

# IMPROVING GREENSPACE / TREE CANOPY COVER OUTCOMES IN HIGH-GROWTH AREAS

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## Future Risks and Challenges

Temperatures will continue to increase year round, with fewer frosts, more frequent and intense downpours, more hot days, more dry spells. These will be accompanied by harsher fire seasons, and risks to human health.

## Victoria's Population Growth

There have been three great waves of population growth in Victoria's history since European settlement: the Gold Rush, Post World War 2 migration, and now. Victoria's growth has been unprecedented. In the 12 months to July 2018, net growth has been 145,000 people.

Victoria is experiencing increased urbanisation and pressure on infrastructure, natural resources and the environment.

## Victoria's Connection with 'Green'

Known as the Green State, Melbourne has benefited from the Hoddle Grid, a number of large parks, a protected waterways system, and good use of trees.

## The Benefits of a Green City

The benefits of a green city are manifold. Tree canopy cools a city, offers shade, and promotes biodiversity. Recent research has shown the importance of nature to people: improving cognitive functioning, reducing stress and opportunities for reflection. The cooling effect of an extra 10% canopy is between 0.5 and 1.0 degree Centigrade according to my review of the literature.

Trees and greenery contribute to a sense of place and identity. Opportunities for active and passive exercise have concomitant health benefits.

## The Role of the Victorian Planning Authority

The Victorian Planning Authority is the Victorian Government provider of strategic plans for strategic sites and precincts.

It has 3 main goals - affordability, prosperity, and liveability.

## What does the VPA do?

Growth area framework plans set the regional framework for urban growth based on the strategic directions of Melbourne 2030. They show broad land use patterns, committed and proposed transport networks and regional open space, significant waterways and areas of potential environmental sensitivity. We work to protect riparian zones and waterways, the amenity of hilltops, and to protect native flora and fauna.

## What is a Precinct Structure Plan?

A precinct structure plan (PSP) sets the future structure for a suburb. These suburbs contain between 7,000 to 30,000 dwellings. It provides more detail on the land uses defined by the Growth Area Framework Plan.

A PSP shows:

- Housing yields
- Employment land provision and location
- Transport networks
- Open space and natural systems
- Activity centres
- Community facilities

### **How do we measure our work?**

We have developed a checklist and KPI's- for instance less than 700 metres to the nearest public transport from any dwelling. At least 10% of the total area in a Precinct Structure plan dedicated to open space. So far we are achieving 18% on the open space KPI.

### **PSP Guidelines and the Expert Review Panel Suggestions/ Learnings**

The VPA recently commissioned a review of the PSP Guidelines by an Expert Panel.

Some key learnings are shown in Appendix 2 and the main ones are described below.

Within denser environments, a stronger emphasis on creating better public realm and public open space would support liveability outcomes, particularly urban greening. While private green space will continue to have a role, stronger emphasis on the public realm can address the environmental impacts associated with smaller lots (i.e. lack of green space in yards, greater levels of impervious surfaces, etc.).

Greening within larger greenfield and brownfield developments are typically handled better than for smaller scale development. In most large developments, public open space strategies, recreation facilities and landscaped streetscapes are considered the standard. For areas with fragmented ownership, coordination and integration of open space networks should remain a primary responsibility for structure plans.

The role of greening public spaces and the streetscape becomes increasingly important as the size of residential allotments decline. The Guidelines need to provide stronger guidance on the role of planting and maintenance of streets and parks.

Drainage issues are arising from poor amenity and liveability outcomes in higher density areas. Poor soils and rainfall, a lack of private open space, narrow streetscapes, high impervious fraction, conventional drainage systems and lack of water to enhance public open space are limiting the liveability and resilience of new and changing communities.

While the content within the Guidelines for incorporating integrated water management is good, water industry stakeholders have highlighted that these aren't being implemented. It has been recognised that the water authorities are often unprepared for early engagement in some structure planning processes.

To improve consistency, the guidelines need to strengthen its elements to incorporate IWM and to improve its approach to integrated planning. Furthermore, more formal collaborative governance arrangements should be established to support the structure planning process.

### **Other Necessary Changes**

Too often local Council budgets don't keep pace with the maintenance requirements for regular watering of newly planted and increasingly distressed trees in the public realm. This needs to be a priority.

The VPA, in conjunction with other authorities, needs reflect on the cumulative impact of the PSPs in a metropolitan setting to ensure that the outcomes over time are what was originally intended in Growth Area Framework Plans.

## **APPENDIX 1: Excerpt from the PSP Guidelines**

### **Environmental Sustainability**

The Victorian Planning Authority can respond to climate change and protect biodiversity, increase environmental sustainability, and cultural heritage if:

- The precinct is planned with the intention of reducing the extent of car use by minimising travel distances and facilitating alternatives (e.g. public transport, cycling and walking) to car use;
- The environmental footprint of the development is minimised through careful use of resources such as land, energy and water;
- The use of renewable energy options are promoted such as passive solar energy
- Development planning is responsive to climate change risks;
- Opportunities are created for integrated water management, including water sensitive urban design, re-use of stormwater and recycled water;
- Waterways and ecologically significant areas of native vegetation and other important habitat areas become key community assets;
- Land required for community purposes such as easements, drainage, community facilities, retarding basins etc. is used efficiently for multiple purposes;
- Areas retained for environmental purposes and Aboriginal and post-contact heritage form part of the open space network, providing for both conservation and recreation needs;
- Development is responsive to environmental constraints and risks such as salinity, soil erosion, flooding, coastal inundation, bushfire risk and increased predicted temperatures; and
- Land management, river health and biodiversity are enhanced.

### **PSP**

The Precinct Structure Plan should respond to the following standards:

#### **S1**

Provide a network of quality, well-distributed, multi-functional and cost effective open space, catering for a broad range of users that includes:

- Local parks within 400m safe walking distance of at least 95% of all dwellings
- Active open space within one kilometre of 95% of all dwellings;
- Linear parks and trails, most often along waterways, but also linked to vegetation corridors and road reserves within one kilometre of 95% of all dwellings.

In residential areas, approximately 10% of the net developable area as total public open space, of which 6% is active open space.

In addition, residential precincts should contain active indoor recreation facilities that are co-located and/or share space with schools and integrated community facilities. This should result in an active indoor sports provision of approximately five hectares per 60,000 residents.

#### **S3**

In major employment areas, approximately 2% of net developable area as public open space, usually with a passive recreation function.

#### **S4**

In meeting standards S2 and S3, encumbered land should be used productively for open space.

The network of local and district parks should be efficiently designed to maximise the integration and sharing of space with publicly accessible encumbered land.

Encumbered land usually includes land retained for drainage, electricity, biodiversity and cultural heritage purposes.

The parkland created by such sharing and integration should be suitable for the intended open space function/s, including maintenance.

In this way, encumbered land will be well utilised, while the total amount of open space can be optimised without adversely impacting on the quality and functionality of the network.

#### **S5**

Active open space should be:

- Of an appropriate size, i.e. sufficient to incorporate two football/ cricket ovals, but small enough to enable regular spacing of active open space provision across the precinct. This configuration would generally require at least eight hectares;
- Appropriate for its intended open space use in terms of quality and orientation;
- Located on flat land (which can be cost effectively graded);
- Located with access to, or making provision for a recycled or other sustainable water supply;
- Designed to achieve sharing of space between sports, and;
- Linked to pedestrian and cycle paths.

### **The Precinct Structure Plan Guidelines**

There are PSP Guidelines which are strictly adhered to. They include a number of Elements which cover standards and questions to be answered. Element 5 is directed to Open Space.

#### **Element 5 - Open Space.**

All public open space areas should be designed to maximise passive surveillance.

The public open space network is combined with techniques for managing urban run-off and biodiversity.

## **APPENDIX 2: Key learnings - expert Panel Review of the PSP Guidelines**

Within denser environments, a stronger emphasis on creating better public realm and public open space would support liveability outcomes, particularly urban greening.

While private green space will continue to have a role, stronger emphasis on the public realm can address the environmental impacts associated with smaller lots (i.e. lack of green space in yards, greater levels of impervious surfaces, etc.).

To strike the right balance between private and public green spaces, examples of place making and design outcomes need to be developed and promoted.

Greening within larger greenfield and brownfield developments are typically handled better than for smaller scale development. In most large developments, public open space strategies, recreation facilities and landscaped streetscapes are considered the standard.

For areas with fragmented ownership, coordination and integration of open space networks should remain a primary responsibility for structure plans.

The role of greening public spaces and the streetscape becomes increasingly important as the size of residential allotments decline. The Guidelines need to provide stronger guidance on the role of planting and maintenance of streets and parks.

Drainage issues are arising from poor amenity and liveability outcomes in higher density areas. Poor soils and rainfall, a lack of private open space, narrow streetscapes, high impervious fraction, conventional drainage systems and lack of water to enhance public open space are limiting the liveability and resilience of new and changing communities.

The current Guidelines are considered to be comprehensive and consistent with the State Government's 'Water for Victoria' plan, which aims to 'help transform Victorian cities and towns into the most resilient and liveable in the world'.

While the content within the Guidelines for incorporating integrated water management is good, water industry stakeholders have highlighted that these aren't being implemented.

It has been recognised that the water authorities are often unprepared for early engagement in some structure planning processes.

To improve consistency, the guidelines need to strengthen its elements to incorporate IWM and to improve its approach to integrated planning. Furthermore, more formal collaborative governance arrangements should be established to support the structure planning process.

### **Draft Guidelines**

Structure plans are to support the creation of walkable and bikeable neighbourhoods, with appropriate and safe access to key destinations; opportunities for community gardens and productive streetscapes; and a network of accessible, high quality, local open spaces.

Structure plans must utilise the attributes of distinctive areas and landscapes, including protection of the value of heritage (aboriginal and post-contact heritage). Placemaking practices are to be integrated into road-space management and greening is to be supported.

Structure plans should facilitate the creation of sustainable communities that reduce pressure on water, drainage, sewerage, energy and waste. Further minimising their impact on the environment, development of strategic sites and precincts are to support improvements to the health of waterways and coastlines through integrated water management opportunities; and preservation of biodiversity through opportunities to connect with nature through a network of green spaces.

Guidelines intend to make it clearer how different stakeholders and partners are able to contribute towards the development of structure plans. For example, water authorities will continue to be encouraged to identify opportunities with integrated water management with a clearer understanding of their role and needed input.

A number of considerations and measures incorporated within the guideline that intends to address greening within the public and private realm. A stronger focus will be on maximising opportunities within the public realm in higher density areas.