

PORT PHILLIP CITY COUNCIL BIODIVERSITY STUDY & ACTION PLAN

July 2020

City of Port Phillip retains important biodiversity assets within its highly urbanised environment

The Council is committed to the ongoing protection and enhancement of its natural heritage values

Natural heritage refers to the elements of biodiversity, ecosystems and geological structures that we inherit from past generations, maintain in our generation and then bestow to future generations.

Arcadis with **EcoAerial** and **dellbotany** were commissioned by the City of Port Phillip to undertake a Biodiversity Study and Action Plan project in 2019-2020



The Study and Action Plan was prepared 2019/20 and is effective for the 2020-30 decade

What was involved

A Biodiversity Study and Action Plan was completed in mid 2020. It included:

1. Data review to collate existing ecological data for the municipality
2. Discussion Paper to summarise the data and determine field site locations
3. Stakeholder consultation workshops
4. Biodiversity Study with flora and fauna field surveys
5. Biodiversity Action Plan to:
 - Manage
 - Protect
 - Promote
 - Enhance biodiversity across the municipality

Biodiversity Action Plan

1. Data review

Data was collated from:

- government flora and fauna databases
- prior flora and fauna studies (e.g. for local reserves and parks)
- interest groups and stakeholders (including environmental groups, traditional custodians and local naturalists)



This allowed:

- **the creation of council-specific species lists**
- **identification of potential threatened species present**
- **identification of “flagship” and “keystone” species**

Flagship species

Iconic species that portray the identity of Port Phillip municipality (Flora, fauna or fungi may be regarded as *Flagship* for ecological, cultural or amenity reasons)

Examples:

Karkalla *Carpobrotus rossii*

Prickly Spear-grass *Austrostipa stipoides*

Little Penguin *Eudyptula minor*

Wedge-tailed Eagle *Aquila audax*

Keystone species

Ecologically important species that have a large suite of 'dependent' species

Examples:

Hairy spinifex *Spinifex sericeus*
(Dune stabilizing)

Drooping Sheoak *Allocasuarina verticillata* (insect and bat habitat)

Grey-headed Flying-fox *Pteropus poliocephalus* (important pollinator)




Flagship species play a role in building connections between people and place.

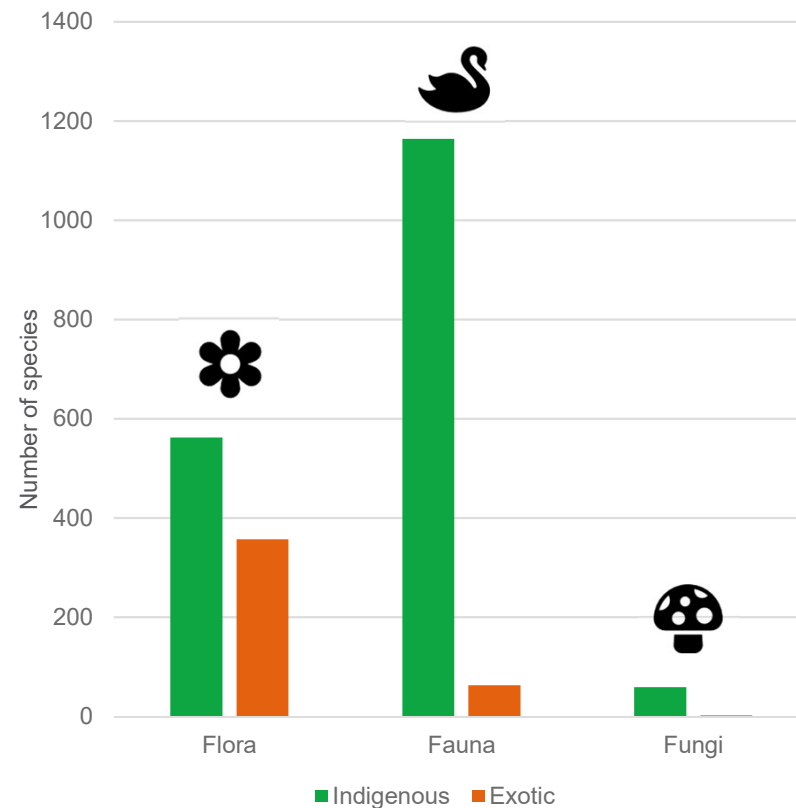
Identifying Keystone Species helps to focus management actions

Local species diversity

From the review of available data sources and local knowledge (pre-field surveys).

Number of species per Kingdom

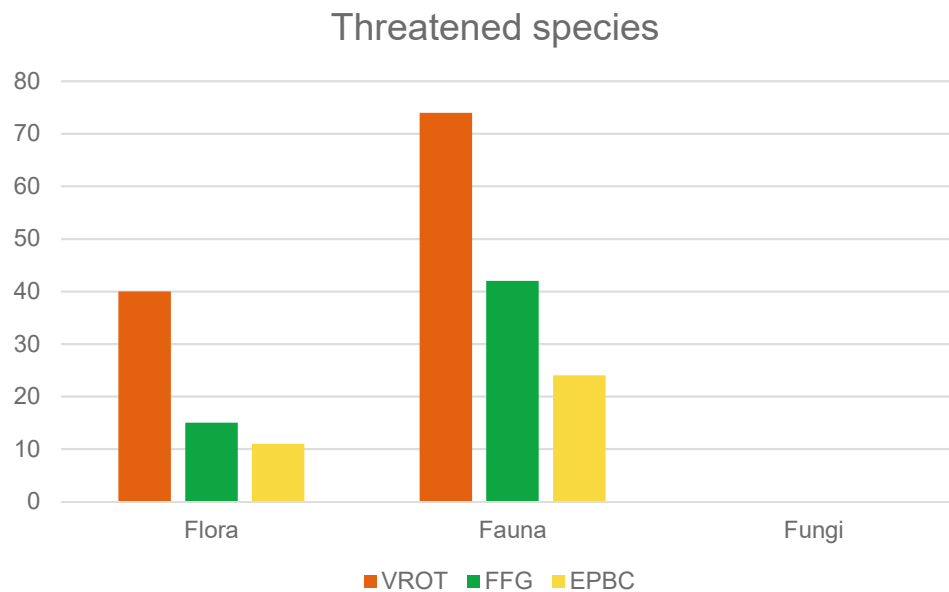
	Indigenous	Exotic	Total
Flora 	562	357 (+71)	990
Fauna 	1164	63	1227
Fungi 	59	2	61



Exotic species have been introduced i.e. not indigenous to the area

Biodiversity data review

Threatened species



VROT = Victorian Rare or Threatened Species as classified by the Victorian Department of Environment, Land, Water and Planning.

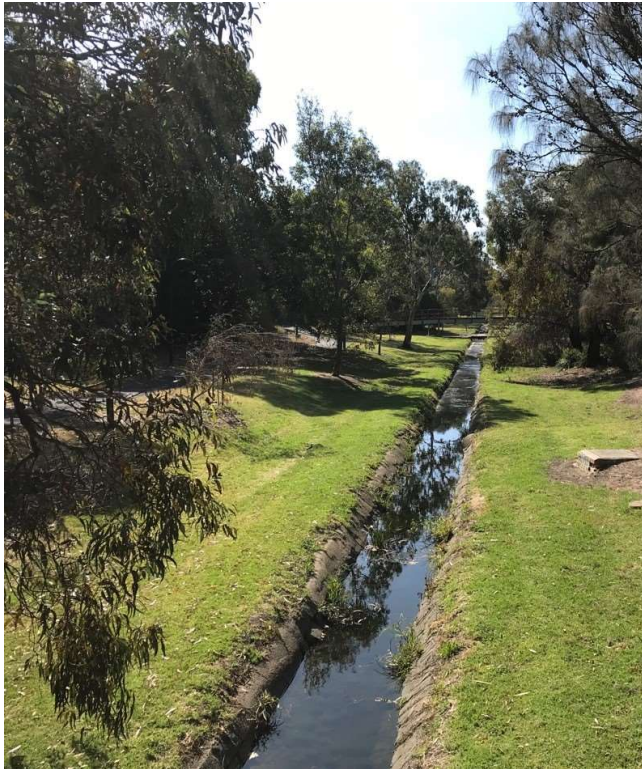
FFG = listed as threatened under the Victorian *Flora and Fauna Guarantee Act 1999*

EPBC = listed as threatened under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*

	Flora	Fauna	Fungi
VROT	40	74	0
FFG	15	42	0
EPBC	11	24	0

Biodiversity data review

2. Field study



Six flora sites

- Vegetation mapping
- Vegetation Quality Assessments
- Floristic quadrats

Six fauna sites

- Fauna habitat surveys
- Microbat sound recorder surveys
- Spotlighting (Rakali, amphibians)

Field surveys were targeted to areas or species that were identified as priorities in the data review stage

Field survey locations

City of Port Phillip



- LEGEND**
- ▭ Flora study area
 - ▭ Fauna study area
 - ▬ Waterbody

1:45,000 at A4

ARCADIS
ARCADIS AUSTRALIA PACIFIC PTY LTD
ABN 76 104 485 289
Level 5, 141 Walker St North Sydney NSW 2060
P: +61 (0) 2 8907 9000 | F: +61 (0) 2 8907 9001
Coordinate System: GDA 1994 MGA Zone 55
Date issued: March 2, 2020



Field surveys were undertaken summer of 2019/20

Field survey sites/targets

Flora Surveys

- Port Melbourne Foreshore (Sandridge Foreshore and First Point)
- St Kilda West Beach
- Elwood Coastline (MO Moran Reserve, Point Ormond, Elwood Teatree, Elwood Foreshore Reserve)
- Port Melbourne Light Rail
- Elwood Canal Linear Reserve
- Alma Park East

Fauna surveys

- Canterbury Road Urban Forest – Bat survey
- St Kilda Botanical Gardens – Bat and frog survey
- Elwood Canal / Elster Creek – Bat, frog and reptile survey
- Point Ormond Reserve – Bat survey
- St Kilda Breakwater – Rakali survey
- St Kilda Spit (a tidal sandbar artefact of the breakwater construction at St Kilda West Beach) – Shorebird / wader survey.

Alma Park East



Vegetation assessment and mapping

Elwood Canal



Vegetation assessment and mapping

Elwood Coastline (1)



Elwood Coastline (2)



Vegetation assessment and mapping

Elwood Coastline (3)



Vegetation assessment and mapping

Port Melbourne Foreshore (1)



Vegetation assessment and mapping

Port Melbourne Foreshore (2)



Vegetation assessment and mapping

Port Melbourne Light Rail



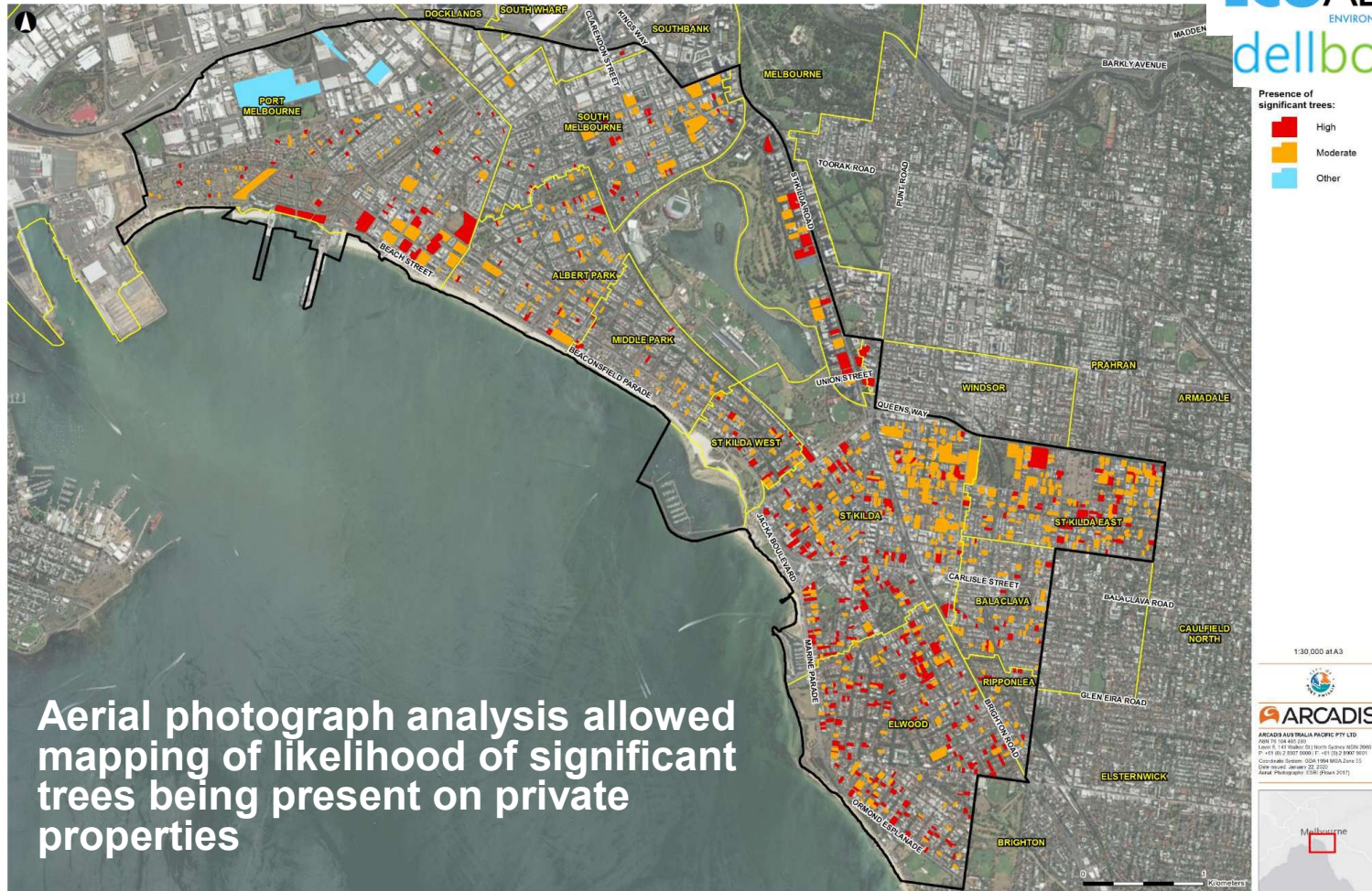
Vegetation assessment and mapping

St Kilda West Beach



Vegetation assessment and mapping

Significant Tree mapping



Aerial photograph analysis allowed mapping of likelihood of significant trees being present on private properties

A 'Significant Tree' is defined in the City of Port Phillip's Local Law. They are trees or palms with a trunk circumference of ≥ 150 cm measured 1 m from the base.

Notable findings

St Kilda Breakwater (an artificial feature) supports one of the largest Rakali (a native water-rat) populations in greater Melbourne and nesting for Little Penguins.

The Breakwater has created the tidal sand bar on the St Kilda Spit where migratory shorebirds roost of an evening.

Two threatened flora species recorded (presumed all planted):

- Marsh Saltbush *Atriplex paludosa* subsp. *paludosa*
- Coast Wirilda *Acacia uncifolia*



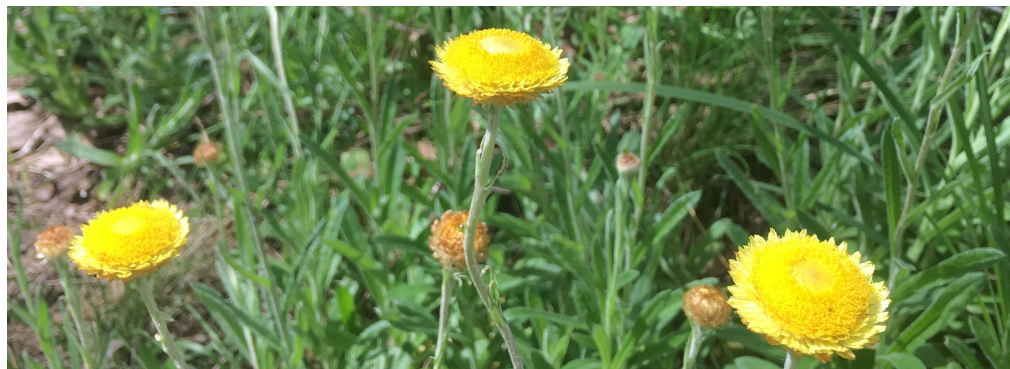
BIODIVERSITY ACTION PLAN



Four Themes

THEME 1: Become a leader of urban biodiversity conservation

- Implement the Action Plan and collaborate with relevant public land managers
- Council policies, strategies and initiatives incorporate biodiversity protection and enhancement, and Caring for Country principles
- Council staff and contractors understand and the incorporate biodiversity protection into their work
- Evaluation of impacts on natural environment a requirement in CoPPs Project Management by



THEME 2: Connect people with nature

- Community participation in supported workshops, citizen science projects, and working bee events
- Greater accessibility to biodiversity information to the general public
- Interpretative signage, website resources, news and social media items, library resources
- Biodiversity education provided to all early childhood and school aged children through easily accessible



THEME 3: Understand the biodiversity values present, improve protection & management

- Maintain and expand knowledge of ecological values occurring within the municipality
- Up-to-date knowledge maintained and expanded for:
 - Sites of high ecological value
 - Rare or threatened species
 - Species at-risk of localised population decline
 - Ecological cultural heritage values
- Improve protection of biodiversity values
- Tracking and auditing
 - native vegetation removal
 - exotic tree and shrub removal
- Ensure compliance with relevant legislation, policies and local laws

THEME 4: Manage biodiversity values and threatening processes

- Development of the Vegetation and Fauna Habitat Management Program for conservation reserves and sites with biodiversity values from threats such as:
 - Weeds
 - Pest animals
 - Pollution
 - Unauthorised damage (e.g. trampling, garden encroachment)
 - Climate change
- Minimise impacts of domestic pets on wildlife and native vegetation
 - Biodiversity incorporated into the next revision of Domestic Animal Management Plan 2017 – 2021



THEME 4: Manage biodiversity values and threatening processes

- Protect native vegetation and habitat from removal (permitted and unpermitted)
 - No unauthorised removal of native vegetation (particularly foreshore)
 - Non-native trees and shrub retained where possible
 - Biodiversity incorporated into new constructed assets.
 - Significant Trees identified and protected on private and public land.
- Increase cover of indigenous plants across the municipality
 - Increased plantings on public land
 - Planting guides for residents
 - Approvals practice notes

Authors and lead contributors

Fiona Sutton, Nina Roberts, Sian Tetter (Arcadis)

Rob Gration (EcoAerial)

Matt Dell (dellbotany)

**Renaë Walton (City of Port
Phillip)**

Funded by City of Port Phillip

