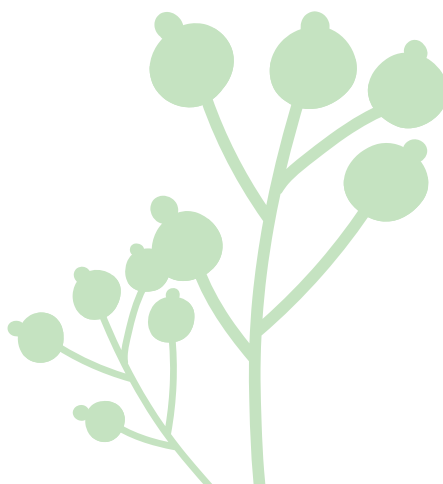
- Public Conservation and Resource Zone (PCRZ);
- Environmental Significance Overlay (ESO); and
- Vegetation Protection Overlay (VPO).

The owners of land affected by these planning controls must apply to and be granted a planning permit by Council before the following activities are undertaken:

- PCRZ – construct or carry out works unless in accordance with an incorporated plan;
- ESO – construct a building or construct or carry out works, construct a fence if specified in the schedule, construct bicycle pathways and trails, subdivide land and/or remove, destroy or lop any vegetation including dead vegetation unless the schedule or table of exemptions specifically exempts this vegetation, or such activity is otherwise in accordance with a native vegetation precinct plan; and

- VPO – remove, destroy or lop any vegetation specified in the schedule unless the table of exemptions specifically exempts this vegetation, or such activity is otherwise in accordance with a native vegetation precinct plan.

The schedule to each overlay includes a statement of significance for each site affected by the overlay (see Appendix 6). A number of amendments to the Darebin Planning Scheme have been gazetted by the Minister for Planning since publication of the Natural Heritage Plan 2011. In November 2012, Amendment C105 updated information on the location of significant trees in Schedules 3 (Mount Cooper) and 4 (Springthorpe) of the VPO. The Minister is currently considering Amendment C138 to the DPS for gazettal. This amendment makes broad changes to Council's local planning policies, including the Municipal Strategic Statement last reviewed in 2008.

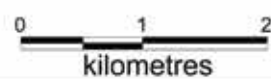




# Map 3 Land Ownership



- Darebin City Council
- State Government
- Melbourne Water
- La Trobe University
- Privately Owned
- Committee of Management

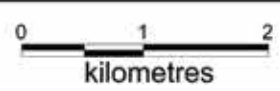
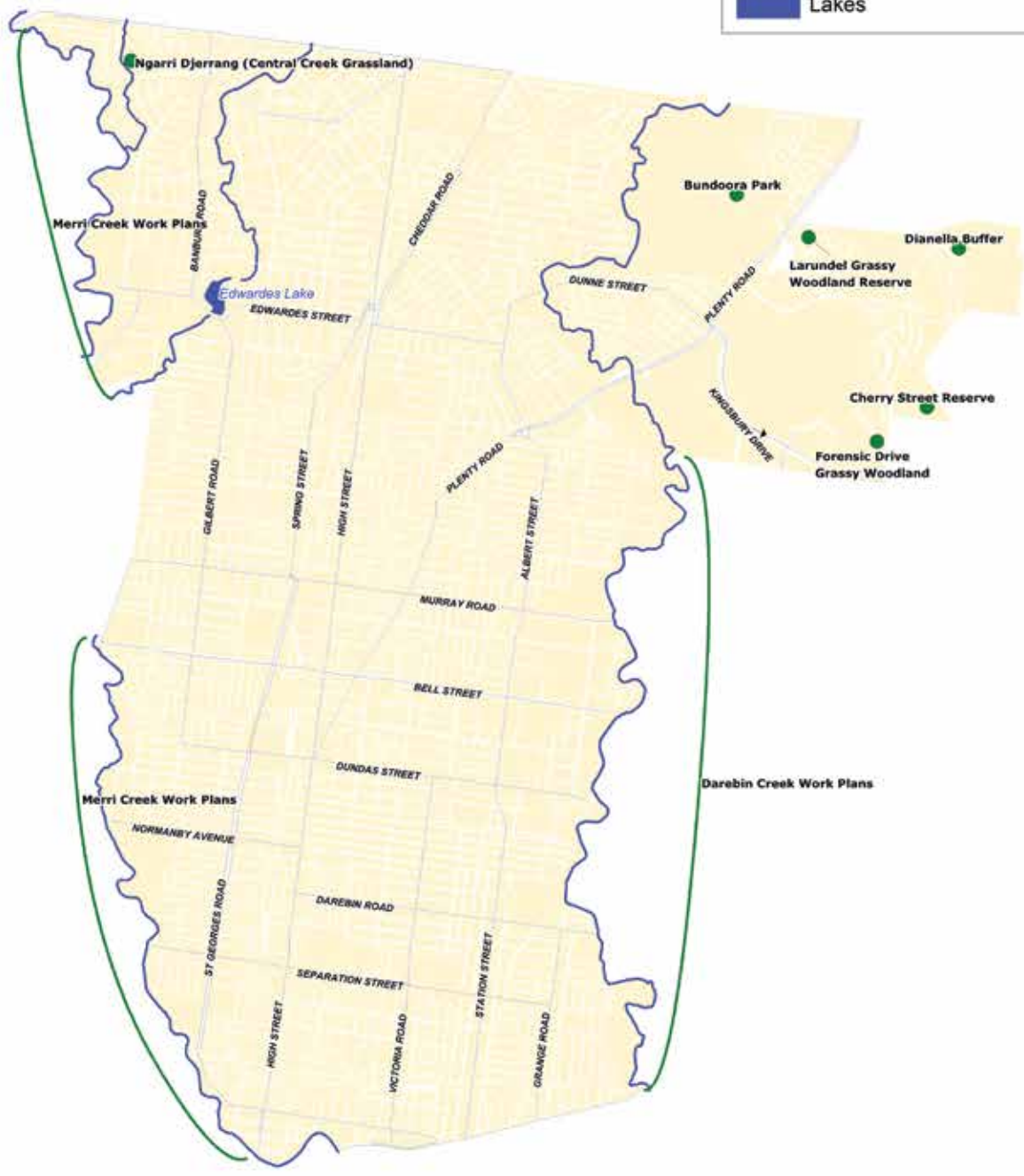


# Map 4

## Council Management Plans



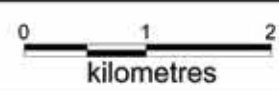
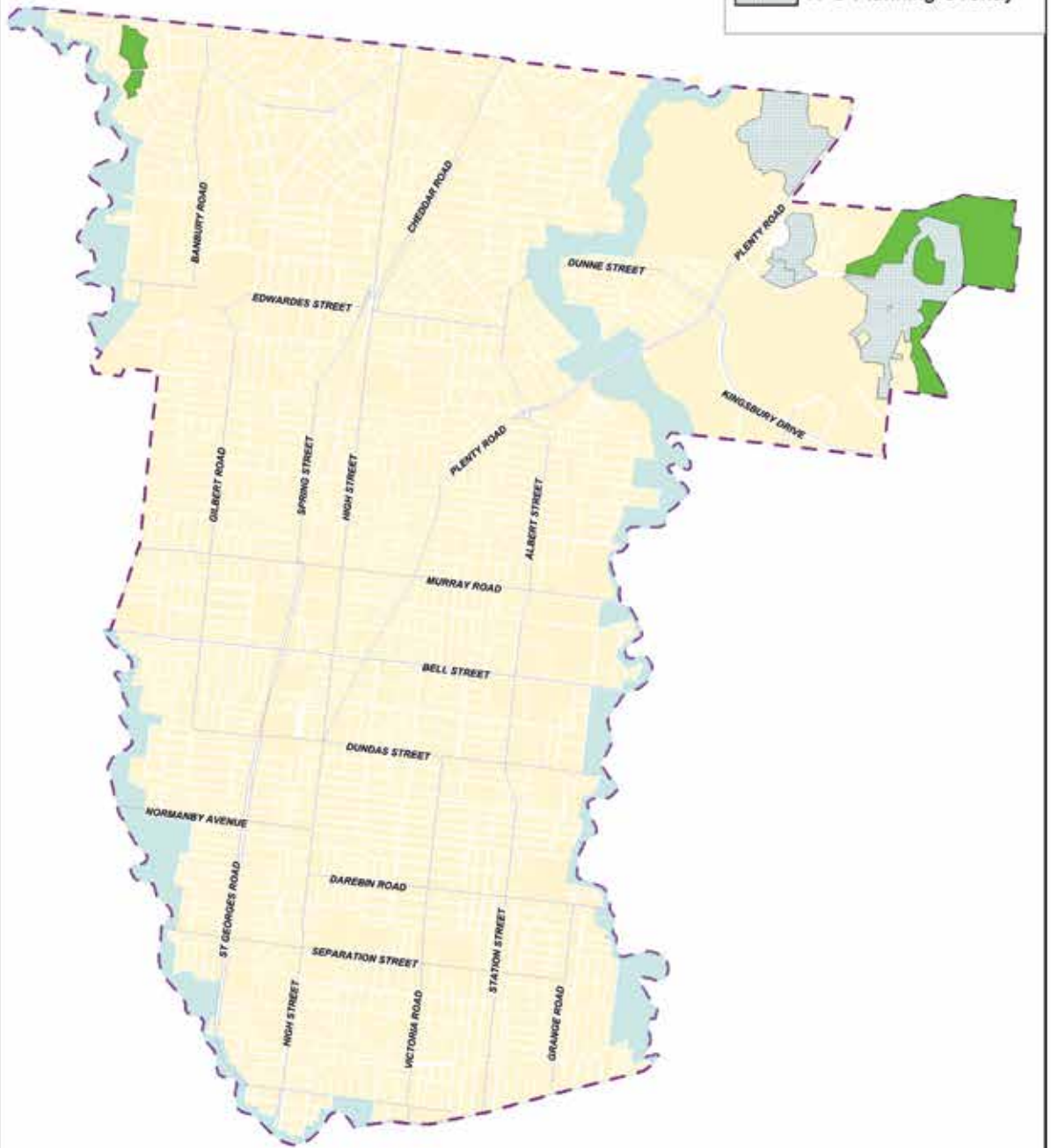
- Darebin City Council Management Plans
- Creeks
- Lakes



# Map 5 Planning Controls affecting Natural Heritage



- PCRZ Planning Zone
- ESO Planning Overlay
- VPO Planning Overlay



## 2.4 Legislation, policies, strategies and plans

The following tables summarise key policies, legislation, strategies, plans and stakeholders which influence natural heritage outcomes within Darebin.

**Table 1: Key Council policies, strategies and plans affecting natural heritage in Darebin**

Reference	Internal Stakeholders
Council Plan 2013-2017	Corporate Governance and Performance
Darebin Fire Management Plan 2007	Emergency Management Committee
Darebin Planning Scheme	City Development
Domestic Animal Management Plan 2013-2017	Civic Compliance
Watershed Strategy 2015-2025 [Draft] Urban Food Production Strategy 2014-2018 Darebin Heritage Study, Natural Heritage Plan 2011 Climate Change and Peak Oil Adaptation Plan 2009 Climate Change Action Plan 2007-2009 Darebin Biodiversity Baseline Report 2005 Darebin Environment Policy	Environment and Natural Resources
Monthly, Seasonal and Annual Work Plans for various locations Bundoora Park: Flora and Fauna Management Plan 2011-2016 [Draft] Central Creek Grassland (Ngarri-djarrang) 5 Year Works Plan 2010-2015 Urban Forest Strategy 2013 Guide to the Indigenous Plants of the City of Darebin Integrated Weed Management Strategy 2008 Baseline Vegetation Monitoring for the Larundel Grassy Woodland Reserve, Bundoora, Victoria 2005 Management Plan, Cherry Street Grasslands Reserve 2004 Forensic Drive Grassy Woodland Management Report 2004 Buffer and Matted Flax-lily ( <i>Dianella amoena</i> ) Management Plan, Springthorpe Estate, MacLeod 2004 Darebin Creek Design & Development Guidelines 2000	Parks and Vegetation
Merri Creek Management Committee-Darebin City Council Memorandum of Understanding 2014-2017 Darebin Creek Management Committee-Darebin City Council Memorandum of Understanding 2014-2017 Green Streets Streetscape Strategy 2012-2020 Darebin Open Space Strategy 2007-2017	Public Realm
Sale of Minor Council Property Assets 2015 Property Asset Management Strategy 2014	Assets and Properties

**DID YOU KNOW THAT COUNCIL CONDUCTS ECOLOGICAL BURNS OF CENTRAL CREEK GRASSLANDS ONCE A YEAR AND THE WURUNDJERI NAME FOR THE GRASSLANDS IS NGARRI-DJARRANG?**

**Table 2: Key legislation and other documents affecting natural heritage in Darebin**

Reference	Stakeholders - Local
Merri Creek and Environs Strategy 2009-2014 Merri Creek Development Guidelines 2004	Merri Creek Management Committee
Darebin Parklands Master Plan 2008 Darebin and Merri Creeks Design Development Guidelines 2000	Darebin Creek Management Committee
Edgars Creek Conservation and Development Plan 2013	Moreland City Council
Banyule Heritage Strategy 2013	Banyule City Council
<i>La Trobe University Act 2009</i>	La Trobe University
<i>Planning and Environment Act 1987</i> Biodiversity is Everyone's Business: Victoria's Biodiversity Strategy 2010 - 2015 Victorian Biodiversity Atlas	Department of Environment, Land, Water and Planning (formerly Department of Sustainability and Environment)
<i>Catchment and Land Protection Act 1994</i> <i>Flora and Fauna Guarantee Act 1988</i> Advisory List of Rare or Threatened Plants in Victoria 2014 Permitted Clearing of Native Vegetation - Biodiversity Assessment Guidelines 2013 (replaces Victoria's Native Vegetation Framework 2002)	Department of Environment and Primary Industries
<i>Water Act 1989</i>	Melbourne Water
Port Phillip and Western Port Regional Catchment Strategy Port Phillip and Western Port Native Vegetation Plan 2006	Port Phillip and Western Port Catchment Management Authority
<i>Environment Protection and Biodiversity Conservation Act 1999</i> Australia's Biodiversity Conservation Strategy 2010-2030 Australian Natural Heritage Charter 2002	Dep't of the Environment (formerly Department of the Environment, Water, Heritage and the Arts)
National Local Government Biodiversity Strategy 1998	Australian Local Gov't Association
ICOMOS Burra Charter 2013	Australia International Council on Monuments and Sites (ICOMOS)



**Table 3: Significant natural heritage sites within Darebin, land owners, key stakeholders and key documents**

Site	Owner	Key Stakeholders	Key Documents
Merri Creek	Darebin City Council (DCC) Melbourne Water Other Crown owners Private land owners	DCC - Bushland crew Melbourne Water Other Crown owners Merri Creek Management Committee Friends of Merri Creek Private land owners	MCMC-DCC MoU 2014-2017 Works Plans - Monthly, Seasonal, Annual
Darebin Creek	DCC Melbourne Water Other Crown owners Private land owners	DCC - Bushland crew Melbourne Water Other Crown owners Darebin Creek Management Committee Darebin Parklands Association Friends of Darebin Creek Private land owners	DCMC-DCC MoU 2014-2017 Works Plans - Monthly, Seasonal, Annual
Bundoora Park	Darebin City Council	DCCI Friends of Bundoora Park	Bundoora Park: Flora and Fauna Management Plan 2011-2016
La Trobe University Wildlife Sanctuary	La Trobe University	La Trobe University Friends of the Wildlife Reserves DCC	

Site	Owner	Key Stakeholders	Key Documents
Ngarri-djerrang (Central Creek Grasslands)	VicRoads	DCC - Bushland crew Merri Creek Management Committee VicRoads Melbourne Water Friends of Merri Creek	Central Creek Grassland (Ngarri-djerrang) 5 Year Works Plan 2010-2015 MCMC-DCC MoU 2014-2017
Cherry Street Grasslands and Reserve	DCC	DCC - Bushland crew	Management Plan, Cherry Street Grasslands and Reserve 2004
Forensic Drive	Dept' of Education, Employment and Training	DEET DCCI	Forensic Drive Grassy Woodland Management Report 2004
Larundel Grassy Woodland Reserve	DCC	DCC - Bushland crew	Baseline Vegetation Monitoring for the Larundel Grassy Woodland Reserve, Bundoora, Victoria 2005
Dianella Buffer	DCC	DCC - Bushland crew	Buffer and Matted Flax-lily (Dianella amoena) Management Plan, Springthorpe Estate, MacLeod 2004
Gresswell Forest Reserve	Crown Reserve	Parks Victoria Friends of the Wildlife Reserves	The Vegetation of Gresswell Forest Reserve and its Management 1983
Gresswell Habitat Link Reserve	Crown Reserve	Parks Victoria Friends of the Wildlife Reserves	Planning document
Gresswell Hill Reserve	DELWP - Crown Reserve	Parks Victoria Friends of the Wildlife Reserves	Gresswell Hill Reserve Management Plan 2004

# 3. Issues





**Put simply, the ongoing issues and threats to Darebin's natural heritage arise from small and large variations to the way things were in Darebin prior to the 1830's. Natural heritage significance is influenced by a range of factors including the presence or absence of other indigenous flora and fauna, which is in turn affected by factors such as the spread of weeds, presence or absence of feral animals, dumping of rubbish, behaviour of adjoining land owners, flooding events and extremes of weather. Some of these factors can be at least partly controlled by Council and others are simply beyond Council's control. The NHP provides site-specific issues within each statement of significance. Whilst the health of a particular site can be significantly impacted by a single issue, the degradation of sites in most cases arises from the presence and cumulative impact of a number of interlinking factors.**

Considerable efforts to repair and restore degraded natural heritage sites and other areas in Darebin during the past forty years have demonstrated that at least some threats can be significantly reduced, if not eradicated with the right resources, expert knowledge and patience. Just as the profound changes that have taken place in Darebin since the 1830's continue to impact the health of natural heritage today, efforts to reverse the extent of these changes wherever possible influences the viability and vitality of natural heritage sites into the future. Keeping track of the presence and extent of threats to natural heritage enables Council to formulate targeted programs to address these threats. Accurate and up-to-date information on the extent of indigenous flora and fauna provides Council with a crucial tool for directing resources effectively and formulating priorities.

### **3.1 Urban development**

Since the 1830's, people have been developing and using land in Darebin in many different ways. Long-established land management practices and ecosystems gradually made way for farms, orchards, quarries and tanneries, which in turn gave rise to rubbish tips, factories, warehouses, shops, municipal buildings, schools, churches, offices and houses. Infrastructure for transport, water, gas, electricity and communication connected and supported the lives of ever increasing communities of people, both within Darebin and beyond. Darebin's natural heritage was forced to retreat into small pockets and parks, along waterways, abandoned and neglected sites, a few larger undeveloped land-holdings to the north-east and a road reserve to the north-west of the municipality. As with the development of all colonial cities in Australia, the choice between preserving land for natural processes and developing land for human activities was overwhelmingly in favour of the latter. Increasing awareness in recent decades of the benefits of biodiversity to human health and recognition of its own intrinsic value has given rise to greater protection of significant sites and more resources for its care.

The Darebin Planning Scheme (DPS) applies zones and overlays to land within the municipality to manage its use and development. It also includes various planning policies to guide Council's decision making when it considers applications for a planning permit to use and develop land. Some activities are 'as of right', which means the land owner does not need to obtain a planning permit from Council before their land is used or developed in certain ways. For many other activities, a land owner must first apply for and be granted a planning permit by Council before these activities can take place. As noted at Section 2.3 of this Strategy, Darebin's most significant natural heritage sites are already affected by the Vegetation Protection Overlay, Environmental Significance Overlay or Public Conservation and Resource Zone. There may be some limited opportunities to increase planning controls affecting natural heritage sites within Darebin in the future. The majority of known state and nationally significant natural heritage sites in Darebin are already owned and/or managed by Council, by state government agencies, or by La Trobe University (see Map 3). There may be limited opportunities for Council to impose additional planning controls over highly significant natural heritage sites in private ownership.

The following actions have been developed to address these issues: 4.2.20, 4.2.21 and 4.4.6.

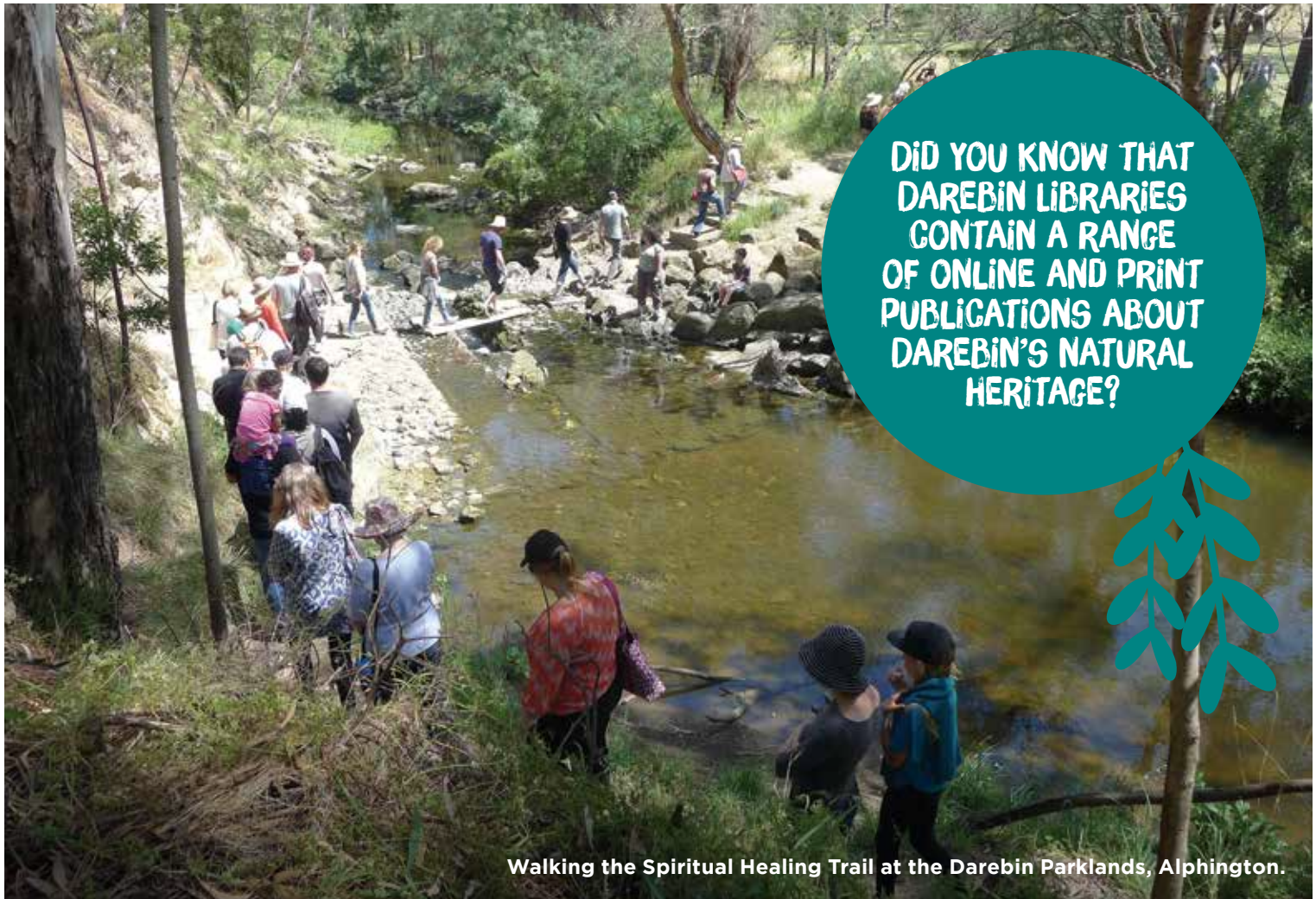


## 3.2 Weeds

The simplest definition of a weed is a plant that is growing in the wrong place. The purpose or use of a place must therefore be clear so that people in charge of looking after it can tell the difference between plants that are weeds and plants that are growing in the right place. Since natural heritage sites are places where indigenous flora and fauna are encouraged to thrive, plants from other parts of Australia as well as plants from overseas are usually considered to be weeds. The use of land for the preservation of natural heritage can be contrasted with other land uses such as sporting fields, parks, nature strips, vegetable gardens and ornamental gardens. In these places, indigenous plants may be considered weeds (whilst also potentially protected by legislation) whereas plants from other parts of Australia and overseas are deliberately grown.

The proximity of boundaries between natural heritage sites and other land uses in Darebin allows weeds to arrive in a variety of ways – they are brought in by the wind, by birds and animals, by stormwater from gutters and kerbs, by 'escaping' over backyard fences and by people dumping soil and garden waste. Once established, weeds can become very difficult and expensive to remove. The good news is that weeds find it more difficult to become established in areas where indigenous flora and fauna are already in abundance. Effective weed management within Darebin's natural heritage areas is crucial to maintaining and improving the health and quality of these sites. Ongoing mapping of the extent and intensity of weed infestations enables Council to collaborate with other land managers and target problem areas. Tackling weeds by working outwards from areas where there are fewer weeds to areas where there are more weeds is generally accepted best-practice. This may be undertaken as part of ongoing maintenance or followed up by replanting indigenous vegetation.

The following actions have been developed to address these issues: 4.2.2, 4.2.4, 4.2.6, 4.2.9, 4.2.10, 4.2.11, 4.2.12 and 4.3.9.



**DID YOU KNOW THAT DAREBIN LIBRARIES CONTAIN A RANGE OF ONLINE AND PRINT PUBLICATIONS ABOUT DAREBIN'S NATURAL HERITAGE?**

**Walking the Spiritual Healing Trail at the Darebin Parklands, Alphington.**

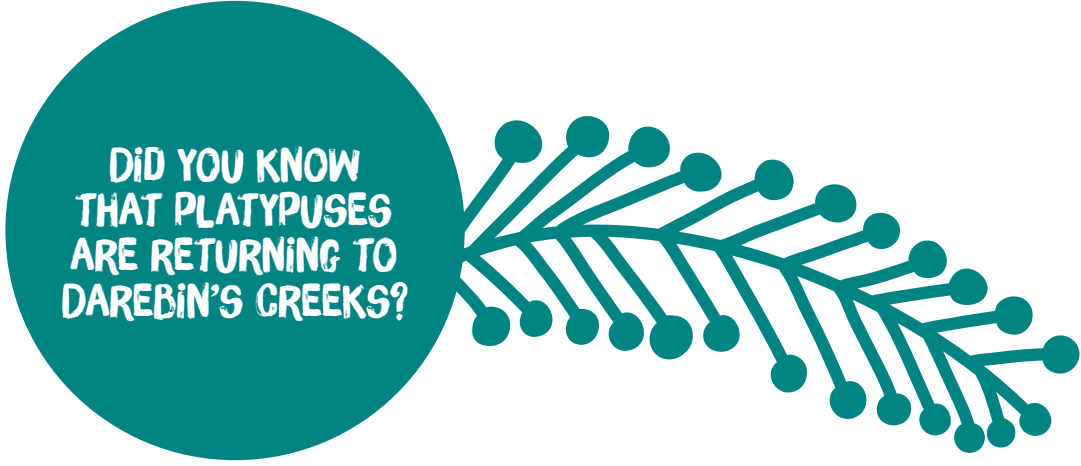
### **3.3 Land ownership and management boundaries**

As noted at Item 2.1 of this strategy, Darebin's natural heritage sites rely on various land owners and managers to act responsibly to ensure these sites are protected and preserved. Council is both an owner and manager of numerous natural heritage sites within the municipality and it shares this responsibility with Melbourne Water, La Trobe University, Parks Victoria and other state government departments as well as owners of smaller residential and commercial lots (see Map 3). Title boundaries imposed on land adjacent to Merri, Darebin, Edgars and Central Creeks are particularly complex and give rise to a complicated mosaic of management responsibility. Effective liaison and collaboration with other land owners and managers, particularly with respect to weed management and revegetation programs is vital to ensure the

ongoing health and wellbeing of Darebin's natural heritage sites.

Even when Council is clearly responsible for managing a specific area of land, such areas often transition from a site of high natural heritage value into a more formalised open space or recreation area, such as a park or sporting field. Responsibility for maintaining these sites also transitions within Council from the Bushland crew to other land managers. The values and objectives of one site, e.g. indigenous flora and fauna habitat, may not be compatible with those of an adjoining site, e.g. sport and recreation. Where possible, Council's Open Space Strategy advocates the creation of buffer areas to better manage such transitions.

The following actions have been developed to address these issues: 4.2.11, 4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.3.5, 4.3.6, 4.3.7, 4.3.8, 4.3.9 and 4.4.2.



**DID YOU KNOW  
THAT PLATYPUSES  
ARE RETURNING TO  
DAREBIN'S CREEKS?**

### 3.4 Fractured Habitat

The ability of Darebin's indigenous flora and fauna to adapt and translocate when required is limited by the fractured nature and extent of natural heritage sites within the municipality. Weed removal and revegetation programs within linear creek-side environments continue to improve opportunities for movement and dispersal, however in general, natural heritage in Darebin at best provides habitat 'stepping stones' for flora and fauna on the move. There are limited opportunities for Council to develop additional habitat corridors, given the costs of purchasing land and resources required to provide ongoing maintenance once a new site is revegetated. Council resources would therefore appear to be best directed toward strengthening existing natural heritage sites during the next ten years, with a view to expanding the number and extent of 'stepping stones' as a secondary objective, subject to Council resources. The development and implementation of a biodiversity strategy for Darebin would also contribute to the mobility and long-term survival of indigenous species.

The following actions have been developed to address these issues: 4.1.3, 4.2.1, 4.2.3, 4.2.5, 4.2.8, 4.2.15, 4.2.16, 4.2.17, 4.2.18, 4.2.19, 4.2.22, 4.2.27, 4.2.31, 4.2.32, 4.3.8 and 4.4.2.

### 3.5 Resources

Council currently commits over \$1 Million annually in operating funds for the management of Darebin's natural heritage sites, with the majority of this being used to fund works undertaken by Council's Bushland Crew. Council also provides funding to the Merri and Darebin Creek Management Committees towards their annual operating costs, contracted vegetation restoration and management programs and community education activities. Approximately \$200K in capital funding is spent annually (this is an average as it varies from year to year) and Council also collaborates with a range of stakeholders to secure grants and other resources to advance natural heritage outcomes. Council has increased resourcing for the management of natural heritage sites in recent years, with the purchase of an additional vehicle for the Bushland Crew and the creation of three Litter Prevention Officer roles.

Increasing resources to address issues affecting natural heritage in Darebin, such as more extensive weed management programs, must be taken into consideration with other Council priorities. Additional funding to extend areas of natural heritage significance, e.g. for new revegetation sites, must be ongoing to ensure effective management of these sites over the long-term.



*Acacia Pycnantha* - Golden Wattle.

Additional actions for consideration in future Council budgets are proposed as part of the Strategy and Council will also continue to seek grants and funding from other potential partners. Given the competition for resources within Council's budget, Council's focus during the next ten years will be primarily on maintaining and improving existing sites of high natural heritage significance, with a secondary objective to manage less significant sites. Where resourcing allows, fund will then be allocated to extend revegetation works and expand habitat corridors.

The following actions have been developed to address these issues: 4.1.3, 4.1.6, 4.1.9, 4.2.1, 4.2.4, 4.2.9, 4.2.17, 4.2.20, 4.2.23, 4.2.25, 4.2.26, 4.2.32, 4.3.8, 4.3.9, 4.4.4, 4.4.10, 4.4.13, 4.4.14 and 4.4.15.

### 3.6 Community Engagement and Education

Darebin has a proud history of community activism and lobbying for the recognition and protection of natural heritage sites. Community volunteering and support for natural heritage preservation is alive and well today, with numerous 'Friends' groups and more formalised management committees collaborating with Council across a variety of projects and programs.

Broader community awareness and engagement around natural heritage would have many benefits including reduction of some of the negative community behaviours that threaten and harm natural heritage sites within the municipality.



***Kennedia prostrata* – Running Postman or Scarlet Runner, Bundoora Park.**

Council's local laws officers and members of the Bushland crew regularly monitor sites for illegally dumped rubbish, including garden waste and spoil from development sites. Rubbish removal and site restoration can be expensive and time-consuming. Plants that may be desirable in a back garden that are not carefully managed can easily escape over back fences and become a serious problem along creeks, grasslands and bushland areas. Cats and dogs can disturb natural heritage areas and destroy native wildlife if pet owners do not comply with legislation. Whilst these issues can be enforced, increasing community awareness of the impacts of these negative behaviours and the value of our natural heritage areas can provide a more long term investment in these issues.

The following actions have been developed to address these issues: 4.1.1, 4.1.6, 4.2.28, 4.2.29, 4.3.6, 4.3.8, 4.4.1, 4.4.2, 4.4.4, 4.4.5, 4.4.7, 4.4.8, 4.4.9, 4.4.10, 4.4.11, 4.4.13, 4.4.14 and 4.4.15.

### 3.7 Climate Change

The 2015 report by CSIRO *The Implications of Climate Change for Biodiversity, Conservation and the National Reserve System* states that due to climate change, *within decades, environments across Australia will be substantially different from those currently experienced by biodiversity at most locations.* It also predicts that biodiversity management may need to change significantly to minimise future losses.

Over the next decade, given the likelihood of increasing temperatures and severe flooding events from more intense storms (with less overall rainfall), it is important that Council considers the impacts of climate change on natural heritage sites. This is particularly important when making decisions about revegetation programs and general maintenance commitments as well as advocating for and managing creek catchments.



**Blue tongue lizard.**

Severe flood events in particular can cause scouring, weed transfer and generalised damage to natural heritage areas. As the severity and frequency of flooding events are also influenced by upstream management practices, creek health and biodiversity along creek corridors is a broader issue for Darebin, creek management committees, private land owners and State Government.

Darebin's indigenous flora has adapted over thousands and even millions of years to significant changes in climate. Many species are well-placed to survive droughts and floods if managed properly and these can contribute to the resilience of urban areas as they adapt to climate change.

The following actions have been developed to address these issues: 4.1.3, 4.2.14, 4.2.17, 4.2.18, 4.2.19 and 4.3.4.

### **3.8 Broader Biodiversity Issues**

This strategy focuses on existing natural heritage assets (primarily pre 1830's vegetation and geological features). The development of a biodiversity strategy was a key recommendation of the Natural Heritage Plan. A biodiversity strategy would address the broader biodiversity issues in Darebin (not just the current natural heritage areas), would look to the future to develop further assets and would also incorporate fauna issues such as habitat conservation, development and corridors.

The following actions have been developed to address these issues: 4.1.9, 4.2.23 and 4.2.24.

# 4. Actions and implementation





As noted in the Executive Summary of this Strategy the recommended actions have been grouped into four themes to assist Council achieve its vision for Darebin as a place where natural heritage is valued and nurtured. The four themes are: Knowing about natural heritage; Caring for natural heritage; Working with land owners, managers and groups; and Community engagement and education. These themes and recommended actions are informed by those advanced as part of the Darebin Natural Heritage Plan 2011 (see Appendix 2). Responsibility for the delivery of each action is allocated to one or more areas of Council. A timeframe for the delivery of each action is also applied, with an estimate of additional resources to carry out each action provided where required.

#### 4.1 Knowing about natural heritage

No.	Action	Responsibility	Timeframe	Resources
4.1.1	Explore the use of the Victorian Biodiversity Atlas to promote and support Darebin's natural heritage	Bushland Crew Environment	Within 5 years	Within current budget (WCB)
4.1.2	Continue to maintain the data agreement between Darebin City Council and the Department of Primary Industries and Environment to contribute to the Victorian Biodiversity Atlas	Bushland Crew	Ongoing	WCB
4.1.3	Source expert advice in natural heritage management when required and include resources in Council's budget to enable this	Bushland Crew Environment	As required	Potential additional cost (PAC)
4.1.4	Continue to support the Bushland Crew's recording of opportunistic fauna and flora sightings by ensuring appropriate time is set aside during maintenance work to record sightings	Bushland Crew	Ongoing	WCB
4.1.5	Include data from opportunistic flora and fauna sightings by the Bushland Crew as part of each site's management plan review and reporting process	Bushland Crew	Ongoing	WCB
4.1.6	Continue to support the Friends of Edwards Lake conduct regular bird surveys and consider expanding Council's expertise and assistance to assist other Friends groups conduct faunal survey work and provide survey data to DELWP	Bushland Crew	Ongoing	WCB
4.1.7	Develop a GIS layer that identifies sites of geological significance to be accessed by Council staff	Customer Business Systems Environment	Within 12 months	WCB

No.	Action	Responsibility	Timeframe	Resources
4.1.8	Ensure key staff are aware of and able to access the Natural Heritage Strategy and Natural Heritage Plan 2011	Environment	Within 6 months of adoption	WCB
4.1.9	Seek funding to update existing flora surveys, conduct new flora surveys, e.g. of revegetation areas more than 10 years old and conduct new fauna surveys for inclusion in a Biodiversity Strategy	Environment	Within 5 years	PAC
4.1.10	Continue to monitor instances where vegetation clearance offset arrangements may apply in Darebin and to identify vegetation clearance offset sites in appropriate locations within Darebin	Statutory Planning Bushland Crew	Ongoing	WCB

## 4.2 Caring for natural heritage

No.	Action	Responsibility	Timeframe	Resources
4.2.1	Continue to maintain and improve the quality and extent of indigenous vegetation by allocating more resources for replanting programs and weed control guided by the following order of site priority: 1. Remnant vegetation sites of national and state significance, 2. Remnant vegetation sites of regional and local significance, 3. Revegetated sites and lastly 4. Degraded sites, noting that additional resources for ongoing maintenance would also be required	Bushland Crew	Ongoing	PAC
4.2.2	Ensure staff are familiar with the most serious weeds in Darebin, how to stop them spreading and how to control them	Bushland Crew	Ongoing	WCB
4.2.3	Continue to maintain existing understorey native vegetation and consider establishing additional understorey native vegetation subject to successful ongoing weed management programs	Bushland Crew	Review in 5 years	PAC
4.2.4	Continue to maintain and consider increasing resourcing for weed management as part of the review of Council's Weed Management Strategy 2008 to ensure it reflects the nexus between ecological burns and intensive weed control	Bushland Crew	Within 2 years	PAC
4.2.5	Consider whether additional species within Ecological Vegetation Classes at Table 25 of the Natural Heritage Plan are suitable for replanting within Darebin when reviewing planting plans. Species suitability is to be determined both by environmental conditions and the resources available to establish and maintain these species	Bushland Crew	Ongoing	WCB

No.	Action	Responsibility	Timeframe	Resources
<b>4.2.6</b>	Continue to train staff in ecological burning, sensitive mowing and weed control	Bushland Crew	As required	WCB
<b>4.2.7</b>	Consider providing staff with training in Aboriginal cultural awareness as it relates to the protection and preservation of Darebin's natural heritage	Bushland Crew	Within 2 years	WCB
<b>4.2.8</b>	Continue to value the conservation and enhancement of natural heritage as an essential part of the planning and review of Master Plans, Management Plans and Works Plans	Bushland Crew	Ongoing	WCB
<b>4.2.9</b>	Investigate resourcing Council's Bushland crew with electronic tablets to record and map the extent of weed infestations, expansion of remnant vegetation areas and expansion of revegetation areas over time and include this information in management and work plans	Bushland Crew	Within 2 years	PAC
<b>4.2.10</b>	Consider transforming 'static' management plans into dynamic electronic formats to enable Council's Bushland Crew to include continuous status updates for each site, e.g. extent of weeds, remnant vegetation and revegetation areas, and to track progress over time	Bushland Crew	Within 2 years	WCB
<b>4.2.11</b>	Continue supporting annual ecological burns and follow-up weed control by Bushland Crew and MCMC at Ngarri-djarrang	Bushland Crew	Ongoing	WCB
<b>4.2.12</b>	Consider whether routine burns and intensive weed control at Bundoora Park could be incorporated into the Bundoora Park Management Plan	Bushland Crew	Within 3 years	PAC
<b>4.2.13</b>	Consider the merits of combining management plans for Forensic Drive & Cherry Street and Larundell Reserve & Dianella Buffer to strengthen the case for resourcing their management as single areas	Bushland Crew	Within 2 years	WCB
<b>4.2.14</b>	Ensure that recommendations in Council's Fire Management Plan 2007 are implemented with consideration to biodiversity and natural heritage values	Emergency Management Committee	In 2017	WCB

No.	Action	Responsibility	Timeframe	Resources
<b>4.2.15</b>	Consider including the terms “revegetation using indigenous species of local provenance” and “environmental management” under both Conservation Bushland and Conservation Parkland as part of the review of Council’s Open Space Strategy 2007-2017	Public Realm	In 2017	WCB
<b>4.2.16</b>	Ensure Council’s Sale of Major Council Property Assets Policy, when formulated, includes the value of environmental benefits as a key criteria for Council to consider when making decisions about the disposal and acquisition of larger land parcels	Assets and Properties	Prior to adoption of this policy	WCB
<b>4.2.17</b>	Continue to review management plans for natural heritage sites and consider increasing resources to support threatened ecological communities and ensure the long-term survival of locally critically endangered species	Bushland Crew	Ongoing	PAC
<b>4.2.19</b>	Continue to use indigenous species of local provenance in all landscaping along waterways or habitat corridors and include this action in relevant management and works plans	Bushland Crew	Ongoing	WCB
<b>4.2.20</b>	Consider preparing a planning scheme amendment to apply the ESO to the following corridors, subject to Council resources and review:  Central Creek - as the Central Creek Grasslands (Ngarri-djerrang) are already located in the PCRZ, the ESO, if applied, would be likely to only affect land located in the General Residential Zone  Edgars Creek to Darebin Creek  Upper Edgars Creek	Strategic Planning	Within 5 years	PAC
<b>4.2.21</b>	Continue to monitor existing VPOs to ensure they are being applied effectively	Strategic Planning	Ongoing	WCB
<b>4.2.22</b>	Liaise with indigenous plant nurseries and consider whether additional species listed at Appendix 4 are suitable for reintroduction within Darebin when undertaking reviews of management plans. Suitability of species to be determined both by environmental conditions and the resources available to both establish and maintain these species	Bushland Crew	Ongoing	WCB

No.	Action	Responsibility	Timeframe	Resources
<b>4.2.23</b>	Consider future budget and funding to prepare a Biodiversity Strategy	Environment	Within 5 years	PAC
<b>4.2.24</b>	Consider modelling future Biodiversity Strategies on the Victorian Biodiversity Strategy 2018, with information to potentially include, e.g. areas of remnant vegetation by EVC, habitat hectares of remnant vegetation by EVC, areas of revegetation by EVC, habitat hectares of revegetation by EVC, number of indigenous plant species surviving as remnants, together with their local conservation status using the IUCN red list criteria, number of indigenous plant species surviving only as planted populations, number of plant species recorded as weeds in Darebin, number of indigenous animal species surviving in Darebin	Environment	Within 5 years	PAC
<b>4.2.25</b>	Investigate training relevant staff in the management of geological sites	Bushland Crew Open Space Crew	Within 12 months	WCB
<b>4.2.26</b>	Investigate restoration of the two geological sites that have been covered with soil	Bushland Crew Open Space Crew	Within 12 months	PAC
<b>4.2.27</b>	Continue to ensure appropriate EVCs are used as models for species selection and density of planting	Bushland Crew	Ongoing	WCB
<b>4.2.28</b>	Continue to conduct blitzes and enforce dog-on-lead laws in problem areas	Local Laws	Ongoing	WCB
<b>4.2.29</b>	Promptly remove dumped rubbish and use education and enforcement to manage this problem in accordance with Council's Waste and Litter Strategy 2015-2025	Bushland Crew Local Laws	Ongoing	WCB
<b>4.2.30</b>	Maintain resourcing Bushland crew's 'first response' to dumped rubbish activities, i.e. report or remove when dumped rubbish is encountered	Bushland Crew	Ongoing	WCB
<b>4.2.31</b>	Continue to liaise with stakeholders, e.g. Darebin and Merri Creek Management Committees and Friends groups to maintain existing nesting boxes	Bushland Crew	Ongoing	WCB
<b>4.2.32</b>	Consider opportunities to secure additional resources to replace older nesting boxes and/or establish additional nesting boxes	Bushland Crew	Within 5 years	PAC

### 4.3 Working with land owners and managers

No.	Action	Responsibility	Timeframe	Resources
4.3.1	Ensure that agencies managing land in Darebin are made aware of the statements of significance for sites that they manage	Environment	Within 12 months	WCB
4.3.2	Continue to collaborate with Melbourne Water to improve the quality and extent of native vegetation within land managed by Melbourne Water	Bushland Crew	Ongoing	WCB
4.3.3	Continue to liaise with La Trobe University in the realisation of its Master Plan, particularly with respect to the preservation of natural heritage	Bushland Crew Strategic Planning	Ongoing Ongoing	WCB
4.3.4	Continue to liaise with other land managers such as Parks Victoria regarding their fire management plans	Bushland Crew Emergency Management Committee	Ongoing Ongoing	WCB
4.3.5	Continue to liaise with Victoria Police on matters pertaining to motorbikes being ridden in prohibited areas	Local Laws	Ongoing	WCB
4.3.6	Continue to maintain effective liaison between Council departments and external stakeholders in the management of natural heritage sites	Environment Bushland Crew	Ongoing Ongoing	WCB
4.3.7	Continue to support Merri Creek and Darebin Creek Management Committees	Environment Bushland Crew	Ongoing	WCB
4.3.8	Consider resourcing incentives for land owners in Darebin to plant indigenous species, e.g. some Councils provide subsidies for residents who purchase indigenous plants at local nurseries	Environment	Within 3 years	PAC
4.3.9	Investigate opportunities in partnership with Melbourne Water for additional resources and programmed meetings to increase the frequency of weed management activity on land managed by Melbourne Water	Bushland Crew	Within 12 months	WCB



## 4.4 Community engagement and education

No.	Action	Responsibility	Timeframe	Resources
4.4.1	Update Darebin Environmental Reference Group on outcomes arising from the Natural Heritage Strategy	Environment	Ongoing	WCB
4.4.2	Continue to support 'Friends' groups to encourage adjoining land owners to plant indigenous species	Environment	Ongoing	WCB
4.4.3	Continue to support natural heritage oriented groups, e.g. 'Friends' groups	Bushland Crew Environment	Ongoing	WCB
4.4.4	Maintain Council's current catalogue of natural heritage resources and consider expanding the reference collection in Darebin's libraries as new publications and other resources become available	Information and Community Learning	Ongoing	WCB
4.4.5	Provide regular articles in 'Sustainability News' and other relevant newsletters about natural heritage, e.g. weeding days, ecological burns, replanting days, creek health/studies, etc.	Bushland Crew Environment	Ongoing Ongoing	WCB
4.4.6	Continue to routinely review Council's significant tree registers and provide updates to land owners whose trees are affected, including those that may be affected by changes to VPOs as appropriate	Arboriculture	Ongoing	WCB
4.4.7	Promote the adoption of the Darebin Natural Heritage Strategy 2012-2025 in 'Darebin Community News' and 'Sustainability News'	Arboriculture Strategic Planning	First publication after launch	WCB
4.4.8	Consider enabling the Conservation and Wildlife data contained within Council's GIS system to be accessed by visitors to Darebin's external website	Environment	Within 12 months	WCB
4.4.9	Consider adding a GIS layer that identifies sites of geological significance to be accessed by visitors to Darebin's external website	Customer Business Systems Environment	Within 12 months Within 12 months	WCB



No.	Action	Responsibility	Timeframe	Resources
<b>4.4.10</b>	Develop information about natural heritage accessible via Council's website and/or other innovative online resources for land owners and occupiers to include 'Guide to Indigenous Plants in Darebin', a list of Darebin's worst environmental weeds and garden escapees, a summary of planning permit controls and triggers for vegetation removal, a reminder about dogs on leads and the illegality of dumping rubbish, information about the Darebin Natural Heritage Strategy and information about joining local Friends groups	Environment	Within 12 months	WCB
<b>4.4.11</b>	Consider adding a reference to the online natural heritage information when replacing and/or creating new signage for natural heritage areas	Bushland Crew	Within 2 years or as signs are replaced	WCB
<b>4.4.12</b>	Send a copy of the 'Guide to Indigenous Plants in Darebin' to the main landscape design firms in Darebin	Environment	Within 12 months	WCB
<b>4.4.13</b>	Extend Council's program of natural heritage interpretation in Darebin, including signage for geologically significant sites and natural heritage trails	Bushland Crew	Within 5 years	WCB
<b>4.4.14</b>	Consider development of an informal pedestrian trail at Ngarri-djarrang (Cherry Street Grasslands) and commit resources to develop and maintain this asset	Bushland Crew	Within 5 years	PAC
<b>4.4.15</b>	Review existing natural heritage interpretation signs and replace as appropriate	Bushland Crew	Every 5 years	PAC
<b>4.4.16</b>	Develop a comprehensive community stakeholder analysis as part to identify concerns and interest.	Environment	Within 12 months	WCB



## Definitions & Abbreviations

<b>ANHC</b>	Australian Natural Heritage Charter
<b>biodiversity</b>	The variability among living organisms from all sources (including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part) and includes diversity within and between species and the diversity of ecosystems (ANHC)
<b>Darebin</b>	All the land that is located within the municipal boundary
<b>DCC</b>	Darebin City Council
<b>DCMC</b>	Darebin Creek Management Committee
<b>DERG</b>	Darebin Environmental Reference Group
<b>DPS</b>	Darebin Planning Scheme
<b>DSE/DELWP</b>	Former Department of Sustainability and Environment now Department of Environment, Land, Water and Planning
<b>ecosystem</b>	A dynamic complex of organisms and their non-living environment, interacting as a functional unit (ANHC)
<b>ESO</b>	Environmental Significance Overlay
<b>EVC</b>	Ecological Vegetation Class
<b>geodiversity</b>	The natural range (diversity) of geological (bedrock), geomorphological (landform) and soil features, assemblages, systems and processes. Geodiversity includes evidence of the past life, ecosystems and environments in the history of the earth as well as a range of atmospheric, hydrological and biological processes currently acting on rocks, landforms and soils (ANHC)
<b>GIS</b>	Geographic Information Systems
<b>HO</b>	Heritage Overlay
<b>ICOMOS</b>	International Council on Monuments and Sites
<b>indigenous species</b>	A species that occurs at a place within its historically known natural range and that forms part of the natural biodiversity of a place (ANHC)
<b>MCMC</b>	Merri Creek Management Committee
<b>MoU</b>	Memorandum of Understanding
<b>MSS</b>	Municipal Strategic Statement
<b>MW</b>	Melbourne Water
<b>NHP</b>	Darebin Natural Heritage Plan 2011
<b>PAC</b>	Potential additional cost
<b>PCRZ</b>	Public Conservation and Resource Zone
<b>STR</b>	Significant Tree Register
<b>VBA</b>	Victorian Biodiversity Atlas
<b>VPO</b>	Vegetation Protection Overlay
<b>WCB</b>	Within current budget

## Appendices

<b>Appendix 1</b>	Darebin Heritage Study, Natural Heritage Plan 2011, Executive Summary
<b>Appendix 2</b>	Natural Heritage Plan 2011 – Recommendations analysis
<b>Appendix 3</b>	Overall Natural Heritage Significance Sites as noted in Map 1
<b>Appendix 4</b>	Key Internal and External Stakeholders for Natural Heritage
<b>Appendix 5</b>	Darebin Libraries resources
<b>Appendix 6</b>	Darebin Planning Scheme – Planning overlays affecting natural heritage – Statements of significance





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