CITY OF VINCENT

GREENING PLAN

2018 - 2023

Contents

VINCENT'S GREEN VISION

What is the City of Vincent Greening Plan?

The City of Vincent Greening Plan (Greening Plan) is a pathway to delivering on our responsibility to protect, enhance and effectively manage our natural and built environment.

The Greening Plan focuses on opportunities to increase overall tree canopy cover, create more liveable neighbourhoods and foster biodiversity. These opportunities are sought on both public and privately owned land.

The objectives of Greening Plan 2018-2023 are:

1. INCREASE CANOPY COVER ON PUBLIC LAND

Increasing tree canopy cover on land managed by the City of Vincent.

2. ENHANCE HABITAT AND PROMOTE BIODIVERSITY

Increasing the diversity and overall height of trees and other vegetation; and

Linking areas of existing habitat and biodiversity through new habitat plantings across the City.

3. GREENING THE TOWN CENTRES

Improving the amenity of Vincent's Town Centres and reducing the urban heat island effect through trees and other vegetation.

4. GREENING PRIVATE LAND AND NEW DEVELOPMENT

Developing mechanisms to encourage the retention of existing tree canopy;

Requiring the incorporation of tree canopy, green infrastructure and vegetation cover in new developments; and

Advocating for changes to state planning legislation and policy to facilitate protection of existing tree canopy on privately owned land.

5. GREENING THE COMMUNITY

Increasing community awareness of the social and environmental benefits of trees and green spaces; and

Inviting and supporting community involvement in greening activities.

What is the purpose of the Greening Plan?

Implementation of the Greening Plan will provide numerous environmental, social and economic benefits, including:

- more liveable neighbourhoods;
- enhanced community well-being;
- removal of atmospheric carbon to counteract human-induced climate change;
- mitigation of the urban heat island effect;
- increased biodiversity;
- improved air quality and overall environmental health;
- storm and ground water quality improvements; and
- a community that is empowered to undertake greening activities.

Greening Plan 2018-2023 will provide guidance and direction to the City's strategic planning, parks, environmental and community partnerships teams and programs. It will also inform the City's community about the types of greening activities they can expect to see in the future and about opportunities to get involved.

INTRODUCTION

Strategic Context

All local governments are required to have a plan for the future. This takes the form of a Strategic Community Plan, which is an overarching document, informed by extensive community consultation. It sets the strategic direction for the entire organisation and is supported by a number of informing strategies and plans. One of these is the Greening Plan. The Greening Plan comes under the umbrella of the City's Sustainable Environment Strategy, which addresses all aspects of environmental sustainability in the City of Vincent. The Sustainable Environment Strategy also informs the City's Public Open Space Strategy which in turn has close links with the Greening Plan.

The relationship between the Greening Plan and other strategic documents is represented in figure 1. Together these strategies and plans inform the City's four year Corporate Business Plan and Annual Budget.

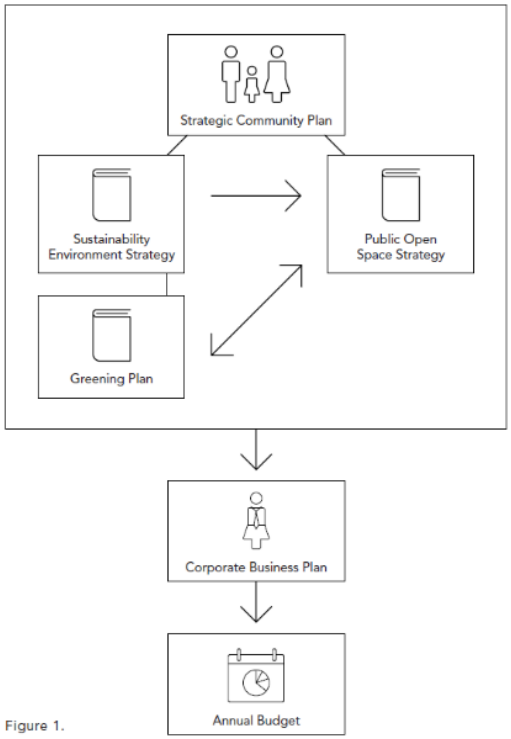


Figure 1.

Our Green Past

Historically the landscape that comprises the City of Vincent local government area consisted of a series of lakes and wetlands. Many of these were interconnected, forming a chain of water bodies that ultimately drained into the Swan River via Claise Brook in East Perth.

From the 1850s, prompted by repeated flooding and associated health concerns for a growing population, the wetlands were progressively filled in to make way for development, industry and market gardens.

The gold boom period of the 1890s in particular, brought exponential population growth that resulted in large scale subdivision and property development.

The post-World War Two period brought a further wave of population growth, with associated land reclamation for residential development and recreational uses.

In line with the popular landscape design trends of the time, the majority of our City's parks and reserves were designed in the European style. This meant open grassed areas, scattered trees (often of European origin) and very little mid or lower storey planting.

By 1966 an estimated 75% (200,000 hectares) of the wetlands of the Swan Coastal Plain had been lost. In the City of Vincent, this figure is estimated to be closer to 99%. Today, along with its wetlands, our City has lost nearly all of its remnant native vegetation.

The Present

Well in advance of adopting its first Greening Plan in 2014, the City recognised the importance of urban green space, tree canopy cover, native habitat and biodiversity. By 2007 the City had put in place policy provisions to protect and maintain its street tree canopy and by 2011 the City had commenced its eco-zoning program, aimed at revegetating underutilised grassed areas in parks and reserves with native understorey plants, thereby converting them into native gardens that provide food and habitat for local fauna.

The City has also restored a number of sites including former wetlands and river foreshore to a state resembling pre-European settlement.

Smith's Lake has been converted from a concrete and lawn-edged lake to a natural wetland setting, with a fringing vegetation of native species. This provides habitat for frogs and invertebrates and nesting sites for water birds, whilst reducing the nutrient inflow to the water body.

A seasonal wetland has been created in Robertson Park, heavily vegetated with native species and featuring a lake known locally as Little Boojoormelup.

Hyde Park lakes have undergone major restoration to provide secure habitat for waterbirds and aquatic animals and at the same time reduce groundwater extraction and improve water quality.

A number of restoration projects have been carried out at Banks Reserve including foreshore restoration projects (2007 and 2018) and the restoration of Walters Brook completed in 2014. Bio-engineering techniques including revegetation using local native species were used to stabilise the river foreshore whilst increasing the amenity, biodiversity and habit in the area.

Beyond the ecological value of native fauna and flora, urban vegetation provides significant health and wellbeing benefits to human inhabitants of cities. Perhaps most important among these is the mitigation of the urban heat island effect. The loss of urban vegetation in Vincent over the past century has brought into sharp focus the value of this important environmental service.

Long-lived woody plant species such as trees and large shrubs act as carbon sinks, mitigating human-induced climate change. They also moderate some of the unavoidable impacts of climate change such as increasingly powerful storm events by diffusing strong winds, slowing and filtering storm water run-off and reducing soil erosion.

In the baseline year of 2009, the City of Vincent local government area had 11.7% of its total area covered by urban tree canopy. Of this, 41% was located on privately owned land and therefore vulnerable to ongoing urban development. Between 2009 and 2014, 43,733 m^2 of this canopy was lost to subdivision and urban infill.

Land owned or managed by the City accounts for one third of Vincent's local government area and in the baseline year of 2009 held 59% of the City's tree canopy. By 2014, this had increased by 62,993m^2 as a result of the City's dedicated tree planting, maintenance and protection efforts.

The tree canopy gained in the public realm between 2009 and 2014 managed to offset the loss of trees on privately owned land, resulting in a small growth in overall canopy cover across the City to 11.9%.

Local governments in Western Australia currently have little power to protect trees and other vegetation on privately owned land. However the City has sought to harness the planning instruments available to local government to incentivise the retention of existing mature trees on development sites and to mandate the planting of new trees once development is completed. Policy provisions to this effect were introduced in 2017 as part of the City's new Built Form Policy (Policy No. 7.1.1). The effects of these policy provisions are expected to manifest within the next Greening Plan review period.

Our Green Future

The City will continue to develop and deliver programs to grow tree canopy and increase habitat and biodiversity in the public domain.

However, land managed by the City is finite and space for additional plantings will eventually run out. When all available public land is fully planted and those trees reach maturity, our city will still fall short of achieving its 20% overall canopy target by 2050 unless the current loss of trees on privately owned land can be reversed.

To arrest the loss of tree canopy on privately owned land, the City will need to leverage the power it has to incentivise the retention of existing vegetation on development sites and to mandate the planting of additional trees and shrubs after development is completed. This will be achieved through effective engagement with developers and related industry professionals.

To achieve an increase in canopy cover on privately owned land, the City will need to go further. Property owners and residents will need to be engaged in a shared sense of ownership and responsibility for greening Vincent. This will require ongoing community education and the resourcing of related support programs and activities.

Further action to protect and grow tree canopy on privately owned land will require changes to the Western Australian Planning and Development Act and state planning policy. The City will continue to advocate to the Western Australian Government to bring about such changes and to open the way for local governments to implement mechanisms for tree protection and canopy growth that are currently not available to them.

Review of Greening Plan 2014

In July 2014 the City adopted its first Greening Plan. This identified six key objectives corresponding to the City's top greening priorities:

1. Increasing Tree Canopy
2. Enhancing Habitat and Promoting Biodiversity
3. Greening, Enlarging and Enhancing Public Open Space
4. Greening the Five Town Centres
5. Greening New Development
6. Greening the Community

For each of these objectives Greening Plan 2014 identified relevant targets and actions. Appendix 1 provides an overview of how the City has performed in delivering on these objectives, targets and actions to date.

HOW WE DEVELOPED GREENING PLAN 2018-2023

Gaps and opportunities

Development of Greening Plan 2018-2023 started with the review of Greening Plan 2014. Gaps and opportunities revealed themselves as the City assessed its actions and their outcomes against the Greening Plan objectives and targets set in 2014.

A summary of these gaps and opportunities, and how they are to be addressed in Greening Plan 2018-2023 is presented below:

Gaps and Opportunities in Greening Plan 2014	How they will be addressed in Greening Plan 2018-2023
Objective 1 – Increasing Tree Canopy	
Objective 1 in Greening Plan 2014 addressed tree canopy generally. It did not differentiate between canopy on privately owned and City-managed land. Given the observed trend in canopy loss and gain across the two domains, and current barriers to tree protection on privately owned land, the City must acknowledge that the potential canopy cover on private and public land is likely to be very different, targets and actions for these two domains must by necessity be separated. The targets and actions for privately owned land are more closely aligned to those of Objective 5 (Greening New Development) as they all involve influencing the choices and behaviours of private land owners. Unlike vegetation on public land which is at the City's discretion.	Objective 1 in Greening Plan 2018-2023 will address only City-managed (public) land. Privately owned land will be addressed under Objective 4 – Greening Private Land and New Development.
The single long-term canopy target set for 2050 makes it difficult to assess how the City is tracking toward that target in the short to medium term.	Going forward, five-yearly interval targets will be set to enable more effective tracking of progress.

Gaps and Opportunities in Greening Plan 2014	How they will be addressed in Greening Plan 2018-2023
Objective 2 – Enhancing Habitat and Promoting Biodiversity	
Objective 2 included targets for creating and maintaining a biodiversity monitoring program. Given the resourcing requirements, the value of such a program is questionable in a highly urbanised setting that has few pockets of remnant vegetation and no intact ecological communities.	Acknowledging that the City is starting from a very low ecological baseline, targets and actions for Objective 2 will focus on protecting and expanding known areas of biodiversity. This will be achieved through greenway linkages and through a growing diversity of future plantings across the city that will provide opportunity for adaptation and survival of both flora and fauna in a changing climate.
Objective 3 – Greening, Enlarging and Enhancing Public Open Space	
Public open space (POS) encompasses a great deal more than the green components of parks, reserves and Town Centres. Many aspects of enlarging and enhancing POS therefore fall outside the remit of a greening plan. These include consideration of active versus passive recreation zones and upgrades to infrastructure and equipment to cater for changing local demographics. Recognising the importance of addressing POS in a strategic and comprehensive way, the City is developing a separate POS Strategy. Greening Plan 2018-2023 will inform this Strategy in relation to the future greening of POS.	There will be no objective relating specifically to POS in Greening Plan 2018-2023. Targets and actions related to the greening of POS will be included under Objectives 1, 2, 3 and 5 of the Greening Plan. Due to the deletion of the POS section, Objectives 4, 5 and 6 from Greening Plan 2014 will become Objectives 3, 4 and 5 respectively in Greening Plan 2018-2023.
Objective 4 – Greening the Five Town Centres	
While the City currently recognises five Town Centres, there is potential for these to grow in number during the implementation period of Greening Plan 2018-2023.	The title of this objective has been changed to allow for the addition of further Town Centres and reporting of related greening activities in future.
Greening Plan 2014 set an unquantified target of a “year-on-year increase” in Town Centre plantings.	Greening Plan 2018-2023 will set a measurable canopy cover target for Town Centres. To enable tracking of progress toward 2050, five-yearly interval targets will also be included.

Gaps and Opportunities in Greening Plan 2014	How they will be addressed in Greening Plan 2018-2023
Objective 5 – Greening New Development	
As discussed under Objective 1 above, the potential for canopy cover on private land versus public land is likely to be very different. Targets and actions for these two domains should therefore be separated.	Tree canopy on privately owned land will be addressed under Objective 4 of Greening Plan 2018-2023 and this Objective will now be renamed *'Greening Private Land and New Development*'.
Having implemented the available planning instruments to protect trees and vegetation on development sites, the City must now shift its focus to education and advocacy to protect trees that are not currently captured within the development approval process.	A new set of actions will be added relating to engagement of land owners, developers and State Government in the protection of trees and vegetation on privately owned land.
Objective 6 – Greening the Community	
No significant gaps identified.	Minor adjustments to wording only.

Key considerations

Competing land uses

In the context of a rapidly densifying urban landscape, the City must consider competing functions in the allocation of limited public land. This includes providing safe pedestrian access and cycle ways, sporting fields and passive recreational areas in addition to habitat and canopy plantings. The City is also obliged to preserve traditional planting schemes in parks covered by heritage conservation plans. These do not tend to align with the Greening Plan vision of native species and dense understorey habitat plantings.

Innovative, multi-functional public domain landscaping is the solution for delivering amenity, recreational opportunities, habitat and biodiversity all in one package.

Competition for root and canopy space

The *Utility Providers Code of Practice* provided by Main Roads Western Australia sets out the standard allocation of space in road reserves. This imposes limitations on the location of trees and precludes their planting entirely in some cases. Sometimes the location and depth of underground utilities do not match the available technical drawings, resulting in necessary changes to planting plans.

The City is now using root barriers and redirectors to minimise potential conflict with underground utilities and will continue to investigate further technologies and alternative solutions into the future.

Above ground powerlines, buildings and existing trees also limit canopy space.

Western Power requires a minimum clearance of 2.5 metres to the side, and 2 metres below powerlines. There is no vegetation allowed above powerlines. This limits street tree canopy size significantly on the majority of Vincent's roads and also reduces shade density.

Undergrounding of powerlines appears to be some decades away for Vincent. The City is investigating alternative solutions such as insulated bundling of overhead power cables, which could allow tree canopy to grow around them.

In Town Centres, buildings abutting the footpath and awnings that reach to the curb are desirable as they create an embracing human-scale environment. They also limit street tree canopy spread, which is essential for counteracting the urban heat island effect created by the predominance of thermal mass in Town Centres. Ideally, tall canopy trees would fill the space above the street, but when trees must be pruned hard on one side to accommodate building facades, they can become unstable and fail to thrive. Wherever possible, the City plants tall, spreading canopy trees in the centre to Town Centre streets to avoid this competition from buildings.

Increased density of plantings to achieve greater canopy cover also increases competition between trees above and below ground. Careful considering is given to mature tree canopy size and root system extent when planning tree densities and spacing. The City's new Tree Selection Tool (see Appendix 3 and further description below) will be instrumental in informing such decisions going forward.

Changing environmental conditions

Modified soil and microclimate plus changing macroclimatic conditions require consideration when selecting plants for greening projects. Some local native species are already struggling under present conditions and may no longer be suitable for large scale planting in future.

Street trees are a particular challenge. Extensive areas of impervious paving and root zone compaction limit the opportunity for rainwater infiltration to root zones. Extreme heat events of increasing duration are combining with lengthy dry periods and declining access to ground water to severely limit plant growth and survival. A broader range of Australian and exotic species suited to Perth's future climatic conditions (including fruit and nut trees) will need to be considered for future habitat and amenity functions.

To facilitate the best possible choice of tree for each type of streetscape and planting environment the City has developed a Tree Selection Tool (see Appendix 3). The Tool will be used by the City's Administration to select trees for planting in the public domain and also to advise developers on suitable species to meet the City's canopy cover requirements for new developments. Maximising biodiversity and canopy coverage are key selection factors within the Tool, which is based on a master list of trees that are proven performers in the local environment, but can also draw upon a trial list of trees that are yet to be tested under local conditions. Depending on the project and planting scenario, the tool can be asked to generate recommendations from either the master list or trial list. Once tested, it is likely that a number of trial list trees will move onto the master list and may become important for the City in future.

A spin-off from the development of the Tool has been the *Choosing a Tree for your Property* guide. It provides a list of trees suitable for Vincent gardens, describes their key features and shares handy hints for ensuring planting success.

Availability of tree species

There are a number of tree species that the City intends to trial in future, but which are not yet readily available in commercial cultivation. Careful planning, pre-ordering and project timing will be required to ensure that such trees are available and ready for planting at the right time.

Trees are not only a mitigator of the urban heat island effect but also its victim. Extended heat waves stress and kill trees just as they do people. As our climate continues to warm the City will need to place increasing focus on identifying heat islands and seek additional ways to reduce them. This may include shade structures, choosing lighter colour schemes in the public domain and using planning instruments to require similar measures in private developments.

There are currently only two areas of heat vulnerability identified within Vincent, both located on State Government controlled land and both in the vicinity of East Perth Station. The City has little influence over planting in these areas but will advocate to the relevant state agencies to priorities these areas for future greening.

Timing of projects and coordination of resources

The Greening Plan is coordinated within the City's infrastructure provision activities, ensuring space for trees, landscape treatments and water sensitive urban design. The practice of green infrastructure crosses many disciplines including planning, engineering, place management, sustainability, parks/environment and community engagement. Since the adoption of Greening Plan 2014, teams and individuals from across the City's directorates have come together in collaborative teams to deliver successful green infrastructure projects in accordance with a five year Implementation Plan.

An updated five year Implementation Plan for Greening Plan 2018-2023 (see Appendix 2) sets out the schedule of works for the projects and programs that will deliver on the updated greening targets. Ongoing management and maintenance of completed projects is factored into the parks team's annual operating budgets and service unit plans. In addition, a Street Tree Master Plan (see Appendix 4) has been developed to prioritise streets for new plantings based on the need for shade and the status of existing street trees.

Water limitations

Ground water allocation is strictly limited and the City works hard to priories water use for its most vital functions, which include the establishment of street trees and public space plantings. Wherever possible, hardy water wise species are chosen and the new Tree Selection Tool will further assist in this regard.

As water allocations are expected to reduce further, the City is starting to explore alternative fit-for-purpose water sources to supplement its irrigation. Water sensitive urban design and other opportunities to obtain additional water supplies through industry and government collaboration will need to be explored.

To this end, the City is undertaking a benchmarking process using the Water Sensitive Cities Index. This will identify gaps and opportunities in the City's approach to dealing with water in the landscape and lay the groundwork for the City to maximise the capture, use and local infiltration of environmental water.

Lifecycle of trees

All trees have a natural lifecycle involving the stages of growth, maturity and decline. Identification and classification of individual trees and their wider context (ecosystems) is imperative. Enhanced understanding of the trees within the City will lead to higher quality management techniques which will, in time, lead to the improved care, value and amenity of urban vegetation.

The work carried out to date in creating the City's Tree Selection Tool has gone some way to provide answers about the characteristics of a range of tree species and their expected performance within the local context. As trees are trialled over the coming years, further information about local performance will be added to the Tool to grow the body of knowledge that will inform tree selection and care into the future.

Data collection and analysis

Measurement of vegetation and tree canopy cover relies on the use of existing mapping technologies. The review of Greening Plan 2014 was informed by aerial imaging obtained through Landgate's Urban Monitor project[1] and by heat island mapping obtained through 202020 Vision[2].

Additional imaging and measurement technologies will be employed as they become available, including technologies that may enable modelling and projection of future vegetation and canopy cover based on policy settings and expected development.

Targets set within the Greening Plan will continue to be tracked and performance measured to ensure that its objectives are being achieved.

Vegetation imagery will continue to be collected and mapped every five years to monitor changes. Updated heat island imaging will also be sought.

In order to keep abreast of best practice in the regional and wider context, the greening plans, policies and programs of other relevant authorities will continue to be monitored.

[1] https://www.environment.gov.au/system/files/resources/23952ac8-31d4-44b0-bad6-3a4179f4e3bb/files/urban-monitor-final-report.pdf

[2] http://202020vision.com.au/media/162690/wsattg_wa_fa3.pdf

Engagement

Effective community engagement is essential for the success of every aspect of the Greening Plan across both public and private domains. The City will therefore need to continue its engagement efforts across all segments of the community.

Over the next five years there will be a strong focus on communicating the benefits of urban vegetation and tree canopy. A variety of incentives and support mechanisms to assist property owners with planting, maintenance and retention will need to be developed and implemented.

To halt the loss of tree canopy to new development, the City will need to ramp up efforts to engage with developers and property industry professionals. The City's Built Form Policy would form the basis of this engagement and be supported by the Tree Selection Tool, which assists with appropriate tree selection for maximum tree canopy and long-term tree survival in development settings.

The City will also need to continue working closely with Town Centre stakeholders to meet their needs whilst achieving the City's greening objectives. Each Town Centre's individual character and function will need to be respected, through appropriate species selection and choice of installations.

Community groups whose activities align with the objectives of the Greening Plan will continue to be important partners in both the ideation and delivery of greening projects and in the dissemination of greening knowledge and inspiration to the wider community. The City will continue to support and collaborate with such groups to maximise community benefit.

The City will also need to maintain its collaborative and advocacy efforts with the Western Australian Government to inform and bring about changes in regulation to further increase the protection of trees.

3. GREENING PLAN 2018-2023

Objective 1: Increase Canopy Cover on Public Land

Tree canopy cover is defined as foliage that is 2.5 meters or higher above the ground and therefore provides overhead shade for people and for the surfaces and materials that people interact with in the environment.

A lack of tree canopy in built up urban centres creates a heat island effect, resulting in temperatures at ground level that are significantly hotter during summer than in nearby ‘leafy’ areas.

In recognition of this, cities around the world are increasing urban tree planting. Targets for urban canopy cover internationally range from 17 to 34%. Best practice for urban residential and light commercial areas is 25%.

Taking into consideration local factors such as a drying and warming climate, declining access to groundwater and competition for space both above and below ground, the following targets and actions have been created.

Targets:

- Tree canopy cover of 35% on public land by 2050 (interim target: 23.33% by 2023)
- Net increase in canopy cover of 1.88% compared to each previous imaging cycle (imaging to be completed every five years)
- Net year-on-year increase in street tree numbers – 100 trees on average per year (current number ~13,000)
- 51 kilometres of greenways established by 2050 (interim target: 26.5 kilometres by 2023, building on 25 kilometres of greenway planting completed between 2014 and 2018)

Actions:

- Plant more trees than are lost or removed
- Complete 1.5 kilometres of additional greenway planting per year
- Select trees to maximise overall canopy cover for each planting area
- Implement quality pruning & management techniques to maximise the canopy of each individual tree

Objective 2: Enhance Habitat and Promote Biodiversity

The ecological health of urban areas is a function of the abundance and diversity of local flora and fauna. The healthier the natural environment, the more environmental services it can provide, and the better the health and well-being of its local community. Improving urban ecosystems provides both environmental and social benefits to a city.

By protecting, enhancing and expanding out from the City's existing pockets of biodiversity, the abundance of locally-indigenous plants and animals can be increased across Vincent. Birds, invertebrates, frogs and small reptiles such as skinks are the main groups of fauna most likely to benefit from the City's planting activities.

Targets:

- Net year-on-year increase in native habitat plantings to continue until 2050 (4,000m^2 of eco-zoning on average per year, building on 49,549m^2 of eco-zoning completed by 2018)
- Net year-on-year increase in the variety of native habitat plants on the City's planting list

Actions:

- Identify existing areas of biodiversity value
- Preserve, enhance and expand existing areas of biodiversity value through supplementary planting
- Connect existing areas of biodiversity value through additional planting of biodiversity linkages across the City
- Prioritise the preservation & improvement of native habitat and biodiversity in all greening activities

Objective 3: Greening the Town Centres

Our City's Town Centres are well established urban hubs of vibrant shopping and recreational activity. Since the adoption of Greening Plan 2014 they have also been the focus of intensive greening activity, with the aim of transforming these built up areas into green recreational hubs. As a result, each Town Centre's unique character is now being further enhanced through sensitively integrated greening projects.

The City's Parks and Engineering Services will continue to work closely with Place Managers and Town Teams to identify and prioritise the location, nature and extent of greening activities to maximise function, amenity and environmental benefits. Where appropriate, Town Centre greening activities will continue to extend beyond Town Centre boundaries to adjacent commercial and mixed use zones.

Town Centres are comprised of intermeshed public and private spaces and through their built-up nature tend to limit the space available for tree canopy. This has been taken into consideration in setting of the following targets, which are intermediate between the canopy cover targets for public and private land.

Targets:

- Average Tree canopy cover of 20% for the Town Centres by 2050 (interim target: 9.7% by 2023, up from 8% in 2014)
- Year-on-year enhancement, enlargement or addition of amenity plantings in each of the Town Centres

Actions:

- Select trees and amenity plantings based on the functional needs of each Town Centre and in consultation with relevant stakeholders
- Proactively engage with and provide technical advice to stakeholders involved in greening activities
- Develop a program of tree planting in City-managed open air car parks to achieve 80% tree canopy cover in accordance with the City's Built Form Policy 7.1.1

Objective 4: Greening Private Land and New Development

Privately owned land accounts for 66% of the Vincent local government area. Infill development in this domain has been the main contributor to decline in Vincent's tree canopy and vegetation cover. The recent introduction of policy provisions to preserve and increase tree canopy and soft landscaping in new developments is one mechanism through which the City aims to reverse this trend. Other approaches will require proactive engagement and advocacy with landowners and state government as set out in the targets and actions below.

Targets:

- Tree canopy cover of 12% on privately owned land by 2050 (interim target: 7.53% by 2023, up from 6.81% in 2014)
- Reduced loss of tree canopy cover on privately owned land compared to each previous five-yearly imaging cycle
- Increased tree planting compared to each previous five-yearly imaging cycle
- Compliance with the tree retention, deep soil zone and tree canopy provisions of the City's Built Form Policy 7.1.1
- Increased planting of trees and other vegetation on privately owned land

Actions:

- Educate the community on the benefits of trees and soft landscaping
- Support and advise residents in choosing appropriate tree and landscaping species
- Engage and educate developers on the value of trees and soft landscaping to developments
- Advise developers in choosing appropriate tree and landscaping species
- Use available planning instruments to mandate and incentivise the retention or reinstatement of vegetation
- Investigate incentives for encouraging tree retention by property owners outside the development approval process
- Advocate for changes to state planning legislation and policy to facilitate protection of both trees on privately owned land and their owners against tree-related liability

Objective 5: Greening the Community

The Vincent community remains the City's single greatest resource for greening the urban landscape. Since the adoption of Greening Plan 2014 the City has encouraged and supported its community's greening efforts and aspirations through a variety of projects, programs and initiatives. Community interest in urban greening has in turn continued to grow.

To reap the highest possible social and environmental benefits of trees and urban vegetation, the City will continue to educate, inspire and resource its community to pursue the possibilities and fulfil the potential inherent in urban greening.

Targets:

- A community that is empowered to contribute to and actively participate in the greening of Vincent
- At least one community-driven greening project per year delivered by the community with financial and in-kind support from the City

Actions:

- Provide effective communication, education and networking opportunities centred on urban greening
- Invite community input and participation in City driven greening initiatives
- Invite the community to nominate greening projects and initiatives to be delivered by the City
- Support the community to deliver greening projects and initiatives through financial and in-kind support from the City

APPENDICES

Appendix 1 – Review of Greening Plan 2014 – What We Have Achieved

Objective 1: Increasing Tree Canopy

Targets set in Greening Plan 2014 relating to tree canopy and vegetation cover:

Targets	Outcomes
Increase Vincent's overall tree canopy cover from 11.7% to 20% by 2050.*	Between the baseline** year of 2009 (figure 2) and follow-up mapping in 2014 (figures 3 and 4), overall net canopy gain for the City was 0.2% • Canopy cover on land managed by the City increased by 62,993m^2 – expressed as a percentage, this was a 1.58% increase from 19.87% in 2009 to 21.45% in 2014 • Canopy cover on privately owned land decreased by 43,733m^2 – expressed a percentage, this was a 0.58% loss from 7.39% in 2009 to 6.81% in 2014 Note: At the time of review, the latest vegetation data available to the City was for the year 2014.
Measurable net increase in vegetation and canopy cover compared to each previous imaging cycle. (Vegetation includes, grass, ground covers, shrubs and trees)	Total vegetation appeared to decrease by 1.99% between 2009 (figure 5) and 2014 (figure 6), but some of this decrease turned out to be an artefact of the mapping technology • Around one third of the apparent vegetation loss was recorded on land managed by the City. However, closer examination of the vegetation maps (figure 7) revealed much of this "loss" to be areas of dry turf in the City's parks and reserves. These did not register as vegetation and because there were significantly more dry patches in 2014 compared with 2009, and this was reflected as vegetation loss. • Some of the vegetation loss on City-managed land was real. This

Targets	Outcomes
	was associated with works such as the Hyde Park Lakes restoration project and the City's eco-zoning program. At the time of vegetation mapping in 2014, these work sites simply had not yet been covered over by newly planted vegetation. • Around two thirds of overall vegetation loss occurred on privately owned land. Examination of the vegetation maps revealed this to be is largely due to infill development and the associated clearing of previously established gardens.
Net year-on-year increase in street tree numbers	Since the adoption of Greening Plan 2014, on average 358 new street trees have planted by the City each year. In 2018 the number of street trees in Vincent is approximately 13,000. The continuous increase in street tree numbers and the associated canopy growth will be reflected in future canopy mapping.

*Using 30 years as the average time required for tree maturation, it was estimated that an intensive tree planting program could achieve the targeted canopy cover by 2050. The rate of tree loss on privately owned land however was vastly underestimated, as revealed by the five-year follow-up mapping data. Local governments have limited power to prevent tree loss on private property in the current regulatory environment. This means that a concerted education and advocacy campaign will be required if the 20% overall canopy target is to be achieved.

** Greening Plan 2014 used 2009 as the baseline year against which progress on tree canopy cover and vegetation changes were to be measured. There were two reasons for the choice of baseline year.

1) 2009 was the latest year for which detailed city-wide vegetation mapping was available.

2) Prior to and during the development of the Greening Plan the City had already commenced a range of greening projects and programs. The baseline of 2009 would allow for the outcomes of these earlier greening activities to be captured, measured and reported in subsequent reviews.

Figure 2: Tree Canopy 2009

Figure 3: Tree canopy 2014

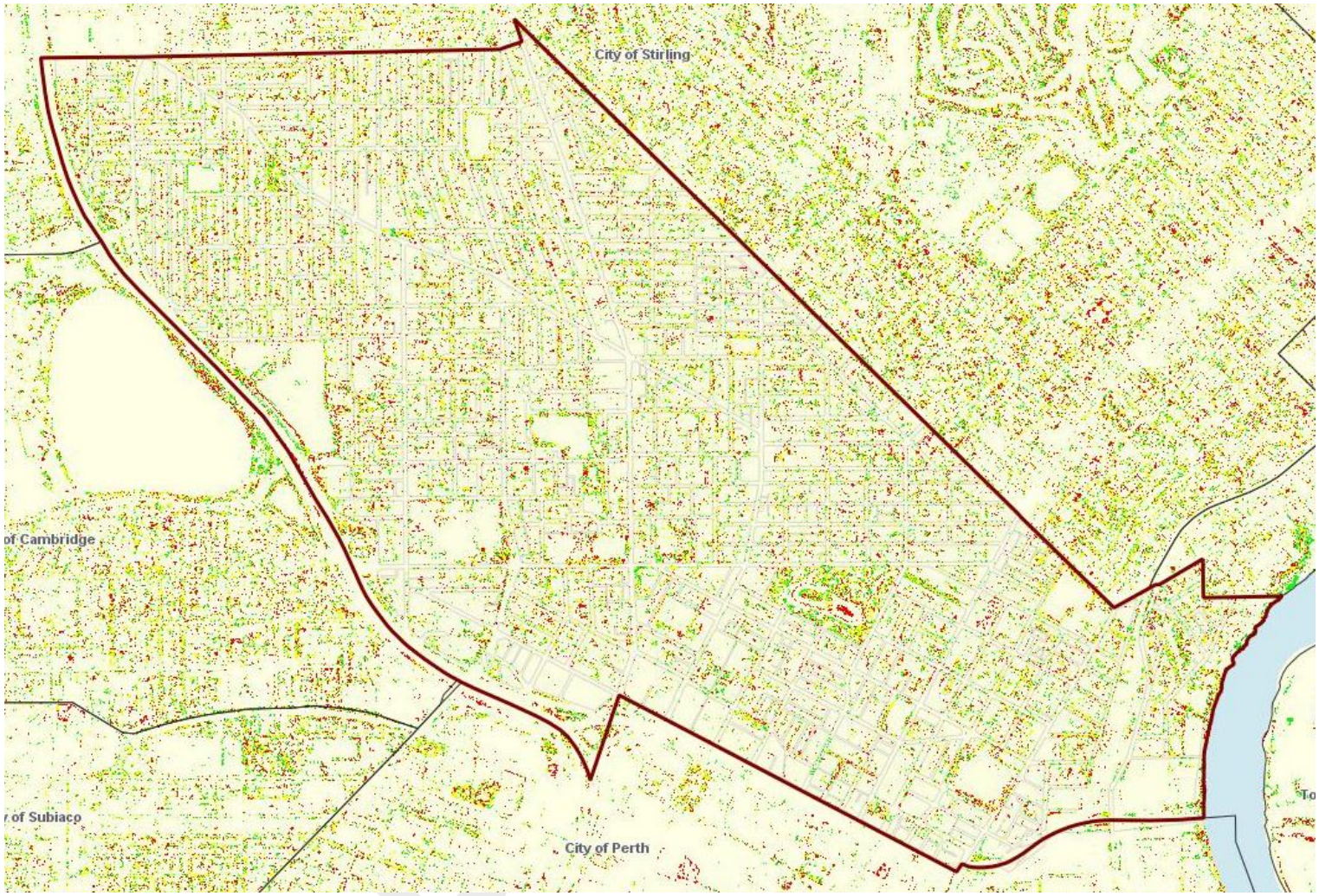


Figure 4: Tree Canopy change 2009 to 2014 (Red = loss, Green = gain, Yellow = no change)

Figure 5: Total vegetation 2009

Figure 6: Total vegetation 2014

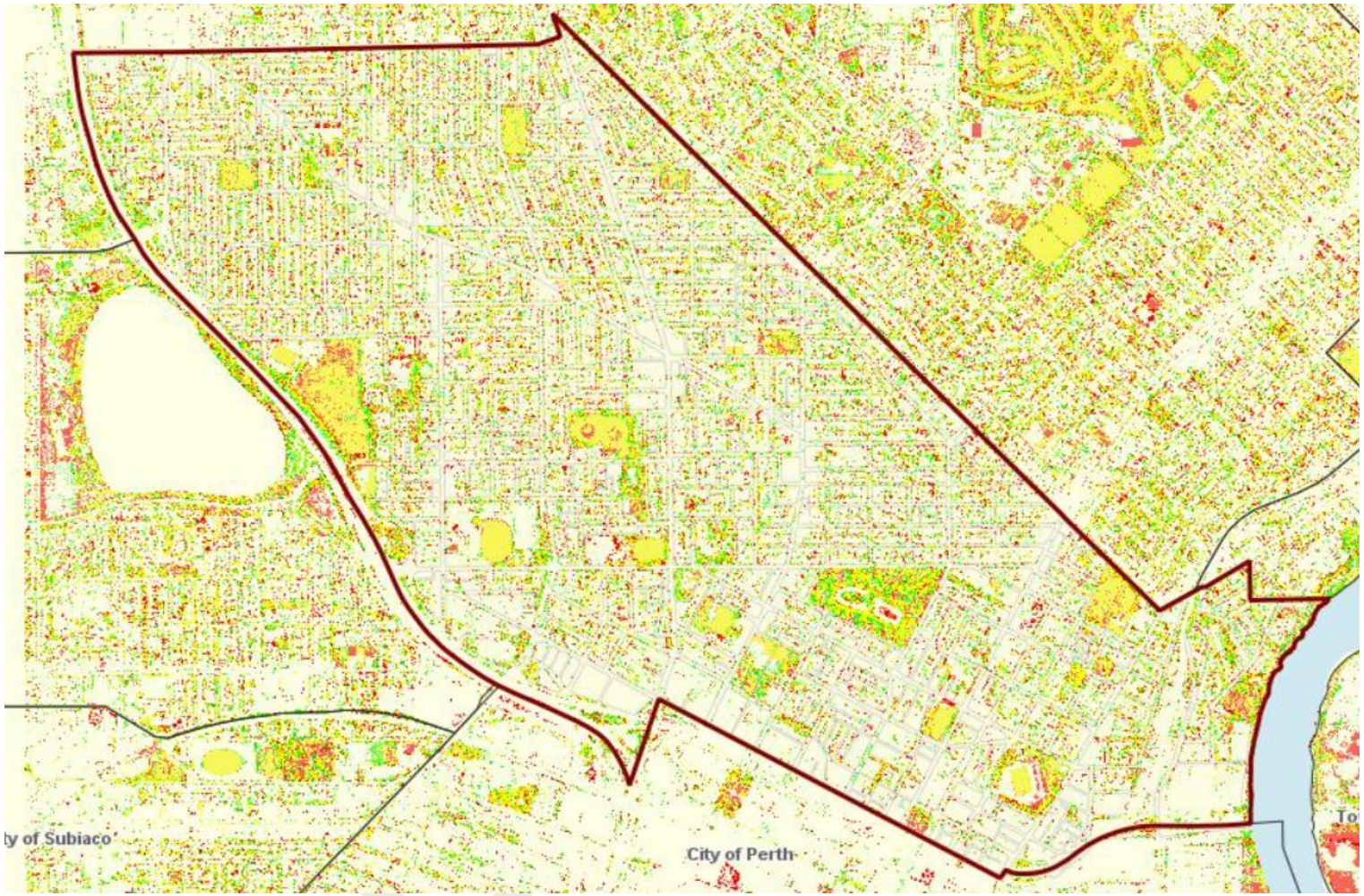


Figure 7: Change in total vegetation 2009 to 2014

(Red = loss, Green = gain, Yellow = no change)

Actions identified in Greening Plan 2014 to deliver on canopy cover and vegetation targets	Actions delivered between 2014 and 2018
Plant more trees than are lost or removed	Tree planting activities – yearly planting of additional trees in newly determined locations across the City, including reserves and residential verges.
	Street tree replacement activities – ongoing identification and replacement of street trees that have been damaged, removed or have significantly declined.
Undertake quality pruning and management techniques of trees within the City	Tree enhancement activities – improved pruning and management practices have been implemented across the City to support the health and longevity of trees on public land.
Support the community in undertaking planting initiatives	Annual National Tree Day event – thousands of native habitat plants planted across the City's parks and reserves.
Facilitate the retention of trees in new developments	Built Form Policy (Policy No. 7.1.1) adopted in early 2017 includes an incentive for the retention of existing trees on development sites.
Support tree retention efforts	Adopt a Tree program – supports residents to take ownership and care for street trees.
	Trees of Significance Register – the City has continued to add trees to the register of protected trees and to support property owners in the care and management of these trees.
	Advice for tree owners – Parks Officers regularly provide information and advice to property owners in relation to tree species, health and management issues.

Objective 2: Enhancing Habitat and Promoting Biodiversity

Targets we set in Greening Plan 2014 relating to habitat and biodiversity:

Targets	Outcomes
Establish a community-based biodiversity monitoring program by 2016	Investigation into the processes and systems required to establish such a biodiversity program revealed that the City did not have the required resources. Additional resources could not be spared and existing staff capacity was therefore allocated to the delivery of more readily achievable Greening Plan targets.
Create a basic Biodiversity Baseline by 2017 and continue to add meaningful indicators as they emerge over subsequent years	This target was linked to and directly dependent upon the above target and therefore also not delivered. These two targets have been reconsidered in Greening Plan 2018-2023.
Achieve a year-on-year increase in native habitat plantings until 2050	19,595m^2 of native habitat planting was completed through the City's eco-zoning program prior to the adoption of Greening Plan 2014. Between 2014 and 2018 a further 29,610m^2 of native habitat was planted - averaging 4,726m^2 of habitat planting per year.
Year-on-year increase in the variety of native habitat plants on the City's planting list	It is standard practice for the City's Parks Team to source and trial the latest available native plant species and cultivars each planting season. This helps to grow the biodiversity of the City's plant palette and protect against changing conditions in future.

Actions identified in Greening Plan 2014 to deliver on habitat and biodiversity targets	Actions delivered between 2014 and 2018
Identify key species and locations for biodiversity monitoring	Hyde Park turtle study – the western long-necked turtle (*Chelodina colliei*) was identified as a key species in Hyde Park and a population study was completed in partnership with the University of Western Australia. Further study into the population is currently underway with a view to identifying mechanisms for protection into the future.
Establish a community-based biodiversity monitoring program and support the community to contribute to biodiversity monitoring	Not delivered, as explained above.
Embed the preservation and improvement of native habitat into all greening activities	Standard operating practice – the City's Parks Team gives preference to native plant species for all amenity plantings as a matter of standard practice.
	Establishing quality native landscaped areas – the City's Parks Team have established a practice of creating micro parks on disused verges and medians to form pockets of biodiversity and create a chain of "biodiversity islands" that serve local fauna, connect people with nature and improve the walkability of local streets.
	Twice yearly Native Plant Sales – provide subsidised native plants for residents to encourage and facilitate the establishment of native gardens and verges.
	Adopt a Verge Program – incentivises and assists residents to create native verge gardens and thereby contribute links to the chain of "biodiversity islands" being established by the City.
Increase the density of food and habitat plants of native fauna	Eco-zoning – a key greening activity that increases the density of food and habitat plants for native fauna in parks and reserves throughout Vincent.
	Micro-park projects (as described above) – increase the density of food and habitat plants throughout Vincent.
	Town Centre amenity planting – increasing the density and quality of landscaping in and around Town Centres has been a key focus between 2014 and 2018.
Enhance and contribute to greenways	Careful tree selection – the City's team of horticulture staff considers local conditions and context for each greenway planting, choosing the most appropriate species to maximise tree health and longevity. This selection process is now supported by the City's new Tree Selection

Actions identified in Greening Plan 2014 to deliver on habitat and biodiversity targets	Actions delivered between 2014 and 2018
	Tool (see Appendix 3), especially developed for this purpose. A preference for native species and prioritisation of biodiversity are key considerations built into the tool.
	Water sensitive urban design – engineering measures such as flush curbing, planted swales and stormwater infiltration pits are contributing to the health and biodiversity of the City's greenways.

Objective 3: Greening, Enlarging and Enhancing Public Open Space (POS)

Targets we set in Greening Plan 2014 relating to Public Open Space:

Targets	Outcomes
Establish 30 new greenways (51 kilometres) by 2050 – annual Greenway plantings averaging 1.5km	Between 2014 and 2018 a total of 25km of Greenway plantings was completed (figure 8) – an average of 6.2km per year.
In addition to Greenway plantings convert suitable areas of underutilised public land to community-use green space	Between 2014 and 2018 six community-use green space projects and seven on-road Parklets were completed – a total of 3,223m^2 of new public green space.
Maintain the area of public open space at or close to the target set by the WAPC	Despite the City's best efforts, rapid population growth between 2014 and 2018 outstripped the growth of green POS: • In 2014 the City had 3.37ha of green POS per 1,000 residents • In 2018 the City had 2.82ha of green POS per 1,000 residents

Figure 8: Proposed and completed greenway plantings

Actions identified in Greening Plan 2014 to deliver on POS targets	Actions delivered between 2014 and 2018
Plant additional trees and understorey vegetation in public open space	Eco-zoning – this ongoing program has focused on restoring areas of POS within the City through revegetation, rehabilitation and the reintroduction of native species to parks and reserves.
Acquire additional land for new public open space	New POS creation – land that was previously disused or not accessible to the public has been transformed into POS. This has included a section of road (Hyde Street), a fenced storm water sump, a laneway and several areas of barren road reserve and hard stand.
Increase quality, useability, amenity and function of public open space	Park and reserve upgrades – new nature play areas, improved parks infrastructure, accessibility upgrades, new public facilities, enhanced drainage and more natural landscaping.
Involve the community in assessing and prioritising proposed greenway locations	Resident notifications – while greenway locations were predetermined within Greening Plan 2014, residents living on streets designated as greenways are notified in advance of planting and their feedback is taken into consideration.
Involve the community in identifying and prioritising areas of public land for conversion to green space	Community ideas invited – calls for community budget submissions and community participation in the City's Environmental Advisory Group have resulted in a number of new green space projects.

Objective 4: Greening the Five Town Centres

Targets we set in Greening Plan 2014 relating to Town Centres:

Targets	Outcomes
Meet the needs and expectations of the occupants and users of Vincent's five Town Centres identified through ongoing consultation and engagement	In 2014 the City created two new Place Manager roles to work closely with Town Centre stakeholders (Town Teams). A series of Place Plans are being created in collaboration with the Town Teams to deliver place-based initiatives to meet the needs and expectations of the Town Centre occupants and users.
Achieve a measureable year-on-year increase in Town Centre plantings	Prior to the adoption of Greening Plan 2014, the only Town Centre with a measureable increase in vegetation was William Street (figure 9), with a tree canopy increase of 39% resulting from street tree planting by the City in 2007. The other four Town Centres all experienced an overall tree canopy decline between 2009 and 2014. This was primarily due to the removal of trees on privately owned land. The average tree canopy cover across the City's five Town Centres was 8% in 2014, down from 9% in 2009. At the time of review the latest vegetation maps available to the City were for the year 2014. Objective measurement of new plantings between 2014 and 2018 will therefore be presented in the next review period. However, the City's planting records for 2014 to 2018 show: • An average of 80 new street trees planted across the City's Town Centres each year • 1,374m^2 of green public open space created in Town Centres, including seven Parklets • 117 planter boxes installed • 34 additional trees planted in public car parks

Figure 9: William Street 2009 on the left versus William Street 2014 on the right

Actions identified in Greening Plan 2014 to deliver on Town Centre targets	Actions delivered between 2014 and 2018
Support the character, vibe and individuality of each Town Centre	Creative planting installations – the City's Place Managers and Parks Team have worked with the Town Teams to investigate and implement new plantings that enhance the amenity and unique character of each Town Centre.
Prioritise the use of native vegetation options	Preference for native plants – it has become standard practice for the City's Parks Team to preference native plant species.
Proactively engage with and provide technical advice to stakeholders engaged with greening activities	Place Plans – each Town Centre's Place Plan captures the greening activities identified in collaboration with the Town Team.
	Support and guidance – businesses seeking to install garden beds, planter boxes and Parklets receive technical assistance and support from the City's Place Managers and Parks Team.

Objective 5: Greening New Development

Targets we set in Greening Plan 2014 relating to new development:

Targets	Outcomes
Retention, reinstatement and where possible increase of vegetation cover on privately owned land	Between the baseline year of 2009 and the adoption of the City's Greening Plan in 2014, 139,071m^2 (1.87%) of vegetation was lost from privately owned land. Following the adoption of the Greening Plan in 2014, the City commenced work on its Built Form Policy (Policy No. 7.1.1). This was adopted in early 2017 and contains provisions aimed at halting and reversing vegetation loss due to development. As the Policy came into effect so late in the current mapping cycle, its impacts are likely to become apparent only in the next vegetation mapping period, recorded after 2019.
Incorporation of innovative green infrastructure into the design of new developments, particularly where high density limits the site area available for in-ground plantings	The City's Built Form Policy requires landscaping to be sustainable and integrated with the building design. This prompts inclusion of green infrastructure such as green roofs/walls, balcony gardens, productive communal gardens and planted light wells.

Actions identified in Greening Plan 2014 to deliver on greening new developments	Actions delivered between 2014 and 2018
Engage and educate developers on the value of trees and gardens to developments	Property Industry Workshop – during the development of the City's Built Form policy in 2015 the City hosted a workshop for industry representatives that focused on the importance of tree canopy and quality green space in private developments.
	Stakeholder consultation – the local development industry was invited to participate in discussion sessions as the City developed its new landscaping requirements through 2015 and 2016.
Amend planning policies to increase and tighten requirements for the provision of green space in new developments	Built Form Policy – adopted in early 2017, this Policy superseded a number of earlier planning policies and prescribed additional landscaping requirements including minimum tree canopy cover and planting area.
Use available planning instruments to mandate the retention or reinstatement of existing vegetation	Protection of verge trees – the City has continued to exercise its power to mandate the retention and protection of verge trees during development.
	Advocacy for trees on private land – under current state planning legislation local governments do not have power to mandate the retention of vegetation on development sites. The City is advocating to the Western Australian Government to change this.
Use available planning instruments to incentivise the retention or reinstatement of existing vegetation	Built Form Policy – provides an incentive for developers to retain existing trees on development sites, allowing a reduction in the deep soil zone requirement and a potential increase to the building footprint.
Seek opportunities to support private land owners to increase vegetation in and around their property	Adopt a Verge and Adopt a Tree programs.
	Native Plant Sales – the subsidised sale of native plants to residents encourages additional planting and is supported by advice from the City's horticultural staff at the Sales as well as by phone upon request.
Support, mandate or incentivise where possible the incorporation of green infrastructure within developments	Built Form Policy – requires new developments to provide landscaping, deep soil zones and tree canopy additional to what is required under state planning policy.

Objective 6: Greening the Community

Targets we set in Greening Plan 2014 relating to greening our community:

Targets	Outcomes
Empower the community to contribute to the greening of Vincent	Since the adoption of Greening Plan 2014 a range of mechanisms have been implemented to empower the City's community to contribute to greening activities. These are detailed under the "Actions delivered" section that follows.
At least one community-driven greening project per year to be delivered by the community in a public space with financial and in-kind support from the City	This outcome has been successfully delivered for each of the years from 2014 to 2018. Examples of projects are provided in the "Actions delivered" section that follows.

Actions identified in Greening Plan 2014 to deliver on greening the community	Actions delivered between 2014 and 2018
Support and facilitate the community's green vision by inviting the community to nominate greening projects in the public domain	Verge and median micro-parks – a number of these have been established as a result of community nomination.
	Sump-to-park project – the conversion of a fenced stormwater sump in North Perth to a community open space followed an invitation to community members on the City's Environmental Advisory Group to nominate suitable projects.
Support the generation of new greening initiatives by the community through financial and in-kind support	Environmental Grants – grants offered on an annual basis to schools and community groups have led to the establishment of a number of native, productive and communal gardens.
	Support for community budget submissions – financial and in-kind support for community budget submissions has led to the creation of additional green space and the delivery of greening activities by the City's community.
	Adopt a Verge program – facilitates the creation of new verge gardens. Between 2014 and 2018, 412 verges have been transformed under this program.
Facilitate ongoing educational opportunities and community networking	Community workshops and presentations – numerous free, gardening focused workshops and presentations have provided education, inspiration and networking opportunities for community members.

Actions identified in Greening Plan 2014 to deliver on greening the community	Actions delivered between 2014 and 2018
	Native Plant Sales – horticulture staff at Plant Sales provide advice on the selection, planting and care of native species, empowering the community to create and maintain sustainable, biodiverse gardens.
	Greening Vincent Garden Competition – an annual event that recognises, celebrates and provides networking opportunities for the City's most prolific, skilled and environmentally responsible gardeners.
Maintain effective communication channels with the community	Advertising, promotion and consultation – a range of communication channels is employed by the City to ensure that greening projects, initiatives and matters for consultation are effectively shared with the community.
Provide ongoing opportunity for community involvement in Council-driven greening activities	National Tree Day – this annual planting event gives all community members an opportunity to contribute to the growth of the City's tree canopy and biodiversity.

Appendix 2 – Implementation Plan 2018-2023

CITY OF VINCENT GREENING PLAN 2018-2023 – FIVE YEAR IMPLEMENTATION PLAN									
Initiative/task	**Responsible Team**	**Support Team/s**	**Cost**	**18/19**	**19/20**	**21/22**	**21/22**	**22/23**	**Comments**
Objective 1. Increase Canopy Cover on Public Land									
Greening Plan – tree planting programs (3)	Parks	Engineering	Capital Budget	$300,000	$300,000	$200,000	$200,000	$200,000	Annual budget can be adjusted as required to suit additional projects
Street tree replacement program	Parks		Existing Operational	$75,000	$75,000	$75,000	$75,000	$75,000	Predominantly individual residential requests, not part of Greening Plan program
Investigate options to maximise canopy cover of trees located under power lines (3)	Parks	Engineering	No cost	✓					Revised pruning techniques, clearance allowances and/or modified infrastructure. Budget may need to be considered in subsequent years following outcome of investigation
Investigate options to increase canopy on public land through additional tree planting in car parks (3)	Parks	Engineering, Policy & Place	No cost	✓	✓	✓			Some car park tree planting projects included in Greening Plan planting program 2018 – 2022. Additional opportunities to be investigated and budgets can be adjusted as required
Report on net change in street trees planted each year	Parks		No Cost	✓	✓	✓	✓	✓	
Adopt a Tree program (5)	Parks			✓	✓	✓	✓	✓	Promotion of this program to be intensified
Report on net change in canopy cover from 2014-2019 (3) (4)	Parks	Policy & Place					$5,000	✓	2019 data may become available sooner

Note: Some initiatives/tasks contribute to more than one objective and where this is the case they will be followed by numbers in brackets denoting their contribution towards other objectives

CITY OF VINCENT GREENING PLAN – FIVE YEAR IMPLEMENTATION PLAN									
Initiative/task	**Responsible Team**	**Support Team/s**	**Cost**	**18/19**	**19/20**	**21/22**	**21/22**	**22/23**	**Comments**
Objective 2. Enhance Habitat and Promote Biodiversity									
Eco-zoning Program	Parks		Capital Budget	$30,000	$30,000	$30,000	$30,000	$30,000	As per 15 year implementation program 2011-2025
Parks Replanting Program	Parks		Existing Operational	$45,000	$45,000	$45,000	$45,000	$45,000	Annual program to infill previous plantings as required
Verge and median plantings (3)	Parks	Engineering	Existing Operational/ Additional Cost	TBD	TBD	TBD	TBD	TBD	Budget included for individual projects as required
Adopt a verge program (5)	Parks		Existing Operational	$80,000	$80,000	$80,000	$80,000	$80,000	Honours student conducting thesis on the success and social aspects of this program
Adopt a verge “Fast Track Program” (5)	Parks		Existing Operational	$20,000	$20,000	$20,000	$20,000	$20,000	
National Tree Day (5)	Parks			$6,000	$6,000	$6,000	$6,000	$6,000	Recently eco-zoned area planted up with community
Preference local native plants where possible for tree and understorey planting (1)	Parks		No Cost	✓	✓	✓	✓	✓	
Identify and add new local native plants to the City’s planting lists as these species become commercially available.	Parks		No Cost	✓	✓	✓	✓	✓	New plants continually investigated/trialled and made available through local plant sales to the community

Note: Some initiatives/tasks contribute to more than one objective and where this is the case they will be followed by numbers in brackets denoting their contribution towards other objectives

CITY OF VINCENT GREENING PLAN – FIVE YEAR IMPLEMENTATION PLAN									
Initiative/task	**Responsible Team**	**Support Team/s**	**Cost**	**18/19**	**19/20**	**21/22**	**21/22**	**22/23**	**Comments**
Objective 3. Greening the Town Centres									
Establish Town Centre tidy teams to better manage and maintain existing green spaces within Town Centres	Engineering Directorate		Existing Operation	✓	TBD	TBD	TBD	TBD	Initial team to be established using existing staff and resources
Continue engagement and ongoing consultation with Town Teams to identify and prioritise Town Centre greening activities	Policy & Place	Parks	Existing Operational	✓	✓	✓	✓	✓	Place Managers regularly meet with business owners. Parks representatives allocated to each Town Team
Investigate options to increase canopy in Town Centres through additional tree planting in car parks (1)	Parks	Policy & Place	No Cost		✓	✓			Some car park tree planting projects included in Greening Plan planting program 2018 – 2022
Encourage business owners to maintain existing planter boxes and facilitate the implementation of planter boxes for new businesses	Policy & Place	Parks	No Cost	✓	✓	✓	✓	✓	Program has been implemented with some success
Encourage businesses to install new parklets	Policy & Place	Parks	No Cost	✓	✓	✓	✓	✓	Greenery must be incorporated into the design of every parklet

Note: Some initiatives/tasks contribute to more than one objective and where this is the case they will be followed by numbers in brackets denoting their contribution towards other objectives

CITY OF VINCENT GREENING PLAN – FIVE YEAR IMPLEMENTATION PLAN									
Initiative/task	**Responsible Team**	**Support Team/s**	**Cost**	**18/19**	**19/20**	**21/22**	**21/22**	**22/23**	**Comments**
Objective 4. Greening Private Land and New Development									
Provide support to landowners to increase canopy cover on and around their property (5)	Parks	Approvals	Existing Operational	✓	✓	✓	✓	✓	Advice, donation of mulch and plants. Provision of native tree stock suitable for private lots at Local Plant sales. Planning advice, and Built Form Policy guidance
Maintain the City's Trees of Significance Inventory and continue to mandate retention and support maintenance of significant trees	Policy & Place	Parks	Existing Operational	✓	✓	✓	✓	✓	
Review the Trees of significance Policy to 1) clarify its intent, and 2) investigate options for simplifying and incentivising the nomination of trees for inclusion	Policy & Place	Parks	Existing Operational		✓				Budget may need to be considered for subsequent years following investigations
Review canopy requirements within the Built Form Policy	Policy & Place		Existing Operational	✓					
Continue to enforce retention of street trees in the development process	Approvals	Parks	Existing Operational	✓	✓	✓	✓	✓	
Develop a marketing campaign to educate private land owners and developers on the importance and benefits of trees	Policy & Place	Marketing/ Parks	Existing Operational		✓				Budget allocation will need to be included following development of the campaign
Roll out a marketing campaign to educate private land owners and developers on the importance and benefits of trees	Policy & Place	Marketing/ Parks	Additional cost			TBD			Specific budget to be determined following investigations in consultation with Marketing
Advocate for changes to State Legislation and State Planning Policies to facilitate tree protection	Policy & Place		Existing Operational	✓	✓	✓	✓	✓	

Note: Some initiatives/tasks contribute to more than one objective and where this is the case they will be followed by numbers in brackets denoting their contribution towards other objectives

CITY OF VINCENT GREENING PLAN – FIVE YEAR IMPLEMENTATION PLAN									
Initiative/task	**Responsible Team**	**Support Team/s**	**Cost**	**18/19**	**19/20**	**21/22**	**21/22**	**22/23**	**Comments**
Objective 5. Greening the Community									
Annual Greening Vincent Garden Competition (2) (4)	Parks	Marketing	Existing Operational	$20,000	$20,000	$20,000	$20,000	$20,000	Very popular annual competition that has been running since Vincent's inception
Native Plant sales (2) (4)	Parks		Existing Operational	$35,000	$35,000	$35,000	$35,000	$35,000	April and August of each year
Environmental Grants Program	Parks		Existing Operational	$14,000	$14,000	$14,000	$14,000	$14,000	Annually
Environmentally Focused Workshops (2) (4)	Parks	Policy & Place, Waste	Existing Operational	$7,000	$7,000	$7,000	$7,000	$7,000	Includes composting/worm farming and Waterwise workshops
Community Budget Submissions (1) (2) (3) (4)			Additional Cost	TBD	TBD	TBD	TBD	TBD	Specific budgets to be included as required following submission assessment

Note: Some initiatives/tasks contribute to more than one objective and where this is the case they will be followed by numbers in brackets denoting their contribution towards other objectives

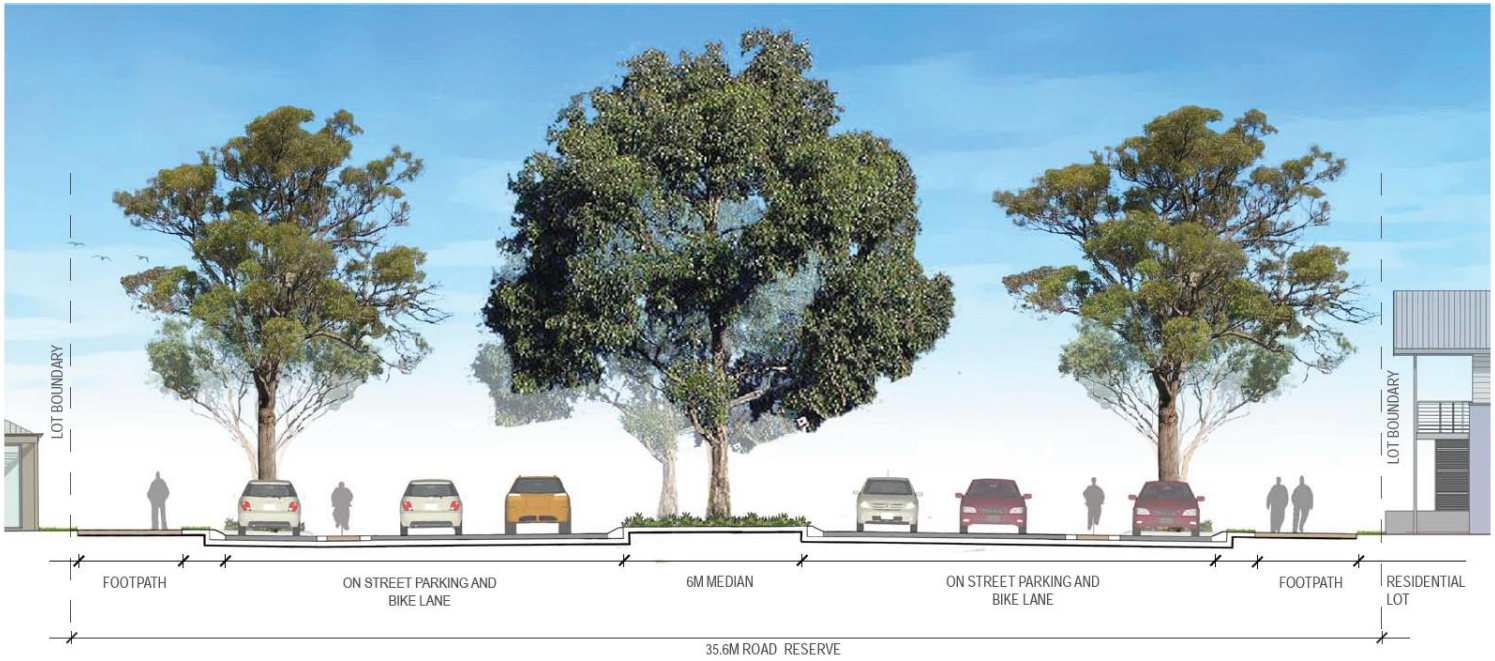
Appendix 3 – Tree Selection Tool

To facilitate the best choice of tree for each type of streetscape and planting environment the City has developed a Tree Selection Tool. Below is an overview of what it is, how it works and what it looks like.

The Tree Selection Tool is essentially a database that has been populated with information about the City's various streetscapes and other key planting scenarios, as well as a comprehensive set of trees, their key features and growing requirements.

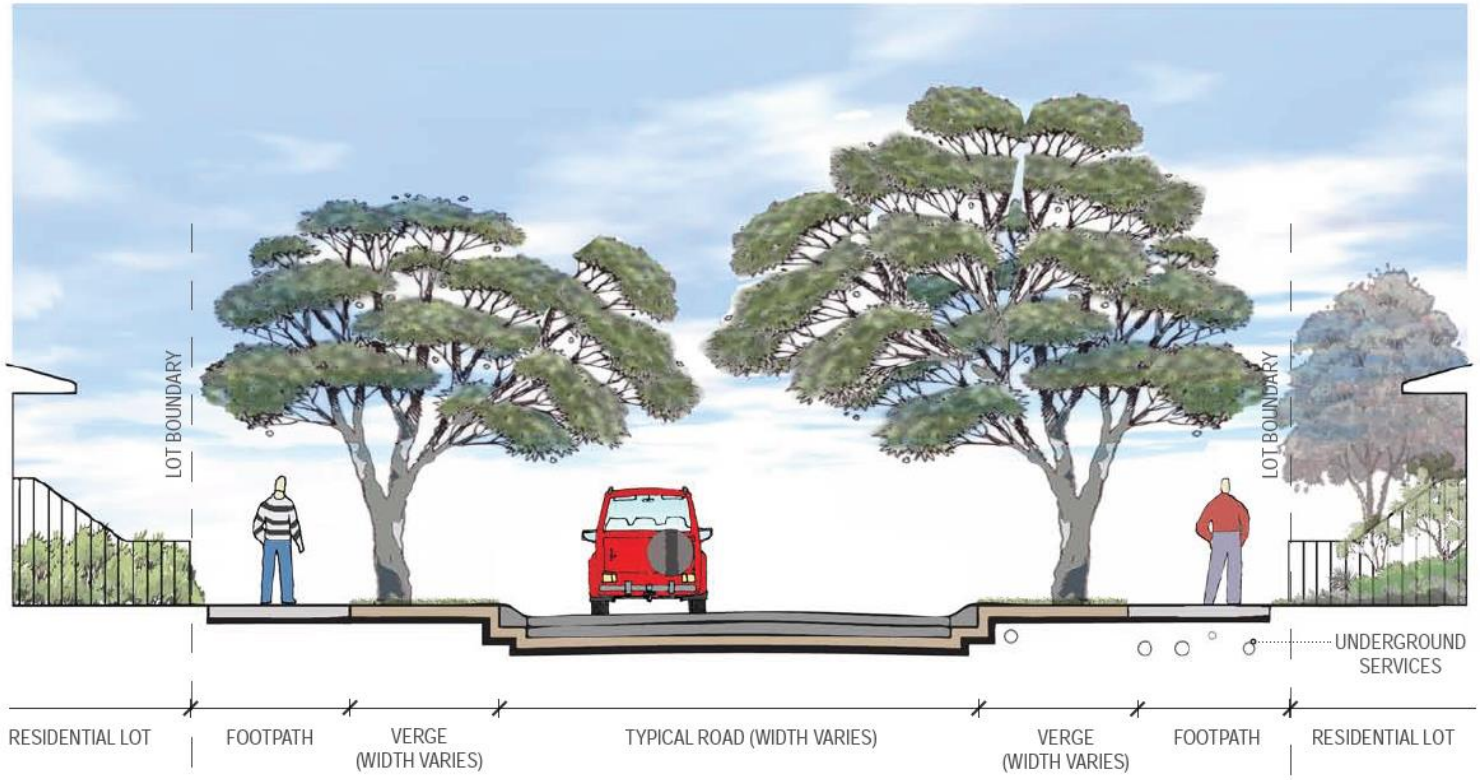
Each streetscape and planting scenario has specifications related to road reserve width, footpaths and central medians.

Examples of streetscape typologies identified within the tool:



Boulevard

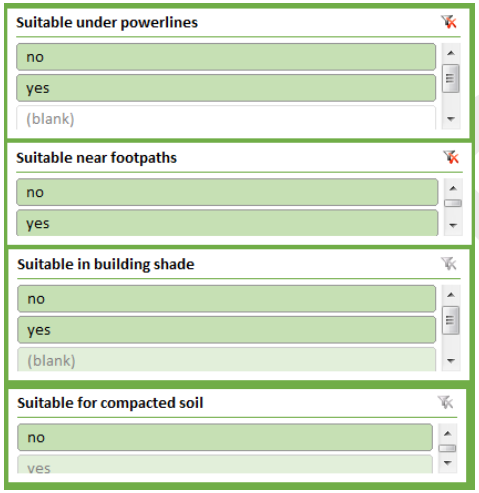
Neighbourhood Street



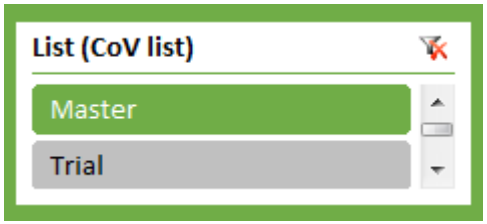
Local Street

The first step in using the Tool is to select the correct streetscape typology or planting scenario:

This can be refined further by specifying particular features such as the presence of overhead powerlines, shade from adjacent buildings or compacted soil.



The Tool can be directed to draw trees from either a master list of locally proven trees, or from a trial list of trees that are yet to be tested in the local environment but could become important in future as both macro and microclimatic conditions change.



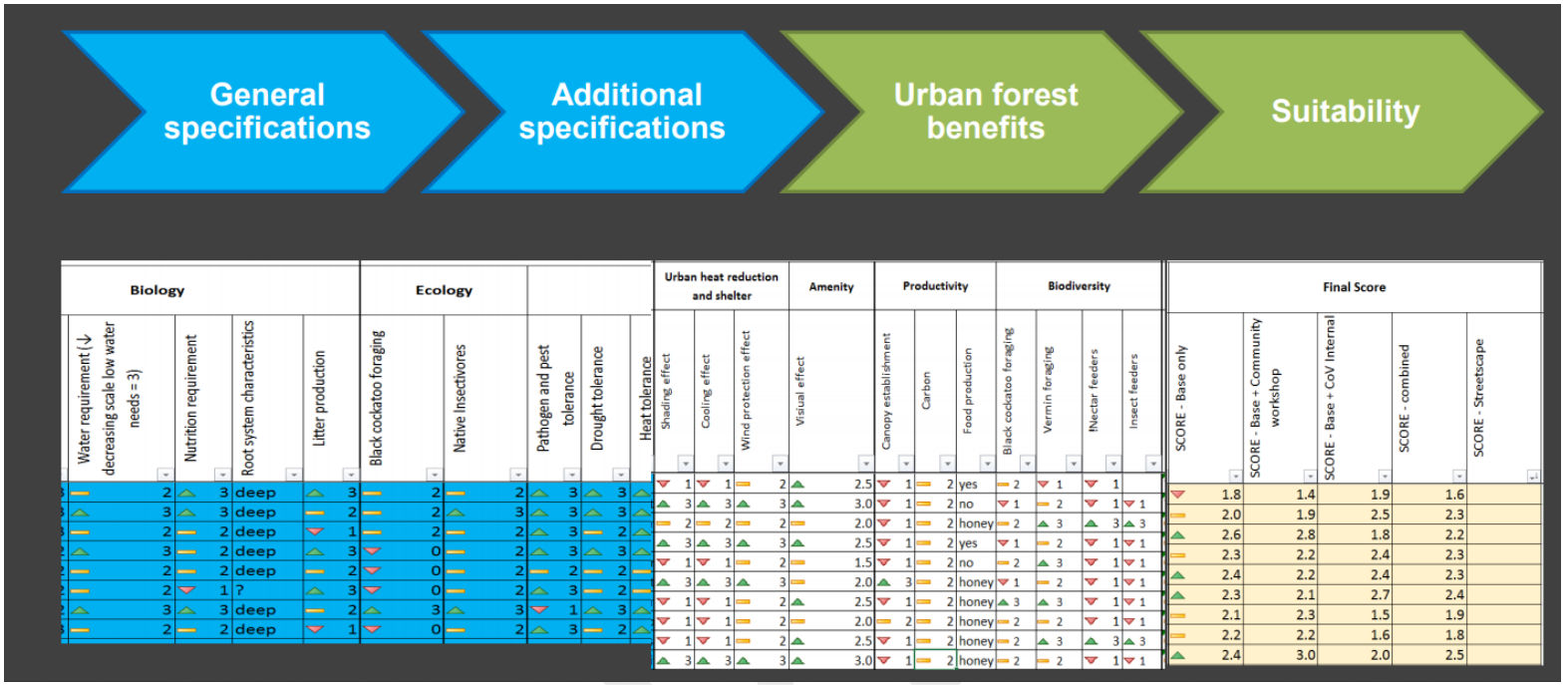
Trees from the trial list may be chosen in instances where only a small number of trees are needed and where failure will not pose a significant risk to the City or its community.

The Tool sorts trees for suitability in each planting scenario in the following order:

1) General tree specifications – what are the tree's growing requirements and how likely is it to survive in this location

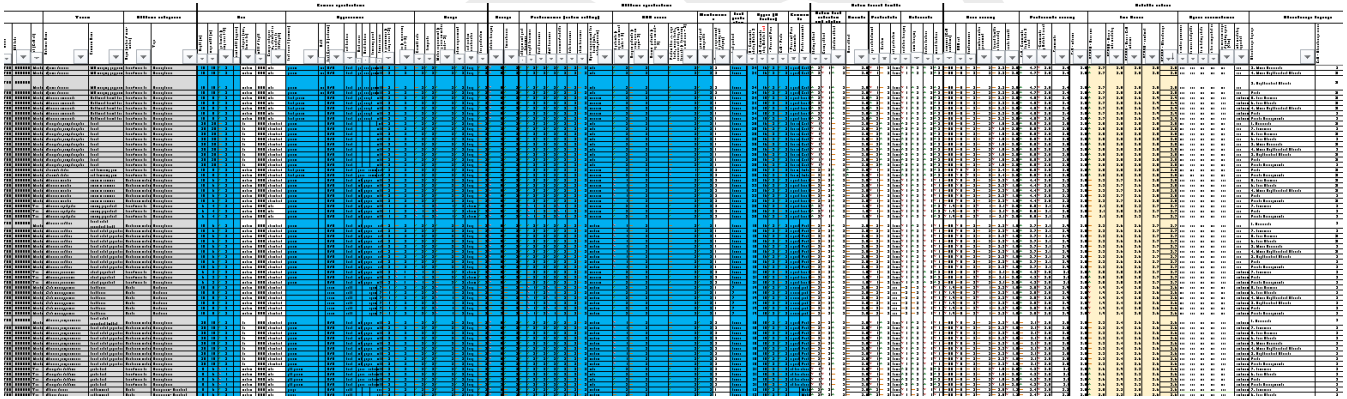
2) Additional specifications – ecological function (food and habitat for fauna) and ability to adapt to changing conditions

3) Urban forest benefits – urban heat reduction and shelter, amenity, productivity and contribution to biodiversity



Biology				Ecology				Urban heat reduction and shelter			Amenity	Productivity			Biodiversity				Final Score				
Water requirement (↓ decreasing scale low water needs = 3)	Nutrition requirement	Root system characteristics	Litter production	Black cockatoo foraging	Native Insectivores	Pathogen and pest tolerance	Drought tolerance	Heat tolerance	Shading effect	Cooling effect	Wind protection effect	Visual effect	Canopy establishment	Carbon	Food production	Black cockatoo foraging	Vermin foraging	†Nectar feeders	Insect feeders	SCORE - Base only	SCORE - Base + Community workshop	SCORE - Base + CoV Internal	SCORE - combined	SCORE - Streetscape
2	3	deep	3	2	2	3	3		1	1	2	2.5	1	2	yes	2	1	1		1.8	1.4	1.9	1.6	
3	3	deep	2	2	3	3	3		3	3	3	3.0	1	2	no	1	2	1	1	2.0	1.9	2.5	2.3	
2	2	deep	1	2	2	3	2		2	2	2	2.0	1	2	honey	2	3	3	3	2.6	2.8	1.8	2.2	
3	2	deep	3	0	2	3	3		3	3	3	2.5	1	2	yes	1	2	1	1	2.3	2.2	2.4	2.3	
2	2	deep	2	0	2	2	2		1	1	2	1.5	1	2	no	2	3	1	1	2.4	2.2	2.4	2.3	
2	1	?	3	0	2	3	2		3	3	3	2.0	3	2	honey	1	2	1	1	2.3	2.1	2.7	2.4	
3	3	deep	2	3	3	1	3		1	1	2	2.5	1	2	honey	3	3	1	1	2.1	2.3	1.5	1.9	
2	2	deep	1	0	2	3	2		1	1	2	2.0	2	2	honey	2	2	1	1	2.2	2.2	1.6	1.8	
									1	1	2	2.5	1	2	honey	2	3	3	3	2.4	3.0	2.0	2.5	
									3	3	3	3.0	1	2	honey	2	2	1	1					

The above image is just a small snapshot of the specifications used in the tool, the complete set is shown below:



Based on the above considerations, the Tool produces a shortlist of recommendations which looks like this:

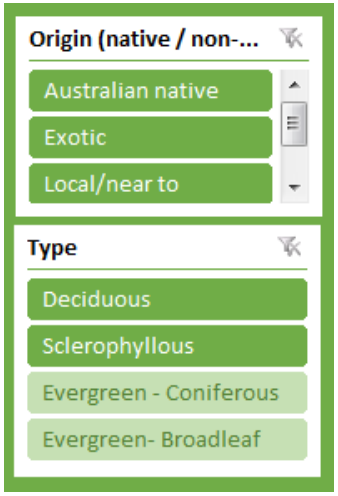
Rank	Species
1	*Eucalyptus gomphocephala*
2	*Corymbia eximia*
3	*Angophora costata*
4	*Corymbia maculata*
5	*Platanus x acerifolia*

This outcome can be further refined based on specific functional need, for example a tree planted close to the north-facing windows of a building (as may occur in a Town Centre setting) should ideally be deciduous to allow for passive solar gain to the building in winter. The tool therefore allows for the specific selection of deciduous trees.

This might change the Tool's recommendation to:

Rank	Species
1	*Celtis mississippiensis*
2	*Koelreuteria bipinnata*
3	*Liquidamber styraciflua*
4	*0*
5	*0*

It also allows for the selection of other specific types of foliage and for local native, Australian and exotic trees:



Appendix 4 – Street Tree Master Plan 2018

In 2017 the City completed an audit of its streetscapes to identify the streets that are in greatest need of new tree plantings based on the need for shade and improved walkability. The Street Tree Master Plan shown below was created as a result. It prioritises streets based on the urgency and degree of planting required.