

Living Maroondah: *a future for our plants, animals, and us*

Saturday 16th February 2019

Karralyka Centre, Mines Road, Ringwood East

Maroondah Vegetation Review

The local situation

“Living Maroondah” Community Symposium
16 February 2019



Collecting the Evidence

Council commissioned three key studies:

1. Maroondah Canopy and Landscape Analysis 2011 to 2016 – Joseph Kaspar
2. Biodiversity in Maroondah – Dr Graeme Lorimer
3. Maroondah Vegetation Planning Policy Review - Claire Scott

- › This presentation provides a brief overview of their findings.
- › Please submit your questions during the presentation



Maroondah Canopy and Landscape Analysis

Who: Joseph Kaspar, Greenspace Consultant

What was done: based on the i-Tree tool, a statistical analysis of tree canopy cover changes from 2011 to 2016 to compare the different planning controls that apply to tree removal in Maroondah.

How it was done:

The municipality was divided into 11 areas based on the different planning controls currently in effect:

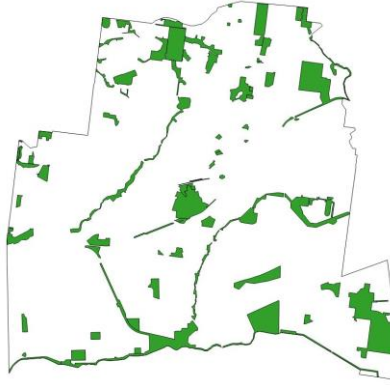
- Vegetation Protection Overlays (VPOs) – 3 areas
- Significant Landscape Overlays (SLOs) – 4 areas
- Design and Development Overlays (DDOs) – 2 areas
- No controls – 2 areas

The entire municipality was also treated as another area for analysis

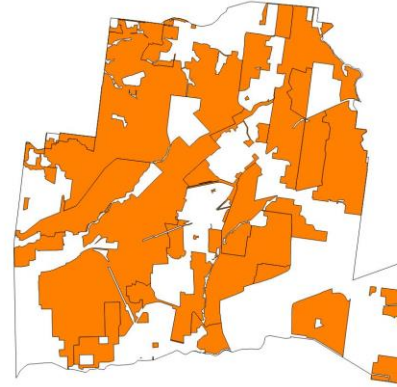


Maroondah Canopy and Landscape Analysis (Cont'd)

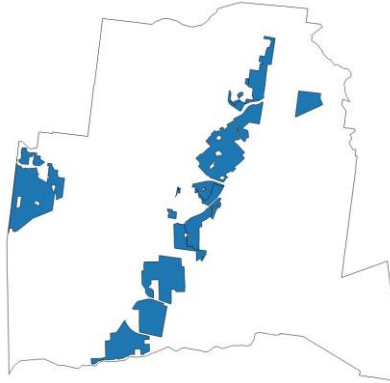
VPO aggregate



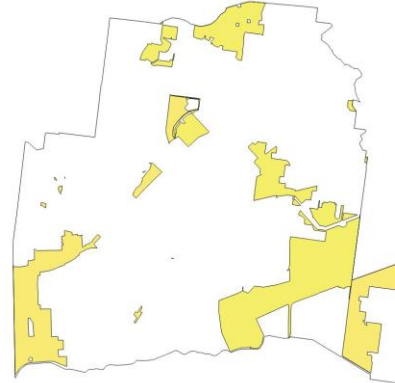
SLO aggregate



DDO aggregate



No Controls aggregate



Maroondah Canopy and Landscape Analysis (Cont'd)

For each area – 2,000 random sample points were generated

Each sample point was applied to both 2011 and 2016 aerial imagery

For both years, each point was categorised as one of:

- › Tree canopy (trees > 3m high)
- › Shrub (trees/shrubs < 3m high)
- › Grass/bare earth
- › Hard surface (eg roof, road, footpath, etc.)

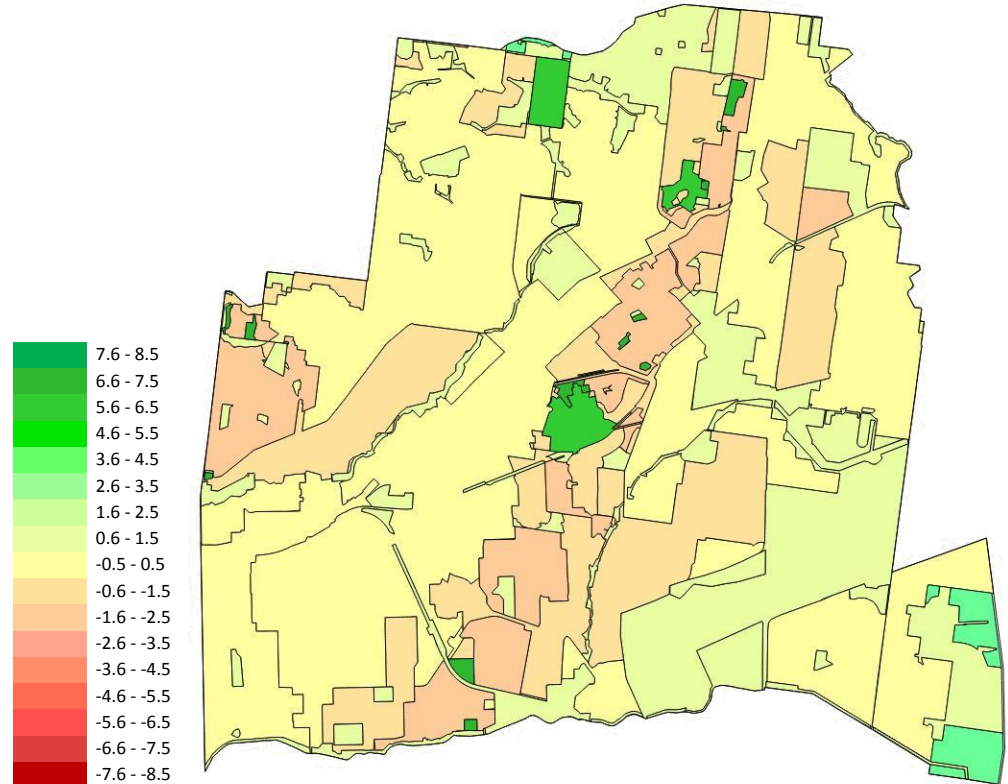
Maroondah Canopy and Landscape Analysis (Cont'd)

- › If a point was hard surface, grass/bare earth or shrub in 2011, and a tree in 2016 = **canopy growth** (either a small tree got bigger or a tree canopy extended laterally to cover one of the other categories)
- › If a point was a tree in 2011, and one of the other categories in 2016 = **canopy loss**
- › Cover gains and losses for each area were then calculated as the proportion (%) of sample points affected.
- › Canopy losses were categorised as caused by '**Construction**' (evident building activity) or '**Removal**' (eg pruning, death or tree removal)

Maroondah Canopy and Landscape Analysis (Cont'd)

The results:

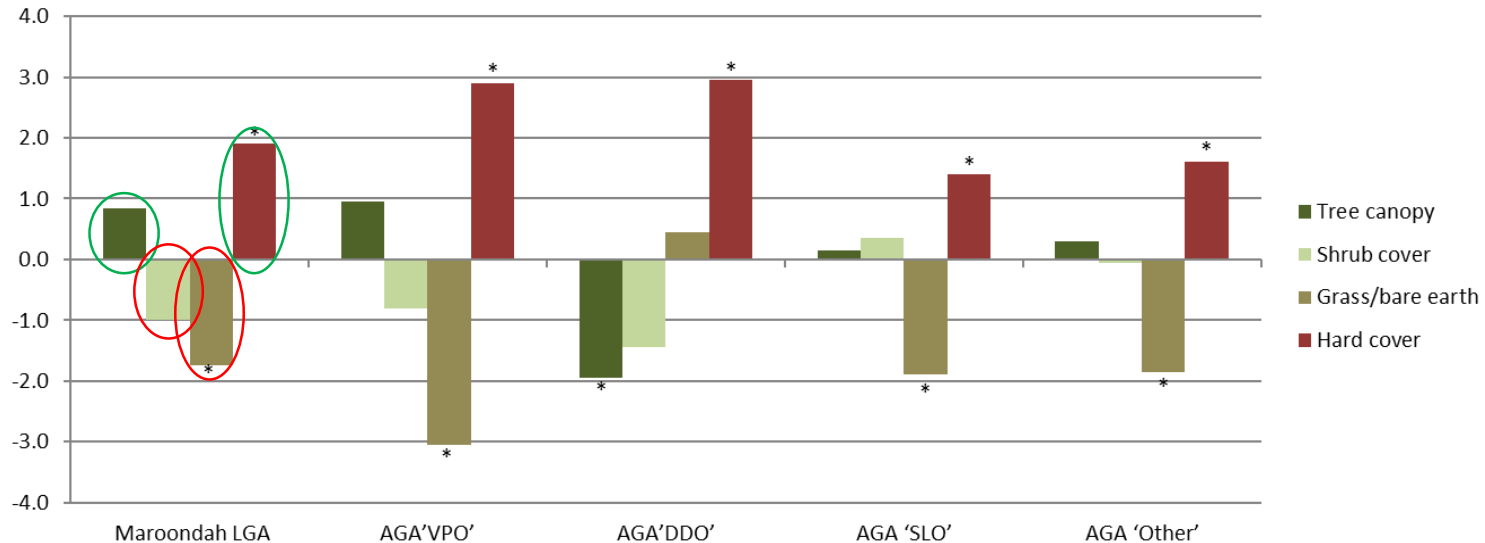
- › Maroondah has relatively high canopy cover – 27.1%
- › All areas experienced gains and losses in canopy cover
- › Slight (0.8%) increase in overall (Maroondah-wide) tree canopy cover from 2011 to 2016 (ie gains slightly exceed losses)



Maroondah Canopy and Landscape Analysis (Cont'd)

Key findings

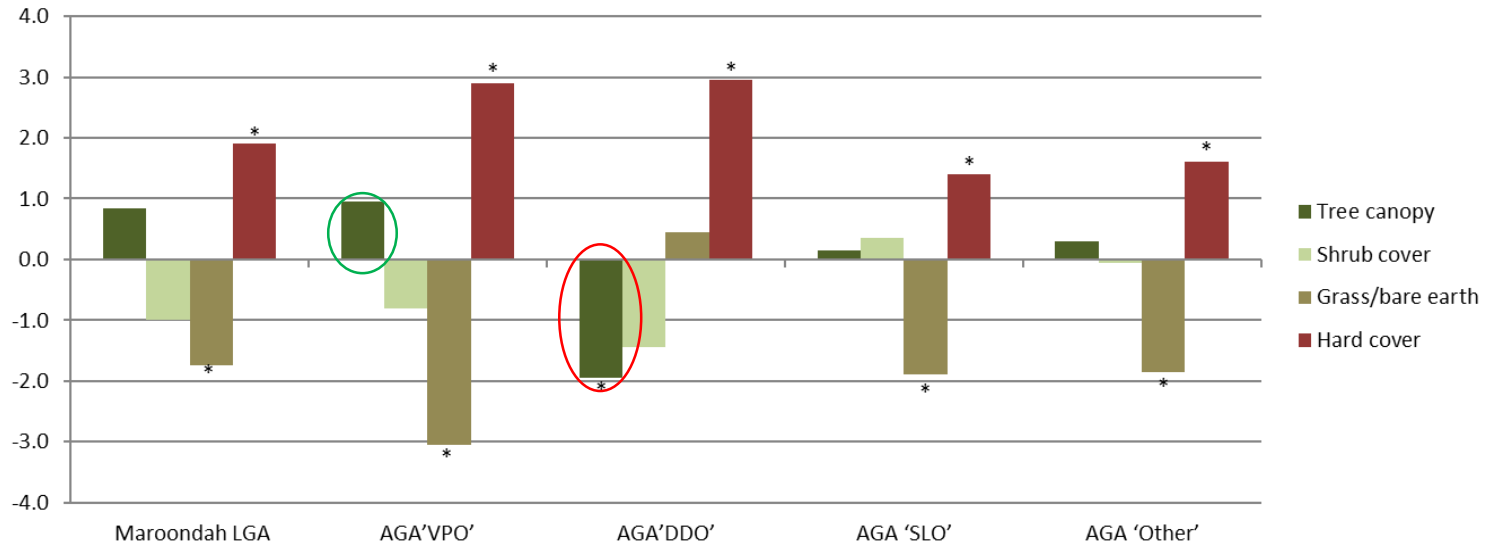
- › Canopy cover gains were largely matched by similar losses in shrub cover
- › Greatest losses occurred in grass/bare earth, converting mainly to hard surface and not shrub cover



Maroondah Canopy and Landscape Analysis (Cont'd)

Key findings

- › Areas covered by a Vegetation Protection Overlay (VPO) had the highest proportion of **canopy growth** (+1.0%)
- › Areas covered by a Design and Development Overlay (but not a VPO) had the highest proportion of **canopy loss** (-2.0%)



Maroondah Canopy and Landscape Analysis (Cont'd)

Other key findings

- › Public open space had the highest canopy cover and was the major contributor to canopy cover growth
- › 15% of Maroondah experienced canopy growth
- › 77% of Maroondah experienced no significant change
- › 9% of Maroondah experienced canopy loss
- › Almost 60% of Maroondah's tree canopy is classified as 'native' (*Eucalypt*, *Acacia*, *Melaleuca*)
- › The 'SLOs and 'Other' aggregate areas offer the greatest potential for increased tree planting on nature strips

Biodiversity in Maroondah

Who: Dr Graeme Lorimer, Biosphere P/L

What was done: Assess condition, changes and future threats to Maroondah's Sites of Biological Significance and Maroondah's biodiversity.

How it was done:

- › Analysis of textual and biological database records
- › Inspection of 135 Sites of Biological Significance identified in 1997 and other sites discovered since.



Biodiversity in Maroondah (Cont'd)

How it was done:

Gathered existing information from literature, databases, museum specimens and previous fieldwork

Each site was visited at least once during 2018 to:

- › Record all indigenous and naturalised plant and animal species observed
- › Record observed changes in presence and abundance of plant and animal species
- › Note changes to habitat extent and update site boundaries

Biodiversity in Maroondah (cont'd)

Key findings for Maroondah

Indigenous plant diversity

> Overall

- > 80 plant species **lost** (out of 562 recorded)
- > Another 171 species **critically endangered**

> Orchids

- > 40 species **lost** (out of 92)
- > Another 32 species **critically endangered**

> Species that are specially adapted to winter-sodden/summer-dry floodplains

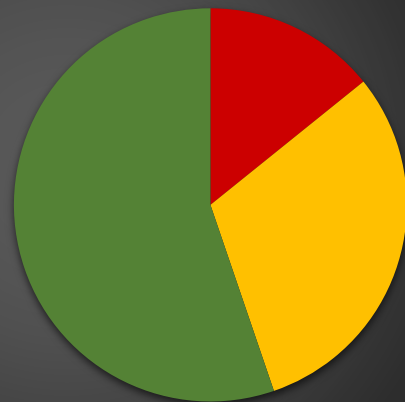
- > 11 species **lost** (out of 45)
- > Remaining 34 species **critically endangered**

Maroondah's Indigenous Plants

■ Locally extinct

■ Critically endangered

■ Endangered, vulnerable or lower risk



Biodiversity in Maroondah (Cont'd)

Key findings for Maroondah

Indigenous animal (vertebrate) diversity

> Overall

- > **33** animal species **lost** (out of 200 recorded)
(ie not expected to return in foreseeable future)
- > **Another 12** species **not recorded for 20+ years**

> Birds

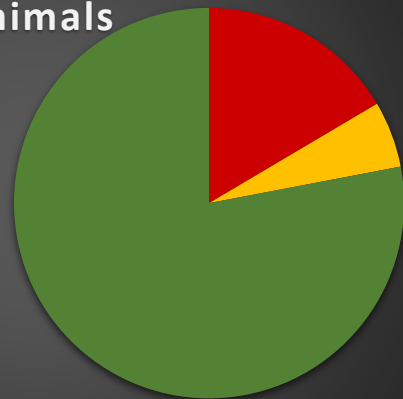
- > **13** species **major decline since 1997**
- > **7** species **significant increase since 1997**

Butterflies

- > **All but 2** species **in decline** (out of 22 recorded)

Maroondah's Indigenous Animals

- Locally extinct
- Not recorded for 20+ years
- Less concern



Biodiversity in Maroondah (Cont'd)

Key findings

Changes in number of SoBS since 1997:

1997 132 sites recognised

1997 to 2019:

- › 12 sites lost - due to loss of nearly all habitat
- › 1 site gained - due to improved habitat condition
- › 4 sites gained - due to elevated significance, but unchanged habitat condition
- › 3 sites gained - due to amalgamation and splitting of 6 sites to become 9 sites
- › 5 sites lost - due to downgraded significance as result of habitat deterioration
- › 14 sites not retained - due to significance criteria changes

2019 109 sites currently recognised

Biodiversity in Maroondah (Cont'd)

Key findings

Changes in habitat extent in SoBS since 1997:

(of the original 132 sites, and the five new sites)

1997 to 2019:

- › 11 sites - practically all habitat extent lost
- › 31 sites - noticeable loss of habitat extent
- › 41 sites - noticeable gain in habitat extent
- › 53 sites - no noticeable net change in habitat extent
- › 1 site - unknown (insufficient data from 1997)

54.5 ha of Sites of Biological Significance lost since 1997 (eg “The Range” estate = 30 ha)

Biodiversity in Maroondah (Cont'd)

Key findings

Changes in ecological condition of SoBS since 1997:

(of the original 132 sites, and the five new sites)

1997 to 2019:

- › 11 sites - effectively all ecological condition lost due to clearing
- › 26 sites - noticeable deterioration in ecological condition
- › 26 sites - noticeable improvement in ecological condition
- › 10 sites - mix of improvement and deterioration
- › 37 sites - no clear change in ecological condition
- › 27 sites - unknown (no access or insufficient data)

Biodiversity in Maroondah (Cont'd)

Key findings

Other observed changes in condition of SoBS:

- › Most of Maroondah's nature reserves have improved in condition
- › Natural or semi-natural vegetation along creeks has deteriorated in condition
- › Sites of significance within school grounds have deteriorated in condition
- › All natural wetlands were lost long ago
- › Many existing artificial wetlands are in poor ecological condition with excessive nutrients

Biodiversity in Maroondah (Cont'd)

Other key findings

Eucalypt deaths

- › Certain species of eucalypt (mainly stringybark species) have suffered extensive population reduction and ill-health (not confined to Maroondah)

Correa hybridisation

- › Offspring of wild plants of Common Correa are predominantly hybrids and are giving rise to dense patches

Range expansions

- › A few species that compete aggressively have extended their range into Maroondah

Naturalised Plants

- › 26 naturalised species nominated as being “major drivers of environmental change”, with Sweet Pittosporum the most serious

Climate change

- › Millennium Drought has had a major impact and climate change is predicted to cause worse droughts

Vegetation Planning Policy Review



Who: Claire Scott, Claire Scott Planning

What was done: Full assessment of the Maroondah Planning Scheme provisions in relation to the protection and management of landscape, vegetation (including canopy trees), and biodiversity.

How it was done:

- › Analysis of current Maroondah Planning Scheme provisions
- › Assessment of findings from canopy cover and biodiversity analyses
- › Analysis of relevant VCAT cases
- › Assessment of implications of recently revised Planning Policy Framework

Vegetation Planning Policy Review (Cont'd)

Key Findings

Existing planning controls:

- › Vegetation Protection Overlay (VPO) – ‘protection’ control.
 - › Permit trigger for vegetation removal only
 - › Apparent effectiveness may be ‘inflated’ by context:
 - › Is applied to public bushland areas where vegetation retention is Council’s responsibility
 - › Is applied to private land where other controls may also affect vegetation (eg minimum lot sizes, site coverage, cut & fill ‘incentives’)
- › Significant Landscape Overlay (SLO) – ‘protection’ control
 - › Can trigger permit for building and works, and/or vegetation removal
 - › Performs a key role of providing a permit trigger for removal of canopy trees

Proposes that Maroondah needs a combination of ‘protection’ and ‘proactive requirement’ controls to successfully manage Maroondah’s tree canopy cover, landscape character and biodiversity

Vegetation Planning Policy Review (Cont'd)

Key findings

Other available planning controls:

- › Environmental Significance Overlay (ESO)
 - › Identified by DELWP (ie State Gov't) as the preferred overlay for biodiversity outcomes
 - › Can control impacts from things like building construction, works, fence construction, subdivision, as well as vegetation removal
 - › Can be used to provide justifiable buffer zones
- › Reforms to Victoria Planning Provisions - eg VC148 (July 2018), VC110 (March 2017)
 - › Opportunity to include 'proactive requirements' in zone schedules (in particular permeability and landscaping specifications)
 - › Opportunity to refocus content of current Municipal Strategic Statement in new Municipal Planning Strategy to strengthen vegetation and biodiversity provisions

