

CACE Urban Forest Fact Sheet

Community Action in the Climate Emergency V2.0 Last edited 25 Aug 2018al

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What can Councils do to support a healthy urban forest?

Increase diversity in species to ensure resilience from diseases and pests

In the past when WA Councils selected trees to plant, particularly street trees, it was common to use a small number of species (eg Queensland Box Tree, Jacaranda, London Plane, Bottlebrush, Peppermint Tree), that were often clones, to give uniformity to street tree plantings. There was a limited supply in the West of suitable advanced stock which affected this lack of choice.

This monoculture of street trees enables diseases, such as the London Plane Tree - honey fungus, to spread easily. It is recommended that the number of species used for street trees be increased and that more local native species be included, to support our biodiversity.

Deciduous species generally provide the greatest cooling effect and are recommended for places where cooling is a priority such as highly trafficked shopping centres and public meeting places. Other non-deciduous trees such as the Ficus, ie Port Jackson Fig and Moreton Bay Fig with their large dense canopy, drought and heat tolerance are also excellent for cooling.

Melbourne's Urban Forest Diversity Guidelines is a great resource for this information - <https://www.melbourne.vic.gov.au/SiteCollectionDocuments/urban-forest-diversity-guidelines.pdf>.

Habitat Corridors

Create and support existing habitat corridors between parklands so birds, reptiles and insects can easily move between reserves.

Set Canopy Cover Targets

Councils need to set ambitious canopy cover targets to help galvanise efforts to reduce the loss of trees, particularly on private land.

Green Space

It was fashionable in past landscaping practices to use large areas of lawn. Planting trees in appropriate places throughout this lawn provides shade and increases canopy cover.

The use of ecozoning, where lawn is replaced with local natives and mulch, around the edges of greenspace should be encouraged. This practice provides habitat and saves water as the local natives require less water than lawn.

Heat Mapping

Urban areas, with little shade and lots of hard surfaces, can suffer from the urban heat island effect, where ambient temperatures are higher than regional areas or surrounding farmland or bush. Airborne thermal remote sensing is a useful tool for identifying the hot spots in the town or city. This is a great way to identify priority areas for urban forest implementation. Reducing the urban heat island effect will reduce deaths and hospitalisations during future heat waves.

Street Tree Matrix

Selection of street trees must be carefully considered as the street location can be really tough on living things. Street locations usually have higher than normal pollution, compacted soil and heat and lower than usual soil volume and rain penetration. If powerlines are present they may need regular pruning and there are often many underground services that require the soil to be regularly disturbed.

A street tree species matrix is a spreadsheet that helps arrive at a short list of suitable species for any given street. It helps eliminate inappropriate planting, minimise negative interactions with built infrastructure and will reduce the cost burden of increased maintenance and replacement costs.

Water harvesting

Tree pits or similar water collection designs can be used to intercept and direct stormwater runoff to street trees and help support them.

Recognising the economic value of trees

Trees to be prescribed a value to enable the assessment of the economic, health and environmental contributions that trees provide.

Private Property

The largest loss of trees in Perth's Urban Forest, in the past few decades, has been from private land. This is due to increased density, poorly designed developments, and people's tolerance for risk being extraordinarily low and getting lower when considering trees potential impact on people and property.

Significant Tree Register

Significant trees are an important part of the natural and cultural landscape. They help make the urban environment healthy and more beautiful and contribute to the character. A significant tree register can help protect trees with unique historic, cultural or botanical values in public parks and streets as well as privately owned properties. The register helps to guide their management so they are protected for future generations.

Where a significant tree is on private land the owners will get advice from the Tree Consultant (see below). Councils should consider also supporting the owners of significant trees with the costs of maintaining the tree/s eg soil amendment, mulching, irrigation and judicious pruning where required.

Examples:

http://www.cityofsydney.nsw.gov.au/__data/assets/pdf_file/0015/111273/Register-significant-trees-sections-A-B.PDF

<https://www.mandurah.wa.gov.au/environment/Trees-and-Bushland/significant-tree-register>

Tree Consultations for Private Property

Private property owners with large trees can feel pressured by neighbours to remove the tree due to perceived risks and leaves falling into their property. There may be other neighbours who really appreciate the shade, habitat and cooling the tree/s provide but often the owner only hears from people who want the tree removed.

To help combat this the Council could employ or use a suitable consultant whose role is to encourage the retention of large trees on private property and advise and encourage the planting of trees (large ones where possible) on private property. The consultant would

- Inspect existing large trees and trees on the Significant Tree Register and advise on safety and any judicious pruning that is required. (the consultants company would be banned from carrying out the pruning to remove any conflict of interest).
- Provide advice on suitable locations, particularly for large trees.
- Provide suitable tube stock and plant on the property.
- Be present on community days to promote the service and educate the community on large trees.

Get Creative

Sometimes it's hard to find space for trees, due to underground services leaving little room for roots or large buildings and just lots of hard surfaces. Here's some ideas for alternatives

- Above ground planters
- A trellis with creepers such as Wisteria, Native Wisteria or Fruitless Grapes planted in planters
- Green walls (but Perth can be tough on green walls in summer so carefully consider the aspect, irrigation requirements and species)
- Vines and creepers are a tougher alternative to green walls and can be grown directly on the wall or supported with a trellis.

Landscaping Standards for New Developments

Landscaping Standards for new developments need to require high quality, sustainable landscape spaces. There should be incentives to retain mature existing trees. They should set out requirements that ensure there are deep soil zones where large trees can be planted and the percentage of canopy cover required within 5 years of development.

City of Vincent's Draft Built Form Policy (see link below) offers practical examples of how councils can encourage useable private landscape spaces that support large trees and the urban forest. Highlights are

- 30% of the site area is to be provided as canopy coverage within 5 years of development approval.
- Open air car parks are to have a minimum of 80% canopy coverage within 5 years of approval.
- All open-air parking areas are to be landscaped at a rate of one tree per four car bays.
- Deep soil zones are to be provided as follows:

Site Area	Minimum Area	Deep Soil Zone (% of site)
<650m ²	1m ²	12%
650m ² – 1,500m ²	3m ²	12%
>1,500m ²	6m ²	12%

NOTE: the minimum dimension for the area of deep soil zone is to be 1m

- An incentive to retain mature existing trees with a reduction of the required deep soil zone by 8%.
- The perimeter of all open-air parking areas are to be landscaped by a planting strip of at least 1.5m width.
- Landscape maintenance scheduling requirements

<https://www.vincent.wa.gov.au/agenda/2016/20160920/briefingagenda/att/bfpolicy7.pdf>

Car Parks

Unshaded large car parks really amplify the urban heat island effect. Investigate and promote the use of alternative materials to black bitumen, eg Light colour painted bitumen and as little hard surfaces as possible.

Require the carparks of all new developments to install trees that will provide a 80% or more canopy cover. Find ways to work with the owners of existing car parks to shade and cool the area.

Guidelines for Disease, Drought and Heatwaves

With WA's drying climate, increased heatwaves and tree diseases we need to ensure that any new tree species planted and existing trees will cope with the reduced rainfall, known diseases and heat stress during prolonged heatwaves. Guidelines should be developed to ensure appropriate new species are planted and methods to optimise the survival of existing trees recommended. Methods such as mulching root zones, increased use of irrigation and biosecurity hygiene requirements when working near trees should be considered.